Section:	Appendix 8.1	**Page No.:**	31 & 32
Topic:	DSM		
Subtopic:	Forecast Internal DSM Budget		
Issue:	Actual and Forecast DSM spending		

PREAMBLE TO IR (IF ANY):

QUESTION:

Please expand the Internal DSM Utility Investment by program (as seen on page 31) by year from 2014/15 to 2028/29.

RATIONALE FOR QUESTION:

MIPUG would like to compare the spending year over year and increases made in the new DSM program following the NFAT review.

RESPONSE:

The Electric Cumulative Costs (in millions) column on page 31 outlines the following categories of investment:

Cumulative Investment Total, 2014/15 – 2028/29	$821.5
Spent to 2013/14	$461.0
Total Electric Expenditures	$1,282.5

The Cumulative Investment Total, 2014/15 – 2028/29 (in millions) can be broken into two categories:

Power Smart Electric, 2014/15 – 2028/29	$818.2
Electric Affordable Energy Fund, 2014/15 – 2028/29	$3.3
Cumulative Investment Total, 2014/15 – 2028/29	$821.5

A breakdown of Power Smart Electric forecast of $818.2 million by program is provided in Appendix 8.1 of the filing in Appendix A.3 of the report.

A breakdown of the Electric Affordable Energy Fund forecast of $3.3 million by program is shown in the table below.

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25 - 2028/29	Total
Electric DSM												
Affordable Energy Program	$1.0	$1.0	$0.3	-	-	-	-	-	-	-	-	$2.2
Geothermal Support	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	-	-	-	$0.2
Community Support and Outreach	$0.1	-	-	-	-	-	-	-	-	-	-	$0.1
Special Projects												
Solar Water Heaters	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Power Smart Residential Loan	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.1
Spruce Wood Loggers	$0.2	-	-	-	-	-	-	-	-	-	-	$0.2
Community Energy Development												
Power Smart PAYS Financing Program	$0.0	$0.1	$0.1	$0.0	$0.0	$0.0	$0.0	-	-	-	-	$0.2
Total Electric DSM	**$1.4**	**$1.1**	**$0.4**	**$0.1**	**$0.1**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$3.0**
Oil and Propane DSM												
Oil & Propane Furnace Replacement	$0.0	-	-	-	-	-	-	-	-	-	-	$0.0
Oil & Propane Heated Homes – Additional Funding	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.3
Total Oil & Propane DSM	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.3**
Total Affordable Energy Fund DSM	**$1.4**	**$1.1**	**$0.4**	**$0.1**	**$0.1**	**$0.1**	**$0.1**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$3.3**

Please see Manitoba Hydro's response to MIPUG/MH-I-1b for a breakdown by program of the costs to 2013/14 amount of $461.0 million.

Section:	Appendix 8.1	**Page No.:**	31 & 32
Topic:	DSM		
Subtopic:	Forecast Internal DSM Budget		
Issue:	Actual and Forecast DSM spending		

PREAMBLE TO IR (IF ANY):

QUESTION:

Please expand the Internal DSM Utility Investment by program for actual years until 2013/14 encompassed in the "spent to 2013/14" line for total expenditures equal to $584.6 million.

RATIONALE FOR QUESTION:

MIPUG would like to compare the spending year over year and increases made in the new DSM program following the NFAT review.

RESPONSE:

The total internal DSM utility investment to 2013/14 of $584.6 million includes natural gas investments. As outlined on page 32 of Appendix 8.1 and in the table below, the total Electric DSM expenditures to date is $461.0 million:

Electric Power Smart	$448.7
Affordable Energy Fund – Electric	$11.8
Affordable Energy Fund – Oil & Propane	$0.5
Total Electric Expenditures	$461.0

A breakdown of the Electric Power Smart expenditures to date by program is provided in Appendix 8.1 of the filing in Appendix B.3 of the report.

A breakdown of the electric Affordable Energy Fund expenditures (in millions) to date by program is shown in the following table.

	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	Total
Electric DSM									
Affordable Energy Program	$0.1	$0.1	$0.3	$0.5	$0.7	$0.8	$0.9	$0.8	$4.1
Geothermal Support	$0.7	$0.3	$0.1	$0.1	$0.1	$0.1	$0.1	$0.0	$1.6
Community Support and Outreach	-	-	$0.0	$0.1	$0.1	$0.1	$0.1	$0.1	$0.7
Special Projects									
Residential ecoENERGY Audits	-	$0.1	$0.3	$0.1	$0.1	$0.0	-	-	$0.6
Solar Water Heaters	-	-	$0.1	$0.1	$0.1	$0.0	$0.0	$0.0	$0.3
Power Smart Residential Loan	-	-	-	$0.0	$0.0	$0.0	$0.1	$0.1	$0.2
Community Energy Development									
ecoENERGYProgram Funding	-	-	-	-	-	$3.0	$1.3	$0.0	$4.3
Power Smart PAYS Financing Program	-	-	-	-	-	-	-	$0.0	$0.0
Total Electric DSM	**$0.8**	**$0.4**	**$0.8**	**$1.0**	**$1.2**	**$4.2**	**$2.4**	**$1.0**	**$11.8**
Oil and Propane DSM									
Oil & Propane Heated Homes	-	$0.1	$0.1	$0.0	$0.0	$0.0	$0.0	$0.0	$0.3
Oil & Propane Furnace Replacement	-	-	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.1
Oil & Propane Heated Homes – Additional Funding	-	-	-	-	-	$0.0	$0.0	$0.0	$0.1
Total Oil & Propane DSM	**$0.0**	**$0.1**	**$0.1**	**$0.1**	**$0.1**	**$0.1**	**$0.0**	**$0.0**	**$0.5**
Total Affordable Energy Fund DSM	**$0.8**	**$0.5**	**$0.9**	**$1.0**	**$1.3**	**$4.2**	**$2.5**	**$1.1**	**$12.3**

Section:	Appendix 8.1	**Page No.:**	Page 38 & 39
Topic:	DSM		
Subtopic:	Forecast DSM programming		
Issue:	Economic testing of DSM programming		

PREAMBLE TO IR (IF ANY):

QUESTION:

Please add the PACT and RIM DSM Metrics to the Integrated DSM Metrics for 2014/15 – 2028/29.

RATIONALE FOR QUESTION:

MIPUG would like to test the economics of DSM programming planned for the years being reviewed in this GRA.

RESPONSE:

The electric RIM DSM metrics for 2014/15 – 2028/29 is provided on page 42 of Appendix 8.1.

The PACT DSM Metrics for 2014/15 – 2028/29 are provided in the following table:

Utility DSM Metrics
2014/15 - 2028/29

Electric DSM

	PACT
Residential	
New Home Program	41.8
Home Insulation Program	4.2
Water and Energy Saver Program	2.6
Affordable Energy Program	
Affordable Energy Program - Insulation	3.8
Affordable Energy Program - Furnace	n/a
Affordable Energy Program - Total	3.8
Refrigerator Retirement Program	2.6
Residential LED Lighting Program	3.4
Community Geothermal Program	3.7
Residential Programs Total	4.8
Commercial	
Commercial Lighting Program	3.9
LED Roadway Lighting Conversion Program	1.0
Commercial Building Envelope - Windows Program	4.6
Commercial Building Envelope - Insulation Program	4.1
Commercial Geothermal Program	2.9
Commercial HVAC Program - Boilers	n/a
Commercial HVAC Program - Chillers	3.4
Commercial HVAC Program - CO2 Sensors	6.3
Commercial HVAC Program - Water Heaters	n/a
Commercial Custom Measures Program	3.0
Commercial Building Optimization Program	3.0
New Buildings Program	7.2
Commercial Refrigeration Program	6.3
Commercial Kitchen Appliance Program	30.6
Network Energy Management Program	11.8
Internal Retrofit Program	1.2
Power Smart Shops	3.5
Commercial Programs Total	3.5
Industrial	
Performance Optimization Program	3.1
Natural Gas Optimization Program	n/a
Industrial Programs Total	3.1
Energy Efficiency Subtotal	3.6
Load Management	
Curtailable Rate Program	1.4
Load Management Programs Total	1.4
Load Displacement & Alternative Energy	
Bioenergy Optimization Program	4.9
Customer Sited Load Displacement	7.3
Load Displacement & Alt. Energy Programs Total	7.0
Conservation Rates	
Conservation Rates - Residential	9.3
Conservation Rates - Commercial	12.5
Conservation Rates Total	11.0
Fuel Choice	
Fuel Choice	7.6
Fuel Choice Total	7.6
Program Impacts Total	4.4
Program Support and Contingency Costs	-
Program Impacts Total (Incl. Support and Contingency Costs)	4.0
Other Internal DSM Investments	
Afforedable Energy Fund	-
Overall Portfolio Metric	3.9

Section:	Tab 4	**Page No.:**	Page 10
Topic:	DSM		
Subtopic:	10 Year Cost Flow Update		
Issue:			

PREAMBLE TO IR (IF ANY):

Figure 4.10 on page 10 indicates that $26.3 million is to be spent on "added conservation rates for residential and commercial customers" and that $55.1 million will be spend on "added fuel choice program" during the 10-year period 2015 - 2024.

QUESTION:

Please indicate the status and objectives the Conservation rates initiative, and a breakdown of the proposed spending for residential and commercial customers. Specifically what is the $26.3 million being spent on?

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

The program design details of the Energy Conservation Rates initiative which were included as part of Manitoba Hydro's 2014 – 2017 Power Smart Plan – 15 Year Supplemental Report (included as Appendix 8.1 of this Application) are not finalized nor approved at this time. For purposes of planning, a placeholder for the program was included in Corporation's overall Demand Side Management Plan. The placeholder included a high level estimate for costs, energy savings and timing.

The objective of the Energy Conservation Rates initiative would be to optimize the use of all available tools in achieving the Corporation's overall demand side management strategy. In developing the Corporation's 2014 – 2017 Power Smart Plan, an aggressive approach was

contemplated which went much beyond the traditional approach used to date involving primarily incentives, education and codes to influence customers. Under the 2014 – 2017 Power Smart Plan, a strategy was envisioned for leveraging and optimizing the use of all available tools in program designs including the use of incentives, education, conservation rates, service extension policies, etc. For example, alternative program designs for the new home market are being considered which range from one design premised upon significant upstream incentives to another design premised upon a combination of changes to service extension policy and service extension allowances.

Detailed work on these program designs is pending a Government decision on Manitoba Hydro's future role and responsibilities for Demand Side Management.

Section:	Tab 4	**Page No.:**	Page 10
Topic:	DSM		
Subtopic:	10 Year Cost Flow Update		
Issue:			

PREAMBLE TO IR (IF ANY):

Figure 4.10 on page 10 indicates that $26.3 million is to be spent on "added conservation rates for residential and commercial customers" and that $55.1 million will be spend on "added fuel choice program" during the 10-year period 2015 - 2024.

QUESTION:

Please indicate the status and objectives of the Fuel Choice Program, and a breakdown of the proposed spending. Please indicate the contribution from Centra Gas for this initiative including any reduction or forgiveness from extension or connection charges.

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

The program design details of the Fuel Choice Program which was included as part of Manitoba Hydro's 2014 – 2017 Power Smart Plan – 15 Year Supplemental Report (included as Appendix 8.1 of this Application) are not finalized nor approved at this time. For purposes of planning, a placeholder for the program was included in Corporation's overall Demand Side Management Plan. The placeholder included a high level estimate for costs, energy use impacts and timing. No definitive decisions were made regarding contributions for Centra Gas for this initiative at this time.

The overall objective of the Fuel Choice Program would be to optimize the use of fuels for meeting Manitoba's overall energy needs, taking into consideration, the economic benefit to

customers, the economic impact to Manitoba Hydro's Operations, the economic impact to the province, and impact on emissions from a provincial and global perspective.

Detailed work on program design is pending further discussions and agreement with the Provincial Government in accordance with the Energy Savings Act.

Section:	Tab 4	**Page No.:**	Page 10
Topic:	DSM		
Subtopic:	10 Year Cost Flow Update		
Issue:			

PREAMBLE TO IR (IF ANY):

Figure 4.10 on page 10 indicates that $26.3 million is to be spent on "added conservation rates for residential and commercial customers" and that $55.1 million will be spend on "added fuel choice program" during the 10-year period 2015 - 2024.

QUESTION:

For each program provide the RIM and PACT metrics showing all data and calculations.

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

The formulas for RIM and PACT are as follows:

$$\text{RIM} = \frac{\text{PV Utility Marginal Benefits}}{\text{PV Utility Program Administration Costs + PV Utility Incentive Costs + PV Domestic Revenue Loss}}$$

$$\text{PACT} = \frac{\text{PV Utility Marginal Benefits}}{\text{PV Utility ProgramAdministration Costs + PV Utility Incentive Costs}}$$

Conservation Rates – Residential

$$\text{RIM} = \frac{\$116,989,635}{\$12,637,996 + \$0 + \$139,671,836}$$

$$= 0.8$$

$$\text{PACT} = \frac{\$116,989,635}{\$12,637,996 + \$0}$$

$$= 9.3$$

Conservation Rates – Commercial

$$\text{RIM} = \frac{\$177,184,019}{\$14,124,912 + \$0 + \$144,708,127}$$

$$= 1.1$$

$$\text{PACT} = \frac{\$177,184,019}{\$14,124,912 + \$0}$$

$$= 12.5$$

Fuel Choice

$$\text{RIM} = \frac{\$285,603,426}{\$2,482,920 + \$35,165,157 + \$246,783,729}$$

$$= 1.0$$

$$\text{PACT} = \frac{\$285,603,426}{\$2,482,920 + \$35,165,157}$$

$$= 7.6$$

Section:	Appendix 6.1 & 6.2	**Page No.:**	
Topic:	Proof of Revenue		
Subtopic:	Rates and Billing Determinants		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide actual proof of revenue, showing all rates and billing determinants for the 2012/13 and 2013/14 fiscal years.

RATIONALE FOR QUESTION:

To test proof of revenue at the customer class and sub-class level.

RESPONSE:

Manitoba Hydro prepares a Proof of Revenue with each General Rate Application to indicate, on a prospective basis, the revenues forecast to be generated by applying the proposed rates to the forecast number of customer bills, forecast billing demand and forecast energy consumption for each customer class. It is provided to show the change in revenue between two sets of rates assuming that all factors upon which those rates are applied are equal (i.e. customer count, energy and demand).

This request seeks a proof of revenue based on actual consumption and rates in place throughout the historic time period. On an actual basis, the number of customer bills, billing demand units and energy consumption units will vary from the forecast. In addition, in each of the years in question, there were rate changes which occurred within each year which must be taken into consideration. Therefore, it is not possible to prepare a "proof of revenue" on an actual basis, in the same manner as is prepared on a forecast basis.

The following table provides actual revenue and consumption data for 2012/13 and 2013/14, which has not been weather-normalized.

Annualized billing determinants have been provided for both years, recognizing that each year is comprised of two sets of rates. The 2012/13 actuals are based on five months of data at April 1, 2012 rates and seven months of data at September 1, 2012 rates. The 2013/14 actuals are based on one month of data at September 1, 2012 rates and eleven months of data at May 1, 2013 rates.

Actual Revenues 2012/13 and 2013/14
for 12 months ending March 31

	Actual Revenue[1] 2012/13	Actual Revenue[2] 2013/14	Difference (Dollars)	Difference (Percent)
Basic	534,378,962	594,856,358	$60,477,396	11.32%
Diesel	626,719	666,037	$39,318	6.27%
Seasonal	7,153,132	8,277,390	$1,124,258	15.72%
FRWH	1,193,102	1,186,382	($6,720)	-0.56%
RESIDENTIAL	**$543,351,915**	**604,986,167**	**$61,634,252**	**11.34%**
Small Non-Demand	$129,399,824	141,318,608	$11,918,784	9.21%
Small Demand	$127,985,470	140,679,461	$12,693,991	9.92%
Seasonal	$560,073	595,759	$35,686	6.37%
FRWH	$541,850	541,539	($311)	-0.06%
GS Small	$258,487,217	283,135,367	$24,648,150	9.54%
GS Medium	$174,134,772	$190,015,273	$15,880,501	9.12%
Large 750 V - 30 kV	$79,063,802	84,152,179	$5,088,377	6.44%
Large 30 - 100 kV	$51,391,825	55,551,018	4,159,193	8.09%
Large > 100 kV	$165,463,252	164,456,284	(1,006,968)	-0.61%
GS Large	$295,918,879	304,159,481	$8,240,602	2.78%
Diesel GS & Gov.	$5,922,467	5,911,578	($10,889)	-0.18%
SEP	$888,008	$1,253,494	$365,486	41.16%
TOTAL GS	**$735,351,343**	**$784,475,193**	$49,123,850	6.68%
AREA & ROADWAY	**$21,106,347**	**$22,087,703**	**$981,356**	**4.65%**
DSM REDUCTION	$0	$0	$0	0.00%
Total Misc & Adjs	$41,201,256	$12,577,404	($28,623,852)	-69.47%
GENERAL CONSUMERS	**$1,341,010,861**	**$1,424,126,467**	**$83,115,606**	**6.20%**

[1] Actual Revenues obtained in fiscal 2013/14 includes 5 months of revenues at April 1, 2013 rates and 7 months of revenues at September 1, 2013 rates, with Total Misc. and Adjs. reflecting the $22.5 million deferred due to the 1% rate rollback which was confirmed in rates in Order 43/13. Actual data has not been weather normalized.

[2] Actual Revenues obtained from customers in fiscal 2013/14 includes one month of revenues at September 1, 2013 rates and 11 months of revenues at May 1, 2014 rates. Actual data has not been weather normalized.

RESIDENTIAL: Actual Rates and Billing Determinants 2012/13

Actual 2012/13	Customer Months	>200 A Cust Months	Total kWh
Basic	5,473,563	45,096	7,223,490,671
Diesel	6,928	0	8,447,269
Seasonal	(avg mthly) 20,731	0	81,077,385
FRWH	49,068	0	20,804,828

April 1, 2012 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$6.85	$6.85	$0.0677
Diesel	$6.85		$0.0677
Seasonal	(annual) $82.20		$0.0677
FRWH	(average) $24.03		

Sept 1, 2012 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$6.85	$6.85	$0.0694
Diesel	$6.85		$0.0694
Seasonal	(annual) $82.20		$0.0694
FRWH	(average) $24.61		

2012/13 Revenue at April & Sept 2012 Rates	BC & >200 A Revenue	kWh $	Total Calculcated Revenue	Adj. Factor	Book Revenue
Basic	$37,802,814	$496,181,574	$533,984,388	1.001	$534,378,962
Diesel	$47,457	$580,243	$627,700	.9984	$626,719
Seasonal	$1,704,088	$5,535,153	$5,535,153	.9881	$7,153,132
FRWH			$1,193,102	1.000	$1,193,102

GENERAL SERVICE: Actual Rates and Billing Determinants 2012/13

Actual Data 2012/13	Cust Months	3 Phase Cust Months	1st 11000 kWh	Next 8500 kW.h & ND Runoff	Balance of kWh	Total kW.h	Billable Demand
Small ND	622,308	139,071	1,495,806,167	132,136,158		1,627,942,325	0
Small Demand	141,979	94,349	791,552,750	448,386,059	771,782,176	2,011,720,985	2,371,327
Small LUBD	683	647	-	-	-	3,957425	18,666
Seasonal	(avg mthly) 850	-	5,143,003	0	0	5,143,003	0
FRWH	4,890	-	-	-	-	7,431,197	0
Medium	22,779	-	248,119,349	187,642,128	2,646,417,755	3,082,179,231	6,906,053
Med. LUBD	193	-	-	-	-	4,042,180	33,914
Large <30	3,444	-	-	-	-	1,643,161,469	3,881,268
L<30 LUBD	36	-	-	-	-	615,599	11,102
Lrg30-100	446	-	-	-	-	1,221,588,534	2,617,786
Lrg >100	156	-	-	-	-	4,396,892,796	7,684,740
L>100 LUBD	32	-	-	-	-	1,587,311	30,985
DFC Fed Govt	560	-	-	-	-	1,850,002	0
DFC Prov Gov	240	-	-	-	-	438,875	0
DFC Non-Gov	1,303	-	(1st 2000 kW.h)	1,192,611	1,963,328	3,155,939	0
SEP Med	281	-	-	-	-	25,994,883	0
SEP Lrg <30		-	-	-	-	1,829,853	0

April 1, 2012 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$18.55	$7.60	$0.0710	$0.0494		
Small Demand	$18.55	$7.60	$0.0710	$0.0494	$0.0326	$8.34
Small LUBD	$18.55	$7.60			$0.0807	$2.09
Seasonal	(annual) $222.60	$91.20	$0.0710	$0.0494		
FRWH	(average) $108.94					
Medium	$27.60		$0.0710	$0.0494	$0.0326	$8.34
Med. LUBD	$27.60				$0.0807	$2.09
Large <30	$0.00				$0.0307	$7.08
L<30 LUBD	$0.00				$0.0715	$1.77
Large 30-100	$0.00				$0.0285	$6.06
Large >100	$0.00				$0.0276	$5.40
L>100 LUBD	$0.00				$0.0583	$1.41
DFC Fed Govt	$18.55				$2.13	
DFC Prov Gov	$18.55				$2.13	
DFC Non-Gov	$18.55		First 2000 kW.h @ $0.0710		$0.3500	
SEP Med	$50.00		$0.02532 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02355 average energy charge & $0.0033 dist. charge (per kW.h)			

Sept 1, 2012 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$18.55	$7.60	$0.0729	$0.0506		
Small Demand	$18.55	$7.60	$0.0729	$0.0506	$0.0334	$8.55
Small LUBD	$18.55	$7.60			$0.0827	$2.14
Seasonal	(annual) $222.60	$91.20	$0.0729	$0.0506		
FRWH	(average) $111.71					
Medium	$27.60		$0.0729	$0.0506	$0.0334	$8.55
Med. LUBD	$27.60				$0.0827	$2.14
Large <30	$0.00				$0.0314	$7.26
L<30 LUBD	$0.00				$0.0732	$1.82
Large 30-100	$0.00				$0.0292	$6.21
Large >100	$0.00				$0.0283	$5.53
L>100 LUBD	$0.00				$0.0600	$1.41
DFC Fed Govt	$18.55				$2.27	
DFC Prov Gov	$18.55				$2.27	
DFC Non-Gov	$18.55		First 2000 kW.h @ $0.0729		$0.3730	
SEP Med	$50.00		$0.02532 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02355 average energy charge & $0.0033 dist. charge (per kW.h)			

2012/13 Revenue at 2012 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Total Calculated Revenue	Adj Factor	Book Revenue
Small ND	$11,543,813	$1,056,940	$107,862,583	$6,620,021	$0	$0	$127,083,357	1.018	$129,399,824
Small D.	$2,633,710	$717,052	$57,078,869	$22,464,142	$25,522,837	$20,061,426	$128,478,036	0.993	$127,604,803
Small LUBD	$12,670	$4,917	-	-	$323,994	$39,572	$381,153	0.999	$380,667
Seasonal	$189,210	$0	$370,862	$0	$0	-	$560,072	1.000	$560,073
FRWH	-	-	-	-	-	-	$541,850	1.000	$541,850
Medium	$628,700	-	$17,891,886	$9,400,871	$87,517,035	$58,425,209	$173,863,702	0.999	$173,725,419
Med. LUBD	$5,327	-	-	-	$330,933	$71,898	$408,158	1.003	$409,353
Lrg <30	$0	-	-	-	$51,118,480	$27,886,010	$79,004,490	1.000	$78,999,351
L<30 LUBD	$0	-	-	-	$44,625	$19,972	$64,597	0.998	$64,452
Lrg30-100	$0	-	-	-	$35,314,696	$16,090,494	$51,405,191	1.000	$51,391,825
Lrg >100	$0	-	-	-	$123,225,690	$42,092,191	$165,317,881	1.000	$165,325,414
L100 LUBD	$0	-	-	-	$94,112	$43,689	$137,801	1.000	$137,837
DFC Fed G	$10,388	-	-	-	$4,091,594	-	$4,101,982	1.002	$4,108,622
DFC Prov G	$4,452	-	-	-	$970,647	-	$975,099	1.002	$977,317
DFC Non-G	$24,171	-	$85,999		$713,513	-	$823,682	1.016	$836,528
SEP Med	$14,050	-	$161,168 (distribution); $658,262 (energy)			-	$833,480	1.000	$833,480
SEP Lrg <30	$5,400	-	$6,039 (distribution); $43,089 (energy)			-	$54,528	1.000	$54,528

RESIDENTIAL: Actual Rates and Billing Determinants 2013/14

Actual 2013/14	Customer Months	>200 A Cust Months	Total kWh
Basic	5,547,285	49,431	7,767,135,088
Diesel	6,990	0	8,615,860
Seasonal	(avg mthly) 20,757	0	92,477,019
FRWH	46,296	0	19,598,189

Sept 1, 2012 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$6.85	$6.85	$0.0694
Diesel	$6.85		$0.0694
Seasonal	(annual) $82.20		$0.0694
FRWH	(average) $24.88		

May 1, 2013 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.09	$7.09	$0.07183
Diesel	$7.09		$0.07183
Seasonal	(annual) $85.08		$0.07183
FRWH	(average) $25.74		

2013/14 Revenue at 2012 & 2013 Rates	BC & >200 A Revenue	kWh $	Total Calculated Revenue	Adj. Factor	Book Revenue
Basic	$39,568,782	$556,359,886	$595,928,668	.9982	$594,856,358
Diesel	$49,919	$617,154	$666,573	.9992	$666,037
Seasonal	$1,761,024	$6,530,727	$8,291,751	.9983	$8,277,390
FRWH			$1,186,382	1.000	$1,186,382

GENERAL SERVICE: Actual Rates and Billing Determinants 2013/14

Actual Data 2013/14	Cust Months	3 Phase Cust Months	1st 11000 kWh	Next 8500 kW.h & ND Runoff	Balance of kWh	Total kW.h	Billable Demand
Small ND	631,242	142,815	1,573,204,542	148,774,565		1,721,979,107	0
Small Demand	142,192	95,729	825,277,246	470,955,484	842,745,734	2,138,978,464	2,493,289
Small LUBD	630	603	-	-	-	3,760,425	18,825
Seasonal	(avg mthly) 861	-	5,262,103	0	0	5,262,103	0
FRWH	4,703	-	-	-	-	7,119,057	0
Medium	23,564	-	256,492,510	194,071,737	2,786,041,958	3,236,606,205	7,268,472
Med. LUBD	190	-	-	-	-	4,134,970	35,013
Large <30	3,549	-	-	-	-	1,687,432,677	3,924,818
L<30 LUBD	36	-	-	-	-	716,381	9,148
Lrg30-100	463	-	-	-	-	1,282,607,258	2,637,908
Lrg >100	156	-	-	-	-	4,222,135,420	7,194,993
L>100 LUBD	36	-	-	-	-	1,368,814	31,919
DFC Fed Govt	564	-	-	-	-	1,753,275	0
DFC Prov Gov	240	-	-	-	-	400,446	0
DFC Non-Gov		-	(1st 2000 kW.h) 1,181,009		1,883,899	3,064,908	0
SEP Med	281	-	-	-	-	27,155,373	0
SEP Lrg <30	37	-	-	-	-	2,167,179	0

Sept 1, 2012 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$18.55	$7.60	$0.0729	$0.0506		
Small Demand	$18.55	$7.60	$0.0729	$0.0506	$0.0334	$8.55
Small LUBD	$18.55	$7.60			$0.0827	$2.14
Seasonal	(annual) $222.60	$91.20	$0.0729	$0.0506		
FRWH	(average) $111.71					
Medium	$27.60		$0.0729	$0.0506	$0.0334	$8.55
Med. LUBD	$27.60				$0.0827	$2.14
Large <30	$0.00				$0.0314	$7.26
L<30 LUBD	$0.00				$0.0732	$1.82
Large 30-100	$0.00				$0.0292	$6.21
Large >100	$0.00				$0.0283	$5.53
L>100 LUBD	$0.00				$0.0600	$1.41
DFC Fed Govt	$18.55				$2.27	
DFC Prov Gov	$18.55				$2.27	
DFC Non-Gov	$18.55		First 2000 kW.h @ $0.0729		$0.3730	
SEP Med	$50.00		$0.02532 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02355 average energy charge & $0.0033 dist. charge (per kW.h)			

May 1, 2013 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$19.20	$7.87	$0.07545	$0.05237		
Small Demand	$19.20	$7.87	$0.07545	$0.05237	$0.03457	$8.85
Small LUBD	$19.20	$7.87			$0.08560	$2.21
Seasonal	(annual) $230.40	$94.44	$0.07545	$0.05237		
FRWH	(average) $115.63					
Medium	$28.57		$0.07545	$0.05237	$0.03457	$8.85
Med. LUBD	$28.57				$0.08560	$2.21
Large <30	$0.00				$0.03250	$7.51
L<30 LUBD	$0.00				$0.07580	$1.88
Large 30-100	$0.00				$0.03022	$6.43
Large >100	$0.00				$0.02929	$5.72
L>100 LUBD	$0.00				$0.06210	$1.46
DFC Fed Govt	$19.20				$2.3495	
DFC Prov Gov	$19.20				$2.3495	
DFC Non-Gov	$19.20		First 2000 kW.h @ $0.07545		$0.38605	
SEP Med	$50.00		$0.02515 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02400 average energy charge & $0.0033 dist. charge (per kW.h)			

2013/14 Revenue at 2012 & 2013 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Total Calculated Revenue	Adj Factor	Book Revenue
Small ND	$12,088,284	$1,121,098	$118,367,910	$7,769,008	$0	$0	$139,346,300	1.014	$141,318,608
Small D.	$2,722,977	$751,473	$62,093,860	$24,593,295	$29,049,445	$22,015,739	$141,226,790	0.993	$140,300,652
Small LUBD	$12,065	$4,734	-	-	$320,990	$41,490	$379,278	0.999	$378,809
Seasonal	$197,815	$0	$395,921	$0	$0	-	$593,735	1.003	$595,759
FRWH	-	-	-	-	-	-	$541,539	1.000	$541,539
Medium	$671,338	-	$19,298,496	$10,134,426	$96,034,866	$64,180,608	$190,319,735	0.996	$189,579,472
Med. LUBD	$5,413	-	-	-	$352,961	$77,168	$435,543	1.001	$435,801
Lrg <30	$0	-	-	-	$54,689,165	$29,396,796	$84,085,961	1.000	$84,080,911
L<30 LUBD	$0	-	-	-	$54,144	$17,153	$71,297	1.000	$71,268
Lrg30-100	$0	-	-	-	$38,659,254	$16,914,492	$55,573,745	1.000	$55,551,018
Lrg >100	$0	-	-	-	$123,293,526	$41,034,158	$164,327,684	1.000	$164,324,980
L100 LUBD	$0	-	-	-	$84,771	$46,474	$131,245	1.000	$131,304
DFC Fed G	$10,801	-	-	-	$4,107,748	-	$4,118,549	0.998	$4,111,944
DFC Prov G	$4,596	-	-	-	$938,205	-	$942,801	0.998	$940,901
DFC Non-G	$24,876	-	$88,859	$725,226	-	$838,961	1.023	$858,733	
SEP Med	$15,000	-	$168,363 (distribution); $992,882 (energy)	-	$1,176,245	1.000	$1,176,242		
SEP Lrg <30	$3,700	-	$7,152 (distribution); $66,400 (energy)	-	$77,252	1.000	$77,252		

Section:	Appendix 6.1 & 6.2	**Page No.:**	
Topic:	Proof of Revenue		
Subtopic:	Rates and Billing Determinants		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the 2014/15 proof of revenue, showing all rates and billing determinants for the April 1, 2013 rates and for the interim rates proposed to be finalized for May 1, 2014.

RATIONALE FOR QUESTION:

To test proof of revenue at the customer class and sub-class level.

RESPONSE:

A detailed Proof of Revenue for 2014/15 based on May 1, 2013 and May 1, 2014 rates, annualized over the 12 months, is provided on the following page. Billing determinants associated with this Proof of Revenue for are also provided.

It should be noted that the customer and energy forecast figures provided are based on the 2013 Load Forecast, which was the most current forecast available at the time the May 1, 2013 rates were approved. Manitoba Hydro's current rate application for rates effective April 1, 2015 and April 1, 2016 are based on the 2014 Load Forecast.

2014/15 PROOF OF REVENUE

May 1, 2013 Rates versus May 1, 2014 Rates
12 Months Annualized Revenues

	Calculated Revenue At 2013 Rates	Calculated Revenue At 2014 Rates	Diff. in Revenue Dollars	Diff. in Revenue Percent
Basic	576,376,403	592,233,493	15,857,090	2.75%
Diesel	672,373	690,869	18,496	2.75%
Seasonal	7,758,699	7,971,221	212,523	2.74%
FRWH	1,130,110	1,161,210	31,100	2.75%
Total Residential	**$585,937,585**	**$602,056,793**	**$16,119,208**	**2.75%**
Small Non-Demand	134,729,055	138,428,467	3,699,412	2.75%
Small Demand	142,735,951	146,648,611	3,912,659	2.74%
Seasonal	589,564	605,772	16,208	2.75%
FRWH	513,380	527,499	14,118	2.75%
Total Small	278,567,950	286,210,348	7,642,397	2.74%
Total Medium	186,717,896	191,825,733	5,107,837	2.74%
Large 750 V-30 kV	86,258,566	88,638,260	2,379,694	2.76%
Large 30 - 100 kV	60,480,897	62,151,987	1,671,090	2.76%
Large > 100 kV	184,889,842	189,970,708	5,080,866	2.75%
Total Large	331,629,305	340,760,955	9,131,650	2.75%
Diesel GS & Gov.	6,315,898	6,489,525	173,627	2.75%
SEP	1,005,844	1,005,844	0	0.0%
Total GS	**$804,236,894**	**$826,292,404**	**$22,055,511**	**2.74%**
Area & Roadway	**$22,196,396**	**$22,804,562**	**$608,166**	**2.74%**
DSM Reduction	(10,012,765)	(10,277,701)	(264,936)	2.65%
Misc. Rev & Adjs.	5,315,000	5,461,163	146,163	2.75%
General Consumers	**$1,407,673,110**	**$1,446,337,221**	**$38,664,111**	**2.75%**

RESIDENTIAL:

Forecast 2014/15	Customer Months	>200 A Cust Months	Total kWh
Basic	5,607,504	51,110	7,458,388,937
Diesel	7,056	0	8,678,804
Seasonal	(avg mthly) 20,886	0	84,576,316
FRWH	44,364	0	18,776,357

May 1, 2013 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.09	$7.09	$0.07183
Diesel	$7.09		$0.07183
Seasonal	(annual) $85.08		$0.07183
FRWH	(average) $25.47		

2014/15 Revenue at 2013 Rates	BC & >200 A Revenue	kWh $	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$40,119,573	$535,736,077	$575,855,651	1.001	$576,376,403
Diesel	$50,027	$623,398	$673,398	.9984	$672,373
Seasonal	$1,776,981	$6,075,117	$7,852,098	.9881	$7,758,699
FRWH			$1,130,110	1.000	$1,130,110

May 1, 2014 Interim Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.28	$7.28	$0.07381
Diesel	$7.28		$0.07381
Seasonal	(annual) $87.36		$0.07381
FRWH	(average) $26.45		

2014/15 Revenue at 2014 Rates	BC & >200 A Revenue	kWh $	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$41,194,710	$550,503,687	$591,698,397	1.001	$592,233,493
Diesel	$51,368	$640,583	$691,950	.9984	$690,869
Seasonal	$1,824,601	$6,242,578	$8,067,179	.9881	$7,971,221
FRWH			$1,161,210	1.000	$1,161,210

GENERAL SERVICE:

Forecast Data 2014/15	**Cust Months**	**3 Phase Cust Months**	**1st 11000 kWh**	**Next 8500 kW.h & ND Runoff**	**Balance of kWh**	**Total kW.h**	**Billable Demand**
Small ND	626,244	139,951	1,490,654,638	128,355,831		1,619,010,469	0
Small Demand	150,428	99,964	839,703,492	477,778,624	833,120,474	2,150,602,590	2,535,034
Small LUBD	724	686	-	-	-	4,199,200	19,806
Seasonal	(avg mthly) 856	-	5,200,000	0	0	5,200,000	0
FRWH	4,440	-	-	-	-	6,710,000	0
Medium	23,739	-	258,525,753	195,393,805	2,702,253,950	3,156,173,508	7,071,848
Med. LUBD	201	-	-	-	-	4,221,000	35,414
Large <30	3,636	-	-	-	-	1,718,017,123	4,042,621
L<30 LUBD	36	-	-	-	-	616,000	11,109
Lrg30-100	456	-	-	-	-	1,377,496,000	2,932,919
Lrg >100	144	-	-	-	-	4,704,503,105	8,205,093
L>100 LUBD	36	-	-	-	-	1,786,000	34,863
DFC Fed Govt	564	-	-	-	-	1,861,200	0
DFC Prov Gov	240	-	-	-	-	439,200	0
DFC Non-Gov	1,332	-	(1st 2000 kW.h) 1,209,786		1,957,664	3,167,450	0
SEP Med	336	-	-	-	-	29,400,000	0
SEP Lrg <30	72	-	-	-	-	2,200,000	0

May 2013 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$19.20	$7.87	$0.07545	$0.05237		
Small Demand	$19.20	$7.87	$0.07545	$0.05237	$0.03457	$8.85
Small LUBD	$19.20	$7.87			$0.08560	$2.21
Seasonal	(annual) $230.40	$94.44	$0.07545	$0.05237		
FRWH	(average) $115.63					
Medium	$28.57		$0.07545	$0.05237	$0.03457	$8.85
Med. LUBD	$28.57				$0.08560	$2.21
Large <30	$0.00				$0.03250	$7.51
L<30 LUBD	$0.00				$0.07580	$1.88
Large 30-100	$0.00				$0.03022	$6.43
Large >100	$0.00				$0.02929	$5.72
L>100 LUBD	$0.00				$0.06210	$1.46
DFC Fed Govt	$19.20				$2.3495	
DFC Prov Gov	$19.20				$2.3495	
DFC Non-Gov	$19.20		First 2000 kW.h @ $0.07545		$0.38605	
SEP Med	$50.00		$0.02515 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02400 average energy charge & $0.0033 dist. charge (per kW.h)			

2014/15 Revenue at 2013 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$12,023,885	$1,101,414	$112,469,892	$6,721,995	$0	$0	$132,317,186	1.018	$134,729,055
Small D.	$2,888,218	$786,717	$63,355,628	$25,021,267	$28,800,975	$22,435,055	$143,287,859	0.993	$142,313,967
Small LUBD	$13,901	$5,399	-	-	$359,452	$43,772	$422,523	0.999	$421,984
Seasonal	$197,222	$0	$392,340	$0	$0	-	$589,562	1.000	$589,564
FRWH	-	-	-	-	-	-	$513,380	1.000	$513,380
Medium	$678,223	-	$19,505,768	$10,232,774	$93,416,919	$62,585,851	$186,419,535	0.999	$186,271,266
Med. LUBD	$5,743	-	-	-	$361,318	$78,266	$445,326	1.003	$446,630
Lrg <30	$0	-	-	-	$55,835,557	$30,360,086	$86,195,643	1.000	$86,191,140
L<30 LUBD	$0	-	-	-	$46,693	$20,885	$67,578	0.999	$67,426
Lrg30-100	$0	-	-	-	$41,627,929	$18,858,668	$60,486,597	1.000	$60,480,897
Lrg >100	$0	-	-	-	$137,794,896	$46,933,134	$184,728,030	1.000	$184,728,030
L100 LUBD	$0	-	-	-	$110,911	$50,901	$161,812	1.000	$161,811
DFC Fed G	$10,829	-	-	-	$4,372,889	-	$4,383,718	1.002	$4,390,814
DFC Prov G	$4,608	-	-	-	$1,031,900	-	$1,036,508	1.002	$1,038,866
DFC Non-G	$25,574	-	$91,278		$755,756	-	$872,608	1.016	$886,217
SEP Med	$16,800	-	$182,280 (distribution); $739,497 (energy)			-	$938,577	1.000	$938,577
SEP Lrg <30	$7,200	-	$7,260 (distribution); $52,807 (energy)			-	$67,267	1.000	$67,267

May 2014 Interim Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$19.73	$8.09	$0.07752	$0.05381		
Small Demand	$19.73	$8.09	$0.07752	$0.05381	$0.03552	$9.09
Small LUBD	$19.73	$8.09			$0.08795	$2.27
Seasonal	(annual) $236.76	$97.08	$0.07752	$0.05381		
FRWH	(average) $118.80					
Medium	$29.36		$0.07752	$0.05381	$0.03552	$9.09
Med. LUBD	$29.36				$0.08795	$2.27
Large <30	$0.00				$0.03339	$7.72
L<30 LUBD	$0.00				$0.07788	$1.93
Large 30-100	$0.00				$0.03105	$6.61
Large >100	$0.00				$0.03009	$5.88
L>100 LUBD	$0.00				$0.06381	$1.50
DFC Fed Govt	$19.73				$2.4141	
DFC Prov Gov	$19.73				$2.4141	
DFC Non-Gov	$19.73		First 2000 kW.h @ $0.07752		$0.39665	
SEP Med	$50.00		$0.02515 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.02400 average energy charge & $0.0033 dist. charge (per kW.h)			

2014/15 Revenue at 2014 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$12,355,794	$1,132,204	$115,555,548	$6,906,827	$0	$0	$135,950,373	1.018	$138,428,467
Small D.	$2,967,944	$808,709	$65,093,815	$25,709,268	$29,592,439	$23,043,463	$147,215,638	0.993	$146,215,050
Small LUBD	$14,285	$5,550	-	-	$369,320	$44,960	$434,114	0.999	$433,561
Seasonal	$202,667	$0	$403,104	$0	$0	-	$605,771	1.000	$605,772
FRWH	-	-	-	-	-	-	$527,499	1.000	$527,499
Medium	$696,977	-	$20,040,916	$10,514,141	$95,984,060	$64,283,095	$191,519,189	0.999	$191,366,864
Med. LUBD	$5,901	-	-	-	$371,237	$80,390	$457,529	1.003	$458,869
Lrg <30	$0	-	-	-	$57,364,592	$31,209,036	$88,573,628	1.000	$88,569,001
L<30 LUBD	$0	-	-	-	$47,974	$21,441	$69,415	0.999	$69,259
Lrg30-100	$0	-	-	-	$42,771,251	$19,386,593	$62,157,844	1.000	$62,151,987
Lrg >100	$0	-	-	-	$141,558,499	$48,245,949	$189,804,448	1.000	$189,804,448
L100 LUBD	$0	-	-	-	$113,965	$52,295	$166,260	1.000	$166,260
DFC Fed G	$11,128	-	-	-	$4,493,123	-	$4,504,251	1.002	$4,511,542
DFC Prov G	$4,735	-	-	-	$1,060,273	-	$1,065,008	1.002	$1,067,431
DFC Non-G	$26,280	-	$93,783		$776,507	-	$896,570	1.016	$910,553
SEP Med	$16,800	-	$182,280 (distribution); $739,497 (energy)			-	$938,577	1.000	$938,577
SEP Lrg <30	$7,200	-	$7,260 (distribution); $52,807 (energy)			-	$67,267	1.000	$67,267

Section:	Appendix 6.1 & 6.2	**Page No.:**	
Topic:	Proof of Revenue		
Subtopic:	Rates and Billing Determinants		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the 2015/16 proof of revenue, showing all rates and billing determinants, for the interim rates proposed to be finalized for May 1, 2014, and the proposed rates for year ending March 31, 2016 (assuming full year implementation).

RATIONALE FOR QUESTION:

To test proof of revenue at the customer class and sub-class level.

RESPONSE:

Please see Appendix 6.1 of the Application for a copy of the 2015/16 Proof of Revenue. Provided below are the rates and billing determinants associated with the 2015/16 Proof of Revenue based on the 2014 Load Forecast at interim rates effective May 1, 2014 and proposed rates for 2015 (assuming a full year implementation).

RESIDENTIAL:

Forecast 2015/16	Customer Months	>200 A Cust Months	Total kWh
Basic	5,685,137	54,798	7,480,782,568
Diesel	7,140	0	9,067,463
Seasonal	(avg mthly) 20,914	0	92,729,617
FRWH	41,660	0	17,688,461

May 1, 2014 Interim Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.28	$7.28	$0.07381
Diesel	$7.28		$0.07381
Seasonal	(annual) $87.36		$0.07381
FRWH	(average) $26.45		

2015/16 Revenue at 2014 Rates	BC & >200 A Revenue	kWh $	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$41,786,727	$552,156,561	$593,943,288	.9981	$592,844,674
Diesel	$51,979	$669,269	$721,249	.9992	$720,668
Seasonal	$1,827,069	$6,844,373	$8,671,442	.9983	$8,656,423
FRWH			$1,102,053	1.000	$1,102,053

Proposed 2015 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.57	$7.57	$0.07672
Diesel	$7.57		$0.07672
Seasonal	(annual) $90.84		$0.07672
FRWH	(average) $27.50		

2015/16 Revenue at 2015 Rates	BC & >200 A Revenue	kWh Revenue	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$43,451,308	$573,925,639	$617,376,947	.9981	$616,234,993
Diesel	$50,050	$695,656	$749,706	.9992	$749,102
Seasonal	$1,899,850	$7,114,216	$9,014,067	.9983	$8,998,455
FRWH		-	$1,145,633	1.000	$1,145,633

GENERAL SERVICE:

Forecast Data 2015/16	Cust Months	3 Phase Cust Months	1st 11000 kWh	Next 8500 kW.h & ND Runoff	Balance of kWh	Total kW.h	Billable Demand
Small ND	638,482	144,453	1,559,932,386	139,287,414		1,699,219,800	0
Small Demand	144,307	97,153	833,613,099	467,679,333	795,411,730	2,096,704,162	2,444,012
Small LUBD	639	612	-	-	-	3,834,000	19,193
Seasonal	(avg mthly) 876	-	5,320,000	0	0	5,320,000	0
FRWH	4,290	-	-	-	-	6,440,000	0
Medium	24,316	-	264,683,439	200,285,766	2,882,676,804	3,347,646,009	7,517,835
Med. LUBD	196	-	-	-	-	4,312,000	36,512
Large <30	3,754	-	-	-	-	1,798,250,281	4,186,687
L<30 LUBD	36	-	-	-	-	716,000	9,143
Lrg30-100	480	-	-	-	-	1,633,928,000	3,427,076
Lrg >100	156	-	-	-	-	4,553,800,000	7,758,771
L>100 LUBD	36	-	-	-	-	1,369,000	31,923
DFC Fed Govt	564	-	-	-	-	1,754,000	0
DFC Prov Gov	240	-	-	-	-	400,800	0
DFC Non-Gov	1,381	-	(1st 2000 kW.h)	1,295,499	2,192,014	3,487,513	0
SEP Med	300	-	-	-	-	27,000,000	0
SEP Lrg <30	36	-	-	-	-	2,000,000	0

May 2014 Interim Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$19.73	$8.09	$0.07752	$0.05381		
Small Demand	$19.73	$8.09	$0.07752	$0.05381	$0.03552	$9.09
Small LUBD	$19.73	$8.09			$0.08795	$2.27
Seasonal	(annual) $236.76	$97.08	$0.07752	$0.05381		
FRWH	(average) $118.80					
Medium	$29.36		$0.07752	$0.05381	$0.03552	$9.09
Med. LUBD	$29.36				$0.08795	$2.27
Large <30	$0.00				$0.03339	$7.72
L<30 LUBD	$0.00				$0.07788	$1.93
Large 30-100	$0.00				$0.03105	$6.61
Large >100	$0.00				$0.03009	$5.88
L>100 LUBD	$0.00				$0.06381	$1.50
DFC Fed Govt	$19.73				$2.4141	
DFC Prov Gov	$19.73				$2.4141	
DFC Non-Gov	$19.73		First 2000 kW.h @ $0.07752		$0.39665	
SEP Med	$50.00		$0.03598 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.03339 average energy charge & $0.0033 dist. charge (per kW.h)			

2015/16 Revenue at 2014 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$12,597,250	$1,168,625	$120,925,959	$7,495,056	$0	$0	$142,186,889	1.014	$144,199,403
Small D.	$2,847,177	$785,968	$64,621,687	$25,165,825	$28,253,025	$22,216,068	$143,889,750	0.993	$142,946,149
Small LUB D	$12,607	$4,951	-	-	$337,200	$43,569	$398,328	0.999	$397,835
Seasonal	$207,323	$0	$412,406	$0	$0	-		1.003	$621,841
FRWH	-	-	-	-	-	-		1.000	$509,649
Medium	$713,918	-	$20,518,260	$10,777,377	$102,392,680	$68,337,120	$202,739,355	0.996	$201,950,785
Med. LUB D	$5,755	-	-	-	$379,240	$82,882	$467,877	1.001	$468,155
Lrg <30	$0	-	-	-	$60,043,577	$32,321,226	$92,364,803	1.000	$92,360,302
L<30 LUB D	$0	-	-	-	$55,762	$17,647	$73,409	1.000	$73,379
Lrg30-100	$0	-	-	-	$50,733,464	$22,602,963	$73,336,427	1.000	$73,318,053
Lrg >100	$0	-	-	-	$137,023,842	$45,621,574	$182,645,416	1.000	$182,645,304
L100 LUB D	$0	-	-	-	$87,356	$47,885	$135,241	1.000	$135,241
DFC Fed G	$11,128	-	-	-	$4,234,331	-	$4,245,459	0.998	$4,238,651
DFC Prov G	$4,735	-	-	-	$967,571	-	$972,306	0.998	$970,347
DFC Non-G	$27,247	-	$100,427		$869,463	-	$997,137	1.023	$1,020,637
SEP Med	$15,000	-	$167,400 (distribution);		$971,549 (energy)	-	$1,153,949	1.000	$1,153,949
SEP Lrg <30	$3,600	-	$6,600 (distribution);		$66,775 (energy)	-	$76,975	1.000	$76,975

Proposed 2015 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kW.h Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$20.51	$8.41	$0.08058	$0.05594		
Small Demand	$20.51	$8.41	$0.08058	$0.05594	$0.03692	$9.45
Small LUBD	$20.51	$8.41			$0.09146	$2.36
Seasonal	(annual) $246.12	$100.92	$0.08058	$0.05594		
FRWH	(average) $123.49					
Medium	$30.52		$0.08058	$0.05594	$0.03692	$9.45
Med. LUBD	$30.52				$0.09146	$2.36
Large <30	$0.00				$0.03472	$8.02
L<30 LUBD	$0.00				$0.08095	$2.01
Large 30-100	$0.00				$0.03228	$6.87
Large >100	$0.00				$0.03128	$6.11
L>100 LUBD	$0.00				$0.06653	$1.53
DFC Fed Govt	$20.51				$2.5095	
DFC Prov Gov	$20.51				$2.5095	
DFC Non-Gov	$20.51		First 2000 kW.h @ $0.08058		$0.41232	
SEP Med	$50.00		$0.03598 average energy charge & $0.0062 dist. charge (per kW.h)			
SEP Lrg <30	$100.00		$0.03339 average energy charge & $0.0033 dist. charge (per kW.h)			

2015/16 Revenue at 2015 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$13,095,266	$1,214,850	$125,699,352	$7,791,738	$0	$0	$147,801,205	1.014	$149,893,184
Small D.	$2,959,737	$817,057	$67,172,544	$26,161,982	$29,366,601	$23,095,913	$149,573,832	0.993	$148,592,956
Sm LUBD	$13,106	$5,147	-	-	$350,658	$45,296	$414,207	0.999	$413,694
Seasonal	$215,519	$0	$428,686	$0	$0	-	$644,205	1.003	$646,400
FRWH	-	-	-	-	-	-	$529,780	1.000	$529,780
Medium	$742,124	-	$21,328,192	$11,203,986	$106,428,428	$71,043,540	$210,746,270	0.996	$209,926,556
Med. LUBD	$5,982	-	-	-	$394,376	$86,168	$486,526	1.001	$486,814
Lrg <30	$0	-	-	-	$62,435,250	$33,577,233	$96,012,483	1.000	$96,007,804
L<30 LUBD	$0	-	-	-	$57,960	$18,378	$76,338	1.000	$76,307
Lrg30-100	$0	-	-	-	$52,743,196	$23,492,036	$76,235,232	1.000	$76,216,131
Lrg >100	$0	-	-	-	$142,442,864	$47,421,609	$189,864,473	1.000	$189,864,356
L100 LUBD	$0	-	-	-	$91,080	$48,843	$139,922	1.000	$139,922
DFC Fed G	$11,568	-	-	-	$4,401,663	-	$4,413,231	0.998	$4,406,153
DFC Prov G	$4,922	-	-	-	$1,005,808	-	$1,010,730	0.998	$1,008,693
DFC Non-G	$28,324	-	$104,391		$903,811	-	$1,036,526	1.023	$1,060,955
SEP Med	$15,000	-	$167,400 (distribution); $971,549 (energy)			-		1.000	$1,153,949
SEP Lrg <30	$3,600	-	$6,600 (distribution); $66,775 (energy)			-		1.000	$76,975

Section:	Appendix 6.1 & 6.2	**Page No.:**	
Topic:	Proof of Revenue		
Subtopic:	Rates and Billing Determinants		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the 2016/17 billing determinants.

RATIONALE FOR QUESTION:

To test proof of revenue at the customer class and sub-class level.

RESPONSE:

Please see Appendix 6.2 of the Application for a copy of the 2016/17 Proof of Revenue. Provided below are the rates and billing determinants associated with that Proof of Revenue based on the 2014 System Load Forecast at proposed April 1, 2015 and April 1, 2016 rates.

RESIDENTIAL:

Forecast 2016/17	Customer Months	>200 A Cust Months	Total kWh
Basic	5,759,557	55,971	7,606,292,175
Diesel	7,236	0	9,259,742
Seasonal	(avg mthly) 21,014	0	94,557,361
FRWH	39,582	0	16,806,647

Proposed 2015 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.57	$7.57	$0.07672
Diesel	$7.57		$0.07672
Seasonal	(annual) $90.84		$0.07672
FRWH	(average) $27.50		

2016/17 Revenue at 2015 Rates	BC & >200 A Revenue	kWh Revenue	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$44,023,547	$583,554,736	$627,578,283	.9981	$626,416,557
Diesel	$54,777	$710,407	$765,184	.9992	$764,568
Seasonal	$1,908,934	$7,254,441	$9,163,375	.9983	$9,147,505
FRWH		-	$1,088,489	1.000	$1,088,489

Proposed 2016 Rates	Basic Charge	>200 A Charge	kWh Charge
Basic	$7.87	$7.87	$0.07975
Diesel	$7.87		$0.07975
Seasonal	(annual) $94.44		$0.07975
FRWH	(average) $28.59		

2016/17 Revenue at 2016 Rates	BC & >200 A Revenue	kWh Revenue	Total Revenue	Adj. Factor	Adjusted Revenue
Basic	$45,768,205	$606,601,801	$652,370,006	.9981	$651,162,390
Diesel	$56,947	$738,464	$795,412	.9992	$794,772
Seasonal	$1,984,586	$7,540,950	$9,525,535	.9983	$9,509,037
FRWH		-	$1,131,467	1.000	$1,131,467

GENERAL SERVICE:

Forecast Data 2016/17	Cust Months	3 Phase Cust Months	1st 11000 kWh	Next 8500 kWh & ND Runoff	Balance of kWh	Total kWh	Billable Demand
Small ND	644,112	145,727	1,588,066,577	145,655,236		1,733,721,814	0
Small Demand	145,500	97,956	841,782,677	475,052,680	821,237,888	2,138,073,245	2,492,234
Small LUBD	645	618	-	-	-	3,870,000	19,374
Seasonal	(avg mthly) 881	-	5,350,000	0	0	5,350,000	0
FRWH	4,078	-	-	-	-	6,120,000	0
Medium	24,546	-	267,206,930	202,262,405	2,940,195,540	3,409,664,875	7,657,111
Med. LUBD	198	-	-	-	-	4,356,000	36,885
Large <30	3,841	-	-	-	-	1,845,784,844	4,298,740
L<30 LUBD	36	-	-	-	-	716,000	9,143
Lrg30-100	492	-	-	-	-	1,803,856,000	3,794,060
Lrg >100	156	-	-	-	-	4,330,800,000	7,421,360
L>100 LUBD	36	-	-	-	-	1,369,000	31,923
DFC Fed Govt	564	-	-	-	-	1,754,000	0
DFC Prov Gov	240	-	-	-	-	400,800	0
DFC Non-Gov	1,400	-	(1st 2000 kWh)	1,314,393	2,227,244	3,541,636	0
SEP Med	348	-	-	-	-	30,000,000	0
SEP Lrg <30	36	-	-	-	-	2,000,000	0

Proposed 2015 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$20.51	$8.41	$0.08058	$0.05594		
Small Demand	$20.51	$8.41	$0.08058	$0.05594	$0.03692	$9.45
Small LUBD	$20.51	$8.41			$0.09146	$2.36
Seasonal	(annual) $246.12	$100.92	$0.08058	$0.05594		
FRWH	(average) $123.49					
Medium	$30.52		$0.08058	$0.05594	$0.03692	$9.45
Med. LUBD	$30.52				$0.09146	$2.36
Large <30	$0.00				$0.03472	$8.02
L<30 LUBD	$0.00				$0.08095	$2.01
Large 30-100	$0.00				$0.03228	$6.87
Large >100	$0.00				$0.03128	$6.11
L>100 LUBD	$0.00				$0.06653	$1.53
DFC Fed Govt	$20.51				$2.5095	
DFC Prov Gov	$20.51				$2.5095	
DFC Non-Gov	$20.51		First 2000 kWh @ $0.08058		$0.41232	
SEP Med	$50.00		$0.03598 average energy charge & $0.0062 dist. charge (per kWh)			
SEP Lrg <30	$100.00		$0.03339 average energy charge & $0.0033 dist. charge (per kWh)			

2016/17 Revenue at 2015 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$13,210,737	$1,225,564	$127,966,405	$8,147,954	$0	$0	$150,550,660	1.014	$152,681,555
Small D.	$2,984,205	$823,810	$67,830,848	$26,574,447	$30,320,103	$23,551,607	$152,085,020	0.993	$151,087,676
Sm LUBD	$13,229	$5,197	-	-	$353,950	$45,721	$418,098	0.999	$417,581
Seasonal	$216,750	$0	$431,103	$0	$0	-	$647,853	1.003	$650,061
FRWH	-	-	-	-	-	-	$503,600	1.000	$503,600
Medium	$749,144	-	$21,531,534	$11,314,559	$108,552,019	$72,359,701	$214,506,958	0.996	$213,672,617
Med. LUBD	$6,043	-	-	-	$398,400	$87,047	$491,490	1.001	$491,782
Lrg <30	$0	-	-	-	$64,085,650	$34,475,895	$98,561,544	1.000	$98,556,729
L<30 LUBD	$0	-	-	-	$57,960	$18,378	$76,338	1.000	$76,307
Lrg30-100	$0	-	-	-	$58,228,472	$26,065,192	$84,293,664	1.000	$84,273,828
Lrg >100	$0	-	-	-	$135,467,424	$45,359,355	$180,826,779	1.000	$180,826,662
L100 LUBD	$0	-	-	-	$91,080	$48,843	$139,922	1.000	$139,922
DFC Fed G	$11,568	-	-	-	$4,401,663	-	$4,413,231	0.998	$4,406,153
DFC Prov G	$4,922	-	-	-	$1,005,808	-	$1,010,730	0.998	$1,008,693
DFC Non-G	$28,714	-	$105,914		$918,337	-	$1,052,965	1.023	$1,077,781
SEP Med	$17,400	-	$186,000 (distribution); $1,079,499 (energy)			-		1.000	$1,282,899
SEP Lrg <30	$3,600	-	$6,600 (distribution); $66,775 (energy)			-		1.000	$76,975

Proposed 2016 Rates	**Basic Charge**	**3 Ph Charge**	**1st 11000 kWh Chg**	**Next 8500 kWh Chg & ND Bal.**	**Balance of kWh Charge**	**Demand Charge**
Small ND	$21.32	$8.74	$0.08376	$0.05815		
Small Demand	$21.32	$8.74	$0.08376	$0.05815	$0.03838	$9.82
Small LUBD	$21.32	$8.74			$0.09502	$2.46
Seasonal	(annual) $255.84	$104.88	$0.08376	$0.05815		
FRWH	(average) $128.37					
Medium	$31.73		$0.08376	$0.05815	$0.03838	$9.82
Med. LUBD	$31.73				$0.09502	$2.46
Large <30	$0.00				$0.03609	$8.34
L<30 LUBD	$0.00				$0.08417	$2.09
Large 30-100	$0.00			See table below		
Large >100	$0.00			See table below		
L>100 LUBD	$0.00				$0.06914	$1.59
DFC Fed Govt	$21.32				$2.6086	
DFC Prov Gov	$21.32				$2.6086	
DFC Non-Gov	$21.32		First 2000 kWh @ $0.08376		$0.42861	
SEP Med	$50.00		$0.03598 average energy charge & $0.0062 dist. charge (per kWh)			
SEP Lrg <30	$100.00		$0.03339 average energy charge & $0.0033 dist. charge (per kWh)			

2016/17 Revenue at 2016 Rates	Basic Chg Revenue.	3 Ph Chg Revenue	1st Block Revenue	2nd Block Rev.& ND Runoff	Run-Off Revenue	Demand Charge Revenue	Calculated Revenue	Adj Factor	Adjusted Revenue
Small ND	$13,732,468	$1,273,654	$133,016,457	$8,469,852	$0	$0	$156,492,430	1.014	$158,707,425
Small D.	$3,102,060	$856,135	$70,507,717	$27,624,313	$31,519,110	$24,481,210	$158,090,546	0.993	$157,053,819
Sm LUBD	$13,751	$5,401	-	-	$367,727	$47,659	$434,539	0.999	$434,001
Seasonal	$225,310	$0	$448,116	$0	$0	-	$673,426	1.003	$675,721
FRWH	-	-	-	-	-	-	$523,493	1.000	$523,493
Medium	$778,845	-	$22,381,252	$11,761,559	$112,844,705	$75,215,803	$222,982,164	0.996	$222,114,858
Med. LUBD	$6,283	-	-	-	$413,907	$90,736	$510,926	1.001	$511,229
Lrg <30	$0	-	-	-	$66,614,375	$35,851,491	$102,465,866	1.000	$102,460,860
L<30 LUBD	$0	-	-	-	$60,266	$19,109	$79,375	1.000	$79,343
Lrg30-100	$0	-	-	-			See table below		
Lrg >100	$0	-	-	-			See table below		
L100 LUBD	$0	-	-	-	$94,653	$50,758	$145,411	1.000	$145,411
DFC Fed G	$12,024	-	-	-	$4,575,484	-	$4,587,509	0.998	$4,580,152
DFC Prov G	$5,117	-	-	-	$1,045,527	-	$1,050,644	0.998	$1,048,526
DFC Non-G	$29,848	-	$110,094		$954,619	-	$1,094,560	1.023	$1,120,356
SEP Med	$17,400	-	$186,000 (distribution); $1,079,499 (energy)			-	$1,282,899	1.000	$1,282,899
SEP Lrg <30	$3,600	-	$6,600 (distribution); $66,775 (energy)			-	$76,975	1.000	$76,975

TOU Billing Determinants for General Service Large >30 kV:

Sub Class	Non-Winter On-Peak kWh	Non-Winter Off-Peak kWh	Winter On-Peak kWh	Winter Off-Peak kWh	On-Peak Demand
Billing Units:					
Large 30-100	519,269,798	635,703,387	283,043,039	365,839,776	4,010,066
Large >100	1,265,914,994	1,488,050,541	708,739,155	868,095,311	7,659,201
Unit Charges:					
Large 30-100	$ 0.0486	$ 0.0270	$ 0.0590	$ 0.0270	$ 4.64
Large >100	$ 0.0470	$ 0.0260	$0.0570	$ 0.0260	$ 3.50
Revenues:					
Large 30-100	$ 25,259,879	$ 17,163,991	$ 16,698,124	$ 9,877,674	$18,606,706
Large >100	$ 59,498,005	$ 38,689,314	$ 40,398,132	$ 22,570,478	$26,807,204

Section:	Appendix 5.5	**Page No.:**	
Topic:	OM&A Cost Containment		
Subtopic:	BC Hydro Review Report		
Issue:			

PREAMBLE TO IR (IF ANY):

During the 2012/13 & 2013/14 GRA Hydro filed Exhibit #28, which included a report detailing the response and action plan for Manitoba Hydro's comments on the recent BC Hydro Review report examining the operating and capital requirements of BC Hydro for the purpose of minimizing rate increases.

QUESTION:

Can Hydro provide a status update including a timeline for when the other action plan items will occur (or alternatively indicate which of the other Action Plan items detailed in this report will not proceed)?

RATIONALE FOR QUESTION:

MIPUG plans to review Hydro's approach to budgeting and cost control methods.

RESPONSE:

As noted in the preamble to the question, Manitoba Hydro Exhibit #28 from the last GRA included a report that provided Manitoba Hydro's comments with respect to the 2011 BC Hydro review.

While it was never the intention that Manitoba Hydro would have detailed action plans surrounding all of the recommendations in response to the review of BC Hydro, Manitoba Hydro provides the following update on a number of the initiatives that are ongoing at the Corporation, that are relevant to its current operations.

Action Plan #1:

The cost constraint measures currently in place for operating and administrative expenses will be maintained with regular updates provided to the Board. In addition, a review will be undertaken to determine what steps can be taken to further constrain operating and administrative expenses. This review will also be expanded to include capital expenditures. Further, technology will be leveraged to further increase the productivity and efficiency of the Corporation.

Status:

Please see Tab 5, section 5.14, pages 45-51 for a description of the key ongoing initiatives being undertaken by the Corporation to manage its overall operating and capital expenditures. Also see the response to MIPUG/MH I-38a for a summary of the process undertaken by Manitoba Hydro to review its staff complement that resulted in a projected reduction of 300 operational positions over the next 3 years.

Action Plan #2:

Investigate whether cost reductions can be achieved through increased use of external resources.

Action Plan #6:

Consider the use of private sector contractors in ongoing efforts to effectively manage overtime and other costs.

Status:

Manitoba Hydro continuously reviews opportunities to utilize external resources including private sector contractors to either reduce operating costs or optimize the use of its capital funding in light of its need to manage its capital asset growth. The use of external engineering firms and construction contractors helps to manage work schedules more effectively and deliver in-service dates on time and on budget.

For example, urban substation projects in Winnipeg and a number of transmission station projects in Manitoba are now primarily contracted out on an Engineering, Procurement (EP) model or on an Engineering, Procurement and Construction (EPC) basis in order to address resource limitations, streamline engineering and construction processes and take advantage of economies of scale.

Action Plan #3:

Establish an Information Technology Coordinating Committee at the Corporate level to confirm that all Information Technology projects are fully aligned with strategic objectives.

Status:

The Corporate IT Coordinating Committee (Corporate ITCC) has been established and includes representatives from each Business Unit as well as Information Technology Services.

The Corporate ITCC coordinates the efforts of enterprise IT projects, on behalf of all business units and to ensure that there is appropriate communication and that the enterprise IT projects are prioritized according to overall corporate goals.

Action Plan #4:

Undertake a comprehensive supply chain management and logistics review (including upstream and downstream processes).

Status:

Please see Tab 5, section 5.14, subsection 5.14.9, page 50, for a description of its Supply Chain Management initiatives.

Action Plan #5:

In consultation with unions, continue with ongoing efforts to reduce the overall cost of operations and further improve productivity.

Status:

Manitoba Hydro continues to work with its unions towards improving the cost of operations and productivity. Examples of where this has been successfully achieved include reducing the amount of overtime paid to employees when resolving technical issues over the phone, reducing service hours where appropriate and working closely with the affected unions on the consolidation of staff due to district reorganizations.

In addition to the above, Manitoba Hydro continues to explore future opportunities where costs savings or productivity enhancements can be realized. It should be noted that any changes will require dialogue and agreement with the unions prior to implementation.

Action Plan #7:

Further review employee benefit costs to confirm that costs are being effectively incurred to attract and retain talented employees at Manitoba Hydro.

Status:

Manitoba Hydro has or is in the process of undertaking various initiatives to ensure that benefits costs are being effectively incurred. Examples include:

- Manitoba Hydro's Employee Assistance Program – In November 2012, a review of market competitiveness and best practices was completed and recommendations were provided. In April 2013, Manitoba Hydro initiated a change to the delivery model of the Employees Assistance Program, resulting in cost reductions and overall improvements to service delivery.

- Health Benefit Program Administrative Costs – In December 2012, Manitoba Hydro initiated a review of the administrative fees associated with health benefit programs. This was done to ensure financial market competitiveness from Manitoba Hydro benefit service providers. The review concluded that most administrative fees associated with health benefit programs benefit were competitive, with recommendations for improvements on a few benefits. As a result of these recommendations, Manitoba Hydro reopened two contracts with benefit providers, resulting in administrative fee costs savings.

Action Plan #8:

Consider the merits of a variable pay for performance incentive program for management and professional staff.

Status:

Manitoba Hydro has not considered broadly the merits of a variable pay for performance incentive program for management and professional staff.

Action Plan #9:

Review budgeting and forecasting processes to ensure that all programs are cost-justified and that appropriate measures are in place to ensure the cost effectiveness of operating and maintenance expenditures.

Status:

As part of the IFF14 operating budget process, Manitoba Hydro identified additional measures to manage OM&A expenditures below inflationary levels. The forecast apportioned to each of the business units considered specific business and economic factors, as well as the various measures needed to support cost containment.

In evaluating the appropriateness of the business unit targets an analysis of specific work functions was undertaken, seeking opportunities to streamline processes through the use of technology and consolidation or elimination of work, while balancing the need to ensure staffing levels are adequate to provide safe and reliable service.

Action Plan #10:

Examine the concept of requiring a commitment from staff to remain with Manitoba Hydro for a minimum of five years after obtaining apprenticeship training.

Status:

Manitoba Hydro is examining the concept of retaining Power Line apprentices through "Continue to Work" commitments and is conducting research on best practices at other utilities. Preliminary information indicates that programs of this kind are rare in the electrical industry. Further review is required to see if such a program is feasible for Manitoba Hydro, including discussion with affected bargaining units.

Action Item #11:

Investigate the extent to which increased value can be derived from expanding the use of innovative approaches to constructing major capital projects.

Status:

Manitoba Hydro evaluates the various project delivery models when determining how to execute a project. Evaluations are done on a project by project basis and consider a number of factors such as safety and reliability constraints to determine whether internal delivery models or contracting models are most effective. For example, following the Jenpeg unit #1 electrical fire, a turnkey project delivery model was used to significantly accelerate the tendering process and is anticipated will return the unit to service approximately 1 year earlier than design-bid-build model.

Examples of project delivery models include Design-bid-build, Engineering Procurement (EP), Engineering, Procurement and Construction (EPC), etc.

Action Item #12:

Research whether further savings can be realized by providing more flexibility to vendors and contractors to achieve project deliverables.

Status:

Please see Tab 5, section 5.14, subsection 5.14.3, page 46, for descriptions of the actions that Manitoba Hydro has undertaken to manage contractor costs for capital projects.

Action Item #13:

Formalize the use and reporting of project contingencies and segregate contingencies as identifiable components of projects.

Status:

Major New Generations and Transmission projects apply management reserves to properly address both labour and cost escalation risks based on current market conditions and labour restrictions.

For other large projects, progress is being made on formalizing the use and reporting of project contingencies and segregating contingencies as an identifiable component. The amount of contingency can range from 5% to 15% of the overall project cost, and is based on the complexity of the project and identified risks. The risks are ranked by probability and consequence to determine an appropriate level of contingency.

Action Item #14:

Review policies and processes related to First Nation consultations and environmental assessments with a view to reducing these costs.

Status:

Since the review of BC Hydro took place (2011), the landscape regarding Aboriginal relations has significantly changed. There have been a number of court decisions during this time period, such as the recent Tsilhqot'in decision, which have influenced Aboriginal perspectives on a number of matters, including how they wish

to be engaged and involved in projects. This constantly changing landscape results in regular review of processes related to Aboriginal engagement.

Efforts have been made to streamline and improve Aboriginal engagement including:

- Initiating engagement with communities earlier in the process to increase opportunities for communities to learn about the project, share concerns, and provide input into routing decisions;
- Working closely with communities in the development of project-related traditional knowledge studies;
- As early as possible, sharing information from Aboriginal engagement with the Crown as appropriate and agreed-to by communities, with the intent to assist in improving the efficiency and timeliness of any Crown Consultation processes undertaken by the Provincial or Federal governments.
- Reviewing and adjusting communication processes with communities to ensure adequate and timely information sharing with respect to project planning and construction.

It is anticipated that the above actions may increase the ability to mitigate or address concerns through routing or project design, increase transparency with respect to how concerns have been addressed, and reduce the number of concerns, raised during or after regulatory processes have occurred.

Action Item #15:

Provide updated recommendations to the Manitoba Hydro Board on rate design objectives that continue to balance the criteria of energy efficiency, fairness, competitiveness, simplicity, and appropriate cost recovery (among other criteria) that meet the criteria of efficiency, fairness, competitiveness and simplicity.

Status:

Pleaes see Tab 6, section 6.3, pages 7 to 13 for a description of Manitoba Hydro's Time-of-Use Rates proposal for General Service Large. Manitoba Hydro is seeking approval to implement a new Time-of-Use rate design for its large energy consumers. Manitoba Hydro notes that the review of this rate design proposal has been postponed, and is to be addressed in conjunction with the Cost of Service review.

Action Item #16:

Provide an updated Cost of Service Study to the Manitoba Hydro Board that incorporates updated rate design objectives.

Status:

Please see Tab 6, section 6.5, page 15, for a description of the Cost of Service Stakeholder Engagement process undertaken by Manitoba Hydro.

Action Item #17:

Conduct a review and provide recommendations on the appropriate capital structure for Manitoba Hydro during the period of the major capital expansion program.

Status:

Please see Tab 3, section 3.4, subsection 3.4.1, page 11 for a discussion of the financial target review which is underway, as well as the response to PUB/MH I-84d for the associated terms of reference.

Section:	Appendix 11.23	**Page No.:**	Operating Expenses MFR 3
Topic:	OM&A		
Subtopic:	Equivalent Full time (EFT) and Vacancy Rate		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please confirm that an EFT represents one employee working full-time hours of 72.7 hours biweekly or 1,916 hours per year. If not, please provide the new definition of an EFT and provide rationale for a change.

RATIONALE FOR QUESTION:

To review Hydro's OM&A forecast.

RESPONSE:

An EFT represents the equivalent of an employee working full-time hours of 73.7 hours bi-weekly or 1,921 hours per year. The change from 72.7 hours bi-weekly or 1,916 hours per year reflects a move to common hours of work for all employees.

Section:	Appendix 11.23	**Page No.:**	Operating Expenses MFR 3
Topic:	OM&A		
Subtopic:	Equivalent Full time (EFT) and Vacancy Rate		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please indicate and provide supporting calculations for the vacancy factor utilized for forecast 2014/15 to 2016/17.

RATIONALE FOR QUESTION:

To review Hydro's OM&A forecast.

RESPONSE:

The average vacancy rate utilized for the forecast years 2014/15 to 2016/17 is 4.5%.

The vacancy rate is defined as the number of vacant positions as a percentage of the total positions. Vacant positions are attributable to a number of factors including employee retirements, turnover of staff both internally and externally and cost containment initiatives. As a result, these factors are not quantified individually in the vacancy rate calculation.

Section:	Appendix 11.23	**Page No.:**	Operating Expenses MFR 3
Topic:	OM&A		
Subtopic:	Equivalent Full time (EFT) and Vacancy Rate		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide Hydro's actual vacancy rate for the five most recently available fiscal years.

RATIONALE FOR QUESTION:

To review Hydro's OM&A forecast.

RESPONSE:

The table below provides the actual and forecast vacancy rates from 2009/10 to 2013/14.

Manitoba Hydro
Actual and Forecast Vacancy Factor

Vacancy Factor	2009/10	2010/11	2011/12	2012/13	2013/14
Actual	9.3%	7.4%	7.8%	8.5%	8.1%
Forecast	6.6%	5.7%	6.3%	6.2%	5.5%

Section:	Appendix 11.23	**Page No.:**	Operating Expenses MFR 3
Topic:	OM&A		
Subtopic:	Equivalent Full time (EFT) and Vacancy Rate		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please indicate if Hydro still has implemented the External Hiring Freeze referenced in MIPUG/MH I-29f from the 2012/13 & 2013/14 GRA. How does the cancellation of Conawapa effected the External Hiring Freeze and the vacancy factor used in the forecast years?

RATIONALE FOR QUESTION:

To review Hydro's OM&A forecast.

RESPONSE:

While Manitoba Hydro no longer has an external hiring freeze in place, the majority of external hires are for temporary positions to address short term operational requirements (e.g. seasonal workers for shoreline cleanup) and for various technical trades programs such as the Operating and Power Line Technician programs and the Gas Service Person program.

Alternatively, the Corporation has undertaken an extensive review of its staff complement and has committed to reducing approximately 300 operational positions over the forecast period from 2014/15 to 2016/17.

Following the 2014 decision to suspend construction of Conawapa, staff have been redeployed throughout the Corporation in order to address other business requirements. As such, there is no impact on the vacancy factor.

Section:	Appendix 5.5	**Page No.:**	Page 5
Topic:	OM&A		
Subtopic:	Capitalization Requirements		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION (REVISED):

Please update PUB/MH I-79 from the 2012/13 & 2013/14 GRA, including all subparts.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

Since the 2012/13 and 2013/14 GRA, Manitoba Hydro has continued to assess the required changes to its overhead capitalization practices in order to comply with IFRS commencing in 2015/16. There have not been any additional categories of costs identified as ineligible for capitalization; however, refinements in the dollar values and clarification of the eligibility of specific activities have been made.

In order to ensure compliance with IFRS, $54.7 million of ineligible administrative and overhead costs are being expensed in 2015/16 (see Appendix 5.5, Schedule 5.5.5). The increase in costs no longer eligible for capitalization is primarily a result of higher levels of construction activity, resulting in a proportionate allocation of overhead to capital. Historically approximately 40% of Manitoba Hydro's activities were directed towards the construction of capital assets; however, as Manitoba Hydro is entering a period of extensive capital investment this figure has grown to approximately 45%.

Further clarification of specific activities within the Service Areas and Administrative and Clerical Support Staff functions has also been made. For example, in the Service Area function, corporate safety activities (e.g. safety manuals and standards) have been deemed ineligible whereas project specific safety activities (e.g. ensure adherence to safety regulations at a job site) are eligible for capitalization. For additional information on the functions and activities ineligible for capitalization under IFRS, please see PUB/MH-I-74b.

Section:	Appendix 5.5	**Page No.:**	Page 5
Topic:	OM&A		
Subtopic:	Capitalization Requirements		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Provide comment and a comparison on any changes since the last GRA on capitalization of overheads.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

Please refer to MIPUG/MH I-7a.

Section:	Tab 9	**Page No.:**	Page 22-23
Topic:	Financial Impact of Drought		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

In a format similar to MIPUG/MH I-36a from the 2012/13 & 2013/14 GRA, please provide the schedules regarding the five year and seven year drought impacts.

RATIONALE FOR QUESTION:

To review financial risks to Hydro over the near and longer term.

RESPONSE:

Manitoba Hydro's methodology for the calculation of the drought impact is based on the difference in net revenues over the flow years of a representative drought with respect to the net revenues based on the average of all flow cases. The flow years, 1987/88 to 1991/92, inclusive, constitutes the representative 5-year drought. Flow years, 1936/37 to 1942/43, inclusive, make up the representative 7-year drought.

The attached table provides the revenue and cost impacts (excluding financing costs) for these two representative droughts with onset of the drought in 2016/17.

	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Impact of 5-Year Drought on Revenues (millions of $ CDN)						
Revenue						
Extra-Provincial Sales	-175	-171	-174	-161	-129	-809
Expense						
Water Rental	-28	-35	-19	-21	-18	-120
Fuel & Power Purchase	186	364	51	110	66	777
Net Revenue (Excluding Finance Expense)	-333	-500	-206	-250	-177	-1466
Impact of 5-Year Drought on Energy (GWh/yr)						
Extra-Provincial Sales	-4008	-3787	-3688	-3299	-2718	-17500
Hydro Generation	-8354	-10426	-5767	-6176	-5327	-36049
Fuel & Power Purchase	3702	5812	1637	2420	2226	15797

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Total
Impact of 7-Year Drought on Revenues (millions of $ CDN)								
Revenue								
Extra-Provincial Sales	-131	-101	-162	-209	-202	-227	-80	-1112
Expense								
Water Rental	-15	-11	-19	-30	-40	-36	-8	-159
Fuel & Power Purchase	10	-2	51	251	468	379	-7	1149
Net Revenue (Excluding Finance Expense)	-127	-88	-195	-430	-630	-570	-64	-2103
Impact of 7-Year Drought on Energy (GWh/yr)								
Extra-Provincial Sales	-3299	-2628	-3533	-3967	-3610	-3875	-1939	-22851
Hydro Generation	-4483	-3404	-5597	-8837	-11817	-10805	-2540	-47482
Fuel & Power Purchase	820	496	1638	4189	7349	6149	386	21027

Section:	Tab 9	**Page No.:**	Page 22
Topic:	Total Hydraulic Generation and Net Revenues		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please file an updated version of the schedule provided in MIPUG/MH I-35a from the 2012/13 & 2013/14 GRA and the supporting analysis from Figure 9.13 for the Average Hydraulic Energy including corresponding net revenues.

RATIONALE FOR QUESTION:

To review financial risks to Hydro over the near and longer term.

RESPONSE:

Table 1 provides the hydraulic energy and net revenue associated with each of the 102 historical flow years (representing historic flow years 1912/13 to 2013/14, inclusive) for the 2016/17 load year. The variation of net revenue for a specific flow year with respect to the average net revenue from all flow cases is also provided. The values in the table are based on the 2014 Load Forecast, and the 2014 forecast of export and import prices, as well as all other updates for the 2014 IFF.

The net revenue represents the revenues minus costs. Revenues are inclusive of firm and opportunity export sales and transmission inter-connection revenues. Costs are inclusive of water rentals for Manitoba Hydro hydraulic energy generation, costs of Manitoba Hydro thermal generation, import and wind energy purchases, and transmission inter-connection costs.

The revenues and costs are reflected in Manitoba Hydro's Integrated Financial Forecast Statement of Income. Revenues are reflected in the Extra-provincial Revenue, while the costs are reflected in the Water Rentals & Assessments and the Fuel & Power Purchased.

Table 2 includes the actual and average annual total hydraulic generation for fiscal years 1992/93 through 2013/14 provided in Figure 9.13. There was no net revenues analysis associated with the Average Hydraulic Energy shown in this figure.

Table 1. Hydraulic Energy and Net Revenue Variation with Flow Year

Flow Year	Annual System Inflow	MH Hydraulic Energy	Net Revenue	Variation of Net Revenue from Average
	Kcfs	(TWh/yr)	(M $Cdn)	(M $Cdn)
1912/13	112	32.9	226	74
1913/14	119	32.6	217	66
1914/15	98	28.3	95	-56
1915/16	105	30.4	165	13
1916/17	137	36.2	312	161
1917/18	119	34.1	261	110
1918/19	105	29.9	148	-3
1919/20	98	27.4	57	-95
1920/21	103	29.1	119	-32
1921/22	114	31.5	188	37
1922/23	106	29.6	140	-12
1923/24	112	31.1	175	23
1924/25	99	26.7	28	-123
1925/26	120	32.6	217	66
1926/27	111	31.2	185	33
1927/28	155	37.5	325	174
1928/29	114	33.6	248	97
1929/30	87	25.1	-37	-189
1930/31	89	24.5	-69	-221
1931/32	87	24.0	-94	-245
1932/33	95	26.4	18	-134
1933/34	101	27.8	79	-72
1934/35	119	32.7	222	70
1935/36	118	32.4	213	62
1936/37	96	26.6	25	-127
1937/38	99	27.7	69	-83
1938/39	89	25.6	-16	-167
1939/40	79	22.3	-203	-354
1940/41	55	20.2	-349	-500
1941/42	92	21.5	-261	-413
1942/43	101	29.0	117	-35
1943/44	108	30.7	163	11
1944/45	107	30.4	149	-2
1945/46	119	32.5	216	64
1946/47	113	32.2	205	54
1947/48	126	34.0	258	107
1948/49	113	32.9	219	67
1949/50	116	31.0	176	24
1950/51	144	35.7	293	141
1951/52	132	36.4	315	164
1952/53	107	32.1	202	51
1953/54	124	33.6	248	97
1954/55	143	37.3	335	183
1955/56	133	35.5	279	128
1956/57	119	33.1	228	77
1957/58	111	31.6	186	35
1958/59	96	26.6	26	-125
1959/60	137	34.9	282	130
1960/61	102	29.6	135	-16
1961/62	75	21.4	-278	-430
1962/63	119	32.1	201	49
1963/64	111	31.0	183	31
1964/65	113	31.6	193	41
1965/66	157	37.2	334	183
1966/67	151	36.2	300	149
1967/68	115	33.1	223	71
1968/69	133	33.9	256	105
1969/70	148	37.8	335	184
1970/71	145	36.8	319	168
1971/72	139	36.1	305	153
1972/73	126	34.8	261	109
1973/74	115	31.8	195	44
1974/75	164	36.7	310	158
1975/76	139	36.0	296	145
1976/77	92	26.1	-12	-163
1977/78	99	26.5	26	-125
1978/79	122	33.2	238	86
1979/80	135	34.0	239	88
1980/81	93	25.4	-24	-176
1981/82	85	23.7	-110	-262
1982/83	115	31.6	183	32
1983/84	110	30.0	150	-2
1984/85	101	27.9	80	-72
1985/86	136	34.5	267	116
1986/87	125	34.3	249	97
1987/88	82	22.7	-181	-333
1988/89	72	20.4	-334	-486
1989/90	91	25.5	-22	-173
1990/91	85	25.0	-47	-198
1991/92	91	26.2	7	-144
1992/93	115	31.3	177	26
1993/94	106	29.9	136	-16
1994/95	102	28.8	96	-55
1995/96	103	29.5	133	-18
1996/97	141	35.2	275	123
1997/98	151	36.6	316	165
1998/99	106	30.2	127	-25
1999/00	110	30.7	160	9
2000/01	126	33.3	238	87
2001/02	126	33.2	210	58
2002/03	104	28.7	104	-47
2003/04	72	20.9	-317	-468
2004/05	141	34.7	281	130
2005/06	175	38.5	366	214
2006/07	113	31.9	179	27
2007/08	150	36.6	313	161
2008/09	141	36.7	315	164
2009/10	151	36.3	300	149
2010/11	162	38.4	355	204
2011/12	153	35.7	277	125
2012/13	121	33.4	242	90
2013/14	134	35.7	287	135
Average	**115**	**31.1**	**151.43**	**0**

Table 2. Actual Hydraulic Generation

Fiscal Year	Generation (TWh)
1992/93	27.6
1993/94	27.2
1994/95	27.9
1995/96	29.1
1996/97	31.7
1997/98	33.8
1998/99	29.1
1999/00	29.5
2000/01	31.8
2001/02	32.2
2002/03	28.6
2003/04	18.5
2004/05	31.1
2005/06	37.2
2006/07	31.6
2007/08	34.9
2008/09	34.2
2009/10	33.8
2010/11	34.0
2011/12	33.2
2012/13	33.1
2013/14	35.3
Average	31.2

Section:	Appendix 3.3	**Page No.:**	Page 32
Topic:	IFF14		
Subtopic:	Capital Expenditures on Conawapa		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please detail the rationale and purpose for the Conawapa Generation expenditures for 2015 to 2017 totalling $95 million for three years

RATIONALE FOR QUESTION:

To better understand the near-term capital expenditures.

RESPONSE:

Prior to the suspension of the Conawapa Generation project, activities engaged in by the Corporation included the Needs For and Alternatives To (NFAT) hearing, environmental assessments and studies in preparation of the Environmental Impact Statement, negotiations with First Nations, Aboriginal Traditional Knowledge studies and engineering design. The forecasted expenditures associated with these activities totals approximately $11 million for 2014/15.

While the majority of the planning and licensing activities on Conawapa have been suspended following the NFAT recommendation, there are still some activities currently being undertaken including:

- Conclusion of technical environmental studies and analyses required to preserve the knowledge gained to date through extensive fieldwork;

- Opportunities for First Nations to complete Aboriginal Traditional Knowledge (ATK) studies which were already underway or under negotiation that will help to shape local community development and resource management plans; and

- Close of negotiations and environmental assessments, engineering, and regulatory activities.

These activities provide enduring value for Manitoba Hydro, local communities and Manitobans and account for approximately $23 million of the approved forecast for 2015/16 & 2016/17. The remaining forecast is for capitalized interest on construction in progress for 2014/15 to 2016/17.

Section:	Appendix 3.3	**Page No.:**	Page 32
Topic:	IFF14		
Subtopic:	Capital Expenditures on Conawapa		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the rationale for the basis of amortization of Conawapa beginning in 2016/17 as per Tab 5, page 27.

RATIONALE FOR QUESTION:

To better understand the near-term capital expenditures.

RESPONSE:

Please see the response to PUB/MH-I-23d.

Section:	Appendix 3.3	**Page No.:**	Page 32
Topic:	IFF14		
Subtopic:	Capital Expenditures on Conawapa		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Are there any plans to review different investment options or Government charge reductions regarding Conawapa?

RATIONALE FOR QUESTION:

To better understand the near-term capital expenditures.

RESPONSE:

It is Manitoba Hydro's understanding that MIPUG has withdrawn this Information Request.

Section:	Appendix 3.3	**Page No.:**	32
Topic:	Capital Expenditures Forecast		
Subtopic:	Major Projects		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide an update from MIPUG/MH I -28a from the 2012/13 & 2013/14 GRA showing plant in service and accumulated depreciation for all major projects in CEF14 of IFF14.

RATIONALE FOR QUESTION:

To better determine the drivers of depreciation and amortization expense and major project expenses.

RESPONSE:

Please see the following table which provides a schedule of cumulative plant in-service, accumulated depreciation and net plant in-service for Major New Generation and Transmission projects in CEF14.

CEF14 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Wuskwatim - Generation*																					
Plant In Service	1 698	1 738	1 742	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768
Accumulated Depreciation	44	70	97	124	151	178	205	232	260	287	314	341	368	396	423	450	477	504	532	559	586
Net Plant In Service	1 654	1 667	1 645	1 644	1 617	1 590	1 563	1 535	1 508	1 481	1 454	1 427	1 399	1 372	1 345	1 318	1 291	1 264	1 236	1 209	1 182
Keeyask - Generation																					
Plant In Service	-	-	-	-	-	-	2 748	6 413	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496	6 496
Accumulated Depreciation	-	-	-	-	-	-	6	71	161	251	341	432	522	612	702	792	883	973	1 063	1 153	1 244
Net Plant In Service	-	-	-	-	-	-	2 742	6 342	6 335	6 245	6 155	6 064	5 974	5 884	5 794	5 704	5 613	5 523	5 433	5 343	5 252
Grand Rapids Fish Hatchery Upgrade & Expansion																					
Plant In Service	-	-	-	-	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24
Accumulated Depreciation	-	-	-	-	-	1	1	2	3	3	4	4	5	6	6	7	8	8	9	10	10
Net Plant In Service	-	-	-	-	24	23	22	22	21	20	20	19	18	18	17	17	16	15	15	14	13
Kelsey Improvements & Upgrades																					
Plant In Service	300	317	325	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340	340
Accumulated Depreciation	8	14	20	27	33	39	46	52	59	65	72	78	84	91	97	104	110	117	123	126	129
Net Plant In Service	292	303	305	313	307	301	295	288	282	275	269	262	256	250	243	237	230	224	217	214	211
Kettle Improvements & Upgrades																					
Plant In Service	50	56	80	104	130	162	191	191	191	191	192	192	192	192	192	192	192	192	192	192	192
Accumulated Depreciation	2	4	6	9	11	14	18	22	26	29	33	37	41	45	49	53	56	60	64	67	70
Net Plant In Service	48	52	74	95	119	147	173	170	166	162	158	154	151	147	143	139	135	131	128	125	122
Pointe du Bois Spillway Replacement																					
Plant In Service	-	477	569	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572	572
Accumulated Depreciation	-	4	11	19	27	36	44	52	60	68	76	84	93	101	109	117	125	133	141	150	158
Net Plant In Service	-	473	557	553	545	537	529	521	512	504	496	488	480	472	464	455	447	439	431	423	415
Pointe du Bois - Transmission																					
Plant In Service	56	77	77	87	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
Accumulated Depreciation	3	6	10	14	18	22	27	31	35	40	44	48	53	57	61	66	70	74	78	81	83
Net Plant In Service	53	70	67	73	97	92	88	84	79	75	71	66	62	58	53	49	45	41	36	34	31
Gillam Redevelopment and Expansion Program (GREP)																					
Plant In Service	-	18	42	66	88	106	128	150	172	192	210	233	262	266	266	266	266	266	266	266	266
Accumulated Depreciation	-	0	1	2	5	8	12	16	22	28	35	41	47	54	61	69	76	83	90	97	104
Net Plant In Service	-	18	41	63	83	98	116	134	150	163	175	192	215	212	205	198	191	184	176	169	162

* Includes Wuskwatim Transmission

CEF14 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Bipole III - Transmission Line																					
Plant In Service	-	0	1	1	106	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593	1 593
Accumulated Depreciation	-	0	0	0	0	15	37	59	80	102	124	145	167	189	210	232	254	276	297	319	341
Net Plant In Service	-	0	1	1	106	1 578	1 556	1 535	1 513	1 491	1 470	1 448	1 426	1 404	1 383	1 361	1 339	1 318	1 296	1 274	1 252
Bipole III - Converter Stations																					
Plant In Service	18	141	141	141	141	2 652	2 670	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675	2 675
Accumulated Depreciation	-	2	5	8	11	54	119	184	250	315	380	445	510	575	641	704	768	831	895	958	1 022
Net Plant In Service	18	139	136	133	130	2 598	2 551	2 491	2 425	2 360	2 295	2 230	2 165	2 099	2 034	1 971	1 907	1 844	1 780	1 716	1 653
Bipole III - Collector Lines																					
Plant In Service	0	4	4	17	23	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260	260
Accumulated Depreciation	-	-	-	0	0	3	7	11	15	19	23	27	31	35	39	43	47	50	54	58	62
Net Plant In Service	0	4	4	17	22	256	252	249	245	241	237	233	229	225	221	217	213	209	205	201	197
Bipole III - Community Development Initiative																					
Plant In Service	-	-	-	-	-	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62	62
Accumulated Depreciation	-	-	-	-	-	1	1	2	3	4	4	5	6	7	8	8	9	10	11	12	12
Net Plant In Service	-	-	-	-	-	61	61	60	59	58	57	57	56	55	54	53	53	52	51	50	50
Riel 230/500kV Station																					
Plant In Service	0	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Accumulated Depreciation	0	5	13	21	29	36	44	52	59	67	75	82	90	98	106	113	121	129	136	144	152
Net Plant In Service	0	324	317	309	301	294	286	278	271	263	255	247	240	232	224	217	209	201	194	186	178
Manitoba-Minnesota Transmission Project																					
Plant In Service	-	-	-	-	-	7	7	349	349	349	349	349	349	349	349	349	349	349	349	349	349
Accumulated Depreciation	-	-	-	-	-	-	-	5	11	16	22	28	34	40	46	51	57	63	69	75	80
Net Plant In Service	-	-	-	-	-	7	7	344	339	333	327	321	315	310	304	298	292	286	280	275	269
Generating Station Improvements & Upgrades																					
Plant In Service	-	-	-	-	-	-	3	36	69	104	139	174	211	256	288	309	318	333	348	374	442
Accumulated Depreciation	-	-	-	-	-	-	-	0	1	1	3	5	7	10	13	17	22	27	31	37	42
Net Plant In Service	-	-	-	-	-	-	3	36	69	102	136	170	204	246	275	292	297	306	317	337	400

Section:	Appendix 3.3	**Page No.:**	32
Topic:	Capital Expenditures Forecast		
Subtopic:	Major Projects		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

As a comparison, please provide the same update showing plant in service and accumulated depreciation for all major projects for CEF12 and CEF13 (located in IFF12 and IFF13 respectively).

RATIONALE FOR QUESTION:

To better determine the drivers of depreciation and amortization expense and major project expenses.

RESPONSE:

Please see the following table which provides a schedule of cumulative plant in-service, accumulated depreciation and net plant in-service for Major New Generation and Transmission projects in CEF12 and CEF13.

CEF12 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Wuskwatim - Generation*																					
Plant In Service	-	1 741	1 741	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771	1 771
Accumulated Depreciation	-	27	54	81	108	135	162	189	216	243	270	297	324	351	378	405	432	459	486	513	540
Net Plant In Service	-	1 715	1 688	1 691	1 664	1 637	1 610	1 583	1 556	1 529	1 502	1 475	1 448	1 421	1 394	1 367	1 340	1 313	1 286	1 259	1 232
Keeyask - Generation																					
Plant In Service	-	-	-	-	-	-	-	-	2 666	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220
Accumulated Depreciation	-	-	-	-	-	-	-	-	6	71	161	251	340	430	519	609	698	788	877	967	1 056
Net Plant In Service	-	-	-	-	-	-	-	-	2 659	6 149	6 059	5 970	5 880	5 790	5 701	5 611	5 522	5 432	5 343	5 253	5 164
Conawapa																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 096	9 173	10 192	10 192	10 192	10 192	10 192
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	130	274	419	564	709	855
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 065	9 044	9 919	9 774	9 628	9 483	9 338
Kelsey Improvements & Upgrades																					
Plant In Service	213	249	283	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302	302
Accumulated Depreciation	3	7	12	17	22	27	32	37	42	47	52	57	63	68	73	78	83	88	93	97	101
Net Plant In Service	209	242	271	285	280	275	269	264	259	254	249	244	239	234	229	224	219	214	209	205	200
Kettle Improvements & Upgrades																					
Plant In Service	46	48	49	70	79	102	127	135	142	150	158	165	165	165	165	165	165	165	165	165	165
Accumulated Depreciation	0	1	2	3	4	6	7	9	11	13	16	18	20	23	25	27	30	32	35	37	39
Net Plant In Service	46	47	47	67	75	97	120	125	131	137	142	148	145	143	140	138	136	133	131	129	126
Pointe du Bois Spillway Replacement																					
Plant In Service	-	-	387	548	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550
Accumulated Depreciation	-	-	-	6	13	20	28	35	42	49	57	64	71	79	86	93	101	108	115	123	130
Net Plant In Service	-	-	387	542	537	530	522	515	508	500	493	486	478	471	464	456	449	442	435	427	420
Pointe du Bois - Transmission																					
Plant In Service	2	45	54	60	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Accumulated Depreciation	0	1	3	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	33	35	37
Net Plant In Service	2	43	51	55	70	68	66	64	62	60	58	56	54	52	50	48	46	44	43	41	39
Pointe du Bois - Powerhouse Rebuild																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	67	1 483	1 538
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	29	63
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	65	1 454	1 476
Gillam Redevelopment and Expansion Program (GREP)																					
Plant In Service	-	-	-	24	56	88	117	141	171	201	229	256	287	317	355	366	366	366	366	366	366
Accumulated Depreciation	-	-	-	0	1	2	4	7	11	15	20	25	31	38	45	53	62	70	78	87	95
Net Plant In Service	-	-	-	24	55	86	113	134	160	186	210	231	256	280	309	313	305	297	288	280	271

* Includes Wuskwatim Transmission

CEF12 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Bipole III - Transmission Line																					
Plant In Service	-	1	5	5	5	5	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201
Accumulated Depreciation	-	0	0	0	1	1	8	25	41	58	75	91	108	125	141	157	174	190	206	222	238
Net Plant In Service	-	1	4	4	4	3	1 192	1 176	1 159	1 143	1 126	1 109	1 093	1 076	1 060	1 043	1 027	1 011	995	979	963
Bipole III - Converter Stations																					
Plant In Service	18	18	18	128	128	140	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828	1 828
Accumulated Depreciation	-	-	-	1	3	7	29	75	121	167	214	260	306	352	399	445	491	537	583	630	676
Net Plant In Service	18	18	18	127	125	133	1 800	1 753	1 707	1 661	1 615	1 568	1 522	1 476	1 430	1 383	1 337	1 291	1 245	1 199	1 153
Bipole III - Collector Lines																					
Plant In Service	0	2	2	2	2	8	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191
Accumulated Depreciation	-	-	-	-	-	0	2	5	8	11	14	18	21	24	27	30	34	37	40	43	46
Net Plant In Service	0	2	2	2	2	8	189	186	183	180	176	173	170	167	164	160	157	154	151	148	145
Riel 230/500kV Station																					
Plant In Service	0	0	0	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267	267
Accumulated Depreciation	-	0	0	3	9	15	21	27	33	39	44	50	56	62	68	74	80	86	92	97	103
Net Plant In Service	0	0	0	265	259	253	247	241	235	229	223	217	211	205	199	193	187	182	176	170	164
Manitoba-Minnesota Transmission Project																					
Plant In Service	-	-	-	-	-	-	-	7	90	195	195	195	195	195	195	195	195	195	195	195	195
Accumulated Depreciation	-	-	-	-	-	-	-	-	1	4	8	11	15	18	22	26	29	33	37	40	44
Net Plant In Service	-	-	-	-	-	-	-	7	89	191	188	184	180	177	173	169	166	162	159	155	151
Generating Station Improvements & Upgrades																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	45	77	98	108	122	137	163	231	276	322	322
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	1	2	3	4	6	8	10	13	16	20
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	45	77	97	105	118	132	156	222	263	305	301
Additional North South Transmission																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	396	396	396	396	396	396
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	14	20	25	30
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	392	387	381	376	371	365

CEF13 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Wuskwatim - Generation*																					
Plant In Service	1 684	1 729	1 738	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768	1 768
Accumulated Depreciation	16	44	71	100	128	157	186	215	244	273	302	331	359	388	417	446	475	504	533	562	590
Net Plant In Service	1 668	1 685	1 667	1 669	1 640	1 611	1 582	1 553	1 524	1 496	1 467	1 438	1 409	1 380	1 351	1 322	1 293	1 265	1 236	1 207	1 178
Keeyask - Generation																					
Plant In Service	-	-	-	-	-	-	-	2 666	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220	6 220
Accumulated Depreciation	-	-	-	-	-	-	-	7	78	176	273	371	469	567	664	762	860	958	1 056	1 153	1 251
Net Plant In Service	-	-	-	-	-	-	-	2 659	6 142	6 044	5 947	5 849	5 751	5 653	5 556	5 458	5 360	5 262	5 164	5 067	4 969
Conawapa																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 246	9 442	10 492	10 492	10 492	10 492	10 492
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	147	309	474	638	802	967
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5 210	9 296	10 182	10 018	9 853	9 689	9 525
Kelsey Improvements & Upgrades																					
Plant In Service	252	292	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Accumulated Depreciation	7	12	17	22	27	32	37	42	47	52	56	61	66	71	76	81	86	91	96	101	106
Net Plant In Service	245	280	283	278	273	268	263	258	253	248	243	238	233	228	224	219	214	209	204	199	194
Kettle Improvements & Upgrades																					
Plant In Service	49	51	53	75	94	103	135	164	164	164	164	165	165	165	165	165	165	165	165	165	165
Accumulated Depreciation	1	2	3	4	5	6	8	10	12	14	16	18	20	22	24	27	29	31	33	35	37
Net Plant In Service	48	49	50	71	89	97	127	155	153	151	149	146	144	142	140	138	136	134	132	130	128
Pointe du Bois Spillway Replacement																					
Plant In Service	-	426	546	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
Accumulated Depreciation	-	(0)	7	15	22	30	37	45	52	60	67	75	82	90	97	105	112	120	127	135	142
Net Plant In Service	-	426	539	537	529	522	514	507	499	492	485	477	470	462	455	447	440	432	425	417	410
Pointe du Bois - Transmission																					
Plant In Service	45	56	65	65	76	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108	108
Accumulated Depreciation	1	2	4	6	9	12	14	17	20	23	26	29	32	35	38	41	44	47	50	52	55
Net Plant In Service	44	54	61	59	68	97	94	91	88	85	82	79	76	73	70	67	65	62	59	56	53
Pointe du Bois - Powerhouse Rebuild																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	67	1 483	1 538	1 538
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	19	42	64
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	65	1 463	1 497	1 474
Gillam Redevelopment and Expansion Program (GREP)																					
Plant In Service	-	-	24	56	88	117	141	171	201	229	256	287	317	355	366	366	366	366	366	366	366
Accumulated Depreciation	-	-	0	1	2	4	7	11	15	20	25	32	38	46	55	64	72	81	90	99	108
Net Plant In Service	-	-	24	55	86	113	134	160	186	210	231	256	279	308	312	303	294	285	276	268	259

* Includes Wuskwatim Transmission

CEF13 Major New Generation & Transmission Net Plant In Service (in millions of $)

	OB	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Bipole III - Transmission Line																					
Plant In Service	-	0	0	0	0	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201	1 201
Accumulated Depreciation	-	-	0	0	0	7	23	40	56	73	89	106	122	139	155	171	187	203	219	235	250
Net Plant In Service	-	0	0	0	0	1 194	1 177	1 161	1 144	1 128	1 111	1 095	1 078	1 062	1 046	1 030	1 014	998	982	966	951
Bipole III - Converter Stations																					
Plant In Service	18	18	93	132	142	1 700	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827	1 827
Accumulated Depreciation	-	-	1	3	6	27	73	120	166	212	259	305	351	397	444	490	536	582	628	674	720
Net Plant In Service	18	18	93	128	136	1 673	1 754	1 707	1 661	1 615	1 569	1 522	1 476	1 430	1 384	1 337	1 291	1 245	1 199	1 153	1 107
Bipole III - Collector Lines																					
Plant In Service	0	0	4	4	10	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191	191
Accumulated Depreciation	-	-	0	0	0	2	5	8	12	15	19	22	26	29	32	36	39	43	46	50	53
Net Plant In Service	0	0	4	4	10	189	186	182	179	175	172	169	165	162	158	155	151	148	145	141	138
Bipole III - Community Development Initiative																					
Plant In Service	-	-	-	-	-	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
Accumulated Depreciation	-	-	-	-	-	0	1	2	3	4	5	5	6	7	8	9	10	10	11	12	13
Net Plant In Service	-	-	-	-	-	60	60	59	58	57	56	55	55	54	53	52	51	50	50	49	48
Riel 230/500kV Station																					
Plant In Service	0	0	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330	330
Accumulated Depreciation	0	0	6	14	22	31	39	48	56	64	73	81	89	98	106	114	123	131	139	147	155
Net Plant In Service	0	0	324	316	307	299	291	282	274	265	257	249	240	232	224	215	207	199	191	183	175
Manitoba-Minnesota Transmission Project																					
Plant In Service	-	-	-	6	6	6	6	338	338	338	338	338	338	338	338	338	338	338	338	338	338
Accumulated Depreciation	-	-	-	-	-	-	-	3	9	15	21	28	34	40	46	53	59	65	71	78	84
Net Plant In Service	-	-	-	6	6	6	6	335	329	323	317	311	304	298	292	286	279	273	267	261	254
Generating Station Improvements & Upgrades																					
Plant In Service	-	-	-	-	-	-	-	3	36	69	104	139	174	211	256	288	309	318	333	348	374
Accumulated Depreciation	-	-	-	-	-	-	-	-	0	0	1	2	4	6	8	11	15	18	22	26	30
Net Plant In Service	-	-	-	-	-	-	-	3	36	69	102	136	170	205	247	277	294	300	311	322	344
Additional North South Transmission																					
Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	475	475	475	475	475	475	475
Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	16	22	29	36	42
Net Plant In Service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	472	466	459	453	446	439	433

Section:	Appendix 3.3	**Page No.:**	Page 19-21
Topic:	Financial Targets		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update PUB/MH I-30a) from the 2012/13 & 2013/14 GRA and file the respective charts and data tables for the equity ratio, interest coverage ratio and capital coverage ratio for electric options for IFF14 .

RATIONALE FOR QUESTION:

MIPUG to examine financial integrity in the near-term.

RESPONSE:

Please see Appendix 11.14.

Section:	Appendix 3.3	**Page No.:**	Page 19-21
Topic:	Financial Targets		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update PUB/MH I-30c) from the 2012/13 & 2013/14 GRA and provide the supporting definition/formula/calculations for the determination of each of the ratios for electric operations for years actual and forecast years from 2004 – 2034.

RATIONALE FOR QUESTION:

MIPUG to examine financial integrity in the near-term.

RESPONSE:

Please see Appendix 11.13.

Section:	Appendix 3.7	**Page No.:**	10
Topic:	Sinking Fund		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

a) Please update MIPUG/MH I-31b) from the 2012/13 & 2013/14 GRA and provide an update with respect to any progress Manitoba Hydro has made on discussions with the Province of Manitoba with respect to removing sinking fund requirements. What is the implication of the removal of sinking fund requirements on revenue requirement?

RATIONALE FOR QUESTION:

MIPUG is reviewing the financial forecast including Hydro's debt management activities.

RESPONSE:

In Order 33/15, the PUB accepted Manitoba Hydro's submission that cabinet confidences should not be disclosed in Information Requests.

For a discussion of the implications of the removal of sinking fund requirements on revenue requirement, please see the response to MIPUG/MH-I-13b.

Section:	Appendix 3.7	**Page No.:**	10
Topic:	Sinking Fund		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

b) Please update PUB/MH I-50 from the 2012/13 & 2013/14 GRA and provide a continuity schedule on the sinking funds from actual 2004 to forecast 2034, income earned and withdrawals from the fund.

RATIONALE FOR QUESTION:

MIPUG is reviewing the financial forecast including Hydro's debt management activities.

RESPONSE:

The primary implication of the removal of sinking fund requirements on revenue requirement would be a reduction in the amount Provincial Debt Guarantee Fee (PGF) as the calculation of the PGF is based on the level of gross debt (and not net debt after sinking funds).

The sinking fund continuity schedule for the years 2003/04 to 2033/34 is as follows:

MIPUG/MH I - 13 (b)

MANITOBA HYDRO
Sinking Fund Continuity

Actuals to March 31, 2014
(in millions Canadian Dollars)

	Actual 2003/04	Actual 2004/05	Actual 2005/06	Actual 2006/07	Actual 2007/08	Actual 2008/09	Actual 2009/10	Actual 2010/11	Actual 2011/12	Actual 2012/13	Actual 2013/14	Forecast 2014/15	Forecast 2015/16	Forecast 2016/17	Forecast 2017/18	Forecast 2018/19
Canadian Sinking Fund																
Opening Balance	257	301	81	(0)	(0)	(0)	(0)	17	55	129	58	0	21	(0)	7	(0)
Contributions *	50	13	5	-	-	-	17	55	98	58	-	21	-	7	-	39
Withdrawals	(10)	(236)	(84)	-	-	-	-	-	(23)	(129)	(58)	(0)	(21)	-	(7)	-
Premiums/ Discounts	5	3	(2)	-	-	-	-	(17)	-	-	-	-	-	-	-	-
Closing Balance (CAD)	**301**	**81**	**(0)**	**(0)**	**(0)**	**(0)**	**17**	**55**	**129**	**58**	**0**	**21**	**(0)**	**7**	**(0)**	**39**
US Sinking Fund																
Opening Balance	691	414	481	555	630	718	666	366	227	243	294	111	93	286	433	663
Contributions *	63	86	98	100	96	124	82	66	-	49	209	94	190	148	230	188
Withdrawals	(258)	-	-	-	-	(261)	(263)	(191)	-	-	(357)	(110)	-	-	-	(448)
Premiums/ Discounts/ Other **	-	14	(1)	(13)	64	(32)	8	(2)	11	(2)	(52)	-	-	-	-	-
FX Adjustments ***	(81)	(34)	(22)	(12)	(72)	116	(126)	(12)	5	4	16	(1)	2	-	-	-
Closing Balance (CAD)	**414**	**481**	**555**	**630**	**718**	**666**	**366**	**227**	**243**	**294**	**111**	**93**	**286**	**433**	**663**	**403**
Total Closing Balance (CAD)	**715**	**562**	**555**	**630**	**718**	**666**	**383**	**282**	**372**	**352**	**111**	**114**	**286**	**441**	**663**	**442**
Interest Earned on Sinking Fund	43	28	31	29	30	25	24	17	10	10	24	0	2	9	19	24

* The sinking fund contributions shown in this schedule do not include any temporary investment amounts that may be deposited into the sinking fund.
** Premiums/ Discounts/ Other includes premiums and discounts on investments; as well as the difference between the fair market value and carrying value of the USD sinking fund portfolio.
*** As the continuity schedule is presented in Canadian dollars, the FX adjustment line shows the year-end retranslation of the USD sinking fund balances into their Canadian equivalencies.

MIPUG/MH I - 13 (b)

MANITOBA HYDRO
Sinking Fund Continuity

Actuals to March 31, 2014
(in millions Canadian Dollars)

	Forecast 2019/20	Forecast 2020/21	Forecast 2021/22	Forecast 2022/23	Forecast 2023/24	Forecast 2024/25	Forecast 2025/26	Forecast 2026/27	Forecast 2027/28	Forecast 2028/29	Forecast 2029/30	Forecast 2030/31	Forecast 2031/32	Forecast 2032/33	Forecast 2033/34
Canadian Sinking Fund															
Opening Balance	39	19	1	(0)	27	195	103	201	408	626	792	926	465	665	856
Contributions *	19	1	-	27	195	205	201	207	217	227	234	238	213	221	228
Withdrawals	(39)	(19)	(1)	-	(27)	(297)	(103)	-	-	(60)	(100)	(700)	(13)	(30)	-
Premiums/ Discounts	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing Balance (CAD)	**19**	**1**	**(0)**	**27**	**195**	**103**	**201**	**408**	**626**	**792**	**926**	**465**	**665**	**856**	**1,084**
US Sinking Fund															
Opening Balance	403	443	415	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Contributions *	212	246	300	165	-	-	-	-	-	-	-	-	-	-	-
Withdrawals	(165)	(275)	(715)	(165)	-	-	-	-	-	-	-	-	-	-	-
Premiums/ Discounts/ Other **	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FX Adjustments ***	(7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Closing Balance (CAD)	**443**	**415**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**
Total Closing Balance (CAD)	**462**	**416**	**(0)**	**27**	**195**	**103**	**201**	**408**	**626**	**792**	**926**	**465**	**665**	**856**	**1,084**
Interest Earned on Sinking Fund	24	21	19	7	9	13	16	30	44	59	69	82	62	76	91

* The sinking fund contributions shown in this schedule do not include any temporary investment amounts that may be deposited into the sinking fund.
** Premiums/ Discounts/ Other includes premiums and discounts on investments; as well as the difference between the fair market value and carrying value of the USD sinking fund portfolio.
*** As the continuity schedule is presented in Canadian dollars, the FX adjustment line shows the year-end retranslation of the USD sinking fund balances into their Canadian equivalencies.

Section:	MH-55 from the 2012/13 & 2013/14 GRA	**Page No.:**	
Topic:	Accounting Changes		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update MH Exhibit #55 from the 2012/13 & 2013/14 Electric General Rate Application for IFF14.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

Please see the response to PUB/MH I-73a.

Section:	MH-55 from the 2012/13 & 2013/14 GRA	**Page No.:**	
Topic:	Accounting Changes		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update MH Exhibit #55 for actual accounting changes in the 2013/14 fiscal year.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

Please see the response to PUB/MH-I-73a.

Section:	MH-55 from the 2012/13 & 2013/14 GRA	**Page No.:**	
Topic:	Accounting Changes		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please compare part b) above with MH Exhibit #55, providing rationale for variances that differ by +/- 5%.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

The total accounting changes varies in every year from 2012 to 2022 as a result of differences in the proposed accounting changes between MH14 (PUB/MH I-73-a) and MH12 (MH Exhibit #55).

The changes are predominately driven by:

1) Changes in Pension and Benefits – In 2011/12, it was necessary for Manitoba Hydro to reduce its discount rate for the valuation of its pension and benefit obligations reflecting industry trends to calculate rates in accordance with recent guidance from the Canadian Institute of Actuaries and lower interest rates in general. MH12 assumed a discount rate for pension expense of 5.25% whereas MH14 assumes a discount rate of 4.50%. In addition, higher employee levels and increases in wages & salaries as a result of contract settlements have impacted pension and benefit costs.

2) Issuance of Interim Standard for Rate-Regulated activities - on January 30, 2014, the International Accounting Standards Board ("IASB") issued an Interim IFRS (IFRS 14 *Regulatory Deferral Accounts*) for rate-regulated activities effective January 1, 2016 with earlier adoption permitted. Manitoba Hydro will early adopt the interim standard effective April 1, 2015 and will continue to recognize rate-regulated accounts upon its transition to IFRS. In absence of such a standard, MH12 had assumed expensing between $23 and $29 per year for DSM, site remediation and regulatory costs.

3) Impacts of 2014 Depreciation Study - Manitoba Hydro completed a new depreciation study in October 2014 resulting in an annual reduction to depreciation expense as a result of extensions to the service lives of select components, further reallocations of historical costs between existing and new component groups and reductions in the 2010 depreciation deficit balances for various components.

4) General and Administrative costs no longer eligible for capitalization - To ensure compliance with IFRS, $54.7 million of ineligible general and administrative costs are being expensed commencing in 2015/16 (see Appendix 5.5, Schedule 5.5.5). The increase in costs no longer eligible for capitalization is primarily a result of higher levels of construction activity, resulting in a proportionate allocation of overhead to capital. Historically approximately 40% of Manitoba Hydro's activities were directed towards the construction of capital assets; however, as Manitoba Hydro is entering a period of extensive capital investment this figure has grown to approximately 45%.

5) Deferral of IFRS - The implementation of IFRS has been deferred to the 2015/16 fiscal year with comparative information presented for 2014/15. The 2015/16 transition year represents an additional one year deferral to Manitoba Hydro's previous transition date of 2014/15 (assumed under MH12) and is the result of the February 2013 decision by the Accounting Standards Board of Canada (AcSB) to extend the option for rate-regulated entities to transition to IFRS.

Information from PUB-MH I-73a

SCHEDULE A - ACCOUNTING POLICY & ESTIMATE CHANGES - MH14

	Estimated Impact on Actual Results -->						Forecast -->							
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Electric only (in millions of $'s)														
OM&A														
CGAAP Changes														
Intangible Assets	5	4	4	4	4	4	5	5	5	5	5	5	5	5
Overhead Capitalized	5	9	29	29	60	61	62	63	63	64	65	65	66	66
Pension & Other Benefits Changes (e.g. Discount Rate)	-	-	-	3	14	25	27	27	27	27	27	27	27	27
Subtotal CGAAP Changes	10	13	33	37	78	91	94	95	95	96	97	97	98	99
IFRS Changes														
Administrative Overhead								55	55	56	56	57	57	58
Meter Compliance, Exchange and Sampling								(1)	(1)	(1)	(1)	(1)	(1)	(1)
Pension								0	3	3	3	3	3	3
Employee Benefits								(3)	(1)	(2)	(1)	(1)	(1)	(1)
Subtotal IFRS Changes							-	51	56	57	58	58	59	60
Total OM&A Changes	**10**	**13**	**33**	**37**	**78**	**91**	**94**	**146**	**151**	**153**	**154**	**156**	**157**	**158**
DEPRECIATION EXPENSE														
CGAAP Changes														
Administrative Overhead					(0)	(1)	(1)	(2)	(3)	(3)	(4)	(4)	(5)	(6)
Subtotal CGAAP Changes	-	-	-	-	(0)	(1)	(1)	(2)	(3)	(3)	(4)	(4)	(5)	(6)
Depreciation Study Changes														
Average Service Life Changes (2010 Depreciation Study)	-	-	-	(35)	(36)	(41)	(46)	(49)	(51)	(51)	(57)	(64)	(73)	(70)
Average Service Life Changes (2014 Depreciation Study)	-	-	-	-	-	-	(25)	(29)	(30)	(30)	(34)	(38)	(43)	(41)
Subtotal Depreciation Study Changes	-	-	-	(35)	(36)	(41)	(71)	(78)	(81)	(81)	(91)	(102)	(116)	(111)
IFRS Changes														
Administrative Overhead								(0)	(2)	(4)	(6)	(7)	(9)	(11)
Meter Compliance, Exchange and Sampling								0	0	0	0	0	0	1
Provision for Asset Removal								(60)	(63)	(67)	(86)	(96)	(107)	(117)
Change to IFRS Compliant Depreciation								36	38	41	49	55	63	67
Subtotal IFRS Changes	-	-	-	-	-	-	-	(24)	(27)	(30)	(42)	(48)	(53)	(60)
Total Depreciation Changes	**-**	**-**	**-**	**(35)**	**(36)**	**(42)**	**(73)**	**(104)**	**(111)**	**(114)**	**(137)**	**(154)**	**(174)**	**(177)**
FINANCE EXPENSE														
Total Finance Expense Accounting Changes								(0)	(0)	(1)	(1)	(1)	(2)	(2)
CAPITAL TAX EXPENSE														
Total Capital Tax Expense Accounting Changes								(3)	(3)	(3)	(2)	(2)	(2)	(2)
Total Increase (Decrease) in Revenue Requirement	**10**	**13**	**33**	**1**	**43**	**49**	**21**	**39**	**37**	**35**	**14**	**(2)**	**(21)**	**(22)**

Information from MH Exhibit #55 from the 2012 GRA

SCHEDULE A - ACCOUNTING CHANGES - MH12

	Actual 2009	Actual 2010	Actual 2011	Actual 2012	Forecast --> 2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Electric only (in millions of $'s)														
OM&A														
CGAAP Changes														
Intangible Assets	5	4	4	4	4	4	5	5	5	5	5	5	5	5
Overhead Capitalized	5	9	29	29	56	58	59	60	61	62	64	65	66	68
Change in Discount Rate on Pension & Other Benefits				3	8	10	5	5	5	5	5	6	6	6
Subtotal CGAAP Changes	10	13	33	37	69	72	68	70	71	72	74	75	77	78
IFRS Changes														
DSM							23	22	21	20	19	18	17	17
Site Remediation							5	5	5	5	5	5	5	5
Regulatory Costs							1	1	2	1	1	1	1	1
Pension							-	2	4	5	7	9	11	12
Employee Benefits (amortization of RHSA)							(3)	(1)	(1)	(1)	(1)	(1)	(1)	(0)
Admin & General							37	38	38	39	40	41	41	42
Subtotal IFRS Changes							62	66	69	69	71	73	75	77
Total OM&A Accounting Changes	**10**	**13**	**33**	**37**	**69**	**72**	**130**	**135**	**140**	**141**	**145**	**148**	**152**	**156**
DEPRECIATION EXPENSE														
CGAAP Changes														
Administrative & General Overhead Capitalized					(0)	(1)	(1)	(2)	(3)	(3)	(4)	(4)	(5)	(6)
Average Service Life				(35)	(40)	(44)	(47)	(49)	(52)	(55)	(58)	(61)	(68)	(72)
Subtotal CGAAP Changes	-	-	-	(35)	(40)	(44)	(48)	(51)	(54)	(58)	(62)	(65)	(73)	(78)
IFRS Changes														
Administrative & General Overhead Capitalized							(0)	(1)	(2)	(3)	(3)	(4)	(5)	(6)
Reduction in Rate Regulated Assets							(38)	(38)	(37)	(35)	(33)	(31)	(30)	(28)
Change to Equal Life Group Depreciatin Method							36	38	39	40	41	43	52	58
Removal of Net Salvage from depreciation rates							(63)	(66)	(68)	(73)	(77)	(81)	(97)	(107)
Subtotal IFRS Changes	-	-	-	-	-	-	(65)	(67)	(69)	(71)	(72)	(74)	(80)	(84)
Total Depreciation Accounting Changes	**-**	**-**	**-**	**(35)**	**(40)**	**(44)**	**(113)**	**(118)**	**(123)**	**(129)**	**(134)**	**(139)**	**(152)**	**(162)**
FINANCE EXPENSE														
CGAAP Changes					0	0	0	0	0	0	1	1	1	1
IFRS Changes					-	-	2	2	3	3	3	3	4	4
Total Finance Expense Accounting Changes	**-**	**-**	**-**	**-**	**0**	**0**	**2**	**3**	**3**	**3**	**4**	**4**	**5**	**5**
CAPITAL TAX EXPENSE														
CGAAP Changes					0	0	0	0	0	1	1	1	1	1
IFRS Changes					-	-	(3)	(3)	(3)	(3)	(3)	(3)	(2)	(2)
Total Capital Tax Expense Accounting Changes	**-**	**-**	**-**	**-**	**0**	**0**	**(3)**	**(3)**	**(3)**	**(2)**	**(2)**	**(2)**	**(1)**	**(1)**
Total Increase (Decrease) in Revenue Requirement	**10**	**13**	**33**	**2**	**29**	**28**	**17**	**17**	**17**	**13**	**13**	**12**	**3**	**(2)**

	Estimated Impact on Actual Results				Forecast									
MH14 vs MH12	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Change in Revenue Requirement Increase (Decrease)	-	-	-	**(1)**	**13**	**21**	**5**	**22**	**20**	**22**	**1**	**(13)**	**(24)**	**(20)**

Section:	MH-55 from the 2012/13 & 2013/14 GRA	**Page No.:**	
Topic:	Accounting Changes		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update PUB/MH I -55 from the 2012/13 & 2013/14 GRA comparing different jurisdictions regarding IFRS changes.

RATIONALE FOR QUESTION:

To review the proposed accounting changes, the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

The following information is an update to previous GRA responses provided by Manitoba Hydro regarding the application of IFRS in different Canadian jurisdictions. The information provided is based on publically available records. Updated tables as presented in PUB/MH 1-55 from the 2012/13 & 2013/14 GRA with respect to the implementation of IFRS for Manitoba Hydro and for rate regulated utilities in Ontario and Alberta are included in Attachment 1. References used in the compilation of this response are provided in Attachment 2.

For rate regulated distributors in Ontario that adopt IFRS for financial reporting, such entities are also required to apply IFRS for rate setting purposes. The OEB has indicated that it will continue to use deferral and variance accounts where appropriate, but has also expressed its concerns with the additional work utilities may have to incur to maintain separate records for financial reporting and rate setting purposes as follows:

OEB - EB 2008-048, Transition to International Financial Reporting Standards, page 8, *The Board recognizes that minimization of differences between financial and regulatory accounting is desirable where it is feasible. Large differences between financial accounting and regulatory accounting will inevitably result in increased administrative costs to utilities and, if those costs are passed into rates, to their ratepayers.*

For Alberta based utilities adopting IFRS, the AUC published Rule 026, Regulatory Account Procedures Pertaining to the Implementation of the International Financial Reporting Standards. Similar to the OEB, the AUC requires entities adopting IFRS to use IFRS for rate setting purposes subject to AUC regulatory requirements, which are identified in the tables in Attachment 1 to this response.

The number of major Canadian utilities converting to US GAAP is significant and includes Fortis BC, Fortis Alberta, Hydro One, Ontario Power Group and Hydro Quebec. The change to US GAAP has been driven by the continued uncertainty as to whether or not the IASB will in the future adopt a permanent standard permitting the recognition of rate regulated accounting. Most of these utilities applied for and received permission from the Ontario Securities Commission (OSC) for an exemption to apply US GAAP up to January 1, 2019 which allows time for the IASB to complete its projects on rate regulated activities. While Manitoba Hydro is not in possession of all regulatory pronouncements on this issue, its general understanding is that most of the utilities that moved to US GAAP also requested and obtained approval from their regulators to use US GAAP for rate-setting purposes.

	Regulatory Assets and Liabilities
IFRS	On January 30, 2014 the IASB issued an interim standard IFRS 14 – *Regulatory Deferral Accounts* effective January 1, 2016 with earlier application permitted. The interim standard will permit first time adopters of IFRS to continue to account for regulatory deferral account balances in accordance with their previous accounting policies. On September 17, 2014 the IASB issued a Discussion paper *Reporting the Financial Effects of Rate Regulation* as part of its comprehensive project on rate regulated activities. The Discussion paper does not provide specific accounting proposals but explores a number of possible approaches that the IASB could consider when deciding how best to report the financial effects of rate regulation. The deadline for comments for the Discussion paper was January 15, 2015. In early March 2015 the Rate Regulated Activities consultative group met to discuss comments received in response to the Discussion Paper. Next steps will be the development of recommendations for the IASB.
MH Current	MH recognizes the impact of rate-regulation by applying various accounting policies that allow for the deferral of certain costs or credits which will be recovered or refunded in future rates.
MH Proposed	Manitoba Hydro will early adopt the interim standard IFRS 14 – *Regulatory Deferral Accounts* on transition to IFRS effective April 1, 2015.
OEB	The OEB will continue to use deferral and variance accounts for rate making in appropriate circumstances, whether or not these accounts are recognized under IFRS.
AUC	Utilities shall maintain the existing practice of applying to the Commission for approval of any deferral accounts that may be required for the purpose of establishing Regulatory Assets and Liabilities and proposing the mechanism for their disposition.

	Property Plant & Equipment – General and Administrative Overhead
IFRS	As per IAS 16, para. 19 Examples of costs that are not costs of an item of property, plant and equipment are: (a) costs of opening a new facility; (b) costs of introducing a new product or service (including costs of advertising and promotional activities); (c) costs of conducting business in a new location or with a new class of customer (including costs of staff training); and (d) administration and other general overhead costs.
MH Current	To date, Manitoba Hydro (Electric operations) has reduced administrative overhead costs allocated to capital under CGAAP in the amount of approximately $62 annually. These changes were made to better align Manitoba Hydro's capitalization practices with those of other utilities and were agreed to by the PUB in Order 43/13 page 15 which states, "In the Board's view, Manitoba Hydro's proposed accounting changes are appropriate for the test years."
MH Proposed	Upon transition to IFRS, Manitoba Hydro (Electric operations) expects to eliminate an additional $55 million of annual administrative overheads from capitalization as such charges do not meet the IFRS criteria for inclusion in the cost of self constructed capital assets.
OEB	The OEB will require utilities to adhere to IFRS capitalization accounting requirements for rate making and regulatory reporting purposes after the date of adoption of IFRS. Utilities will be required to file a copy of its capitalization policy, identifying any updates to the policy, as part of its first rate filing after IFRS adoption. Revenue requirement impacts of any change in capitalization policy must be specifically and separately identified.
AUC	Utilities shall adhere to the IFRS requirements for capitalization of costs that are not directly attributable to an asset. Any financial difference that arises as a result of the adoption of the IFRS requirements is to be identified in a utility's first IFRS-compliant GRA/GTA, and the utility shall also propose in that rate application the method for settling the difference. In addition, the utility will file a copy of its updated capitalization policy as a part of its first IFRS-compliant GRA/GTA.

	Property Plant & Equipment - Borrowing Costs
IFRS	As per IAS 23, para. 1 "Borrowing costs that are directly attributable to the acquisition, construction, or production of a qualifying asset form part of the cost of that asset. Other borrowing costs are recognized as an expense."
MH Current	MH's interest capitalization rate consists of the weighted average debt rate for all debt outstanding for the period, including anticipated borrowings in the upcoming fiscal year. Where debt is designated to finance a particular capital project, MH will capitalize interest to the asset based on the interest rate from that designated debt issue.
MH Proposed	No future changes are proposed upon transition to IFRS
OEB	The OEB will continue to publish interest rates for CWIP as it does now. Where incurred debt is acquired on an arms length basis, the actual borrowing cost should be used for determining the amount of carrying charges to be capitalized to CWIP for rate making during the period, in accordance with IFRS. Where incurred debt is not acquired on an arm's length basis, the actual borrowing cost may be used for rate making, provided that the interest rate is no greater than the OEB's published rates. Otherwise, the applicant should use the OEB's published rates.
AUC	Subject to subsection (ii), utilities shall maintain the Existing Accounting Practice of including the debt and equity components of AFUDC when accounting for construction work in progress and plant in service. (ii) Utilities may submit an application to the AUC requesting approval to make their regulatory accounting practice the same as the practice under IFRS.

	Property Plant & Equipment - Customer Contributions
IFRS	Under IFRS, customer contributions are to be recognized as revenue; either immediately or over some future period of time. The customer contribution is recognized as revenue based upon the performance obligations of the underlying arrangement.
MH Current	Currently, non-refundable contributions in aid of construction are separately recorded on the balance sheet and amortized to income on a straight-line basis as a reduction to depreciation over the life of the related item of PP&E.
MH Proposed	Customer contributions will be recognized as deferred revenue upon transition to IFRS where the revenue will be recognized over the life of the related plant asset. This will result in little or no impact to net income. However, classification on the income statement will change as the amortization of the contribution that was previously recognized as an offset in depreciation expense will now be recognized as other revenue.
OEB	For regulatory reporting and rate making purposes, customer contributions will be treated as deferred revenue to be included as an offset to rate base and amortized to income over the life of the facilities to which they relate. Distributors should confirm in the introduction to their first rates application after the IFRS transition that the amortization period is being adjusted on an ongoing basis.
AUC	Utilities shall maintain the Existing Accounting Practice of recognizing customer contributions in their property, plant & equipment accounts and including the amortization as an offset to depreciation.

	Property Plant & Equipment - Asset Reclassifications from PPE to Intangible Assets
IFRS	As per IAS 38, para. 8 "An intangible asset is an identifiable non-monetary asset without physical substance." As per IAS 38, para. 4. "Some intangible assets may be contained in or on a physical substance such as a compact disc (in the case of computer software), legal documentation (in the case of a licence or patent) or film. In determining whether an asset that incorporates both intangible and tangible elements should be treated under IAS16 Property, Plant and Equipment or as an intangible asset under this Standard, an entity uses judgment to assess which element is more significant."
MH Current	Upon adoption of CICA section 3064 for its March 2010 year end, MH reclassified (April 1, 2008 balances, net of accumulated amortization) $103 million of Computer Software development and $37 million of Easements from Property, Plant & Equipment to a separate category titled Goodwill and Intangible Assets.
MH Proposed	No future changes are proposed upon transition to IFRS.
OEB	Where IFRS requires certain assets to be recorded as intangible assets that were previously included in PP&E (e.g. computer software and land rights), utilities shall include such intangible assets in rate base and the amortization expense in depreciation expense for determining revenue requirement. This reclassification is also necessary to preserve continuity of the rate base.
AUC	Utilities shall maintain the Existing Accounting Practice of recognizing intangible assets as part of their property, plant & equipment accounts.

	Property Plant & Equipment - Asset Retirement Obligations
IFRS	As per IAS 16, para. 16 "The cost of an item of property, plant and equipment comprises:,… (c) the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which an entity incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period." As per IAS37 para. 10, "A constructive obligation is an obligation that derives from an entity's actions where: (a) by an established pattern of past practice, published policies or a sufficiently specific current statement, the entity has indicated to other parties that it will accept certain responsibilities; and (b) as a result, the entity has created a valid expectation on the part of those other parties that it will discharge those responsibilities."
MH Current	Under GAAP, MH has recognized AROs for the decommissioning of a thermal generating station and the partial decommissioning of a hydraulic generating station.
MH Proposed	MH has reviewed its circumstances under IFRS and has preliminarily concluded that no new provisions exist pertaining to constructive obligations. MH will recognize such obligations when a commitment is made to decommission an asset and significant removal and/or remediation costs are expected to be incurred
OEB	Utilities shall identify separately in their rate applications the depreciation expense associated with amortizing asset retirement costs and the accretion expense associated with the amortization of the asset retirement obligations. The OEB will assess these costs independently of other amortization costs to determine the portion, if any, of these costs that should be recovered in revenue requirement.
AUC	Subject to subsection (ii), utilities shall maintain the existing accounting practice regarding the treatment of asset retirement obligations and future removal and site restoration costs. (ii) Utilities may, by way of application to the AUC, request approval to account for asset retirement obligations and future removal and site restoration costs in accordance with IFRS.

	Property Plant & Equipment - Gains and Losses on Disposition of Assets
IFRS	As per IAS 16, para. 68 "The gain or loss arising from the derecognition of an item of property, plant and equipment shall be included in profit or loss when the item is derecognized,…. Gains shall not be classified as revenue."
MH Current	MH currently recognizes gains and losses on the retirement of plant assets in accumulated depreciation.
MH Proposed	Upon transition to IFRS, MH is planning to recognize gains and losses on asset retirements to net income as they occur. Such gains and losses are expected to be minimized upon transitioning to the Equal Life Group method of depreciation upon transition to IFRS.
OEB	Where a utility for financial reporting purposes under IFRS has accounted for the amount of gain or loss on the retirement of assets in a pool of like assets as a charge or credit to income, for reporting and rate application filings the utility shall reclassify such gains and losses as depreciation expense and disclose the amount separately. Where a utility for financial reporting purposes under IFRS has reported a gain or loss on disposition of individual assets, such amounts should be identified separately in rate filings for review by the OEB.
AUC	Utilities shall maintain the existing accounting practice of recording gains and losses upon retirement or disposal of assets. Utilities shall identify and record any difference in accounting between the IFRS reporting requirements and these regulatory reporting requirements in a separate subsidiary accumulated depreciation account.

	Property Plant & Equipment - Treatment of Asset Impairment
IFRS	As per IAS 36, para 9. "An entity shall assess at the end of each reporting period whether there is any indication that an asset may be impaired. If any such indication exists, the entity shall estimate the recoverable amount of the asset. para. 60, "An impairment loss shall be recognised immediately in profit or loss, unless the asset is carried at revalued amount in accordance with another Standard."
MH Current	Under CGAAP, long-lived assets should be tested whenever events or changes in circumstances indicate their carrying amount may not be recoverable. MH performs an annual impairment test on its goodwill balances which have not indicated any impairment to date.
MH Proposed	MH does not anticipate any substantial changes to its annual impairment testing requirements.
OEB	Where for financial reporting purposes under IFRS a utility has recorded an asset impairment loss, for rate application filings such losses shall be reclassified to PP&E and identified separately to allow consideration of whether and how such amounts are to be reflected in rates.
AUC	Utilities shall maintain the existing accounting practice of having no impairment (or impairment reversal) charges included when providing or reporting financial information to the AUC.

	Depreciation
IFRS	As per IAS 16, para. 43 "Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately." para. 60, "The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity."
MH Current	MH currently depreciates its PP&E component groupings on a straight-line remaining-life basis.
MH Proposed	MH has established new depreciation component groupings as necessary to comply with IFRS requirements. New depreciation rates utilizing the Equal Life Group method of depreciation have been established for implementation upon transition to IFRS. In conjunction with this, Manitoba Hydro has chosen to eliminate its provision in depreciation rates for asset removal costs in order to mitigate the impacts of other accounting changes to a net reduction in revenue requirement. This is consistent with the PUB findings as per page 18 of Order 43/13, "*The Board accepts Manitoba Hydro's position that net salvage should be removed from depreciation when International Financial Reporting Standards are implemented rather than during the test years.*"
OEB	Utilities should continue to use the straight line method of depreciation for regulatory accounting purposes. The OEB engaged Kinectrics Inc. to perform a joint depreciation study for electricity distributors to assist them in making the transition from GAAP to IFRS and to assist them with the determination of suitable asset total service lives for assets commonly used in the distribution of electricity in Ontario. Distributors are required to assess whether the service lives as set out in the Kinectrics report are applicable to their own utility. Where applicable, utilities may make changes to their depreciation rates consistent with the recommendations of the Kinectrics report.
AUC	(i) Depreciation Rates A. Subject to subsection (B), utilities shall continue to use the depreciation rates utilized under the existing accounting practice. B. If the adoption of the IFRS requirements for external financial reporting results in depreciation rates that differ from existing accounting practice or results in a difference in the timing of commencement of depreciation, or both, then a utility may, by way of application to the AUC, request approval to account for regulatory depreciation in accordance with IFRS. (iii) Componentization A. Subject to subsection (B), with respect to componentization, utilities shall record assets at the level of detail being reported under the Existing Accounting Practice. B. If the adoption of IFRS requirements for external financial reporting results in a different level of componentization, then a utility may, by way of application to the AUC, request approval to account for regulatory componentization in accordance with IFRS.

	Financial Reporting
IFRS	As per IAS 1, para. 15, "Financial statements shall present fairly the financial position, financial performance and cash flows of an entity. Fair presentation requires the faithful representation of the effects of transactions, other events and conditions in accordance with the definitions and recognition criteria for assets, liabilities, income and expenses set out in the Framework. The application of IFRSs, with additional disclosure when necessary, is presumed to result in financial statements that achieve a fair presentation." para. 16 "An entity whose financial statements comply with IFRSs shall make an explicit and unreserved statement of such compliance in the notes. An entity shall not describe financial statements as complying with IFRSs unless they comply with all the requirements of IFRSs."
MH Current	Given that the AcSB permitted rate-regulated entities to defer transition to IFRS, MH's audited financial statements will be presented in accordance CGAAP for fiscal year 2014/15.
MH Proposed	MH's audited financial statements will be presented in accordance with IFRS commencing in its fiscal 2015/16 fiscal year and forward. IFRS based comparatives will be issued for the 2014/15 fiscal year.
OEB	The OEB does not have the authority to determine a utilities form of financial reporting (i.e. IFRS or US GAAP) for external financial reporting purposes.
AUC	The AUC does not have the authority to determine a utilities form of financial reporting (i.e. IFRS or US GAAP) for external financial reporting purposes.

	Application Reporting
IFRS	IFRS does not include a standard that applies to the rate application reporting of rate-regulated utilities.
MH Current	MH's 2015/16 and 2016/17 GRA is prepared on the basis that MH would transition to IFRS in its 2015/16 fiscal year. As such the 2014/15 filing requirements were based on CGAAP and the 2015/16 filing requirements were based on IFRS as per IFF 14.
MH Proposed	MH is proposing that upon transition to IFRS that financial and regulatory reporting will be aligned.
OEB	For utilities adopting IFRS, the OEB's requires the historical year (1 year prior to bridge reporting year) to be presented in accordance with CGAAP, the Bridge year to be presented in accordance with CGAAP plus adjustments for rate setting purposes, for the test year in accordance with rate setting purposes.
AUC	Please see Attachment 3 to this response for the AUC's IFRS application reporting requirements per AUC Rule 026. It is MH's understanding, that utilities that use a form of financial reporting that is different than CGAAP, must file rate applications in accordance with Rule 026 and where applicable, seek approval for regulatory deferral accounts for differences between financial reporting and regulatory reporting.

The following list of documents were the primary documents referenced by Manitoba Hydro in compiling the information for this response.

Ontario jurisdiction:

- April 30, 2012 OEB letter Impact on the Decision to defer the Mandatory Date for the Implementation of International Financial reporting Standards to January 1, 2013 by the Canadian Accounting Standards Board;
- July 8, 2010 Asset Depreciation Study for the Ontario Energy Board (Kinectrics Report); and
- July 28, 2009 OEB report "EB-2008-0408, Report of the Board, Transition to International Financial Reporting Standards" which was updated for the February 24, 2010 letter issued by the OEB re: Accounting for Overhead Costs Associated with Capital Work (This letter confirmed that the OEB will require utilities to adhere to IFRS overhead capitalization requirements for rate making and regulatory reporting purposes after the date of adoption of IFRS) and amendments dated November 8, 2010 and March 15, 2011.
- Ontario Securities Commission – (July 21, 2011) In the Matter of Exemptive Relief Applications in Multiple Jurisdictions and in the Matter of Hydro One Inc.
- Ontario Securities Commission – (July 21, 2011) In the Matter of the Process for Exemptive Relief Applications in Multiple Jurisdictions and in the Matter of Ontario Power Generation Inc.
- Ontario Power Generation Inc. 2013 Financial Results - Management Discussion and Analysis
- Hydro One Annual Report 2012 – Management Discussion and Analysis

Alberta jurisdiction:

- May 19, 2009 AUC – Rule 026 – Regulatory Account Procedures Pertaining to the Implementation of the International Financial Reporting Standards, amended November 13, 2013.
- Fortis Alberta Annual Report December 31, 2011, Management Discussion and Analysis

Quebec jurisdiction:

- Hydro Quebec, Annual Report December 31, 2014 Note 1 to the Financial Statements
- R-3905-2014 Response D'Hydro-Quebec Distribution A La Demande De resnseignements No 4 De La Regie

Alberta Utility Commission

Fiscal year	Year filed	Actual / forecast	Accounting/reporting standard to use
2013	2014	Actual	For utilities that have adopted IFRS effective January 1, 2013 – this rule is to be followed for regulatory filings with the AUC, complete with 2012 comparatives prepared using this rule; IFRS is to be used for financial statements, including 2012 comparatives prepared using IFRS. For utilities adopting IFRS effective January 1, 2014, or January 1, 2015 – existing accounting practice is to be followed for regulatory filings with the AUC; existing Canadian GAAP is to be used for financial statements.
2014	2015	Actual	For utilities that have adopted IFRS effective January 1, 2013 – this rule is to be followed for regulatory filings with the AUC, complete with 2013 comparatives prepared using this rule; IFRS is to be used for financial statements, including 2013 comparatives prepared using IFRS. For utilities adopting IFRS effective January 1, 2014 – this rule is to be followed for regulatory filings with the AUC, complete with 2013 comparatives prepared using this rule; IFRS is to be used for financial statements, including 2013 comparatives prepared using IFRS. For utilities adopting IFRS effective January 1, 2015 – existing accounting practice is to be followed for regulatory filings with the AUC; existing Canadian GAAP is to be used for financial statements.
2015 and beyond	2016 and beyond	Actual	This rule is to be followed for regulatory filings with the AUC, complete with prior year comparatives prepared using this rule; IFRS is to be followed for financial statements, including prior year comparatives prepared using IFRS.
2014 (first year in test period) and beyond	2013 and beyond	Forecast	For utilities that have adopted IFRS effective January 1, 2013 – this rule is to be used for forecasts filed with the AUC. For utilities adopting IFRS effective January 1, 2014 – this rule is to be used for forecasts filed with the AUC. For utilities adopting IFRS effective January 1, 2015 – existing accounting practice is to be used for the 2014 forecast year; this rule is to be used for the 2015 and beyond forecast years.
2015 and beyond	2013 and beyond	Forecast	This rule is to be used for forecasts filed with the AUC.

Section:	Appendix 5.6	**Page No.:**	Page 5
Topic:	Depreciation Expense		
Subtopic:	Depreciation Expense Breakdown		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please breakdown depreciation expense Figure 5.7.2 for Transmission and Distribution separately.

RATIONALE FOR QUESTION:

To better determine the drivers of depreciation and amortization expense.

RESPONSE:

Please see the attached table for a further breakdown of Figure 5.7.2 Depreciation Expense for Transmission and Distribution. Please note that the Transmission and Distribution categories also include Substations which has also been broken out separately.

Further Break down of Figure 5.7.2 from Appendix 5.6

Depreciation (in millions of dollars)	2015-16 (IFRS)			2016-17 (IFRS)		
Electric Assets	Provision for Asset Removal	Change to ELG	IFRS Net Impact	Provision for Asset Removal	Change to ELG	IFRS Net Impact
Generation	$ (13)	$ 8	$ (5)	$ (14)	$ 9	$ (5)
Transmission	(4)	1	(3)	(5)	1	(4)
Substations	(20)	10	(10)	(21)	11	(10)
Distribution	(18)	10	(8)	(19)	11	(8)
Communication	(1)	2	1	(1)	1	-
General Equipment	-	-	-	-	-	-
Other (e.g. Buildings, Software)	(1)	2	1	-	2	2
Wuskwatim	(3)	3	-	(3)	3	-
Net increase (decrease) in revenue requirement	**$ (60)**	**$ 36**	**$ (24)**	**$ (63)**	**$ 38**	**$ (25)**

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Peer Reviewed Utilities		
Issue:			

PREAMBLE TO IR (IF ANY):

MH Exhibit #57 from the 2012/13 & 2013/14 GRA provided the utilities that Mr. Kennedy reviewed and relied upon in the selection of average service life recommendations. PUB/MH I-85 indicated the depreciation methodology employed in other Canadian jurisdictions at the time of the 2012/13 & 2013/14 GRA and compared ASL and ELG.

QUESTION:

Please update MH Exhibit #57 in providing the peer information for the companies relied upon by Gannett Fleming in the 2014 Depreciation Study, with a copy of the summary of results from each of the above studies.

RATIONALE FOR QUESTION:

MIPUG is reviewing the depreciation study including any changes that have occurred since the 2010 depreciation study.

RESPONSE:

The following response was provided by Gannett Fleming.

The average service life estimates for the following eight (8) regulated Canadian utilities were reviewed by Mr. Kennedy and relied upon in the selection of average service life recommendations:

- AltaLink LP – 2014 Depreciation study incorporating forecast plant balances as at December 31, 2016

- ATCO Electric – 2010 Depreciation study incorporating plant balances as at December 31, 2008
- BC Hydro – 2005 Depreciation Study incorporating Plant Accounting information through March 31, 2005
- FortisAlberta – 2011 Study incorporating plant balances through December 31, 2010
- FortisBC Inc – 2010 Depreciation Study incorporating plant balances through December 31, 2009
- Newfoundland and Labrador Hydro – 2009 Depreciation Study incorporating plant balances through December 31, 2007
- Ontario Power Generation – 2013 Depreciation Study incorporating plant balances through December 31, 2012
- SaskPower - 2010 Depreciation Study incorporating plant balances through December 31, 2009

A copy of the summary of results from each of the above studies is provided as an attachment to this response.

ALTALINK LP

TABLE 1A. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
AS OF DECEMBER 31, 2013
"COST OF REMOVAL"

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	ESTIMATED NET SALVAGE PERCENTAGE	SURVIVING ORIGINAL COST AS OF 12/31/2013	CALCULATED ACCRUED DEPRECIATION	ANNUAL ACCRUAL		ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION	
						AMOUNT	RATE		EXPENSE	RATE
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)= (7)/(5)	(9)	(10)=(7)+(9)	(11)=(10)/(5)
TRANSMISSION PLANT										
352.00	STRUCTURES AND IMPROVEMENTS	50-R2.5	(40)	200,703,062	13,728,337	1,908,105	0.95	293,825	2,201,930	1.10
353.00	STATION EQUIPMENT	47-R2	(40)	1,666,212,377	137,114,793	17,541,117	1.05	2,499,965	20,041,082	1.20
353.10	SYSTEM COMMUNICATION AND CONTROL	25-L1.5	(25)	535,906,782	39,850,165	6,424,390	1.20	1,537,001	7,961,391	1.49
354.00	TOWERS AND FIXTURES	53-R1.5	(25)	877,972,224	32,017,348	6,320,152	0.72	519,207	6,839,359	0.78
355.00	POLES AND FIXTURES	50-R2.5	(100)	634,220,801	109,071,757	15,083,790	2.38	(290,054)	14,793,736	2.33
356.00	OVERHEAD CONDUCTORS AND DEVICES	65-R4	(40)	675,428,598	54,709,096	4,373,730	0.65	895,323	5,269,053	0.78
358.00	UNDERGROUND CONDUCTORS AND DEVICES	50-R5	(10)	53,898,963	278,275	109,953	0.20	5,846	115,799	0.21
	TOTAL TRANSMISSION PLANT			**4,644,342,807**	**386,769,771**	**51,761,237**		**5,461,112**	**57,222,349**	**1.23**

ATCO ELECTRIC

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
AS OF DECEMBER 31, 2008
"LIFE ANALYSIS"

Account	Description	Estimated Survivor Curve		Estimated Net Salvage	Surviving Original Cost at 12/31/2008	Calculated Accrued Depreciation	Annual Accrual Amount	Annual Accrual Rate
(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)= (7)/(5)
Transmission Plant								
451.0	Land Rights	75-R3		0	20,674,833.12	4,779,383	304,031	1.47
453.0	Poles and Fixtures	55-R3		(90)	275,251,396.63	78,206,556	5,432,800	1.97
454.0	Overhead Conductors - Poles	60-R4		(50)	155,046,283.70	53,927,986	2,693,090	1.74
454.1	Overhead Conductor - Towers	60-R4		(20)	49,222,215.48	14,823,485	860,794	1.75
455.0	Towers and Fixtures	50-R4		(25)	117,731,599.25	25,341,593	2,480,485	2.11
457.0	Substation Equipment	53-R3		(10)	621,655,247.31	169,527,938	12,792,758	2.06
Total Transmission Plant					1,239,581,575.49	346,606,941.00	24,563,958	
McNeill Converter Station								
451.02	Land Rights	45-R4	*	0	21,201.65	10,302	515	2.43
453.02	Poles and Fixtures	45-R3	*	(2)	126,968.70	62,086	3,171	2.50
454.02	Overhead Conductors - Poles	45-R3	*	(2)	119,137.24	58,091	2,979	2.50
457.02	Substation Equipment	45-R2.5	*	(2)	42,907,280.50	16,454,977	1,234,004	2.88
Total McNeill Converter					43,174,588.09	16,585,456.00	1,240,669	
Distribution Plant								
471.0	Land Rights	75-R3		0	37,948,212.21	5,775,999	569,543	1.50
473.0	Poles Towers and Fixtures	45-R2.5		(50)	503,211,225.25	137,416,832	12,542,591	2.49
474.0	Overhead Conductor	55-R2.5		(65)	315,005,840.13	74,947,596	6,537,604	2.08
474.1	Services - Overhead	50-R4		0	26,155,802.26	9,225,562	539,031	2.06
475.0	Underground Conductor	55-R4		(10)	201,691,265.19	35,646,788	3,871,618	1.92
475.1	Services - Underground	50-R3		0	30,139,904.65	5,697,316	670,714	2.23
476.1	Meters	20-R1.5	**	0	46,831,216.30	25,370,068	2,679,330	5.72
476.12	Automated Meter Reading	15-R2.5		0	60,856,105.78	36,641,736	3,873,876	6.37
477.1	Substation Equipment	50-R3		(5)	22,136,408.14	9,045,852	463,385	2.09
478.1	Street Lighting and Signal Systems	43-R4		(10)	52,324,807.53	15,728,856	1,263,777	2.42
478.2	Sentinel Lights	31-R1		20	3,366,362.04	1,820,613	101,922	3.03
479.1	Line Transformers	40-R2.5		5	366,774,173.69	96,287,671	10,352,577	2.82
Total Distribution Plant					1,666,441,323.17	453,604,889.00	43,465,968	
General Plant								
482.0	Structures and Improvements	55-R3		(5)	68,535,159.23	16,757,221	1,368,559	2.00
483.0	Office Furniture and Equipment	15-R3		0	8,530,832.37	2,783,202	599,493	7.03
483.2	Computer Hardware	5-S0.5		0	409,167.71	223,023	62,140	15.19
484.1	Transportation Equipment-Category 1	10-L1.5		10	292,550.57	154,159	28,143	9.62
484.2	Transportation Equipment-Category 2	12-L1		10	24,525,454.04	8,526,821	2,447,047	9.98
484.3	Transportation Equipment-Category 3	25-R3		20	37,064,319.83	9,821,302	1,600,496	4.32
484.4	Transportation Equipment-Category 4	12-R2		20	1,267,002.49	438,536	115,232	9.09
485.0	Tools and Work Equipment	10-R2		0	12,249,310.45	5,278,517	1,272,316	10.39
486.0	Communication Equipment	25-R2		0	95,408,346.00	43,337,782	3,930,036	4.12
488.2	Company Houses	12-L0		85	737,086.76	493,220	45,818	6.22
Total General Plant					249,019,229.45	87,813,783.00	11,469,280	
Total Utility Plant in Service					3,198,216,716.20	904,611,069	80,739,875	2.52

* Indicates use of a life span expiring at June 30, 2035.
** Indicates use of a life span expiring at June 30, 2020.

BC Hydro

TABLE 1B - Summary of Existing Components

Profile ID's for Assets Operated or Primarily Operated by BCTC

Profile ID	Description	Estimated Life
11602	Easement/right of way	N/A
11626	Land Rights,Finite Life, 20Yrs	20
11701	Clearing-Transmission	100
11901	Yard Surfacing	35
12001	Trail, Caterpillar	50
12301	Pad, Helicopter	25
12402	Landscaping	25
21102	Erosion Donut &/Or Bank	25
21103	Debris/Avalance Deflector	25
22006	Equipment Shelter	10
25101	Structure - Steel Support	65
25102	Structure, Support, Wood	30
25202	Pole Structures	50
25203	Towers	65
25301	Foundations	40
25401	Trenches and Ducts	50
25502	Ductbanks > 60Kv	50
42201	Resistor - Load Breaking	25
51002	Condenser - Synchronous, Static	40
52102	Transformer - Auto / Bulk System	45
52103	Transformer - Power > 100 Mva	40
52104	Transformer - Power < 100 Mva	45
52106	Transformer - Power - Composite Pool	45
52301	Reactor - Oil	25
52302	Reactor - Dry Type	40
52303	Reactor - Composite Pool	40
52401	Transformer - Oil / 69 Kv & Above	40
52402	Transformer - Gas / Sf6 / 69 Kv & Above	40
52403	Oil, < 69 Kv	35
52404	Transformer - Current, Encaps	45
52405	Transformer - Current, Composite Pool	50
52406	Comb Ct & Vt Transformer	40
52501	Transformer,Voltage,Capacitor	35
52502	Transformer,Voltage,Oil-Fill	40
52503	Transformer,Voltage,Gas-Fill	50
52504	Transformer,Voltage,Encaps.	45
52505	Transformer,Volt,Comp. Pool	40
53101	Capacitor - Shunt	30
53201	Capacitor - Series	35
53202	Metal Oxide Varister (Mov)	35
53301	Capacitor - Coupling	35

BC Hydro

TABLE 1B - Summary of Existing Components

Profile ID's for Assets Operated or Primarily Operated by BCTC

Profile ID	Description	Estimated Life
54102	Breakers - Gas (Sf6) 12/25 Kv	30
54103	Breakers - Bulk/Mon Oil/Air Blast	45
54104	Breakers - Gas (Sf6) 69 To 500 Kv	45
54105	Breakers - Composite Pool	35
54201	Use Individual Disconnect Caus	40
54203	Disconnect - 3 Phase - 12/25 Kv	35
54204	Disconnect - 3 Phase - 69-230 Kv	35
54205	Disconnect - 3 Phase - 500 Kv	35
54401	Switchgear - Metalclad	30
54501	Circuit Recloser	40
54601	Circuit Switcher	30
55101	Overhead Conductor > 60 kV	60
55103	Line Disconnect Switches	25
55302	Cable - Underground > 60 Kv	40
55303	Cable - Submarine > 60 Kv	45
55401	Buswork and Station Conductor	60
55501	Grounding Systems	40
56001	Insulators	55
57001	Surge Arrestor	30
58001	Converter	30
58002	Inverter	30
58101	Var Compensator - Static	40
58201	Resistor, Anode Damping	25
59101	Regulator - Feeder Circuit	30
59201	Charger System, Battery	20
59301	Storage Batteries, Bank	20
59601	Metering, Dcp, Trolleys	35
61001	Fencing	25
65001	Panels/Cubicles, P&C	20
65101	Fault Locating& Reporting	20
67001	Liner, Pvc, Spill Containment	35
67005	Oil Spill Containment	35
67006	Containment System, Oil Spill	35
68001	Carrier System, Power Line	15
68101	Antennae & Waveguide,Microwave	20
68201	Control Center - Master Equipment	12
68202	Terminal Unit - Remote	20
68203	Integrated Control/Data(Icda)	5
68302	Radio - Microwave - Digital	35
68303	Microwave, Conversion Only	20
68401	Multiplex Device, Analog	5

BC Hydro

TABLE 1B - Summary of Existing Components

Profile ID's for Assets Operated or Primarily Operated by BCTC

Profile ID	Description	Estimated Life
68402	Multiplex Device - Digital	20
68503	Radio Equipment, Protection	25
68601	Protection Tone System	20
68602	Digital Teleprotection System	20
68701	Wave Trap / Line Trap	20
68801	Fibre Optic System	20
70001	Cable, Entrance Protection	20
70102	Accelerometers	20
70103	Seismic Monitoring Equipment	20
73001	Cooling System - Air	25
75101	Drier, Air	25
75103	Piping, Stainless Steel	40
75201	Tanks, Steel, Air/Fuel	30
75202	Tank,Fibrglas,Dbl Bottom,Fuel	30
75204	Tanks - Concrete	30
82510	Railcars	35
89001	Intangible/Franchise/Consent	10
89501	Animal Preventative Equipment	20
99404	Transmission - Contributions in Aid	40

BC Hydro
TABLE 1C - Summary of Existing Components
Burrard Thermal Generation Plant

Profile ID	Description	Estimated Life
30101	Boilers, Casing	30
30102	Boiler. Insulation	30
30103	Roof, Boiler	30
30201	Waterwall, Boiler	30
30203	Superheater, High Temp	30
30204	Superheater - Low Temp	30
30205	Reheater, Boiler	30
30301	Header - Drum	40
30501	Piping - High Pressure	40
30601	Fan - Forced Draft	30
30602	Breaching - Flue System	30
30603	Stack, Flue Gases	30
30604	Preheater, Air	30
30605	Burner - Fuel	15
30606	Instrumentation - Boiler	30
30608	Control System, Feedwater	15
30609	Seals - Crown	30
30610	Control System, Fuel	15
30611	Desuperheater System	15
30612	Refractory, Boiler	20
30613	Boiler, Package	30
30801	Transfer System, Ammonia	20
30802	Water Deluge System, Ammonia	30
30803	Vapouriser, Ammonia	20
30804	Compressor, Vapour, Ammonia	15
30805	Piping System, Ammonia	30
30901	Monitoring Equipment - Continuous Emissions	10
30902	Reporting System, Cem	10
30903	Delivery System - Ammonia - Scr	30
30904	Catalyst - Scr	10
31001	Water Intake / Discharge Structure	50
31002	Protection, Cathodic	20
31003	Gates, Inlet/Outlet	30
31004	Screens - Intake	20
31005	Conduit, Intake/Discharge	50
33001	Heat Exchanger, Shell & Tube	30
33002	Pump & Motor	30
33004	Condenser, Boiler	30
34002	Casing Cylinder	30
34004	Turbine - Composite Pool	30
34005	Coils - Stator	30
34006	Rotor / Generator - Thermal	30
34007	Generator - Composite Pool - Thermal	30
34008	Supervisory System, Turbine	20
34009	Cooling System - Hydrogen	30
34015	Turbine Blades Sets	15

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
11501	Land, and Land Rights (ID's 11501, 11601, and 11604)	N/A
11801	Recreation Facilities	20
12002	Roads - Paved and Gravel	50
12005	Roads and Trails, Composite Pool	50
12101	Tracks, Railway	40
12201	Bridge, Wood	25
12202	Bridge - Steel	46-R3
12203	Bridge - Concrete	75-R2
12401	Drainage System, Yard	50
12501	Wall, Retaining, Steel	50
12502	Wall, Retaining, Concrete	100
21001	Dam - Embankment / Concrete	100-R4
21002	Dam - Crib / Wooden	35-L3
21101	Dike - Protective	100
21102	Erosion Donut &/Or Bank	25-R2
21901	Roofs	30-R1.5
22001	Plant - Concrete Or Steel	50
22002	Commercial - Concrete Or Steel	50-R2.5
22003	Powerhouse - Integral With Dam	100-R4
22004	Building - Wood	15-R1
22005	Building - Composite Pool	60-R2
22006	Equipment Shelter	10-R0.5
22101	Office Trailer / Mobile Home	23-R1
22201	Leasehold Improvements	5
22202	Leashold Improvements	10
23001	Spillway - Separate From Dam	75-R2
23101	Intake Structure - Power	100-R4
23201	Penstock - Steel	75-R4
23202	Penstock - Concrete	100-R4
23203	Penstock - Wood	50-S3
23302	Tank - Surge / Steel	50-R3
23401	Tailrace	100-R3
23501	Canal	100-R3
23601	Stoplogs - Steel	60-R3
23602	Stoplogs, Wood	25
23603	Hoist - Gate	55-R4
23604	Gate	40-R2.5
23605	Gates, Embedded Components	40
23606	Inlet Valves, Penstock & Turbi	50
23701	Trash Racks	50-R2.5
23801	Cranes	60-R3
23901	Fishways - Steel	50-R2.5
23902	Fishways, Concrete	100
24001	Navigation Locks	100
24002	Navigation Lock Gates - Controls	20
24003	Motor	20

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
24101	Sluiceway - Separate From Dam	100-R3
24201	Tunnels	100-R4
24301	Slope Stabilization	100
24401	Dock / Wharf	25
24402	Ramp, Boat/Barge	20
25201	Poles	50-L4
25501	Ductbanks	50-R3
25502	Ductbanks > 60Kv	50-R3
25601	Barriers & Enclosures	50
25701	Capacitor, <60 Kv	30
30206	Desuperheater/Attemperator	10
30401	Valves, Safety	30
30607	Asbestos Abatement	30
30701	Equipment, Water Treatment	40
31006	Valves	30
31007	Turbine / Penstock Inlet Valves	50-R3
33005	Condenser Air Removal System	15
41001	Runner - Water Wheel	50-R2
41002	Governor System - Turbine	50-R4
41003	Casing - Embedded / Spiral Case	50-R4
41004	Shaft - Turbine	50-R4
41005	Gates, Wicket	50
41006	Cover - Head	50-R4
41007	Turbine - Hydro Composite Pool	50-R4
41008	Bearings For Wicket Gate	25
41501	Draft Tube Water Depression System	25-R3
41601	Unwatering System	25-R3
41701	Turbine Air Injection Blower	25
42001	Coils - Stator	30-R2.5
42002	Rotor - Generator	50-R4
42003	Generator - Composite Pool (Hydro)	50-R3
42101	Excitor - Rotary	40-R1.5
42102	Excitor - Static	40-R4
42104	Excitor - Composite Pool	40-R4
42201	Resistor - Load Breaking	25-R3
42501	Piping, Water Cooling System	40
42502	Monitoring System, Cooling	20
46501	Cooling System, Water	15
46502	Engine - Internal Combustion	25-R2.5
46701	Heat Exchanger	30-R3
47201	Turbine - Gas	25-R3
47401	Fuel System	40
48001	Coils, Stator	40
48002	Rotor, Generator	40
48003	Generator - Composite Pool	30-R2
48004	Generator, Diesel	30
49001	Pump	20-R0.5

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
49002	Motor	30
49201	Vacuum System	25
51001	Condensor,Synchronous,Rotary	50
51002	Condenser - Synchronous, Static	40-S4
52101	Transformer - Generator / Set-Up	40-R4
52102	Transformer - Auto / Bulk System	45-R4
52103	Transformer - Power > 100 Mva	40-R3
52104	Transformer - Power < 100 Mva	45-R3
52105	Transformer - Station Service	40-R3
52106	Transformer - Power - Composite Pool	45-R3
52201	Distribution Transformers	35-R2
52301	Reactor - Oil	25-R1.5
52302	Reactor - Dry Type	40-R4
52303	Reactor - Composite Pool	40-R4
52401	Transformer - Oil / 69 Kv & Above	40-R4
52402	Transformer - Gas / Sf6 / 69 Kv & Above	40-R1.5
52404	Transformer - Current, Encaps	45-R3
52405	Transformer - Current, Composite Pool	50-R4
52601	Mobile Substations	25-R3
53101	Capacitor - Shunt	30-S4
53201	Capacitor - Series	35-R4
53202	Metal Oxide Varister (Mov)	35-R1
53301	Capacitor - Coupling	35-R4
54101	Breaker,Air/Magnetic	20
54102	Breakers - Gas (Sf6) 12/25 Kv	30-R3
54103	Breakers - Bulk/Mon Oil/Air Blast	45-R4
54104	Breakers - Gas (Sf6) 69 To 500 Kv	45-R2.5
54105	Breakers - Composite Pool	35-L4
54202	Disconnect, 1 Phase, Hookstick	30
54203	Disconnect - 3 Phase - 12/25 Kv	35-R2.5
54204	Disconnect - 3 Phase - 69-230 Kv	35-R2.5
54205	Disconnect - 3 Phase - 500 Kv	35-R2.5
54401	Switchgear - Metalclad	30-R3
54601	Circuit Switcher	30-R4
55102	Overhead Conductor	45-R1
55201	Overhead Conductor Services < 60kV	45
55202	Ug Conductor Services < 60 Kv	45
55301	Underground / Submarine Cable	40-R3
55302	Cable - Underground > 60 Kv	40-R4
55303	Cable - Submarine > 60 Kv	45-R4
55304	Cable, Submarine < 60 Kv	35
58101	Var Compensator - Static	40-R3
58901	Power Supply, Solar Panel	10
59001	Power Supply - Uninterruptible	15-R3
59101	Regulator - Feeder Circuit	30-R3
59401	Meters	25-R2
59402	Meters, Transmission	30

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
59501	Street Lights	40-R3
59502	Street Lights,Dist. , Leased	40
61101	Alarm/Security System	20
61201	Booms, Floating	15
61202	Booms, Floating Cedar	25
61203	Booms, Oil Containmnet	15
62001	Fire Protection	25
62501	Firefighting Equipment	25
63001	Exercise Equipment	5
67003	Containment Facility, Concrete	50
67004	Spill Pond, Natural	25
67005	Oil Spill Containment	35-R3
68201	Control Center - Master Equipment	12-R2
68204	Distributed Control System	20-R2
68205	Global Positioning Equipment	10
68301	Radio,Microwave,Analog	35
68302	Radio - Microwave - Digital	35-R4
68402	Multiplex Device - Digital	20-S3
68501	Radio Systems, Uhf/Vhff	35
68502	Mobile Dispatch System	5
68901	Telephone Equipment - Pbx/Pax	20-R2
68903	Tel Equip, Monitoring System	5
68904	Telephone System, Cellular	5
70101	Hydrometeorological Equipment	15
70103	Seismic Monitoring Equipment	20-R2
73001	Cooling System - Air	25-S4
74001	Motor - Generator Sets	35-S4
75102	Piping/Valving, Steel	20
75104	Compressor - Air	25-R3
75203	Tanks - Air Stainless/Oil Steel	30-R2
75204	Tanks - Concrete	30-R2
75205	Tanks, Wood	25
75301	Water Supply System	40
80101	Computer,Hardware,Micro (Pc)	4
80103	Computer,Hardware,Input/Output	5
80105	Laptops	3
80204	Storage Device, Disc/Tape	5
80302	Software - Mainframe	10-SQ
80303	Software - Mid-Range Systems	5-SQ
80304	PC Software	4
80305	Software Upgrade, mid-range systems	2
80306	Network Software	5
80401	Stimulator, Training	5
80501	Premise Cabling	7
80502	Routers	5-SQ
80503	Switches	5-SQ
80504	Servers	5-SQ

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
80508	Misc. Network Equipment	4
81001	Automobiles	8-L2.5
81101	Trucks < 1 Ton- 2 Wheel Drive	8-L2.5
81201	Trucks < 1 Ton- 4 Wheel Drive	8-L2.5
81301	Trucks > 1 Ton-2 Wheel Drive	13-R1.5
81302	Trucks > 1 Ton-4 Wheel Drive	13-R1.5
81401	Trucks >= 1 Ton 4 Wheel Drive	13
81501	Trucks >= 1 Ton 6 Wheel Drive	12
81601	Tractor - Highway	9-L2.5
81701	Aerial Device	13
81702	Line / Service / Van Body	15-R3
81703	Derricks / Diggers	15
81704	Ride-A-Rails	25
82501	Forklift / Pallet Jack	20-R3
82502	Snow Vehicle	20-R3
82503	Sweeper	15
82504	Loader / Backhoe	17-R1.5
82505	Trailer - Reel / Pole / Utility	20-R1.5
82506	Welder, Mobile, Self-Powered	15
82507	Compressor,Mobile,Self-Powered	15
82508	Chipper	15
82512	Regen Plan, Xformer Oil	15
82513	Manlift	15
82514	All Terrain Vehicle	8
82550	Tools and Work Equipment	15
82601	Test / Calibration Equipment	15-SQ
82603	Manufacturing/Test Equipment	15
83001	Boat	15
83002	Boat, Tugboat	20
85001	Office Furniture	15
85003	Signs/Plaques	30
88001	Lab Equipment, Hi-Pwr Lab	20
88002	Lab Equipment, Misc	15
88003	Lab Equipment, Hi-Pwr Lab	15
99401	Generation - Pre 1996 Contributions in Aid	20
99403	Distribution - Pre 1996 Contributions in Aid	45
99405	Substation - Pre 1996 Contributions in Aid	40
99601	Columbia River Treaty	52
99602	Columbia River Treaty - Contributions in Aid	52

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID's for Assets Operated or Primarily Operated by BCTC

Profile ID	Description	Estimated Life
11602	Easement/right of way	N/A
11626	Land Rights,Finite Life, 20Yrs	20
11701	Clearing-Transmission	100
11901	Yard Surfacing	35
12001	Trail, Caterpillar	50
12301	Pad, Helicopter	25
12402	Landscaping	25
21102	Erosion Donut &/Or Bank	25
21103	Debris/Avalance Deflector	25
22006	Equipment Shelter	10
25101	Structure - Steel Support	65
25102	Structure, Support, Wood	30
25202	Pole Structures	50
25203	Towers	65
25301	Foundations	40
25401	Trenches and Ducts	50
25502	Ductbanks > 60Kv	50
42201	Resistor - Load Breaking	25
51002	Condenser - Synchronous, Static	40
52102	Transformer - Auto / Bulk System	45
52103	Transformer - Power > 100 Mva	40
52104	Transformer - Power < 100 Mva	45
52106	Transformer - Power - Composite Pool	45
52301	Reactor - Oil	25
52302	Reactor - Dry Type	40
52303	Reactor - Composite Pool	40
52401	Transformer - Oil / 69 Kv & Above	40
52402	Transformer - Gas / Sf6 / 69 Kv & Above	40
52403	Oil, < 69 Kv	35
52404	Transformer - Current, Encaps	45
52405	Transformer - Current, Composite Pool	50
52406	Comb Ct & Vt Transformer	40
52501	Transformer,Voltage,Capacitor	35
52502	Transformer,Voltage,Oil-Fill	40
52503	Transformer,Voltage,Gas-Fill	50
52504	Transformer,Voltage,Encaps.	45
52505	Transformer,Volt,Comp. Pool	40
53101	Capacitor - Shunt	30
53201	Capacitor - Series	35
53202	Metal Oxide Varister (Mov)	35
53301	Capacitor - Coupling	35
54102	Breakers - Gas (Sf6) 12/25 Kv	30
54103	Breakers - Bulk/Mon Oil/Air Blast	45
54104	Breakers - Gas (Sf6) 69 To 500 Kv	45
54105	Breakers - Composite Pool	35
54201	Use Individual Disconnect Caus	40

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Profile ID	Description	Estimated Life
54203	Disconnect - 3 Phase - 12/25 Kv	35
54204	Disconnect - 3 Phase - 69-230 Kv	35
54205	Disconnect - 3 Phase - 500 Kv	35
54401	Switchgear - Metalclad	30
54501	Circuit Recloser	40
54601	Circuit Switcher	30
55101	Overhead Conductor > 60 kV	60
55103	Line Disconnect Switches	25
55302	Cable - Underground > 60 Kv	40
55303	Cable - Submarine > 60 Kv	45
55401	Buswork and Station Conductor	60
55501	Grounding Systems	40
56001	Insulators	55
57001	Surge Arrestor	30
58001	Converter	30
58002	Inverter	30
58101	Var Compensator - Static	40
58201	Resistor, Anode Damping	25
59101	Regulator - Feeder Circuit	30
59201	Charger System, Battery	20
59301	Storage Batteries, Bank	20
59601	Metering, Dcp, Trolleys	35
61001	Fencing	25
65001	Panels/Cubicles, P&C	20
65101	Fault Locating& Reporting	20
67001	Liner, Pvc, Spill Containment	35
67005	Oil Spill Containment	35
67006	Containment System, Oil Spill	35
68001	Carrier System, Power Line	15
68101	Antennae & Waveguide,Microwave	20
68201	Control Center - Master Equipment	12
68202	Terminal Unit - Remote	20
68203	Integrated Control/Data(Icda)	5
68302	Radio - Microwave - Digital	35
68303	Microwave	20
68401	Multiplex Device, Analog	5
68402	Multiplex Device - Digital	20
68503	Radio Equipment, Protection	25
68601	Protection Tone System	20
68602	Digital Teleprotection System	20
68701	Wave Trap / Line Trap	20
68801	Fibre Optic System	20
70001	Cable, Entrance Protection	20
70102	Accelerometers	20
70103	Seismic Monitoring Equipment	20
73001	Cooling System - Air	25
75101	Drier, Air	25
75103	Piping, Stainless Steel	40
75201	Tanks, Steel, Air/Fuel	30
75202	Tank,Fibrglas,Dbl Bottom,Fuel	30
75204	Tanks - Concrete	30
82510	Railcars	35
89501	Animal Preventative Equipment	20
99404	Transmission - Contributions in Aid	40

BC Hydro
TABLE 1A - Summary of Existing Components
Profile ID's for Assets Owned and Operated by BC Hydro

Burrard Thermal Generation Plant

Profile ID	Description	Estimated Life
30101	Boilers, Casing	30
30102	Boiler. Insulation	30
30103	Roof, Boiler	30
30201	Waterwall, Boiler	30
30203	Superheater, High Temp	30
30204	Superheater - Low Temp	30
30205	Reheater, Boiler	30
30301	Header - Drum	40
30501	Piping - High Pressure	40
30601	Fan - Forced Draft	30
30602	Breaching - Flue System	30
30603	Stack, Flue Gases	30
30604	Preheater, Air	30
30605	Burner - Fuel	15
30606	Instrumentation - Boiler	30
30608	Control System, Feedwater	15
30609	Seals - Crown	30
30610	Control System, Fuel	15
30611	Desuperheater System	15
30612	Refractory, Boiler	20
30613	Boiler, Package	30
30801	Transfer System, Ammonia	20
30802	Water Deluge System, Ammonia	30
30803	Vapouriser, Ammonia	20
30804	Compressor, Vapour, Ammonia	15
30805	Piping System, Ammonia	30
30901	Monitoring Equipment - Continuous Emissions	10
30902	Reporting System, Cem	10
30903	Delivery System - Ammonia - Scr	30
30904	Catalyst - Scr	10
31001	Water Intake / Discharge Structure	50
31002	Protection, Cathodic	20
31003	Gates, Inlet/Outlet	30
31004	Screens - Intake	20
31005	Conduit, Intake/Discharge	50
33001	Heat Exchanger, Shell & Tube	30
33002	Pump & Motor	30
33004	Condenser, Boiler	30
34002	Casing Cylinder	30
34004	Turbine - Composite Pool	30
34005	Coils - Stator	30
34006	Rotor / Generator - Thermal	30
34007	Generator - Composite Pool - Thermal	30
34008	Supervisory System, Turbine	20
34009	Cooling System - Hydrogen	30
34015	Turbine Blades Sets	15

FORTISALBERTA, INC.

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2010

LIFE ANALYSIS

Account	Description	Estimated Survivor Curve	Estimated Net Salvage	Surviving Original Cost at 12/31/2010	Calculated Annual Accrual Amount	Calculated Annual Accrual Rate (%)	Annual Provision For True-Up	Total Depreciation Expense	Total Depreciation Rate (%)
	(1)	(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)
1050	SURFACE AND MINERAL RIGHTS	36-L3	0	13,086,005	394,963.30	3.02	(18,133)	376,830	2.88
1350	BUILDINGS AND/OR MAJOR IMPROVEMENTS - DIST.	25-L1	5	87,731,944	3,844,146.58	4.38	-	3,844,147	4.38
1360	BUILDINGS - GENERAL	40-R1.5	10	13,691,435	366,691.13	2.68	11,445	378,136	2.76
1650	DISTRIBUTION - POLES, TOWERS, FIXTURES	45-R1.5	0	840,236,529	22,138,771.26	2.63	(1,079,058)	21,059,713	2.51
1660	DISTRIBUTION - OH CONDUCTORS	45-R1	0	579,735,568	16,298,181.08	2.81	(1,058,527)	15,239,654	2.63
1670	DISTRIBUTION - UG CONDUCTORS	58-R2	0	552,712,739	11,886,556.33	2.15	(1,418,789)	10,467,767	1.89
1675	DISTRIBUTION - TRANSFORMERS / REGULATORS / OCR	27-R0.5	0	609,979,356	25,908,710.93	4.25	-	25,908,711	4.25
1680	DISTRIBUTION - SCADA	10-R2	0	1,135,239	133,704.24	11.78	12,980	146,684	12.92
1685	DISTRIBUTION - STREET LIGHTING	20-R1	0	41,289,296	2,243,846.06	5.43	149,051	2,392,897	5.80
1690	DISTRIBUTION - STREET LIGHT POLES	45-R1.5	0	112,816,095	3,000,159.60	2.66	76,694	3,076,854	2.73
1825	AMR - DIGITAL METERS	15-R0.5	0	79,650,717	8,755,697.28	10.99	489,324	9,245,021	11.61
1835	AMR - SUBSTATION EQUIPMENT	15-R1.5	0	32,156,444	2,927,028.24	9.10	161,366	3,088,394	9.60
1845	AMR - SKID INFRASTRUCTURE	25-R1.5	0	2,162,342	123,650.69	5.72	2,616	126,267	5.84
2050	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	1,939,307	129,351.76	6.67	-	129,352	6.67
2055	DISTRIBUTION - OFFICE FURNITURE	15-SQ	0	9,397,751	626,829.99	6.67	32,963	659,793	7.02
2100	FLEET VEHICLES (<1 TON)	5-L1	15	18,687,539	3,134,896.30	16.78	807,048	3,941,944	21.09
2105	CORPORATE VEHICLES	3-SQ	50	439,727	54,664.55	12.43	(19,799)	34,866	7.93
2110	VEHICLES OVER 1 TON & OTHER WORK EQUIPMENT	14-S4	15	50,869,533	3,175,835.52	6.24	268,475	3,444,311	6.77
2200	GENERAL TOOLS AND INSTRUMENTS	10-SQ	0	15,521,919	1,552,191.89	10.00	-	1,552,192	10.00
2251	COMPUTER - PC'S AND LAPTOPS	3-SQ	0	5,669,174	1,889,535.83	33.33	557,837	2,447,373	43.17
2252	COMPUTER - SERVERS AND OTHER	5-R4	0	18,333,320	3,600,035.04	19.64	585,399	4,185,434	22.83
2260	MOBILE COMMUNICATION EQUIPMENT	7-SQ	0	480,571	68,673.60	14.29	(17,853)	50,821	10.58
2301	SAP	10-R4	0	50,361,481	5,158,884.58	10.24	(456,119)	4,702,766	9.34
2302	MAJOR APPLICATIONS	5-R4	0	9,997,017	1,991,367.78	19.92	2,284,251	4,275,619	42.77
2303	COMPUTER SOFTWARE - OTHER	5-SQ	0	18,132,188	3,626,437.57	20.00	1,163,615	4,790,053	26.42
2310	LOAD SETTLEMENT SOFTWARE	5-R4	0	3,142,339	564,561.94	17.97	79,536	644,098	20.50
	TOTAL DEPRECIABLE PLANT			3,169,355,574	123,595,373		2,614,322	126,209,695	
	OTHER								
	DIGITAL METERS IN STORES			5,603,197	615,791	10.99	51,692	667,483	11.91
	CUSTOMER CONTRIBUTIONS			(614,894,056)	(20,134,307)	3.27	3,339,915	(16,794,392)	2.73
	CUSTOMER CONTRIBUTIONS - SPP			(1,653,323)	(54,137)	3.27	17,642	(36,495)	2.21
	CONTRIBUTIONS: CUSTOMER REQUESTED CHANGES			(68,409,991)	(2,240,041)	3.27	(319,183)	(2,559,224)	3.74
	AESO CONTRIBUTION			101,750,994	3,331,770	3.27	598,601	3,930,371	3.86
	TOTAL OTHER			(577,603,178)	(18,480,923)		3,688,667	(14,792,256)	
	PLANT NOT STUDIED								
	DISTRIBUTION - ANALOG METERS			58,918,918					
	LAND			11,855,819					
	DISTRIBUTION - MAJOR INSPECTIONS			470,072					
	LEASEHOLD IMPROVEMENTS			3,243,064					
	TOTAL PLANT NOT STUDIED			74,487,873					
	TOTAL PLANT IN SERVICE			2,666,240,270	105,114,450		6,302,989	111,417,439	

FORTISBC, INC.

SCHEDULE 2. ESTIMATED SURVIVOR CURVE, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO UTILITY PLANT AS OF DECEMBER 31, 2009
DEPRECIATION RELATED TO RECOVERY OF ORIGINAL COST OF INVESTMENT

	DEPRECIABLE WORK	SURVIVOR CURVE	NET SALVAGE (%)	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
	GENERATION PLANT								
330.10	LAND RIGHTS	75-R4	0	961,358	(709,439)	1,670,797	36,531	3.80	45.7
331.00	STRUCTURES AND IMPROVEMENTS	60-L3	0	12,015,310	4,714,257	7,301,053	154,738	1.29	47.2
332.00	RESERVOIRS, DAMS, AND WATERWAYS	70-R4	0	24,443,427	3,290,720	21,152,707	492,446	2.01	42.9
333.00	WATER WHEELS, TURBINES, AND GENERATORS	75-R3	0	61,382,405	4,165,975	57,216,430	1,197,917	1.95	47.8
334.00	ACCESSORY ELECTRICAL EQUIPMENT	50-R3	0	27,493,467	7,725,117	19,768,350	648,832	2.36	30.4
335.00	OTHER POWER PLANT EQUIPMENT	45-R4	0	40,893,990	8,029,184	32,864,806	947,694	2.32	34.7
336.00	ROADS, RAILROADS AND BRIDGES	75-S4	0	1,287,435	233,134	1,054,301	19,214	1.49	54.9
	TOTAL GENERATION PLANT			**168,477,392**	**27,448,948**	**141,028,444**	**3,497,372**	**2.08**	
	TRANSMISSION PLANT								
350.10	LAND RIGHTS	75-R3	0	5,798,520	1,103,235	4,695,285	85,106	1.47	55.2
353.00	SUBSTATION EQUIPMENT	50-S4	0	138,236,257	29,775,810	108,460,447	4,758,609	3.44	22.8
355.00	POLES, TOWERS AND FIXTURES	50-R3	0	72,712,210	17,470,103	55,242,107	1,922,254	2.64	28.8
356.00	CONDUCTORS AND DEVICES	60-R3	0	70,447,452	14,363,421	56,084,031	1,442,900	2.05	38.9
359.00	ROADS AND TRAILS	40-R0.5	0	1,121,930	55,044	1,066,886	30,050	2.68	35.5
	TOTAL TRANSMISSION PLANT			**288,316,368**	**62,767,613**	**225,548,755**	**8,238,919**	**2.86**	
	DISTRIBUTION PLANT								
360.10	LAND RIGHTS	75-R3	0	8,477,101	472,271	8,004,830	225,551	2.66	35.5
362.00	SUBSTATION EQUIPMENT	55-S3	0	181,230,662	32,248,509	148,982,153	3,986,601	2.20	37.4
364.00	POLES, TOWERS AND FIXTURES	50-R3	0	126,978,444	34,246,501	92,731,943	2,706,149	2.13	34.2
365.00	CONDUCTORS AND DEVICES	45-R3	0	208,986,680	49,392,215	159,594,465	5,366,420	2.57	29.7
368.00	LINE TRANSFORMERS	45-R4	0	98,456,668	15,995,063	82,461,605	3,360,316	3.41	24.6
369.00	SERVICES	75-R4	0	7,292,398	6,475,852	816,546	11,420	0.16	71.5
370.00	METERS	15-R1	0	13,276,592	6,809,246	6,467,346	1,762,556	13.28	3.7
371.00	INSTALLATIONS ON CUSTOMERS PREMISES	20-R1	0	937,832	937,832	-	-	-	0.0
373.00	STREET LIGHTING AND SIGNAL SYSTEMS	40-R4	0	10,274,609	1,482,786	8,791,823	2,361,225	22.98	3.7
	TOTAL DISTRIBUTION PLANT			**655,910,986**	**148,060,275**	**507,850,711**	**19,780,238**	**3.02**	
	GENERAL PLANT								
390.00	STRUCTURES - FRAME AND IRON	40-R3	0	337,364	266,696	70,668	2,384	0.71	29.6
390.10	STRUCTURES- MASONRY	35-R3	0	8,931,826	1,729,033	7,202,793	557,504	6.24	12.9
390.20	OPERATIONS BUILDINGS	35-R3	0	12,750,128	2,405,273	10,344,855	767,587	6.02	13.5
391.00	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	5,475,178	3,811,035	1,664,143	199,244	3.64	8.4
391.10	COMPUTER EQUIPMENT & SOFTWARE	10-SQ	0	31,957,542	20,400,688	11,556,854	1,599,848	5.01	7.2
391.20	PC COMPUTER EQUIPMENT & SOFTWARE	5-SQ	0	24,929,022	14,475,255	10,453,767	2,613,442	10.48	4.0
392.10	LIGHT DUTY VEHICLES	8-L3	20	6,766,552	186,391	5,226,851	1,266,432	18.72	4.1
392.20	HEAVY DUTY VEHICLES	20-L3	20	10,785,689	2,413,034	6,215,518	415,905	3.86	14.9
394.00	TOOLS AND WORK EQUIPMENT	15-SQ	0	10,869,029	6,546,629	4,322,400	438,361	4.03	9.9
397.00	COMMUNICATIONS STRUCTURES AND EQUIPMENT	15-SQ	0	22,698,403	7,165,405	15,532,998	1,827,007	8.05	8.5
	TOTAL GENERAL PLANT.			**135,500,733**	**59,399,439**	**72,590,846**	**9,687,714**	**7.15**	
	TOTAL DEPRECIABLE PLANT			**1,248,205,480**	**297,676,275**	**947,018,757**	**41,204,242**	**3.30**	
	PLANT NOT STUDIED								
114.0	UTILITY PLANT ACQUISITION ADJUSTMENT			11,912,000	4,839,225	-	-		
350.0	LAND RIGHTS			7,204,996	-	-	-		
360.0	LAND RIGHTS			2,456,724	-	-	-		
389.0	LAND			11,297,255	34,055	-	-		
390.9	LEASEHOLD IMPROVEMENTS			4,401,334	2,054,075	-	-		
	TOTAL NON - DEPRECIABLE PLANT			**37,272,309**	**6,927,355**	-	-		
	TOTAL PLANT			**1,285,477,789**	**304,603,630**	**947,018,757**	**41,235,054**		

*minimum life of 4 years.

NEWFOUNDLAND AND LABRADOR HYDRO

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST AND ANNUAL ACCRUALS
RELATED TO ESTIMATED ORIGINAL COST AT DECEMBER 31, 2009
EXCLUDES HOLYROOD ASSETS NOT REQUIRED FOR SYNCHRONOUS CONDENSER OPERATIONS
AVERAGE SERVICE LIFE USED

	DEPRECIABLE WORK	SURVIVOR CURVE	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE	
	(1)	(2)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
A01	AIRCRAFT LANDING STRIP	22-S6	394,805.08	217,451	177,354	29,659	7.51%	6.0	
A04	AUXILIARY POWER SYSTEMS	30-R4	3,283,352.56	1,647,378	1,635,975	140,058	4.27%	11.7	
B01	BATTERY & POWER SYSTEMS	15-S3	8,289,725.71	3,637,112	4,652,614	551,949	6.66%	8.4	
B02	BOILER SYSTEM	35-R3	1,946,158.89	395,063	1,551,096	47,773	2.45%	32.5	
B03	BOOMS - TIMBERS	40-R1	263,995.47	236,552	27,443	1,211	0.46%	22.7	
B04	BRIDGES	60-R4	4,257,163.40	3,049,973	1,207,190	26,669	0.63%	45.3	
B05	BUILDINGS - OTHER	50-R0.5	48,812,722.58	23,386,172	25,426,551	607,725	1.25%	41.8	
B06	BUILDINGS - METAL	55-R3	19,943,772.82	14,357,796	5,585,977	139,092	0.70%	40.2	
B07	BUS DUCT GENERATOR	35-R3	825,804.04	425,560	400,244	19,467	2.36%	20.6	
B08	BUSWORK & HARDWARE	40-R3	5,539,614.59	2,748,318	2,791,297	143,629	2.59%	19.4	
C01	CABLES - TELECONTROL	40-R2.5	1,605,996.01	1,172,691	433,305	12,865	0.80%	33.7	
C02	CABLE - SUBMARINE	45-R4	8,901,116.47	5,618,356	3,282,760	118,060	1.33%	27.8	
C03	CABLES - UNDER GROUND	60-S4	1,852,851.63	1,202,958	649,894	17,988	0.97%	36.1	
C04	CABLES - ABOVE GROUND	50-R3	9,336,561.23	5,199,675	4,136,886	144,987	1.55%	28.5	
C06	CAPICTORS	35-R4	1,004,935.12	140,385	864,550	55,809	5.55%	15.5	
C08	CHLORINATION SYSTEMS	40-R4			-				
C09	CIRCUIT BREAKERS	55-R3	16,714,614.21	6,625,080	10,089,534	292,052	1.75%	34.5	
C10	COMPRESSED AIR SYSTEMS	40-R3	4,662,228.89	2,395,576	2,266,653	75,241	1.61%	30.1	
C11	COMPUTERS	5-SQ	5,619,782.72	4,065,444	1,554,339	518,113	9.22%	3.0	*
C13	CONDUCTOR	60-R3	62,857,533.60	16,902,895	45,954,639	1,260,421	2.01%	36.5	
C14	CONDUCTOR - DISTRIBUTION	55-R3	21,401,471.20	9,384,068	12,017,403	275,421	1.29%	43.6	
C15	CONTROL, METER / RELAYING	30-R1	18,718,502.07	8,317,645	10,400,857	541,267	2.89%	19.2	
C16	COOLING SYSTEMS	40-R1.5	3,794,719.13	2,097,408	1,697,311	47,726	1.26%	35.6	
C17	COUNTERPOISE	50-R3	3,558,954.86	991,815	2,567,140	84,482	2.37%	30.4	
C18	CRANES	70-R3	6,369,327.68	462,789	5,906,539	123,303	1.94%	47.9	
D01	DAMS & DYKES	100-R4	351,201,750.94	1,781,039	349,420,712	4,794,055	1.37%	72.9	
D02	DIESEL SYSTEMS & ENGINES	25-S0.5	21,346,252.47	11,394,298	9,951,954	516,378	2.42%	19.3	
D03	DISCONNECT SWITCHES	45-S2.5	9,114,371.51	4,056,214	5,058,158	196,234	2.15%	25.8	
D04	DYKES AND LINERS	42-L1	1,887,138.00	1,592,485	294,653	8,961	0.47%	32.9	
E01	ELEVATORS	40-S5	89,800.00	89,800	-		0.00%		
E02	EMS EQUIPMENT	25-R2.5	13,446,886.26	13,184,644	262,242	12,810	0.10%	20.5	
E03	ENVIRONMENTAL EQUIPMENT	30-S4	10,395.75	2,630	7,766	272	2.62%	28.6	
F01	FALL ARREST EQUIPMENT	10-L2	1,318,153.90	103,513	1,214,641	153,076	11.61%	7.9	
F02	FENCING	47-R3	4,825,159.64	2,883,646	1,941,514	51,216	1.06%	37.9	
F03	FIRE FIGHTING EQUIPMENT	45-R4	9,222,528.23	4,799,183	4,423,345	117,471	1.27%	37.7	
F04	FOOTINGS & FOUNDATIONS	50-R4	16,144,467.22	6,483,604	9,660,863	359,895	2.23%	26.8	
F05	FREQ CONVERSION	40-S4	869,211.95	36,565	832,647	21,233	2.44%	39.2	
F06	FUEL SYSTEMS	50-R1.5	14,784,748.08	7,307,166	7,477,582	163,431	1.11%	45.8	
G01	GAS TURBINE SYSTEMS	35-R4	30,993,022.69	25,552,246	5,440,777	271,761	0.88%	20.0	
G02	GATES	80-R4	15,312,218.70	1,743,278	13,568,941	262,474	1.71%	51.7	
G03	GENERATORS	60-S4	64,312,110.88	24,318,003	39,994,108	1,110,298	1.73%	36.0	
G04	GENERATOR - WINDINGS	40-S3	6,766,230.94	6,392,535	373,696	21,714	0.32%	17.2	
G05	GLYCOL SYSTEMS	40-S3	620,703.54	495,234	125,470	5,537	0.89%	22.7	
G06	GOVENORS	45-S4	7,685,239.39	394,699	7,290,540	293,835	3.82%	24.8	
G07	GROUND WIRE SYSTEM	55-R4	7,302,893.45	2,167,951	5,134,942	140,028	1.92%	36.7	
H01	HRDWIRED SUPRVSRY EQUIP	17-L3			-				
I01	INFORMATION DELIVERY SYS - ECC	20-S4			-				
I02	INSTRUMENTATION	26-L0.5	4,018,333.05	1,212,524	2,805,809	124,014	3.09%	22.6	
I03	INSULATORS	30-L3	36,376,195.89	10,491,724	25,884,472	1,383,214	3.80%	18.7	
I04	INTAKE STRUCTURES	100-R4	18,844,444.76	100,300	18,744,145	254,192	1.35%	73.7	
I05	INVERTERS	25-S3	466,597.96	312,787	153,811	9,496	2.04%	16.2	
L03	LAND IMPROVMENTS	50-R3	12,638,775.53	7,147,132	5,491,644	184,973	1.46%	29.7	
L04	LIGHTING SYSTEMS	45-R4	550,249.54	390,331	159,919	9,599	1.74%	16.7	
L05	LIGHTNING ARRESTORS	58-R3	5,619,879.81	1,764,959	3,854,921	78,524	1.40%	49.1	
L06	LINE COUPLING EQUIPMENT	23-R5	12,725.56	12,726	(0)		0.00%		
M01	MAIN BREAKERS	42-R0.5	551,508.09	210,996	340,512	9,197	1.67%	37.0	
M03	METALCLAD SWITCHGEAR CUB/EQU 4kv/600	30-R4	1,849,870.49	1,442,814	407,056	48,728	2.63%	8.4	
M04	METER TEST SWITCHES	35-R5	48,910.55	31,786	17,125	1,016	2.08%	16.9	
M05	METERING TANKS	37-R3	208,167.19	108,522	99,645	5,773	2.77%	17.3	
M06	METERS - DIGITAL	20-L3	3,430,944.36	745,450	2,685,494	194,142	5.66%	13.8	
M07	METERS - ANALOGUE	25-L3	488,014.47	370,459	117,555	14,557	2.98%	8.1	
M08	METERS - OTHER	22-L3	194,391.51	72,936	121,456	10,353	5.33%	11.7	
M10	MISC. UNITS OF PROP	20-R1	2,035,856.23	1,205,671	830,185	115,490	5.67%	7.2	
M11	MOBILE - A.T.V.'S & SNOWMOBILES	7-SQ	1,369,874.43	550,216	819,658	161,322	11.78%	5.1	
M12	MOBILE - AIR COMPRESSOR,ATTACHMENT &BOAT	20-R2	410,663.64	325,669	84,995	4,495	1.09%	18.9	
M13	MOBILE - ARGO'S	7-SQ	30,211.03	28,589	1,622	541	1.79%	3.0	*
M14	MOBILE - FLEX/FORK/LOAD/GRADE/MUSK/TRAILER	20-R2	8,248,424.67	5,220,195	3,028,230	171,332	2.08%	17.7	
M16	MULTIPLEX EQUIPMENT	18-R2.5	2,889,207.03	2,096,283	792,924	65,964	2.28%	12.0	
O01	OFFICE EQUIPMENT	20-SQ	1,195,347.67	877,289	318,059	17,556	1.47%	18.1	
O02	OFFICE FURNITURE	20-SQ	4,269,330.12	3,839,669	429,661	25,252	0.59%	17.0	
P01	P.C.B. STORAGE CONTAINER	30-R4	42,479.84	38,586	3,894	317	0.75%	12.3	
P02	PABX - PRIV AUTO BRANCH EXCH	20-R4	819,535.49	427,128	392,407	23,938	2.92%	16.4	
P03	PENSTOCK	70-R4	56,215,065.27	8,625,533	47,589,532	1,123,136	2.00%	42.4	
P04	POLE CRIBS & POLE HARDWARE	50-L2	65,911,264.63	22,355,247	43,556,018	1,028,846	1.56%	42.3	
P05	POLE STRUCTURES - WOOD	53-R4	104,505,267.12	25,429,257	79,076,010	2,394,419	2.29%	33.0	
P06	POLES - CONCRETE	25-R4	215,304.78	160,922	54,383	9,266	4.30%	5.9	
P07	POLES - WOOD	37-R3	40,210,866.37	16,899,802	23,311,064	800,789	1.99%	29.1	

NEWFOUNDLAND AND LABRADOR HYDRO

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST AND ANNUAL ACCRUALS
RELATED TO ESTIMATED ORIGINAL COST AT DECEMBER 31, 2009
EXCLUDES HOLYROOD ASSETS NOT REQUIRED FOR SYNCHRONOUS CONDENSER OPERATIONS
AVERAGE SERVICE LIFE USED

	DEPRECIABLE WORK	SURVIVOR CURVE	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE	
	(1)	(2)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
P08	POWER LINE CARRIER	20-R4	5,006,762.55	3,748,600	1,258,163	81,860	1.63%	15.4	
P09	POWER SYSTEMS	18-R3	590,182.62	116,245	473,938	41,511	7.03%	11.4	
P10	POWERHOUSE	75-R3	93,181,235.98	13,007,098	80,174,138	1,552,941	1.67%	51.6	
P11	PRINTERS	5-SQ	1,010,719.71	572,117	438,603	141,116	13.96%	3.1	
P12	PROTECTIVE CONTROL & RELAY PANELS	30-R3	4,458,227.98	909,807	3,548,421	186,149	4.18%	19.1	
R01	RADIO TOWERS (WOOD OR STEEL)	35-R3	9,331,364.82	6,073,961	3,257,404	112,622	1.21%	28.9	
R02	RADIOS - FIXED MICROWAVE EQUIPMENT	22-R4	5,431,981.92	3,846,942	1,585,040	105,328	1.94%	15.0	
R03	RADIOS - FIXED UHF EQUIPMENT	15-L1.5	114,223.78	18,190	96,034	6,998	6.13%	13.7	
R04	RADIOS - FIXED VHF EQUIPMENT	19-R3	330,529.66	275,437	55,093	4,296	1.30%	12.8	
R05	RADIOS - MOBILE VHF BASE STATION	15-R3	4,027,815.31	971,834	3,055,981	245,822	6.10%	12.4	
R06	RAMPS - YARD STORAGE	25-R3	1,236,643.69	525,696	710,948	34,391	2.78%	20.7	
R07	REACTORS & RESISTORS	40-S4	860,433.73	69,734	790,700	30,667	3.56%	25.8	
R08	RECLOSERS	40-R4	3,465,827.78	1,683,894	1,781,934	65,403	1.89%	27.2	
R09	REGULATORS	35-R3	3,777,179.98	1,618,625	2,158,555	88,451	2.34%	24.4	
R10	RESERVOIR POWER	30-R3			-				
R11	REVENUE METERING	35-R3	761,706.46	202,490	559,216	33,616	4.41%	16.6	
R12	RIGHT - OF - WAYS	55-R4	18,020,542.37	5,989,582	12,030,960	411,599	2.28%	29.2	
R13	ROADS	50-R4	80,846,786.54	3,979,048	76,867,739	2,936,650	3.63%	26.2	
R14	ROUTERS & LAN	5-SQ	6,097,245.86	4,797,798	1,299,448	433,149	7.10%	3.0	*
R15	RUNNER	33-R5	11,669,901.86	3,427,671	8,242,231	577,150	4.95%	14.3	
S01	SCADA EQUIPMENT	20-R3	3,427,679.44	1,934,879	1,492,800	93,488	2.73%	16.0	
S02	SECTIONALIZERS	25-R3	152,708.72	93,118	59,591	6,174	4.04%	9.7	
S03	SERVERS	5-SQ	5,081,124.97	3,626,053	1,455,072	485,024	9.55%	3.0	*
S04	SEWAGE DISPOSAL SYSTEM	45-R2.5	2,745,341.78	1,708,195	1,037,147	28,232	1.03%	36.7	
S05	SOFTWARE	7-SQ	24,077,181.78	19,989,114	4,088,068	897,882	3.73%	4.6	
S06	SPILLWAY STRUCTURES	100-R4	26,949,270.20	252,588	26,696,682	362,935	1.35%	73.6	
S07	STACKS	40-R4	2,126,667.19	1,368,383	758,284	22,965	1.08%	33.0	
S08	STATIC EXCITATION SYSTEM	32-R4	8,295,339.31	4,208,323	4,087,016	231,836	2.79%	17.6	
S09	STATIC EXCITATION - XFORMERS	32-R4	873,229.34	727,374	145,855	20,302	2.32%	7.2	
S10	STATION SERVICE	40-R4	3,399,370.83	800,120	2,599,251	147,423	4.34%	17.6	
S11	STOP LOGS	65-R4	2,780,641.69	275,711	2,504,931	60,078	2.16%	41.7	
S12	STORAGE PALLETS & RACKINGS	30-R3	21,648.13	21,648	0		0.00%		
S13	STORM & YARD DRAINAGE	45-R4	1,194,341.65	982,815	211,527	7,776	0.65%	27.2	
S14	STREET LIGHTS	20-R2	2,546,773.85	637,293	1,909,481	143,203	5.62%	13.3	
S15	STRUCTURAL SUPPORTS (WOOD OR STEEL)	45-R4	8,609,349.55	3,876,232	4,733,118	211,680	2.46%	22.4	
S16	STUDIES	5-R0.5	3,358,184.45	1,444,249	1,913,935	511,961	15.25%	3.7	
S17	SUMP SYSTEMS	35-R4	238,638.74	84,300	154,339	6,277	2.63%	24.6	
S18	SURGE SYSTEMS	45-R3	3,348,520.61	1,702,117	1,646,404	105,503	3.15%	15.6	
S19	STATION SWITCHING	45-L1.5	10,667,170.66	3,862,529	6,804,642	196,609	1.84%	34.6	
S20	SWITCHING SYSTEMS - L.V.	60-R5	1,805,689.30	116,296	1,689,393	50,232	2.78%	33.6	
T01	TELECONTROL SYSTEM	27-L1	10,919,784.86	8,230,476	2,689,309	117,403	1.08%	22.9	
T02	TEST EQUIPMENT	20-SQ	2,128,465.42	1,876,474	251,991	13,671	0.64%	18.4	
T03	TOOLS & EQUIPMENT	20-SQ	11,281,655.65	7,613,134	3,668,522	202,266	1.79%	18.1	
T04	TOWERS	65-R3	71,559,609.79	13,980,497	57,579,113	1,298,875	1.82%	44.3	
T05	TRANSFORMERS	55-R3	66,582,133.35	25,739,897	40,842,236	1,149,555	1.73%	35.5	
T06	TRANSFORMERS - PADMOUNT	40-R3	2,379,222.82	807,836	1,571,387	50,050	2.10%	31.4	
T07	TRANSFORMERS - POLE MOUNTED	30-R2	16,385,241.31	4,804,173	11,581,068	499,684	3.05%	23.2	
T09	TURBINES	50-R3	42,852,398.82	3,835,012	39,017,387	1,385,887	3.23%	28.2	
V01	VACUUM CLEANING SYSTEM	60-R4	72,451.00	65,210	7,241	232	0.32%	31.2	
V02	VALVES - PENSTOCK	65-R3	6,882,405.29	1,183,261	5,699,144	122,523	1.78%	46.5	
V03	VEHICLES - 1 TON	8-L4			-				
V04	VEHICLES - 3/4 TON AND UNDER	7-L3	3,157,849.72	1,627,287	1,530,563	327,819	10.38%	4.7	
V05	VEHICLES - BOOMS/BODIES/CRANES/CAB &CHASSIS	15-L1.5	10,935,865.73	7,626,020	3,309,846	245,782	2.25%	13.5	
V06	VEHICLES - CARS, STATION WAGONS & VAN	6-L3	2,088,514.89	1,153,743	934,772	238,370	11.41%	3.9	
V07	VEHICLES - DUMP TRUCKS	20-L3	20,135.00	18,415	1,720	104	0.52%	16.5	
W01	WATER REGULATING STRUCTURES	55-S4	21,392,991.48	2,437,259	18,955,732	538,286	2.52%	35.2	
W02	WATER SYSTEMS	30-L4	2,833,440.10	1,121,179	1,712,261	107,888	3.81%	15.9	
W03	WATER SYSTEMS - FEED	45-L2	4,197,894.00	3,857,403	340,491	15,700	0.37%	21.7	
W04	WATER TREATMENT	34-L4	2,793,278.18	2,101,734	691,544	43,702	1.56%	15.8	
	TOTAL DEPRECIABLE PLANT		**1,851,258,222.78**	**529,577,511.00**	**1,321,680,711.78**	**39,083,183.00**			

* Three year minimum remaining life used

ONTARIO POWER GENERATION

SCHEDULE 1A - SUMMARY OF THE CURRENT AVERAGE SERVICE LIFE ESTIMATES AND GANNETT FLEMING RECOMMENDED AVERAGE SERVICE LIFE ESTIMATES

PREVIOUSLY AND NEWLY REGULATED HYDROELECTRIC ASSETS AS AT DECEMBER 31, 2012

ASSET CLASS #	DESCRIPTION	NBV	% AGE	CURRENT	RECOMMENDED
10200000	HYDROELECTRIC - SUBSTRUCTURES AND SUPERSTRUCTURES	$ 1,227,972,792	19.79%	100	100
10101000	HYDROELECTRIC - EXCAVATION, DREDGING, RIPRAPPING AND GROUTING	$ 1,380,649,053	22.25%	100	100
10312000	HYDROELECTRIC - DAMS - CONCRETE	$ 991,676,359	15.98%	100	100
10318000	HYDROELECTRIC - GATES, STOPLOGS AND OPERATING MECHANISMS	$ 361,275,033	5.82%	50	55
10306000	HYDROELECTRIC - SURGETANK, PIPELINE, CONDUIT, PENTSTOCK	$ 292,982,384	4.72%	75	75
10400000	HYDROELECTRIC - TURBINES AND GOVERNORS	$ 213,248,856	3.44%	70	70
10501000	HYDROELECTRIC - MAIN ROTATIONAL ELECTRICAL EQUIPMENT - LESS WINDINGS	$ 221,787,828	3.57%	75	75
10301000	HYDROELECTRIC - LINING OF TUNNELS AND PERMANENT SHAFTS	$ 219,912,108	3.54%	75	75
10510000	HYDROELECTRIC - MAIN POWER AND STATION SERVICE - TRANSMISSION	$ 175,590,706	2.83%	50	50
10500000	HYDROELECTRIC - MAIN ROTATIONAL ELECTRICAL EQUIPMENT - WINDINGS	$ 114,912,729	1.85%	40	40
10311000	HYDROELECTRIC - DAMS - EARTH AND ROCKFILL	$ 106,329,529	1.71%	100	100
10405000	HYDROELECTRIC - TURBINE RUNNERS	$ 96,535,236	1.56%	40	40
10210000	HYDROELECTRIC - SERVICE AND EQUIPMENT BUILDINGS	$ 101,137,556	1.63%	55	55
10502000	HYDROELECTRIC - BUS, SWITCHING AND POWER CABLE	$ 85,327,386	1.37%	45	45
10300000	HYDROELECTRIC - CANAL, FOREBAY, RETAINING WALL LINING	$ 83,670,918	1.35%	75	75
10504000	HYDROELECTRIC - CONTROL BOARDS AND SWITCHBOARDS	$ 77,122,794	1.24%	25	25
10700000	HYDROELECTRIC - AUXILIARY SYSTEMS	$ 72,291,792	1.16%	30	30
10302000	HYDROELECTRIC - SPILLWAYS, SLUICES, FLUMES	$ 72,513,556	1.17%	75	75
10100000	HYDROELECTRIC - LAND	$ 37,317,826	0.60%	100	100
10709000	HYDROELECTRIC - OWNED BRIDGES, RAILWAY TRACK, WHARVES	$ 54,666,182	0.88%	65	65
10505000	HYDROELECTRIC - STATION SERVICE ELECTRICAL EQUIPMENT	$ 44,045,969	0.71%	50	50
10601000	HYDROELECTRIC - MECHANICAL EQUIPMENT - CRANES AND FOLLOWERS	$ 45,064,408	0.73%	55	55
10205000	HYDROELECTRIC - OUTDOOR STRUCTURES	$ 20,878,634	0.34%	75	75
10710000	HYDROELECTRIC - FIRE PROTECTION SYSTEMS	$ 27,019,773	0.44%	20	20
10503000	HYDROELECTRIC - HIGH VOLTAGE SWITCHING	$ 16,335,367	0.26%	40	40
10503100	HYDROELECTRIC - REVENUE METERING - HIGH VOLTAGE SWITCHING, CONTROL BOARDS AND SWITCHBC	$ 13,162,790	0.21%	30	30
10311100	HYDROELECTRIC - DAMS - TIMBER CRIB	$ 8,624,328	0.14%	60	60
16210000	ADMINISTRATION AND SERVICE BUILDINGS - PERMANENT BLDGS. ROADS AND SITE IMPROVEMENT	$ 7,852,168	0.13%	50	50
10991000	HYDROELECTRIC - MAJOR SPARES	$ 7,207,631	0.12%	100	100
10315000	HYDROELECTRIC - STEEL RACKS	$ 6,220,914	0.10%	40	40
10302100	HYDROELECTRIC - PUBLIC SAFETY/WARNING BOOMS	$ 4,066,117	0.07%	15	15
16550000	ADMINISTRATION AND SERVICE BUILDINGS - LAN CABLE	$ 3,922,188	0.06%	10	10
10531000	HYDROELECTRIC - CIRCUIT BREAKERS	$ 4,048,211	0.07%	50	50
10720000	HYDROELECTRIC - SECURITY SYSTEMS	$ 1,987,371	0.03%	10	10
16100000	ADMINISTRATION AND SERVICE BUILDINGS - LANDS	$ 591,758	0.01%	N/A	N/A
16560100	ADMINISTRATION AND SERVICE BUILDINGS - ADMINSTRATIVE SYSTEMS SW	$ 830,257	0.01%	5	5
16230000	ADMINISTRATION AND SERVICE BUILDINGS - FRAME & METAL	$ 11,000	0.00%	25	25
18400000	COMMUNICATIONS - POWER LINE EQUIPMENT	$ 591,742	0.01%	15	15
18460000	COMMUNICATIONS - DATA ACQ. EQUIP., MAN MACHINE INTERFACE EQUIPMENT	$ 105,828	0.00%	15	15
18630000	COMMUNICATIONS - OPTICAL WIRE	$ 644,287	0.01%	25	25
16551000	ADMINISTRATION AND SERVICE BUILDINGS - LAN ELECTRICAL CONNECTING DEVICES	$ 777,362	0.01%	5	5
18633000	COMMUNICATIONS - OPTICAL WIRE - REVENUE METERING	$ 715,860	0.01%	30	30
18540000	COMMUNICATIONS - ADMINISTRATIVE TELEPHONE EQUIPMENT	$ 216,553	0.00%	7	7

ONTARIO POWER GENERATION

SCHEDULE 1A - SUMMARY OF THE CURRENT AVERAGE SERVICE LIFE ESTIMATES AND GANNETT FLEMING RECOMMENDED AVERAGE SERVICE LIFE ESTIMATES
PREVIOUSLY AND NEWLY REGULATED HYDROELECTRIC ASSETS AS AT DECEMBER 31, 2012

ASSET CLASS #	DESCRIPTION	NBV	% AGE	CURRENT	RECOMMENDED
18600000	COMMUNICATIONS - WOOD POLE, COMMUNICATION CABLE APPARATUS AND BOOTHS	$ 77,039	0.00%	40	40
18530000	COMMUNICATIONS - TIMBER AND STEEL STRUCTURES	$ 17,738	0.00%	40	40
18100000	COMMUNICATIONS - LAND	$ 879	0.00%	100	100
16630000	ADMINSITRATION AND SERVICE BUILDINGS - SYSTEMS & EQUIPMENT	$ 132,754	0.00%	20	20
18200000	COMMUNICATIONS - BUILDINGS	$ 58,601	0.00%	50	50
18500000	COMMUNICATIONS - RADIO EQUIPMENT	$ 5,974	0.00%	15	15
	MINOR FIXED ASSETS	$ 4,094,653	0.07%		
NEW	HYDROELECTRIC - NIAGARA FALLS - NEW TUNNEL LINING	$ -	0.00%	N/A	90
NEW	HYDROELECTRIC - BUILDINGS - ROOFING	$ -	0.00%	N/A	30
NEW	HYDROELECTRIC - FENCING	$ -	0.00%	N/A	25
	GRAND TOTAL	**$ 6,206,228,777**	**100.00%**		

SaskPower

SCHEDULE 1. SUMMARY OF AVERAGE SERVICE LIFE ESTIMATES AND NET BOOK VALUE RELATED TO UTILITY PLANT AT DECEMBER 31, 2009

	Depreciable Property Groups	AVERAGE SERVICE LIFE RECOMMENDED	AVERAGE SERVICE LIFE CURRENT	SALVAGE RECOMMENDED	SALVAGE CURRENT	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	NET BOOK VALUE
	Generation							
G001	Turbine - Thermal	25	25	0	0	163,372,685	70,207,652	93,165,033
G002	Turbine - Hydro	50	50	0	0	119,105,219	59,368,737	59,736,482
G003	Turbine - Gas	25	25	0	0	138,954,535	23,128,102	115,826,432
G004	Turbine - Wind	20	20	0	0	179,997,344	35,920,599	144,076,745
G005	Generator - Thermal	25	25	0	0	125,435,748	56,242,129	69,193,619
G006	Generator - Hydro	40	40	0	0	101,946,337	49,340,139	52,606,198
G007	Generator - Gas	25	25	0	0	112,120,571	10,866,869	101,253,702
G008	Generator and Gearboxes Wind	15	15	0	0	60,000,671	11,973,627	48,027,044
G009	Boiler - Conventional	25	25	0	0	478,342,241	225,965,865	252,376,376
G010	Boiler-HRSG/OTSG	25	25	0	0	8,199,078	449,522	7,749,556
G011	High Energy Piping	50	50	0	0	70,321,185	50,611,887	19,709,298
G012	High Pressure Feedwater Heaters	20	20	0	0	36,947,166	16,366,695	20,580,471
G013	Low Pressure Feedwater Heaters	35	35	0	0	6,173,682	4,886,987	1,286,695
G014	Condenser	30	20	0	0	18,649,924	8,610,763	10,039,161
G015	Pulverizer, Feeders, Stabilizing Fuel Equipment	35	35	0	0	97,364,236	60,135,206	37,229,029
G016	High Voltage > 1KV	35	35	0	0	37,340,300	21,462,040	15,878,261
G017	Low Voltage < 1KV	25	25	0	0	28,172,995	12,768,355	15,404,640
G018	Underground Ducts and Cable Trays	50	50	0	0	8,134,916	4,589,763	3,545,153
G019	Controls and Protection	25	25	0	0	154,609,597	68,136,992	86,472,605
G020	Flue Gas and Ash System	25	25	0	0	197,018,536	114,436,570	82,581,966
G021	Large Motors, Pumps and Fans	35	35	0	0	34,111,727	21,976,421	12,135,306
G022	Dams, Waterways, Reservoirs	100	100	0	0	239,813,648	149,999,722	89,813,927
G023	Spillways	60	50	0	0	194,096,169	93,679,285	100,416,884
G024	Penstock and Intake Structures	75	75	0	0	120,071,523	63,699,899	56,371,624
G025	Water Treatment Plant Equipment	25	25	0	0	62,867,268	34,573,170	28,294,097
G026	Miscellaneous AIR/Water/Steam/Sewer/Pump/Fire Systems	40	50	0	0	25,496,473	14,313,195	11,183,278
G027	Coal and Auxiliary Fuel Handling Equipment	35	35	0	0	64,229,887	34,964,984	29,264,903
G028	Gas and Auxiliary Fuel Handling Equipment	50	50	0	0	23,393,940	564,826	22,829,114
G029	Lagoon (Ash)	20	20	0	0	61,422,817	33,221,112	28,201,704
G030	Cooling Water Equipment and Lines	40	40	0	0	65,406,794	38,675,059	26,731,735
G031	Boiler House	50	50	0	0	106,784,614	69,880,288	36,904,327
G032	Turbine House	50	50	0	0	148,826,108	86,354,432	62,471,675
G033	Administration /Shop and Auxiliary Buildings	50	50	0	0	83,140,451	42,867,434	40,273,017
G034	Water Treatment Plant and Pond Building	50	50	0	0	34,834,198	22,496,727	12,337,471
G035	Coal Handling Facilities	50	50	0	0	74,254,655	48,050,228	26,204,427
G036	Polish Ponds Recirculation House	50	50	0	0	11,847,079	11,321,455	525,623
G037	Cooling Water Pump House	50	50	0	0	26,616,651	19,870,070	6,746,580
G038	Land Rights	25	25	0	0	1,176,768	270,163	906,606
G039	Roads, Railroads, and Airfields	30	35	0	0	44,500,704	24,137,989	20,362,715
G041	Experimental Emissions Control Equipment	5	5	0	0	6,315,398	5,341,960	973,439
G043	Generator - Diesel	5	5	0	0	169,792	118,897	50,895
	Generation - Turbine - Gas LM6000 Units (Ermine & Yellowhead)*	15	15	0	0	35,944,036	124,906	35,819,130
	Generation - Turbine - Gas H25 Units (Queen Elizabeth Units #4 - 12)*	15	15	0	0	53,168,860	6,936,680	46,231,880
	AMI*	15	15	0	0			
	Total Generation					**3,660,696,525**	**1,728,907,399**	**1,931,788,826**

SaskPower

SCHEDULE 1. SUMMARY OF AVERAGE SERVICE LIFE ESTIMATES AND NET BOOK VALUE RELATED TO UTILITY PLANT AT DECEMBER 31, 2009

	Depreciable Property Groups	AVERAGE SERVICE LIFE RECOMMENDED	AVERAGE SERVICE LIFE CURRENT	SALVAGE RECOMMENDED	SALVAGE CURRENT	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	NET BOOK VALUE
	Transmission							
S201	Transmission - Conductor	55	50	0	0	138,408,545	71,190,224	67,218,321
S202	Transmission - Devices	35	35	0	0	69,333,149	31,045,776	38,287,373
S203	Transmission - Land Rights	45	45	0	0	52,398,574	22,375,818	30,022,757
S204	Transmission - Switching Station Conductor and Devices	40	40	0	0	14,859,948	10,261,759	4,598,189
S205	Transmission - Power Transformers	50	40	0	0	65,460,033	29,824,857	35,635,177
S206	Transmission - Steel Structures	50	50	0	0	192,233,480	57,549,260	134,684,219
S207	Transmission - Buildings, Roads, Railroads, Airfields	50	50	0	0	10,654,318	4,322,569	6,331,749
S208	Transmission - Wood Structures	45	45	0	0	120,744,987	71,607,757	49,137,231
S211	Transmission - Controls and Auxiliaries	35	35	0	0	88,463,512	42,168,132	46,295,380
S212	Transmission - Line Devices	25	25	0	0	39,032,074	12,806,328	26,225,746
S213	Transmission - Protective Relays	20	20	0	0	5,787,092	1,017,376	4,769,717
S214	Transmission - Site Improvements	40	40	0	0	10,332,488	2,958,591	7,373,897
S215	Transmission - Superstructures	45	45	0	0	29,915,691	12,555,043	17,360,648
	Total Transmission					**837,623,893**	**369,683,490**	**467,940,403**
	Distribution							
S301	Distribution - Power Transformers	40	40	0	0	40,521,031	18,011,622	22,509,408
S302	Distribution - Structures and Foundations	40	40	0	0	10,457,995	3,659,269	6,798,726
S303	Distribution - Substation Equipment	35	35	0	0	92,458,968	43,639,563	48,819,405
S304	Distribution - Overhead Distribution	35	35	0	0	960,587,164	432,805,064	527,782,100
S305	Distribution - Underground Distribution	35	35	0	0	729,374,336	295,806,589	433,567,747
S306	Distribution - Overhead Services	35	35	0	0	39,788,149	14,621,847	25,166,302
S307	Distribution - Underground Services	35	35	0	0	158,156,866	34,385,530	123,771,337
S308	Distribution - Overhead Streetlights	35	35	0	0	20,277,702	14,102,352	6,175,351
S309	Distribution - Underground Streetlights	30	30	0	0	55,650,820	27,050,512	28,600,308
S310	Distribution - Apparatus	35	35	0	0	284,362,775	93,620,869	190,741,906
S311	Distribution - Land Rights	35	35	0	0	7,527,160	1,964,336	5,562,824
S312	Distribution - Buildings and Improvements	40	40	0	0	11,365,715	1,788,974	9,576,742
	Total Distribution					**2,410,528,681**	**981,456,527**	**1,429,072,154**

SaskPower

SCHEDULE 1. SUMMARY OF AVERAGE SERVICE LIFE ESTIMATES AND NET BOOK VALUE RELATED TO UTILITY PLANT AT DECEMBER 31, 2009

	Depreciable Property Groups	AVERAGE SERVICE LIFE RECOMMENDED	AVERAGE SERVICE LIFE CURRENT	SALVAGE RECOMMENDED	SALVAGE CURRENT	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	NET BOOK VALUE
	Other							
S351	Mechanical Meters and Transformers	15	20	0	0	22,618,862	12,218,070	10,400,792
S352	Electronic Meters and Handheld Meter Readers	8	8	0	0	27,281,707	17,030,173	10,251,533
S405	Mining - Dragline and Equipment	20	20	0	0	3,472,908	911,638	2,561,269
S407	Mining - Transmission Facilities	40	40	0	0	7,636,883	5,285,510	2,351,373
S408	Mining - Miscellaneous Buildings	40	40	0	0	283,100	164,354	118,746
S412	Mining - Surface Rights	15	15	30	30	27,028,744	16,651,448	10,377,296
S501	Shand Greenhouse Building	40	40	0	0	4,761,524	1,863,295	2,898,229
S621	Head Office Building	60	50	50	40	16,667,074	5,571,350	11,095,723
S622	Research and Development Building	50	50	50	50	13,122,716	4,123,678	8,999,038
S623	PCB Storage Building	40	40	0	0	2,823,523	2,823,523	-
S624	Other Buildings	40	40	25	25	46,423,877	12,587,475	33,836,402
S631	Office Machines	10	8	0	0	1,554,108	766,772	787,336
S632	Furniture	15	20	0	0	7,348,200	3,228,645	4,119,556
S633	Modular Furniture	15	20	0	0	12,436,101	3,440,938	8,995,163
S641	Vehicles and Equipment - Light Weight	7	7	7	7	41,648,253	20,843,461	20,804,792
S642	Vehicles and Equipment - Medium Weight	12	12	7	7	31,874,768	13,811,232	18,063,536
S643	Vehicles and Equipment - Heavy Weight	12	12	7	7	26,037,001	12,635,775	13,401,226
S644	Vehicles and Equipment - Track Mounted	25	25	10	10	6,811,216	1,181,327	5,629,889
S645	Vehicles and Equipment - Trailers	20	20	0	0	5,340,455	1,769,508	3,570,947
S646	Vehicles and Equipment - Power Operated	20	20	10	10	7,339,274	2,896,967	4,442,307
S647	Vehicles and Equipment - Miscellaneous	20	20	10	10	3,421,280	1,921,890	1,499,390
S648	Vehicles and Equipment - Forklift Trucks	20	20	10	10	3,419,975	1,491,606	1,928,369
S651	CP&C - Scada Building	50	50	0	0	8,138,452	3,806,616	4,331,836
S652	CP&C - Equipment	10	10	0	0	46,472,723	15,904,980	30,567,743
S653	CP&C - Fibre Optic Cable & Land Rights	35	35	0	0	21,041,513	7,009,944	14,031,570
S654	CP&C - Master Control Equipment	5	5	0	0	12,156,995	8,260,407	3,896,588
S661	Tools and Equipment	5	7	0	0	11,398,088	6,678,726	4,719,362
S671	Computer Development	5	5	0	0	129,917,191	105,225,326	24,691,865
S681	Computer Hardware	4	4	0	0	40,417,903	28,198,998	12,218,905
	Total Other					**588,894,414**	**318,303,630**	**270,590,783**
	TOTAL PLANT					**7,497,743,512**	**3,398,351,046**	**4,099,392,166**

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Peer Reviewed Utilities		
Issue:			

PREAMBLE TO IR (IF ANY):

MH Exhibit #57 from the 2012/13 & 2013/14 GRA provided the utilities that Mr. Kennedy reviewed and relied upon in the selection of average service life recommendations. PUB/MH I-85 indicated the depreciation methodology employed in other Canadian jurisdictions at the time of the 2012/13 & 2013/14 GRA and compared ASL and ELG.

QUESTION:

Please update PUB/MH I-85 a) indicating the depreciation methodology employed in other Canadian jurisdictions and in particular where Equal Life Group (ELG) has adopted for rate-setting purposes.

RATIONALE FOR QUESTION:

MIPUG is reviewing the depreciation study including any changes that have occurred since the 2010 depreciation study.

RESPONSE:
Please see the response to PUB/MH-I-42b for an update to PUB/MH I-85(a) from Manitoba Hydro's previous GRA.

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Peer Reviewed Utilities		
Issue:			

PREAMBLE TO IR (IF ANY):

On page 5 of Appendix 5.6 Hydro states that:"IFRS is more specific than CGGAP regarding depreciation. Under IFRS, it is mandatory that items of material cost whose service life is different than other items in the group, be amortized separately. Effectively, if the separate depreciation of an item would have a material impact on net income, that item should be depreciated separately. This requirement is not mandatory under CGAAP."

QUESTION:

Please provide the relevant references and excerpts from the more specific IFRS standards and the CGAAP standards mentioned regarding depreciation on page 5.

RATIONALE FOR QUESTION:

MIPUG is reviewing the depreciation study including any changes that have occurred since the 2010 depreciation study.

RESPONSE:

Please see below for the relevant excerpts from the accounting handbooks (IFRS & CGAAP), as well as excerpts from various accounting firm documents comparing IFRS to CGAAP as it pertains to the componentization of assets for calculating depreciation. Also included is an excerpt from a Canadian Securities Administrators staff notice (52-326) and a financial statement note from the 2011 PotashCorp online financial statements. Manitoba Hydro has underlined the relevant sections from each excerpt. Such documents, along with discussions with Gannett Fleming and other utilities were relied upon by Manitoba Hydro in confirming that IFRS is more explicit than CGAAP in terms of requiring asset componentization.

IFRS Section IAS 16 – Property plant and equipment:

Depreciation

43 ***Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item shall be depreciated separately.***

44 An entity allocates the amount initially recognised in respect of an item of property, plant and equipment to its significant parts and depreciates separately each such part. For example, it may be appropriate to depreciate separately the airframe and engines of an aircraft, whether owned or subject to a finance lease. Similarly, if an entity acquires property, plant and equipment subject to an operating lease in which it is the lessor, it may be appropriate to depreciate separately amounts reflected in the cost of that item that are attributable to favourable or unfavourable lease terms relative to market terms.

45 A significant part of an item of property, plant and equipment may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another significant part of that same item. Such parts may be grouped in determining the depreciation charge.

68 The gain or loss arising from the derecognition of an item of property, plant and equipment shall be included in profit or loss when the item is derecognised (unless IAS 17 requires otherwise on a sale and leaseback). Gains shall not be classified as revenue.

IASB - Basis for Conclusions on IAS 16 Property, Plant & equipment:

Depreciation: unit of measure

BC26 The Board's discussions about the potential improvements to the depreciation principle in the previous version of IAS 16 included consideration of the unit of measure an entity uses to depreciate its items of property, plant and equipment. Of particular concern to the Board were situations in which the unit of measure is the 'item as a whole' even though that item may be composed of significant parts with individually varying useful lives or consumption patterns. The Board did not believe that, in these situations, an entity's use of approximation techniques, such as a weighted average useful life for the item as a whole, resulted in depreciation that faithfully represents an entity's varying expectations for the significant parts.

BC27 The Board sought to improve the previous version of IAS 16 by proposing in the ED revisions to existing guidance on separating an item into its parts and then further clarifying in the Standard the need for an entity to depreciate separately any significant parts of an item of property, plant and equipment. By doing so an entity will also separately depreciate the item's remainder.

CGAAP Section 3061 Property, plant and equipment:

Amortization

.30 The cost of an item of property, plant and equipment made up of significant separable component parts is allocated to the component parts when practicable and when estimates can be made of the lives of the separate components. For example, initial leasing costs may be identifiable as a separable component of the cost of rental real estate and engines may be a separable component of an aircraft.

Excerpts from Accounting Firm Documents:

Deloitte, International Financial Reporting Standards (2008):
Considerations for Power & Utilities
Page 4, Property, plant and equipment (PP&E)

Asset componentization: IAS 16, Property, Plant and Equipment, requires the different components of an asset to be identified and depreciated separately if they have differing patterns of benefits and are significant relative to the total cost of the item. This components approach means that different depreciation periods will be used for each component of a fixed asset. For example, a power plant is comprised of separate components with different useful lives (turbine rotor, turbine blades, boiler, electronic equipment, and so on), so its total book value will have to be allocated to these separate components. These individual components would then be depreciated over their respective useful lives. Significant parts of an asset that have similar useful lives and pattern of consumption can, however, be grouped together. Entities that currently recognize plant assets as one overall item depreciated over a single 20- or 30-year useful life may find componentization to be a challenging process, especially if the PP&E ledger under U.S. GAAP is not sufficiently detailed or lacks certain key data necessary to specifically identify components.

BDO Dunwoody LLP, Canadian GAAP – IFRS Comparison Series – Issue 3 – Property, Plant and Equipment (2008)
Page 7, Components

In both Canadian GAAP and IFRS the requirements for charging depreciation on property, plant and equipment are similar, although in practice may be very different. Both Canadian GAAP and IFRS require component accounting however the requirements under IFRS are much more explicit. As a result the total depreciation amount charged to the profit or loss statement will increase or decrease depending on the depreciation rates and methods used for each separate component. The following simple example illustrates the impact using component accounting can have on the depreciation charged. Following the example used in paragraph 44 of IAS 16, which sets out that it may be appropriate to separate an aircraft into its airframe and engine components, assuming an entity purchases an aircraft for $12m with the cost comprising the airframe ($6.0m), the engine ($4.0m) and other components which will be grouped together ($2.0m). For the purposes of this example assume that the entity uses the straight line depreciation method, there is no residual value and the estimated useful lives of the components are:

- aircraft frame - 20 years;
- the engine component - 16 years, and
- the other component - 8 years.

The estimated useful life of the whole aircraft is 20 years, with no expected residual value.

Journal entry for when the aircraft was initially purchased:

Canadian GAAP

Dr Asset 12m
Cr Bank/Liability 12m

IFRS

Dr Aircraft – Airframe 6m
Dr Aircraft – Engine 4m
Dr Aircraft – Other 2m
Cr Bank/Liability 12m

Journal entry to record depreciation:

Canadian GAAP

Dr Depreciation 0.60m
Cr Accumulated Depreciation 0.60m

IFRS

Dr Depreciation Aircraft – Airframe 0.30m
Dr Depreciation Aircraft – Engine 0.25m
Dr Depreciation Aircraft – Other 0.25m
Cr Accumulated Depreciation – Airframe 0.30m
Cr Accumulated Depreciation – Engine 0.25m
Cr Accumulated Depreciation – Air other 0.25m

As the above example illustrates the total amount of depreciation charged to the profit and loss may increase, in this example increasing from $0.6m to $0.8m.

These differences arising between Canadian GAAP and IFRS in relation to component accounting are summarized in the table below:

Canadian GAAP	IFRS
Under paragraph 30 of Section 3061 component accounting is required for significant separable component parts of an item of property, plant and equipment when practicable and when estimates can be made of the lives of the separate components.	Similar to Canadian GAAP, component accounting is required for significant parts of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item (IAS 16.43).
Although very similar to the IAS 16 requirement, component accounting has typically not been practiced in Canada.	Component accounting is required if the useful life and/or depreciation method for the component is different from the remainder of the asset.

KPMG, Quick Scan – Manitoba Hydro (January 26, 2009)
As filed with the PUB on February 2, 2009. This document represented a high-level diagnostic and qualitative assessment or "Quick Scan" as prepared by KPMG, which identified the areas where implementation of IFRS could have the most significant impact on Manitoba Hydro.

Page 3, Property, Plant and Equipment

- IFRS requires significant components of assets to be capitalized and appropriate depreciation policies applied to each identified component. A separate component may be a physical component such as a major spare part, or a non-physical component such as a major inspection or overhaul. Separate component accounting is more rigorously applied and broader under IFRS than under Canadian GAAP. Manitoba Hydro may need to further componentize their PP&E when adopting IFRS.

KPMG, IFRS compared to Canadian GAAP: An overview (Third Edition 2010)
Section 3.2 Property, plant and equipment
(IAS 16, IAS 23, IFRIC 1, IFRIC 18), (HB 1506, HB 3061, HB 3110, HB 3831, HB 3475)

Page 44 Overview of IFRS

- When an item of property, plant and equipment comprises individual components for which different depreciation methods or rates are appropriate, each component is accounted for separately (component accounting).

Page 44 Overview of Canadian GAAP

- Component accounting is required for significant separable component parts of an item of property, plant and equipment when practicable and when estimates can be made of the lives of the separate components, like IFRSs. However, unlike IFRSs, Canadian GAAP provides no guidance on the cost of a component and the replacement of components, and is less specific than IFRSs about the level at which component accounting is required.

Price WaterhouseCoopers – A Practical Guide to Accounting for Property Under The Cost Model (September 2010)

Page 3, One of the objectives of the 'component approach' is therefore to reflect more precisely the pattern in which the asset's future economic benefits are expected to be

consumed by the entity. The IASB did not believe that an entity's use of approximation techniques, such as a weighted average useful life for the item as a whole, resulted in depreciation that faithfully represents an entity's varying expectations for the significant parts of the asset [IAS 16, BC 26].

The above method achieves a more appropriate calculation of the depreciation, as well as the de-recognition of the costs of a replacement of a part to allow the recognition of the new part.

E & Y Standards International GAAP 2014
Generally Accepted Accounting Practice under International Financial Reporting

Page 1274, IAS 16 requires "significant parts" of an asset to be depreciated separately (IAS 16.43-44). These are parts that have a cost that is significant in relation to the total cost of an asset. An entity will have to identify the significant parts of the asset on initial recognition in order for it to depreciate the asset properly.

Alberta Accountants Website (2010): Top 10 IFRS Issues – Componentization
by Paul Ennis, MBA, ICD.D, CGA.

One of the top ten issues arising from the Canadian conversion from GAAP to IFRS is dealing with componentization of property, plant and equipment (PP&E). Under IFRS, IAS 16 prescribes the accounting treatment for PP&E. Componentization under IAS 16 prescribes that a fixed asset of PP&E should be separated into component parts when the cost of the parts is significant in relation to the total cost of the asset. Each component part is then depreciated separately. Such a distribution of assets was rarely used under Canadian GAAP because it was only required when it was practical. This type of componentization is a requirement under IFRS since it attempts to capture the economic activity of an organization in a more accurate manner than Canadian GAAP.

Canadian Securities Administrators (CSA) staff notice 52-326, IFRS Transition Disclosure Review (July 23, 2010)

Page 1, Canadian Securities Administrators (CSA) staff conducted a review to assess the extent and quality of International Financial Reporting Standards (IFRS) transition disclosure made by issuers in 2009 annual Management's Discussion & Analysis (MD&A). We compared the IFRS transition disclosure of 196 calendar year-end issuers to the disclosure

guidance provided in CSA Staff Notice 52-320 Disclosure of Expected Changes in Accounting Policies Relating to Changeover to International Financial Reporting Standards (SN 52-320).

Identified Differences between Canadian GAAP and IFRS

Page 5, Our review identified two types of accounting differences - differences that are common across various industries and differences that are industry-specific.

Some of the common accounting differences disclosed by issuers included impairment of assets, revenue recognition and property, plant and equipment. An example of entity-specific disclosure for each of these accounting differences is provided below.

Property, plant and equipment (PP&E)

Page 7, IAS 16 Property, plant and equipment requires separate accounting for the different components of an asset when the associated depreciation methods or rates are different. While existing Canadian GAAP also refers to componentization of PP&E, the requirements in IFRS on this issue are more explicit. IFRS also permits PP&E to be revalued to fair value at the end of each reporting period.

We found issuers generally discussed both of these differences. However, to have provided meaningful information to investors, issuers should have disclosed the effects of asset componentization on the balance sheet and depreciation expense in net income. An example of entity-specific disclosure on the effects of componentization of PP&E is provided below.

The Company expects the carrying value of certain property, plant and equipment may decrease upon conversion to IFRS compared to the carrying value under Canadian GAAP. The decrease may result from increased depreciation expense due to asset componentization and the requirement to depreciate property, plant and equipment when the assets are available for use, rather than when the assets are put into use. Asset componentization, which may result in increased depreciation expense, involves breaking down an asset by identifying significant individual components and separately depreciating those individual components over their useful lives.

PotashCorp – 2011 Online Annual Report, Notes to the financial Statements
Note. 30 Transition to IFRS:

Differences from previous Canadian GAAP: Under IFRS, where part of an item of property, plant and equipment has a cost that is significant in relation to the cost of the item as a whole, it must be depreciated separately from the remainder of the item. Canadian GAAP was similar in this respect; however, the componentization concept was not often applied to the same extent due to practicality and/or materiality.

Transition impact: Equity at December 31, 2010 increased by $52 (January 1, 2010 — $18). Net income for 2010 increased by $34.

Expected future impact: The cost of future replacement of components of property, plant and equipment (including the cost of major overhauls) will be capitalized and depreciated over several years rather than being expensed in the year incurred. This will result in a difference in timing between IFRS and Canadian GAAP in terms of when such costs are recognized as expenses.

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Peer Reviewed Utilities		
Issue:			

PREAMBLE TO IR (IF ANY):

On page 5 of Appendix 5.6 Hydro states that:"IFRS is more specific than CGGAP regarding depreciation. Under IFRS, it is mandatory that items of material cost whose service life is different than other items in the group, be amortized separately. Effectively, if the separate depreciation of an item would have a material impact on net income, that item should be depreciated separately. This requirement is not mandatory under CGAAP."

QUESTION:

Please provide any changes in IFRS pronouncements (including relevant sections of IAS materials) regarding rate regulated accounting and depreciation since the last GRA.

RATIONALE FOR QUESTION:

MIPUG is reviewing the depreciation study including any changes that have occurred since the 2010 depreciation study.

RESPONSE:

Please see table 6.1 (pages 54 and 61) of Appendix 5.4 IFRS Status Update Report which provides a summary of recent IFRS changes relating to rate regulated accounting and depreciation.

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Detailed Calculation Example		
Issue:			

PREAMBLE TO IR (IF ANY):

In the 2012/13 & 2013/14 GRA Hydro provided MH Exhibit #59 which provided an illustrative example with two detailed calculations of an investment installed in 1923 with a lifespan of 2063 assuming plant installed in 2013 with a life span of 2063.

QUESTION:

Please provide a copy of MH Exhibit #59 from the 2012/13 & 2013/14 GRA with any revisions needed for accurate representation between the ASL and ELG methods used for the 2014 Depreciation Study?

RATIONALE FOR QUESTION:

MIPUG is reviewing the depreciation study including any changes that have occurred since the 2010 depreciation study.

RESPONSE:

The illustrative examples provided for in MH Exhibit #59 of the 2012/13 & 2013/14 GRA Hydro are still relevant and as such do not require further updating. As MH Exhibit #59 was prepared by Gannet Fleming, the results provided in this response have also been prepared by Gannett Fleming.

Please note that the ASL procedure as applied in this example is not IFRS compliant as there likely would be a requirement to componentize the investment further so as to ensure the applied ASL procedure complies with the requirements of IFRS. In addition, the ASL example fails to recognize annual losses on asset retirements. As a result, this simplistic

example cannot be relied upon to understand the differences between ELG and an IFRS compliant ASL methodology for Manitoba Hydro.

The example provided in Appendix 11.49 (page 10) Manitoba Hydro's Response to Order 43/13, Directives 8 & 9, the recognition of annual asset retirement losses under the ASL procedure can result in an overall annual expense (depreciation plus retirement losses) that is greater than the depreciation expense determined under the ELG method. In addition, it is likely that under IFRS, there would be a requirement.

For further information on the differences between the ELG and ASL procedures, please refer to Appendix 11.49 of the application.

Copy of Exhibit #59 from the 2012/13 & 2013/14 GRA:

Please refer to the following schedules, which provide annual depreciation rates calculated using both the Equal Life Group and Average Service Life Procedures for the two cases requested. The depreciation rates were calculated using the following assumptions:

Case 1

- $1,000 of investment is added in 1923 with an anticipated Life span ending in 2063.
- A small portion of the original investment will retire each year in accordance with the Iowa R4-125 survivor curve. The Anticipated Closing Balance reflects this small amount of annual retirement.
- The anticipated loss on retirement that would result in the ASL procedure has not been considered in this analysis.
- The total original cost of $1,000 is fully recovered in both procedures.

Case 2

- $1,000 of investment is added in 2013 with an anticipated Life span ending in 2063.
- A small portion of the original investment will retire each year in accordance with the Iowa R4-125 survivor curve. The Anticipated Closing Balance reflects this small amount of annual retirement.
- The anticipated loss on retirement that would result in the ASL procedure has not been considered in this analysis.
- The total original cost of $1,000 is fully recovered in both procedures.

Case 1 - Annual Depreciation Rates for the years 1923 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
1923	1,000.00	0.87%	8.70	0.823%	8.23
1924	999.99	0.87%	8.70	0.823%	8.23
1925	999.98	0.87%	8.70	0.823%	8.23
1926	999.97	0.87%	8.70	0.823%	8.23
1927	999.96	0.87%	8.70	0.823%	8.23
1928	999.95	0.87%	8.70	0.823%	8.23
1929	999.94	0.87%	8.70	0.823%	8.23
1930	999.93	0.87%	8.70	0.823%	8.23
1931	999.91	0.87%	8.70	0.823%	8.23
1932	999.89	0.87%	8.70	0.823%	8.23
1933	999.87	0.87%	8.70	0.823%	8.23
1934	999.85	0.87%	8.70	0.823%	8.23
1935	999.83	0.87%	8.70	0.823%	8.23
1936	999.80	0.86%	8.60	0.823%	8.23
1937	999.77	0.86%	8.60	0.823%	8.23
1938	999.74	0.86%	8.60	0.823%	8.23
1939	999.70	0.86%	8.60	0.823%	8.23
1940	999.66	0.86%	8.60	0.823%	8.23
1941	999.62	0.86%	8.60	0.823%	8.23
1942	999.57	0.86%	8.60	0.823%	8.23
1943	999.52	0.86%	8.60	0.823%	8.23
1944	999.46	0.86%	8.60	0.823%	8.23
1945	999.40	0.86%	8.59	0.823%	8.23
1946	999.33	0.86%	8.59	0.823%	8.22
1947	999.25	0.86%	8.59	0.823%	8.22
1948	999.16	0.86%	8.59	0.823%	8.22
1949	999.07	0.86%	8.59	0.823%	8.22
1950	998.97	0.86%	8.59	0.823%	8.22
1951	998.86	0.86%	8.59	0.823%	8.22
1952	998.74	0.86%	8.59	0.823%	8.22
1953	998.61	0.86%	8.59	0.823%	8.22
1954	998.47	0.86%	8.59	0.823%	8.22
1955	998.32	0.86%	8.59	0.823%	8.22
1956	998.15	0.86%	8.58	0.823%	8.21
1957	997.96	0.86%	8.58	0.823%	8.21
1958	997.76	0.86%	8.58	0.823%	8.21
1959	997.54	0.86%	8.58	0.823%	8.21
1960	997.31	0.86%	8.58	0.823%	8.21

Case 1 - Annual Depreciation Rates for the years 1923 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
1961	997.05	0.86%	8.57	0.823%	8.21
1962	996.77	0.86%	8.57	0.823%	8.20
1963	996.47	0.86%	8.57	0.823%	8.20
1964	996.15	0.86%	8.57	0.823%	8.20
1965	995.81	0.86%	8.56	0.823%	8.20
1966	995.43	0.86%	8.56	0.823%	8.19
1967	995.03	0.85%	8.46	0.823%	8.19
1968	994.60	0.85%	8.45	0.823%	8.19
1969	994.14	0.85%	8.45	0.823%	8.18
1970	993.65	0.85%	8.45	0.823%	8.18
1971	993.11	0.85%	8.44	0.823%	8.17
1972	992.53	0.85%	8.44	0.823%	8.17
1973	991.92	0.85%	8.43	0.823%	8.16
1974	991.27	0.85%	8.43	0.823%	8.16
1975	990.57	0.85%	8.42	0.823%	8.15
1976	989.81	0.85%	8.41	0.823%	8.15
1977	989.01	0.85%	8.41	0.823%	8.14
1978	988.15	0.84%	8.30	0.823%	8.13
1979	987.24	0.84%	8.29	0.823%	8.12
1980	986.28	0.84%	8.28	0.823%	8.12
1981	985.24	0.84%	8.28	0.823%	8.11
1982	984.14	0.84%	8.27	0.823%	8.10
1983	982.97	0.84%	8.26	0.823%	8.09
1984	981.73	0.84%	8.25	0.823%	8.08
1985	980.42	0.84%	8.24	0.823%	8.07
1986	979.01	0.84%	8.22	0.823%	8.06
1987	977.52	0.84%	8.21	0.823%	8.04
1988	975.95	0.84%	8.20	0.823%	8.03
1989	974.30	0.84%	8.18	0.823%	8.02
1990	972.56	0.83%	8.07	0.823%	8.00
1991	970.70	0.83%	8.06	0.823%	7.99
1992	968.74	0.83%	8.04	0.823%	7.97
1993	966.68	0.83%	8.02	0.823%	7.96
1994	964.51	0.83%	8.01	0.823%	7.94
1995	962.23	0.83%	7.99	0.823%	7.92
1996	959.80	0.83%	7.97	0.823%	7.90
1997	957.25	0.83%	7.95	0.823%	7.88
1998	954.58	0.82%	7.83	0.823%	7.86

Case 1 - Annual Depreciation Rates for the years 1923 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
1999	951.79	0.82%	7.80	0.823%	7.83
2000	948.87	0.82%	7.78	0.823%	7.81
2001	945.77	0.82%	7.76	0.823%	7.78
2002	942.53	0.82%	7.73	0.823%	7.76
2003	939.14	0.82%	7.70	0.823%	7.73
2004	935.60	0.81%	7.58	0.823%	7.70
2005	931.91	0.81%	7.55	0.823%	7.67
2006	928.01	0.81%	7.52	0.823%	7.64
2007	923.95	0.81%	7.48	0.823%	7.60
2008	919.72	0.81%	7.45	0.823%	7.57
2009	915.32	0.81%	7.41	0.823%	7.53
2010	910.75	0.80%	7.29	0.823%	7.50
2011	905.94	0.80%	7.25	0.823%	7.46
2012	900.95	0.80%	7.21	0.823%	7.41
2013	895.77	0.80%	7.17	0.823%	7.37
2014	890.40	0.80%	7.12	0.823%	7.33
2015	884.84	0.80%	7.08	0.823%	7.28
2016	879.02	0.79%	6.94	0.823%	7.23
2017	873.00	0.79%	6.90	0.823%	7.18
2018	866.77	0.79%	6.85	0.823%	7.13
2019	860.34	0.79%	6.80	0.823%	7.08
2020	853.70	0.79%	6.74	0.823%	7.03
2021	846.78	0.78%	6.60	0.823%	6.97
2022	839.65	0.78%	6.55	0.823%	6.91
2023	832.30	0.78%	6.49	0.823%	6.85
2024	824.73	0.78%	6.43	0.823%	6.79
2025	816.95	0.78%	6.37	0.823%	6.72
2026	808.88	0.77%	6.23	0.823%	6.66
2027	800.58	0.77%	6.16	0.823%	6.59
2028	792.05	0.77%	6.10	0.823%	6.52
2029	783.28	0.77%	6.03	0.823%	6.45
2030	774.26	0.77%	5.96	0.823%	6.37
2031	764.88	0.77%	5.89	0.823%	6.29
2032	755.20	0.76%	5.74	0.823%	6.22
2033	745.20	0.76%	5.66	0.823%	6.13
2034	734.87	0.76%	5.59	0.823%	6.05
2035	724.19	0.76%	5.50	0.823%	5.96
2036	713.01	0.76%	5.42	0.823%	5.87

Case 1 - Annual Depreciation Rates for the years 1923 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
2037	701.44	0.75%	5.26	0.823%	5.77
2038	689.46	0.75%	5.17	0.823%	5.67
2039	677.06	0.75%	5.08	0.823%	5.57
2040	664.24	0.75%	4.98	0.823%	5.47
2041	650.85	0.75%	4.88	0.823%	5.36
2042	637.04	0.74%	4.71	0.823%	5.24
2043	622.81	0.74%	4.61	0.823%	5.13
2044	608.18	0.74%	4.50	0.823%	5.01
2045	593.15	0.74%	4.39	0.823%	4.88
2046	577.63	0.73%	4.22	0.823%	4.75
2047	561.77	0.73%	4.10	0.823%	4.62
2048	545.59	0.73%	3.98	0.823%	4.49
2049	529.13	0.73%	3.86	0.823%	4.35
2050	512.40	0.73%	3.74	0.823%	4.22
2051	495.39	0.73%	3.62	0.823%	4.08
2052	478.22	0.72%	3.44	0.823%	3.94
2053	460.92	0.72%	3.32	0.823%	3.79
2054	443.53	0.72%	3.19	0.823%	3.65
2055	426.08	0.72%	3.07	0.823%	3.51
2056	408.63	0.72%	2.94	0.823%	3.36
2057	391.24	0.72%	2.82	0.823%	3.22
2058	373.94	0.71%	2.65	0.823%	3.08
2059	356.76	0.71%	2.53	0.823%	2.94
2060	339.74	0.71%	2.41	0.823%	2.80
2061	323.00	0.71%	2.29	0.823%	2.66
2062	306.52	0.71%	2.18	0.823%	2.52
2063	289.87	0.71%	2.06	0.823%	2.39
			1,000.81		1,000.37

Case 2 - Annual Depreciation Rates for the years 2013 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
2013	1000	0.99%	9.90	0.99%	9.90
2014	999.99	1.99%	19.90	1.98%	19.82
2015	999.98	1.99%	19.90	1.98%	19.82
2016	999.97	1.99%	19.90	1.98%	19.82
2017	999.96	1.99%	19.90	1.98%	19.82
2018	999.95	1.99%	19.90	1.98%	19.82
2019	999.94	1.99%	19.90	1.98%	19.82
2020	999.93	1.99%	19.90	1.98%	19.82
2021	999.91	1.99%	19.90	1.98%	19.82
2022	999.89	1.99%	19.90	1.98%	19.82
2023	999.87	1.99%	19.90	1.98%	19.82
2024	999.85	1.99%	19.90	1.98%	19.82
2025	999.83	1.99%	19.90	1.98%	19.82
2026	999.8	1.99%	19.90	1.98%	19.82
2027	999.77	1.99%	19.90	1.98%	19.82
2028	999.74	1.99%	19.89	1.98%	19.81
2029	999.7	1.99%	19.89	1.98%	19.81
2030	999.66	1.99%	19.89	1.98%	19.81
2031	999.62	1.98%	19.79	1.98%	19.81
2032	999.57	1.98%	19.79	1.98%	19.81
2033	999.52	1.98%	19.79	1.98%	19.81
2034	999.46	1.98%	19.79	1.98%	19.81
2035	999.4	1.98%	19.79	1.98%	19.81
2036	999.33	1.98%	19.79	1.98%	19.81
2037	999.25	1.98%	19.79	1.98%	19.81
2038	999.16	1.98%	19.78	1.98%	19.80
2039	999.07	1.98%	19.78	1.98%	19.80
2040	998.97	1.98%	19.78	1.98%	19.80
2041	998.86	1.98%	19.78	1.98%	19.80
2042	998.74	1.98%	19.78	1.98%	19.80
2043	998.61	1.98%	19.77	1.98%	19.79
2044	998.47	1.98%	19.77	1.98%	19.79
2045	998.32	1.98%	19.77	1.98%	19.79
2046	998.15	1.98%	19.76	1.98%	19.78
2047	997.96	1.98%	19.76	1.98%	19.78
2048	997.76	1.98%	19.76	1.98%	19.78
2049	997.54	1.98%	19.75	1.98%	19.77
2050	997.31	1.98%	19.75	1.98%	19.77
2051	997.05	1.98%	19.74	1.98%	19.76

Case 2 - Annual Depreciation Rates for the years 2013 through 2063 incorporating the Equal Life Group and Average Service Life Grouping Procedures

		ELG		ASL	
	Anticipated Closing Balance ($)	Annual Rate (%)	Annual Expense ($)	Annual Rate (%)	Annual Expense ($)
2052	996.77	1.98%	19.74	1.98%	19.76
2053	996.47	1.98%	19.73	1.98%	19.75
2054	996.15	1.98%	19.72	1.98%	19.74
2055	995.81	1.98%	19.72	1.98%	19.74
2056	995.43	1.98%	19.71	1.98%	19.73
2057	995.03	1.98%	19.70	1.98%	19.72
2058	994.6	1.98%	19.69	1.98%	19.71
2059	994.14	1.98%	19.68	1.98%	19.70
2060	993.65	1.98%	19.67	1.98%	19.69
2061	993.11	1.98%	19.66	1.98%	19.68
2062	992.53	1.98%	19.65	1.98%	19.67
2063	992.53	1.98%	19.65	1.98%	19.67
			999.74		999.04

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Comparison to 2010 Depreciation Study		
Issue:	Overview of Depreciation Method changes		

PREAMBLE TO IR (IF ANY):

QUESTION:

Please update MIPUG/MH I-15(p) from the 2012/14 GRA providing revised depreciation expense for actual and forecasts through 2016/17. For each year, separately identify the impacts of addition of assets, including Wuskwatim, the impacts of adoption of ELG, new depreciation study lives, and the impact of the elimination of asset retirement costs.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

The following schedule identifies the incremental impact on annual depreciation expense of the following items:

- Net asset additions (additions net of retirements);
- Wuskwatim;
- 2010 Depreciation Study changes, including changes to componentization and to average service lives;
- 2014 Depreciation Study changes to average service lives;
- Implementation of IFRS, including the change to an IFRS compliant depreciation method (ELG), removal of the provision for net salvage from depreciation rates, removal of IFRS ineligible costs from capitalized overhead and capitalization of meter exchange program costs.

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2007/08 Actual	Net Additions	2008/09 Actual	Net Additions	2009/10 Actual	Net Additions	2010/11 Actual
Generation							
Hydraulic Generating Stations	68,451	2,460	70,911	3,399	74,310	1,818	76,128
Thermal Generating Stations	17,170	106	17,276	336	17,612	(7,842)	9,771
Amortization of Planning Studies	2,366	(2,366)	-	-	-	-	
Demand Side Management	11,357	7,800	19,157	2,907	22,064	1,930	23,994
Diesel Generating Stations	4,067	(134)	3,933	(381)	3,552	139	3,691
Amortization of Contributions	(2,774)	(22)	(2,796)	-	(2,796)	-	(2,796)
	$ 100,637	$ 7,844	$ 108,481	$ 6,262	$ 114,743	$ (3,955)	$ 110,788
Transmission							
Transmission	14,120	197	14,317	11	14,328	143	14,471
Amortization of Contributions	(1,631)	(6)	(1,638)	-	(1,638)	9	(1,629)
	$ 12,489	$ 191	$ 12,680	$ 11	$ 12,690	$ 152	$ 12,842
Stations							
Substations	70,616	1,896	72,512	1,611	74,123	2,624	76,747
Transformers	3,681	(1,393)	2,288	(167)	2,121	(468)	1,653
Amortization of Contributions	(1,461)	(1)	(1,462)	(2)	(1,464)	(6)	(1,470)
	$ 72,836	$ 502	$ 73,338	$ 1,442	$ 74,780	$ 2,150	$ 76,930
Distribution							
Subtransmission Lines	8,905	261	9,166	303	9,469	423	9,892
Distribution Lines	72,410	5,320	77,730	4,949	82,679	4,515	87,194
Meters & Metering Transformers	1,551	46	1,597	(7)	1,590	25	1,615
Amortization of Contributions	(9,769)	(411)	(10,180)	(263)	(10,443)	(267)	(10,710)
	$ 73,097	$ 5,215	$ 78,312	$ 4,983	$ 83,295	$ 4,696	$ 87,991
Other							
Communications	17,636	1,837	19,473	1,474	20,947	1,571	22,518
Motor Vehicles	8,275	416	8,691	69	8,760	740	9,500
Structures & Improvements	3,216	2,476	5,692	898	6,590	832	7,422
General Equipment	20,572	(2,898)	17,674	332	18,006	(834)	17,172
Computer Development	13,582	499	14,081	373	14,454	799	15,253
Affordable Energy Fund	625	816	1,441	1,617	3,058	410	3,468
Miscellaneous	2,701	(238)	2,463	532	2,995	(372)	2,623
Corporate Allocation	(2,093)	81	(2,012)	(127)	(2,139)	359	(1,780)
	$ 64,514	$ 2,989	$ 67,503	$ 5,168	$ 72,671	$ 3,505	$ 76,176
Total Dep'n and Amort Expense	$ 323,573	$ 16,741	$ 340,314	$ 17,865	$ 358,179	$ 6,547	$ 364,727

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2010/11 Actual	Year over Year Change			2011/12 Actual
		Net Additions	2010 Depn Study		
			Component Reclass	Change in Asset Life	
Generation					
Hydraulic Generating Stations	76,128	3,692	(352)	(4,404)	75,064
Thermal Generating Stations	9,771	1,180	(426)	(1,845)	8,680
Demand Side Management	23,994	2,197	-	-	26,191
Diesel Generating Stations	3,691	1,685	-	(4,017)	1,359
Amortization of Contributions	(2,796)	(246)	-	2,325	(718)
	$ 110,788	$ 8,508	$ (778)	$ (7,941)	$ 110,576
Transmission					
Transmission	14,471	74	-	(625)	13,920
Amortization of Contributions	(1,629)	1	-	271	(1,357)
	$ 12,842	$ 75	$ -	$ (354)	$ 12,563
Stations					
Substations	76,747	5,060	1,909	(4,558)	79,157
Transformers	1,653	316	-	(278)	1,691
Amortization of Contributions	(1,470)	(29)	-	251	(1,247)
	$ 76,930	$ 5,347	$ 1,909	$ (4,585)	$ 79,601
Distribution					
Subtransmission Lines	9,892	714	-	(4,632)	5,974
Distribution Lines	87,194	4,999	-	(36,646)	55,547
Meters & Metering Transformers	1,615	(176)	-	2,766	4,205
Amortization of Contributions	(10,710)	(401)	-	6,337	(4,774)
	$ 87,991	$ 5,136	$ -	$ (32,175)	$ 60,952
Other					
Communications	22,518	(7,768)	-	5,368	20,118
Motor Vehicles	9,500	1,736	-	(862)	10,374
Structures & Improvements	7,422	403	(1,131)	924	7,618
General Equipment	17,172	826	-	5,495	23,493
Computer Development	15,253	3,485	-	157	18,895
Affordable Energy Fund	3,468	4,004	-	-	7,472
Miscellaneous	2,623	797	-	-	3,420
Corporate Allocation	(1,780)	-	-	74	(1,706)
	$ 76,176	$ 3,482	$ (1,131)	$ 11,156	$ 89,684
Total Dep'n and Amort Expense	$ 364,727	$ 22,548	$ -	$ (33,899)	$ 353,376

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2011/12 Actual	Year over Year Change			2012/13 Actual *
		Net Additions	Wuskwatim	2010 Depn Study Change in Asset Life	
Generation					
Hydraulic Generating Stations	75,064	5,375	12,115	(329)	92,225
Thermal Generating Stations	8,680	6,582	-	153	15,415
Demand Side Management	26,191	2,026	-	-	28,217
Diesel Generating Stations	1,359	7	-	91	1,457
Amortization of Contributions	(718)	(523)	-	399	(841)
	$ 110,576	$ 13,468	$ 12,115	$ 314	$ 136,473
Transmission					
Transmission	13,920	855	1,362	(204)	15,933
Amortization of Contributions	(1,357)	(1)	-	-	(1,358)
	$ 12,562	$ 854	$ 1,362	$ (204)	$ 14,575
Stations					
Substations	79,157	4,002	2,409	(666)	84,902
Transformers	1,691	115	-	(1)	1,806
Amortization of Contributions	(1,247)	(2)	-	2	(1,247)
	$ 79,601	$ 4,115	$ 2,409	$ (664)	$ 85,461
Distribution					
Subtransmission Lines	5,974	562	-	(265)	6,271
Distribution Lines	55,547	4,205	14	(1,582)	58,184
Meters & Metering Transformers	4,205	50	-	17	4,273
Amortization of Contributions	(4,774)	(698)	-	388	(5,084)
	$ 60,952	$ 4,120	$ 14	$ (1,442)	$ 63,644
Other			-		-
Communications	20,118	(485)	258	(441)	19,450
Motor Vehicles	10,374	626	17	(45)	10,971
Structures & Improvements	7,618	146	-	183	7,947
General Equipment	23,493	1,731	4	582	25,810
Computer Development	18,895	1,608	-	79	20,582
Affordable Energy Fund	7,472	(2,066)	-	-	5,406
Miscellaneous	3,420	131	-	(1)	3,550
Corporate Allocation	(1,706)	(241)	-	1	(1,946)
	$ 89,683	$ 1,449	$ 279	$ 358	$ 91,770
Total Dep'n and Amort Expense	$ 353,375	$ 24,004	$ 16,179	$ (1,638)	$ 391,923

* 2012/13 Actual figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2012/13 Actual *	Year over Year Change			2013/14 Actual *
		Net Additions	Wuskwatim	2010 Depn Study Change in Asset Life	
Generation					
Hydraulic Generating Stations	92,225	3,504	7,940	(1,562)	102,108
Thermal Generating Stations	15,415	213	-	(66)	15,562
Demand Side Management	28,217	2,045	-	-	30,262
Diesel Generating Stations	1,457	(536)	-	836	1,757
Amortization of Contributions	(841)	(114)	-	87	(868)
	$ 136,473	$ 5,112	$ 7,940	$ (705)	$ 148,821
Transmission					
Transmission	15,933	547	994	(400)	17,074
Amortization of Contributions	(1,358)	(497)	-	370	(1,485)
	$ 14,575	$ 50	$ 994	$ (31)	$ 15,588
Stations					
Substations	84,902	3,724	2,383	(3,799)	87,210
Transformers	1,806	128	-	6	1,940
Amortization of Contributions	(1,247)	90	-	254	(903)
	$ 85,461	$ 3,941	$ 2,383	$ (3,539)	$ 88,247
Distribution					
Subtransmission Lines	6,271	667	-	(309)	6,629
Distribution Lines	58,184	5,060	25	(1,927)	61,342
Meters & Metering Transformers	4,273	20	-	(33)	4,260
Amortization of Contributions	(5,084)	(868)	-	496	(5,456)
	$ 63,644	$ 4,879	$ 25	$ (1,774)	$ 66,774
Other	-				
Communications	19,450	269	165	1,846	21,730
Motor Vehicles	10,971	702	(2)	(83)	11,588
Structures & Improvements	7,947	(76)	-	195	8,066
General Equipment	25,810	(1,449)	3	(1,102)	23,261
Computer Development	20,582	(423)	-	(492)	19,667
Affordable Energy Fund	5,406	(996)	-	-	4,410
Miscellaneous	3,550	1,041	-	37	4,628
Corporate Allocation	(1,946)	-	-	-	(1,946)
	$ 91,770	$ (931)	$ 165	$ 401	$ 91,404
Total Dep'n and Amort Expense	$ 391,923	$ 13,052	$ 11,508	$ (5,648)	$ 410,834

* 2012/13 and 2013/14 Actual figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2013/14 Actual *	Year over Year Change (Forecast)			2014/15 Forecast *
		Net Additions	2010 Depn Study Change in Asset Life	2014 Depn Study Change in Asset Life	
Generation					
Hydraulic Generating Stations	102,108	6,350	484	4,047	112,990
Thermal Generating Stations	15,562	106	(18)	121	15,770
Demand Side Management	30,262	1,314	-	-	31,576
Diesel Generating Stations	1,757	629	(494)	451	2,342
Amortization of Contributions	(868)	(278)	212	(115)	(1,049)
	$ 148,821	$ 8,121	$ 184	$ 4,503	$ 161,629
Transmission					
Transmission	17,074	234	192	(1,170)	16,329
Amortization of Contributions	(1,485)	(12)	33	74	(1,391)
	$ 15,588	$ 222	$ 225	$ (1,097)	$ 14,938
Stations					
Substations	87,210	12,304	(1,007)	(9,953)	88,555
Transformers	1,940	100	17	(430)	1,627
Amortization of Contributions	(903)	(513)	220	27	(1,170)
	$ 88,247	$ 11,891	$ (770)	$ (10,356)	$ 89,012
Distribution					
Subtransmission Lines	6,629	3,255	(2,637)	129	7,376
Distribution Lines	61,342	5,300	(2,223)	(3,905)	60,514
Meters & Metering Transformers	4,260	4	(65)	(1,351)	2,848
Amortization of Contributions	(5,456)	(1,727)	871	635	(5,678)
	$ 66,774	$ 6,832	$ (4,055)	$ (4,491)	$ 65,061
Other	-				
Communications	21,730	(168)	(286)	(4,108)	17,167
Motor Vehicles	11,588	702	(52)	(2,076)	10,162
Structures & Improvements	8,066	244	165	(547)	7,928
General Equipment	23,261	(1,229)	(857)	(4,545)	16,631
Computer Development	19,667	53	204	(2,237)	17,687
Affordable Energy Fund	4,410	860	-	-	5,270
Miscellaneous	4,628	(2,987)	(1)	62	1,701
Corporate Allocation	(1,946)	0	1	(30)	(1,974)
Target Adjustment	-	(619)	-	(1)	(621)
	$ 91,404	$ (3,145)	$ (826)	$ (13,482)	$ 73,951
Total Dep'n and Amort Expense	$ 410,834	$ 23,921	$ (5,243)	$ (24,923)	$ 404,590

* 2013/14 Actual and 2014/15 Forecast figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

		Year over Year Change (Forecast)								
			2010 Depn Study	2014 Depreciation Study				IFRS	Capitalize	
	2014/15 Forecast *	Net Additions	Change in Asset Life	Change in Asset Life	ELG	Removal of Net Salvage	Remove Indirect Overhead	Meter Exchange Program	2015/16 Forecast *
Generation									
Hydraulic Generating Stations	112,990	7,237	415	(3,749)	9,282	(13,690)	-	-	112,484
Thermal Generating Stations	15,770	85	9	5	1,618	(1,731)	-	-	15,755
Demand Side Management	31,576	3,381	-	-	-	-	-	-	34,957
Diesel Generating Stations	2,342	586	(500)	13	237	(121)	-	-	2,557
Amortization of Contributions	(1,049)	(399)	302	-	-	-	-	-	(1,146)
	$ 161,629	$ 10,890	$ 225	$ (3,730)	$ 11,136	$ (15,542)	$ -	$ -	$ 164,608
Transmission									
Transmission	16,329	614	(13)	(2)	1,030	(4,244)	-	-	13,714
Amortization of Contributions	(1,391)	(228)	1	-	-	-	-	-	(1,618)
	$ 14,938	$ 386	$ (12)	$ (2)	$ 1,030	$ (4,244)	$ -	$ -	$ 12,095
Stations									
Substations	88,555	12,264	(767)	(3,322)	9,058	(18,922)	-	-	86,865
Transformers	1,627	(2,085)	49	2,426	82	(502)	-	-	1,597
Amortization of Contributions	(1,170)	185	-	-	-	-	-	-	(985)
	$ 89,012	$ 10,364	$ (718)	$ (896)	$ 9,140	$ (19,425)	$ -	$ -	$ 87,477
Distribution									
Subtransmission Lines	7,376	1,300	(473)	(61)	1,558	(2,753)	-	-	6,948
Distribution Lines	60,514	6,418	(2,737)	98	9,394	(16,693)	-	-	56,995
Meters & Metering Transformers	2,848	(23)	(21)	112	329	6	-	31	3,281
Amortization of Contributions	(5,678)	(1,663)	925	43	-	(13)	-	-	(6,386)
	$ 65,061	$ 6,032	$ (2,306)	$ 192	$ 11,281	$ (19,452)	$ -	$ 31	$ 60,838
Other									
Communications	17,167	553	251	(314)	1,688	(1,186)	-	-	18,160
Motor Vehicles	10,162	759	(75)	(76)	1,092	(31)	-	-	11,830
Structures & Improvements	7,928	543	130	(87)	688	(402)	-	-	8,800
General Equipment	16,631	(739)	(495)	1,387	-	1	-	-	16,784
Computer Development	17,687	785	(62)	(163)	239	1	-	-	18,487
Affordable Energy Fund	5,270	(980)	-	-	-	-	-	-	4,290
Miscellaneous	1,701	1,029	(11)	124	266	(458)	-	-	2,652
Corporate Allocation	(1,974)	(6)	(6)	(55)	(266)	458	-	-	(1,850)
Target Adjustment	(621)	(2,498)	-	(8)	(274)	515	(419)	-	(3,305)
	$ 73,951	$ (554)	$ (268)	$ 808	$ 3,432	$ (1,103)	$ (419)	$ -	$ 75,848
Total Dep'n and Amort Expense	$ 404,590	$ 27,118	$ (3,080)	$ (3,628)	$ 36,019	$ (59,765)	$ (419)	$ 31	$ 400,866

* 2014/15 and 2015/16 Forecast figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2015/16 Forecast *	Year over Year Change (Forecast)								2016/17 Forecast *
		Net Additions	2010 Depn Study	2014 Depreciation Study			IFRS Remove Indirect Overhead	Capitalize Meter Exchange Program	
			Change in Asset Life	Change in Asset Life	ELG	Removal of Net Salvage			
Generation									
Hydraulic Generating Stations	112,484	4,532	145	120	830	(1,769)	-	-	116,342
Thermal Generating Stations	15,755	69	23	6	43	(41)	-	-	15,856
Demand Side Management	34,957	2,544	-	-	-	-	-	-	37,501
Diesel Generating Stations	2,557	(128)	(73)	(245)	-	-	-	-	2,111
Amortization of Contributions	(1,146)	-	-	-	-	-	-	-	(1,146)
	$ 164,608	$ 7,017	$ 96	$ (120)	$ 873	$ (1,810)	$ -	$ -	$ 170,664
Transmission									
Transmission	13,714	1,385	(56)	(48)	86	(369)	-	-	14,712
Amortization of Contributions	(1,618)	(3)	(2)	-	-	-	-	-	(1,623)
	$ 12,095	$ 1,382	$ (58)	$ (48)	$ 86	$ (369)	$ -	$ -	$ 13,089
Stations									
Substations	86,865	5,882	(429)	(720)	565	(849)	-	-	91,313
Transformers	1,597	(30)	44	337	(23)	(97)	-	-	1,828
Amortization of Contributions	(985)	-	-	-	-	-	-	-	(985)
	$ 87,477	$ 5,852	$ (386)	$ (383)	$ 543	$ (946)	$ -	$ -	$ 92,156
Distribution									
Subtransmission Lines	6,948	797	(289)	(29)	80	(106)	-	-	7,401
Distribution Lines	56,995	7,501	(2,789)	(487)	645	(907)	-	-	60,959
Meters & Metering Transformers	3,281	(35)	68	(53)	12	16	-	114	3,404
Amortization of Contributions	(6,386)	(1,520)	875	53	-	(7)	-	-	(6,985)
	$ 60,838	$ 6,743	$ (2,135)	$ (515)	$ 737	$ (1,004)	$ -	$ 114	$ 64,778
Other									
Communications	18,160	697	268	(740)	81	139	-	-	18,604
Motor Vehicles	11,830	417	(41)	34	47	(51)	-	-	12,236
Structures & Improvements	8,800	700	144	(103)	59	(44)	-	-	9,557
General Equipment	16,784	(650)	(355)	1,026	-	-	-	-	16,804
Computer Development	18,487	2,814	82	(604)	37	-	-	-	20,816
Conawapa	-	7,711	-	-	-	-	-	-	7,711
Affordable Energy Fund	4,290	(2,781)	-	-	-	-	-	-	1,509
Miscellaneous	2,652	642	21	(47)	-	2	-	-	3,269
Corporate Allocation	(1,850)	0	(28)	27	-	(2)	-	-	(1,853)
Target Adjustment	(3,305)	(1,750)	-	(58)	(340)	615	(2,100)	-	(6,938)
	$ 75,848	$ 7,800	$ 90	$ (464)	$ (114)	$ 658	$ (2,100)	$ -	$ 81,717
Total Dep'n and Amort Expense	$ 400,866	$ 28,794	$ (2,393)	$ (1,530)	$ 2,125	$ (3,471)	$ (2,100)	$ 114	$ 422,404

* 2015/16 and 2016/17 Forecast figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Comparison to 2010 Depreciation Study		
Issue:	Overview of Depreciation Method changes		

PREAMBLE TO IR (IF ANY):

QUESTION:

Please compare the forecast 2012/13 and 2013/14 from MIPUG/MH I-15(p) to actual depreciation expense for 2012/13 and 2013/14 including rationale for changes between forecast and actual.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

The following schedule provides a comparison of the 2012/13 and 2013/14 forecast depreciation expense from MIPUG/MH I-15p, from the 2012/13 & 2013/14 GRA, with actual depreciation expense for the same years.

Differences between Forecast and Actual depreciation expense are discussed below:

- Net Additions: The overall variance attributable to differences in the balance of plant in service is less than -0.4% in both 2012/13 and 2013/14 as compared to forecast. Differences within each category are primarily due to the forecast target adjustment. Please refer to PUB/MH I-25b for an explanation of significant differences between forecast and actual in-service amounts for large capital projects.

- Wuskwatim: The reduction in depreciation expense for Wuskwatim is due primarily to a delay in final in-service from June 2012 to October 2012.

- 2010 Depreciation Study – Change in Asset Life: The variance is due to differences between forecasted and actual net plant additions and retirements as well as the ongoing refinement of componentization estimates.

- Deferral of IFRS Implementation: The forecast assumed the implementation of IFRS in 2013/14 which has been deferred to the 2015/16. The following provides a summary of the impacts of the deferral:

Forecast IFRS Implementation Changes ($000's)	**Impact**
Implementation of IFRS compliant methodology (ELG)	$ (32,307)
Removal of net salvage provision from depreciation rates	55,574
Removal of IFRS ineligible indirect overhead from capital cost	221
Removal of depreciation of rate regulated assets	36,792
	$ 60,280

MANITOBA HYDRO - CONSOLIDATED ELECTRIC OPERATIONS
DEPRECIATION AND AMORTIZATION EXPENSE

	2012/13 Forecast *	Difference - Actual vs Forecast			2012/13 Actual **	2013/14 Forecast *	Cummulative Difference - Actual vs Forecast				2013/14 Actual **
		Net Additions	Wuskwatim	2010 Depn Study Change in Asset Life			Net Additions	Wuskwatim	2010 Depn Study Change in Asset Life	Deferral of IFRS Implementation	
Generation											
Hydraulic Generating Stations	97,254	1,617	(7,878)	1,232	92,225	97,852	1,157	(2,382)	85	5,396	102,108
Thermal Generating Stations	16,036	(814)	-	193	15,415	16,496	(1,043)	-	179	(71)	15,562
Demand Side Management	28,664	(447)	-	-	28,217	-	(1,133)	-	-	31,395	30,262
Diesel Generating Stations	1,407	180	-	(130)	1,457	1,368	(552)	-	860	82	1,757
Amortization of Contributions	(1,033)	80	-	112	(841)	(1,092)	101	-	123	-	(868)
	$ 142,328	$ 615	$ (7,878)	$ 1,408	$ 136,473	$ 114,624	$ (1,470)	$ (2,382)	$ 1,246	$ 36,802	$ 148,821
Transmission										-	
Transmission	16,995	(74)	(899)	(89)	15,933	14,179	(68)	95	(464)	3,332	17,074
Amortization of Contributions	(1,358)	(87)	-	87	(1,358)	(1,360)	(563)	-	437	-	(1,485)
	$ 15,636	$ (161)	$ (899)	$ (2)	$ 14,575	$ 12,819	$ (631)	$ 95	$ (27)	$ 3,332	$ 15,588
Stations											
Substations	87,181	(1,204)	(851)	(223)	84,902	80,893	(933)	1,532	(3,827)	9,545	87,210
Transformers	1,983	(196)	-	18	1,806	2,200	(606)	-	54	291	1,940
Amortization of Contributions	(1,235)	(107)	-	95	(1,247)	(1,235)	(2)	-	334	-	(903)
	$ 87,929	$ (1,507)	$ (851)	$ (109)	$ 85,461	$ 81,858	$ (1,540)	$ 1,532	$ (3,439)	$ 9,837	$ 88,247
Distribution											
Subtransmission Lines	6,215	9	-	47	6,271	5,423	120	-	(38)	1,124	6,629
Distribution Lines	59,820	(2,425)	(24)	813	58,184	52,309	(2,859)	1	1,100	10,790	61,342
Meters & Metering Transformers	5,019	(792)	-	46	4,273	5,603	(758)	-	39	(624)	4,260
Amortization of Contributions	(5,318)	115	-	120	(5,084)	(5,551)	(202)	-	298	-	(5,456)
	$ 65,736	$ (3,093)	$ (24)	$ 1,025	$ 63,644	$ 57,784	$ (3,700)	$ 1	$ 1,398	$ 11,291	$ 66,774
Other											
Communications	25,153	(4,876)	226	(1,053)	19,450	29,634	(5,938)	391	337	(2,694)	21,730
Motor Vehicles	9,935	1,012	17	7	10,971	12,010	1,372	15	(49)	(1,760)	11,588
Structures & Improvements	8,509	(572)	-	10	7,947	9,495	(1,008)	-	99	(520)	8,066
General Equipment	23,011	2,373	4	421	25,810	21,226	2,286	6	(257)	-	23,261
Computer Development	16,376	4,081	-	125	20,582	18,937	2,064	-	(315)	(1,019)	19,667
Affordable Energy Fund	8,870	(3,464)	-	-	5,406	8,710	(4,300)	-	-	-	4,410
Miscellaneous	3,759	(207)	-	(1)	3,550	(3,418)	2,678	-	36	5,333	4,628
Corporate Allocation	(1,707)	(240)	-	1	(1,946)	(1,208)	(739)	-	1	-	(1,946)
Target Adjustment	(4,691)	5,163	-	(472)	-	(8,163)	9,571	-	(1,086)	(322)	-
	$ 89,216	$ 3,270	$ 247	$ (964)	$ 91,770	$ 87,223	$ 5,987	$ 412	$ (1,235)	$ (982)	$ 91,404
Total Dep'n and Amort Expense	$ 400,845	$ (876)	$ (9,405)	$ 1,358	$ 391,923	$ 354,307	$ (1,354)	$ (342)	$ (2,057)	$ 60,280	$ 410,834

* Forecast figures shown are as reported for the 2012/13 & 2013/14 GRA in the response to MIPUG/MH I-15p (MH11-2).

** 2012/13 AND 2013/14 Actual figures have been restated from those shown in Schedule 5.1.6 to reflect the reallocation of Wuskwatim costs into the respective asset reporting categories.

Section:	Appendix 5.6	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Comparison to 2010 Depreciation Study		
Issue:	Overview of Depreciation Method changes		

PREAMBLE TO IR (IF ANY):

QUESTION:
Please provide an Excel copy of each of the following tables/schedules: Tables 1, 1A, 2, and 2A from each of the following: (i) the Gannett Fleming letter from January 14, 2015 (ii) the Gannett Fleming study from January 13, 2015 (iii) the Gannett Fleming letter from January 13, 2012 and (iv) the Gannett Fleming study of November 2, 2011. Alternatively, instead of an Excel file, please provide a quantitative comparison of each of the entries in the referenced tables/schedules showing the impacts in each case of ASL versus ELG from studies of the same vintage, and a comparison of the 2012 GRA vintage studies versus the current vintage of studies. Please also provide a copy of Part V of the studies in (ii) and (iv) above.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study the implications on rate payers and how those implications have changed since the 2012/13 & 2013/14 GRA.

RESPONSE:

Please see the response to PUB/MH-I-41 (a) and (b) for the attached electronic files of Tables 1, 1A, 2, and 2A from each of the Gannett Fleming letter from January 14, 2015 and the Gannett Fleming study from January 13, 2015.

Please see the attached electronic file for the information supporting the Gannett Fleming letter from January 13, 2012 (2010 Study ASL rates) and the Gannett Fleming study of November 2, 2011 (2010 Study ELG rates):

- MIPUG/MH-I-19c – Attachment 1.xlsx

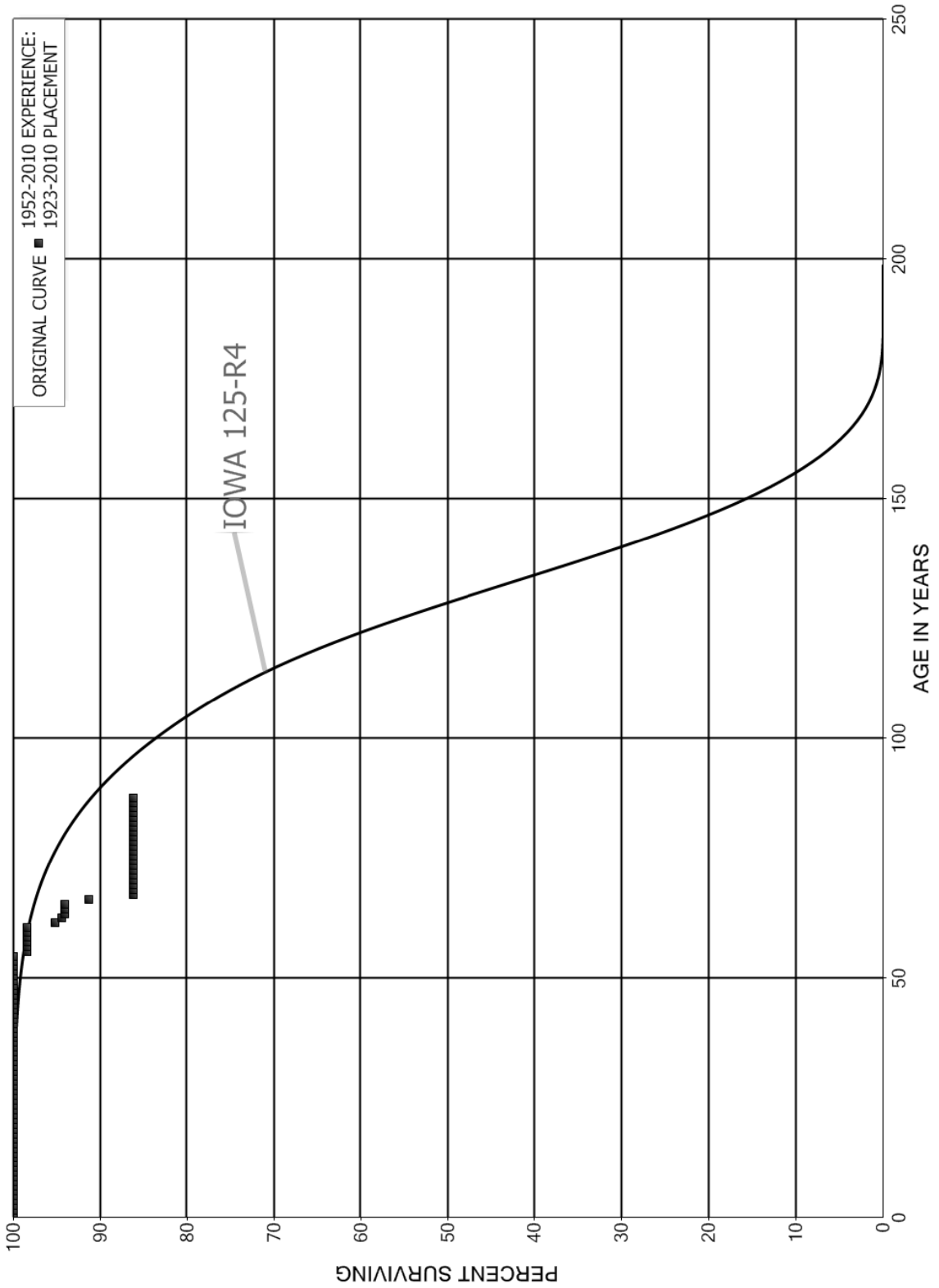
Please note the ASL based depreciation rates included in the attached files are not IFRS compliant.

In addtion, please see the attached electronic files for Part IV (Attachment 2, 2010 Depreciation Study - ELG) and Part V (Attachment 3, 2014 Depreciation Study ELG):

- MIPUG/MH-I-19c – Attachment 2.pdf
- MIPUG/MH-I-19c – Attachment 3.pdf

PART IV. SERVICE LIFE STATISTICS

MANITOBA HYDRO
ACCOUNT 000A - DAMS, DYKES AND WEIRS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	508,421,790		0.0000	1.0000	100.00
0.5	501,643,055		0.0000	1.0000	100.00
1.5	500,090,101		0.0000	1.0000	100.00
2.5	488,484,477		0.0000	1.0000	100.00
3.5	487,761,872		0.0000	1.0000	100.00
4.5	478,998,844		0.0000	1.0000	100.00
5.5	475,383,219		0.0000	1.0000	100.00
6.5	466,850,659		0.0000	1.0000	100.00
7.5	463,706,748		0.0000	1.0000	100.00
8.5	461,332,887		0.0000	1.0000	100.00
9.5	460,509,752		0.0000	1.0000	100.00
10.5	457,434,195		0.0000	1.0000	100.00
11.5	457,229,039		0.0000	1.0000	100.00
12.5	454,512,895		0.0000	1.0000	100.00
13.5	454,162,200		0.0000	1.0000	100.00
14.5	454,162,200		0.0000	1.0000	100.00
15.5	454,162,200		0.0000	1.0000	100.00
16.5	454,108,717		0.0000	1.0000	100.00
17.5	447,052,369		0.0000	1.0000	100.00
18.5	433,780,115		0.0000	1.0000	100.00
19.5	420,254,749		0.0000	1.0000	100.00
20.5	417,016,933	13,954	0.0000	1.0000	100.00
21.5	417,002,979		0.0000	1.0000	100.00
22.5	418,403,378		0.0000	1.0000	100.00
23.5	418,403,378		0.0000	1.0000	100.00
24.5	405,403,073		0.0000	1.0000	100.00
25.5	403,856,291		0.0000	1.0000	100.00
26.5	384,193,841		0.0000	1.0000	100.00
27.5	384,003,089		0.0000	1.0000	100.00
28.5	385,373,616		0.0000	1.0000	100.00
29.5	385,373,616		0.0000	1.0000	100.00
30.5	385,373,616		0.0000	1.0000	100.00
31.5	323,857,324		0.0000	1.0000	100.00
32.5	106,855,187		0.0000	1.0000	100.00
33.5	106,855,187		0.0000	1.0000	100.00
34.5	106,855,187		0.0000	1.0000	100.00
35.5	106,855,187		0.0000	1.0000	100.00
36.5	106,855,187		0.0000	1.0000	100.00
37.5	62,267,931		0.0000	1.0000	100.00
38.5	62,267,931		0.0000	1.0000	100.00

MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	62,265,107		0.0000	1.0000	100.00
40.5	62,265,107		0.0000	1.0000	100.00
41.5	61,796,000		0.0000	1.0000	100.00
42.5	61,796,000		0.0000	1.0000	100.00
43.5	61,796,000		0.0000	1.0000	100.00
44.5	20,881,841		0.0000	1.0000	100.00
45.5	20,881,841		0.0000	1.0000	100.00
46.5	20,881,841		0.0000	1.0000	100.00
47.5	20,881,841		0.0000	1.0000	100.00
48.5	20,881,841		0.0000	1.0000	100.00
49.5	17,244,716		0.0000	1.0000	100.00
50.5	17,244,716		0.0000	1.0000	100.00
51.5	17,235,876		0.0000	1.0000	100.00
52.5	11,635,572		0.0000	1.0000	100.00
53.5	11,635,572		0.0000	1.0000	100.00
54.5	11,635,572	192,434	0.0165	0.9835	100.00
55.5	8,809,810		0.0000	1.0000	98.34
56.5	8,809,810		0.0000	1.0000	98.34
57.5	8,807,519		0.0000	1.0000	98.34
58.5	5,973,735		0.0000	1.0000	98.34
59.5	5,962,152		0.0000	1.0000	98.34
60.5	5,513,012	175,771	0.0319	0.9681	98.34
61.5	5,337,241	44,894	0.0084	0.9916	95.21
62.5	5,292,347	19,841	0.0037	0.9963	94.41
63.5	5,272,506		0.0000	1.0000	94.05
64.5	5,272,506		0.0000	1.0000	94.05
65.5	5,272,506	155,106	0.0294	0.9706	94.05
66.5	5,117,399	283,771	0.0555	0.9445	91.29
67.5	4,833,629		0.0000	1.0000	86.22
68.5	4,833,629		0.0000	1.0000	86.22
69.5	4,833,629		0.0000	1.0000	86.22
70.5	4,833,629		0.0000	1.0000	86.22
71.5	4,833,629		0.0000	1.0000	86.22
72.5	4,833,629		0.0000	1.0000	86.22
73.5	4,833,629		0.0000	1.0000	86.22
74.5	4,833,629		0.0000	1.0000	86.22
75.5	4,833,629		0.0000	1.0000	86.22
76.5	4,833,629		0.0000	1.0000	86.22
77.5	4,833,629		0.0000	1.0000	86.22
78.5	2,211,109		0.0000	1.0000	86.22

MANITOBA HYDRO

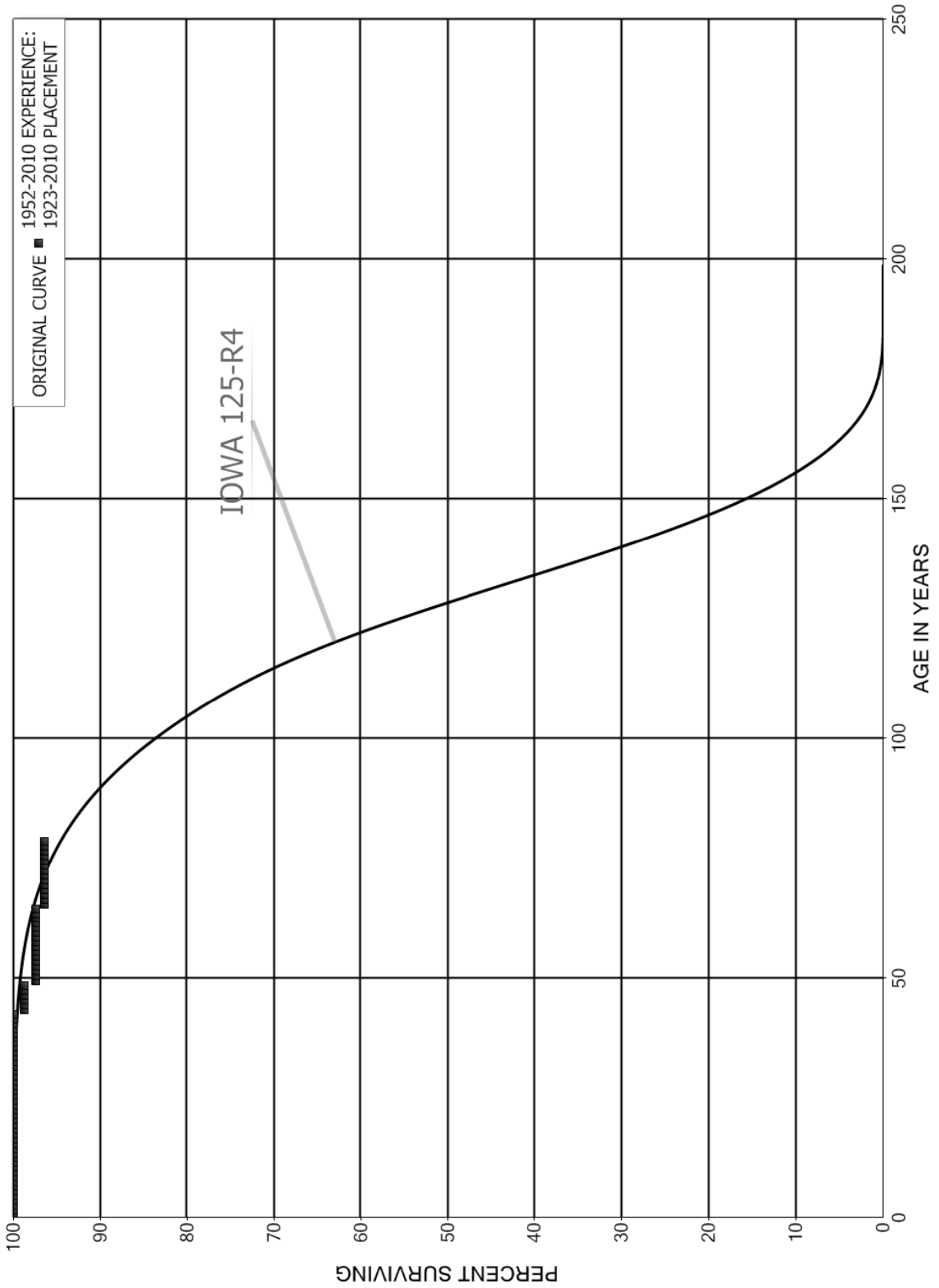
ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,211,109		0.0000	1.0000	86.22
80.5	2,211,109		0.0000	1.0000	86.22
81.5	986,481		0.0000	1.0000	86.22
82.5	986,481		0.0000	1.0000	86.22
83.5	967,520		0.0000	1.0000	86.22
84.5	967,520		0.0000	1.0000	86.22
85.5	967,520		0.0000	1.0000	86.22
86.5	931,651		0.0000	1.0000	86.22
87.5					86.22

MANITOBA HYDRO
ACCOUNT 000B - POWERHOUSE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,006,902,158		0.0000	1.0000	100.00
0.5	1,001,979,304		0.0000	1.0000	100.00
1.5	994,421,280		0.0000	1.0000	100.00
2.5	990,039,764	8,710	0.0000	1.0000	100.00
3.5	979,546,364		0.0000	1.0000	100.00
4.5	976,851,442	232,971	0.0002	0.9998	100.00
5.5	974,805,025	9,768	0.0000	1.0000	99.98
6.5	973,692,577		0.0000	1.0000	99.97
7.5	913,821,075		0.0000	1.0000	99.97
8.5	913,821,075		0.0000	1.0000	99.97
9.5	913,803,066	77,663	0.0001	0.9999	99.97
10.5	913,322,435	5,968	0.0000	1.0000	99.97
11.5	912,997,477		0.0000	1.0000	99.97
12.5	912,767,312	12,034	0.0000	1.0000	99.97
13.5	909,645,809		0.0000	1.0000	99.96
14.5	909,255,949		0.0000	1.0000	99.96
15.5	905,651,022		0.0000	1.0000	99.96
16.5	905,523,543		0.0000	1.0000	99.96
17.5	815,241,985		0.0000	1.0000	99.96
18.5	631,274,247		0.0000	1.0000	99.96
19.5	454,314,537		0.0000	1.0000	99.96
20.5	453,662,579		0.0000	1.0000	99.96
21.5	453,531,074		0.0000	1.0000	99.96
22.5	454,328,376		0.0000	1.0000	99.96
23.5	454,356,372		0.0000	1.0000	99.96
24.5	450,087,316		0.0000	1.0000	99.96
25.5	449,853,614	42,494	0.0001	0.9999	99.96
26.5	448,823,463		0.0000	1.0000	99.95
27.5	448,766,297		0.0000	1.0000	99.95
28.5	449,702,658		0.0000	1.0000	99.95
29.5	449,702,658		0.0000	1.0000	99.95
30.5	449,609,923		0.0000	1.0000	99.95
31.5	309,301,119		0.0000	1.0000	99.95
32.5	234,491,191		0.0000	1.0000	99.95
33.5	234,373,346		0.0000	1.0000	99.95
34.5	234,373,346	4,574	0.0000	1.0000	99.95
35.5	234,368,772		0.0000	1.0000	99.95
36.5	234,360,814		0.0000	1.0000	99.95
37.5	91,680,483		0.0000	1.0000	99.95
38.5	91,657,564	500	0.0000	1.0000	99.95

MANITOBA HYDRO

ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	91,280,176		0.0000	1.0000	99.95
40.5	77,895,685		0.0000	1.0000	99.95
41.5	74,301,792		0.0000	1.0000	99.95
42.5	74,301,792	893,465	0.0120	0.9880	99.95
43.5	73,352,248		0.0000	1.0000	98.75
44.5	54,284,932		0.0000	1.0000	98.75
45.5	54,284,932		0.0000	1.0000	98.75
46.5	54,276,777		0.0000	1.0000	98.75
47.5	54,276,777		0.0000	1.0000	98.75
48.5	54,276,777	739,929	0.0136	0.9864	98.75
49.5	32,034,078		0.0000	1.0000	97.40
50.5	32,034,078		0.0000	1.0000	97.40
51.5	32,010,008		0.0000	1.0000	97.40
52.5	28,005,730		0.0000	1.0000	97.40
53.5	27,995,013		0.0000	1.0000	97.40
54.5	27,995,013		0.0000	1.0000	97.40
55.5	19,121,525		0.0000	1.0000	97.40
56.5	19,121,525		0.0000	1.0000	97.40
57.5	19,121,525		0.0000	1.0000	97.40
58.5	9,976,187		0.0000	1.0000	97.40
59.5	9,973,098		0.0000	1.0000	97.40
60.5	9,226,769		0.0000	1.0000	97.40
61.5	9,226,769		0.0000	1.0000	97.40
62.5	9,226,769		0.0000	1.0000	97.40
63.5	9,226,769		0.0000	1.0000	97.40
64.5	9,226,769	100,000	0.0108	0.9892	97.40
65.5	9,126,769		0.0000	1.0000	96.35
66.5	9,126,769		0.0000	1.0000	96.35
67.5	9,126,769		0.0000	1.0000	96.35
68.5	9,126,769		0.0000	1.0000	96.35
69.5	9,126,769		0.0000	1.0000	96.35
70.5	9,126,769		0.0000	1.0000	96.35
71.5	9,126,769		0.0000	1.0000	96.35
72.5	9,126,769		0.0000	1.0000	96.35
73.5	9,126,769		0.0000	1.0000	96.35
74.5	9,126,769		0.0000	1.0000	96.35
75.5	9,126,769		0.0000	1.0000	96.35
76.5	9,126,769		0.0000	1.0000	96.35
77.5	9,126,769		0.0000	1.0000	96.35
78.5	2,154,669		0.0000	1.0000	96.35

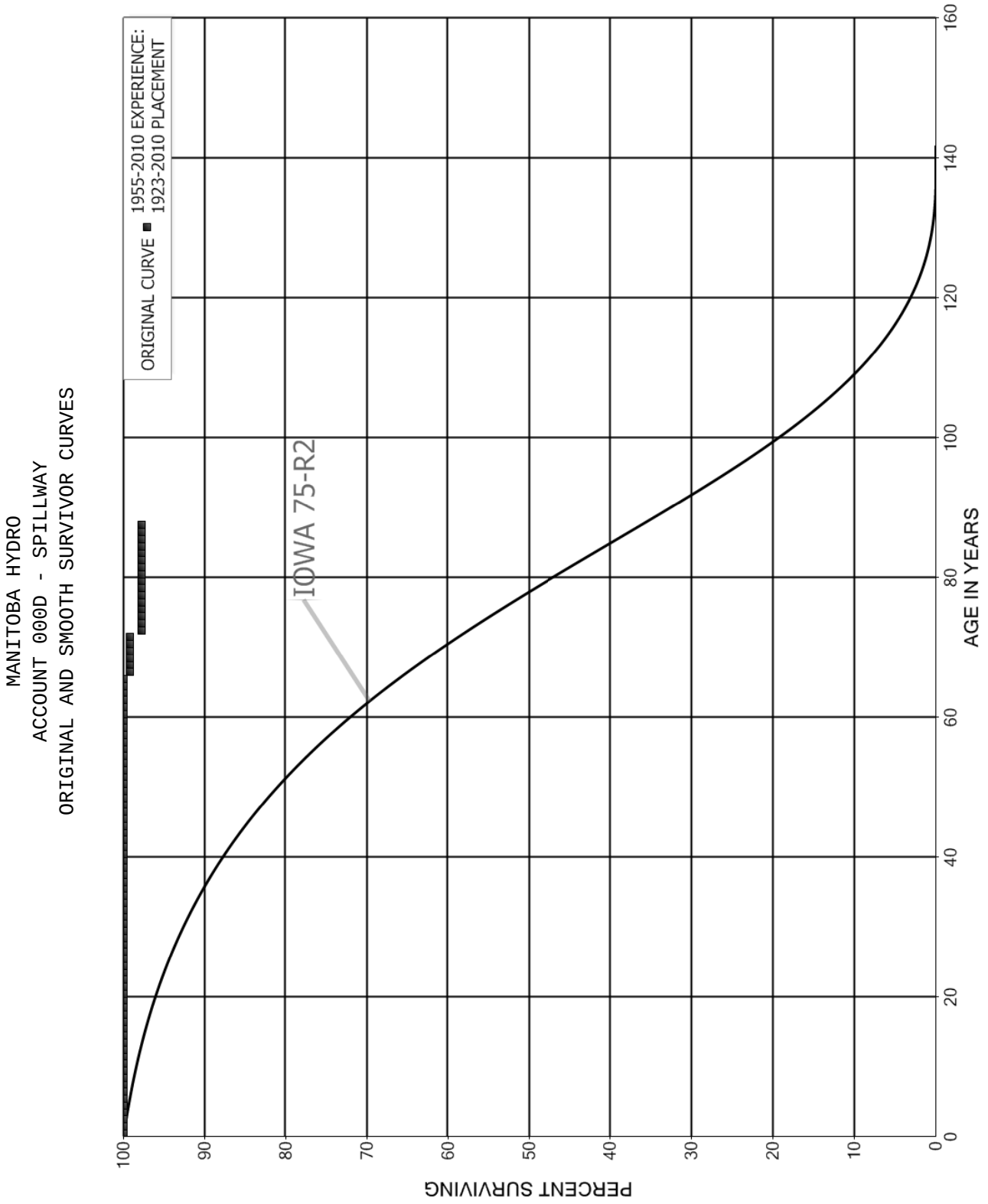
MANITOBA HYDRO

ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,154,669		0.0000	1.0000	96.35
80.5	2,154,669		0.0000	1.0000	96.35
81.5	1,357,368		0.0000	1.0000	96.35
82.5	1,252,181		0.0000	1.0000	96.35
83.5	1,004,594		0.0000	1.0000	96.35
84.5	1,004,594		0.0000	1.0000	96.35
85.5	1,004,594		0.0000	1.0000	96.35
86.5	936,361		0.0000	1.0000	96.35
87.5					96.35


MANITOBA HYDRO
ACCOUNT 000D - SPILLWAY
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1955-2010 EXPERIENCE: 1923-2010 PLACEMENT
IOWA 75-R2
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
140
160
AGE IN YEARS

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	369,552,576		0.0000	1.0000	100.00
0.5	369,506,280		0.0000	1.0000	100.00
1.5	366,978,483		0.0000	1.0000	100.00
2.5	366,762,400		0.0000	1.0000	100.00
3.5	366,644,866		0.0000	1.0000	100.00
4.5	365,995,189		0.0000	1.0000	100.00
5.5	365,386,540		0.0000	1.0000	100.00
6.5	365,386,540		0.0000	1.0000	100.00
7.5	365,386,540		0.0000	1.0000	100.00
8.5	365,386,540	1,838	0.0000	1.0000	100.00
9.5	365,384,702		0.0000	1.0000	100.00
10.5	365,384,702		0.0000	1.0000	100.00
11.5	365,384,702		0.0000	1.0000	100.00
12.5	365,355,774		0.0000	1.0000	100.00
13.5	364,377,188		0.0000	1.0000	100.00
14.5	364,377,188		0.0000	1.0000	100.00
15.5	363,467,145		0.0000	1.0000	100.00
16.5	363,207,008		0.0000	1.0000	100.00
17.5	322,517,032		0.0000	1.0000	100.00
18.5	242,086,562		0.0000	1.0000	100.00
19.5	161,656,093		0.0000	1.0000	100.00
20.5	161,656,093		0.0000	1.0000	100.00
21.5	161,656,093		0.0000	1.0000	100.00
22.5	162,728,053		0.0000	1.0000	100.00
23.5	162,728,053		0.0000	1.0000	100.00
24.5	153,113,204		0.0000	1.0000	100.00
25.5	153,130,509		0.0000	1.0000	100.00
26.5	152,492,998		0.0000	1.0000	100.00
27.5	152,492,998		0.0000	1.0000	100.00
28.5	152,492,998		0.0000	1.0000	100.00
29.5	152,492,998		0.0000	1.0000	100.00
30.5	152,492,998		0.0000	1.0000	100.00
31.5	110,724,015		0.0000	1.0000	100.00
32.5	39,517,819		0.0000	1.0000	100.00
33.5	39,517,819		0.0000	1.0000	100.00
34.5	39,517,819		0.0000	1.0000	100.00
35.5	39,517,819		0.0000	1.0000	100.00
36.5	39,517,819		0.0000	1.0000	100.00
37.5	14,110,860		0.0000	1.0000	100.00
38.5	14,110,860		0.0000	1.0000	100.00

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

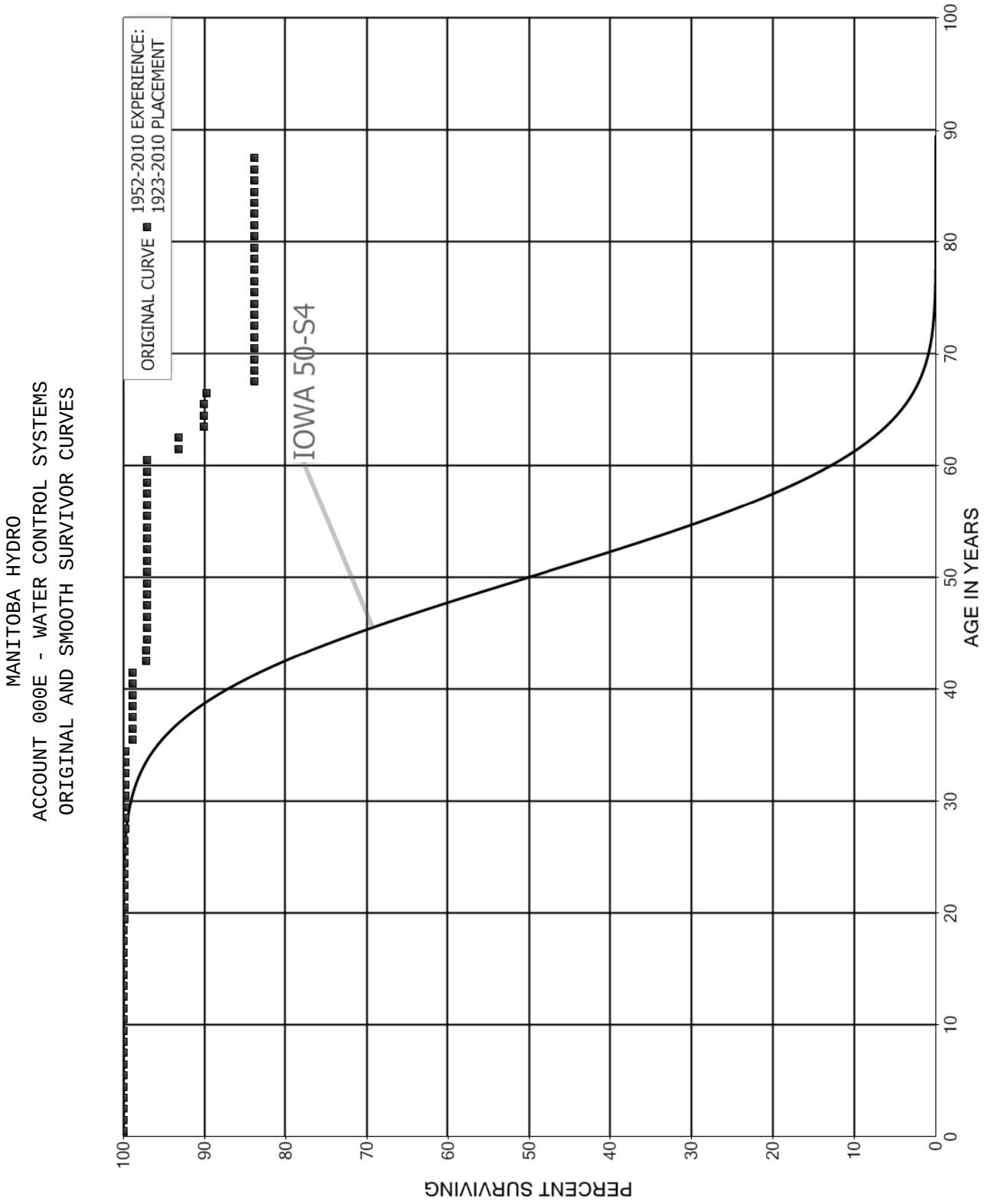
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	14,110,860		0.0000	1.0000	100.00
40.5	14,110,860		0.0000	1.0000	100.00
41.5	12,809,593		0.0000	1.0000	100.00
42.5	12,809,593		0.0000	1.0000	100.00
43.5	12,809,593		0.0000	1.0000	100.00
44.5	8,802,525		0.0000	1.0000	100.00
45.5	8,802,525		0.0000	1.0000	100.00
46.5	8,802,525		0.0000	1.0000	100.00
47.5	8,802,525		0.0000	1.0000	100.00
48.5	8,802,525		0.0000	1.0000	100.00
49.5	3,470,596		0.0000	1.0000	100.00
50.5	3,470,596		0.0000	1.0000	100.00
51.5	3,470,596		0.0000	1.0000	100.00
52.5	3,470,596		0.0000	1.0000	100.00
53.5	3,470,596		0.0000	1.0000	100.00
54.5	3,470,596		0.0000	1.0000	100.00
55.5	1,119,158		0.0000	1.0000	100.00
56.5	1,119,158		0.0000	1.0000	100.00
57.5	1,119,158		0.0000	1.0000	100.00
58.5	1,119,158		0.0000	1.0000	100.00
59.5	1,119,158		0.0000	1.0000	100.00
60.5	1,119,158		0.0000	1.0000	100.00
61.5	1,119,158		0.0000	1.0000	100.00
62.5	1,119,158		0.0000	1.0000	100.00
63.5	1,119,158		0.0000	1.0000	100.00
64.5	1,119,158		0.0000	1.0000	100.00
65.5	1,119,158	9,446	0.0084	0.9916	100.00
66.5	1,109,711		0.0000	1.0000	99.16
67.5	1,109,711		0.0000	1.0000	99.16
68.5	1,109,711		0.0000	1.0000	99.16
69.5	1,109,711		0.0000	1.0000	99.16
70.5	1,109,711		0.0000	1.0000	99.16
71.5	1,109,711	16,317	0.0147	0.9853	99.16
72.5	1,093,394		0.0000	1.0000	97.70
73.5	1,093,394		0.0000	1.0000	97.70
74.5	1,093,394		0.0000	1.0000	97.70
75.5	1,093,394		0.0000	1.0000	97.70
76.5	1,093,394		0.0000	1.0000	97.70
77.5	1,093,394		0.0000	1.0000	97.70
78.5	21,434		0.0000	1.0000	97.70

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010			EXPERIENCE BAND 1955-2010		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	21,434		0.0000	1.0000	97.70
80.5	21,434		0.0000	1.0000	97.70
81.5	13,575		0.0000	1.0000	97.70
82.5	13,575		0.0000	1.0000	97.70
83.5	13,575		0.0000	1.0000	97.70
84.5	13,575		0.0000	1.0000	97.70
85.5	13,575		0.0000	1.0000	97.70
86.5	13,575		0.0000	1.0000	97.70
87.5					97.70


MANITOBA HYDRO
ACCOUNT 000E - WATER CONTROL SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1952-2010 EXPERIENCE:
1923-2010 PLACEMENT
IOWA 50-S4
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
80
90
100

MANITOBA HYDRO

ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	302,547,761		0.0000	1.0000	100.00
0.5	299,441,967	312,000	0.0010	0.9990	100.00
1.5	298,993,682		0.0000	1.0000	99.90
2.5	296,326,623		0.0000	1.0000	99.90
3.5	294,173,590		0.0000	1.0000	99.90
4.5	292,201,331		0.0000	1.0000	99.90
5.5	285,893,574		0.0000	1.0000	99.90
6.5	281,469,435		0.0000	1.0000	99.90
7.5	280,642,804		0.0000	1.0000	99.90
8.5	280,161,201		0.0000	1.0000	99.90
9.5	279,565,026		0.0000	1.0000	99.90
10.5	278,586,784		0.0000	1.0000	99.90
11.5	277,229,730		0.0000	1.0000	99.90
12.5	274,353,103		0.0000	1.0000	99.90
13.5	273,679,962		0.0000	1.0000	99.90
14.5	273,479,481		0.0000	1.0000	99.90
15.5	268,126,237		0.0000	1.0000	99.90
16.5	268,126,237		0.0000	1.0000	99.90
17.5	236,942,009		0.0000	1.0000	99.90
18.5	189,419,936	108,000	0.0006	0.9994	99.90
19.5	141,889,887		0.0000	1.0000	99.84
20.5	141,704,557		0.0000	1.0000	99.84
21.5	141,704,557		0.0000	1.0000	99.84
22.5	141,911,125		0.0000	1.0000	99.84
23.5	141,986,981		0.0000	1.0000	99.84
24.5	130,087,378		0.0000	1.0000	99.84
25.5	130,087,378	6,649	0.0001	0.9999	99.84
26.5	129,797,744	132,000	0.0010	0.9990	99.83
27.5	129,701,874		0.0000	1.0000	99.73
28.5	129,899,061	22,899	0.0002	0.9998	99.73
29.5	129,859,532		0.0000	1.0000	99.71
30.5	129,859,532		0.0000	1.0000	99.71
31.5	71,979,265	1,431	0.0000	1.0000	99.71
32.5	38,874,975		0.0000	1.0000	99.71
33.5	38,874,975		0.0000	1.0000	99.71
34.5	38,825,083	322,000	0.0083	0.9917	99.71
35.5	38,313,578		0.0000	1.0000	98.89
36.5	38,313,578		0.0000	1.0000	98.89
37.5	20,539,319	673	0.0000	1.0000	98.89
38.5	20,538,647		0.0000	1.0000	98.88

MANITOBA HYDRO

ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	20,029,017		0.0000	1.0000	98.88
40.5	19,834,767		0.0000	1.0000	98.88
41.5	18,229,923	321,722	0.0176	0.9824	98.88
42.5	17,908,201		0.0000	1.0000	97.14
43.5	17,889,336	4,933	0.0003	0.9997	97.14
44.5	7,702,557		0.0000	1.0000	97.11
45.5	7,702,557		0.0000	1.0000	97.11
46.5	7,702,557		0.0000	1.0000	97.11
47.5	7,695,810		0.0000	1.0000	97.11
48.5	7,695,810		0.0000	1.0000	97.11
49.5	3,947,007		0.0000	1.0000	97.11
50.5	3,947,007		0.0000	1.0000	97.11
51.5	3,943,313		0.0000	1.0000	97.11
52.5	3,943,313		0.0000	1.0000	97.11
53.5	3,931,348		0.0000	1.0000	97.11
54.5	3,928,984		0.0000	1.0000	97.11
55.5	2,977,551		0.0000	1.0000	97.11
56.5	2,977,551		0.0000	1.0000	97.11
57.5	2,977,551		0.0000	1.0000	97.11
58.5	1,608,288		0.0000	1.0000	97.11
59.5	1,453,478		0.0000	1.0000	97.11
60.5	1,378,970	55,273	0.0401	0.9599	97.11
61.5	1,323,697		0.0000	1.0000	93.22
62.5	1,323,697	44,918	0.0339	0.9661	93.22
63.5	1,278,779		0.0000	1.0000	90.05
64.5	1,278,779		0.0000	1.0000	90.05
65.5	1,278,779	4,369	0.0034	0.9966	90.05
66.5	1,274,410	84,443	0.0663	0.9337	89.75
67.5	1,189,968		0.0000	1.0000	83.80
68.5	1,189,968		0.0000	1.0000	83.80
69.5	1,189,968		0.0000	1.0000	83.80
70.5	1,189,968		0.0000	1.0000	83.80
71.5	1,189,968		0.0000	1.0000	83.80
72.5	1,189,968		0.0000	1.0000	83.80
73.5	1,189,968		0.0000	1.0000	83.80
74.5	1,189,968		0.0000	1.0000	83.80
75.5	1,189,968		0.0000	1.0000	83.80
76.5	1,189,968		0.0000	1.0000	83.80
77.5	1,189,968		0.0000	1.0000	83.80
78.5	407,155		0.0000	1.0000	83.80

MANITOBA HYDRO

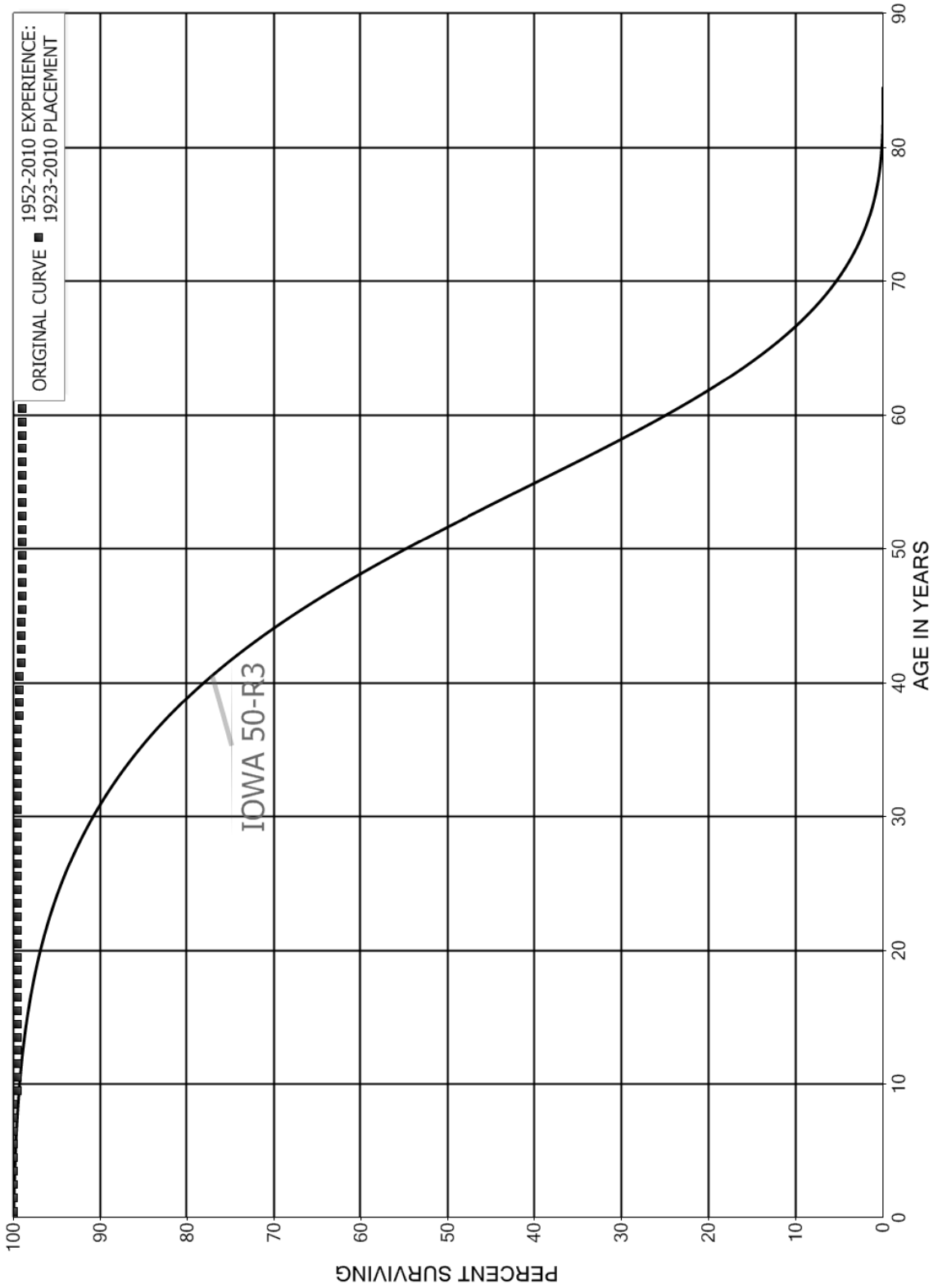
ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	407,155		0.0000	1.0000	83.80
80.5	407,155		0.0000	1.0000	83.80
81.5	255,860		0.0000	1.0000	83.80
82.5	180,004		0.0000	1.0000	83.80
83.5	138,900		0.0000	1.0000	83.80
84.5	138,900		0.0000	1.0000	83.80
85.5	138,900		0.0000	1.0000	83.80
86.5	107,139		0.0000	1.0000	83.80
87.5					83.80

MANITOBA HYDRO
ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	71,116,676		0.0000	1.0000	100.00
0.5	71,034,889		0.0000	1.0000	100.00
1.5	70,687,581		0.0000	1.0000	100.00
2.5	70,345,308		0.0000	1.0000	100.00
3.5	70,277,857	9,613	0.0001	0.9999	100.00
4.5	69,069,776	10,898	0.0002	0.9998	99.99
5.5	68,781,980		0.0000	1.0000	99.97
6.5	66,932,725		0.0000	1.0000	99.97
7.5	66,926,872		0.0000	1.0000	99.97
8.5	66,816,165	331,511	0.0050	0.9950	99.97
9.5	66,432,021		0.0000	1.0000	99.47
10.5	65,970,457		0.0000	1.0000	99.47
11.5	65,801,447		0.0000	1.0000	99.47
12.5	64,352,614		0.0000	1.0000	99.47
13.5	63,154,881		0.0000	1.0000	99.47
14.5	60,837,529		0.0000	1.0000	99.47
15.5	59,623,352		0.0000	1.0000	99.47
16.5	59,459,160		0.0000	1.0000	99.47
17.5	55,639,412		0.0000	1.0000	99.47
18.5	48,623,614		0.0000	1.0000	99.47
19.5	41,682,099		0.0000	1.0000	99.47
20.5	39,799,544		0.0000	1.0000	99.47
21.5	39,799,544		0.0000	1.0000	99.47
22.5	39,361,485		0.0000	1.0000	99.47
23.5	39,308,985		0.0000	1.0000	99.47
24.5	31,435,281		0.0000	1.0000	99.47
25.5	31,435,271		0.0000	1.0000	99.47
26.5	31,435,271	301	0.0000	1.0000	99.47
27.5	31,434,969		0.0000	1.0000	99.47
28.5	27,396,804	6,288	0.0002	0.9998	99.47
29.5	27,390,517		0.0000	1.0000	99.45
30.5	27,390,517		0.0000	1.0000	99.45
31.5	16,189,766		0.0000	1.0000	99.45
32.5	8,854,770		0.0000	1.0000	99.45
33.5	8,854,770		0.0000	1.0000	99.45
34.5	8,854,770		0.0000	1.0000	99.45
35.5	8,854,770		0.0000	1.0000	99.45
36.5	8,854,770	12,926	0.0015	0.9985	99.45
37.5	7,156,730		0.0000	1.0000	99.31
38.5	7,156,730		0.0000	1.0000	99.31

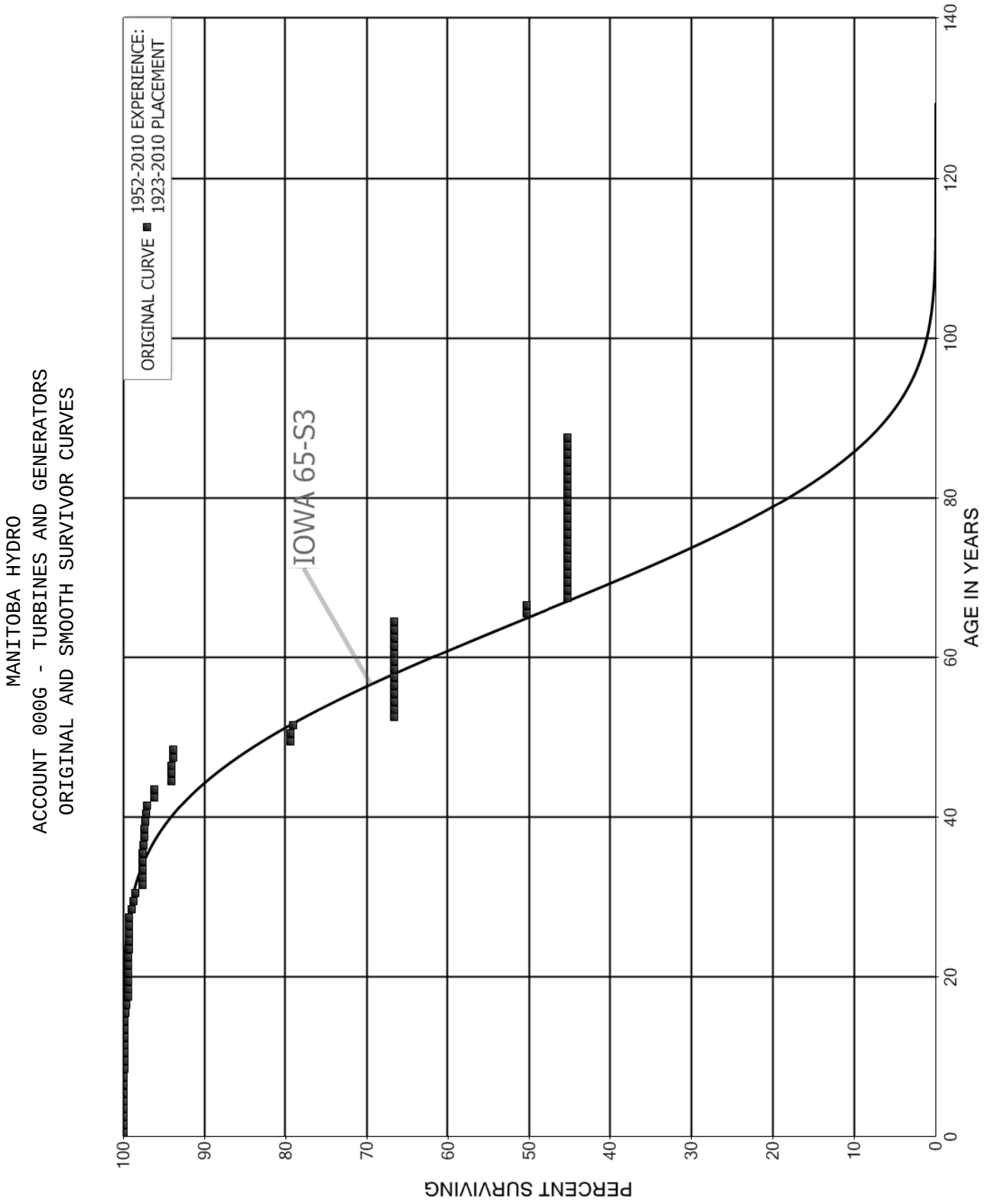
MANITOBA HYDRO

ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	7,156,507		0.0000	1.0000	99.31
40.5	7,087,772	19,231	0.0027	0.9973	99.31
41.5	6,822,124		0.0000	1.0000	99.04
42.5	6,822,124		0.0000	1.0000	99.04
43.5	6,822,124		0.0000	1.0000	99.04
44.5	4,547,969	4,500	0.0010	0.9990	99.04
45.5	4,543,469		0.0000	1.0000	98.94
46.5	4,543,469		0.0000	1.0000	98.94
47.5	4,543,469		0.0000	1.0000	98.94
48.5	4,539,442		0.0000	1.0000	98.94
49.5	1,189,778		0.0000	1.0000	98.94
50.5	1,189,461		0.0000	1.0000	98.94
51.5	1,152,817		0.0000	1.0000	98.94
52.5	1,020,428		0.0000	1.0000	98.94
53.5	1,020,428		0.0000	1.0000	98.94
54.5	1,020,428		0.0000	1.0000	98.94
55.5	1,006,248		0.0000	1.0000	98.94
56.5	1,006,248		0.0000	1.0000	98.94
57.5	1,006,248		0.0000	1.0000	98.94
58.5	71,393		0.0000	1.0000	98.94
59.5	71,393		0.0000	1.0000	98.94
60.5	71,393		0.0000	1.0000	98.94
61.5	71,393		0.0000	1.0000	98.94
62.5	71,393		0.0000	1.0000	98.94
63.5	71,393		0.0000	1.0000	98.94
64.5	71,393		0.0000	1.0000	98.94
65.5	71,393		0.0000	1.0000	98.94
66.5	71,393		0.0000	1.0000	98.94
67.5	71,393		0.0000	1.0000	98.94
68.5	71,393		0.0000	1.0000	98.94
69.5	71,393		0.0000	1.0000	98.94
70.5	71,393		0.0000	1.0000	98.94
71.5	71,393		0.0000	1.0000	98.94
72.5	71,393		0.0000	1.0000	98.94
73.5	71,393		0.0000	1.0000	98.94
74.5	71,393		0.0000	1.0000	98.94
75.5	71,393		0.0000	1.0000	98.94
76.5	71,393		0.0000	1.0000	98.94
77.5	71,393		0.0000	1.0000	98.94
78.5					98.94


MANITOBA HYDRO
ACCOUNT 000G - TURBINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1952-2010 EXPERIENCE: 1923-2010 PLACEMENT
IOWA 65-S3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
140
AGE IN YEARS

MANITOBA HYDRO

ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,130,388,586	133	0.0000	1.0000	100.00
0.5	1,084,785,194		0.0000	1.0000	100.00
1.5	1,041,407,763		0.0000	1.0000	100.00
2.5	986,118,248		0.0000	1.0000	100.00
3.5	974,388,173		0.0000	1.0000	100.00
4.5	964,861,553	1,032,258	0.0011	0.9989	100.00
5.5	941,723,419		0.0000	1.0000	99.89
6.5	919,710,565		0.0000	1.0000	99.89
7.5	890,264,595	38,023	0.0000	1.0000	99.89
8.5	861,537,455	3,212	0.0000	1.0000	99.89
9.5	860,410,095		0.0000	1.0000	99.89
10.5	843,402,030		0.0000	1.0000	99.89
11.5	829,786,579		0.0000	1.0000	99.89
12.5	801,221,629	93,258	0.0001	0.9999	99.89
13.5	799,270,959	465,678	0.0006	0.9994	99.88
14.5	771,160,691	1,013,211	0.0013	0.9987	99.82
15.5	764,013,247	244,117	0.0003	0.9997	99.69
16.5	746,591,563	1,825,978	0.0024	0.9976	99.66
17.5	661,858,674	52,620	0.0001	0.9999	99.41
18.5	499,399,637	17,507	0.0000	1.0000	99.40
19.5	338,695,013	65,863	0.0002	0.9998	99.40
20.5	338,606,167	13,497	0.0000	1.0000	99.38
21.5	338,557,980	28,938	0.0001	0.9999	99.38
22.5	336,658,011	203,028	0.0006	0.9994	99.37
23.5	337,100,568	76,471	0.0002	0.9998	99.31
24.5	334,703,806		0.0000	1.0000	99.29
25.5	334,690,404		0.0000	1.0000	99.29
26.5	331,569,195		0.0000	1.0000	99.29
27.5	331,571,968	1,301,220	0.0039	0.9961	99.29
28.5	331,274,701	641,921	0.0019	0.9981	98.90
29.5	330,632,780	622,558	0.0019	0.9981	98.70
30.5	330,010,222	3,111,335	0.0094	0.9906	98.52
31.5	187,440,225	316	0.0000	1.0000	97.59
32.5	119,830,290	316	0.0000	1.0000	97.59
33.5	119,829,716		0.0000	1.0000	97.59
34.5	119,232,822	5,048	0.0000	1.0000	97.59
35.5	119,184,347	117,163	0.0010	0.9990	97.59
36.5	119,067,184	49,198	0.0004	0.9996	97.49
37.5	53,094,379		0.0000	1.0000	97.45
38.5	53,085,187	64,666	0.0012	0.9988	97.45

MANITOBA HYDRO

ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	53,016,835	107,764	0.0020	0.9980	97.33
40.5	46,235,986	6,632	0.0001	0.9999	97.13
41.5	44,199,494	452,852	0.0102	0.9898	97.12
42.5	43,150,296		0.0000	1.0000	96.12
43.5	43,031,375	914,047	0.0212	0.9788	96.12
44.5	35,291,779		0.0000	1.0000	94.08
45.5	35,268,614		0.0000	1.0000	94.08
46.5	35,237,788	86,595	0.0025	0.9975	94.08
47.5	35,151,193		0.0000	1.0000	93.85
48.5	35,151,193	5,432,541	0.1545	0.8455	93.85
49.5	21,464,258		0.0000	1.0000	79.35
50.5	21,444,370	84,744	0.0040	0.9960	79.35
51.5	21,345,998	3,364,869	0.1576	0.8424	79.03
52.5	17,971,452		0.0000	1.0000	66.57
53.5	17,962,418		0.0000	1.0000	66.57
54.5	16,063,141		0.0000	1.0000	66.57
55.5	12,897,690		0.0000	1.0000	66.57
56.5	12,897,690		0.0000	1.0000	66.57
57.5	8,186,695		0.0000	1.0000	66.57
58.5	7,695,913		0.0000	1.0000	66.57
59.5	6,741,254		0.0000	1.0000	66.57
60.5	5,831,550		0.0000	1.0000	66.57
61.5	5,831,550		0.0000	1.0000	66.57
62.5	5,831,550		0.0000	1.0000	66.57
63.5	5,831,550		0.0000	1.0000	66.57
64.5	5,831,550	1,430,635	0.2453	0.7547	66.57
65.5	4,400,914		0.0000	1.0000	50.24
66.5	4,400,914	446,550	0.1015	0.8985	50.24
67.5	3,954,364		0.0000	1.0000	45.14
68.5	3,954,364		0.0000	1.0000	45.14
69.5	3,954,364		0.0000	1.0000	45.14
70.5	3,954,364		0.0000	1.0000	45.14
71.5	3,954,364		0.0000	1.0000	45.14
72.5	3,954,364		0.0000	1.0000	45.14
73.5	3,954,364		0.0000	1.0000	45.14
74.5	3,954,364		0.0000	1.0000	45.14
75.5	3,954,364		0.0000	1.0000	45.14
76.5	3,954,364		0.0000	1.0000	45.14
77.5	3,954,364		0.0000	1.0000	45.14
78.5	2,961,486		0.0000	1.0000	45.14

MANITOBA HYDRO

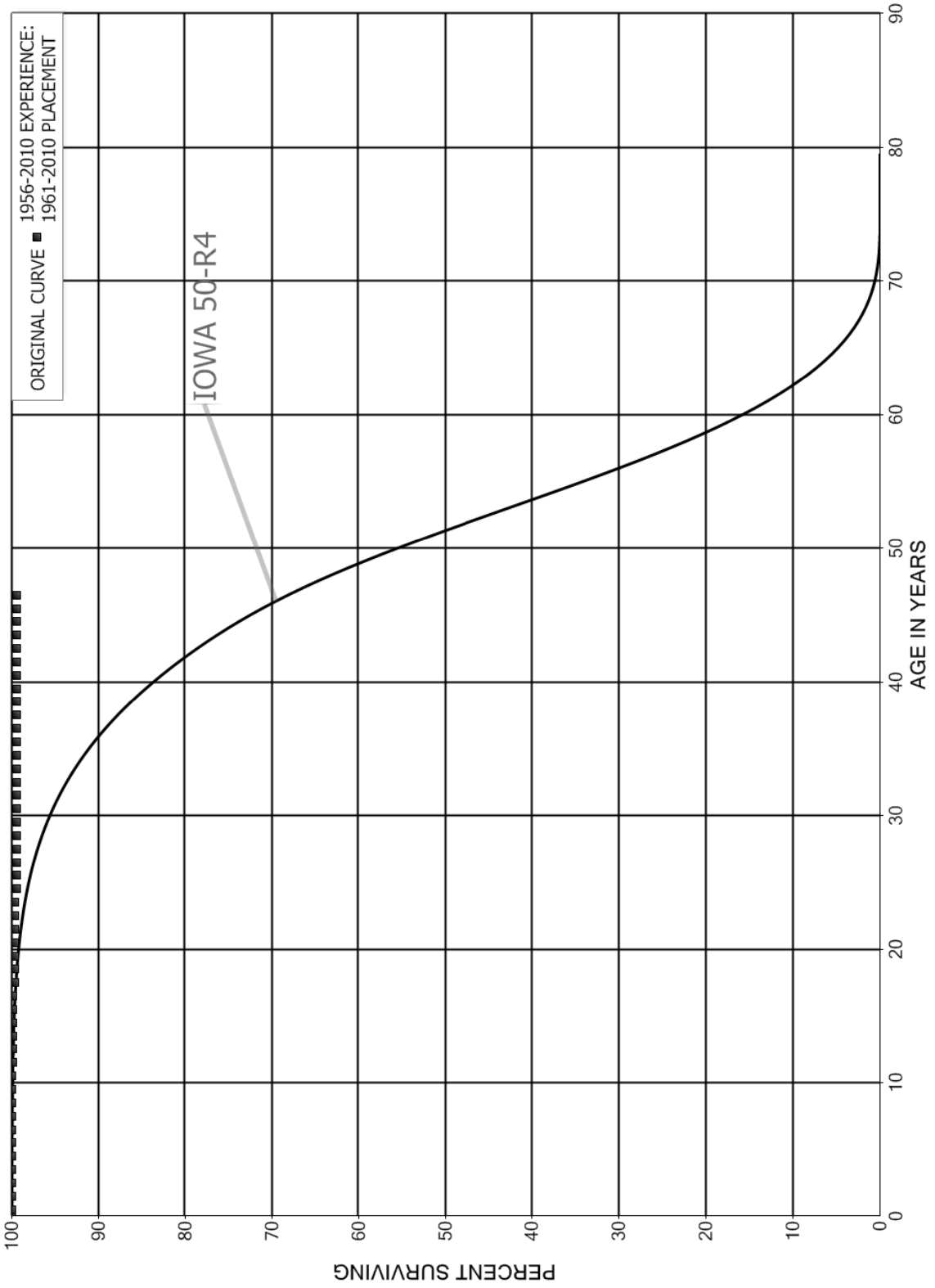
ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,961,486		0.0000	1.0000	45.14
80.5	2,961,486		0.0000	1.0000	45.14
81.5	2,088,881		0.0000	1.0000	45.14
82.5	1,448,348		0.0000	1.0000	45.14
83.5	885,533		0.0000	1.0000	45.14
84.5	885,533		0.0000	1.0000	45.14
85.5	885,533		0.0000	1.0000	45.14
86.5	882,760		0.0000	1.0000	45.14
87.5					45.14

MANITOBA HYDRO
ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEM
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEM

ORIGINAL LIFE TABLE

PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1956-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	24,008,785		0.0000	1.0000	100.00
0.5	24,006,360		0.0000	1.0000	100.00
1.5	23,343,940		0.0000	1.0000	100.00
2.5	23,248,742		0.0000	1.0000	100.00
3.5	23,246,742		0.0000	1.0000	100.00
4.5	23,222,481		0.0000	1.0000	100.00
5.5	23,222,481		0.0000	1.0000	100.00
6.5	22,589,932		0.0000	1.0000	100.00
7.5	22,589,932		0.0000	1.0000	100.00
8.5	22,589,932		0.0000	1.0000	100.00
9.5	22,589,932		0.0000	1.0000	100.00
10.5	20,246,071	38,908	0.0019	0.9981	100.00
11.5	19,971,141		0.0000	1.0000	99.81
12.5	19,832,512		0.0000	1.0000	99.81
13.5	19,743,861		0.0000	1.0000	99.81
14.5	19,743,861		0.0000	1.0000	99.81
15.5	19,743,861		0.0000	1.0000	99.81
16.5	19,743,861	44,433	0.0023	0.9977	99.81
17.5	16,378,470		0.0000	1.0000	99.58
18.5	9,840,837		0.0000	1.0000	99.58
19.5	3,303,204		0.0000	1.0000	99.58
20.5	3,303,204		0.0000	1.0000	99.58
21.5	3,303,204		0.0000	1.0000	99.58
22.5	3,303,204		0.0000	1.0000	99.58
23.5	3,303,204	6,685	0.0020	0.9980	99.58
24.5	3,296,520		0.0000	1.0000	99.38
25.5	3,296,520		0.0000	1.0000	99.38
26.5	2,757,139		0.0000	1.0000	99.38
27.5	2,757,139		0.0000	1.0000	99.38
28.5	2,757,139		0.0000	1.0000	99.38
29.5	2,757,139		0.0000	1.0000	99.38
30.5	2,757,139		0.0000	1.0000	99.38
31.5	2,757,139		0.0000	1.0000	99.38
32.5	2,757,139		0.0000	1.0000	99.38
33.5	2,757,139		0.0000	1.0000	99.38
34.5	2,757,139		0.0000	1.0000	99.38
35.5	2,757,139		0.0000	1.0000	99.38
36.5	2,757,139		0.0000	1.0000	99.38
37.5	27,029		0.0000	1.0000	99.38
38.5	27,029		0.0000	1.0000	99.38

MANITOBA HYDRO

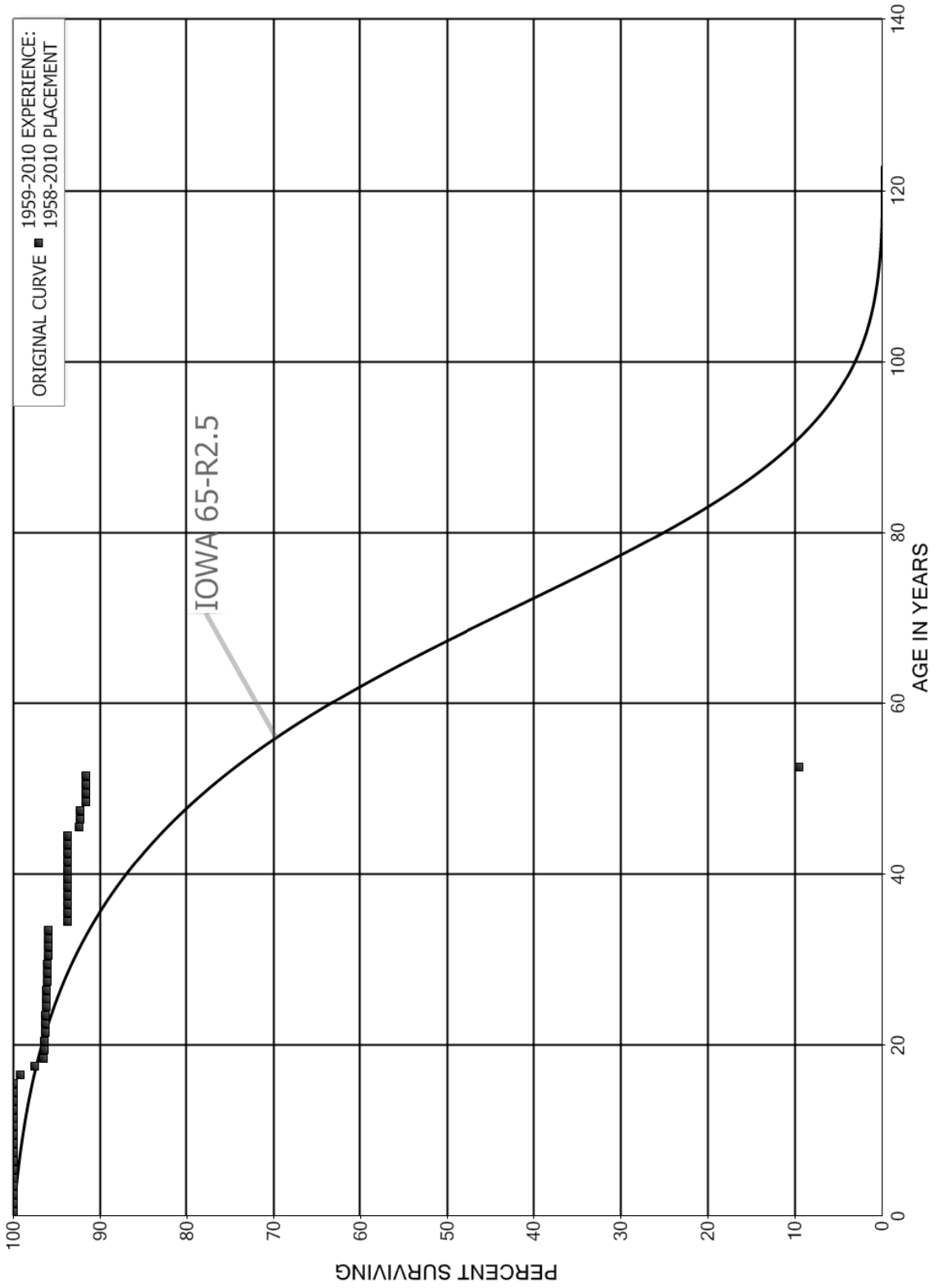
ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEM

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1956-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	23,741		0.0000	1.0000	99.38
40.5	23,741		0.0000	1.0000	99.38
41.5	6,860		0.0000	1.0000	99.38
42.5	6,860		0.0000	1.0000	99.38
43.5	6,860		0.0000	1.0000	99.38
44.5	6,860		0.0000	1.0000	99.38
45.5	6,860		0.0000	1.0000	99.38
46.5					99.38

MANITOBA HYDRO
ACCOUNT 000J - STEAM GENERATOR AND AUXILIARIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000J - STEAM GENERATOR AND AUXILIARIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	80,424,305	75,254	0.0009	0.9991	100.00
0.5	74,101,370		0.0000	1.0000	99.91
1.5	72,656,341		0.0000	1.0000	99.91
2.5	72,636,303		0.0000	1.0000	99.91
3.5	72,345,303		0.0000	1.0000	99.91
4.5	72,339,831	1,800	0.0000	1.0000	99.91
5.5	71,319,413		0.0000	1.0000	99.90
6.5	71,212,402		0.0000	1.0000	99.90
7.5	46,023,359		0.0000	1.0000	99.90
8.5	42,596,882		0.0000	1.0000	99.90
9.5	34,404,254		0.0000	1.0000	99.90
10.5	33,986,498		0.0000	1.0000	99.90
11.5	33,660,617		0.0000	1.0000	99.90
12.5	33,160,252	261	0.0000	1.0000	99.90
13.5	33,116,840		0.0000	1.0000	99.90
14.5	29,205,710	3,104	0.0001	0.9999	99.90
15.5	24,782,246	182,238	0.0074	0.9926	99.89
16.5	23,293,619	378,928	0.0163	0.9837	99.16
17.5	21,549,285	233,442	0.0108	0.9892	97.54
18.5	21,137,094	25,134	0.0012	0.9988	96.49
19.5	21,111,960		0.0000	1.0000	96.37
20.5	21,111,960	8,500	0.0004	0.9996	96.37
21.5	21,067,116	12,739	0.0006	0.9994	96.33
22.5	21,054,376		0.0000	1.0000	96.28
23.5	21,054,376	17,425	0.0008	0.9992	96.28
24.5	21,036,952		0.0000	1.0000	96.20
25.5	21,011,617		0.0000	1.0000	96.20
26.5	20,770,348	21,314	0.0010	0.9990	96.20
27.5	20,446,224		0.0000	1.0000	96.10
28.5	20,439,405		0.0000	1.0000	96.10
29.5	20,439,405	40,118	0.0020	0.9980	96.10
30.5	20,202,204		0.0000	1.0000	95.91
31.5	19,983,232		0.0000	1.0000	95.91
32.5	19,900,128		0.0000	1.0000	95.91
33.5	19,900,128	456,792	0.0230	0.9770	95.91
34.5	19,440,304		0.0000	1.0000	93.71
35.5	19,440,304		0.0000	1.0000	93.71
36.5	19,368,281		0.0000	1.0000	93.71
37.5	19,368,281		0.0000	1.0000	93.71
38.5	19,368,281		0.0000	1.0000	93.71

MANITOBA HYDRO

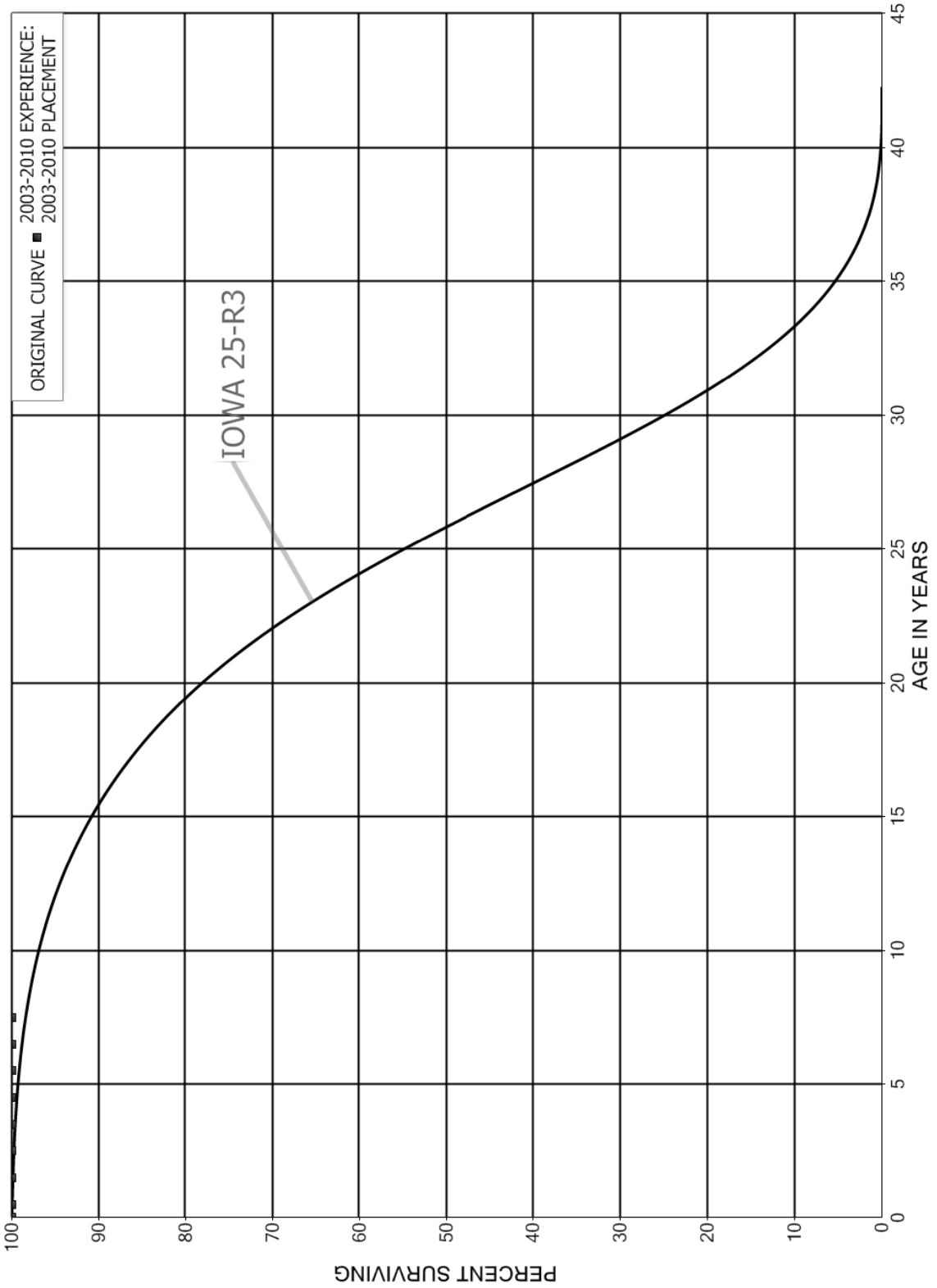
ACCOUNT 000J - STEAM GENERATOR AND AUXILIARIES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	19,368,281		0.0000	1.0000	93.71
40.5	12,522,038		0.0000	1.0000	93.71
41.5	12,522,038		0.0000	1.0000	93.71
42.5	12,522,038		0.0000	1.0000	93.71
43.5	11,219,557		0.0000	1.0000	93.71
44.5	11,219,557	156,068	0.0139	0.9861	93.71
45.5	11,063,489	19,766	0.0018	0.9982	92.40
46.5	11,043,723		0.0000	1.0000	92.24
47.5	11,027,615	77,069	0.0070	0.9930	92.24
48.5	10,934,114		0.0000	1.0000	91.59
49.5	4,317,375		0.0000	1.0000	91.59
50.5	4,317,375		0.0000	1.0000	91.59
51.5	4,316,641	3,867,271	0.8959	0.1041	91.59
52.5					9.54

MANITOBA HYDRO
ACCOUNT 000K - COMBUSTION TURBINE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

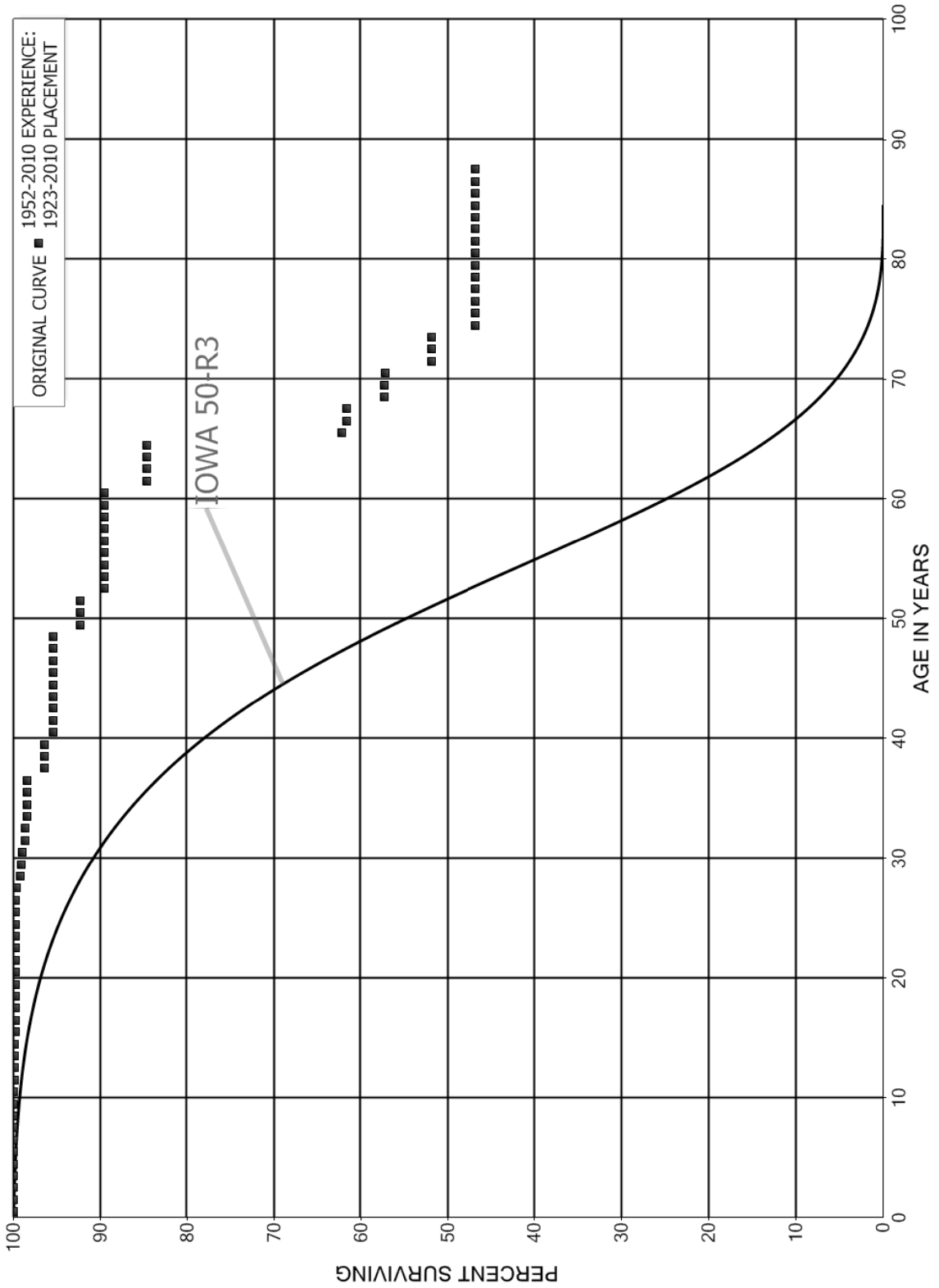
ACCOUNT 000K - COMBUSTION TURBINE

ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2010 EXPERIENCE BAND 2003-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	143,311,694		0.0000	1.0000	100.00
0.5	139,616,533	1,603	0.0000	1.0000	100.00
1.5	137,919,300		0.0000	1.0000	100.00
2.5	137,909,392		0.0000	1.0000	100.00
3.5	137,791,333		0.0000	1.0000	100.00
4.5	137,791,333		0.0000	1.0000	100.00
5.5	135,896,437		0.0000	1.0000	100.00
6.5	135,538,131		0.0000	1.0000	100.00
7.5					100.00

MANITOBA HYDRO
ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	292,828,017		0.0000	1.0000	100.00
0.5	279,326,442		0.0000	1.0000	100.00
1.5	273,584,241		0.0000	1.0000	100.00
2.5	271,677,214		0.0000	1.0000	100.00
3.5	268,310,640		0.0000	1.0000	100.00
4.5	267,686,749	112,433	0.0004	0.9996	100.00
5.5	266,993,314	97,287	0.0004	0.9996	99.96
6.5	263,023,462	206	0.0000	1.0000	99.92
7.5	245,914,253		0.0000	1.0000	99.92
8.5	242,613,779		0.0000	1.0000	99.92
9.5	242,605,145		0.0000	1.0000	99.92
10.5	237,699,044	329,374	0.0014	0.9986	99.92
11.5	235,826,986		0.0000	1.0000	99.78
12.5	235,041,552	7,100	0.0000	1.0000	99.78
13.5	231,458,887		0.0000	1.0000	99.78
14.5	225,608,940	12,800	0.0001	0.9999	99.78
15.5	224,400,687	285	0.0000	1.0000	99.77
16.5	222,537,137	40,796	0.0002	0.9998	99.77
17.5	191,832,695	61,737	0.0003	0.9997	99.76
18.5	133,955,376	285	0.0000	1.0000	99.72
19.5	72,642,201		0.0000	1.0000	99.72
20.5	70,844,632	3,077	0.0000	1.0000	99.72
21.5	67,781,096	885	0.0000	1.0000	99.72
22.5	67,867,072	8,000	0.0001	0.9999	99.72
23.5	67,903,403		0.0000	1.0000	99.71
24.5	67,223,580	23,574	0.0004	0.9996	99.71
25.5	67,200,006		0.0000	1.0000	99.67
26.5	67,186,048	29,851	0.0004	0.9996	99.67
27.5	66,659,848	316,183	0.0047	0.9953	99.63
28.5	65,929,853	45,026	0.0007	0.9993	99.15
29.5	65,811,137	101,082	0.0015	0.9985	99.09
30.5	65,640,081	245,972	0.0037	0.9963	98.93
31.5	37,610,914		0.0000	1.0000	98.56
32.5	16,899,839	22,875	0.0014	0.9986	98.56
33.5	16,876,963		0.0000	1.0000	98.43
34.5	16,784,200		0.0000	1.0000	98.43
35.5	16,782,064	1,390	0.0001	0.9999	98.43
36.5	16,764,510	340,345	0.0203	0.9797	98.42
37.5	12,293,464		0.0000	1.0000	96.42
38.5	12,257,937		0.0000	1.0000	96.42

MANITOBA HYDRO

ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,233,163	127,541	0.0104	0.9896	96.42
40.5	10,641,790	8,300	0.0008	0.9992	95.42
41.5	10,443,292		0.0000	1.0000	95.34
42.5	10,443,292		0.0000	1.0000	95.34
43.5	10,442,434		0.0000	1.0000	95.34
44.5	8,837,007		0.0000	1.0000	95.34
45.5	8,799,717		0.0000	1.0000	95.34
46.5	8,788,527		0.0000	1.0000	95.34
47.5	8,788,527		0.0000	1.0000	95.34
48.5	8,788,527	285,969	0.0325	0.9675	95.34
49.5	5,796,787		0.0000	1.0000	92.24
50.5	5,673,959		0.0000	1.0000	92.24
51.5	5,575,203	165,169	0.0296	0.9704	92.24
52.5	4,403,786		0.0000	1.0000	89.51
53.5	4,402,136		0.0000	1.0000	89.51
54.5	4,379,548		0.0000	1.0000	89.51
55.5	3,045,849		0.0000	1.0000	89.51
56.5	3,045,849		0.0000	1.0000	89.51
57.5	2,551,929		0.0000	1.0000	89.51
58.5	1,579,722		0.0000	1.0000	89.51
59.5	1,469,333		0.0000	1.0000	89.51
60.5	1,157,623	64,000	0.0553	0.9447	89.51
61.5	1,093,623		0.0000	1.0000	84.56
62.5	1,093,623		0.0000	1.0000	84.56
63.5	1,093,623		0.0000	1.0000	84.56
64.5	1,093,623	289,155	0.2644	0.7356	84.56
65.5	804,468	7,388	0.0092	0.9908	62.20
66.5	797,080		0.0000	1.0000	61.63
67.5	797,080	56,733	0.0712	0.9288	61.63
68.5	740,347		0.0000	1.0000	57.24
69.5	740,347	1,500	0.0020	0.9980	57.24
70.5	738,847	68,056	0.0921	0.9079	57.13
71.5	670,791		0.0000	1.0000	51.87
72.5	670,791		0.0000	1.0000	51.87
73.5	670,791	66,556	0.0992	0.9008	51.87
74.5	604,235		0.0000	1.0000	46.72
75.5	604,235		0.0000	1.0000	46.72
76.5	604,235		0.0000	1.0000	46.72
77.5	604,235		0.0000	1.0000	46.72
78.5	185,317		0.0000	1.0000	46.72

MANITOBA HYDRO

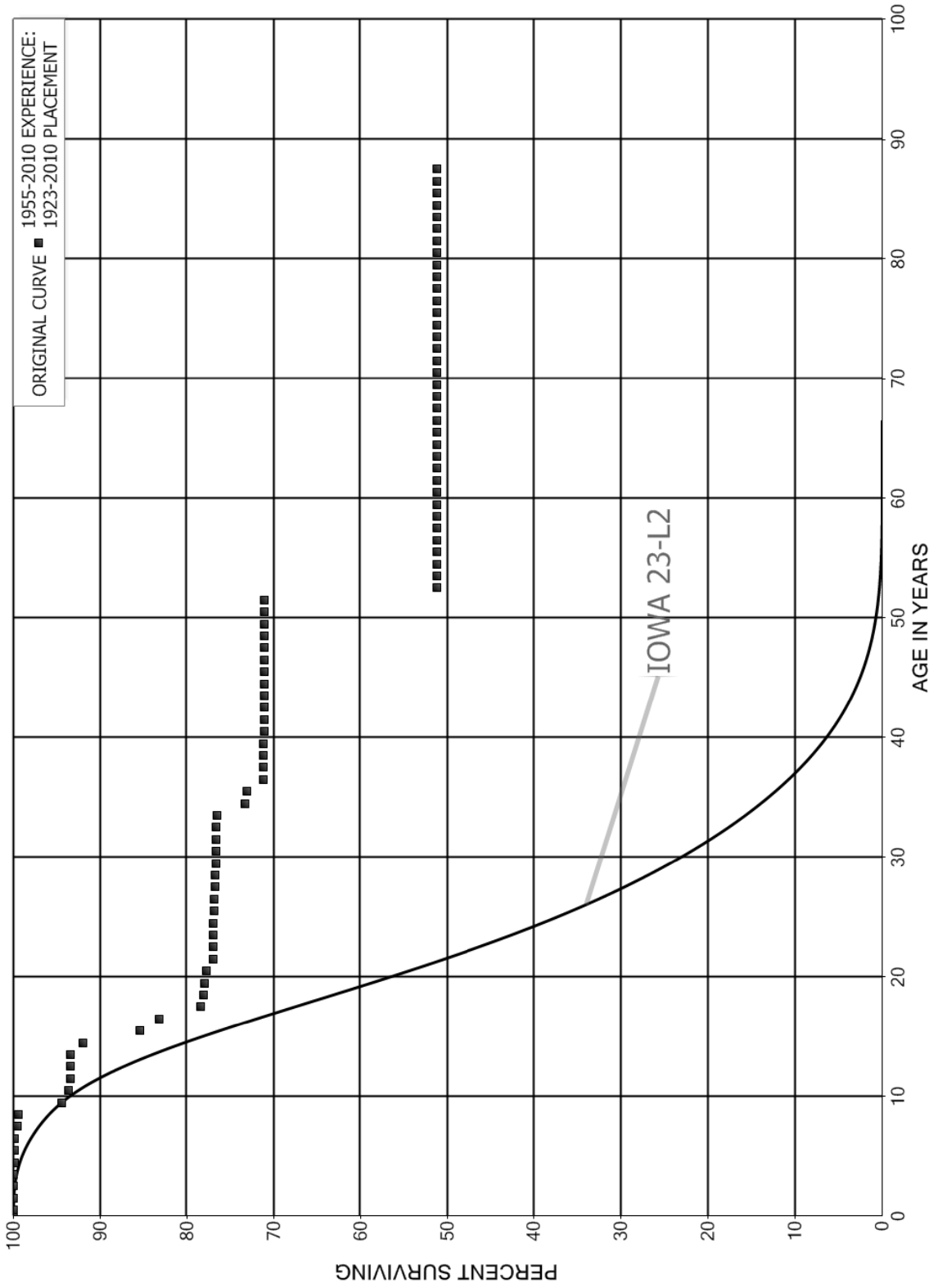
ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	185,317		0.0000	1.0000	46.72
80.5	185,317		0.0000	1.0000	46.72
81.5	175,686		0.0000	1.0000	46.72
82.5	99,161		0.0000	1.0000	46.72
83.5	4,479		0.0000	1.0000	46.72
84.5	4,479		0.0000	1.0000	46.72
85.5	4,479		0.0000	1.0000	46.72
86.5	3,613		0.0000	1.0000	46.72
87.5					46.72

MANITOBA HYDRO
ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	113,512,197		0.0000	1.0000	100.00
0.5	110,922,819		0.0000	1.0000	100.00
1.5	108,424,973		0.0000	1.0000	100.00
2.5	107,366,926		0.0000	1.0000	100.00
3.5	105,444,621	122,120	0.0012	0.9988	100.00
4.5	101,758,727	200	0.0000	1.0000	99.88
5.5	97,904,128	45,137	0.0005	0.9995	99.88
6.5	93,915,854	313,182	0.0033	0.9967	99.84
7.5	92,312,982	73,269	0.0008	0.9992	99.51
8.5	83,573,216	4,250,138	0.0509	0.9491	99.43
9.5	77,955,135	667,574	0.0086	0.9914	94.37
10.5	73,824,226	171,391	0.0023	0.9977	93.56
11.5	70,873,829		0.0000	1.0000	93.34
12.5	64,082,132	1,000	0.0000	1.0000	93.34
13.5	59,258,714	889,976	0.0150	0.9850	93.34
14.5	45,889,792	3,271,252	0.0713	0.9287	91.94
15.5	37,651,074	965,716	0.0256	0.9744	85.39
16.5	33,051,720	1,895,794	0.0574	0.9426	83.20
17.5	28,664,663	134,502	0.0047	0.9953	78.42
18.5	24,183,660	25,564	0.0011	0.9989	78.06
19.5	21,256,023	72,220	0.0034	0.9966	77.97
20.5	21,177,893	193,176	0.0091	0.9909	77.71
21.5	20,396,620	5,814	0.0003	0.9997	77.00
22.5	20,265,246	4,500	0.0002	0.9998	76.98
23.5	20,019,285		0.0000	1.0000	76.96
24.5	19,862,468	25,233	0.0013	0.9987	76.96
25.5	18,676,539		0.0000	1.0000	76.86
26.5	18,527,653	41,175	0.0022	0.9978	76.86
27.5	18,542,086	4,893	0.0003	0.9997	76.69
28.5	18,520,835	2,000	0.0001	0.9999	76.67
29.5	18,471,061	21,614	0.0012	0.9988	76.66
30.5	18,446,012	1,000	0.0001	0.9999	76.57
31.5	14,552,131		0.0000	1.0000	76.57
32.5	12,679,351	8,600	0.0007	0.9993	76.57
33.5	12,646,935	541,068	0.0428	0.9572	76.52
34.5	11,968,716	31,173	0.0026	0.9974	73.24
35.5	11,744,812	300,696	0.0256	0.9744	73.05
36.5	11,444,116	7,036	0.0006	0.9994	71.18
37.5	6,605,160		0.0000	1.0000	71.14
38.5	6,596,160		0.0000	1.0000	71.14

MANITOBA HYDRO

ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	6,203,378	7,116	0.0011	0.9989	71.14
40.5	3,936,407		0.0000	1.0000	71.06
41.5	3,657,705		0.0000	1.0000	71.06
42.5	3,657,705		0.0000	1.0000	71.06
43.5	3,642,274		0.0000	1.0000	71.06
44.5	2,261,508		0.0000	1.0000	71.06
45.5	2,261,508		0.0000	1.0000	71.06
46.5	2,261,508		0.0000	1.0000	71.06
47.5	2,261,508		0.0000	1.0000	71.06
48.5	2,256,039		0.0000	1.0000	71.06
49.5	2,061,683		0.0000	1.0000	71.06
50.5	2,060,954		0.0000	1.0000	71.06
51.5	2,006,520	559,931	0.2791	0.7209	71.06
52.5	475,938		0.0000	1.0000	51.23
53.5	475,938		0.0000	1.0000	51.23
54.5	475,938		0.0000	1.0000	51.23
55.5	475,938		0.0000	1.0000	51.23
56.5	475,938		0.0000	1.0000	51.23
57.5	475,938		0.0000	1.0000	51.23
58.5	475,938		0.0000	1.0000	51.23
59.5	475,938		0.0000	1.0000	51.23
60.5	475,938		0.0000	1.0000	51.23
61.5	475,938		0.0000	1.0000	51.23
62.5	475,938		0.0000	1.0000	51.23
63.5	475,938		0.0000	1.0000	51.23
64.5	475,938		0.0000	1.0000	51.23
65.5	475,938		0.0000	1.0000	51.23
66.5	475,938		0.0000	1.0000	51.23
67.5	475,938		0.0000	1.0000	51.23
68.5	475,938		0.0000	1.0000	51.23
69.5	475,938		0.0000	1.0000	51.23
70.5	475,938		0.0000	1.0000	51.23
71.5	475,938		0.0000	1.0000	51.23
72.5	475,938		0.0000	1.0000	51.23
73.5	475,938		0.0000	1.0000	51.23
74.5	475,938		0.0000	1.0000	51.23
75.5	475,938		0.0000	1.0000	51.23
76.5	475,938		0.0000	1.0000	51.23
77.5	475,938		0.0000	1.0000	51.23
78.5	475,938		0.0000	1.0000	51.23

MANITOBA HYDRO

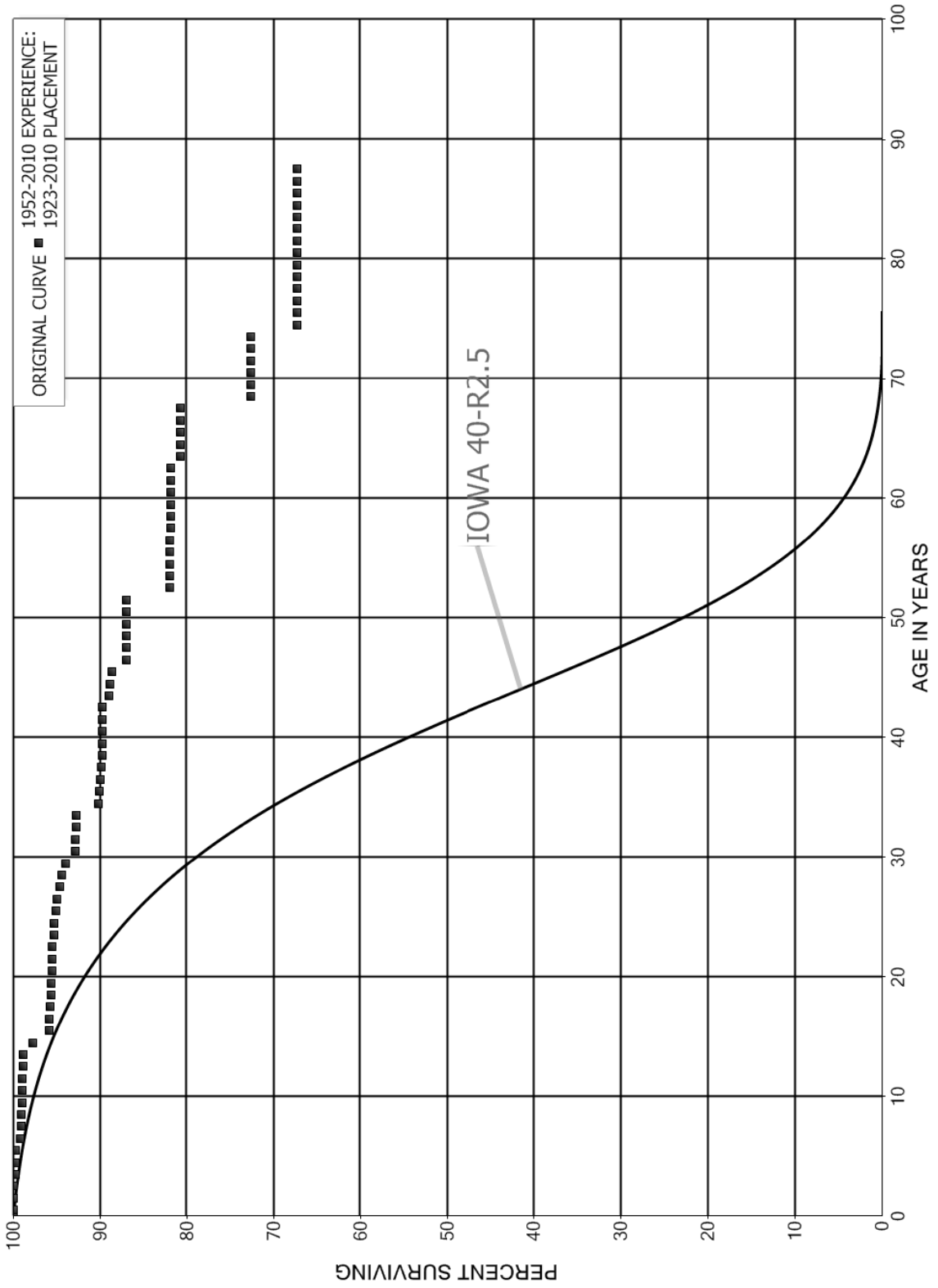
ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	475,938		0.0000	1.0000	51.23
80.5	475,938		0.0000	1.0000	51.23
81.5	248,803		0.0000	1.0000	51.23
82.5	190,007		0.0000	1.0000	51.23
83.5	134,399		0.0000	1.0000	51.23
84.5	134,399		0.0000	1.0000	51.23
85.5	134,399		0.0000	1.0000	51.23
86.5	98,990		0.0000	1.0000	51.23
87.5					51.23

MANITOBA HYDRO
ACCOUNT 000R - AUXILIARY STATION PROCESSES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	192,624,854		0.0000	1.0000	100.00
0.5	184,805,819		0.0000	1.0000	100.00
1.5	179,793,702	13,946	0.0001	0.9999	100.00
2.5	176,424,434	486,671	0.0028	0.9972	99.99
3.5	169,989,173	610	0.0000	1.0000	99.72
4.5	167,342,114	18,978	0.0001	0.9999	99.72
5.5	165,029,209	963,272	0.0058	0.9942	99.70
6.5	158,223,071	72,518	0.0005	0.9995	99.12
7.5	147,022,130		0.0000	1.0000	99.08
8.5	144,278,234	122,136	0.0008	0.9992	99.08
9.5	143,700,574	231	0.0000	1.0000	98.99
10.5	140,201,772	100,311	0.0007	0.9993	98.99
11.5	136,482,240	46,729	0.0003	0.9997	98.92
12.5	130,907,743	4,553	0.0000	1.0000	98.89
13.5	122,020,915	1,371,150	0.0112	0.9888	98.89
14.5	97,190,921	1,933,878	0.0199	0.9801	97.77
15.5	92,079,982	39,726	0.0004	0.9996	95.83
16.5	86,682,515	36,609	0.0004	0.9996	95.79
17.5	75,602,356	128,938	0.0017	0.9983	95.75
18.5	61,025,988		0.0000	1.0000	95.58
19.5	45,316,350	46,375	0.0010	0.9990	95.58
20.5	43,704,160		0.0000	1.0000	95.49
21.5	42,368,695		0.0000	1.0000	95.49
22.5	41,158,808	103,849	0.0025	0.9975	95.49
23.5	40,955,165	5,322	0.0001	0.9999	95.24
24.5	40,190,640	63,238	0.0016	0.9984	95.23
25.5	39,390,661	39,485	0.0010	0.9990	95.08
26.5	38,144,989	135,096	0.0035	0.9965	94.99
27.5	37,461,286	90,669	0.0024	0.9976	94.65
28.5	37,376,798	169,653	0.0045	0.9955	94.42
29.5	37,154,410	438,438	0.0118	0.9882	93.99
30.5	36,609,146	33,298	0.0009	0.9991	92.88
31.5	27,362,995	6,065	0.0002	0.9998	92.80
32.5	23,034,951		0.0000	1.0000	92.78
33.5	22,976,353	647,311	0.0282	0.9718	92.78
34.5	22,172,044	23,311	0.0011	0.9989	90.17
35.5	22,138,406	34,197	0.0015	0.9985	90.07
36.5	21,975,375	10,346	0.0005	0.9995	89.93
37.5	13,525,241	20,084	0.0015	0.9985	89.89
38.5	13,275,764	1,103	0.0001	0.9999	89.76

MANITOBA HYDRO

ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,124,532		0.0000	1.0000	89.75
40.5	11,320,803		0.0000	1.0000	89.75
41.5	11,202,706	1,312	0.0001	0.9999	89.75
42.5	11,110,105	96,785	0.0087	0.9913	89.74
43.5	10,947,641	10,144	0.0009	0.9991	88.96
44.5	10,843,253	36,619	0.0034	0.9966	88.87
45.5	10,706,636	200,000	0.0187	0.9813	88.57
46.5	10,489,195	600	0.0001	0.9999	86.92
47.5	10,482,935		0.0000	1.0000	86.91
48.5	10,482,701		0.0000	1.0000	86.91
49.5	6,282,977		0.0000	1.0000	86.91
50.5	6,278,935		0.0000	1.0000	86.91
51.5	6,239,360	355,563	0.0570	0.9430	86.91
52.5	1,352,685		0.0000	1.0000	81.96
53.5	1,349,124		0.0000	1.0000	81.96
54.5	1,349,124	600	0.0004	0.9996	81.96
55.5	880,961		0.0000	1.0000	81.92
56.5	880,961	1,213	0.0014	0.9986	81.92
57.5	879,603		0.0000	1.0000	81.81
58.5	467,314		0.0000	1.0000	81.81
59.5	467,216		0.0000	1.0000	81.81
60.5	443,426		0.0000	1.0000	81.81
61.5	443,426		0.0000	1.0000	81.81
62.5	443,426	6,000	0.0135	0.9865	81.81
63.5	437,426		0.0000	1.0000	80.70
64.5	437,426		0.0000	1.0000	80.70
65.5	437,426		0.0000	1.0000	80.70
66.5	437,426		0.0000	1.0000	80.70
67.5	437,426	43,712	0.0999	0.9001	80.70
68.5	393,714		0.0000	1.0000	72.64
69.5	393,714		0.0000	1.0000	72.64
70.5	393,714		0.0000	1.0000	72.64
71.5	393,714		0.0000	1.0000	72.64
72.5	393,714		0.0000	1.0000	72.64
73.5	393,714	29,068	0.0738	0.9262	72.64
74.5	364,647		0.0000	1.0000	67.28
75.5	364,647		0.0000	1.0000	67.28
76.5	364,647		0.0000	1.0000	67.28
77.5	364,647		0.0000	1.0000	67.28
78.5	47,772		0.0000	1.0000	67.28

MANITOBA HYDRO

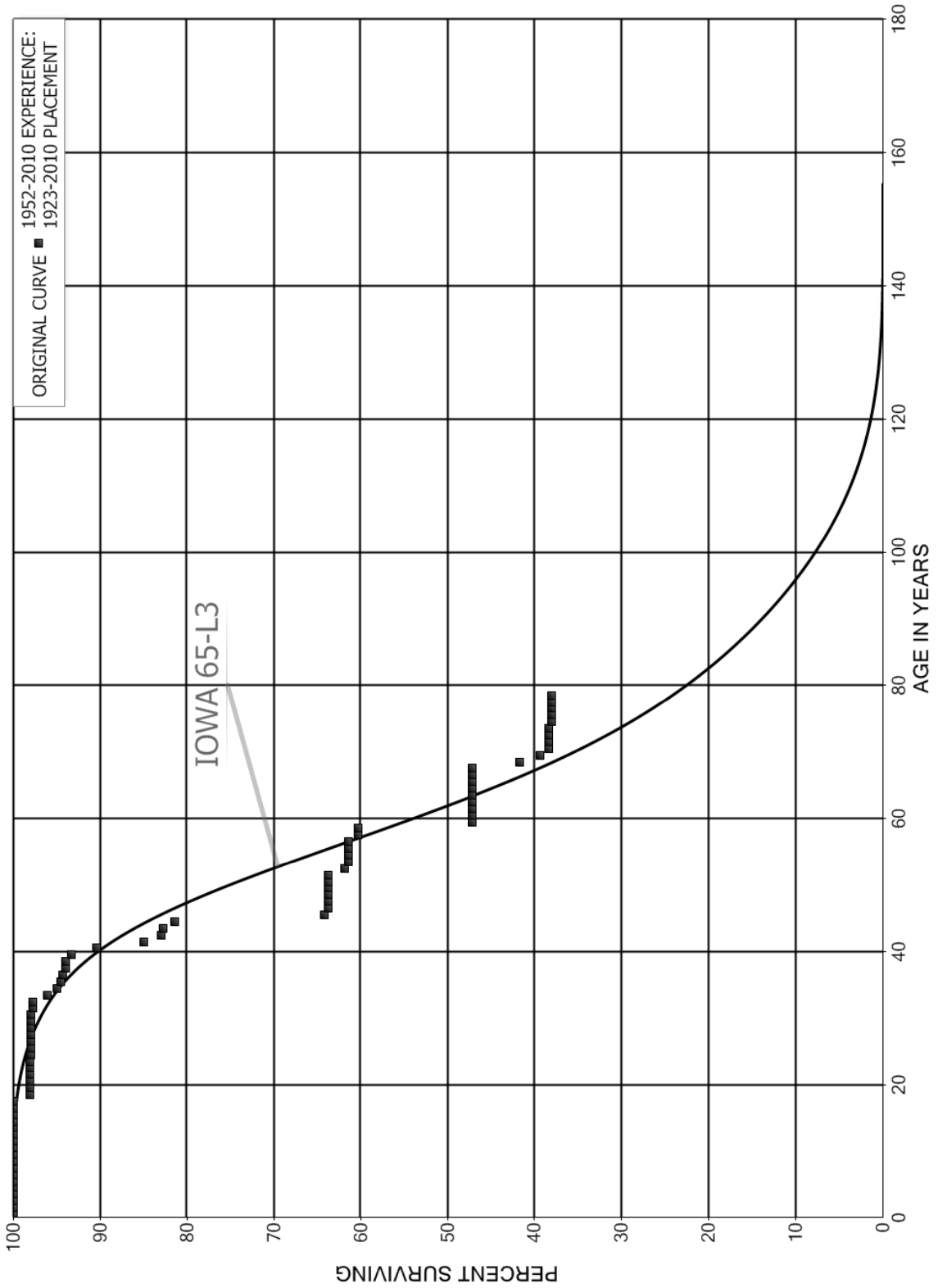
ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	47,772		0.0000	1.0000	67.28
80.5	47,772		0.0000	1.0000	67.28
81.5	21,135		0.0000	1.0000	67.28
82.5	21,135		0.0000	1.0000	67.28
83.5	18,210		0.0000	1.0000	67.28
84.5	18,210		0.0000	1.0000	67.28
85.5	18,210		0.0000	1.0000	67.28
86.5	18,210		0.0000	1.0000	67.28
87.5					67.28

MANITOBA HYDRO
ACCOUNT 000V - TOWN SITE BUILDING
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000V - TOWN SITE BUILDING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	61,916,630		0.0000	1.0000	100.00
0.5	60,156,072		0.0000	1.0000	100.00
1.5	57,323,328		0.0000	1.0000	100.00
2.5	54,642,240		0.0000	1.0000	100.00
3.5	53,603,510		0.0000	1.0000	100.00
4.5	49,079,689		0.0000	1.0000	100.00
5.5	48,986,247		0.0000	1.0000	100.00
6.5	48,996,334		0.0000	1.0000	100.00
7.5	48,989,321		0.0000	1.0000	100.00
8.5	48,846,804		0.0000	1.0000	100.00
9.5	47,741,402	4,325	0.0001	0.9999	100.00
10.5	45,508,060		0.0000	1.0000	99.99
11.5	45,046,404		0.0000	1.0000	99.99
12.5	44,009,404		0.0000	1.0000	99.99
13.5	42,772,297		0.0000	1.0000	99.99
14.5	42,610,137		0.0000	1.0000	99.99
15.5	42,145,031		0.0000	1.0000	99.99
16.5	38,392,785		0.0000	1.0000	99.99
17.5	38,392,785	731,713	0.0191	0.9809	99.99
18.5	37,291,313		0.0000	1.0000	98.09
19.5	36,158,607		0.0000	1.0000	98.09
20.5	33,585,873		0.0000	1.0000	98.09
21.5	27,834,848	15,000	0.0005	0.9995	98.09
22.5	27,494,118		0.0000	1.0000	98.03
23.5	27,509,443	10,965	0.0004	0.9996	98.03
24.5	22,119,445		0.0000	1.0000	97.99
25.5	22,119,445	761	0.0000	1.0000	97.99
26.5	22,065,719		0.0000	1.0000	97.99
27.5	22,065,719		0.0000	1.0000	97.99
28.5	21,239,277	4,433	0.0002	0.9998	97.99
29.5	20,828,965	9,114	0.0004	0.9996	97.97
30.5	20,819,851	45,101	0.0022	0.9978	97.93
31.5	10,120,997	3,618	0.0004	0.9996	97.71
32.5	10,117,379	169,076	0.0167	0.9833	97.68
33.5	9,948,303	108,958	0.0110	0.9890	96.05
34.5	9,824,944	48,375	0.0049	0.9951	95.00
35.5	9,772,738	28,769	0.0029	0.9971	94.53
36.5	9,735,678	26,163	0.0027	0.9973	94.25
37.5	2,368,657		0.0000	1.0000	94.00
38.5	2,368,657	17,649	0.0075	0.9925	94.00

MANITOBA HYDRO

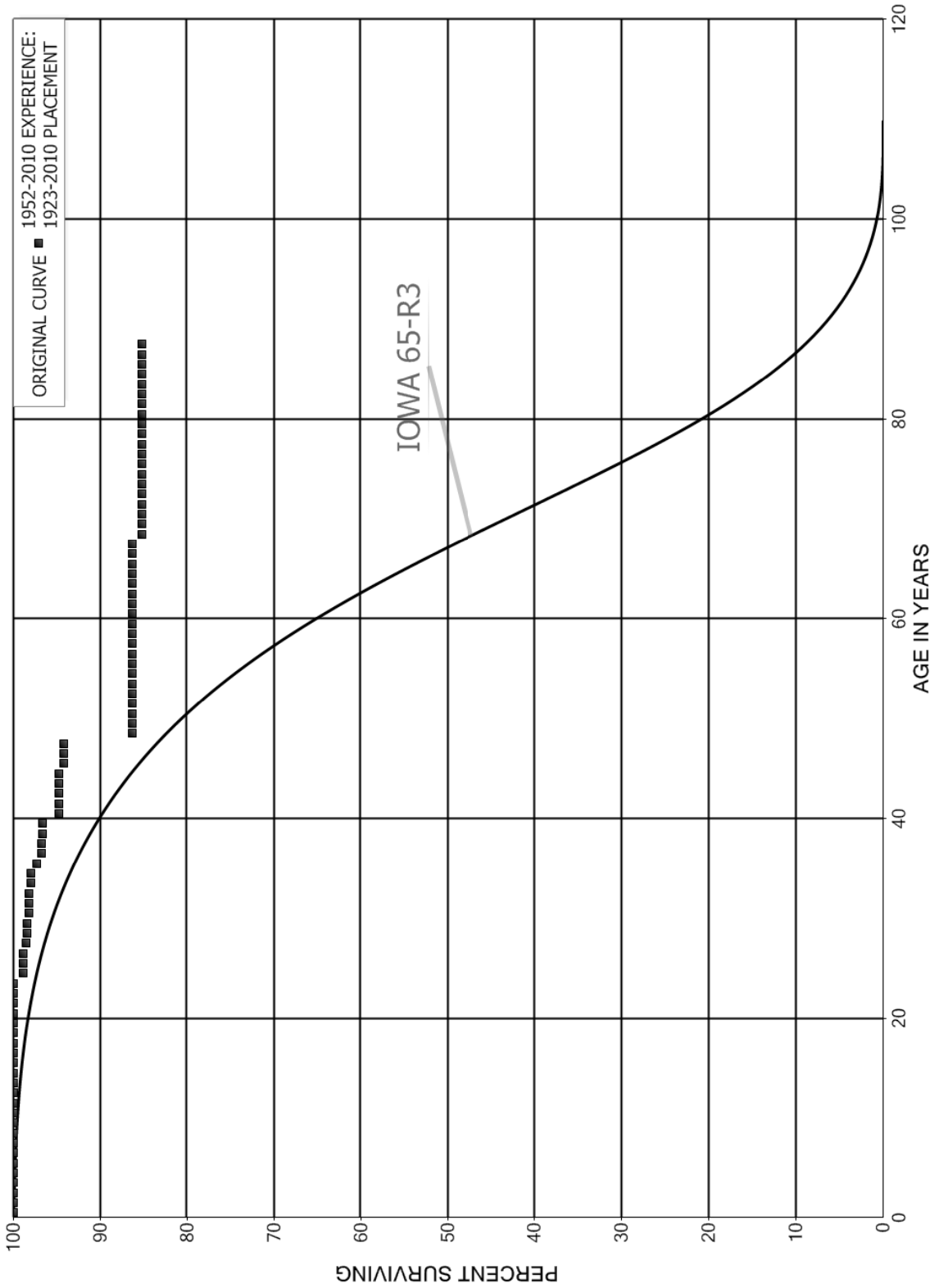
ACCOUNT 000V - TOWN SITE BUILDING

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,345,175	72,580	0.0309	0.9691	93.30
40.5	2,272,595	136,469	0.0601	0.9399	90.41
41.5	1,962,231	46,332	0.0236	0.9764	84.98
42.5	1,915,900	4,833	0.0025	0.9975	82.97
43.5	1,859,687	31,908	0.0172	0.9828	82.76
44.5	661,942	139,698	0.2110	0.7890	81.34
45.5	493,189	3,874	0.0079	0.9921	64.18
46.5	439,590		0.0000	1.0000	63.67
47.5	439,590		0.0000	1.0000	63.67
48.5	439,590		0.0000	1.0000	63.67
49.5	425,042		0.0000	1.0000	63.67
50.5	421,470		0.0000	1.0000	63.67
51.5	421,470	12,213	0.0290	0.9710	63.67
52.5	409,257	3,000	0.0073	0.9927	61.83
53.5	405,256		0.0000	1.0000	61.37
54.5	405,106		0.0000	1.0000	61.37
55.5	405,106		0.0000	1.0000	61.37
56.5	405,106	7,000	0.0173	0.9827	61.37
57.5	398,106		0.0000	1.0000	60.31
58.5	398,094	87,285	0.2193	0.7807	60.31
59.5	310,810		0.0000	1.0000	47.09
60.5	303,510		0.0000	1.0000	47.09
61.5	303,510		0.0000	1.0000	47.09
62.5	303,510		0.0000	1.0000	47.09
63.5	303,510		0.0000	1.0000	47.09
64.5	303,510		0.0000	1.0000	47.09
65.5	303,510		0.0000	1.0000	47.09
66.5	303,510		0.0000	1.0000	47.09
67.5	303,510	35,256	0.1162	0.8838	47.09
68.5	268,254	15,326	0.0571	0.9429	41.62
69.5	252,929	5,903	0.0233	0.9767	39.24
70.5	247,025		0.0000	1.0000	38.33
71.5	247,025		0.0000	1.0000	38.33
72.5	247,025		0.0000	1.0000	38.33
73.5	247,025	2,559	0.0104	0.9896	38.33
74.5	244,467		0.0000	1.0000	37.93
75.5	244,467		0.0000	1.0000	37.93
76.5	244,467		0.0000	1.0000	37.93
77.5	244,467		0.0000	1.0000	37.93
78.5					37.93

MANITOBA HYDRO
ACCOUNT 000X - SUPPORT BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	53,265,314		0.0000	1.0000	100.00
0.5	51,710,788		0.0000	1.0000	100.00
1.5	49,728,815		0.0000	1.0000	100.00
2.5	48,507,423		0.0000	1.0000	100.00
3.5	48,155,695		0.0000	1.0000	100.00
4.5	47,400,616		0.0000	1.0000	100.00
5.5	46,904,041	8,065	0.0002	0.9998	100.00
6.5	43,889,140		0.0000	1.0000	99.98
7.5	37,885,207		0.0000	1.0000	99.98
8.5	37,470,809		0.0000	1.0000	99.98
9.5	36,997,262		0.0000	1.0000	99.98
10.5	35,950,102		0.0000	1.0000	99.98
11.5	35,231,141		0.0000	1.0000	99.98
12.5	28,844,054		0.0000	1.0000	99.98
13.5	27,869,847		0.0000	1.0000	99.98
14.5	22,298,714		0.0000	1.0000	99.98
15.5	21,042,579		0.0000	1.0000	99.98
16.5	20,761,245		0.0000	1.0000	99.98
17.5	14,397,669	5,000	0.0003	0.9997	99.98
18.5	12,583,643		0.0000	1.0000	99.95
19.5	10,790,616		0.0000	1.0000	99.95
20.5	10,655,066		0.0000	1.0000	99.95
21.5	10,594,622		0.0000	1.0000	99.95
22.5	10,603,778		0.0000	1.0000	99.95
23.5	9,738,510	105,000	0.0108	0.9892	99.95
24.5	9,646,586		0.0000	1.0000	98.87
25.5	6,068,037		0.0000	1.0000	98.87
26.5	6,068,037	24,541	0.0040	0.9960	98.87
27.5	5,887,995	3,750	0.0006	0.9994	98.47
28.5	6,287,289		0.0000	1.0000	98.41
29.5	6,167,681	13,076	0.0021	0.9979	98.41
30.5	6,147,403		0.0000	1.0000	98.20
31.5	6,147,403	140	0.0000	1.0000	98.20
32.5	5,935,367	13,913	0.0023	0.9977	98.20
33.5	5,913,554	2,230	0.0004	0.9996	97.97
34.5	5,880,223	36,237	0.0062	0.9938	97.93
35.5	5,843,986	33,826	0.0058	0.9942	97.33
36.5	5,810,159	1,939	0.0003	0.9997	96.76
37.5	1,951,527	2,049	0.0011	0.9989	96.73
38.5	1,864,106	1,132	0.0006	0.9994	96.63

MANITOBA HYDRO

ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,818,759	34,550	0.0190	0.9810	96.57
40.5	1,784,209		0.0000	1.0000	94.74
41.5	1,784,209		0.0000	1.0000	94.74
42.5	1,781,193		0.0000	1.0000	94.74
43.5	1,781,193		0.0000	1.0000	94.74
44.5	1,641,309	9,816	0.0060	0.9940	94.74
45.5	1,621,462		0.0000	1.0000	94.17
46.5	1,621,462		0.0000	1.0000	94.17
47.5	1,621,462	136,000	0.0839	0.9161	94.17
48.5	1,485,462		0.0000	1.0000	86.27
49.5	826,055		0.0000	1.0000	86.27
50.5	826,055		0.0000	1.0000	86.27
51.5	816,248		0.0000	1.0000	86.27
52.5	418,391		0.0000	1.0000	86.27
53.5	418,391		0.0000	1.0000	86.27
54.5	418,391		0.0000	1.0000	86.27
55.5	418,391		0.0000	1.0000	86.27
56.5	418,391		0.0000	1.0000	86.27
57.5	418,391	15	0.0000	1.0000	86.27
58.5	418,375		0.0000	1.0000	86.27
59.5	418,375		0.0000	1.0000	86.27
60.5	418,375		0.0000	1.0000	86.27
61.5	418,375		0.0000	1.0000	86.27
62.5	418,375		0.0000	1.0000	86.27
63.5	418,375		0.0000	1.0000	86.27
64.5	418,375		0.0000	1.0000	86.27
65.5	418,375		0.0000	1.0000	86.27
66.5	418,375		0.0000	1.0000	86.27
67.5	418,375	5,406	0.0129	0.9871	86.27
68.5	412,969		0.0000	1.0000	85.15
69.5	412,969		0.0000	1.0000	85.15
70.5	412,969		0.0000	1.0000	85.15
71.5	412,969		0.0000	1.0000	85.15
72.5	412,969		0.0000	1.0000	85.15
73.5	412,969		0.0000	1.0000	85.15
74.5	412,969		0.0000	1.0000	85.15
75.5	412,969		0.0000	1.0000	85.15
76.5	412,969		0.0000	1.0000	85.15
77.5	412,969		0.0000	1.0000	85.15
78.5	412,969		0.0000	1.0000	85.15

MANITOBA HYDRO

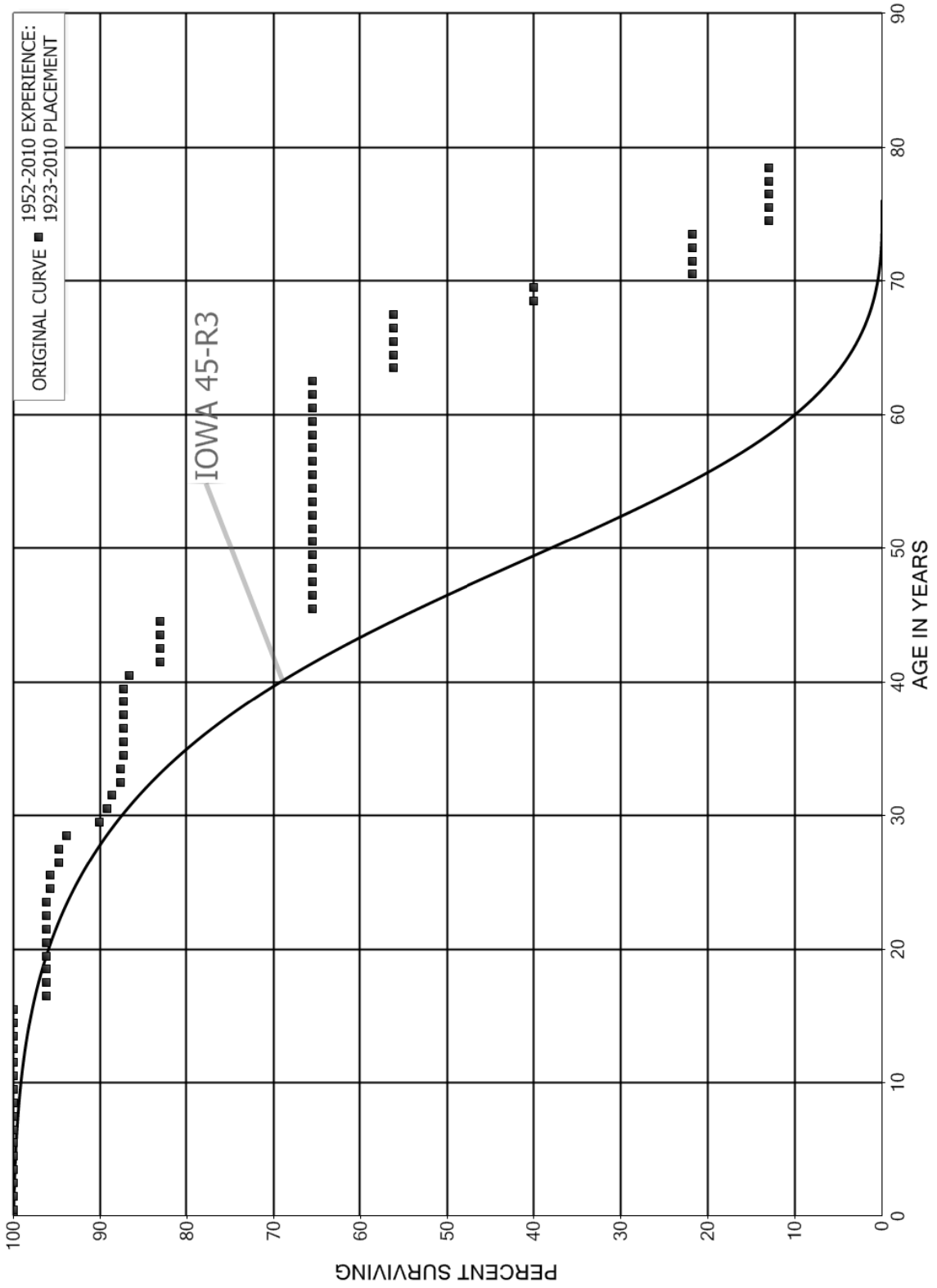
ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	412,969		0.0000	1.0000	85.15
80.5	412,969		0.0000	1.0000	85.15
81.5	412,969		0.0000	1.0000	85.15
82.5	412,969		0.0000	1.0000	85.15
83.5	412,969		0.0000	1.0000	85.15
84.5	412,969		0.0000	1.0000	85.15
85.5	412,969		0.0000	1.0000	85.15
86.5	412,969		0.0000	1.0000	85.15
87.5					85.15

MANITOBA HYDRO
ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	26,962,127		0.0000	1.0000	100.00
0.5	24,661,955		0.0000	1.0000	100.00
1.5	24,443,245		0.0000	1.0000	100.00
2.5	23,018,558		0.0000	1.0000	100.00
3.5	22,865,349		0.0000	1.0000	100.00
4.5	22,347,512		0.0000	1.0000	100.00
5.5	17,646,550		0.0000	1.0000	100.00
6.5	16,955,132		0.0000	1.0000	100.00
7.5	16,786,460		0.0000	1.0000	100.00
8.5	14,898,563		0.0000	1.0000	100.00
9.5	11,181,716		0.0000	1.0000	100.00
10.5	10,804,400		0.0000	1.0000	100.00
11.5	10,499,905	2,648	0.0003	0.9997	100.00
12.5	7,092,531		0.0000	1.0000	99.97
13.5	4,656,753		0.0000	1.0000	99.97
14.5	4,339,626		0.0000	1.0000	99.97
15.5	4,213,310	160,237	0.0380	0.9620	99.97
16.5	3,946,446		0.0000	1.0000	96.17
17.5	3,946,446		0.0000	1.0000	96.17
18.5	3,867,574		0.0000	1.0000	96.17
19.5	3,976,181		0.0000	1.0000	96.17
20.5	3,916,614		0.0000	1.0000	96.17
21.5	3,073,875		0.0000	1.0000	96.17
22.5	2,958,860		0.0000	1.0000	96.17
23.5	2,647,763	13,660	0.0052	0.9948	96.17
24.5	2,403,122		0.0000	1.0000	95.68
25.5	2,282,796	22,099	0.0097	0.9903	95.68
26.5	2,236,560		0.0000	1.0000	94.75
27.5	2,192,114	21,075	0.0096	0.9904	94.75
28.5	2,214,444	89,800	0.0406	0.9594	93.84
29.5	2,124,645	21,333	0.0100	0.9900	90.03
30.5	2,103,312	13,038	0.0062	0.9938	89.13
31.5	2,090,274	21,589	0.0103	0.9897	88.58
32.5	2,068,684		0.0000	1.0000	87.66
33.5	2,068,684	8,629	0.0042	0.9958	87.66
34.5	2,060,055		0.0000	1.0000	87.30
35.5	2,060,055		0.0000	1.0000	87.30
36.5	2,060,055		0.0000	1.0000	87.30
37.5	793,872		0.0000	1.0000	87.30
38.5	793,872		0.0000	1.0000	87.30

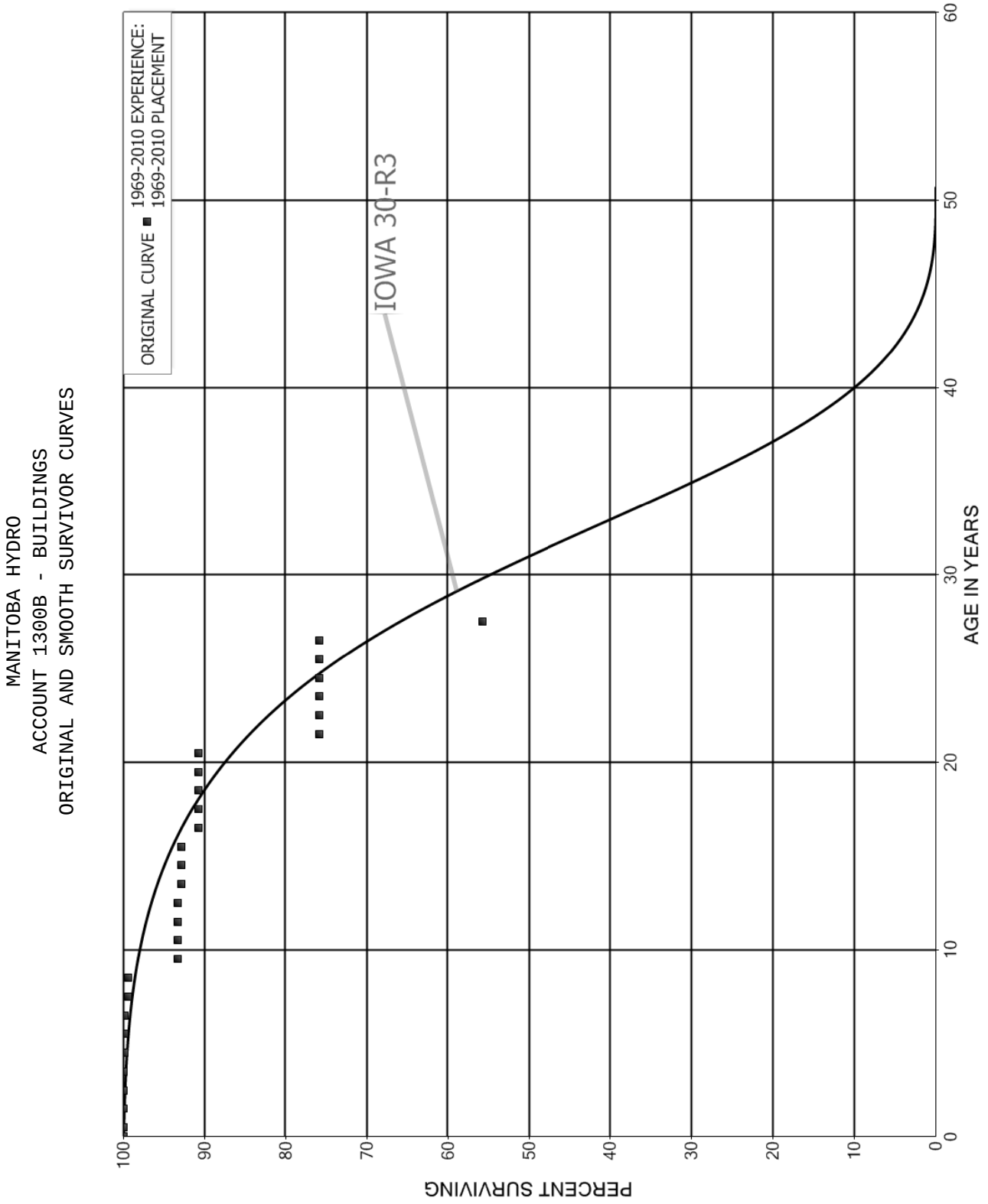
MANITOBA HYDRO

ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	769,124	6,270	0.0082	0.9918	87.30
40.5	762,855	30,675	0.0402	0.9598	86.59
41.5	732,179		0.0000	1.0000	83.10
42.5	732,179		0.0000	1.0000	83.10
43.5	732,179		0.0000	1.0000	83.10
44.5	409,891	86,788	0.2117	0.7883	83.10
45.5	323,103		0.0000	1.0000	65.51
46.5	323,103		0.0000	1.0000	65.51
47.5	323,103		0.0000	1.0000	65.51
48.5	323,103		0.0000	1.0000	65.51
49.5	323,103		0.0000	1.0000	65.51
50.5	323,103		0.0000	1.0000	65.51
51.5	323,103		0.0000	1.0000	65.51
52.5	323,103		0.0000	1.0000	65.51
53.5	323,103		0.0000	1.0000	65.51
54.5	320,603		0.0000	1.0000	65.51
55.5	320,603		0.0000	1.0000	65.51
56.5	320,603		0.0000	1.0000	65.51
57.5	320,603		0.0000	1.0000	65.51
58.5	320,603		0.0000	1.0000	65.51
59.5	320,603		0.0000	1.0000	65.51
60.5	320,603		0.0000	1.0000	65.51
61.5	320,603		0.0000	1.0000	65.51
62.5	320,603	45,430	0.1417	0.8583	65.51
63.5	275,173		0.0000	1.0000	56.23
64.5	275,173		0.0000	1.0000	56.23
65.5	275,173		0.0000	1.0000	56.23
66.5	275,173		0.0000	1.0000	56.23
67.5	275,173	79,771	0.2899	0.7101	56.23
68.5	195,402		0.0000	1.0000	39.93
69.5	195,402	88,819	0.4545	0.5455	39.93
70.5	106,582		0.0000	1.0000	21.78
71.5	106,582		0.0000	1.0000	21.78
72.5	106,582		0.0000	1.0000	21.78
73.5	106,582	43,405	0.4072	0.5928	21.78
74.5	63,177		0.0000	1.0000	12.91
75.5	63,177		0.0000	1.0000	12.91
76.5	63,177		0.0000	1.0000	12.91
77.5	63,177		0.0000	1.0000	12.91
78.5					12.91


MANITOBA HYDRO
ACCOUNT 1300B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1969-2010 EXPERIENCE:
1969-2010 PLACEMENT
IOWA 30-R3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60

MANITOBA HYDRO

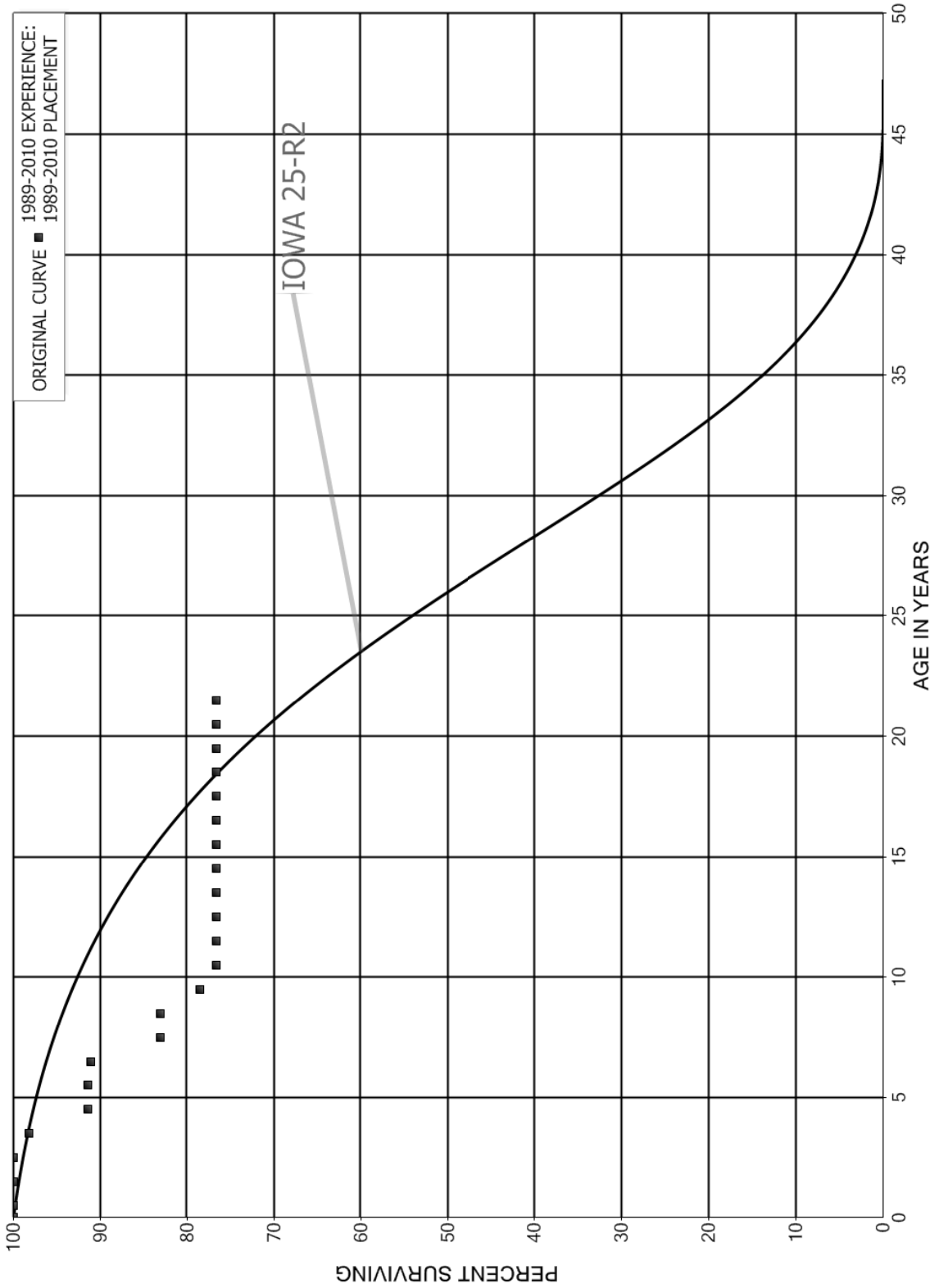
ACCOUNT 1300B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-2010 EXPERIENCE BAND 1969-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,583,878	6,187	0.0006	0.9994	100.00
0.5	9,572,965		0.0000	1.0000	99.94
1.5	9,158,746		0.0000	1.0000	99.94
2.5	8,838,340		0.0000	1.0000	99.94
3.5	8,837,489	6,018	0.0007	0.9993	99.94
4.5	8,924,618		0.0000	1.0000	99.87
5.5	8,807,177		0.0000	1.0000	99.87
6.5	6,607,729	27,966	0.0042	0.9958	99.87
7.5	6,579,763		0.0000	1.0000	99.44
8.5	6,579,763	405,204	0.0616	0.9384	99.44
9.5	5,858,745		0.0000	1.0000	93.32
10.5	2,959,957		0.0000	1.0000	93.32
11.5	2,959,957		0.0000	1.0000	93.32
12.5	2,296,581	11,963	0.0052	0.9948	93.32
13.5	694,911		0.0000	1.0000	92.83
14.5	694,911		0.0000	1.0000	92.83
15.5	694,911	15,439	0.0222	0.9778	92.83
16.5	622,424		0.0000	1.0000	90.77
17.5	622,424		0.0000	1.0000	90.77
18.5	622,424		0.0000	1.0000	90.77
19.5	312,471		0.0000	1.0000	90.77
20.5	312,471	51,461	0.1647	0.8353	90.77
21.5	261,010		0.0000	1.0000	75.82
22.5	261,010		0.0000	1.0000	75.82
23.5	252,203		0.0000	1.0000	75.82
24.5	252,203		0.0000	1.0000	75.82
25.5	252,203		0.0000	1.0000	75.82
26.5	86,796	22,979	0.2648	0.7352	75.82
27.5	63,817		0.0000	1.0000	55.75
28.5	53,817		0.0000	1.0000	55.75
29.5	53,817		0.0000	1.0000	55.75
30.5	53,817		0.0000	1.0000	55.75
31.5	53,817		0.0000	1.0000	55.75
32.5					55.75

MANITOBA HYDRO
ACCOUNT 1300N - ENGINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

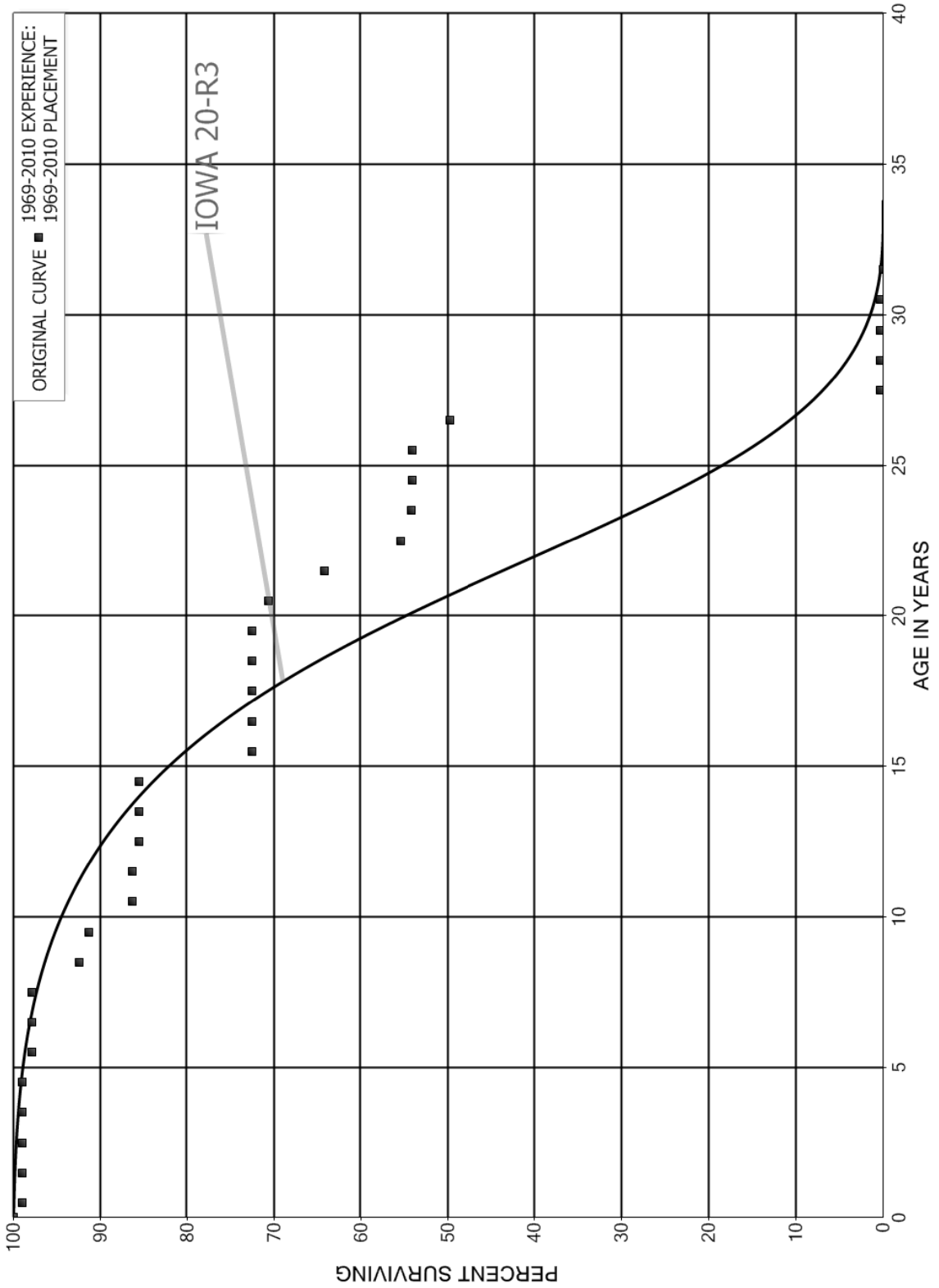
ACCOUNT 1300N - ENGINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1989-2010 EXPERIENCE BAND 1989-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	21,060,023	877	0.0000	1.0000	100.00
0.5	20,087,437		0.0000	1.0000	100.00
1.5	20,002,462		0.0000	1.0000	100.00
2.5	20,002,462	357,976	0.0179	0.9821	100.00
3.5	18,921,328	1,307,837	0.0691	0.9309	98.21
4.5	16,145,983		0.0000	1.0000	91.42
5.5	15,588,645	59,016	0.0038	0.9962	91.42
6.5	9,913,245	875,373	0.0883	0.9117	91.07
7.5	9,037,872		0.0000	1.0000	83.03
8.5	9,037,872	487,350	0.0539	0.9461	83.03
9.5	7,944,411	193,546	0.0244	0.9756	78.55
10.5	5,055,358		0.0000	1.0000	76.64
11.5	5,055,358		0.0000	1.0000	76.64
12.5	4,350,668		0.0000	1.0000	76.64
13.5	1,492,509		0.0000	1.0000	76.64
14.5	1,475,614		0.0000	1.0000	76.64
15.5	1,475,614		0.0000	1.0000	76.64
16.5	469,356		0.0000	1.0000	76.64
17.5	351,053		0.0000	1.0000	76.64
18.5	254,269		0.0000	1.0000	76.64
19.5	111,048		0.0000	1.0000	76.64
20.5	60,048		0.0000	1.0000	76.64
21.5					76.64

MANITOBA HYDRO
ACCOUNT 1300Q - ACCESSORY STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



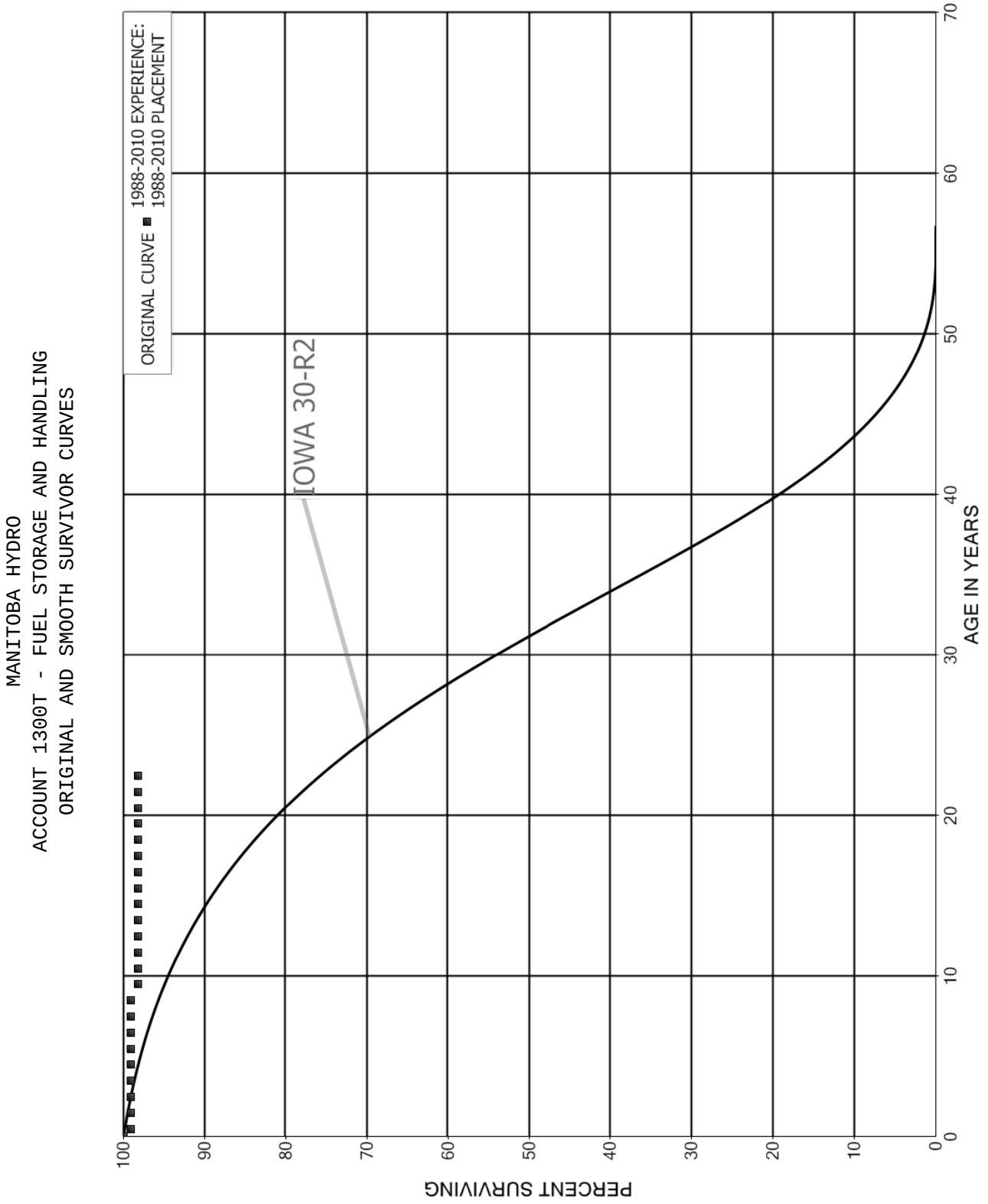
MANITOBA HYDRO

ACCOUNT 1300Q - ACCESSORY STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-2010 EXPERIENCE BAND 1969-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	20,671,711	220,998	0.0107	0.9893	100.00
0.5	20,389,293		0.0000	1.0000	98.93
1.5	20,511,933		0.0000	1.0000	98.93
2.5	13,434,722		0.0000	1.0000	98.93
3.5	13,388,883		0.0000	1.0000	98.93
4.5	13,266,250	147,056	0.0111	0.9889	98.93
5.5	13,043,459		0.0000	1.0000	97.83
6.5	8,961,148		0.0000	1.0000	97.83
7.5	8,933,438	493,353	0.0552	0.9448	97.83
8.5	7,783,674	99,124	0.0127	0.9873	92.43
9.5	6,756,811	366,421	0.0542	0.9458	91.25
10.5	4,347,888		0.0000	1.0000	86.31
11.5	4,347,259	39,448	0.0091	0.9909	86.31
12.5	3,504,963		0.0000	1.0000	85.52
13.5	1,526,698	1,162	0.0008	0.9992	85.52
14.5	1,519,129	229,472	0.1511	0.8489	85.46
15.5	1,220,072		0.0000	1.0000	72.55
16.5	439,405		0.0000	1.0000	72.55
17.5	365,774		0.0000	1.0000	72.55
18.5	365,774		0.0000	1.0000	72.55
19.5	365,657	9,808	0.0268	0.9732	72.55
20.5	355,849	32,170	0.0904	0.9096	70.60
21.5	323,679	44,556	0.1377	0.8623	64.22
22.5	279,123	5,924	0.0212	0.9788	55.38
23.5	272,640	736	0.0027	0.9973	54.20
24.5	271,904		0.0000	1.0000	54.06
25.5	255,999	20,443	0.0799	0.9201	54.06
26.5	9,791	9,734	0.9942	0.0058	49.74
27.5	57		0.0000	1.0000	0.29
28.5	57		0.0000	1.0000	0.29
29.5	57		0.0000	1.0000	0.29
30.5	57	57	1.0000		0.29
31.5					


MANITOBA HYDRO
ACCOUNT 1300T - FUEL STORAGE AND HANDLING
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1988-2010 EXPERIENCE: 1988-2010 PLACEMENT
IOWA 30-R2
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
AGE IN YEARS

MANITOBA HYDRO

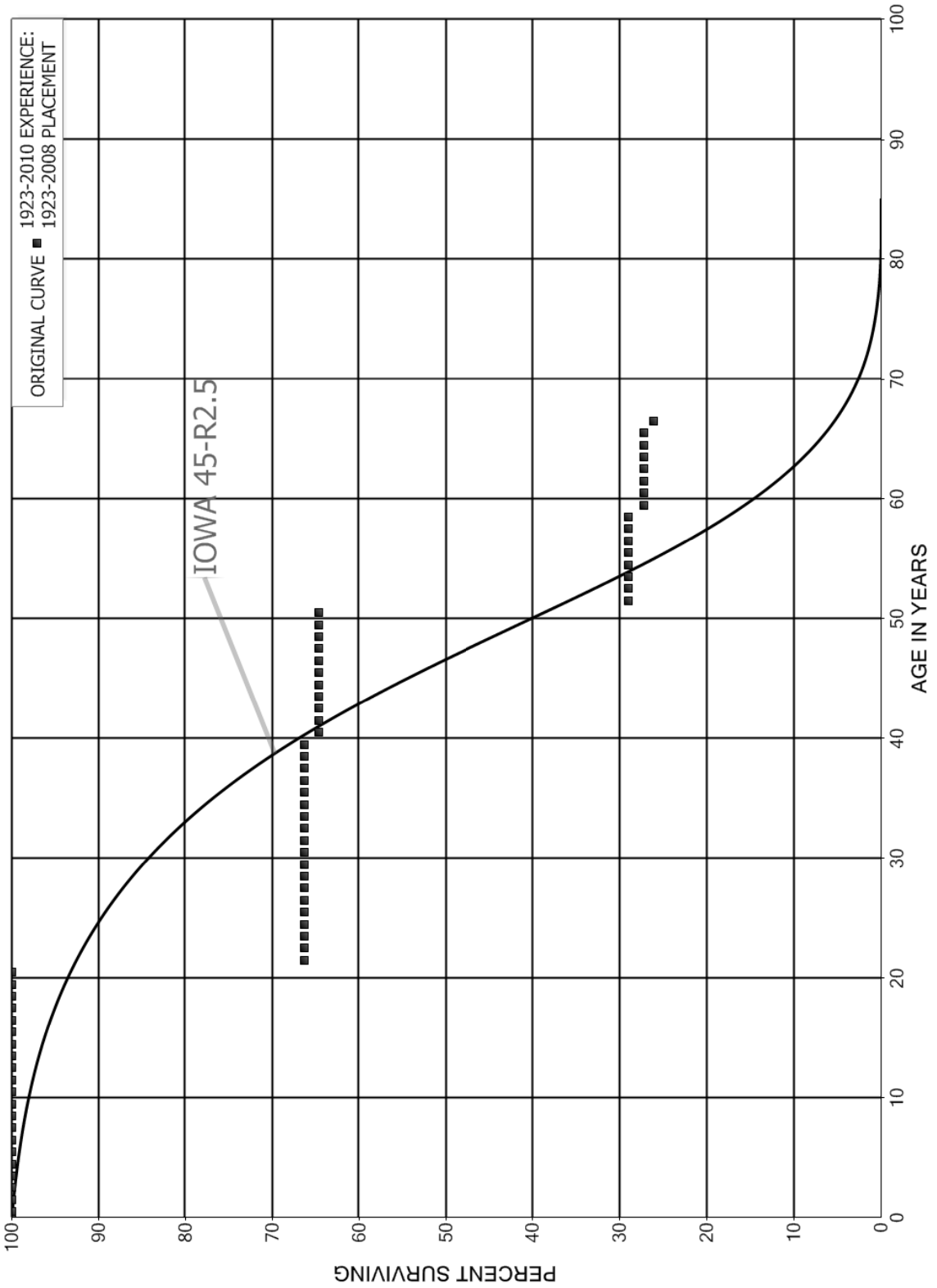
ACCOUNT 1300T - FUEL STORAGE AND HANDLING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1988-2010 EXPERIENCE BAND 1988-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	3,405,930	31,628	0.0093	0.9907	100.00
0.5	3,330,440		0.0000	1.0000	99.07
1.5	3,330,440		0.0000	1.0000	99.07
2.5	3,320,986		0.0000	1.0000	99.07
3.5	3,306,891		0.0000	1.0000	99.07
4.5	3,013,661		0.0000	1.0000	99.07
5.5	3,036,653		0.0000	1.0000	99.07
6.5	2,669,779		0.0000	1.0000	99.07
7.5	2,669,217		0.0000	1.0000	99.07
8.5	2,464,786	23,319	0.0095	0.9905	99.07
9.5	2,195,067		0.0000	1.0000	98.13
10.5	1,793,128		0.0000	1.0000	98.13
11.5	1,793,128		0.0000	1.0000	98.13
12.5	1,783,166		0.0000	1.0000	98.13
13.5	585,990		0.0000	1.0000	98.13
14.5	399,150		0.0000	1.0000	98.13
15.5	399,150		0.0000	1.0000	98.13
16.5	364,446		0.0000	1.0000	98.13
17.5	333,000		0.0000	1.0000	98.13
18.5	333,000		0.0000	1.0000	98.13
19.5	146,401		0.0000	1.0000	98.13
20.5	146,401		0.0000	1.0000	98.13
21.5	45,394		0.0000	1.0000	98.13
22.5					98.13

MANITOBA HYDRO
ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2008 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,214,395	1,449	0.0003	0.9997	100.00
0.5	4,212,946		0.0000	1.0000	99.97
1.5	4,212,946		0.0000	1.0000	99.97
2.5	3,761,975		0.0000	1.0000	99.97
3.5	3,525,385		0.0000	1.0000	99.97
4.5	3,505,941		0.0000	1.0000	99.97
5.5	3,505,941		0.0000	1.0000	99.97
6.5	3,505,941		0.0000	1.0000	99.97
7.5	3,487,836		0.0000	1.0000	99.97
8.5	3,450,133		0.0000	1.0000	99.97
9.5	3,287,169		0.0000	1.0000	99.97
10.5	3,050,719		0.0000	1.0000	99.97
11.5	1,703,056		0.0000	1.0000	99.97
12.5	491,868		0.0000	1.0000	99.97
13.5	491,868		0.0000	1.0000	99.97
14.5	491,868		0.0000	1.0000	99.97
15.5	491,868		0.0000	1.0000	99.97
16.5	491,868		0.0000	1.0000	99.97
17.5	362,885		0.0000	1.0000	99.97
18.5	362,885		0.0000	1.0000	99.97
19.5	362,885		0.0000	1.0000	99.97
20.5	362,885	122,342	0.3371	0.6629	99.97
21.5	219,959		0.0000	1.0000	66.26
22.5	219,959		0.0000	1.0000	66.26
23.5	219,959		0.0000	1.0000	66.26
24.5	219,959		0.0000	1.0000	66.26
25.5	219,959		0.0000	1.0000	66.26
26.5	219,959		0.0000	1.0000	66.26
27.5	219,959		0.0000	1.0000	66.26
28.5	219,959		0.0000	1.0000	66.26
29.5	219,959		0.0000	1.0000	66.26
30.5	219,959		0.0000	1.0000	66.26
31.5	169,463		0.0000	1.0000	66.26
32.5	169,463		0.0000	1.0000	66.26
33.5	169,463		0.0000	1.0000	66.26
34.5	169,463		0.0000	1.0000	66.26
35.5	169,463		0.0000	1.0000	66.26
36.5	169,463		0.0000	1.0000	66.26
37.5	162,692		0.0000	1.0000	66.26
38.5	162,692		0.0000	1.0000	66.26

MANITOBA HYDRO

ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2008 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	162,692	4,066	0.0250	0.9750	66.26
40.5	158,625		0.0000	1.0000	64.61
41.5	149,818		0.0000	1.0000	64.61
42.5	149,818		0.0000	1.0000	64.61
43.5	149,818		0.0000	1.0000	64.61
44.5	69,251		0.0000	1.0000	64.61
45.5	69,251		0.0000	1.0000	64.61
46.5	69,251		0.0000	1.0000	64.61
47.5	69,251		0.0000	1.0000	64.61
48.5	69,251		0.0000	1.0000	64.61
49.5	69,251		0.0000	1.0000	64.61
50.5	69,251	38,172	0.5512	0.4488	64.61
51.5	31,079		0.0000	1.0000	29.00
52.5	31,079		0.0000	1.0000	29.00
53.5	31,079		0.0000	1.0000	29.00
54.5	31,079		0.0000	1.0000	29.00
55.5	31,079		0.0000	1.0000	29.00
56.5	31,079		0.0000	1.0000	29.00
57.5	31,079		0.0000	1.0000	29.00
58.5	31,079	1,948	0.0627	0.9373	29.00
59.5	29,132		0.0000	1.0000	27.18
60.5	29,132		0.0000	1.0000	27.18
61.5	16,509		0.0000	1.0000	27.18
62.5	16,509		0.0000	1.0000	27.18
63.5	16,509		0.0000	1.0000	27.18
64.5	16,509		0.0000	1.0000	27.18
65.5	16,509	700	0.0424	0.9576	27.18
66.5	15,809		0.0000	1.0000	26.03
67.5	15,809		0.0000	1.0000	26.03
68.5	15,809		0.0000	1.0000	26.03
69.5	15,809		0.0000	1.0000	26.03
70.5	15,809		0.0000	1.0000	26.03
71.5	15,809		0.0000	1.0000	26.03
72.5	15,809		0.0000	1.0000	26.03
73.5	15,809		0.0000	1.0000	26.03
74.5	15,809		0.0000	1.0000	26.03
75.5	15,809		0.0000	1.0000	26.03
76.5	15,809		0.0000	1.0000	26.03
77.5	15,809		0.0000	1.0000	26.03
78.5	15,809		0.0000	1.0000	26.03

MANITOBA HYDRO

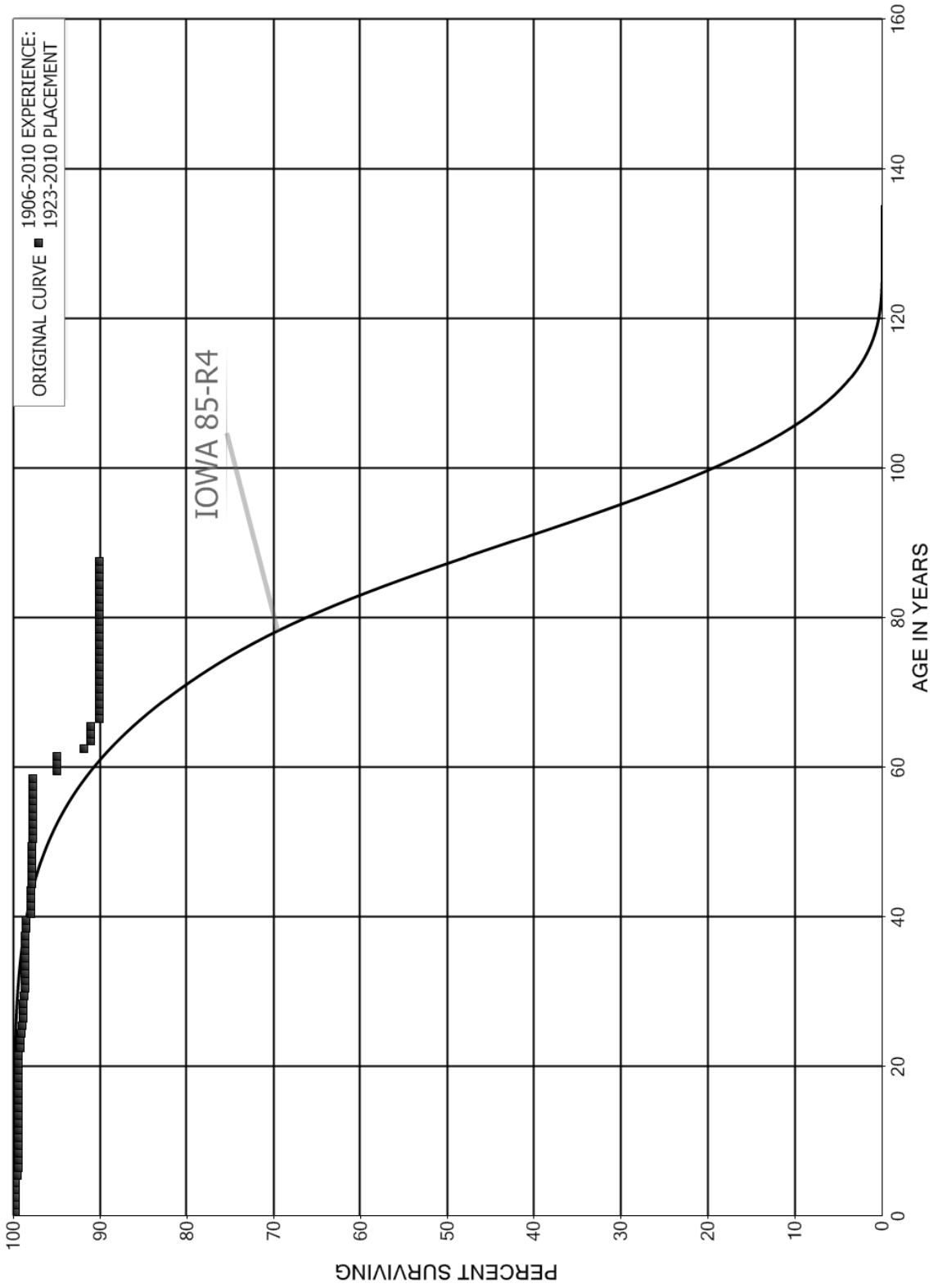
ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2008 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	15,809		0.0000	1.0000	26.03
80.5	4,982		0.0000	1.0000	26.03
81.5	4,982		0.0000	1.0000	26.03
82.5	4,982		0.0000	1.0000	26.03
83.5	4,982		0.0000	1.0000	26.03
84.5	4,982		0.0000	1.0000	26.03
85.5	4,982		0.0000	1.0000	26.03
86.5	4,982		0.0000	1.0000	26.03
87.5					26.03

MANITOBA HYDRO
ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1906-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	343,221,273	790,419	0.0023	0.9977	100.00
0.5	341,263,398	97,340	0.0003	0.9997	99.77
1.5	340,028,377		0.0000	1.0000	99.74
2.5	334,825,846	23,659	0.0001	0.9999	99.74
3.5	328,454,824	633	0.0000	1.0000	99.73
4.5	325,322,955	792,488	0.0024	0.9976	99.73
5.5	323,308,335	175,753	0.0005	0.9995	99.49
6.5	321,664,814	1,784	0.0000	1.0000	99.44
7.5	311,759,023		0.0000	1.0000	99.44
8.5	308,300,878	7,135	0.0000	1.0000	99.44
9.5	286,912,989	800	0.0000	1.0000	99.43
10.5	283,661,591	35	0.0000	1.0000	99.43
11.5	254,545,487		0.0000	1.0000	99.43
12.5	213,536,288	7,526	0.0000	1.0000	99.43
13.5	193,910,406		0.0000	1.0000	99.43
14.5	193,170,631		0.0000	1.0000	99.43
15.5	188,959,516	13,873	0.0001	0.9999	99.43
16.5	187,948,087		0.0000	1.0000	99.42
17.5	187,410,338		0.0000	1.0000	99.42
18.5	184,464,992		0.0000	1.0000	99.42
19.5	183,022,654	71,732	0.0004	0.9996	99.42
20.5	180,460,002	783	0.0000	1.0000	99.38
21.5	160,035,959	283,982	0.0018	0.9982	99.38
22.5	159,361,386	127,407	0.0008	0.9992	99.21
23.5	158,908,885	68,000	0.0004	0.9996	99.13
24.5	158,534,829	157,879	0.0010	0.9990	99.09
25.5	141,971,893	185,278	0.0013	0.9987	98.99
26.5	141,023,871	2,392	0.0000	1.0000	98.86
27.5	141,021,479		0.0000	1.0000	98.86
28.5	55,226,157	91,411	0.0017	0.9983	98.86
29.5	54,909,666	25,130	0.0005	0.9995	98.69
30.5	45,455,622		0.0000	1.0000	98.65
31.5	44,322,516	2,483	0.0001	0.9999	98.65
32.5	41,177,892		0.0000	1.0000	98.64
33.5	37,025,046		0.0000	1.0000	98.64
34.5	35,683,656		0.0000	1.0000	98.64
35.5	34,836,510		0.0000	1.0000	98.64
36.5	31,835,413	879	0.0000	1.0000	98.64
37.5	29,855,522	28,174	0.0009	0.9991	98.64
38.5	24,885,015		0.0000	1.0000	98.55

MANITOBA HYDRO

ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1906-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	24,551,667	152,354	0.0062	0.9938	98.55
40.5	22,853,880		0.0000	1.0000	97.93
41.5	18,935,574		0.0000	1.0000	97.93
42.5	16,073,564		0.0000	1.0000	97.93
43.5	9,224,201	11,480	0.0012	0.9988	97.93
44.5	9,072,577		0.0000	1.0000	97.81
45.5	7,712,334		0.0000	1.0000	97.81
46.5	7,689,357		0.0000	1.0000	97.81
47.5	7,555,915		0.0000	1.0000	97.81
48.5	5,602,785		0.0000	1.0000	97.81
49.5	5,468,225	2,101	0.0004	0.9996	97.81
50.5	5,451,912		0.0000	1.0000	97.77
51.5	5,226,073		0.0000	1.0000	97.77
52.5	5,132,409		0.0000	1.0000	97.77
53.5	5,132,409	1,064	0.0002	0.9998	97.77
54.5	4,206,828		0.0000	1.0000	97.75
55.5	4,204,286		0.0000	1.0000	97.75
56.5	4,203,945		0.0000	1.0000	97.75
57.5	4,191,699	1,284	0.0003	0.9997	97.75
58.5	3,433,451	96,590	0.0281	0.9719	97.72
59.5	3,336,861		0.0000	1.0000	94.98
60.5	2,901,225		0.0000	1.0000	94.98
61.5	2,512,454	83,486	0.0332	0.9668	94.98
62.5	2,427,520	20,976	0.0086	0.9914	91.82
63.5	2,406,544		0.0000	1.0000	91.03
64.5	2,405,615		0.0000	1.0000	91.03
65.5	2,405,615	25,079	0.0104	0.9896	91.03
66.5	2,380,536		0.0000	1.0000	90.08
67.5	2,380,536		0.0000	1.0000	90.08
68.5	2,380,536		0.0000	1.0000	90.08
69.5	2,380,536		0.0000	1.0000	90.08
70.5	2,380,536		0.0000	1.0000	90.08
71.5	2,380,424		0.0000	1.0000	90.08
72.5	2,380,424		0.0000	1.0000	90.08
73.5	2,380,424		0.0000	1.0000	90.08
74.5	2,380,424		0.0000	1.0000	90.08
75.5	2,380,424		0.0000	1.0000	90.08
76.5	2,380,424		0.0000	1.0000	90.08
77.5	2,380,424		0.0000	1.0000	90.08
78.5	2,380,424		0.0000	1.0000	90.08

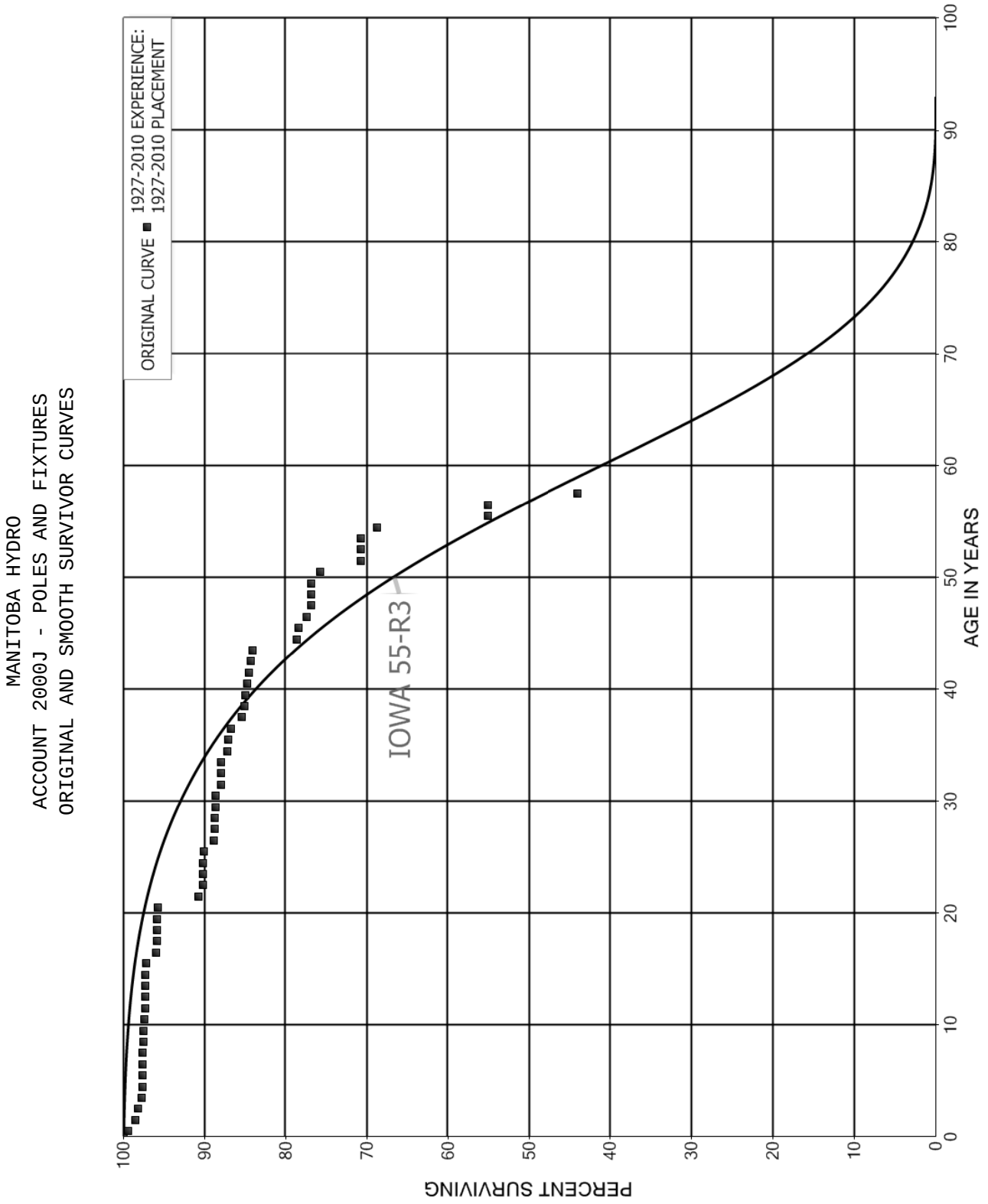
MANITOBA HYDRO

ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1906-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	1,380,424		0.0000	1.0000	90.08
80.5	861,166		0.0000	1.0000	90.08
81.5	861,166		0.0000	1.0000	90.08
82.5	807,290		0.0000	1.0000	90.08
83.5	185,908		0.0000	1.0000	90.08
84.5	67,433		0.0000	1.0000	90.08
85.5	67,433		0.0000	1.0000	90.08
86.5	67,433		0.0000	1.0000	90.08
87.5					90.08


MANITOBA HYDRO
ACCOUNT 2000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1927-2010 EXPERIENCE: 1927-2010 PLACEMENT
IOWA 55-R3
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
80
90
100

MANITOBA HYDRO

ACCOUNT 2000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1927-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	111,668,368	643,616	0.0058	0.9942	100.00
0.5	106,229,173	1,004,758	0.0095	0.9905	99.42
1.5	104,087,735	276,957	0.0027	0.9973	98.48
2.5	98,972,816	534,142	0.0054	0.9946	98.22
3.5	88,271,155	36,231	0.0004	0.9996	97.69
4.5	86,199,593	46,189	0.0005	0.9995	97.65
5.5	83,825,180	16,221	0.0002	0.9998	97.60
6.5	82,763,572	12,261	0.0001	0.9999	97.58
7.5	74,836,796	11,785	0.0002	0.9998	97.57
8.5	71,825,670	64,424	0.0009	0.9991	97.55
9.5	69,191,979	50,160	0.0007	0.9993	97.46
10.5	68,691,579	42,292	0.0006	0.9994	97.39
11.5	66,138,851	4,900	0.0001	0.9999	97.33
12.5	58,611,602	22,960	0.0004	0.9996	97.32
13.5	51,901,235	19,187	0.0004	0.9996	97.29
14.5	51,693,357	23,209	0.0004	0.9996	97.25
15.5	47,662,307	630,178	0.0132	0.9868	97.21
16.5	46,446,697	27,087	0.0006	0.9994	95.92
17.5	42,393,943	1,223	0.0000	1.0000	95.87
18.5	36,429,262	1,960	0.0001	0.9999	95.86
19.5	34,793,312	34,568	0.0010	0.9990	95.86
20.5	28,933,082	1,509,587	0.0522	0.9478	95.76
21.5	27,074,219	161,801	0.0060	0.9940	90.77
22.5	26,405,690	4,728	0.0002	0.9998	90.22
23.5	26,328,120	8,924	0.0003	0.9997	90.21
24.5	26,302,393	29,303	0.0011	0.9989	90.18
25.5	22,859,061	312,066	0.0137	0.9863	90.08
26.5	22,382,721	31,466	0.0014	0.9986	88.85
27.5	22,271,752	1,210	0.0001	0.9999	88.72
28.5	20,632,351	14,210	0.0007	0.9993	88.72
29.5	20,495,895	21,308	0.0010	0.9990	88.66
30.5	16,810,912	105,728	0.0063	0.9937	88.56
31.5	16,640,757	10,877	0.0007	0.9993	88.01
32.5	14,198,036	4,082	0.0003	0.9997	87.95
33.5	14,139,071	127,017	0.0090	0.9910	87.92
34.5	11,962,774	10,913	0.0009	0.9991	87.13
35.5	9,185,460	39,914	0.0043	0.9957	87.05
36.5	8,757,253	134,210	0.0153	0.9847	86.68
37.5	8,025,254	27,407	0.0034	0.9966	85.35
38.5	6,066,514	6,927	0.0011	0.9989	85.06

MANITOBA HYDRO

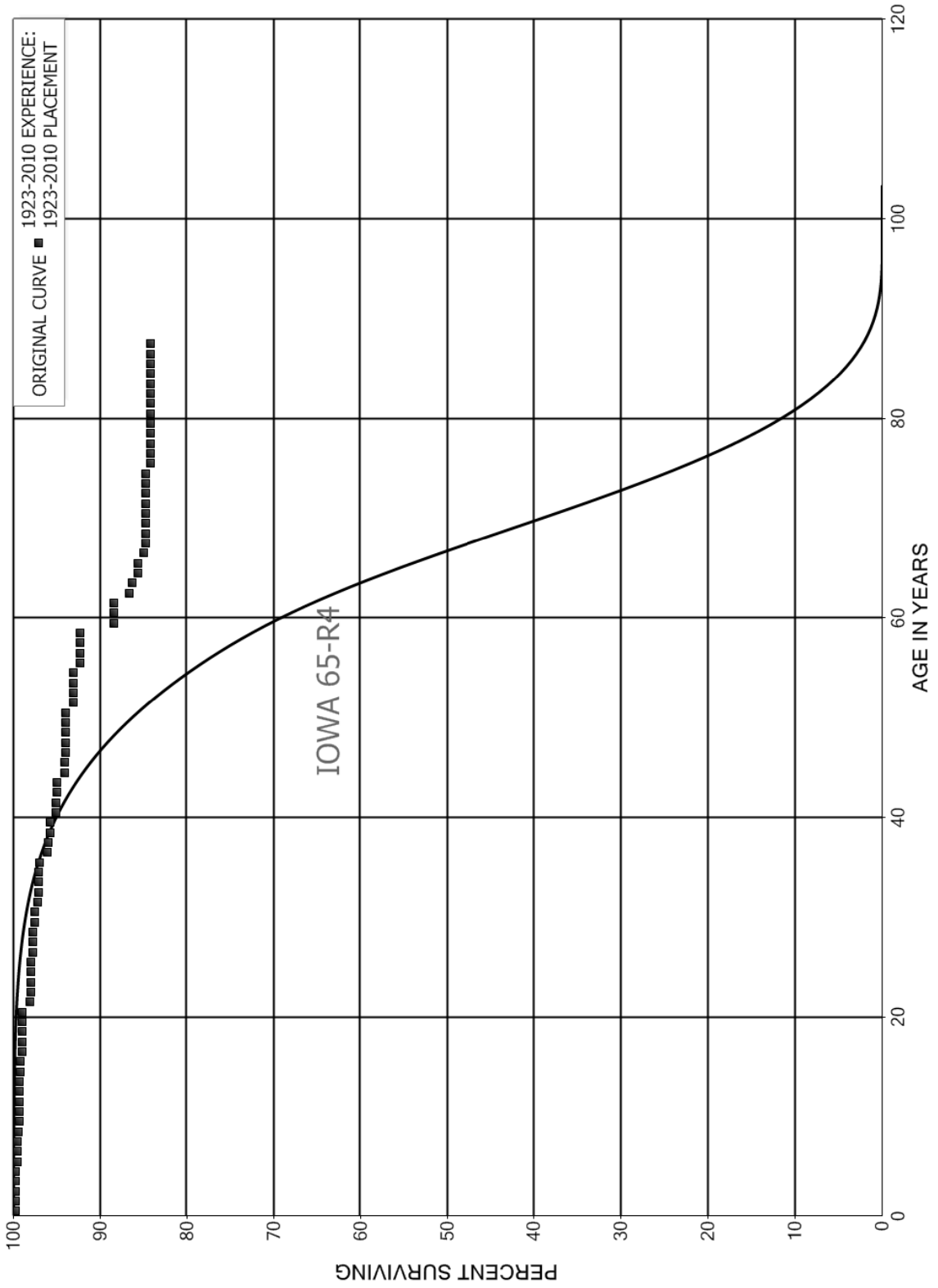
ACCOUNT 2000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1927-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,101,535	13,076	0.0032	0.9968	84.96
40.5	3,687,799	8,236	0.0022	0.9978	84.69
41.5	3,170,417	9,618	0.0030	0.9970	84.50
42.5	2,878,485	6,228	0.0022	0.9978	84.24
43.5	2,053,790	133,128	0.0648	0.9352	84.06
44.5	1,412,794	3,428	0.0024	0.9976	78.61
45.5	1,404,299	18,579	0.0132	0.9868	78.42
46.5	1,385,519	9,159	0.0066	0.9934	77.38
47.5	1,340,484	887	0.0007	0.9993	76.87
48.5	1,331,640	86	0.0001	0.9999	76.82
49.5	733,964	10,497	0.0143	0.9857	76.82
50.5	721,864	47,796	0.0662	0.9338	75.72
51.5	638,573		0.0000	1.0000	70.70
52.5	638,571		0.0000	1.0000	70.70
53.5	556,958	15,619	0.0280	0.9720	70.70
54.5	438,220	87,205	0.1990	0.8010	68.72
55.5	328,315		0.0000	1.0000	55.05
56.5	281,387	56,990	0.2025	0.7975	55.05
57.5	224,397		0.0000	1.0000	43.90
58.5	214,901	83,002	0.3862	0.6138	43.90
59.5	127,114	121,766	0.9579	0.0421	26.94
60.5					1.13

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	310,397,555	770,980	0.0025	0.9975	100.00
0.5	307,303,595	52,683	0.0002	0.9998	99.75
1.5	305,229,108	20,103	0.0001	0.9999	99.73
2.5	300,792,995	92,075	0.0003	0.9997	99.73
3.5	284,255,781	3,116	0.0000	1.0000	99.70
4.5	281,979,747	535,729	0.0019	0.9981	99.70
5.5	275,231,475	14,647	0.0001	0.9999	99.51
6.5	268,403,518	22,851	0.0001	0.9999	99.50
7.5	254,993,658	155,590	0.0006	0.9994	99.49
8.5	240,977,839	237,587	0.0010	0.9990	99.43
9.5	229,383,648	64,635	0.0003	0.9997	99.33
10.5	225,523,280	10,661	0.0000	1.0000	99.31
11.5	208,929,294	9,064	0.0000	1.0000	99.30
12.5	194,056,844	130,555	0.0007	0.9993	99.30
13.5	175,261,319	6,345	0.0000	1.0000	99.23
14.5	174,809,116	11,385	0.0001	0.9999	99.23
15.5	170,428,236	363,049	0.0021	0.9979	99.22
16.5	168,196,508	5,714	0.0000	1.0000	99.01
17.5	165,728,232	517	0.0000	1.0000	99.01
18.5	161,933,991	38,713	0.0002	0.9998	99.01
19.5	159,277,614	17,720	0.0001	0.9999	98.98
20.5	149,865,868	1,428,380	0.0095	0.9905	98.97
21.5	141,881,506	74,998	0.0005	0.9995	98.03
22.5	141,384,559	3,660	0.0000	1.0000	97.98
23.5	141,367,867	14,783	0.0001	0.9999	97.97
24.5	141,333,278	964	0.0000	1.0000	97.96
25.5	119,067,807	307,764	0.0026	0.9974	97.96
26.5	118,397,803	29,453	0.0002	0.9998	97.71
27.5	118,283,503	4,121	0.0000	1.0000	97.68
28.5	60,426,258	78,173	0.0013	0.9987	97.68
29.5	59,911,466	27,968	0.0005	0.9995	97.55
30.5	53,075,868	198,549	0.0037	0.9963	97.51
31.5	52,270,478	36,235	0.0007	0.9993	97.14
32.5	49,599,922	4,282	0.0001	0.9999	97.08
33.5	44,325,248	22,833	0.0005	0.9995	97.07
34.5	41,268,688	33,318	0.0008	0.9992	97.02
35.5	37,681,208	331,062	0.0088	0.9912	96.94
36.5	34,152,050	59,358	0.0017	0.9983	96.09
37.5	32,230,781	53,918	0.0017	0.9983	95.92
38.5	28,637,167	164	0.0000	1.0000	95.76

MANITOBA HYDRO

ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	26,870,875	197,813	0.0074	0.9926	95.76
40.5	25,475,827	43	0.0000	1.0000	95.06
41.5	23,620,222	16,317	0.0007	0.9993	95.06
42.5	22,854,261	44	0.0000	1.0000	94.99
43.5	12,370,659	124,453	0.0101	0.9899	94.99
44.5	11,668,702	2,272	0.0002	0.9998	94.03
45.5	10,340,557	1,925	0.0002	0.9998	94.02
46.5	10,261,870		0.0000	1.0000	94.00
47.5	10,151,010		0.0000	1.0000	94.00
48.5	7,911,460	1,242	0.0002	0.9998	94.00
49.5	6,638,287	187	0.0000	1.0000	93.98
50.5	6,628,995	67,301	0.0102	0.9898	93.98
51.5	6,515,763		0.0000	1.0000	93.03
52.5	6,504,205		0.0000	1.0000	93.03
53.5	6,260,060		0.0000	1.0000	93.03
54.5	5,242,360	40,592	0.0077	0.9923	93.03
55.5	4,987,541		0.0000	1.0000	92.31
56.5	4,987,541		0.0000	1.0000	92.31
57.5	4,802,836	82	0.0000	1.0000	92.31
58.5	4,178,931	176,478	0.0422	0.9578	92.31
59.5	3,591,350		0.0000	1.0000	88.41
60.5	3,074,940		0.0000	1.0000	88.41
61.5	2,635,288	51,893	0.0197	0.9803	88.41
62.5	2,582,799	11,421	0.0044	0.9956	86.67
63.5	2,571,378	20,820	0.0081	0.9919	86.28
64.5	2,549,505		0.0000	1.0000	85.58
65.5	2,549,505	18,277	0.0072	0.9928	85.58
66.5	2,512,952	6,865	0.0027	0.9973	84.97
67.5	2,506,086		0.0000	1.0000	84.74
68.5	2,506,086		0.0000	1.0000	84.74
69.5	2,506,086		0.0000	1.0000	84.74
70.5	2,506,086		0.0000	1.0000	84.74
71.5	2,505,640		0.0000	1.0000	84.74
72.5	2,505,640		0.0000	1.0000	84.74
73.5	2,505,640		0.0000	1.0000	84.74
74.5	2,505,640	15,280	0.0061	0.9939	84.74
75.5	2,490,360		0.0000	1.0000	84.22
76.5	2,490,360		0.0000	1.0000	84.22
77.5	2,490,360		0.0000	1.0000	84.22
78.5	2,490,360		0.0000	1.0000	84.22

MANITOBA HYDRO

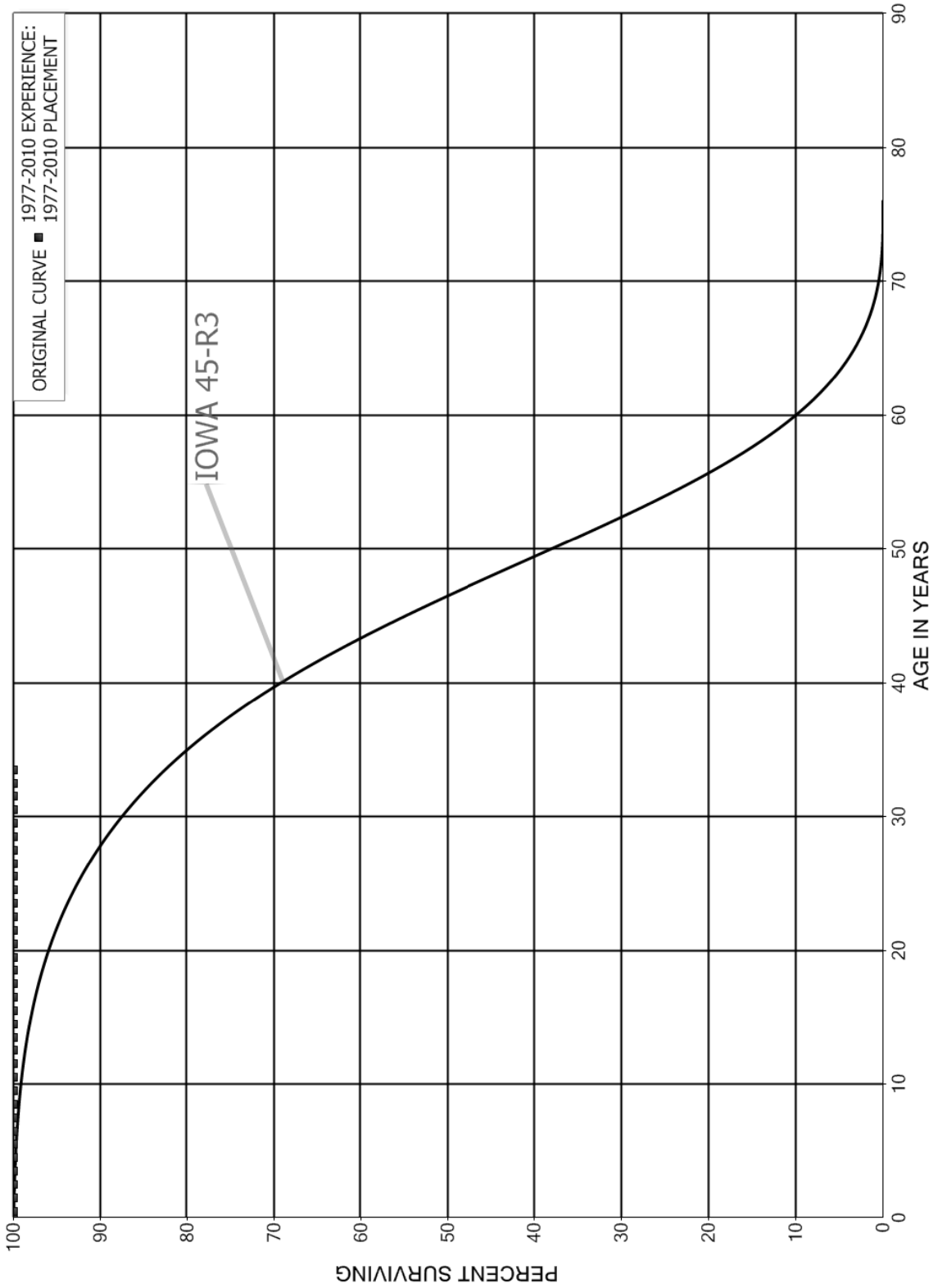
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1923-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	990,360		0.0000	1.0000	84.22
80.5	468,297	119	0.0003	0.9997	84.22
81.5	468,177		0.0000	1.0000	84.20
82.5	428,814		0.0000	1.0000	84.20
83.5	113,957		0.0000	1.0000	84.20
84.5	51,029		0.0000	1.0000	84.20
85.5	51,029		0.0000	1.0000	84.20
86.5	51,029		0.0000	1.0000	84.20
87.5					84.20

MANITOBA HYDRO
ACCOUNT 2000M - UNDERGROUND CABLE AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

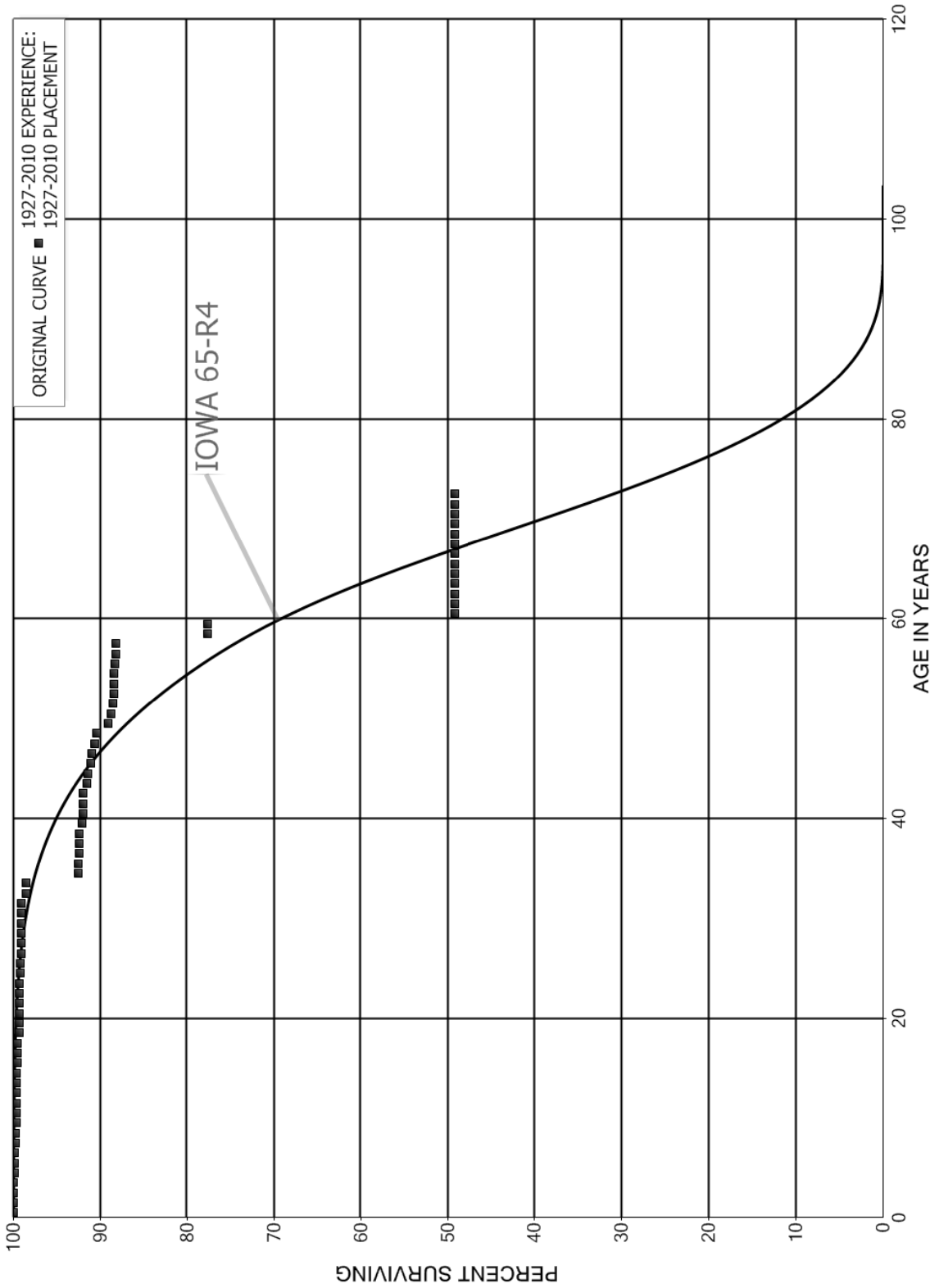
ACCOUNT 2000M - UNDERGROUND CABLE AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1977-2010 EXPERIENCE BAND 1977-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,167,855	93	0.0001	0.9999	100.00
0.5	1,163,975		0.0000	1.0000	99.99
1.5	1,163,975		0.0000	1.0000	99.99
2.5	1,163,975		0.0000	1.0000	99.99
3.5	1,163,975		0.0000	1.0000	99.99
4.5	1,163,975		0.0000	1.0000	99.99
5.5	987,317		0.0000	1.0000	99.99
6.5	987,317		0.0000	1.0000	99.99
7.5	987,317		0.0000	1.0000	99.99
8.5	986,702		0.0000	1.0000	99.99
9.5	960,628		0.0000	1.0000	99.99
10.5	960,628		0.0000	1.0000	99.99
11.5	960,628		0.0000	1.0000	99.99
12.5	960,628		0.0000	1.0000	99.99
13.5	960,628		0.0000	1.0000	99.99
14.5	960,628		0.0000	1.0000	99.99
15.5	960,628	0	0.0000	1.0000	99.99
16.5	960,628		0.0000	1.0000	99.99
17.5	960,628		0.0000	1.0000	99.99
18.5	960,628		0.0000	1.0000	99.99
19.5	960,628		0.0000	1.0000	99.99
20.5	960,628		0.0000	1.0000	99.99
21.5	960,628		0.0000	1.0000	99.99
22.5	960,535		0.0000	1.0000	99.99
23.5	960,535		0.0000	1.0000	99.99
24.5	960,535		0.0000	1.0000	99.99
25.5	954,613		0.0000	1.0000	99.99
26.5	954,613		0.0000	1.0000	99.99
27.5	954,613		0.0000	1.0000	99.99
28.5	954,613		0.0000	1.0000	99.99
29.5	414,801		0.0000	1.0000	99.99
30.5	414,801		0.0000	1.0000	99.99
31.5	414,801		0.0000	1.0000	99.99
32.5	414,801		0.0000	1.0000	99.99
33.5					99.99

MANITOBA HYDRO
ACCOUNT 3000B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1927-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	56,542,870	5,625	0.0001	0.9999	100.00
0.5	54,029,821	4,661	0.0001	0.9999	99.99
1.5	52,142,704	5,088	0.0001	0.9999	99.98
2.5	49,557,285	10,440	0.0002	0.9998	99.97
3.5	48,132,226	45,648	0.0009	0.9991	99.95
4.5	46,458,839	13,619	0.0003	0.9997	99.86
5.5	44,728,018	19,900	0.0004	0.9996	99.83
6.5	42,378,937	23,102	0.0005	0.9995	99.78
7.5	41,401,994	10,449	0.0003	0.9997	99.73
8.5	37,856,090	12,970	0.0003	0.9997	99.70
9.5	37,596,460	17,926	0.0005	0.9995	99.67
10.5	78,206,053	4,852	0.0001	0.9999	99.62
11.5	76,093,011	18,434	0.0002	0.9998	99.61
12.5	85,254,748	11,935	0.0001	0.9999	99.59
13.5	82,909,127	3,956	0.0000	1.0000	99.58
14.5	82,452,350	22,845	0.0003	0.9997	99.57
15.5	82,234,768	7,044	0.0001	0.9999	99.54
16.5	81,700,125	1,017	0.0000	1.0000	99.54
17.5	80,555,450	185,940	0.0023	0.9977	99.53
18.5	66,232,273	1,487	0.0000	1.0000	99.30
19.5	61,843,653	4,061	0.0001	0.9999	99.30
20.5	60,323,238	6,698	0.0001	0.9999	99.30
21.5	59,549,371	19,037	0.0003	0.9997	99.29
22.5	59,242,971	1,341	0.0000	1.0000	99.25
23.5	59,106,428	51,838	0.0009	0.9991	99.25
24.5	58,982,435	1,910	0.0000	1.0000	99.16
25.5	58,599,607	39,649	0.0007	0.9993	99.16
26.5	58,352,645	27,274	0.0005	0.9995	99.09
27.5	58,157,754	10,789	0.0002	0.9998	99.05
28.5	57,810,086	5,943	0.0001	0.9999	99.03
29.5	57,453,049	2,223	0.0000	1.0000	99.02
30.5	57,186,882	175	0.0000	1.0000	99.01
31.5	55,746,830	271,430	0.0049	0.9951	99.01
32.5	14,791,365	2,411	0.0002	0.9998	98.53
33.5	14,551,378	889,817	0.0611	0.9389	98.52
34.5	4,242,540	155	0.0000	1.0000	92.49
35.5	3,995,087	1,699	0.0004	0.9996	92.49
36.5	3,956,528	1,478	0.0004	0.9996	92.45
37.5	3,871,559	1,248	0.0003	0.9997	92.41
38.5	3,693,855	14,941	0.0040	0.9960	92.39

MANITOBA HYDRO

ACCOUNT 3000B - BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1927-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,429,628	378	0.0001	0.9999	92.01
40.5	3,418,254	1,807	0.0005	0.9995	92.00
41.5	3,366,918	2,203	0.0007	0.9993	91.95
42.5	2,939,483	13,269	0.0045	0.9955	91.89
43.5	1,987,986	2,150	0.0011	0.9989	91.48
44.5	1,562,969	6,132	0.0039	0.9961	91.38
45.5	1,518,877	892	0.0006	0.9994	91.02
46.5	1,299,226	5,610	0.0043	0.9957	90.97
47.5	1,067,884	2,012	0.0019	0.9981	90.57
48.5	771,258	11,843	0.0154	0.9846	90.40
49.5	4,350,926	14,610	0.0034	0.9966	89.02
50.5	4,299,139	10,395	0.0024	0.9976	88.72
51.5	4,104,760	3,712	0.0009	0.9991	88.50
52.5	4,063,123	3,324	0.0008	0.9992	88.42
53.5	3,993,108	70	0.0000	1.0000	88.35
54.5	3,797,388	2,588	0.0007	0.9993	88.35
55.5	3,734,673	2,864	0.0008	0.9992	88.29
56.5	3,731,630		0.0000	1.0000	88.22
57.5	94,197	11,292	0.1199	0.8801	88.22
58.5	55,793		0.0000	1.0000	77.64
59.5	54,933	20,122	0.3663	0.6337	77.64
60.5	30,679		0.0000	1.0000	49.20
61.5	30,679		0.0000	1.0000	49.20
62.5	30,679		0.0000	1.0000	49.20
63.5	30,679		0.0000	1.0000	49.20
64.5	30,679		0.0000	1.0000	49.20
65.5	30,679		0.0000	1.0000	49.20
66.5	30,679		0.0000	1.0000	49.20
67.5	30,679		0.0000	1.0000	49.20
68.5	30,679		0.0000	1.0000	49.20
69.5	30,679		0.0000	1.0000	49.20
70.5	30,679		0.0000	1.0000	49.20
71.5	30,679		0.0000	1.0000	49.20
72.5	30,679		0.0000	1.0000	49.20
73.5	30,679		0.0000	1.0000	49.20
74.5	30,679		0.0000	1.0000	49.20
75.5	30,679		0.0000	1.0000	49.20
76.5	30,679		0.0000	1.0000	49.20
77.5	30,679		0.0000	1.0000	49.20
78.5	30,679		0.0000	1.0000	49.20

MANITOBA HYDRO

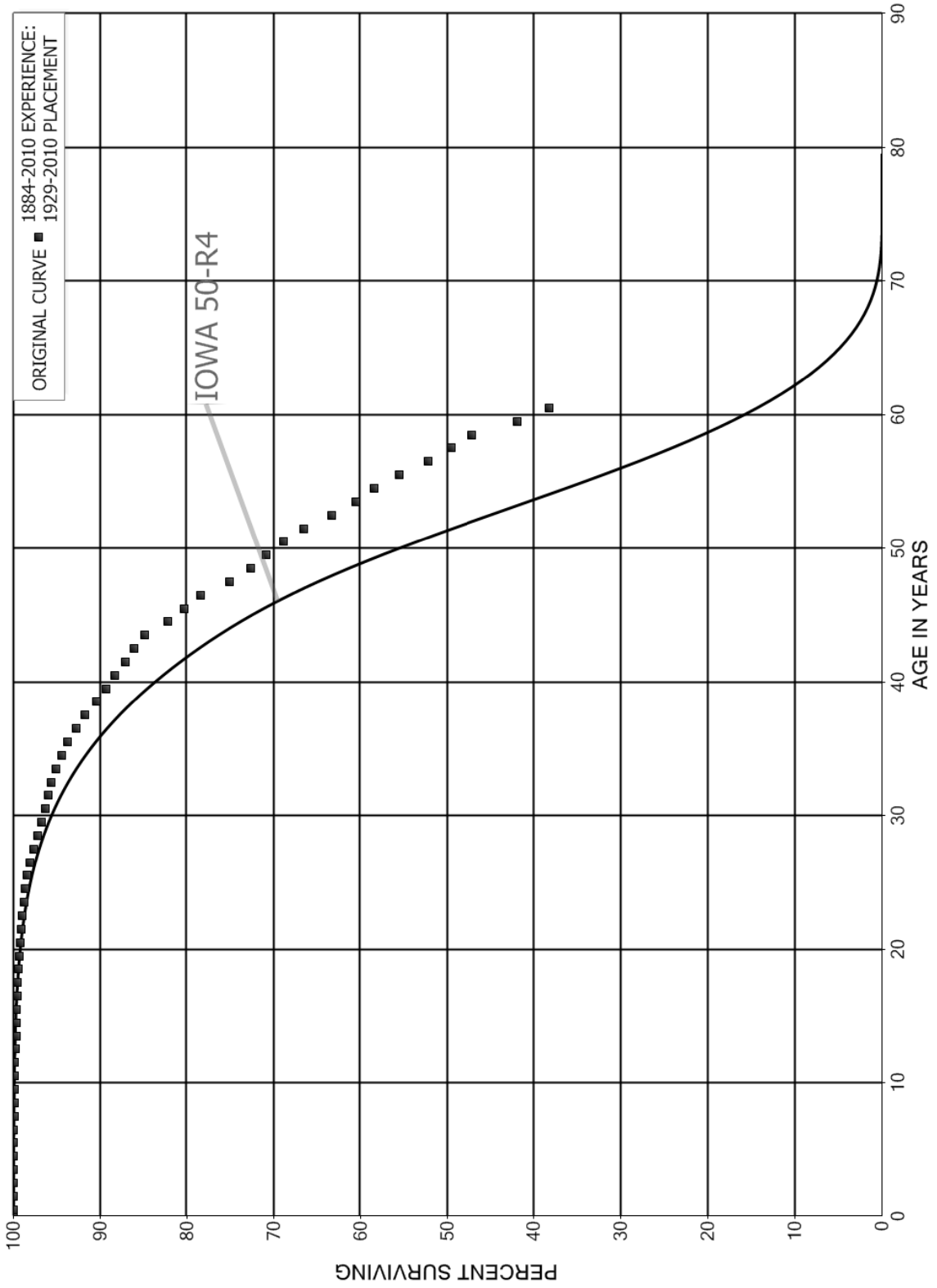
ACCOUNT 3000B - BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1927-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	30,679		0.0000	1.0000	49.20
80.5	30,679		0.0000	1.0000	49.20
81.5	30,679		0.0000	1.0000	49.20
82.5	30,679		0.0000	1.0000	49.20
83.5					49.20

MANITOBA HYDRO
ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK

ORIGINAL LIFE TABLE

PLACEMENT BAND 1929-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	116,284,252	4,722	0.0000	1.0000	100.00
0.5	114,766,326	11,987	0.0001	0.9999	100.00
1.5	105,507,888	25,443	0.0002	0.9998	99.99
2.5	98,499,913	8,095	0.0001	0.9999	99.96
3.5	91,656,390	11,847	0.0001	0.9999	99.95
4.5	84,579,418	18,796	0.0002	0.9998	99.94
5.5	81,671,728	11,189	0.0001	0.9999	99.92
6.5	77,336,649	12,286	0.0002	0.9998	99.90
7.5	69,486,835	7,370	0.0001	0.9999	99.89
8.5	65,682,586	35,487	0.0005	0.9995	99.88
9.5	63,425,856	12,534	0.0002	0.9998	99.82
10.5	60,008,530	12,730	0.0002	0.9998	99.80
11.5	52,509,319	17,249	0.0003	0.9997	99.78
12.5	48,629,250	53,175	0.0011	0.9989	99.75
13.5	40,369,563	13,082	0.0003	0.9997	99.64
14.5	37,642,070	16,119	0.0004	0.9996	99.61
15.5	33,646,497	17,989	0.0005	0.9995	99.57
16.5	32,455,301	17,443	0.0005	0.9995	99.51
17.5	31,049,102	23,562	0.0008	0.9992	99.46
18.5	29,103,398	25,996	0.0009	0.9991	99.38
19.5	28,452,037	31,737	0.0011	0.9989	99.30
20.5	25,583,009	31,262	0.0012	0.9988	99.18
21.5	23,155,515	34,441	0.0015	0.9985	99.06
22.5	22,402,432	35,041	0.0016	0.9984	98.92
23.5	21,875,780	41,363	0.0019	0.9981	98.76
24.5	21,054,989	41,974	0.0020	0.9980	98.57
25.5	20,323,143	59,100	0.0029	0.9971	98.38
26.5	19,380,921	86,276	0.0045	0.9955	98.09
27.5	18,606,152	81,978	0.0044	0.9956	97.66
28.5	18,029,159	87,827	0.0049	0.9951	97.22
29.5	15,822,030	71,584	0.0045	0.9955	96.75
30.5	14,782,188	58,524	0.0040	0.9960	96.31
31.5	13,603,981	52,376	0.0039	0.9961	95.93
32.5	9,048,663	46,875	0.0052	0.9948	95.56
33.5	8,582,213	57,425	0.0067	0.9933	95.07
34.5	7,693,759	57,734	0.0075	0.9925	94.43
35.5	6,807,268	71,420	0.0105	0.9895	93.72
36.5	6,601,081	74,952	0.0114	0.9886	92.74
37.5	6,340,232	88,393	0.0139	0.9861	91.69
38.5	6,136,931	74,963	0.0122	0.9878	90.41

MANITOBA HYDRO

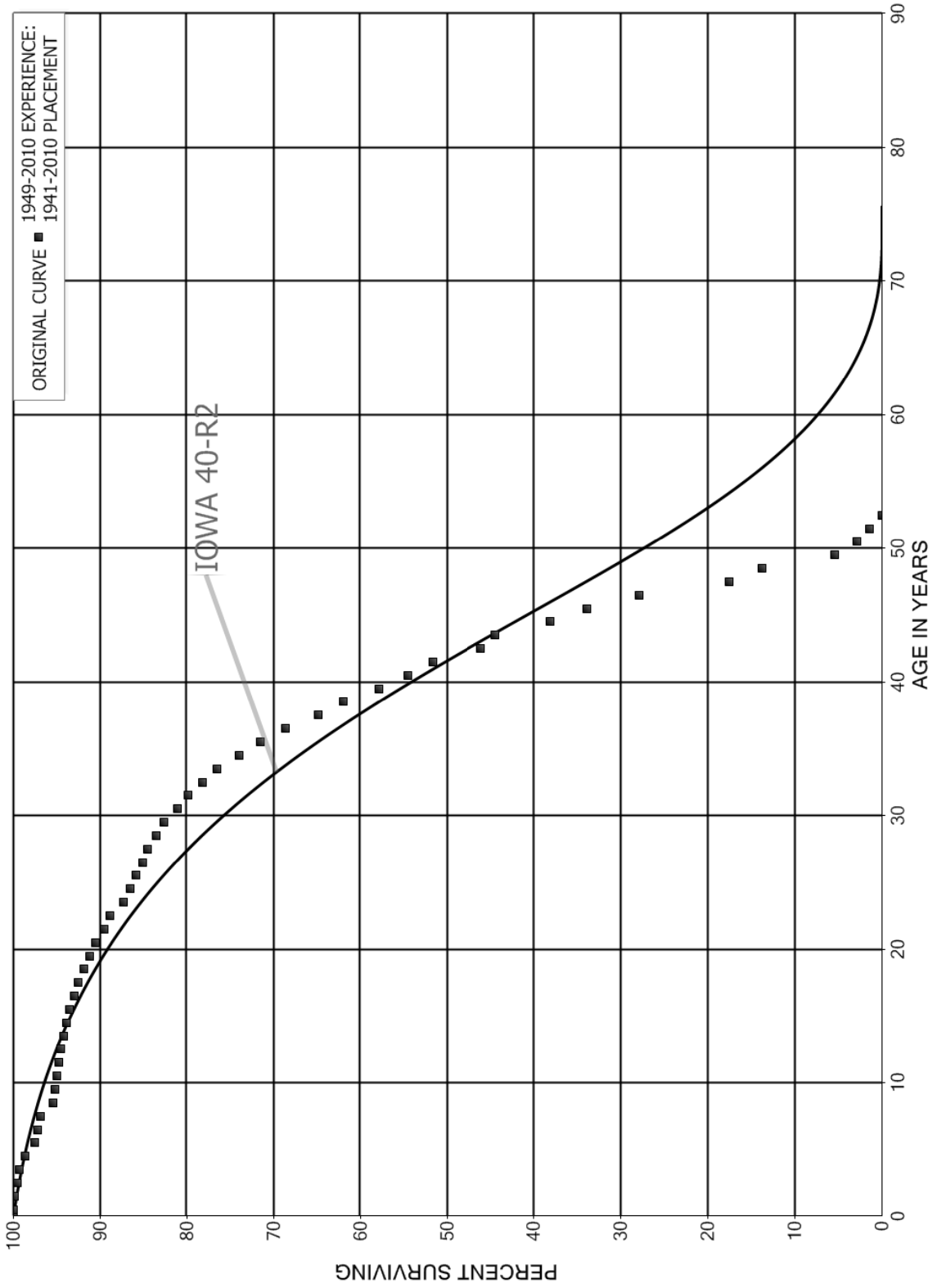
ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,149,050	56,456	0.0110	0.9890	89.30
40.5	4,997,080	68,432	0.0137	0.9863	88.33
41.5	4,801,985	60,565	0.0126	0.9874	87.12
42.5	4,642,810	66,187	0.0143	0.9857	86.02
43.5	4,373,442	133,378	0.0305	0.9695	84.79
44.5	3,758,919	86,082	0.0229	0.9771	82.20
45.5	3,663,349	89,923	0.0245	0.9755	80.32
46.5	3,564,785	149,985	0.0421	0.9579	78.35
47.5	3,360,601	109,278	0.0325	0.9675	75.05
48.5	3,185,981	75,737	0.0238	0.9762	72.61
49.5	2,909,120	85,627	0.0294	0.9706	70.89
50.5	2,819,813	94,590	0.0335	0.9665	68.80
51.5	2,699,981	129,585	0.0480	0.9520	66.49
52.5	2,329,124	103,978	0.0446	0.9554	63.30
53.5	2,224,872	77,440	0.0348	0.9652	60.48
54.5	2,086,251	101,255	0.0485	0.9515	58.37
55.5	1,758,955	106,015	0.0603	0.9397	55.54
56.5	1,650,889	84,282	0.0511	0.9489	52.19
57.5	570,130	28,160	0.0494	0.9506	49.53
58.5	10,159	1,129	0.1112	0.8888	47.08
59.5	6,981	604	0.0865	0.9135	41.85
60.5	1,812	258	0.1425	0.8575	38.23
61.5	1,553	149	0.0962	0.9038	32.78
62.5	1,404	115	0.0816	0.9184	29.63
63.5	1,290	192	0.1493	0.8507	27.21
64.5	1,097	650	0.5922	0.4078	23.15
65.5	447	130	0.2896	0.7104	9.44
66.5	318	248	0.7800	0.2200	6.71
67.5	70	70	1.0000		1.48
68.5					

MANITOBA HYDRO
ACCOUNT 3000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1941-2010 EXPERIENCE BAND 1949-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,916,716	8,608	0.0010	0.9990	100.00
0.5	8,425,508	6,516	0.0008	0.9992	99.90
1.5	7,369,165	22,159	0.0030	0.9970	99.83
2.5	7,267,120	19,814	0.0027	0.9973	99.53
3.5	6,895,745	40,630	0.0059	0.9941	99.25
4.5	6,638,267	77,096	0.0116	0.9884	98.67
5.5	6,385,262	23,106	0.0036	0.9964	97.52
6.5	6,282,839	22,249	0.0035	0.9965	97.17
7.5	5,870,891	85,755	0.0146	0.9854	96.83
8.5	4,490,279	8,641	0.0019	0.9981	95.41
9.5	4,449,185	10,669	0.0024	0.9976	95.23
10.5	4,200,187	9,865	0.0023	0.9977	95.00
11.5	3,868,567	12,386	0.0032	0.9968	94.78
12.5	3,324,157	10,470	0.0031	0.9969	94.47
13.5	2,632,129	9,655	0.0037	0.9963	94.18
14.5	2,301,889	8,743	0.0038	0.9962	93.83
15.5	2,086,095	12,355	0.0059	0.9941	93.47
16.5	1,798,642	8,068	0.0045	0.9955	92.92
17.5	1,679,990	12,593	0.0075	0.9925	92.50
18.5	1,595,616	10,380	0.0065	0.9935	91.81
19.5	1,370,013	11,212	0.0082	0.9918	91.21
20.5	1,268,420	13,931	0.0110	0.9890	90.47
21.5	1,132,597	8,764	0.0077	0.9923	89.47
22.5	1,036,253	17,223	0.0166	0.9834	88.78
23.5	929,901	7,961	0.0086	0.9914	87.31
24.5	899,673	7,110	0.0079	0.9921	86.56
25.5	887,616	7,809	0.0088	0.9912	85.87
26.5	860,827	6,345	0.0074	0.9926	85.12
27.5	854,482	9,851	0.0115	0.9885	84.49
28.5	815,042	8,618	0.0106	0.9894	83.52
29.5	802,082	15,591	0.0194	0.9806	82.63
30.5	783,832	11,448	0.0146	0.9854	81.03
31.5	741,057	15,936	0.0215	0.9785	79.84
32.5	719,391	14,965	0.0208	0.9792	78.13
33.5	688,062	23,404	0.0340	0.9660	76.50
34.5	640,012	20,877	0.0326	0.9674	73.90
35.5	568,800	22,674	0.0399	0.9601	71.49
36.5	533,969	29,865	0.0559	0.9441	68.64
37.5	484,821	21,100	0.0435	0.9565	64.80
38.5	446,623	29,788	0.0667	0.9333	61.98

MANITOBA HYDRO

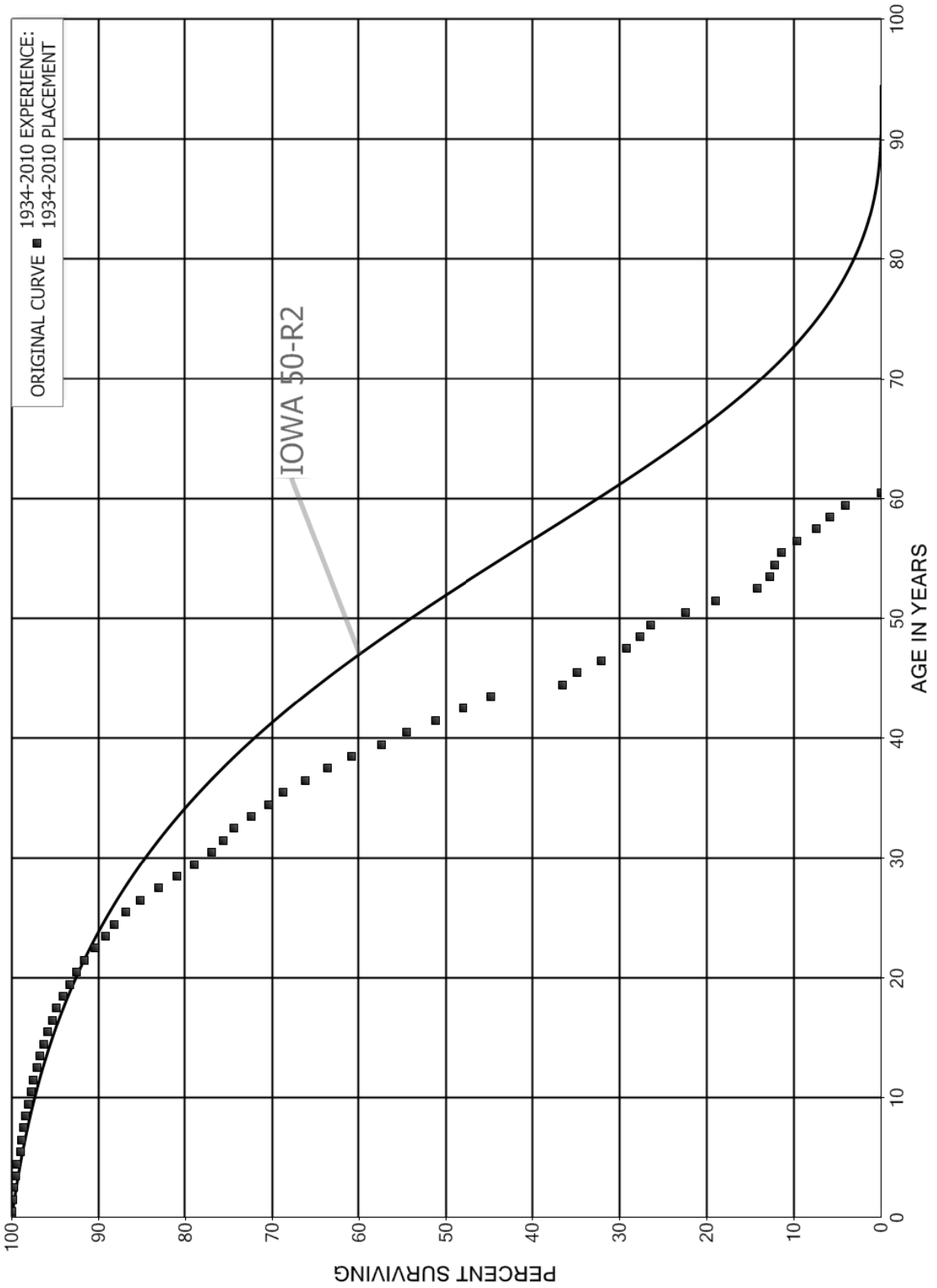
ACCOUNT 3000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1941-2010 EXPERIENCE BAND 1949-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	402,161	23,425	0.0582	0.9418	57.85
40.5	373,690	19,716	0.0528	0.9472	54.48
41.5	350,576	37,741	0.1077	0.8923	51.60
42.5	300,415	10,732	0.0357	0.9643	46.05
43.5	289,385	41,558	0.1436	0.8564	44.40
44.5	244,099	27,009	0.1106	0.8894	38.03
45.5	216,492	38,056	0.1758	0.8242	33.82
46.5	176,975	66,014	0.3730	0.6270	27.87
47.5	96,432	20,870	0.2164	0.7836	17.48
48.5	75,562	45,710	0.6049	0.3951	13.69
49.5	18,936	9,161	0.4838	0.5162	5.41
50.5	8,280	4,114	0.4969	0.5031	2.79
51.5	2,330	2,330	1.0000		1.41
52.5					

MANITOBA HYDRO
ACCOUNT 3100R - POWER TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100R - POWER TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1934-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	313,839,783	203,070	0.0006	0.9994	100.00
0.5	300,595,744	321,606	0.0011	0.9989	99.94
1.5	288,304,526	447,108	0.0016	0.9984	99.83
2.5	278,660,276	439,353	0.0016	0.9984	99.67
3.5	272,156,905	420,705	0.0015	0.9985	99.52
4.5	255,915,826	911,106	0.0036	0.9964	99.36
5.5	250,305,563	493,921	0.0020	0.9980	99.01
6.5	241,670,014	512,307	0.0021	0.9979	98.81
7.5	226,175,198	534,926	0.0024	0.9976	98.60
8.5	215,792,691	664,875	0.0031	0.9969	98.37
9.5	207,636,585	654,783	0.0032	0.9968	98.07
10.5	198,440,301	570,149	0.0029	0.9971	97.76
11.5	178,430,885	657,289	0.0037	0.9963	97.48
12.5	166,066,493	702,254	0.0042	0.9958	97.12
13.5	138,792,783	538,675	0.0039	0.9961	96.71
14.5	129,945,695	648,491	0.0050	0.9950	96.33
15.5	111,287,119	671,298	0.0060	0.9940	95.85
16.5	104,533,662	536,557	0.0051	0.9949	95.27
17.5	98,008,456	773,055	0.0079	0.9921	94.78
18.5	92,326,799	730,050	0.0079	0.9921	94.04
19.5	87,150,947	736,958	0.0085	0.9915	93.29
20.5	80,401,473	763,091	0.0095	0.9905	92.50
21.5	74,753,273	997,203	0.0133	0.9867	91.63
22.5	72,760,628	957,308	0.0132	0.9868	90.40
23.5	70,269,121	842,846	0.0120	0.9880	89.21
24.5	66,079,364	988,731	0.0150	0.9850	88.14
25.5	61,504,953	1,138,326	0.0185	0.9815	86.83
26.5	59,057,681	1,506,761	0.0255	0.9745	85.22
27.5	55,506,882	1,438,648	0.0259	0.9741	83.04
28.5	51,801,127	1,216,760	0.0235	0.9765	80.89
29.5	40,765,459	1,046,895	0.0257	0.9743	78.99
30.5	34,074,370	602,905	0.0177	0.9823	76.96
31.5	30,171,390	474,437	0.0157	0.9843	75.60
32.5	27,965,723	755,443	0.0270	0.9730	74.41
33.5	26,321,499	738,051	0.0280	0.9720	72.40
34.5	24,129,497	576,742	0.0239	0.9761	70.37
35.5	21,497,565	775,222	0.0361	0.9639	68.69
36.5	19,751,325	760,169	0.0385	0.9615	66.21
37.5	18,187,516	808,282	0.0444	0.9556	63.67
38.5	16,485,718	923,083	0.0560	0.9440	60.84

MANITOBA HYDRO

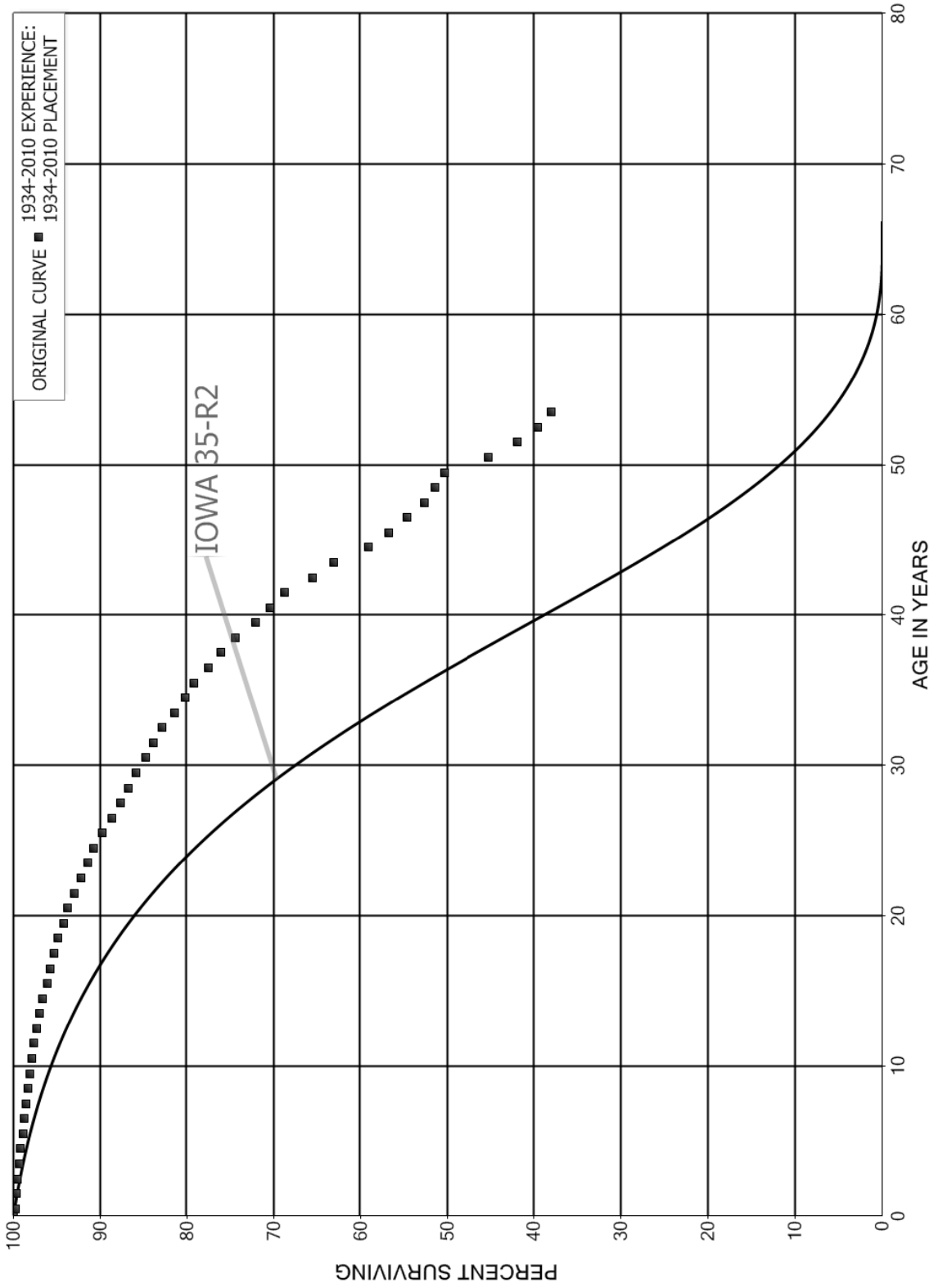
ACCOUNT 3100R - POWER TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1934-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	14,005,832	723,636	0.0517	0.9483	57.43
40.5	12,630,616	773,736	0.0613	0.9387	54.46
41.5	11,405,375	698,831	0.0613	0.9387	51.13
42.5	9,959,084	689,574	0.0692	0.9308	47.99
43.5	8,817,476	1,609,327	0.1825	0.8175	44.67
44.5	6,640,288	310,931	0.0468	0.9532	36.52
45.5	6,126,700	481,084	0.0785	0.9215	34.81
46.5	5,504,133	493,958	0.0897	0.9103	32.07
47.5	4,858,780	261,923	0.0539	0.9461	29.20
48.5	4,476,888	201,202	0.0449	0.9551	27.62
49.5	4,139,443	623,159	0.1505	0.8495	26.38
50.5	3,411,513	527,833	0.1547	0.8453	22.41
51.5	2,803,222	699,644	0.2496	0.7504	18.94
52.5	2,045,438	220,675	0.1079	0.8921	14.21
53.5	1,775,756	73,458	0.0414	0.9586	12.68
54.5	1,570,364	95,799	0.0610	0.9390	12.16
55.5	1,445,905	223,579	0.1546	0.8454	11.41
56.5	1,200,609	275,769	0.2297	0.7703	9.65
57.5	24,616	5,309	0.2157	0.7843	7.43
58.5	9,723	2,964	0.3049	0.6951	5.83
59.5	2,284	2,284	1.0000		4.05
60.5					

MANITOBA HYDRO
ACCOUNT 3100S - OTHER TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100S - OTHER TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1934-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	70,816,154	221,251	0.0031	0.9969	100.00
0.5	69,480,687	68,844	0.0010	0.9990	99.69
1.5	67,782,603	82,704	0.0012	0.9988	99.59
2.5	65,191,168	101,166	0.0016	0.9984	99.47
3.5	63,720,682	78,542	0.0012	0.9988	99.31
4.5	59,766,559	221,683	0.0037	0.9963	99.19
5.5	58,612,269	75,062	0.0013	0.9987	98.82
6.5	57,135,538	93,877	0.0016	0.9984	98.70
7.5	53,452,355	132,908	0.0025	0.9975	98.53
8.5	51,452,331	132,523	0.0026	0.9974	98.29
9.5	49,897,878	122,814	0.0025	0.9975	98.04
10.5	48,000,452	105,390	0.0022	0.9978	97.79
11.5	44,429,391	118,725	0.0027	0.9973	97.58
12.5	42,619,786	174,075	0.0041	0.9959	97.32
13.5	37,424,249	127,190	0.0034	0.9966	96.92
14.5	32,646,071	163,380	0.0050	0.9950	96.59
15.5	27,491,233	119,001	0.0043	0.9957	96.11
16.5	26,444,731	110,578	0.0042	0.9958	95.69
17.5	25,338,654	127,268	0.0050	0.9950	95.29
18.5	23,282,630	146,639	0.0063	0.9937	94.81
19.5	22,560,202	125,102	0.0055	0.9945	94.22
20.5	20,512,937	170,273	0.0083	0.9917	93.69
21.5	19,347,963	157,435	0.0081	0.9919	92.92
22.5	18,872,456	155,543	0.0082	0.9918	92.16
23.5	18,427,333	131,431	0.0071	0.9929	91.40
24.5	17,436,067	192,039	0.0110	0.9890	90.75
25.5	16,907,797	208,322	0.0123	0.9877	89.75
26.5	16,382,220	183,339	0.0112	0.9888	88.64
27.5	15,795,025	174,045	0.0110	0.9890	87.65
28.5	15,282,328	147,092	0.0096	0.9904	86.69
29.5	12,584,013	172,757	0.0137	0.9863	85.85
30.5	11,434,631	111,583	0.0098	0.9902	84.67
31.5	10,445,636	131,208	0.0126	0.9874	83.85
32.5	6,485,571	110,696	0.0171	0.9829	82.79
33.5	6,239,016	94,083	0.0151	0.9849	81.38
34.5	5,396,837	69,306	0.0128	0.9872	80.15
35.5	4,871,729	98,180	0.0202	0.9798	79.12
36.5	4,607,043	87,397	0.0190	0.9810	77.53
37.5	4,180,189	93,368	0.0223	0.9777	76.06
38.5	3,849,478	121,317	0.0315	0.9685	74.36

MANITOBA HYDRO

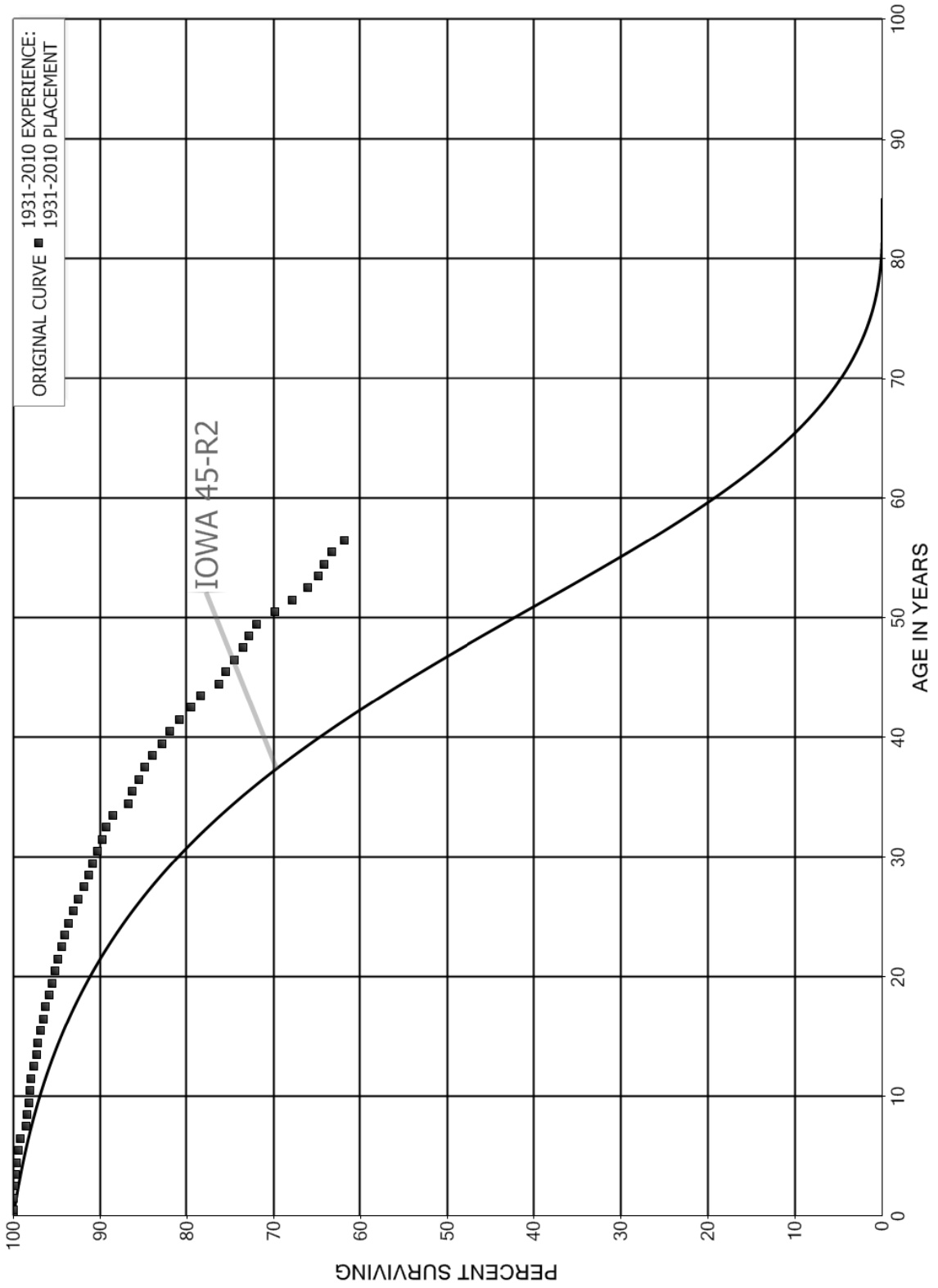
ACCOUNT 3100S - OTHER TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1934-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,652,152	58,826	0.0222	0.9778	72.02
40.5	2,393,196	57,650	0.0241	0.9759	70.42
41.5	2,277,676	104,868	0.0460	0.9540	68.72
42.5	1,945,349	75,406	0.0388	0.9612	65.56
43.5	1,721,519	109,247	0.0635	0.9365	63.02
44.5	1,451,014	56,270	0.0388	0.9612	59.02
45.5	1,288,818	47,121	0.0366	0.9634	56.73
46.5	1,192,287	43,858	0.0368	0.9632	54.66
47.5	1,085,698	26,430	0.0243	0.9757	52.64
48.5	978,428	20,865	0.0213	0.9787	51.36
49.5	844,803	85,962	0.1018	0.8982	50.27
50.5	719,364	52,725	0.0733	0.9267	45.15
51.5	620,977	34,449	0.0555	0.9445	41.84
52.5	483,349	18,930	0.0392	0.9608	39.52
53.5	447,453	6,721	0.0150	0.9850	37.97
54.5	404,194	10,946	0.0271	0.9729	37.40
55.5	375,089	22,311	0.0595	0.9405	36.39
56.5	345,916	31,878	0.0922	0.9078	34.23
57.5	15,581	1,322	0.0849	0.9151	31.07
58.5	5,212	521	0.0999	0.9001	28.44
59.5	1,868	442	0.2368	0.7632	25.59
60.5					19.53

MANITOBA HYDRO
ACCOUNT 3100T - INTERRUPTING EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100T - INTERRUPTING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1931-2010 EXPERIENCE BAND 1931-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	165,441,707	43,470	0.0003	0.9997	100.00
0.5	161,185,539	85,394	0.0005	0.9995	99.97
1.5	154,726,267	135,625	0.0009	0.9991	99.92
2.5	144,646,153	122,594	0.0008	0.9992	99.83
3.5	142,449,431	181,748	0.0013	0.9987	99.75
4.5	136,064,695	375,423	0.0028	0.9972	99.62
5.5	124,892,988	183,509	0.0015	0.9985	99.35
6.5	123,029,177	807,346	0.0066	0.9934	99.20
7.5	114,303,111	215,178	0.0019	0.9981	98.55
8.5	110,020,288	184,992	0.0017	0.9983	98.36
9.5	107,444,157	165,309	0.0015	0.9985	98.20
10.5	102,853,303	143,723	0.0014	0.9986	98.05
11.5	95,906,179	325,307	0.0034	0.9966	97.91
12.5	92,398,685	231,667	0.0025	0.9975	97.58
13.5	83,172,669	165,641	0.0020	0.9980	97.33
14.5	74,117,494	216,470	0.0029	0.9971	97.14
15.5	66,686,307	275,931	0.0041	0.9959	96.86
16.5	64,412,116	148,546	0.0023	0.9977	96.46
17.5	62,898,486	232,060	0.0037	0.9963	96.23
18.5	59,512,555	215,507	0.0036	0.9964	95.88
19.5	58,129,264	198,132	0.0034	0.9966	95.53
20.5	55,732,623	239,951	0.0043	0.9957	95.21
21.5	54,048,143	221,225	0.0041	0.9959	94.80
22.5	53,273,596	221,534	0.0042	0.9958	94.41
23.5	52,609,910	235,847	0.0045	0.9955	94.01
24.5	51,157,824	266,967	0.0052	0.9948	93.59
25.5	50,416,792	332,188	0.0066	0.9934	93.10
26.5	49,514,230	323,526	0.0065	0.9935	92.49
27.5	48,472,248	288,557	0.0060	0.9940	91.89
28.5	47,426,005	255,285	0.0054	0.9946	91.34
29.5	43,132,662	280,256	0.0065	0.9935	90.85
30.5	41,051,962	243,565	0.0059	0.9941	90.26
31.5	31,744,530	159,298	0.0050	0.9950	89.72
32.5	24,428,457	224,934	0.0092	0.9908	89.27
33.5	23,854,270	466,319	0.0195	0.9805	88.45
34.5	22,069,425	114,304	0.0052	0.9948	86.72
35.5	21,214,470	183,712	0.0087	0.9913	86.27
36.5	20,701,288	168,979	0.0082	0.9918	85.52
37.5	20,128,433	210,129	0.0104	0.9896	84.83
38.5	19,506,340	266,523	0.0137	0.9863	83.94

MANITOBA HYDRO

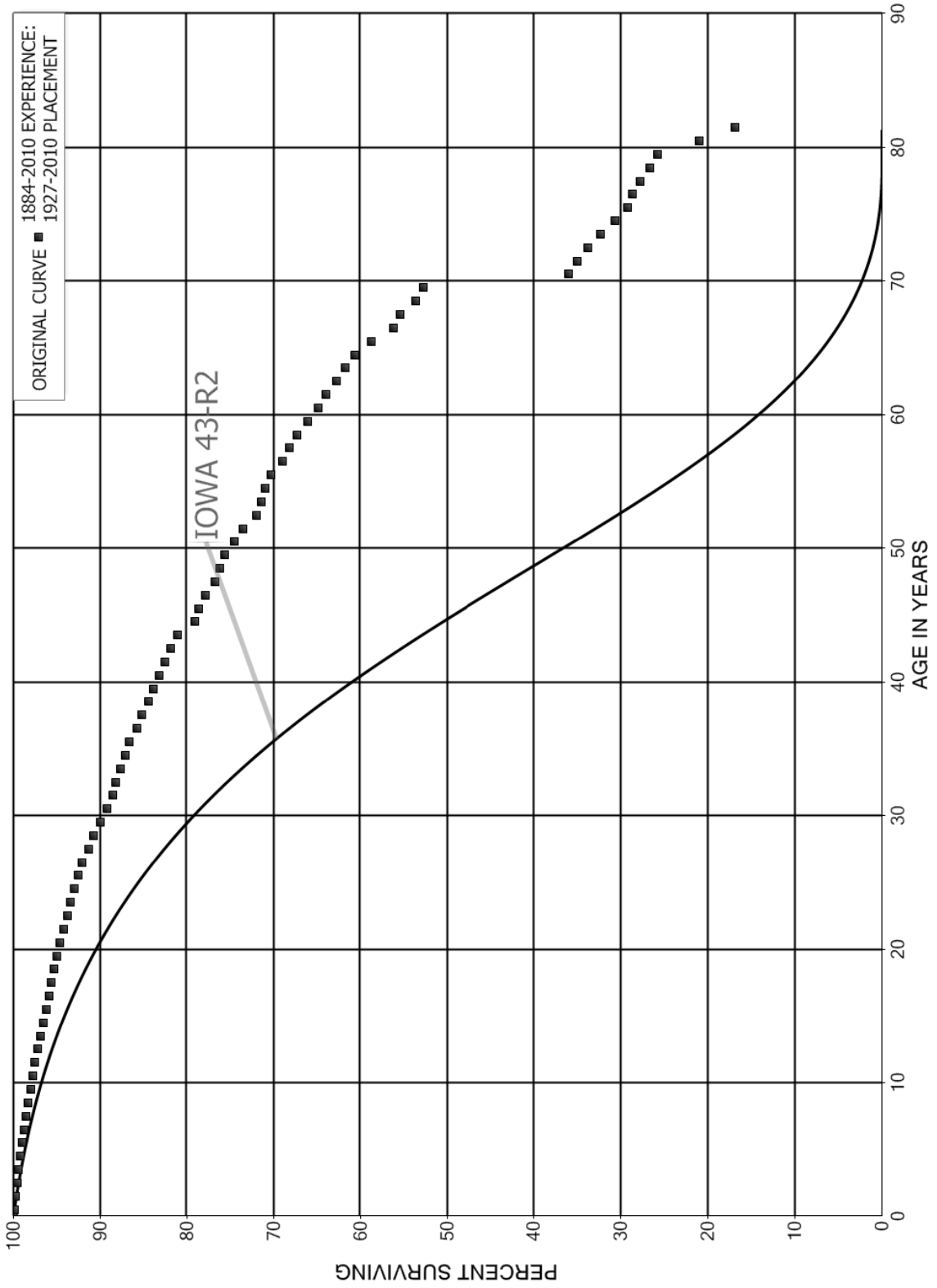
ACCOUNT 3100T - INTERRUPTING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1931-2010 EXPERIENCE BAND 1931-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	16,847,416	183,165	0.0109	0.9891	82.79
40.5	15,896,018	202,142	0.0127	0.9873	81.89
41.5	15,181,669	262,679	0.0173	0.9827	80.85
42.5	14,313,654	187,301	0.0131	0.9869	79.45
43.5	13,310,182	355,882	0.0267	0.9733	78.41
44.5	11,119,761	120,148	0.0108	0.9892	76.32
45.5	10,801,741	141,870	0.0131	0.9869	75.49
46.5	10,459,541	137,350	0.0131	0.9869	74.50
47.5	10,194,132	100,557	0.0099	0.9901	73.52
48.5	9,747,176	106,587	0.0109	0.9891	72.80
49.5	8,694,254	263,062	0.0303	0.9697	72.00
50.5	8,306,820	236,195	0.0284	0.9716	69.82
51.5	7,828,254	198,456	0.0254	0.9746	67.84
52.5	7,137,746	137,994	0.0193	0.9807	66.12
53.5	6,760,010	65,739	0.0097	0.9903	64.84
54.5	6,146,164	86,890	0.0141	0.9859	64.21
55.5	5,834,087	132,335	0.0227	0.9773	63.30
56.5	5,628,089	261,439	0.0465	0.9535	61.87
57.5	459,712	17,877	0.0389	0.9611	58.99
58.5	186,284	7,151	0.0384	0.9616	56.70
59.5	111,761	6,540	0.0585	0.9415	54.52
60.5	7,409	617	0.0833	0.9167	51.33
61.5	1,986	479	0.2410	0.7590	47.06
62.5					35.72

MANITOBA HYDRO
ACCOUNT 3100U - OTHER STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	537,241,078	624,567	0.0012	0.9988	100.00
0.5	527,977,415	826,856	0.0016	0.9984	99.88
1.5	495,675,423	898,378	0.0018	0.9982	99.73
2.5	470,304,190	918,675	0.0020	0.9980	99.55
3.5	445,385,461	799,489	0.0018	0.9982	99.35
4.5	416,881,759	1,042,523	0.0025	0.9975	99.17
5.5	403,194,158	799,439	0.0020	0.9980	98.93
6.5	384,007,672	804,958	0.0021	0.9979	98.73
7.5	359,199,604	839,524	0.0023	0.9977	98.52
8.5	338,462,672	1,149,307	0.0034	0.9966	98.29
9.5	325,838,791	797,701	0.0024	0.9976	97.96
10.5	308,376,063	839,329	0.0027	0.9973	97.72
11.5	278,867,976	748,241	0.0027	0.9973	97.45
12.5	258,338,525	1,017,503	0.0039	0.9961	97.19
13.5	218,598,637	734,988	0.0034	0.9966	96.81
14.5	202,652,040	673,041	0.0033	0.9967	96.48
15.5	180,913,560	539,654	0.0030	0.9970	96.16
16.5	170,817,022	477,096	0.0028	0.9972	95.88
17.5	162,160,158	570,366	0.0035	0.9965	95.61
18.5	153,469,603	592,963	0.0039	0.9961	95.27
19.5	148,627,630	518,971	0.0035	0.9965	94.90
20.5	138,342,967	564,997	0.0041	0.9959	94.57
21.5	128,705,620	570,300	0.0044	0.9956	94.19
22.5	124,866,967	519,380	0.0042	0.9958	93.77
23.5	122,129,430	502,599	0.0041	0.9959	93.38
24.5	117,958,525	553,252	0.0047	0.9953	92.99
25.5	115,060,815	627,186	0.0055	0.9945	92.56
26.5	111,335,264	964,155	0.0087	0.9913	92.05
27.5	107,376,232	622,013	0.0058	0.9942	91.26
28.5	101,610,000	890,495	0.0088	0.9912	90.73
29.5	91,059,537	794,080	0.0087	0.9913	89.93
30.5	82,712,547	559,999	0.0068	0.9932	89.15
31.5	76,003,242	351,309	0.0046	0.9954	88.54
32.5	60,399,155	389,197	0.0064	0.9936	88.14
33.5	58,129,577	345,565	0.0059	0.9941	87.57
34.5	53,921,047	294,679	0.0055	0.9945	87.05
35.5	50,254,305	474,747	0.0094	0.9906	86.57
36.5	48,413,279	348,234	0.0072	0.9928	85.75
37.5	46,676,518	408,627	0.0088	0.9912	85.14
38.5	45,253,398	291,683	0.0064	0.9936	84.39

MANITOBA HYDRO

ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	39,848,031	333,319	0.0084	0.9916	83.85
40.5	38,256,337	294,523	0.0077	0.9923	83.15
41.5	36,702,096	311,030	0.0085	0.9915	82.51
42.5	33,393,701	301,922	0.0090	0.9910	81.81
43.5	27,294,614	659,639	0.0242	0.9758	81.07
44.5	24,548,558	162,750	0.0066	0.9934	79.11
45.5	23,682,108	236,108	0.0100	0.9900	78.58
46.5	22,844,079	315,951	0.0138	0.9862	77.80
47.5	21,613,196	164,153	0.0076	0.9924	76.72
48.5	20,402,230	149,898	0.0073	0.9927	76.14
49.5	18,956,874	258,133	0.0136	0.9864	75.58
50.5	18,203,015	260,457	0.0143	0.9857	74.55
51.5	17,007,042	362,542	0.0213	0.9787	73.49
52.5	15,653,171	120,251	0.0077	0.9923	71.92
53.5	15,149,636	84,300	0.0056	0.9944	71.37
54.5	14,144,724	146,382	0.0103	0.9897	70.97
55.5	13,069,334	228,087	0.0175	0.9825	70.24
56.5	12,612,427	153,350	0.0122	0.9878	69.01
57.5	1,627,753	21,695	0.0133	0.9867	68.17
58.5	951,849	17,004	0.0179	0.9821	67.26
59.5	797,079	14,296	0.0179	0.9821	66.06
60.5	278,421	3,993	0.0143	0.9857	64.88
61.5	194,106	3,769	0.0194	0.9806	63.95
62.5	187,972	2,998	0.0160	0.9840	62.70
63.5	173,257	2,937	0.0170	0.9830	61.70
64.5	168,137	5,394	0.0321	0.9679	60.66
65.5	140,427	6,027	0.0429	0.9571	58.71
66.5	125,693	1,810	0.0144	0.9856	56.19
67.5	122,402	3,874	0.0316	0.9684	55.38
68.5	112,102	1,825	0.0163	0.9837	53.63
69.5	107,239	34,228	0.3192	0.6808	52.76
70.5	71,753	1,874	0.0261	0.9739	35.92
71.5	65,341	2,408	0.0369	0.9631	34.98
72.5	62,933	2,653	0.0422	0.9578	33.69
73.5	47,427	2,431	0.0513	0.9487	32.27
74.5	44,996	2,123	0.0472	0.9528	30.62
75.5	42,211	803	0.0190	0.9810	29.17
76.5	39,400	1,288	0.0327	0.9673	28.62
77.5	38,112	1,445	0.0379	0.9621	27.68
78.5	22,505	765	0.0340	0.9660	26.63

MANITOBA HYDRO

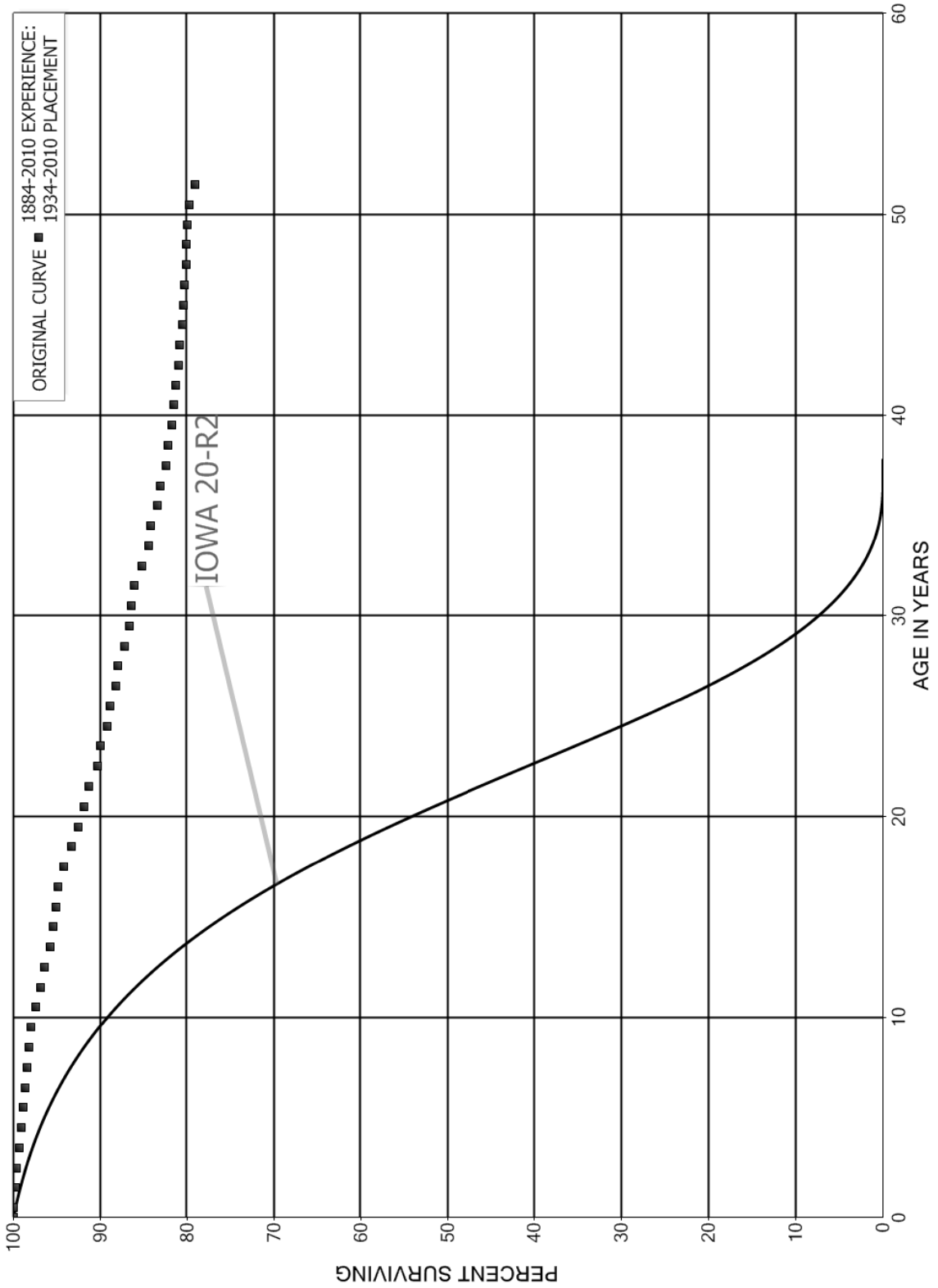
ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,393	450	0.1880	0.8120	25.73
80.5	1,943	379	0.1953	0.8047	20.89
81.5					16.81

MANITOBA HYDRO
ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1884-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	167,118,445	139,315	0.0008	0.9992	100.00
0.5	157,626,248	245,861	0.0016	0.9984	99.92
1.5	146,594,864	282,404	0.0019	0.9981	99.76
2.5	131,071,953	430,614	0.0033	0.9967	99.57
3.5	117,586,366	199,457	0.0017	0.9983	99.24
4.5	109,252,494	266,615	0.0024	0.9976	99.07
5.5	104,522,107	225,238	0.0022	0.9978	98.83
6.5	99,217,726	253,147	0.0026	0.9974	98.62
7.5	94,277,902	146,088	0.0015	0.9985	98.37
8.5	89,668,598	232,929	0.0026	0.9974	98.21
9.5	87,476,319	459,667	0.0053	0.9947	97.96
10.5	83,859,431	514,066	0.0061	0.9939	97.44
11.5	76,042,016	347,016	0.0046	0.9954	96.85
12.5	69,779,637	477,568	0.0068	0.9932	96.41
13.5	54,061,806	220,965	0.0041	0.9959	95.75
14.5	50,602,218	166,947	0.0033	0.9967	95.35
15.5	46,634,646	120,391	0.0026	0.9974	95.04
16.5	45,489,637	310,467	0.0068	0.9932	94.79
17.5	41,221,986	371,126	0.0090	0.9910	94.15
18.5	38,796,231	334,158	0.0086	0.9914	93.30
19.5	36,988,424	275,720	0.0075	0.9925	92.50
20.5	32,232,621	173,874	0.0054	0.9946	91.81
21.5	28,174,815	314,378	0.0112	0.9888	91.31
22.5	26,747,116	115,157	0.0043	0.9957	90.29
23.5	24,661,588	188,275	0.0076	0.9924	89.90
24.5	23,200,520	97,461	0.0042	0.9958	89.22
25.5	22,422,504	181,446	0.0081	0.9919	88.84
26.5	21,442,205	53,729	0.0025	0.9975	88.12
27.5	20,960,873	184,990	0.0088	0.9912	87.90
28.5	20,414,527	115,007	0.0056	0.9944	87.13
29.5	19,145,161	45,701	0.0024	0.9976	86.64
30.5	18,015,227	74,599	0.0041	0.9959	86.43
31.5	16,959,875	178,564	0.0105	0.9895	86.07
32.5	15,140,094	131,518	0.0087	0.9913	85.17
33.5	14,678,896	51,636	0.0035	0.9965	84.43
34.5	14,179,345	118,334	0.0083	0.9917	84.13
35.5	13,659,321	55,473	0.0041	0.9959	83.43
36.5	13,448,866	110,803	0.0082	0.9918	83.09
37.5	13,211,833	37,757	0.0029	0.9971	82.40
38.5	13,100,823	67,588	0.0052	0.9948	82.17

MANITOBA HYDRO

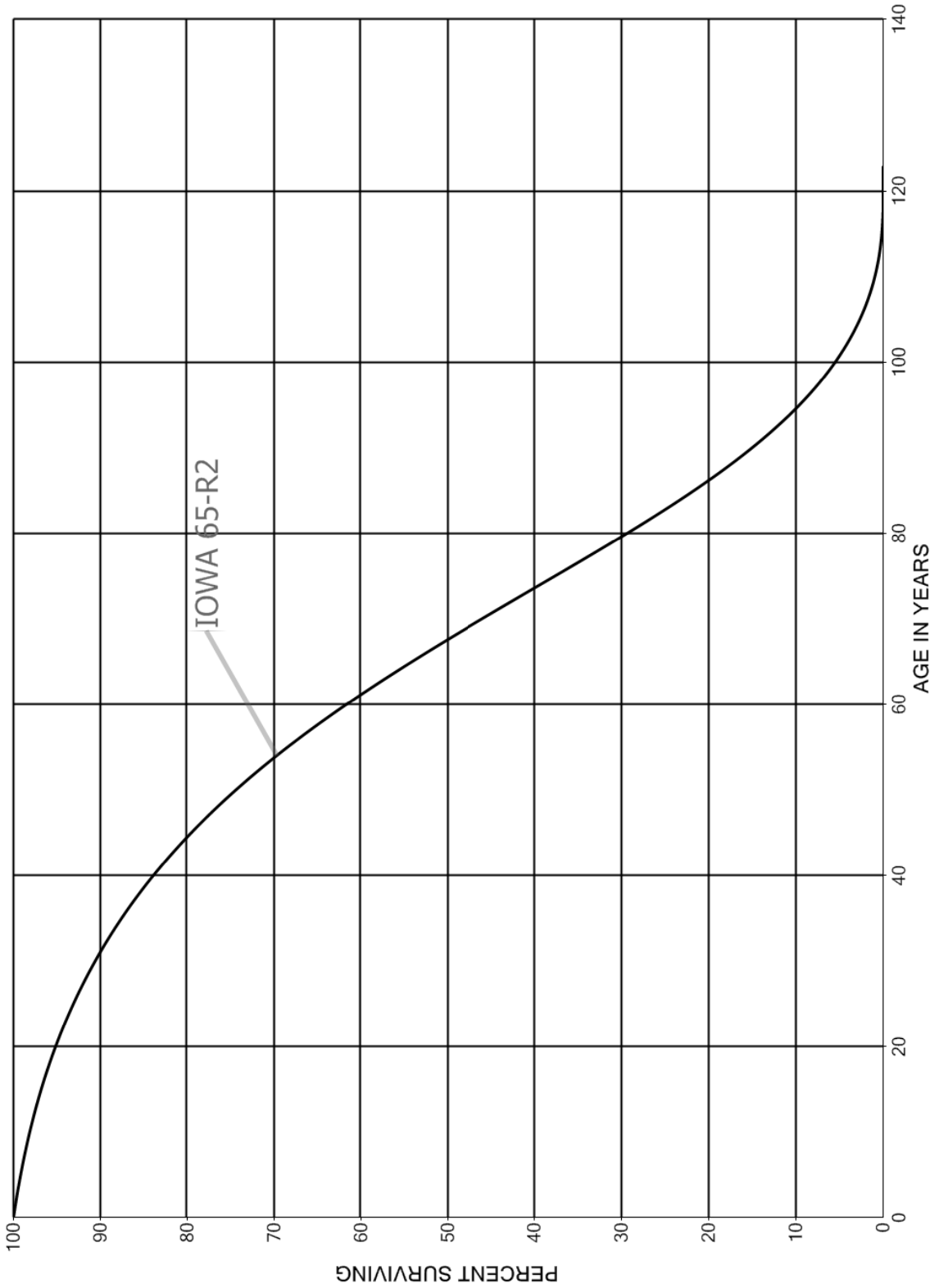
ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES

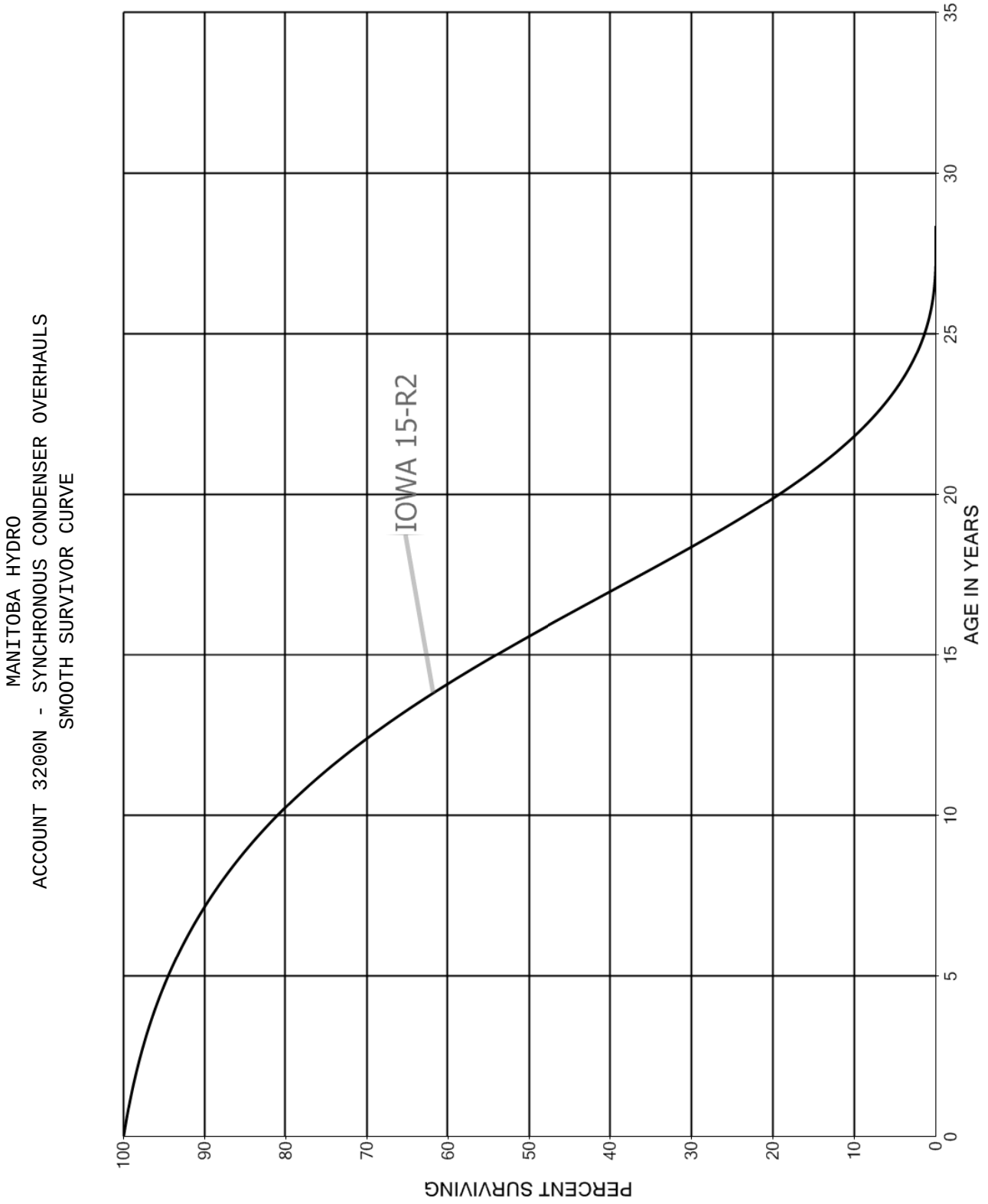
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2010 EXPERIENCE BAND 1884-2010

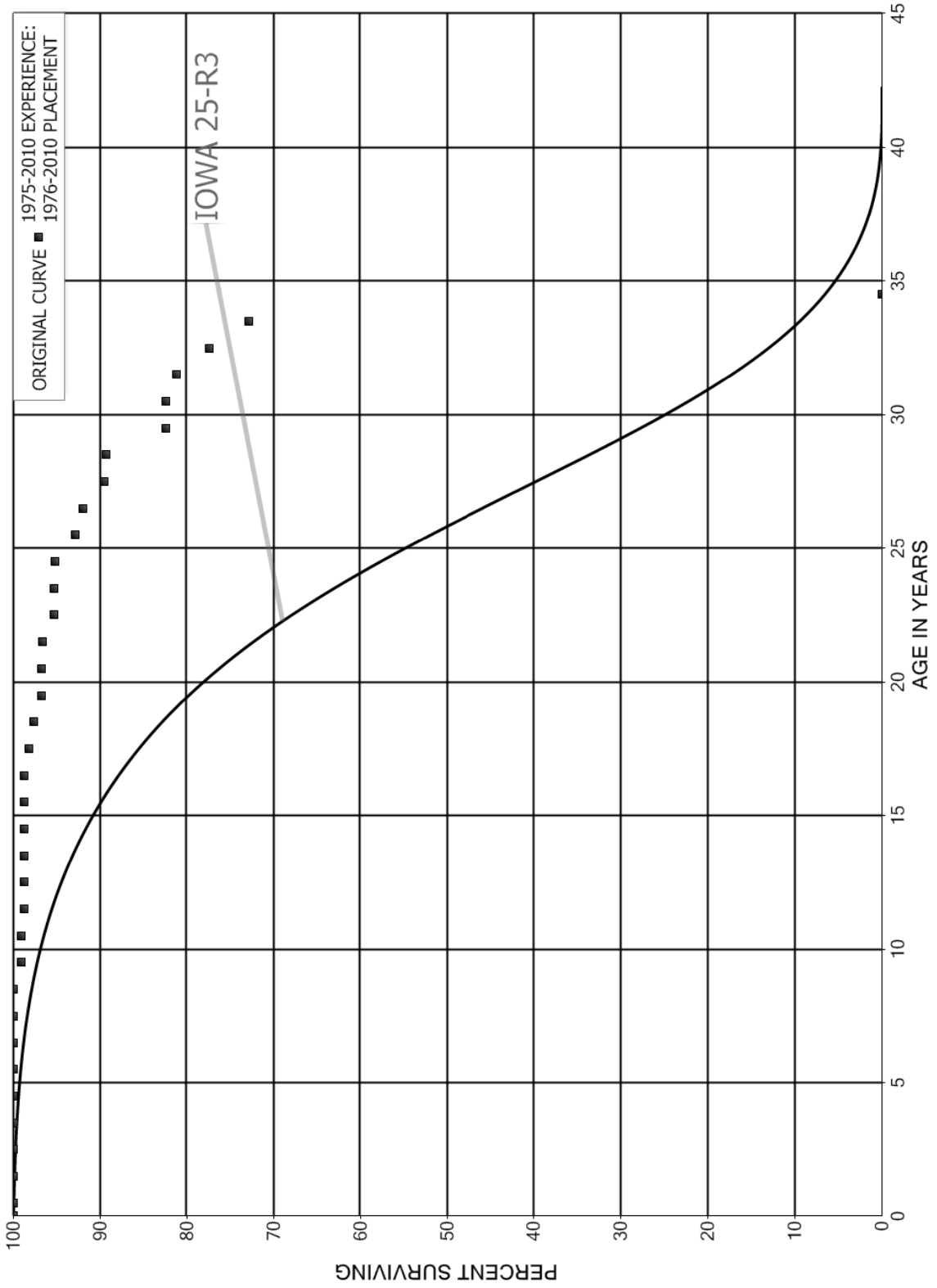
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,566,828	35,429	0.0028	0.9972	81.74
40.5	12,452,761	33,797	0.0027	0.9973	81.51
41.5	12,291,313	57,251	0.0047	0.9953	81.29
42.5	12,130,808	17,602	0.0015	0.9985	80.91
43.5	11,903,300	38,384	0.0032	0.9968	80.80
44.5	11,762,260	28,252	0.0024	0.9976	80.54
45.5	11,720,334	14,748	0.0013	0.9987	80.34
46.5	11,705,551	19,960	0.0017	0.9983	80.24
47.5	11,678,177	9,419	0.0008	0.9992	80.10
48.5	11,598,329	14,455	0.0012	0.9988	80.04
49.5	6,934,992	14,392	0.0021	0.9979	79.94
50.5	6,911,415	56,837	0.0082	0.9918	79.77
51.5	6,794,555	28,537	0.0042	0.9958	79.12
52.5	6,742,657	81,929	0.0122	0.9878	78.79
53.5	6,636,575	29,826	0.0045	0.9955	77.83
54.5	6,561,721	12,916	0.0020	0.9980	77.48
55.5	6,519,916	16,858	0.0026	0.9974	77.33
56.5	6,463,593	62,119	0.0096	0.9904	77.13
57.5	167		0.0000	1.0000	76.38
58.5					76.38

MANITOBA HYDRO
ACCOUNT 3200M - SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS
SMOOTH SURVIVOR CURVE




MANITOBA HYDRO
ACCOUNT 3200N - SYNCHRONOUS CONDENSER OVERHAULS
SMOOTH SURVIVOR CURVE
IOWA 15-R2
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
5
10
15
20
25
30
35

MANITOBA HYDRO
ACCOUNT 3200P - HVDC CONVERTER EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

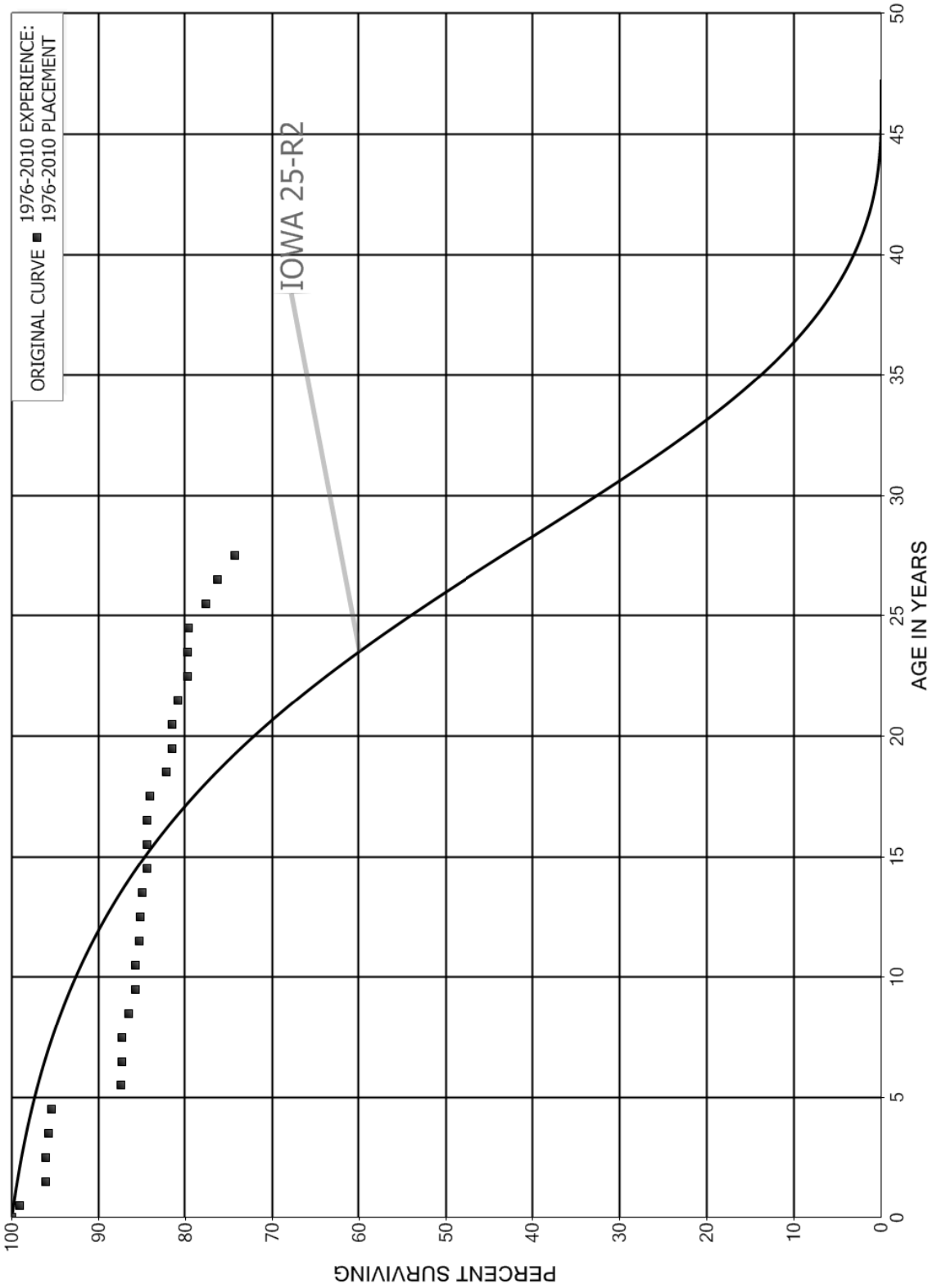
ACCOUNT 3200P – HVDC CONVERTER EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1976-2010 EXPERIENCE BAND 1975-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	252,697,195	11,323	0.0000	1.0000	100.00
0.5	251,460,523	28,577	0.0001	0.9999	100.00
1.5	244,953,820		0.0000	1.0000	99.98
2.5	232,841,977		0.0000	1.0000	99.98
3.5	227,098,152		0.0000	1.0000	99.98
4.5	219,206,199		0.0000	1.0000	99.98
5.5	178,511,473	15,771	0.0001	0.9999	99.98
6.5	165,669,158	61,463	0.0004	0.9996	99.98
7.5	156,607,188	341	0.0000	1.0000	99.94
8.5	149,787,591	1,343,007	0.0090	0.9910	99.94
9.5	142,453,998		0.0000	1.0000	99.04
10.5	138,275,041	451,215	0.0033	0.9967	99.04
11.5	135,209,306	17,198	0.0001	0.9999	98.72
12.5	130,540,713		0.0000	1.0000	98.71
13.5	115,900,340		0.0000	1.0000	98.71
14.5	111,521,184	4,562	0.0000	1.0000	98.71
15.5	92,086,823	10,872	0.0001	0.9999	98.70
16.5	92,014,717	464,725	0.0051	0.9949	98.69
17.5	90,658,159	576,041	0.0064	0.9936	98.19
18.5	85,842,803	762,534	0.0089	0.9911	97.57
19.5	83,921,856	176	0.0000	1.0000	96.70
20.5	83,265,829	83,414	0.0010	0.9990	96.70
21.5	82,265,260	1,133,721	0.0138	0.9862	96.60
22.5	80,143,230	545	0.0000	1.0000	95.27
23.5	79,560,937	112,388	0.0014	0.9986	95.27
24.5	79,216,150	1,935,642	0.0244	0.9756	95.14
25.5	61,721,844	606,307	0.0098	0.9902	92.81
26.5	44,925,027	1,180,495	0.0263	0.9737	91.90
27.5	43,690,615	103,951	0.0024	0.9976	89.49
28.5	42,916,654	3,298,617	0.0769	0.9231	89.27
29.5	39,465,014		0.0000	1.0000	82.41
30.5	39,441,126	601,989	0.0153	0.9847	82.41
31.5	38,835,426	1,778,445	0.0458	0.9542	81.15
32.5	4,122,349	243,900	0.0592	0.9408	77.44
33.5	3,878,449	3,878,449	1.0000		72.86
34.5					

MANITOBA HYDRO
ACCOUNT 3200S - HVDC SERIALIZED EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

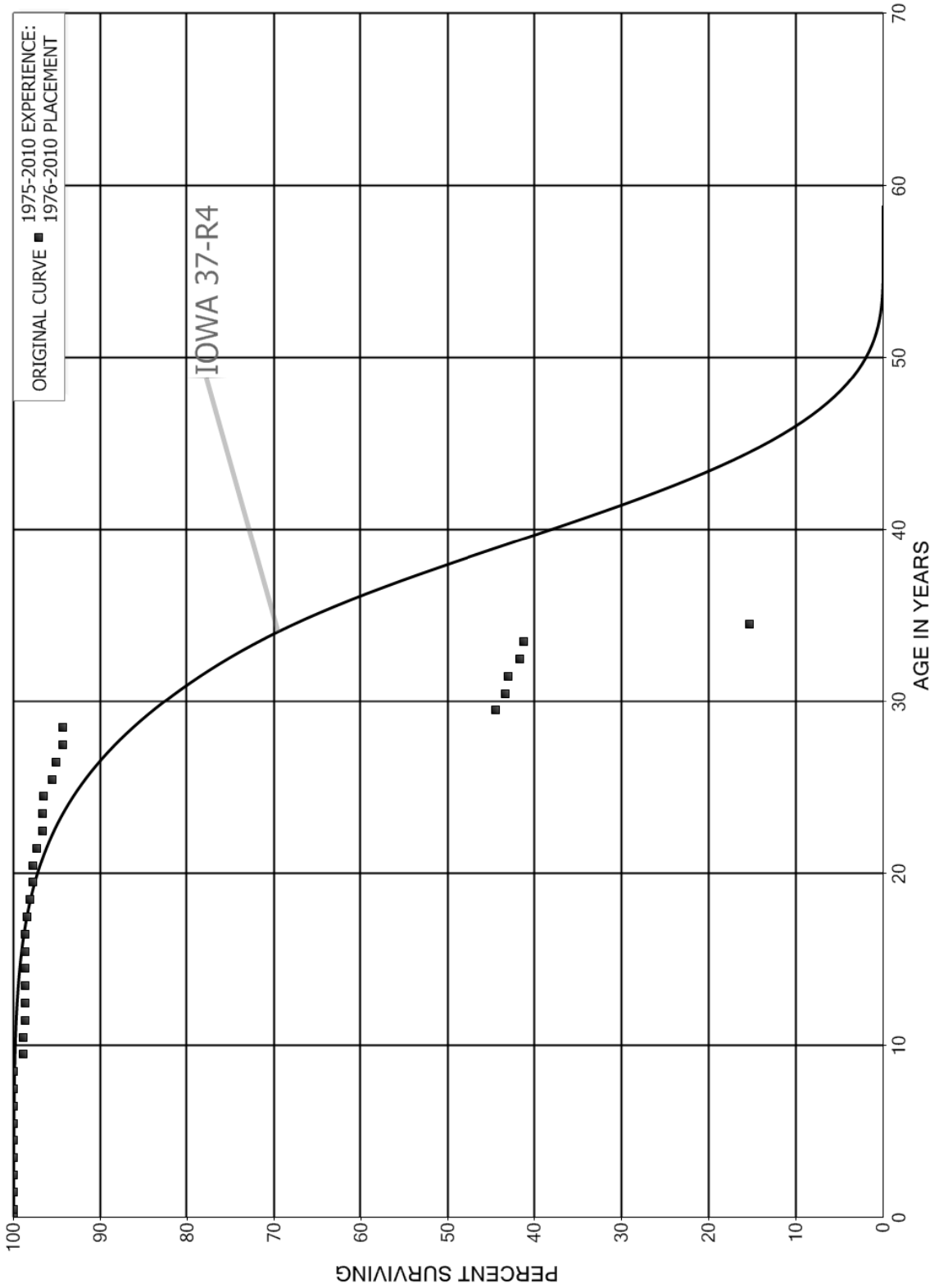
ACCOUNT 3200S – HVDC SERIALIZED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1976-2010 EXPERIENCE BAND 1976-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	823,063,567	7,883,675	0.0096	0.9904	100.00
0.5	798,886,362	23,888,005	0.0299	0.9701	99.04
1.5	759,176,277	42,304	0.0001	0.9999	96.08
2.5	724,658,268	2,622,234	0.0036	0.9964	96.08
3.5	714,621,251	2,181,532	0.0031	0.9969	95.73
4.5	686,239,186	58,152,678	0.0847	0.9153	95.44
5.5	570,261,719	82,054	0.0001	0.9999	87.35
6.5	534,712,538	175,165	0.0003	0.9997	87.34
7.5	493,636,839	4,691,317	0.0095	0.9905	87.31
8.5	465,525,303	3,827,489	0.0082	0.9918	86.48
9.5	437,184,829		0.0000	1.0000	85.77
10.5	415,627,263	2,110,935	0.0051	0.9949	85.77
11.5	403,024,346	844,000	0.0021	0.9979	85.33
12.5	388,924,156	750,000	0.0019	0.9981	85.15
13.5	346,449,992	2,250,000	0.0065	0.9935	84.99
14.5	332,762,316	13,002	0.0000	1.0000	84.44
15.5	277,375,583	30,983	0.0001	0.9999	84.43
16.5	277,170,086	1,324,437	0.0048	0.9952	84.42
17.5	273,303,978	5,871,708	0.0215	0.9785	84.02
18.5	250,018,190	2,173,176	0.0087	0.9913	82.21
19.5	244,543,610	502	0.0000	1.0000	81.50
20.5	242,673,974	2,115,726	0.0087	0.9913	81.50
21.5	237,944,412	3,231,036	0.0136	0.9864	80.79
22.5	231,896,757	1,553	0.0000	1.0000	79.69
23.5	230,237,258	320,300	0.0014	0.9986	79.69
24.5	229,254,637	5,516,461	0.0241	0.9759	79.58
25.5	179,396,940	3,151,939	0.0176	0.9824	77.67
26.5	130,103,044	3,364,337	0.0259	0.9741	76.30
27.5	126,585,047	5,721,255	0.0452	0.9548	74.33
28.5	118,954,305	9,400,856	0.0790	0.9210	70.97
29.5	109,117,343		0.0000	1.0000	65.36
30.5	109,049,264	5,457,242	0.0500	0.9500	65.36
31.5	103,581,446	5,068,459	0.0489	0.9511	62.09
32.5	15,241,922	1,695,100	0.1112	0.8888	59.05
33.5	13,546,822	12,884,123	0.9511	0.0489	52.48
34.5					2.57

MANITOBA HYDRO
ACCOUNT 3200U - HVDC ACCESSORY STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

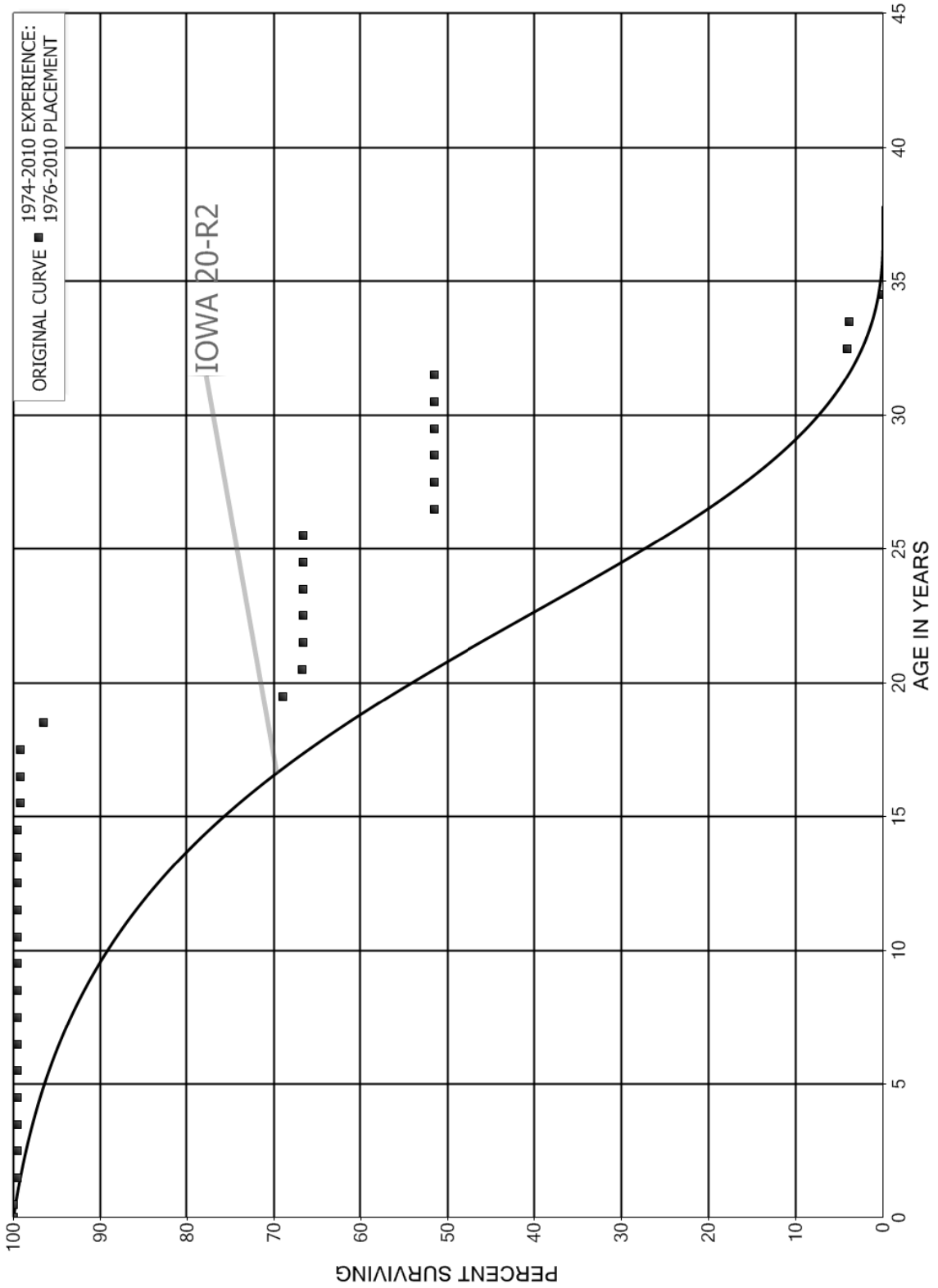
ACCOUNT 3200U - HVDC ACCESSORY STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1976-2010 EXPERIENCE BAND 1975-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	71,135,950	11,504	0.0002	0.9998	100.00
0.5	58,262,946	7,147	0.0001	0.9999	99.98
1.5	56,635,604		0.0000	1.0000	99.97
2.5	53,606,401		0.0000	1.0000	99.97
3.5	52,169,857		0.0000	1.0000	99.97
4.5	50,196,059		0.0000	1.0000	99.97
5.5	39,582,350	3,944	0.0001	0.9999	99.97
6.5	36,370,455	15,372	0.0004	0.9996	99.96
7.5	34,104,034	85	0.0000	1.0000	99.92
8.5	32,398,436	335,890	0.0104	0.9896	99.92
9.5	30,564,286		0.0000	1.0000	98.88
10.5	40,566,051	112,850	0.0028	0.9972	98.88
11.5	39,799,303	4,301	0.0001	0.9999	98.61
12.5	63,979,721		0.0000	1.0000	98.60
13.5	60,318,127	2,494	0.0000	1.0000	98.60
14.5	59,220,396	1,141	0.0000	1.0000	98.59
15.5	54,359,814	2,719	0.0001	0.9999	98.59
16.5	54,341,780	116,229	0.0021	0.9979	98.59
17.5	54,002,501	144,069	0.0027	0.9973	98.38
18.5	44,873,289	190,712	0.0043	0.9957	98.11
19.5	44,392,855	44	0.0000	1.0000	97.70
20.5	44,228,781	165,745	0.0037	0.9963	97.70
21.5	43,833,653	322,343	0.0074	0.9926	97.33
22.5	43,264,132	136	0.0000	1.0000	96.61
23.5	43,118,499	28,109	0.0007	0.9993	96.61
24.5	43,032,267	484,109	0.0112	0.9888	96.55
25.5	40,145,702	154,728	0.0039	0.9961	95.46
26.5	35,941,687	295,245	0.0082	0.9918	95.10
27.5	35,632,957	25,999	0.0007	0.9993	94.32
28.5	35,439,388	18,761,979	0.5294	0.4706	94.25
29.5	16,639,137	395,764	0.0238	0.9762	44.35
30.5	16,237,399	150,559	0.0093	0.9907	43.30
31.5	16,085,912	497,109	0.0309	0.9691	42.90
32.5	5,862,963	61,000	0.0104	0.9896	41.57
33.5	5,801,963	3,645,642	0.6283	0.3717	41.14
34.5					15.29

MANITOBA HYDRO
ACCOUNT 3200V – HVDC ELECTRONIC EQUIPMENT AND BATTERIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



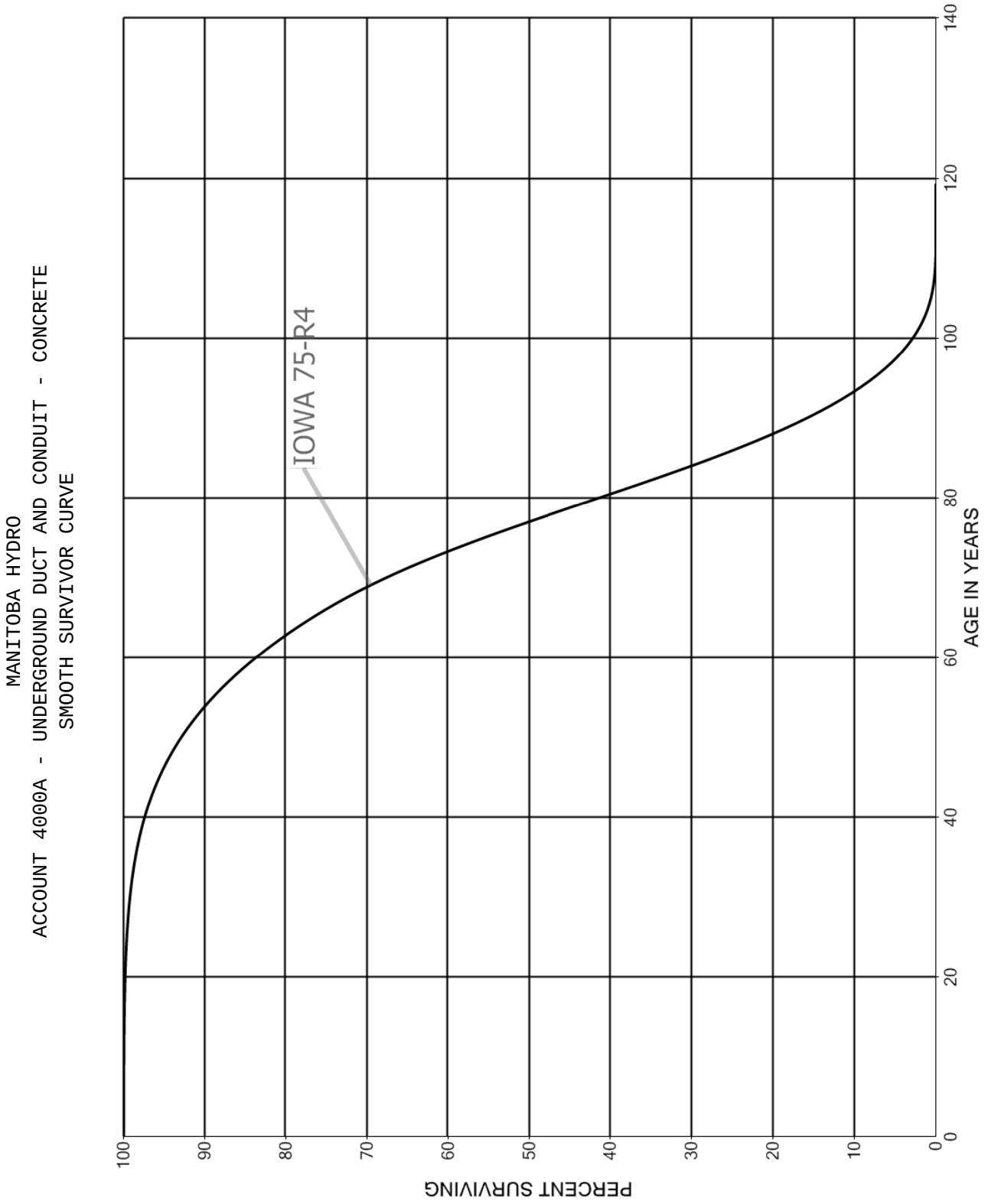
MANITOBA HYDRO

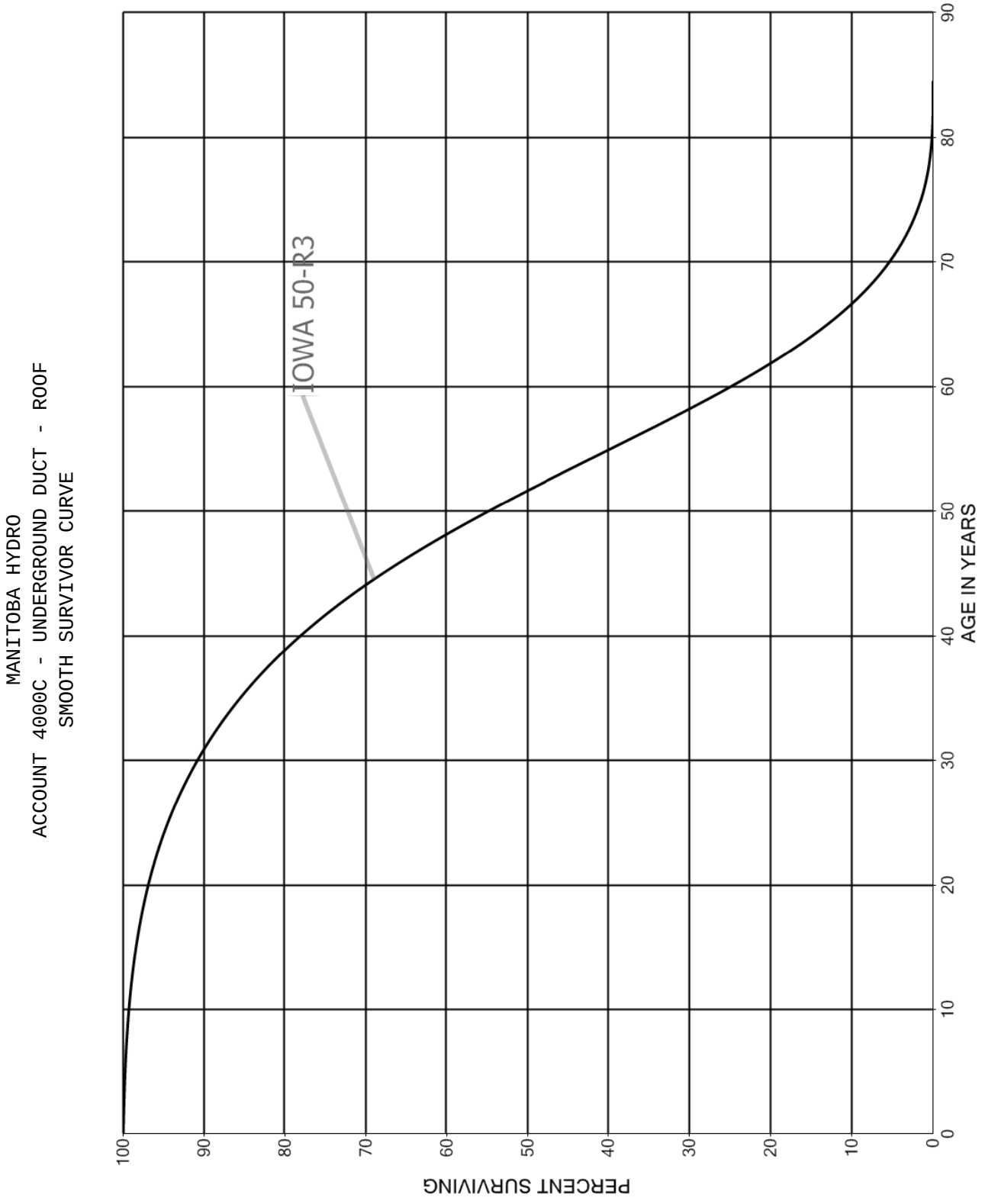
ACCOUNT 3200V – HVDC ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE

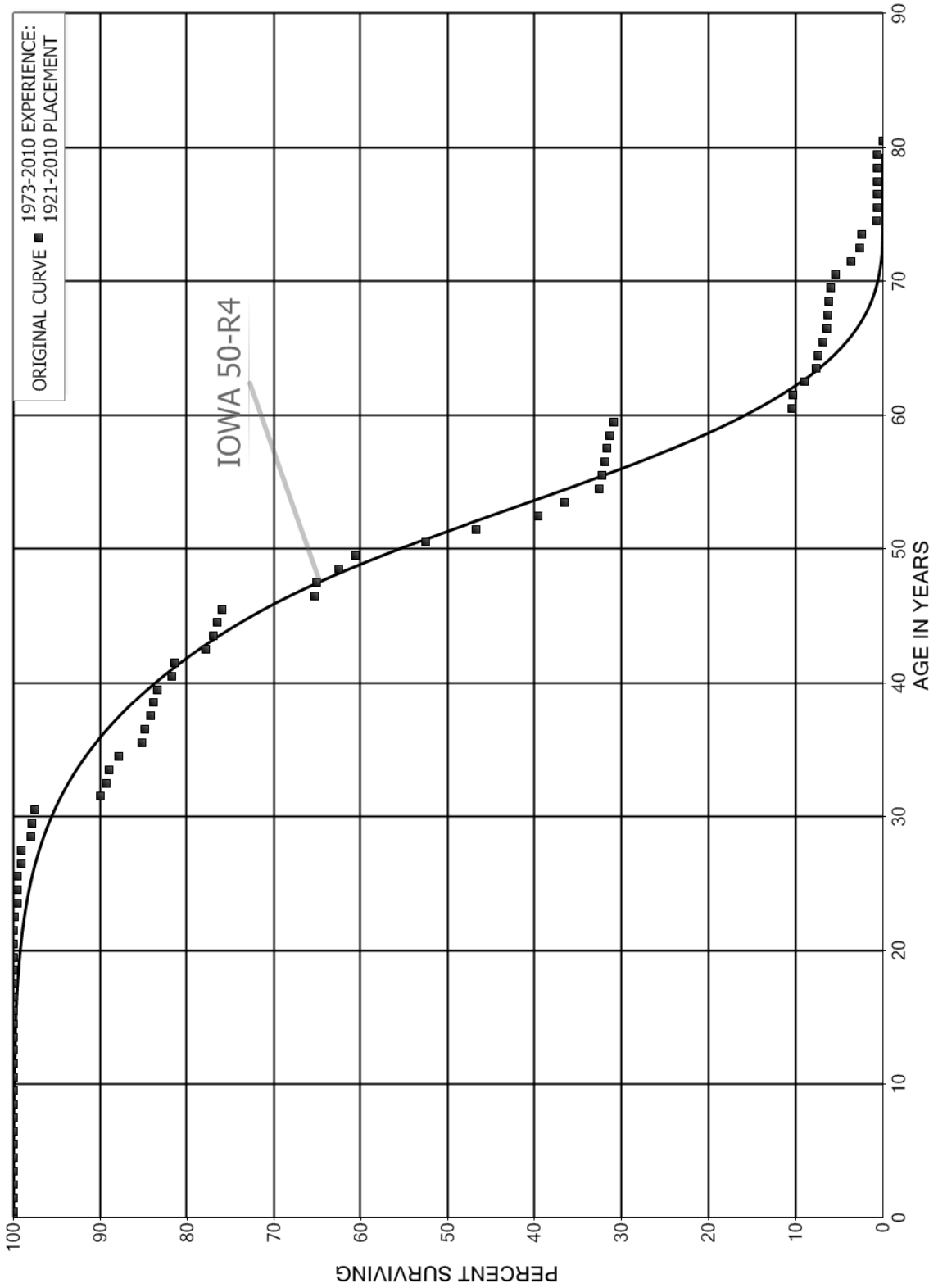
PLACEMENT BAND 1976-2010 EXPERIENCE BAND 1974-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	12,914,421	1	0.0000	1.0000	100.00
0.5	12,674,912	64,502	0.0051	0.9949	100.00
1.5	12,295,858		0.0000	1.0000	99.49
2.5	12,234,909		0.0000	1.0000	99.49
3.5	12,170,255		0.0000	1.0000	99.49
4.5	12,010,848		0.0000	1.0000	99.49
5.5	10,382,590		0.0000	1.0000	99.49
6.5	10,382,590		0.0000	1.0000	99.49
7.5	10,347,988		0.0000	1.0000	99.49
8.5	10,325,052		0.0000	1.0000	99.49
9.5	10,284,032		0.0000	1.0000	99.49
10.5	16,107,632		0.0000	1.0000	99.49
11.5	16,078,405		0.0000	1.0000	99.49
12.5	15,897,389		0.0000	1.0000	99.49
13.5	12,377,269	70	0.0000	1.0000	99.49
14.5	12,132,875	33,420	0.0028	0.9972	99.49
15.5	12,079,591		0.0000	1.0000	99.22
16.5	12,038,671		0.0000	1.0000	99.22
17.5	11,143,426	300,592	0.0270	0.9730	99.22
18.5	10,282,634	2,938,234	0.2857	0.7143	96.54
19.5	7,010,058	226,415	0.0323	0.9677	68.95
20.5	6,444,285	5,829	0.0009	0.9991	66.73
21.5	5,590,232		0.0000	1.0000	66.67
22.5	5,590,232		0.0000	1.0000	66.67
23.5	5,561,491		0.0000	1.0000	66.67
24.5	5,306,681		0.0000	1.0000	66.67
25.5	4,639,083	1,055,413	0.2275	0.7725	66.67
26.5	3,583,670		0.0000	1.0000	51.50
27.5	3,583,670		0.0000	1.0000	51.50
28.5	3,583,670		0.0000	1.0000	51.50
29.5	3,583,670	2,477	0.0007	0.9993	51.50
30.5	3,581,192		0.0000	1.0000	51.46
31.5	3,581,192	3,295,601	0.9203	0.0797	51.46
32.5	285,591	16,891	0.0591	0.9409	4.10
33.5	268,700	268,700	1.0000		3.86
34.5					


MANITOBA HYDRO
ACCOUNT 4000A - UNDERGROUND DUCT AND CONDUIT - CONCRETE
SMOOTH SURVIVOR CURVE
IOWA 75-R4
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
140
AGE IN YEARS


MANITOBA HYDRO
ACCOUNT 4000C - UNDERGROUND DUCT - ROOF
SMOOTH SURVIVOR CURVE
IOWA 50-R3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
10
20
30
40
50
60
70
80
90

MANITOBA HYDRO
ACCOUNT 4000G - METAL TOWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000G - METAL TOWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1921-2010 EXPERIENCE BAND 1973-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,211,791		0.0000	1.0000	100.00
0.5	4,015,619		0.0000	1.0000	100.00
1.5	4,015,619		0.0000	1.0000	100.00
2.5	4,363,542	0	0.0000	1.0000	100.00
3.5	3,789,940	3	0.0000	1.0000	100.00
4.5	3,763,543	54	0.0000	1.0000	100.00
5.5	3,739,918	0	0.0000	1.0000	100.00
6.5	3,473,723	1	0.0000	1.0000	100.00
7.5	3,464,763	23	0.0000	1.0000	100.00
8.5	2,152,332	134	0.0001	0.9999	100.00
9.5	2,154,356	0	0.0000	1.0000	99.99
10.5	2,097,059	181	0.0001	0.9999	99.99
11.5	2,098,698	3	0.0000	1.0000	99.98
12.5	2,064,053	4	0.0000	1.0000	99.98
13.5	1,869,203	105	0.0001	0.9999	99.98
14.5	587,664	89	0.0002	0.9998	99.98
15.5	592,383	28	0.0000	1.0000	99.96
16.5	593,465	113	0.0002	0.9998	99.96
17.5	687,498	98	0.0001	0.9999	99.94
18.5	688,303	62	0.0001	0.9999	99.92
19.5	706,930	59	0.0001	0.9999	99.91
20.5	717,183	40	0.0001	0.9999	99.91
21.5	763,228	814	0.0011	0.9989	99.90
22.5	796,458	2,145	0.0027	0.9973	99.79
23.5	835,761	226	0.0003	0.9997	99.53
24.5	853,076	316	0.0004	0.9996	99.50
25.5	871,999	3,032	0.0035	0.9965	99.46
26.5	870,123	737	0.0008	0.9992	99.12
27.5	870,994	9,630	0.0111	0.9889	99.03
28.5	861,701	1,051	0.0012	0.9988	97.94
29.5	862,392	2,730	0.0032	0.9968	97.82
30.5	859,951	66,746	0.0776	0.9224	97.51
31.5	911,502	7,128	0.0078	0.9922	89.94
32.5	881,266	2,494	0.0028	0.9972	89.24
33.5	886,347	11,884	0.0134	0.9866	88.98
34.5	882,192	26,756	0.0303	0.9697	87.79
35.5	856,612	2,726	0.0032	0.9968	85.13
36.5	857,690	7,115	0.0083	0.9917	84.86
37.5	801,531	3,116	0.0039	0.9961	84.15
38.5	798,864	4,084	0.0051	0.9949	83.83

MANITOBA HYDRO

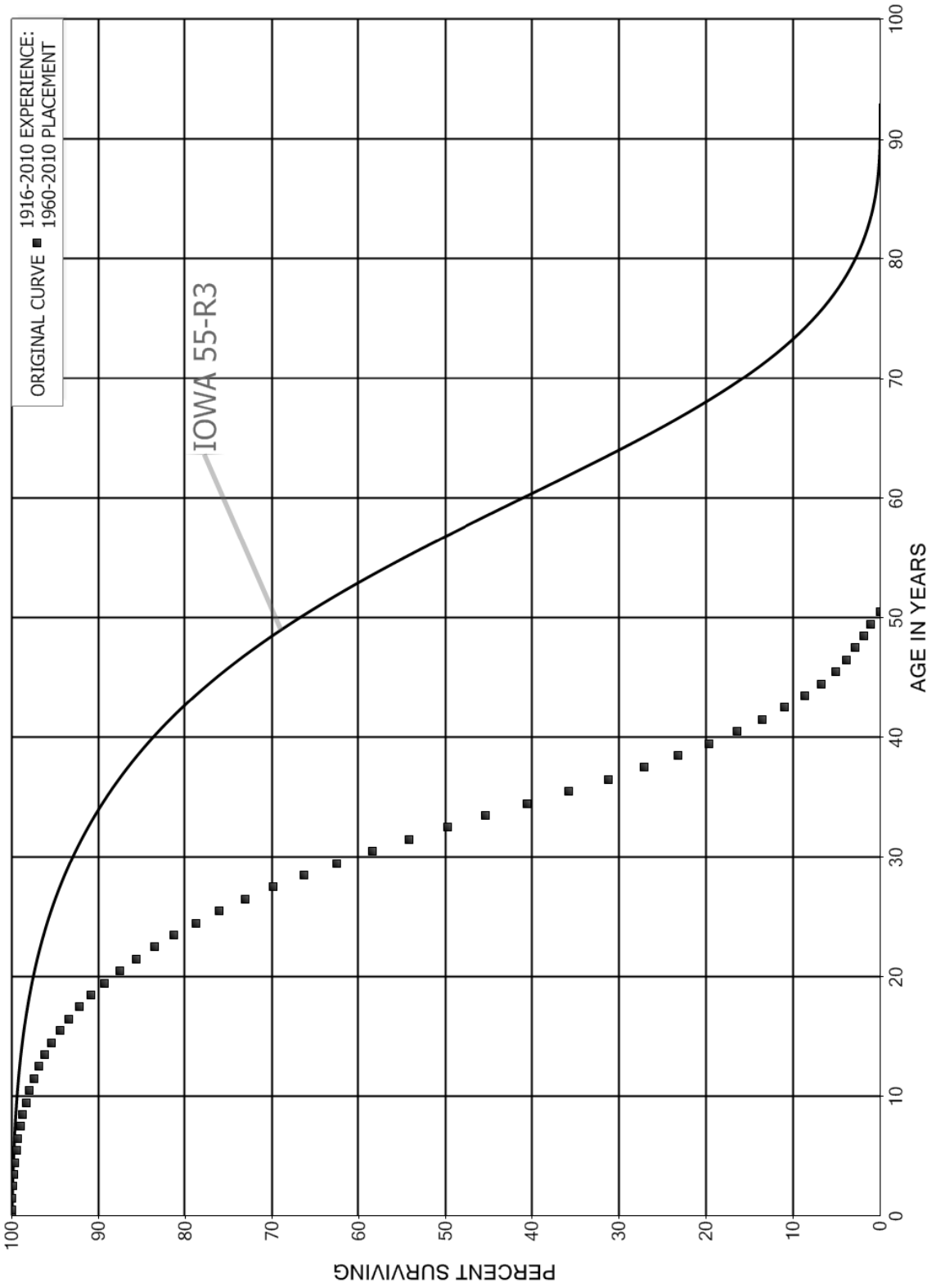
ACCOUNT 4000G - METAL TOWERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1921-2010 EXPERIENCE BAND 1973-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	794,816	15,824	0.0199	0.9801	83.40
40.5	518,556	2,507	0.0048	0.9952	81.74
41.5	517,271	22,052	0.0426	0.9574	81.34
42.5	505,843	5,671	0.0112	0.9888	77.87
43.5	489,715	3,455	0.0071	0.9929	77.00
44.5	466,666	3,307	0.0071	0.9929	76.46
45.5	473,109	66,088	0.1397	0.8603	75.92
46.5	395,398	1,239	0.0031	0.9969	65.31
47.5	393,261	15,823	0.0402	0.9598	65.11
48.5	374,730	11,343	0.0303	0.9697	62.49
49.5	362,635	48,713	0.1343	0.8657	60.60
50.5	313,153	34,935	0.1116	0.8884	52.46
51.5	265,976	40,760	0.1532	0.8468	46.60
52.5	224,707	16,738	0.0745	0.9255	39.46
53.5	206,344	22,711	0.1101	0.8899	36.52
54.5	183,313	1,550	0.0085	0.9915	32.50
55.5	159,686	1,896	0.0119	0.9881	32.23
56.5	157,630	1,074	0.0068	0.9932	31.85
57.5	154,380	1,595	0.0103	0.9897	31.63
58.5	152,467	2,467	0.0162	0.9838	31.30
59.5	150,000	99,511	0.6634	0.3366	30.79
60.5	50,489	623	0.0123	0.9877	10.37
61.5	49,866	6,243	0.1252	0.8748	10.24
62.5	43,624	6,356	0.1457	0.8543	8.96
63.5	37,268	1,028	0.0276	0.9724	7.65
64.5	36,240	3,070	0.0847	0.9153	7.44
65.5	33,170	2,251	0.0679	0.9321	6.81
66.5	30,919	343	0.0111	0.9889	6.35
67.5	30,576	320	0.0105	0.9895	6.28
68.5	30,256	1,155	0.0382	0.9618	6.21
69.5	29,101	2,896	0.0995	0.9005	5.97
70.5	26,205	8,474	0.3234	0.6766	5.38
71.5	17,731	4,856	0.2739	0.7261	3.64
72.5	12,875	1,311	0.1019	0.8981	2.64
73.5	11,563	8,140	0.7040	0.2960	2.37
74.5	3,423	273	0.0797	0.9203	0.70
75.5	3,150	176	0.0560	0.9440	0.65
76.5	2,974	5	0.0018	0.9982	0.61
77.5	2,969	77	0.0261	0.9739	0.61
78.5	2,891	158	0.0547	0.9453	0.59
79.5	2,733	2,733	1.0000		0.56
80.5					

MANITOBA HYDRO
ACCOUNT 4000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2010 EXPERIENCE BAND 1916-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	640,302,274	161,906	0.0003	0.9997	100.00
0.5	609,761,195	375,907	0.0006	0.9994	99.97
1.5	576,567,933	462,125	0.0008	0.9992	99.91
2.5	548,125,828	563,046	0.0010	0.9990	99.83
3.5	522,264,045	669,927	0.0013	0.9987	99.73
4.5	496,987,564	793,823	0.0016	0.9984	99.60
5.5	469,904,027	927,817	0.0020	0.9980	99.44
6.5	440,102,196	1,066,411	0.0024	0.9976	99.25
7.5	393,251,723	1,165,684	0.0030	0.9970	99.01
8.5	370,972,791	1,324,158	0.0036	0.9964	98.71
9.5	349,527,336	1,501,496	0.0043	0.9957	98.36
10.5	324,397,893	1,647,860	0.0051	0.9949	97.94
11.5	292,467,078	1,772,685	0.0061	0.9939	97.44
12.5	262,987,600	1,876,403	0.0071	0.9929	96.85
13.5	242,899,446	2,008,133	0.0083	0.9917	96.16
14.5	217,749,581	2,111,967	0.0097	0.9903	95.36
15.5	199,746,647	2,233,780	0.0112	0.9888	94.44
16.5	181,525,566	2,308,134	0.0127	0.9873	93.38
17.5	164,385,453	2,422,722	0.0147	0.9853	92.20
18.5	147,210,072	2,550,206	0.0173	0.9827	90.84
19.5	135,706,010	2,629,010	0.0194	0.9806	89.26
20.5	126,090,036	2,729,219	0.0216	0.9784	87.53
21.5	114,969,094	2,782,703	0.0242	0.9758	85.64
22.5	104,461,117	2,849,021	0.0273	0.9727	83.57
23.5	94,584,155	2,918,701	0.0309	0.9691	81.29
24.5	84,216,420	2,920,508	0.0347	0.9653	78.78
25.5	74,340,118	2,922,194	0.0393	0.9607	76.05
26.5	65,411,749	2,917,845	0.0446	0.9554	73.06
27.5	56,105,577	2,833,015	0.0505	0.9495	69.80
28.5	48,391,317	2,774,021	0.0573	0.9427	66.27
29.5	41,311,092	2,669,644	0.0646	0.9354	62.48
30.5	34,483,495	2,530,869	0.0734	0.9266	58.44
31.5	28,796,064	2,333,014	0.0810	0.9190	54.15
32.5	23,740,269	2,127,395	0.0896	0.9104	49.76
33.5	17,645,785	1,853,768	0.1051	0.8949	45.30
34.5	12,807,327	1,523,847	0.1190	0.8810	40.54
35.5	9,296,076	1,181,665	0.1271	0.8729	35.72
36.5	6,828,335	890,887	0.1305	0.8695	31.18
37.5	5,067,957	728,380	0.1437	0.8563	27.11
38.5	3,663,916	564,738	0.1541	0.8459	23.21

MANITOBA HYDRO

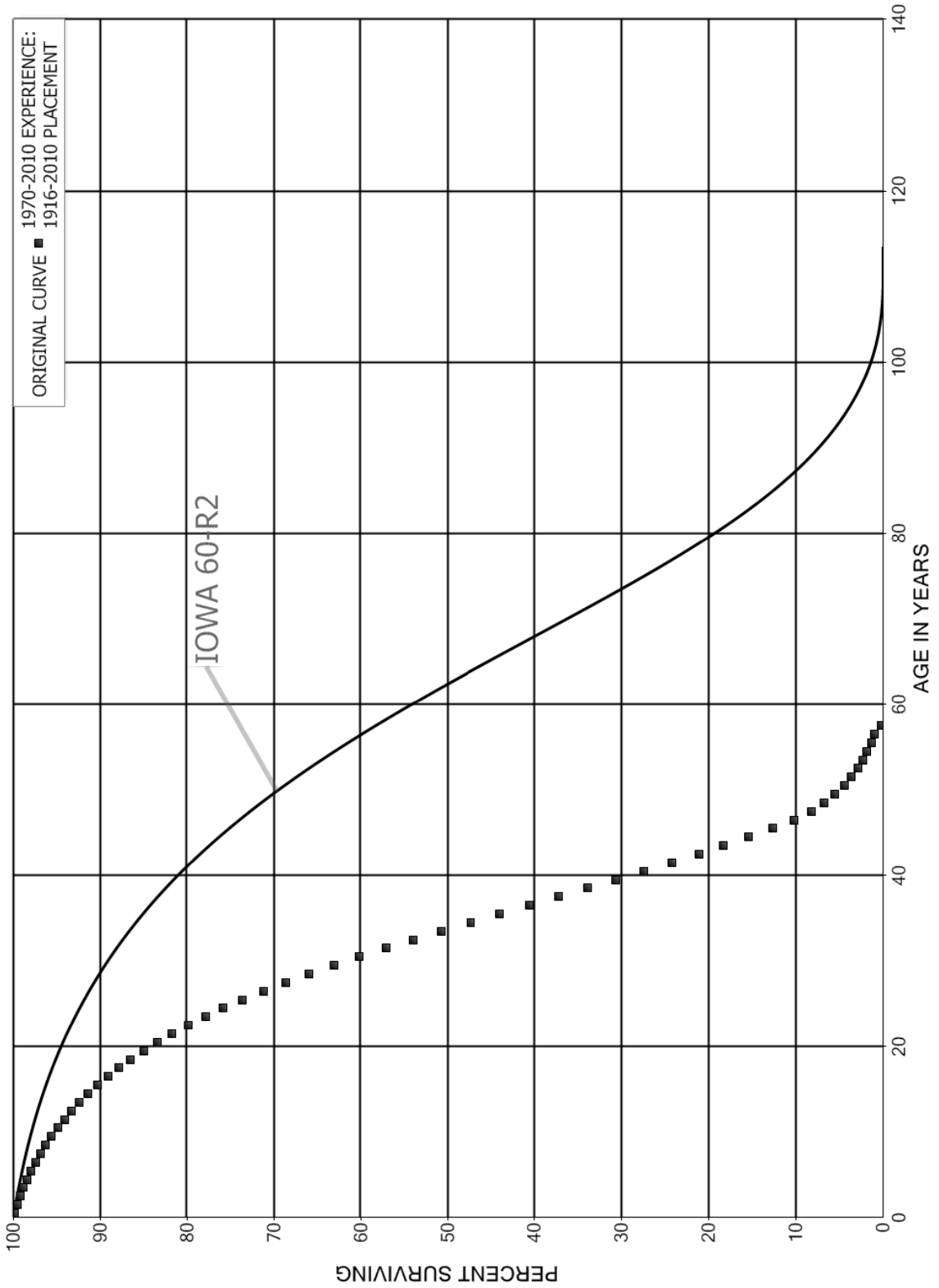
ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2010 EXPERIENCE BAND 1916-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,631,352	437,363	0.1662	0.8338	19.64
40.5	1,858,717	330,611	0.1779	0.8221	16.37
41.5	1,274,391	240,883	0.1890	0.8110	13.46
42.5	846,515	174,642	0.2063	0.7937	10.92
43.5	555,136	125,899	0.2268	0.7732	8.66
44.5	348,467	83,727	0.2403	0.7597	6.70
45.5	202,143	50,808	0.2513	0.7487	5.09
46.5	110,860	28,075	0.2532	0.7468	3.81
47.5	59,795	20,340	0.3402	0.6598	2.85
48.5	21,103	9,296	0.4405	0.5595	1.88
49.5	1,439	1,439	1.0000		1.05
50.5					

MANITOBA HYDRO
ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	680,302,669	999,865	0.0015	0.9985	100.00
0.5	649,714,090	2,052,258	0.0032	0.9968	99.85
1.5	614,887,051	2,158,731	0.0035	0.9965	99.54
2.5	585,242,617	2,278,794	0.0039	0.9961	99.19
3.5	557,871,658	2,367,474	0.0042	0.9958	98.80
4.5	530,779,166	2,486,640	0.0047	0.9953	98.38
5.5	501,441,421	2,586,868	0.0052	0.9948	97.92
6.5	468,959,768	2,664,137	0.0057	0.9943	97.42
7.5	421,532,147	2,631,021	0.0062	0.9938	96.86
8.5	398,451,287	2,715,963	0.0068	0.9932	96.26
9.5	375,811,202	2,805,286	0.0075	0.9925	95.60
10.5	349,050,733	2,842,387	0.0081	0.9919	94.89
11.5	314,737,182	2,835,785	0.0090	0.9910	94.12
12.5	283,518,795	2,814,215	0.0099	0.9901	93.27
13.5	262,393,569	2,832,006	0.0108	0.9892	92.34
14.5	237,667,918	2,814,991	0.0118	0.9882	91.35
15.5	220,132,761	2,853,354	0.0130	0.9870	90.26
16.5	203,846,819	2,890,540	0.0142	0.9858	89.09
17.5	186,412,988	2,901,064	0.0156	0.9844	87.83
18.5	169,282,392	2,916,231	0.0172	0.9828	86.46
19.5	156,372,680	2,930,161	0.0187	0.9813	84.97
20.5	145,502,171	2,984,642	0.0205	0.9795	83.38
21.5	132,848,949	2,981,806	0.0224	0.9776	81.67
22.5	121,510,131	2,982,564	0.0245	0.9755	79.84
23.5	110,702,841	2,966,113	0.0268	0.9732	77.88
24.5	100,232,486	2,938,146	0.0293	0.9707	75.79
25.5	89,576,170	2,890,848	0.0323	0.9677	73.57
26.5	80,005,396	2,840,953	0.0355	0.9645	71.20
27.5	70,632,502	2,773,334	0.0393	0.9607	68.67
28.5	62,788,727	2,731,227	0.0435	0.9565	65.97
29.5	55,911,792	2,638,335	0.0472	0.9528	63.10
30.5	49,313,544	2,525,359	0.0512	0.9488	60.12
31.5	43,398,386	2,365,921	0.0545	0.9455	57.05
32.5	37,674,627	2,248,758	0.0597	0.9403	53.94
33.5	31,541,675	2,111,691	0.0669	0.9331	50.72
34.5	26,308,363	1,892,165	0.0719	0.9281	47.32
35.5	22,033,182	1,691,048	0.0768	0.9232	43.92
36.5	18,437,918	1,545,495	0.0838	0.9162	40.55
37.5	15,565,308	1,389,209	0.0893	0.9107	37.15
38.5	13,106,740	1,251,677	0.0955	0.9045	33.83

MANITOBA HYDRO

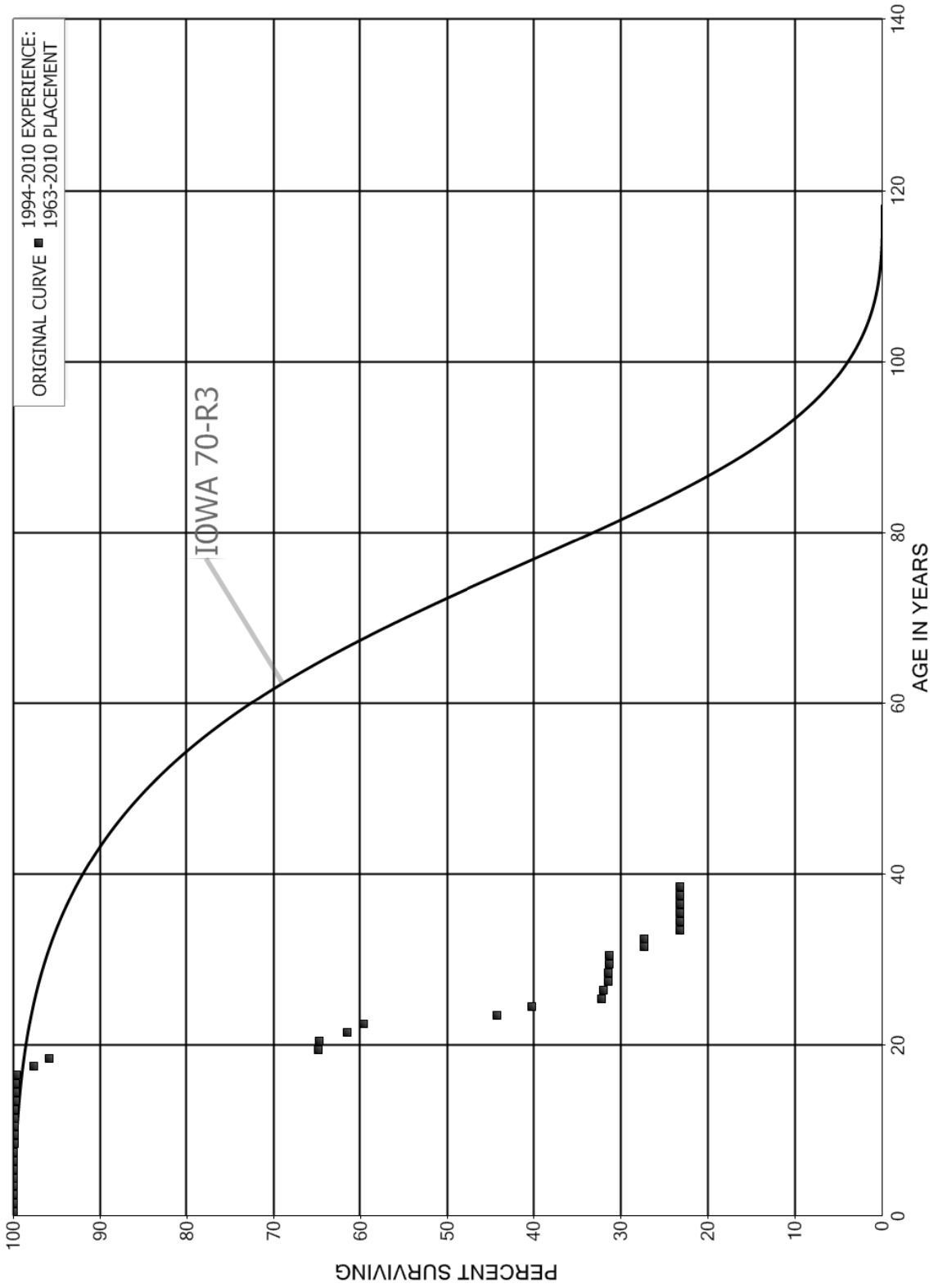
ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	11,082,936	1,167,122	0.1053	0.8947	30.60
40.5	9,202,728	1,095,223	0.1190	0.8810	27.38
41.5	7,554,361	949,743	0.1257	0.8743	24.12
42.5	6,226,544	843,551	0.1355	0.8645	21.09
43.5	4,882,498	753,402	0.1543	0.8457	18.23
44.5	3,734,952	678,595	0.1817	0.8183	15.42
45.5	2,720,057	527,442	0.1939	0.8061	12.62
46.5	1,973,992	380,724	0.1929	0.8071	10.17
47.5	1,441,361	262,389	0.1820	0.8180	8.21
48.5	992,105	182,838	0.1843	0.8157	6.71
49.5	628,310	119,039	0.1895	0.8105	5.48
50.5	399,939	74,582	0.1865	0.8135	4.44
51.5	250,630	50,224	0.2004	0.7996	3.61
52.5	151,751	29,767	0.1962	0.8038	2.89
53.5	115,716	24,568	0.2123	0.7877	2.32
54.5	71,656	22,598	0.3154	0.6846	1.83
55.5	25,216	6,979	0.2768	0.7232	1.25
56.5	4,990	3,959	0.7933	0.2067	0.91
57.5					0.19

MANITOBA HYDRO
ACCOUNT 4000M - UNDERGROUND CABLE AND DEVICES - 66 KV
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

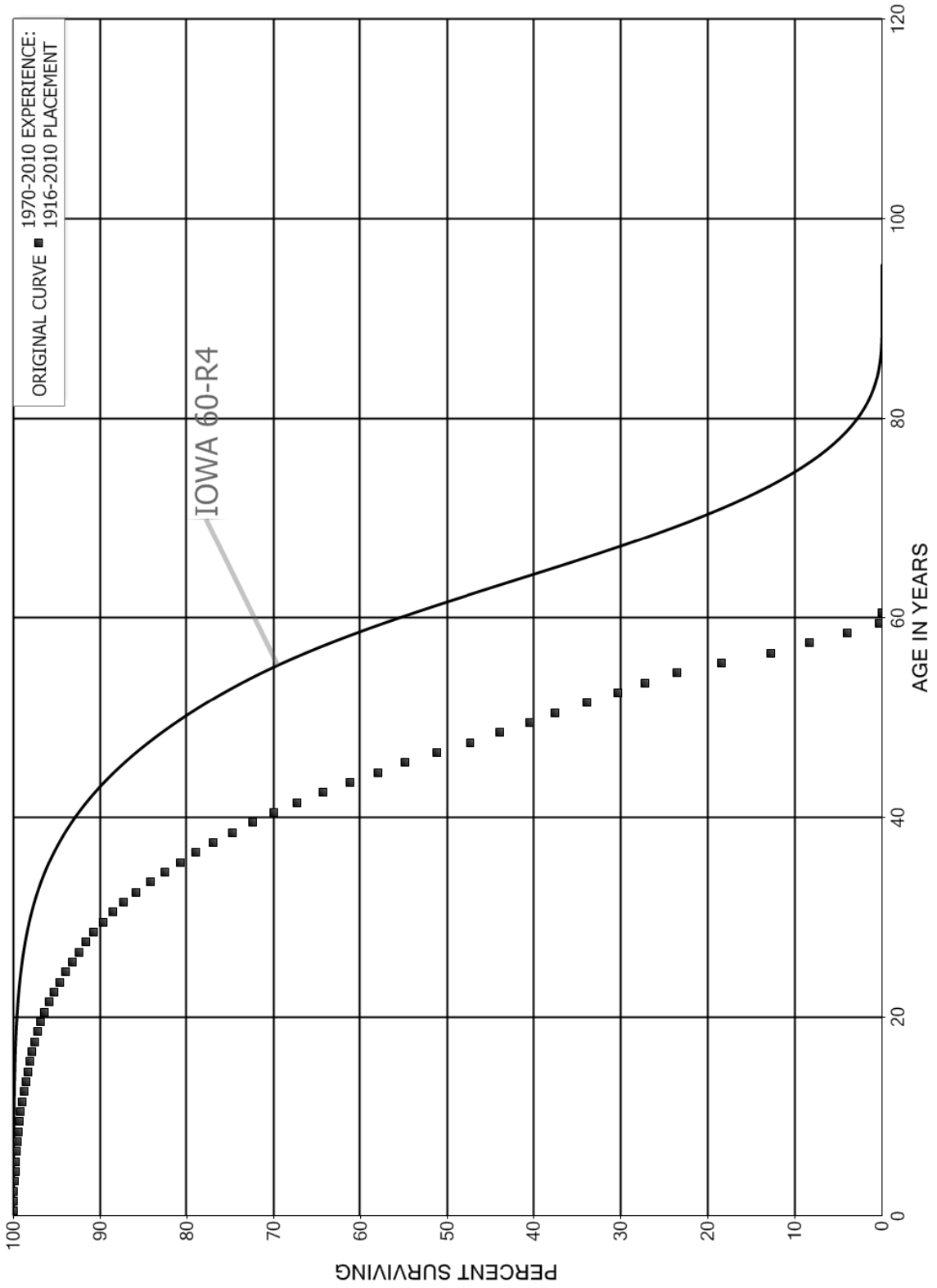
ACCOUNT 4000M - UNDERGROUND CABLE AND DEVICES - 66 KV

ORIGINAL LIFE TABLE

PLACEMENT BAND 1963-2010 EXPERIENCE BAND 1994-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	18,959,677	257	0.0000	1.0000	100.00
0.5	19,248,950	6,555	0.0003	0.9997	100.00
1.5	18,879,075	1,127	0.0001	0.9999	99.96
2.5	18,610,960	3,906	0.0002	0.9998	99.96
3.5	12,711,693	180	0.0000	1.0000	99.94
4.5	12,646,550	358	0.0000	1.0000	99.94
5.5	12,411,977	2,862	0.0002	0.9998	99.93
6.5	12,090,509	515	0.0000	1.0000	99.91
7.5	2,098,088	674	0.0003	0.9997	99.91
8.5	2,090,799	199	0.0001	0.9999	99.87
9.5	2,090,600	16	0.0000	1.0000	99.86
10.5	2,090,583	1,177	0.0006	0.9994	99.86
11.5	2,088,155	147	0.0001	0.9999	99.81
12.5	630,094	289	0.0005	0.9995	99.80
13.5	454,121	15	0.0000	1.0000	99.75
14.5	414,257	14	0.0000	1.0000	99.75
15.5	424,376	604	0.0014	0.9986	99.75
16.5	668,172	13,205	0.0198	0.9802	99.61
17.5	295,463	5,373	0.0182	0.9818	97.64
18.5	266,964	86,425	0.3237	0.6763	95.86
19.5	156,546	200	0.0013	0.9987	64.83
20.5	267,793	13,420	0.0501	0.9499	64.75
21.5	279,788	8,372	0.0299	0.9701	61.50
22.5	322,562	83,931	0.2602	0.7398	59.66
23.5	235,072	21,192	0.0901	0.9099	44.14
24.5	213,880	42,309	0.1978	0.8022	40.16
25.5	171,571	1,283	0.0075	0.9925	32.21
26.5	170,288	3,326	0.0195	0.9805	31.97
27.5	166,962	40	0.0002	0.9998	31.35
28.5	166,922	204	0.0012	0.9988	31.34
29.5	166,718	0	0.0000	1.0000	31.30
30.5	222,382	28,215	0.1269	0.8731	31.30
31.5	194,166	639	0.0033	0.9967	27.33
32.5	185,055	27,676	0.1496	0.8504	27.24
33.5	21,450	2	0.0001	0.9999	23.17
34.5	21,221		0.0000	1.0000	23.16
35.5	21,221		0.0000	1.0000	23.16
36.5	21,221		0.0000	1.0000	23.16
37.5	800		0.0000	1.0000	23.16
38.5					23.16

MANITOBA HYDRO
ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	261,179,152	44,001	0.0002	0.9998	100.00
0.5	243,178,672	95,067	0.0004	0.9996	99.98
1.5	219,352,629	100,281	0.0005	0.9995	99.94
2.5	202,201,044	109,465	0.0005	0.9995	99.90
3.5	189,673,296	123,481	0.0007	0.9993	99.84
4.5	176,048,635	131,884	0.0007	0.9993	99.78
5.5	161,977,709	137,105	0.0008	0.9992	99.70
6.5	151,885,552	150,814	0.0010	0.9990	99.62
7.5	144,131,695	163,967	0.0011	0.9989	99.52
8.5	136,712,041	180,998	0.0013	0.9987	99.41
9.5	127,306,860	191,677	0.0015	0.9985	99.28
10.5	114,600,744	196,133	0.0017	0.9983	99.13
11.5	103,434,835	203,391	0.0020	0.9980	98.96
12.5	96,578,995	217,796	0.0023	0.9977	98.76
13.5	88,315,517	206,678	0.0023	0.9977	98.54
14.5	83,365,304	199,353	0.0024	0.9976	98.31
15.5	76,244,407	205,988	0.0027	0.9973	98.07
16.5	71,370,963	213,185	0.0030	0.9970	97.81
17.5	68,034,972	231,541	0.0034	0.9966	97.52
18.5	64,606,441	255,073	0.0039	0.9961	97.19
19.5	60,030,451	281,626	0.0047	0.9953	96.80
20.5	54,082,815	297,649	0.0055	0.9945	96.35
21.5	50,364,746	304,149	0.0060	0.9940	95.82
22.5	39,913,998	264,083	0.0066	0.9934	95.24
23.5	32,984,936	242,581	0.0074	0.9926	94.61
24.5	30,925,877	242,919	0.0079	0.9921	93.91
25.5	27,793,456	226,850	0.0082	0.9918	93.17
26.5	26,372,233	231,039	0.0088	0.9912	92.41
27.5	24,307,693	246,897	0.0102	0.9898	91.60
28.5	22,968,865	259,334	0.0113	0.9887	90.67
29.5	20,893,256	269,812	0.0129	0.9871	89.65
30.5	18,080,223	256,861	0.0142	0.9858	88.49
31.5	15,360,683	252,533	0.0164	0.9836	87.24
32.5	12,281,068	227,968	0.0186	0.9814	85.80
33.5	9,682,902	194,763	0.0201	0.9799	84.21
34.5	6,509,614	138,576	0.0213	0.9787	82.52
35.5	4,993,397	114,879	0.0230	0.9770	80.76
36.5	3,792,709	94,320	0.0249	0.9751	78.90
37.5	2,917,326	83,664	0.0287	0.9713	76.94
38.5	2,238,578	70,429	0.0315	0.9685	74.73

MANITOBA HYDRO

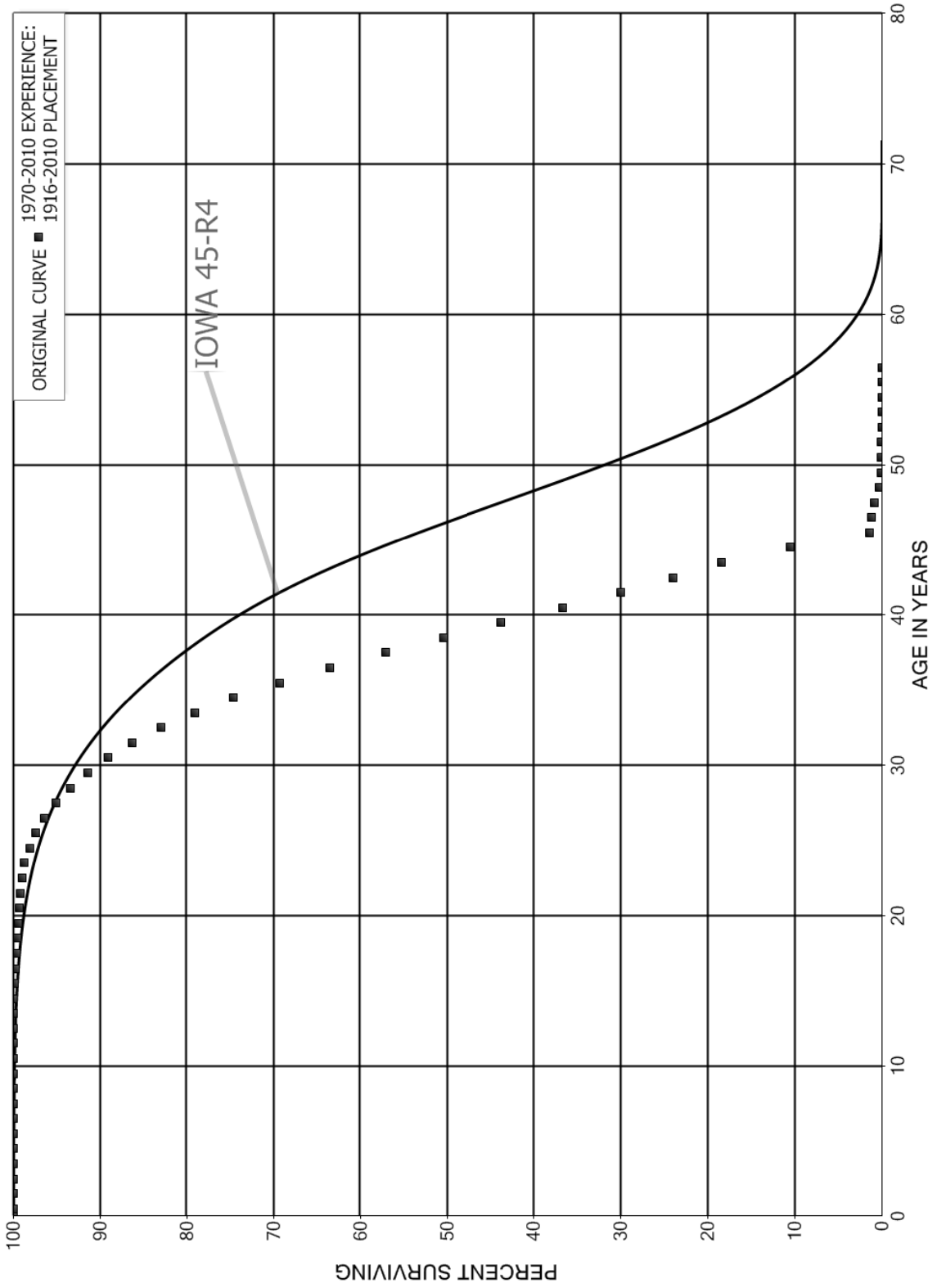
ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,632,986	55,013	0.0337	0.9663	72.38
40.5	1,249,769	47,780	0.0382	0.9618	69.94
41.5	989,683	44,158	0.0446	0.9554	67.27
42.5	655,588	31,655	0.0483	0.9517	64.27
43.5	384,285	20,523	0.0534	0.9466	61.16
44.5	225,684	11,916	0.0528	0.9472	57.90
45.5	133,475	8,958	0.0671	0.9329	54.84
46.5	103,447	7,794	0.0753	0.9247	51.16
47.5	92,428	6,681	0.0723	0.9277	47.31
48.5	20,345	1,623	0.0798	0.9202	43.89
49.5	17,300	1,253	0.0725	0.9275	40.38
50.5	14,663	1,429	0.0975	0.9025	37.46
51.5	12,182	1,252	0.1027	0.8973	33.81
52.5	10,175	1,072	0.1054	0.8946	30.33
53.5	6,654	883	0.1327	0.8673	27.14
54.5	5,417	1,192	0.2201	0.7799	23.54
55.5	3,606	1,104	0.3063	0.6937	18.36
56.5	2,143	756	0.3526	0.6474	12.73
57.5	1,130	593	0.5249	0.4751	8.24
58.5	377	351	0.9299	0.0701	3.92
59.5	6	6	1.0000		0.27
60.5					

MANITOBA HYDRO
ACCOUNT 4000P - UNDERGROUND CABLE AND DEVICES - SECONDARY
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000P - UNDERGROUND CABLE AND DEVICES - SECONDARY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	196,894,665		0.0000	1.0000	100.00
0.5	182,163,616		0.0000	1.0000	100.00
1.5	162,683,357		0.0000	1.0000	100.00
2.5	148,671,534		0.0000	1.0000	100.00
3.5	138,466,497		0.0000	1.0000	100.00
4.5	127,377,363		0.0000	1.0000	100.00
5.5	115,932,815		0.0000	1.0000	100.00
6.5	107,754,795		0.0000	1.0000	100.00
7.5	101,485,667	1	0.0000	1.0000	100.00
8.5	96,370,037	27	0.0000	1.0000	100.00
9.5	89,857,589	253	0.0000	1.0000	100.00
10.5	81,007,673	1,373	0.0000	1.0000	100.00
11.5	73,234,846	4,730	0.0001	0.9999	100.00
12.5	68,507,555	13,374	0.0002	0.9998	99.99
13.5	62,769,778	29,453	0.0005	0.9995	99.97
14.5	59,356,736	42,392	0.0007	0.9993	99.93
15.5	54,363,029	48,433	0.0009	0.9991	99.85
16.5	50,965,317	53,367	0.0010	0.9990	99.76
17.5	48,663,528	51,999	0.0011	0.9989	99.66
18.5	46,300,971	50,549	0.0011	0.9989	99.55
19.5	43,114,230	48,919	0.0011	0.9989	99.45
20.5	38,933,907	57,565	0.0015	0.9985	99.33
21.5	36,369,627	69,171	0.0019	0.9981	99.19
22.5	28,822,119	92,594	0.0032	0.9968	99.00
23.5	23,787,100	135,127	0.0057	0.9943	98.68
24.5	22,296,009	174,233	0.0078	0.9922	98.12
25.5	19,949,688	205,166	0.0103	0.9897	97.35
26.5	18,840,185	247,124	0.0131	0.9869	96.35
27.5	17,195,129	303,852	0.0177	0.9823	95.09
28.5	16,053,803	341,697	0.0213	0.9787	93.41
29.5	14,314,512	376,628	0.0263	0.9737	91.42
30.5	11,984,300	369,096	0.0308	0.9692	89.01
31.5	9,741,101	379,384	0.0389	0.9611	86.27
32.5	7,256,770	337,357	0.0465	0.9535	82.91
33.5	5,223,556	290,442	0.0556	0.9444	79.06
34.5	2,930,754	209,079	0.0713	0.9287	74.66
35.5	1,878,422	159,241	0.0848	0.9152	69.33
36.5	1,135,339	114,984	0.1013	0.8987	63.46
37.5	666,829	77,872	0.1168	0.8832	57.03
38.5	373,593	49,663	0.1329	0.8671	50.37

MANITOBA HYDRO

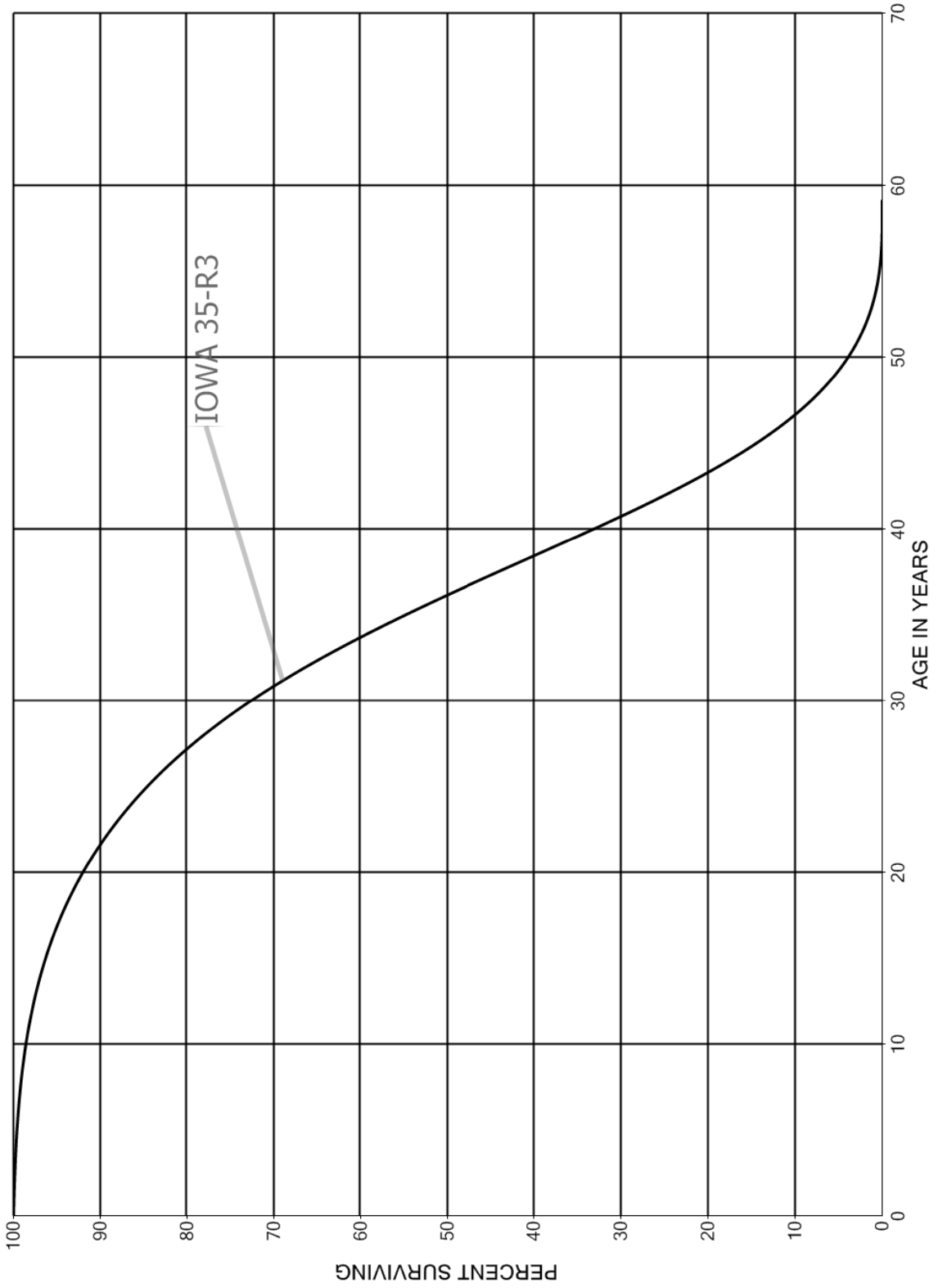
ACCOUNT 4000P - UNDERGROUND CABLE AND DEVICES - SECONDARY

ORIGINAL LIFE TABLE, CONT.

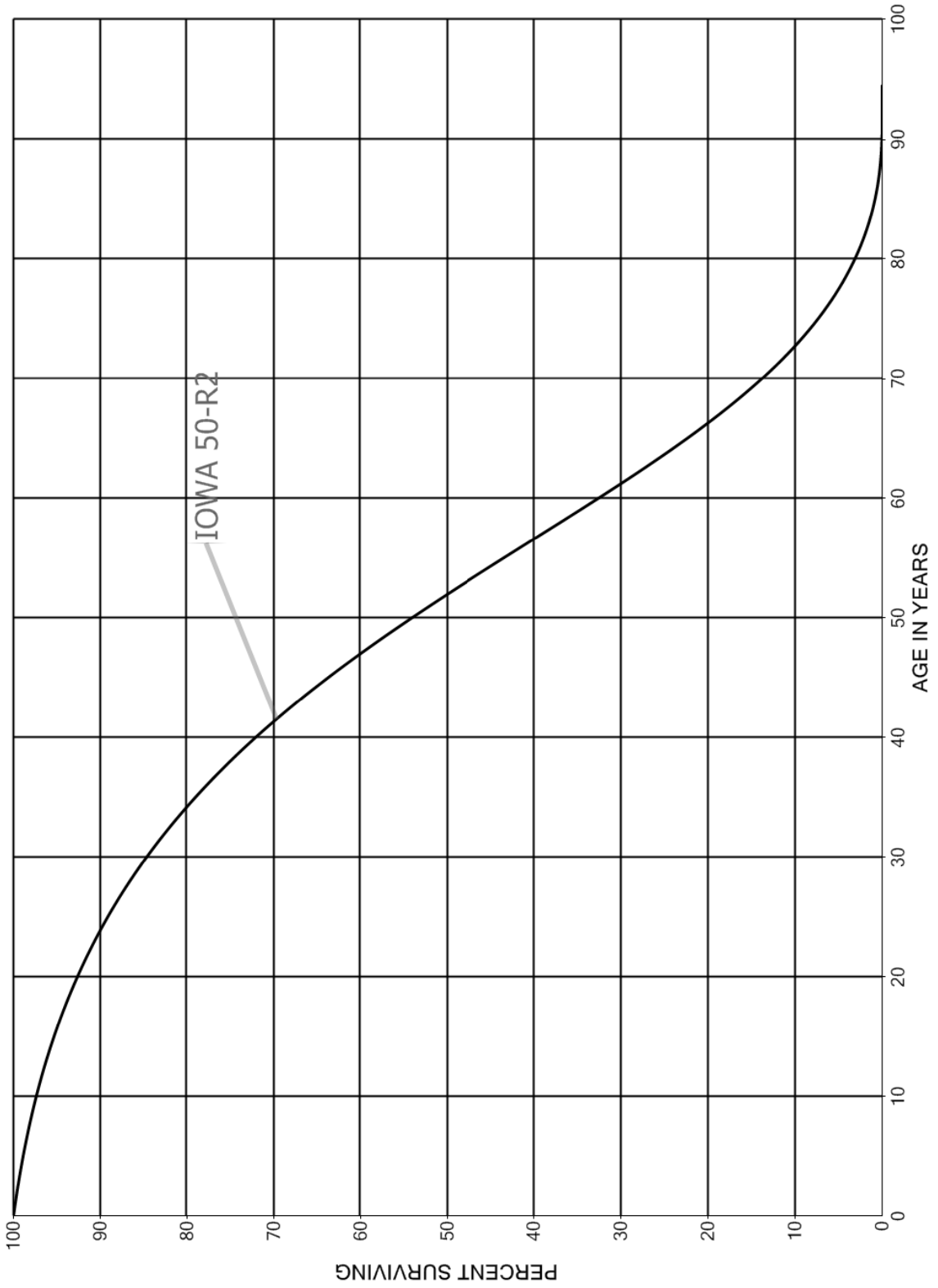
PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

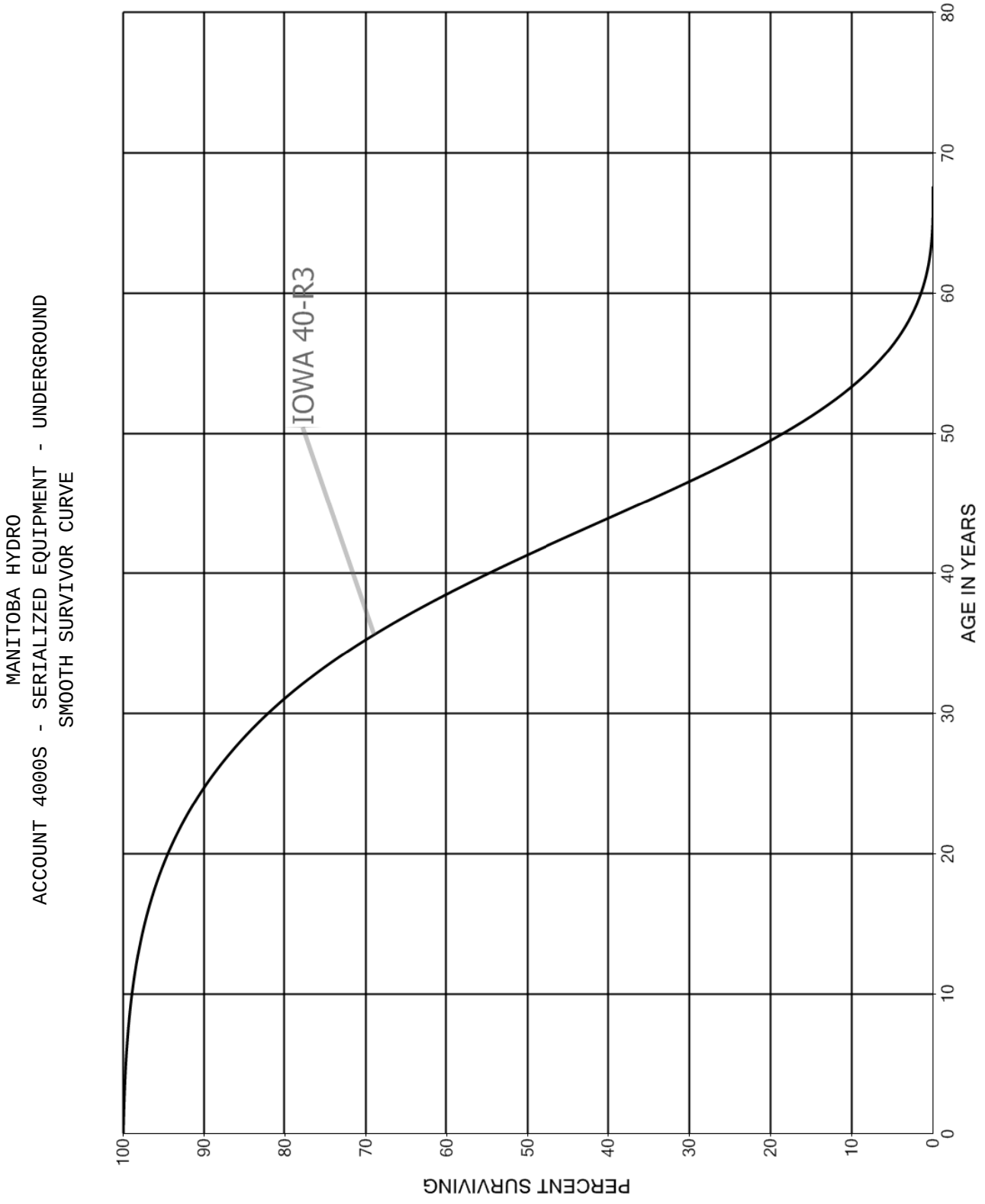
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	177,441	28,712	0.1618	0.8382	43.67
40.5	85,334	15,459	0.1812	0.8188	36.61
41.5	43,373	8,713	0.2009	0.7991	29.98
42.5	14,078	3,279	0.2329	0.7671	23.95
43.5	2,072	887	0.4282	0.5718	18.38
44.5	502	434	0.8651	0.1349	10.51
45.5	239	45	0.1896	0.8104	1.42
46.5	402	104	0.2593	0.7407	1.15
47.5	323	196	0.6064	0.3936	0.85
48.5	144	116	0.8059	0.1941	0.33
49.5	40	21	0.5210	0.4790	0.07
50.5	29	15	0.5009	0.4991	0.03
51.5	22	11	0.5072	0.4928	0.02
52.5	19	9	0.4602	0.5398	0.01
53.5	456	8	0.0178	0.9822	0.00
54.5	448	346	0.7719	0.2281	0.00
55.5	102	102	1.0000		0.00
56.5					

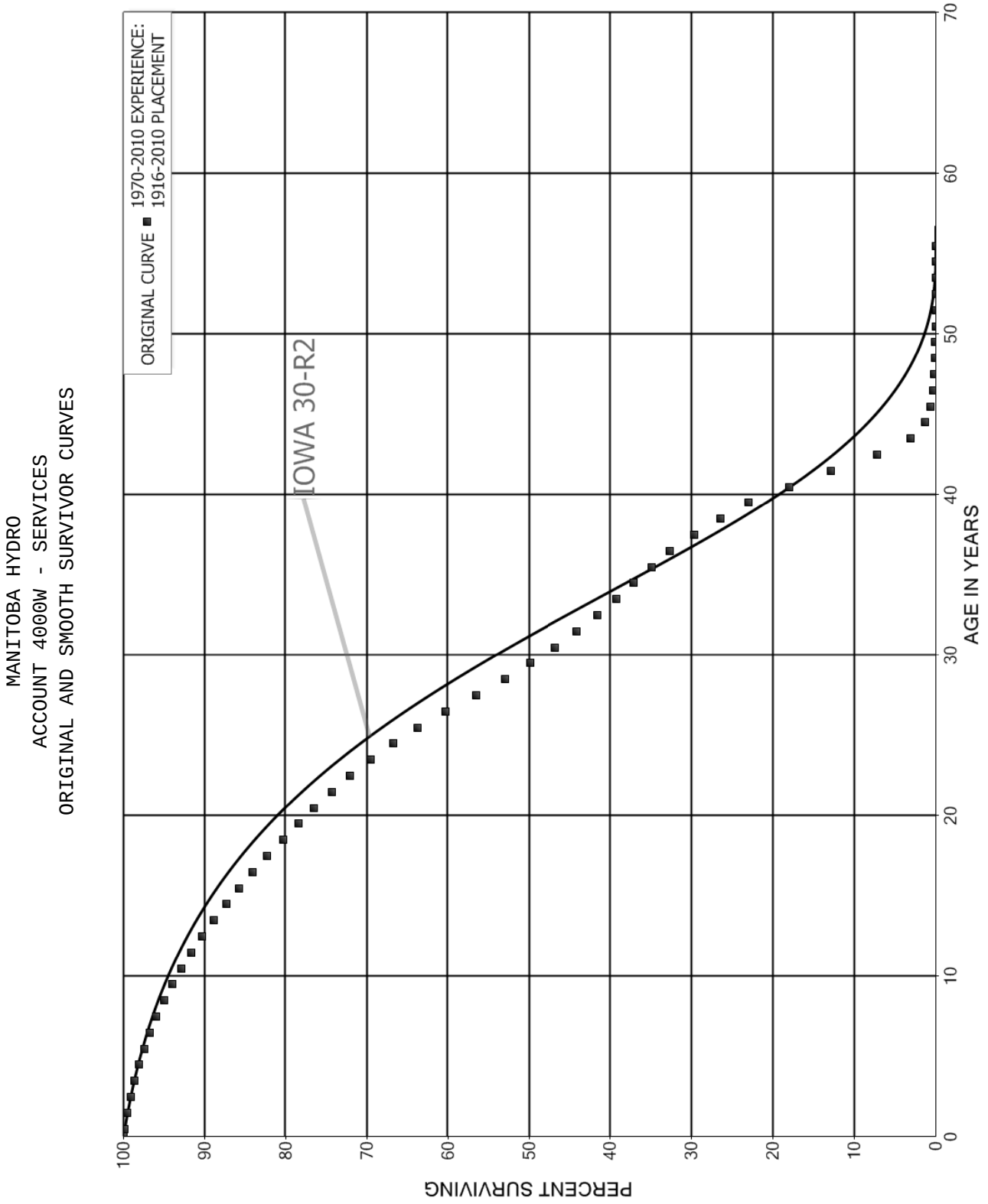
MANITOBA HYDRO
ACCOUNT 4000Q - SERIALIZED EQUIPMENT - OVERHEAD
SMOOTH SURVIVOR CURVE



MANITOBA HYDRO
ACCOUNT 4000R - DSC - HIGH VOLTAGE TRANSFORMERS
SMOOTH SURVIVOR CURVE




MANITOBA HYDRO
ACCOUNT 4000S - SERIALIZED EQUIPMENT - UNDERGROUND
SMOOTH SURVIVOR CURVE
IOWA 40-R3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
10
20
30
40
50
60
70
80


MANITOBA HYDRO
ACCOUNT 4000W - SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1970-2010 EXPERIENCE: 1916-2010 PLACEMENT
IOWA 30-R2
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
70
AGE IN YEARS

MANITOBA HYDRO

ACCOUNT 4000W - SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	138,256,722	228,461	0.0017	0.9983	100.00
0.5	132,536,278	477,950	0.0036	0.9964	99.83
1.5	125,673,301	516,897	0.0041	0.9959	99.47
2.5	118,730,288	563,602	0.0047	0.9953	99.07
3.5	112,190,538	625,639	0.0056	0.9944	98.60
4.5	105,025,762	668,755	0.0064	0.9936	98.05
5.5	97,580,964	705,660	0.0072	0.9928	97.42
6.5	87,297,082	716,055	0.0082	0.9918	96.72
7.5	79,276,348	761,006	0.0096	0.9904	95.92
8.5	70,840,781	763,080	0.0108	0.9892	95.00
9.5	65,526,451	803,748	0.0123	0.9877	93.98
10.5	59,882,049	791,897	0.0132	0.9868	92.83
11.5	54,975,574	784,769	0.0143	0.9857	91.60
12.5	50,110,813	808,414	0.0161	0.9839	90.29
13.5	47,278,116	805,058	0.0170	0.9830	88.83
14.5	43,770,336	798,221	0.0182	0.9818	87.32
15.5	40,341,728	797,777	0.0198	0.9802	85.73
16.5	36,765,092	785,094	0.0214	0.9786	84.03
17.5	33,691,770	781,922	0.0232	0.9768	82.24
18.5	30,302,150	729,540	0.0241	0.9759	80.33
19.5	26,573,876	634,353	0.0239	0.9761	78.40
20.5	23,771,537	706,208	0.0297	0.9703	76.53
21.5	22,868,209	656,762	0.0287	0.9713	74.25
22.5	18,824,832	685,851	0.0364	0.9636	72.12
23.5	16,037,590	628,519	0.0392	0.9608	69.49
24.5	12,385,528	574,378	0.0464	0.9536	66.77
25.5	9,808,330	520,555	0.0531	0.9469	63.67
26.5	7,729,937	483,399	0.0625	0.9375	60.29
27.5	6,144,077	386,641	0.0629	0.9371	56.52
28.5	4,728,299	282,449	0.0597	0.9403	52.97
29.5	3,684,764	225,294	0.0611	0.9389	49.80
30.5	2,918,070	169,800	0.0582	0.9418	46.76
31.5	2,202,685	128,182	0.0582	0.9418	44.04
32.5	1,589,917	88,754	0.0558	0.9442	41.47
33.5	1,058,550	56,238	0.0531	0.9469	39.16
34.5	673,723	40,811	0.0606	0.9394	37.08
35.5	423,894	26,575	0.0627	0.9373	34.83
36.5	248,865	23,251	0.0934	0.9066	32.65
37.5	156,332	16,843	0.1077	0.8923	29.60
38.5	92,899	12,201	0.1313	0.8687	26.41

MANITOBA HYDRO

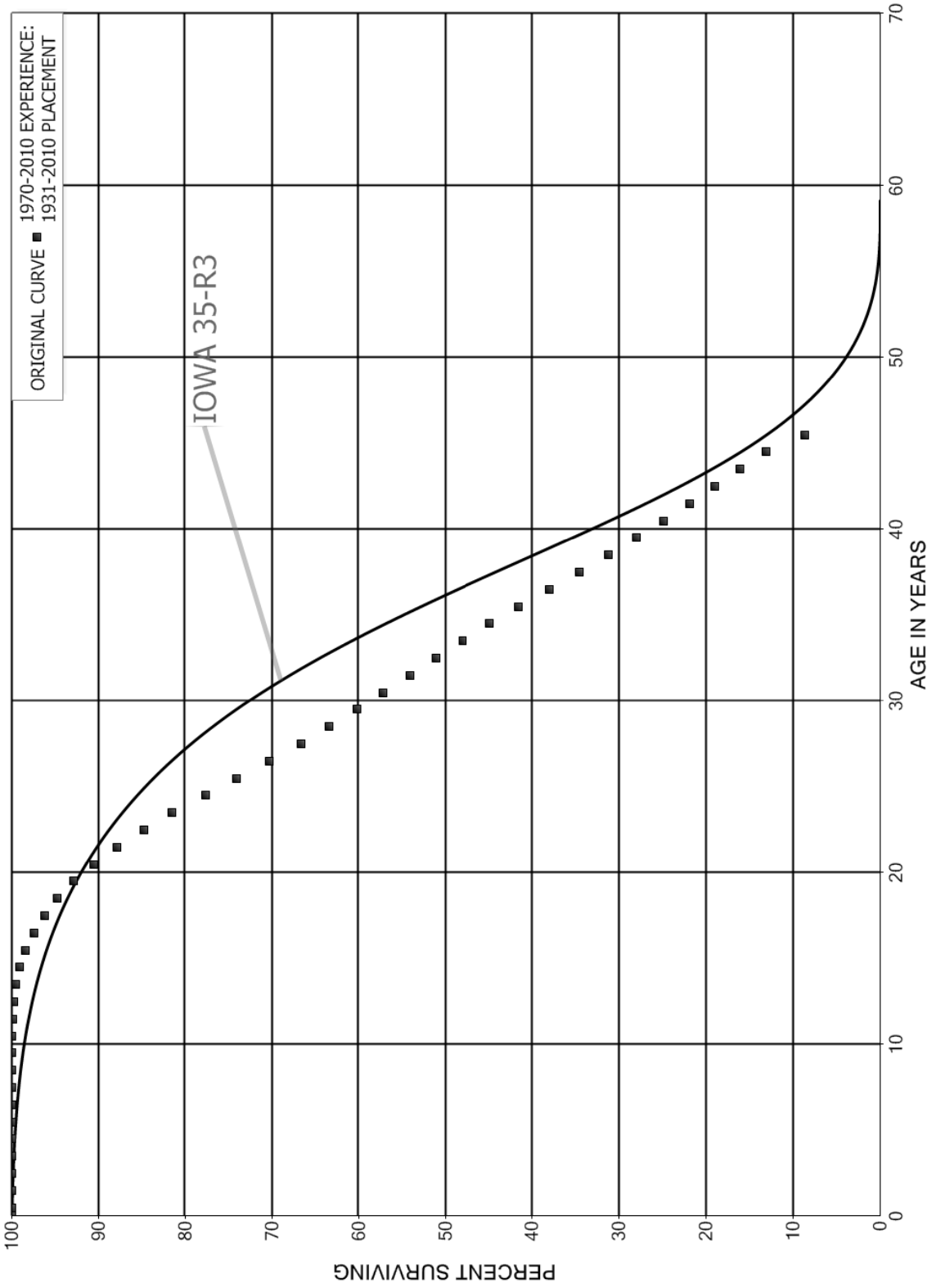
ACCOUNT 4000W - SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	63,435	13,780	0.2172	0.7828	22.94
40.5	49,210	13,909	0.2826	0.7174	17.96
41.5	33,620	14,794	0.4400	0.5600	12.88
42.5	20,791	11,930	0.5738	0.4262	7.21
43.5	13,001	7,451	0.5732	0.4268	3.07
44.5	10,103	5,329	0.5275	0.4725	1.31
45.5	8,877	5,010	0.5644	0.4356	0.62
46.5	8,061	4,124	0.5116	0.4884	0.27
47.5	6,276	4,090	0.6517	0.3483	0.13
48.5	3,621	2,286	0.6312	0.3688	0.05
49.5	2,164	1,397	0.6455	0.3545	0.02
50.5	892	777	0.8709	0.1291	0.01
51.5	318	132	0.4152	0.5848	0.00
52.5	229	190	0.8287	0.1713	0.00
53.5	2,482	271	0.1091	0.8909	0.00
54.5	2,211	2,211	1.0000		0.00
55.5					

MANITOBA HYDRO
ACCOUNT 4000X - STREET LIGHTING
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000X - STREET LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1931-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	159,948,034		0.0000	1.0000	100.00
0.5	154,602,481		0.0000	1.0000	100.00
1.5	150,784,878		0.0000	1.0000	100.00
2.5	145,129,013		0.0000	1.0000	100.00
3.5	140,654,786		0.0000	1.0000	100.00
4.5	135,493,192	4	0.0000	1.0000	100.00
5.5	131,337,748	84	0.0000	1.0000	100.00
6.5	126,224,088	626	0.0000	1.0000	100.00
7.5	123,394,974	3,176	0.0000	1.0000	100.00
8.5	120,087,571	12,858	0.0001	0.9999	100.00
9.5	116,556,218	35,239	0.0003	0.9997	99.99
10.5	112,657,336	74,720	0.0007	0.9993	99.96
11.5	108,293,825	169,080	0.0016	0.9984	99.89
12.5	105,948,004	246,811	0.0023	0.9977	99.73
13.5	100,923,905	471,124	0.0047	0.9953	99.50
14.5	97,144,260	680,822	0.0070	0.9930	99.04
15.5	91,208,318	831,545	0.0091	0.9909	98.34
16.5	84,231,533	1,090,645	0.0129	0.9871	97.45
17.5	77,981,877	1,186,696	0.0152	0.9848	96.18
18.5	68,759,660	1,378,117	0.0200	0.9800	94.72
19.5	61,163,331	1,513,415	0.0247	0.9753	92.82
20.5	55,126,613	1,646,347	0.0299	0.9701	90.53
21.5	48,643,508	1,719,723	0.0354	0.9646	87.82
22.5	44,091,793	1,667,339	0.0378	0.9622	84.72
23.5	38,572,419	1,868,493	0.0484	0.9516	81.51
24.5	33,041,567	1,509,151	0.0457	0.9543	77.56
25.5	28,992,532	1,484,306	0.0512	0.9488	74.02
26.5	25,736,703	1,316,153	0.0511	0.9489	70.23
27.5	21,821,957	1,073,886	0.0492	0.9508	66.64
28.5	18,181,605	904,154	0.0497	0.9503	63.36
29.5	15,060,821	767,444	0.0510	0.9490	60.21
30.5	10,489,950	557,057	0.0531	0.9469	57.14
31.5	8,436,056	477,634	0.0566	0.9434	54.11
32.5	6,007,107	358,795	0.0597	0.9403	51.04
33.5	3,801,553	250,634	0.0659	0.9341	48.00
34.5	2,749,598	201,833	0.0734	0.9266	44.83
35.5	1,554,222	132,397	0.0852	0.9148	41.54
36.5	1,044,191	94,848	0.0908	0.9092	38.00
37.5	731,845	71,659	0.0979	0.9021	34.55
38.5	464,008	48,171	0.1038	0.8962	31.17

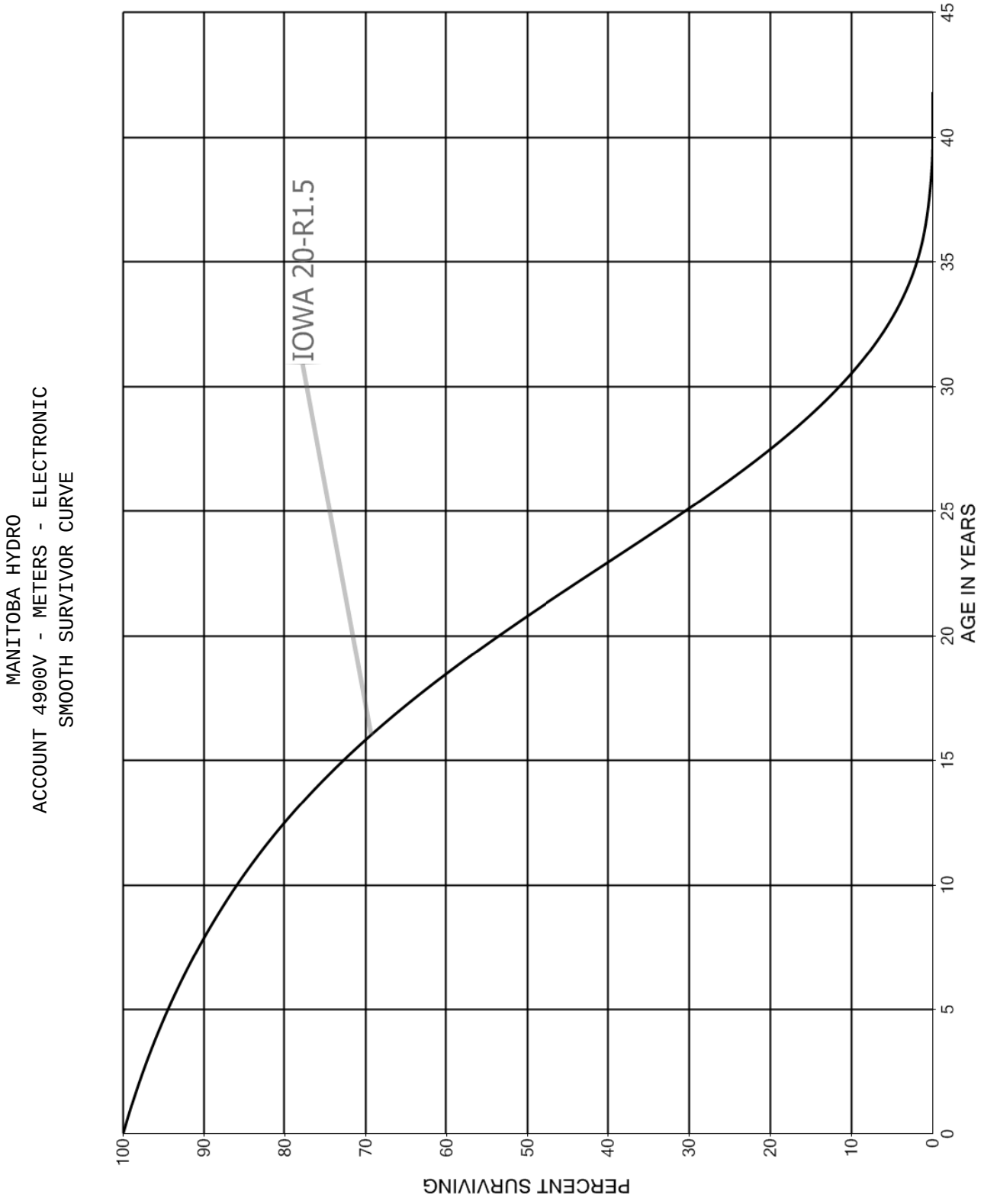
MANITOBA HYDRO

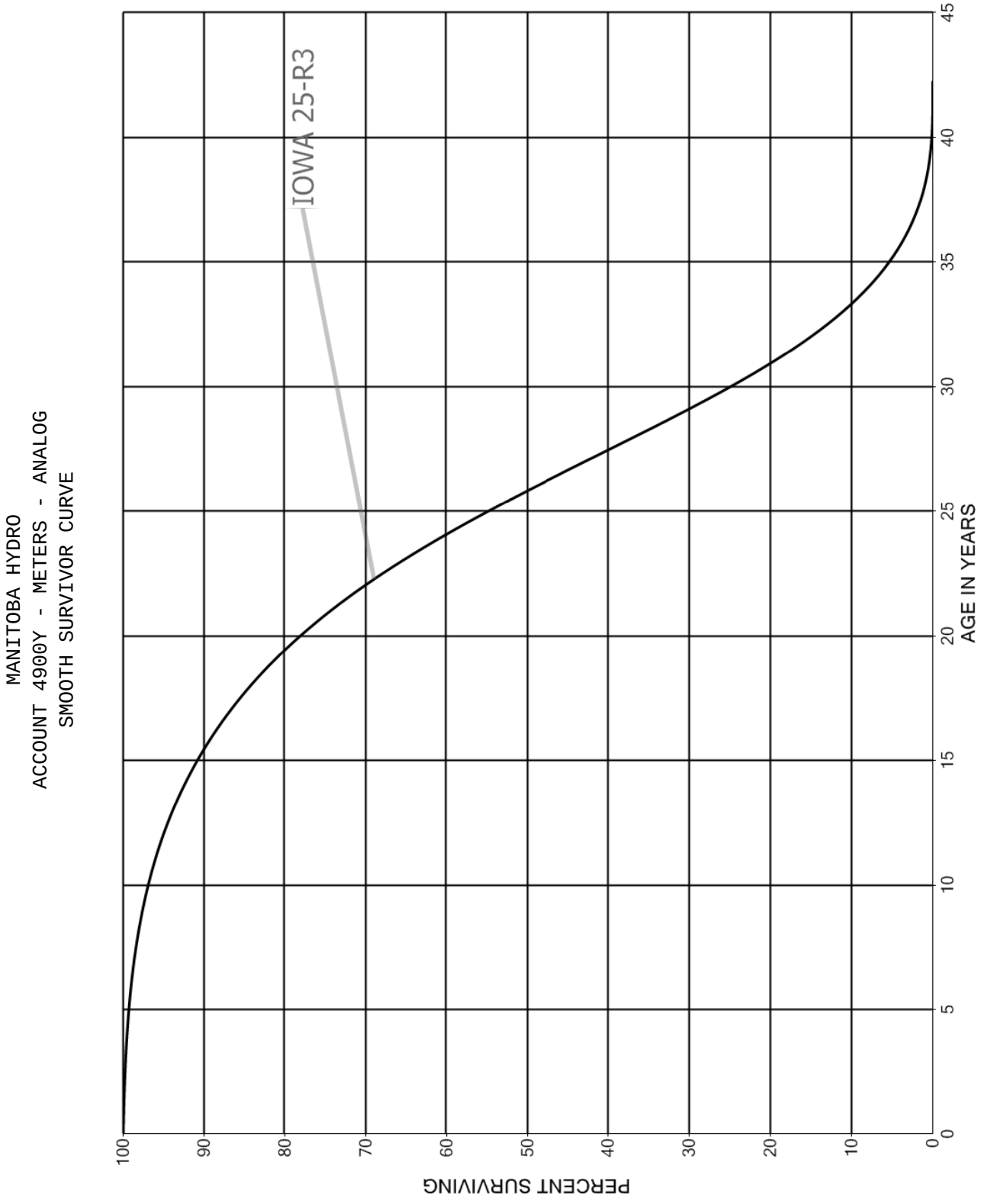
ACCOUNT 4000X - STREET LIGHTING

ORIGINAL LIFE TABLE, CONT.

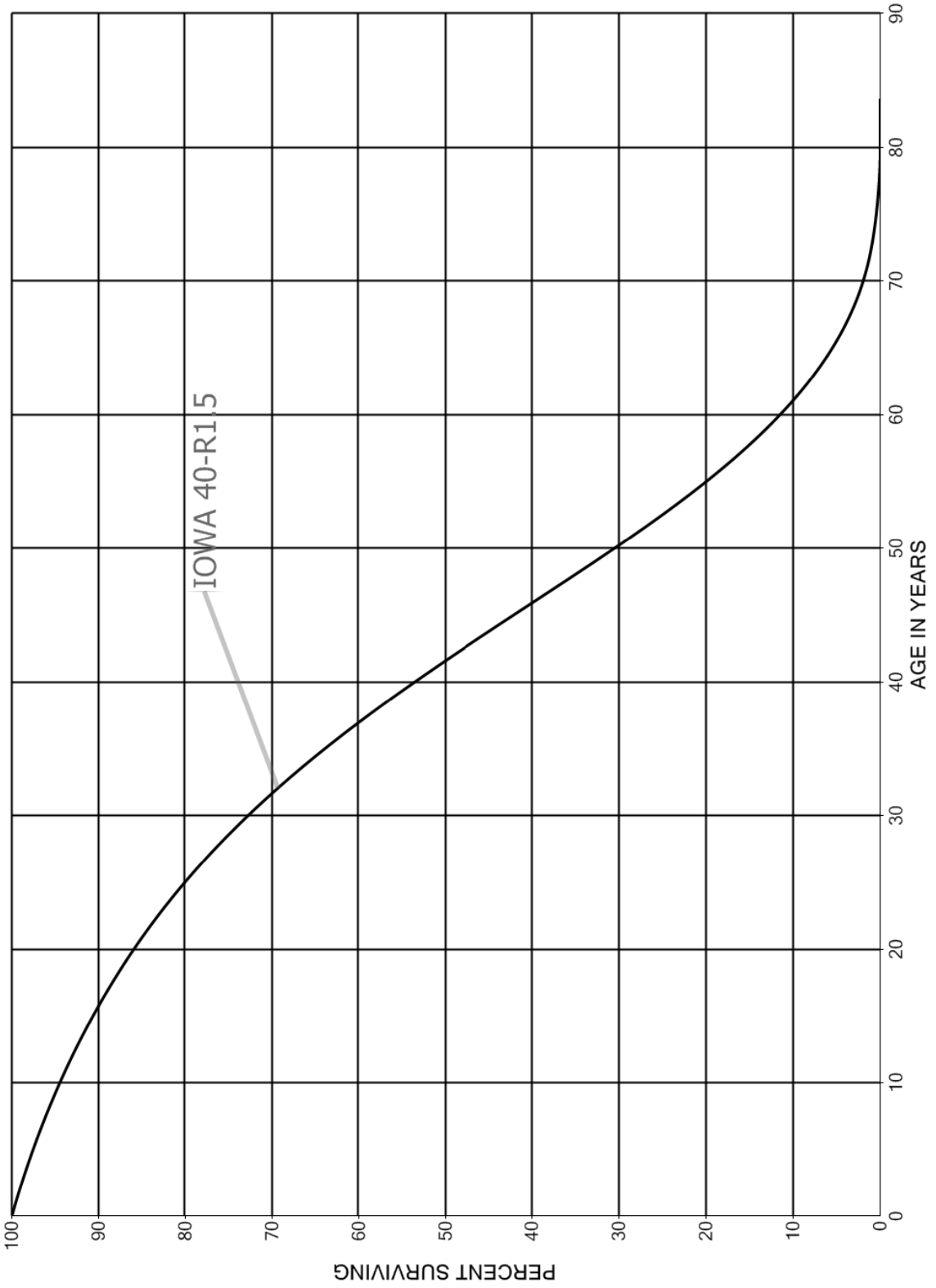
PLACEMENT BAND 1931-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	300,414	33,887	0.1128	0.8872	27.93
40.5	142,655	16,976	0.1190	0.8810	24.78
41.5	85,112	11,302	0.1328	0.8672	21.83
42.5	26,420	3,934	0.1489	0.8511	18.93
43.5	9,780	1,833	0.1874	0.8126	16.11
44.5	2,057	702	0.3411	0.6589	13.09
45.5					8.63

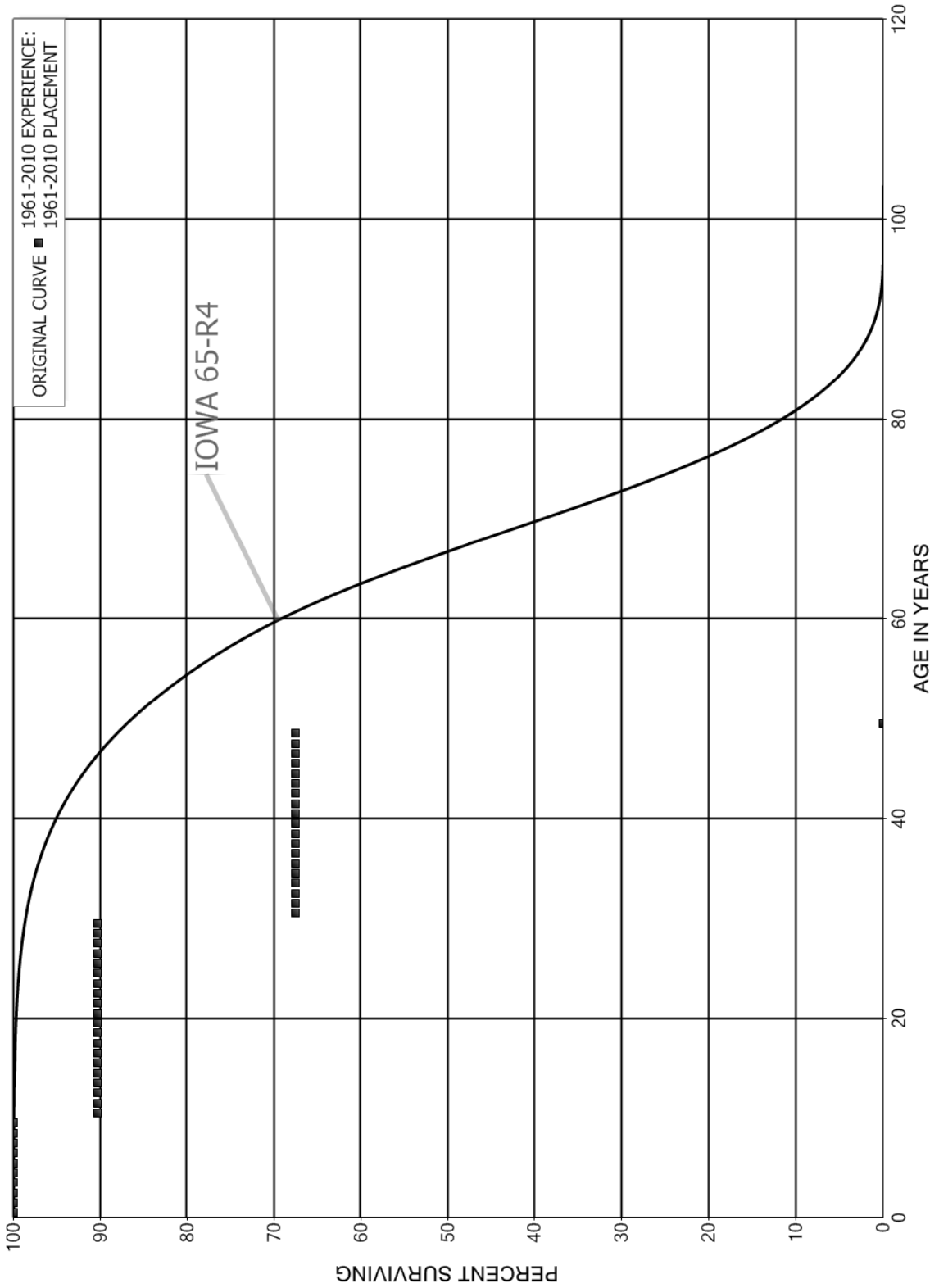

MANITOBA HYDRO
ACCOUNT 4900V - METERS - ELECTRONIC
SMOOTH SURVIVOR CURVE
IOWA 20-R1.5
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
5
10
15
20
25
30
35
40
45


MANITOBA HYDRO
ACCOUNT 4900Y - METERS - ANALOG
SMOOTH SURVIVOR CURVE
IOWA 25-R3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
5
10
15
20
25
30
35
40
45

MANITOBA HYDRO
ACCOUNT 4900Z - METERING TRANSFORMERS
SMOOTH SURVIVOR CURVE



MANITOBA HYDRO
ACCOUNT 5000B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1961-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,310,836		0.0000	1.0000	100.00
0.5	4,295,538		0.0000	1.0000	100.00
1.5	4,295,538		0.0000	1.0000	100.00
2.5	4,295,538		0.0000	1.0000	100.00
3.5	4,103,558		0.0000	1.0000	100.00
4.5	4,103,558		0.0000	1.0000	100.00
5.5	3,818,445		0.0000	1.0000	100.00
6.5	2,762,601		0.0000	1.0000	100.00
7.5	1,895,363		0.0000	1.0000	100.00
8.5	1,851,603		0.0000	1.0000	100.00
9.5	1,208,108	117,852	0.0976	0.9024	100.00
10.5	915,078		0.0000	1.0000	90.24
11.5	915,078		0.0000	1.0000	90.24
12.5	915,078		0.0000	1.0000	90.24
13.5	740,540		0.0000	1.0000	90.24
14.5	740,540		0.0000	1.0000	90.24
15.5	740,540		0.0000	1.0000	90.24
16.5	740,540		0.0000	1.0000	90.24
17.5	740,540		0.0000	1.0000	90.24
18.5	654,437		0.0000	1.0000	90.24
19.5	583,360		0.0000	1.0000	90.24
20.5	376,247		0.0000	1.0000	90.24
21.5	376,247		0.0000	1.0000	90.24
22.5	376,247		0.0000	1.0000	90.24
23.5	376,247		0.0000	1.0000	90.24
24.5	376,247		0.0000	1.0000	90.24
25.5	275,735		0.0000	1.0000	90.24
26.5	275,735		0.0000	1.0000	90.24
27.5	202,009		0.0000	1.0000	90.24
28.5	202,009		0.0000	1.0000	90.24
29.5	149,881	37,826	0.2524	0.7476	90.24
30.5	19,862		0.0000	1.0000	67.47
31.5	19,862		0.0000	1.0000	67.47
32.5	19,862		0.0000	1.0000	67.47
33.5	19,862		0.0000	1.0000	67.47
34.5	19,862		0.0000	1.0000	67.47
35.5	5,602		0.0000	1.0000	67.47
36.5	5,602		0.0000	1.0000	67.47
37.5	5,602		0.0000	1.0000	67.47
38.5	5,602		0.0000	1.0000	67.47

MANITOBA HYDRO

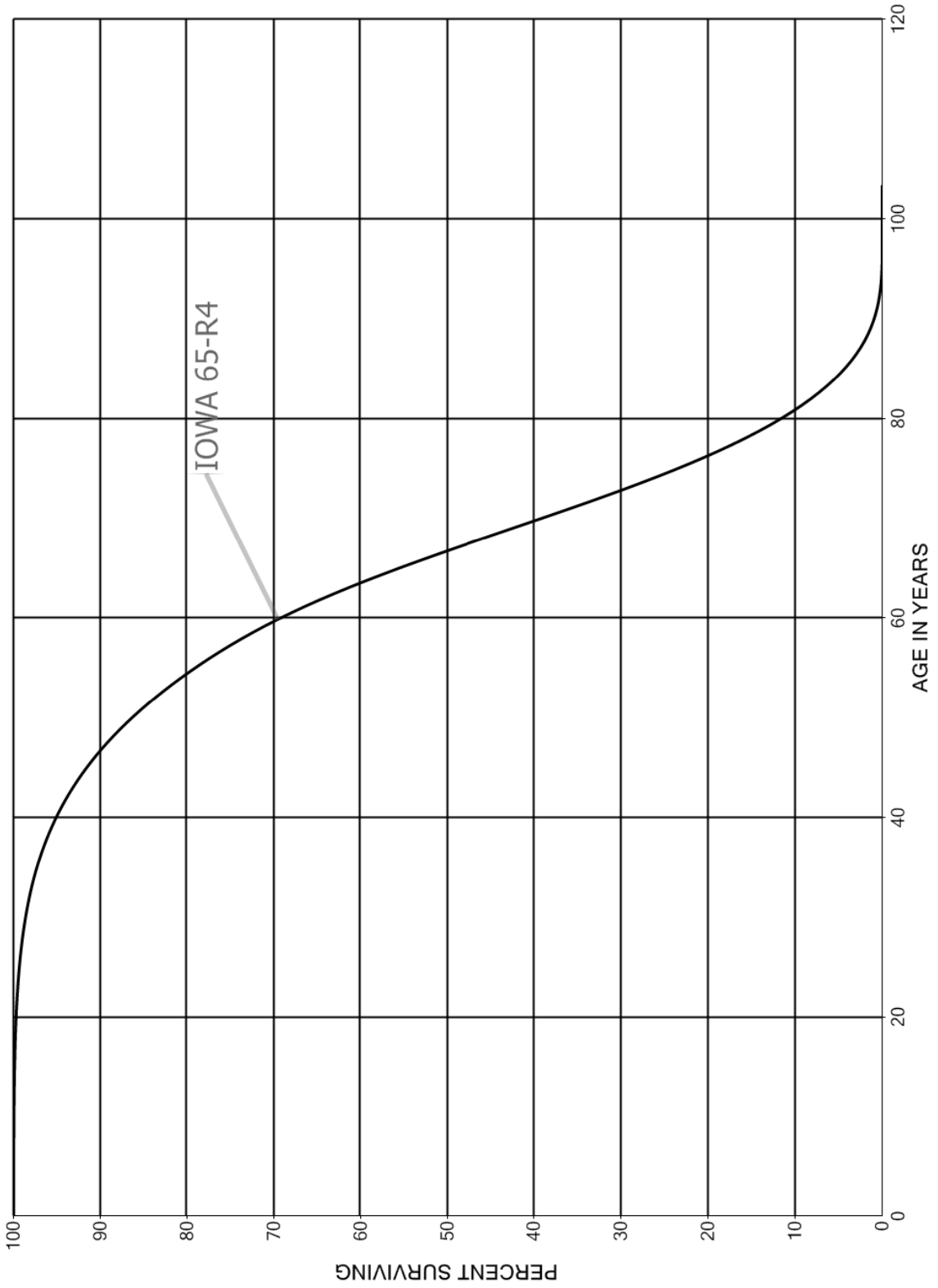
ACCOUNT 5000B - BUILDINGS

ORIGINAL LIFE TABLE, CONT.

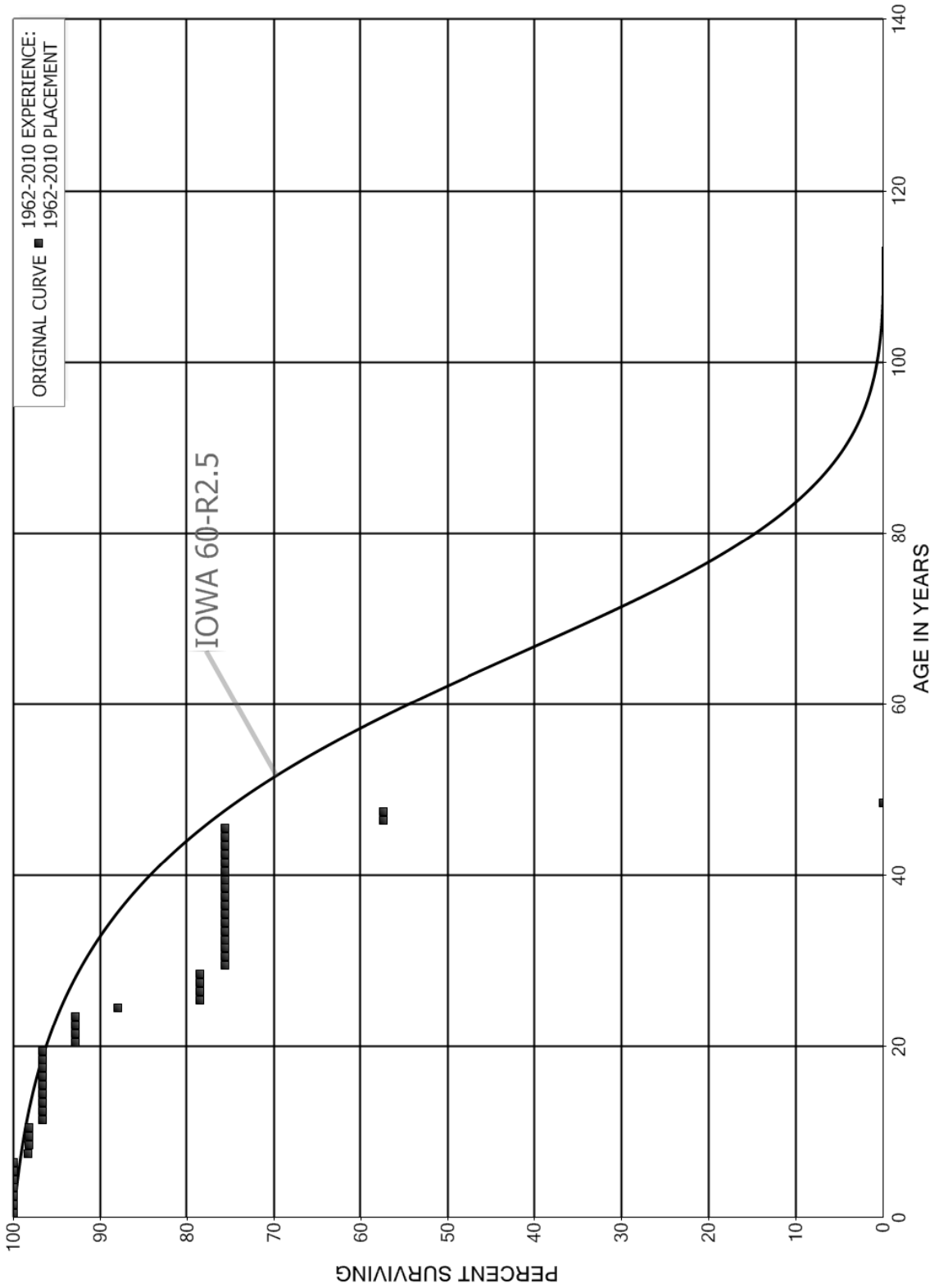
PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1961-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,602		0.0000	1.0000	67.47
40.5	5,602		0.0000	1.0000	67.47
41.5	5,602		0.0000	1.0000	67.47
42.5	5,602		0.0000	1.0000	67.47
43.5	5,602		0.0000	1.0000	67.47
44.5	5,602		0.0000	1.0000	67.47
45.5	701		0.0000	1.0000	67.47
46.5	701		0.0000	1.0000	67.47
47.5	701		0.0000	1.0000	67.47
48.5	701	701	1.0000		67.47
49.5					

MANITOBA HYDRO
ACCOUNT 5000D - BUILDING - SYSTEM CONTROL CENTRE
SMOOTH SURVIVOR CURVE



MANITOBA HYDRO
ACCOUNT 5000G - COMMUNICATION TOWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000G - COMMUNICATION TOWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1962-2010 EXPERIENCE BAND 1962-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,244,289		0.0000	1.0000	100.00
0.5	8,287,003		0.0000	1.0000	100.00
1.5	8,240,544	12	0.0000	1.0000	100.00
2.5	6,930,233	594	0.0001	0.9999	100.00
3.5	6,663,296		0.0000	1.0000	99.99
4.5	6,483,871		0.0000	1.0000	99.99
5.5	6,331,083		0.0000	1.0000	99.99
6.5	6,041,850	103,607	0.0171	0.9829	99.99
7.5	5,437,441	5,912	0.0011	0.9989	98.28
8.5	5,228,636		0.0000	1.0000	98.17
9.5	5,228,636		0.0000	1.0000	98.17
10.5	5,091,302	78,684	0.0155	0.9845	98.17
11.5	4,817,847		0.0000	1.0000	96.65
12.5	4,308,861		0.0000	1.0000	96.65
13.5	2,205,148		0.0000	1.0000	96.65
14.5	2,145,148		0.0000	1.0000	96.65
15.5	2,145,148		0.0000	1.0000	96.65
16.5	2,145,148		0.0000	1.0000	96.65
17.5	1,957,060		0.0000	1.0000	96.65
18.5	1,922,564		0.0000	1.0000	96.65
19.5	1,922,564	76,650	0.0399	0.9601	96.65
20.5	1,317,762		0.0000	1.0000	92.80
21.5	1,317,762		0.0000	1.0000	92.80
22.5	1,317,762		0.0000	1.0000	92.80
23.5	1,317,762	68,640	0.0521	0.9479	92.80
24.5	1,249,121	133,569	0.1069	0.8931	87.97
25.5	897,497		0.0000	1.0000	78.56
26.5	897,497		0.0000	1.0000	78.56
27.5	759,874		0.0000	1.0000	78.56
28.5	753,263	27,899	0.0370	0.9630	78.56
29.5	670,101		0.0000	1.0000	75.65
30.5	172,777		0.0000	1.0000	75.65
31.5	172,777		0.0000	1.0000	75.65
32.5	172,777		0.0000	1.0000	75.65
33.5	172,777		0.0000	1.0000	75.65
34.5	172,777		0.0000	1.0000	75.65
35.5	172,777		0.0000	1.0000	75.65
36.5	172,777		0.0000	1.0000	75.65
37.5	172,777		0.0000	1.0000	75.65
38.5	172,777		0.0000	1.0000	75.65

MANITOBA HYDRO

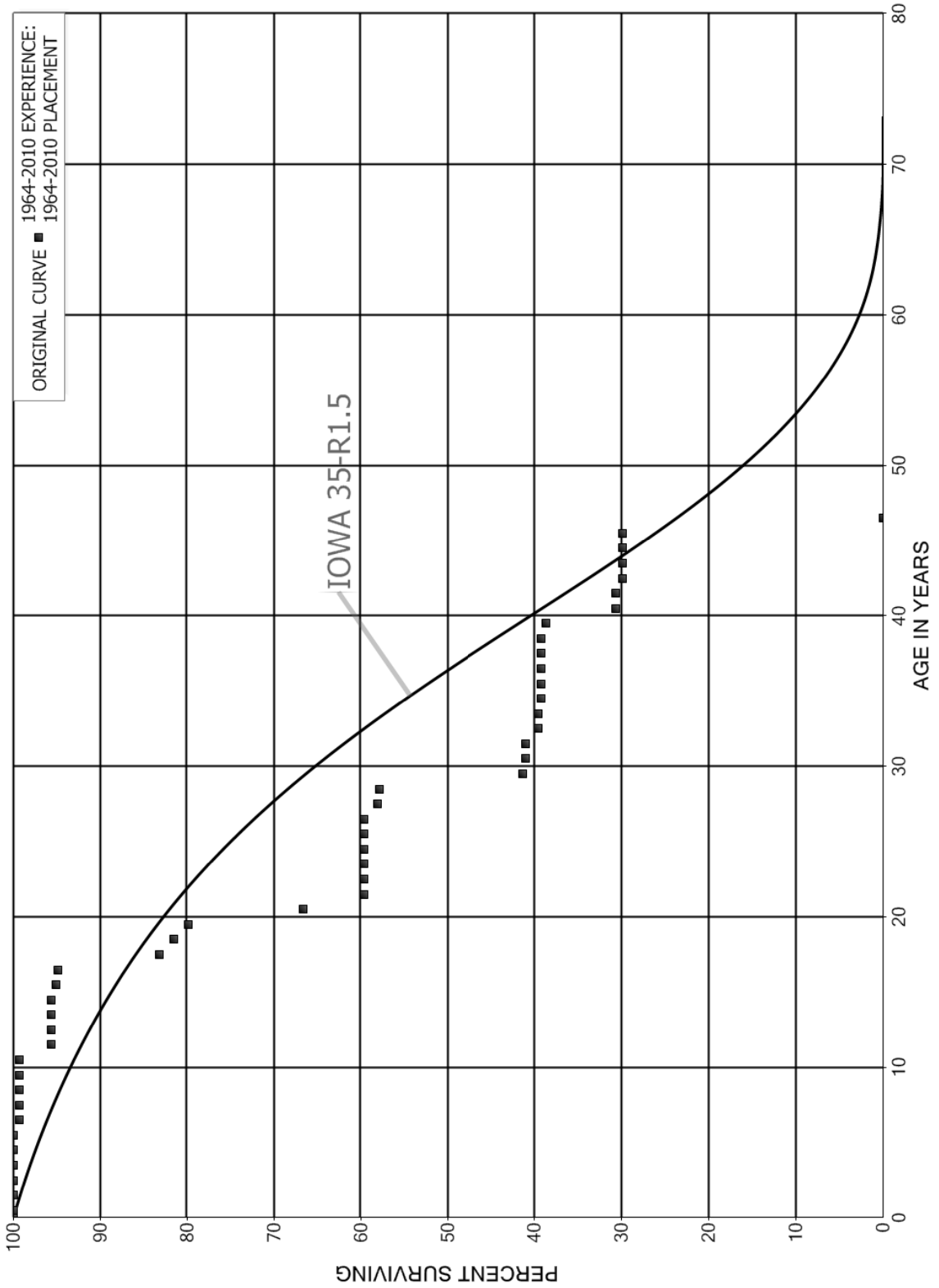
ACCOUNT 5000G - COMMUNICATION TOWERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1962-2010 EXPERIENCE BAND 1962-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	64,501		0.0000	1.0000	75.65
40.5	64,501		0.0000	1.0000	75.65
41.5	64,501		0.0000	1.0000	75.65
42.5	64,501		0.0000	1.0000	75.65
43.5	64,501		0.0000	1.0000	75.65
44.5	64,501		0.0000	1.0000	75.65
45.5	60,483	14,575	0.2410	0.7590	75.65
46.5	220		0.0000	1.0000	57.42
47.5	220	220	1.0000		57.42
48.5					

MANITOBA HYDRO
ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1964-2010 EXPERIENCE BAND 1964-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	120,532,171		0.0000	1.0000	100.00
0.5	113,226,868		0.0000	1.0000	100.00
1.5	109,988,169		0.0000	1.0000	100.00
2.5	101,778,236		0.0000	1.0000	100.00
3.5	89,870,978	85,600	0.0010	0.9990	100.00
4.5	89,697,922	4,193	0.0000	1.0000	99.90
5.5	76,852,633	461,016	0.0060	0.9940	99.90
6.5	28,295,986		0.0000	1.0000	99.30
7.5	27,167,133	6,513	0.0002	0.9998	99.30
8.5	25,051,989		0.0000	1.0000	99.28
9.5	25,049,840		0.0000	1.0000	99.28
10.5	14,668,432	535,000	0.0365	0.9635	99.28
11.5	9,760,780		0.0000	1.0000	95.66
12.5	7,605,681		0.0000	1.0000	95.66
13.5	7,376,597		0.0000	1.0000	95.66
14.5	7,376,597	44,456	0.0060	0.9940	95.66
15.5	7,183,625	15,947	0.0022	0.9978	95.08
16.5	5,826,551	718,790	0.1234	0.8766	94.87
17.5	955,530	19,210	0.0201	0.9799	83.17
18.5	826,207	16,921	0.0205	0.9795	81.49
19.5	747,952	123,943	0.1657	0.8343	79.82
20.5	624,009	65,536	0.1050	0.8950	66.60
21.5	558,473		0.0000	1.0000	59.60
22.5	558,473		0.0000	1.0000	59.60
23.5	558,473		0.0000	1.0000	59.60
24.5	558,473		0.0000	1.0000	59.60
25.5	558,473		0.0000	1.0000	59.60
26.5	558,473	14,816	0.0265	0.9735	59.60
27.5	543,657	2,136	0.0039	0.9961	58.02
28.5	541,522	154,282	0.2849	0.7151	57.79
29.5	387,239	3,989	0.0103	0.9897	41.33
30.5	383,251		0.0000	1.0000	40.90
31.5	383,251	13,414	0.0350	0.9650	40.90
32.5	249,159		0.0000	1.0000	39.47
33.5	249,159	1,934	0.0078	0.9922	39.47
34.5	247,225		0.0000	1.0000	39.16
35.5	247,225		0.0000	1.0000	39.16
36.5	247,225		0.0000	1.0000	39.16
37.5	247,225		0.0000	1.0000	39.16
38.5	247,225	3,204	0.0130	0.9870	39.16

MANITOBA HYDRO

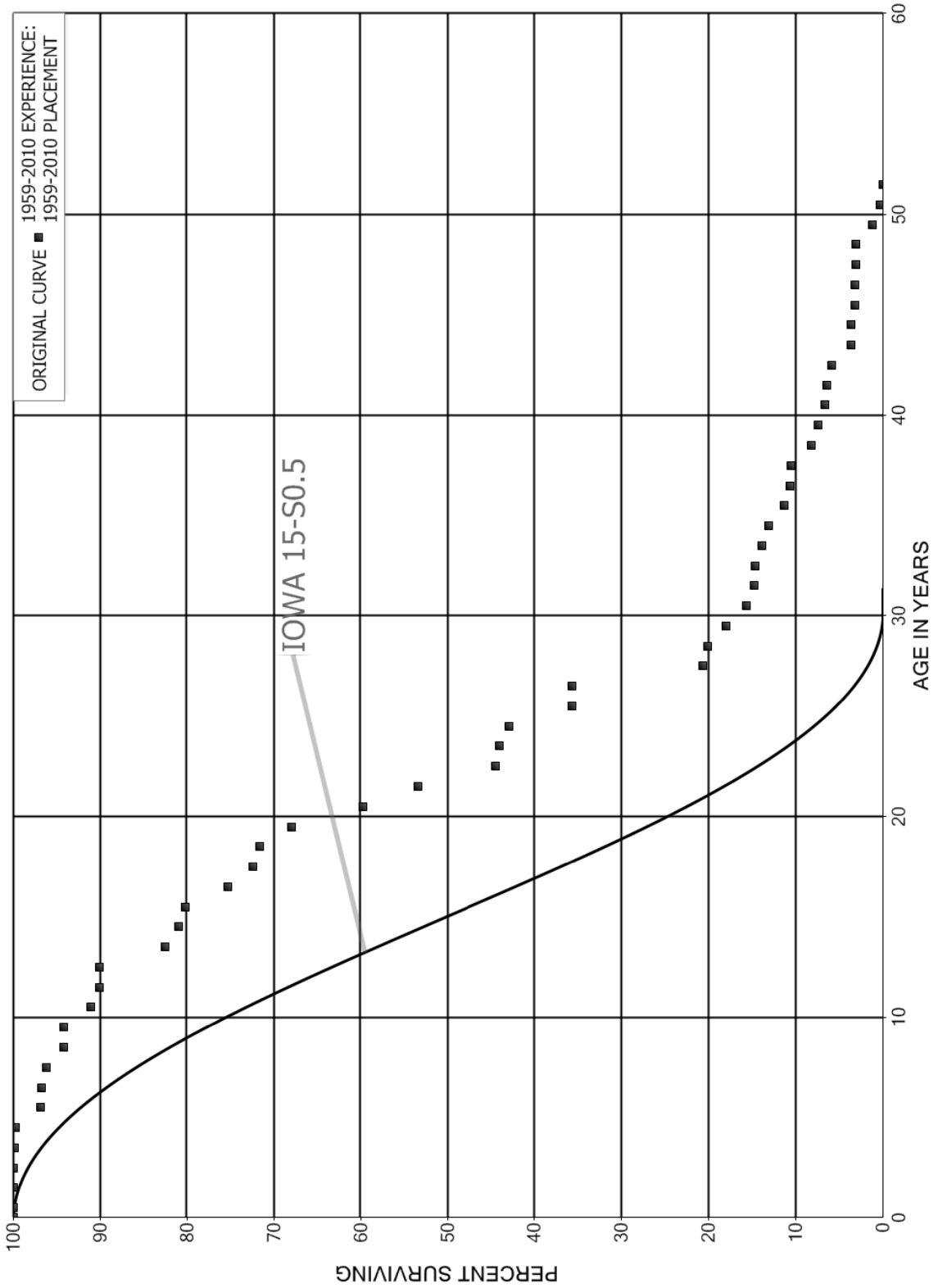
ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1964-2010 EXPERIENCE BAND 1964-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	244,021	50,825	0.2083	0.7917	38.66
40.5	193,196		0.0000	1.0000	30.60
41.5	190,521	5,100	0.0268	0.9732	30.60
42.5	185,421		0.0000	1.0000	29.79
43.5	185,421		0.0000	1.0000	29.79
44.5	185,421		0.0000	1.0000	29.79
45.5	185,421	185,421	1.0000		29.79
46.5					

MANITOBA HYDRO
ACCOUNT 5000J - CARRIER EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000J - CARRIER EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	156,677,976	41,098	0.0003	0.9997	100.00
0.5	150,377,890		0.0000	1.0000	99.97
1.5	134,857,412	46,947	0.0003	0.9997	99.97
2.5	123,961,772	156,402	0.0013	0.9987	99.94
3.5	117,312,223	50,000	0.0004	0.9996	99.81
4.5	113,652,904	3,326,364	0.0293	0.9707	99.77
5.5	105,115,329	129,877	0.0012	0.9988	96.85
6.5	85,823,384	460,897	0.0054	0.9946	96.73
7.5	85,362,487	1,786,427	0.0209	0.9791	96.21
8.5	76,587,263	11,165	0.0001	0.9999	94.20
9.5	75,229,553	2,525,689	0.0336	0.9664	94.18
10.5	68,180,432	741,215	0.0109	0.9891	91.02
11.5	48,444,149	4,074	0.0001	0.9999	90.03
12.5	40,656,810	3,411,264	0.0839	0.9161	90.02
13.5	30,897,900	570,941	0.0185	0.9815	82.47
14.5	29,089,385	294,480	0.0101	0.9899	80.95
15.5	28,508,360	1,741,425	0.0611	0.9389	80.13
16.5	26,023,906	968,232	0.0372	0.9628	75.23
17.5	23,528,379	282,487	0.0120	0.9880	72.43
18.5	23,083,145	1,158,609	0.0502	0.9498	71.56
19.5	21,611,375	2,634,364	0.1219	0.8781	67.97
20.5	18,839,269	1,992,820	0.1058	0.8942	59.69
21.5	16,752,522	2,831,305	0.1690	0.8310	53.37
22.5	13,915,073	127,007	0.0091	0.9909	44.35
23.5	13,434,179	347,776	0.0259	0.9741	43.95
24.5	13,028,944	2,192,969	0.1683	0.8317	42.81
25.5	10,778,393	13,122	0.0012	0.9988	35.60
26.5	10,624,087	4,467,870	0.4205	0.5795	35.56
27.5	6,057,848	169,865	0.0280	0.9720	20.61
28.5	5,607,360	598,149	0.1067	0.8933	20.03
29.5	4,612,223	599,960	0.1301	0.8699	17.89
30.5	4,012,263	229,535	0.0572	0.9428	15.56
31.5	3,782,727	5,215	0.0014	0.9986	14.67
32.5	3,775,459	216,758	0.0574	0.9426	14.65
33.5	3,440,807	173,993	0.0506	0.9494	13.81
34.5	3,266,815	460,126	0.1408	0.8592	13.11
35.5	2,806,688	148,729	0.0530	0.9470	11.27
36.5	2,657,959	39,113	0.0147	0.9853	10.67
37.5	2,618,846	575,920	0.2199	0.7801	10.51
38.5	2,042,926	201,647	0.0987	0.9013	8.20

MANITOBA HYDRO

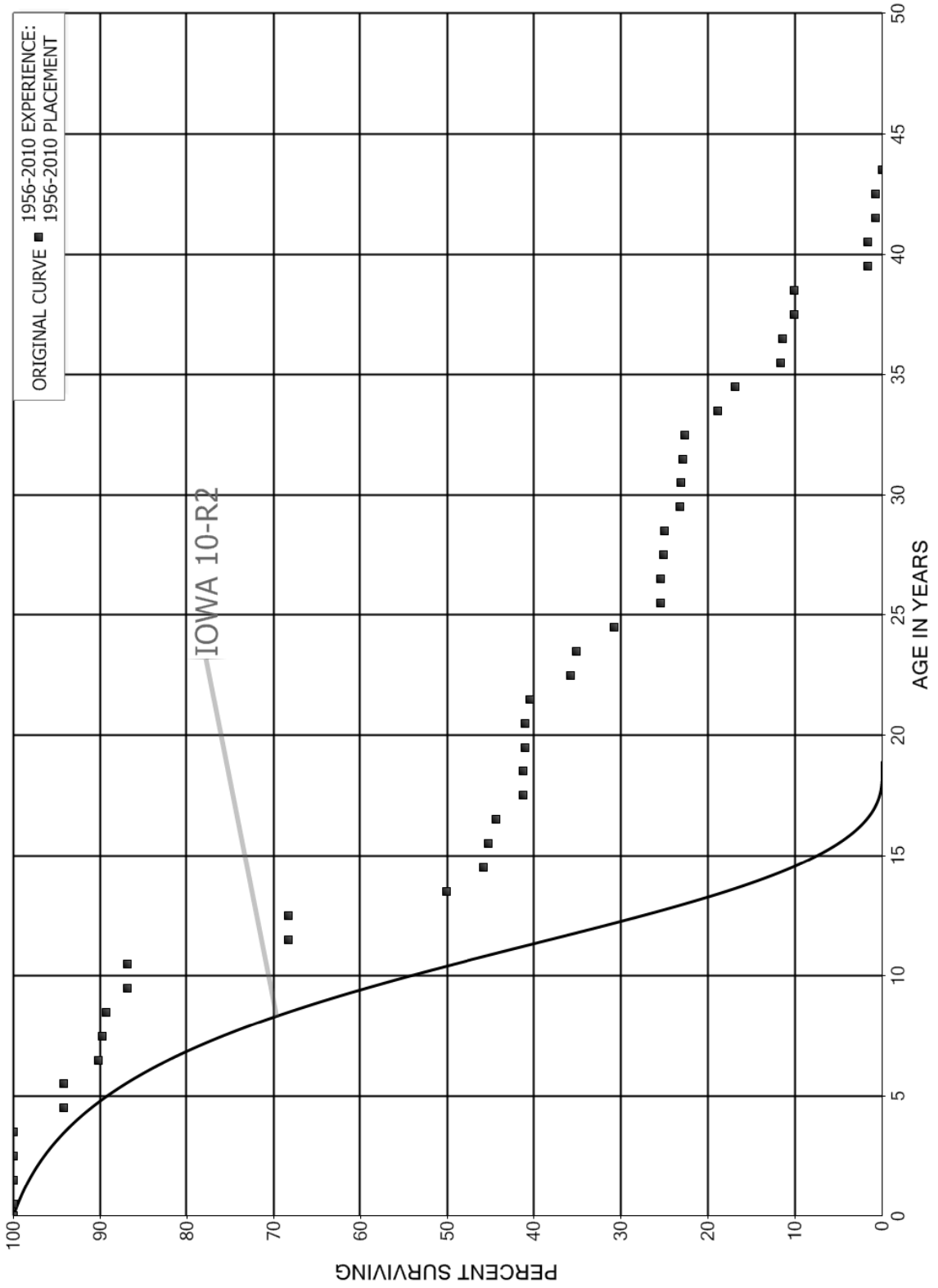
ACCOUNT 5000J - CARRIER EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,841,279	193,859	0.1053	0.8947	7.39
40.5	1,647,420	47,733	0.0290	0.9710	6.61
41.5	1,599,688	140,270	0.0877	0.9123	6.42
42.5	1,459,418	550,776	0.3774	0.6226	5.86
43.5	908,642	10,574	0.0116	0.9884	3.65
44.5	898,068	111,033	0.1236	0.8764	3.61
45.5	787,035	7,112	0.0090	0.9910	3.16
46.5	779,924	26,691	0.0342	0.9658	3.13
47.5	753,233	995	0.0013	0.9987	3.02
48.5	752,238	469,663	0.6244	0.3756	3.02
49.5	282,575	223,516	0.7910	0.2090	1.13
50.5	59,058	59,058	1.0000		0.24
51.5					

MANITOBA HYDRO
ACCOUNT 5000R - POWER SYSTEM CONTROL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000R - POWER SYSTEM CONTROL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1956-2010 EXPERIENCE BAND 1956-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	16,656,718	365	0.0000	1.0000	100.00
0.5	15,991,027		0.0000	1.0000	100.00
1.5	15,734,744		0.0000	1.0000	100.00
2.5	15,127,032	9,864	0.0007	0.9993	100.00
3.5	14,844,099	848,075	0.0571	0.9429	99.93
4.5	13,710,270		0.0000	1.0000	94.22
5.5	13,309,451	566,783	0.0426	0.9574	94.22
6.5	11,820,129	63,915	0.0054	0.9946	90.21
7.5	11,198,876	59,653	0.0053	0.9947	89.72
8.5	11,052,082	302,750	0.0274	0.9726	89.25
9.5	10,534,973		0.0000	1.0000	86.80
10.5	10,174,465	2,172,961	0.2136	0.7864	86.80
11.5	7,321,775		0.0000	1.0000	68.26
12.5	6,757,243	1,799,852	0.2664	0.7336	68.26
13.5	4,626,376	401,514	0.0868	0.9132	50.08
14.5	4,224,862	48,983	0.0116	0.9884	45.73
15.5	4,151,799	85,343	0.0206	0.9794	45.20
16.5	4,032,999	284,552	0.0706	0.9294	44.27
17.5	3,729,473		0.0000	1.0000	41.15
18.5	3,661,902	15,596	0.0043	0.9957	41.15
19.5	3,565,486		0.0000	1.0000	40.98
20.5	3,356,670	46,926	0.0140	0.9860	40.98
21.5	3,154,775	365,163	0.1157	0.8843	40.40
22.5	2,648,980	48,189	0.0182	0.9818	35.73
23.5	2,600,792	318,681	0.1225	0.8775	35.08
24.5	2,264,001	394,703	0.1743	0.8257	30.78
25.5	1,447,080		0.0000	1.0000	25.41
26.5	1,447,080	21,488	0.0148	0.9852	25.41
27.5	1,425,592	3,593	0.0025	0.9975	25.03
28.5	1,418,482	99,437	0.0701	0.9299	24.97
29.5	1,292,148	5,781	0.0045	0.9955	23.22
30.5	1,056,286	11,012	0.0104	0.9896	23.12
31.5	792,555	8,163	0.0103	0.9897	22.88
32.5	784,392	132,261	0.1686	0.8314	22.64
33.5	652,131	69,681	0.1069	0.8931	18.82
34.5	582,450	178,474	0.3064	0.6936	16.81
35.5	392,636	9,074	0.0231	0.9769	11.66
36.5	383,562	46,164	0.1204	0.8796	11.39
37.5	337,398		0.0000	1.0000	10.02
38.5	337,398	281,420	0.8341	0.1659	10.02

MANITOBA HYDRO

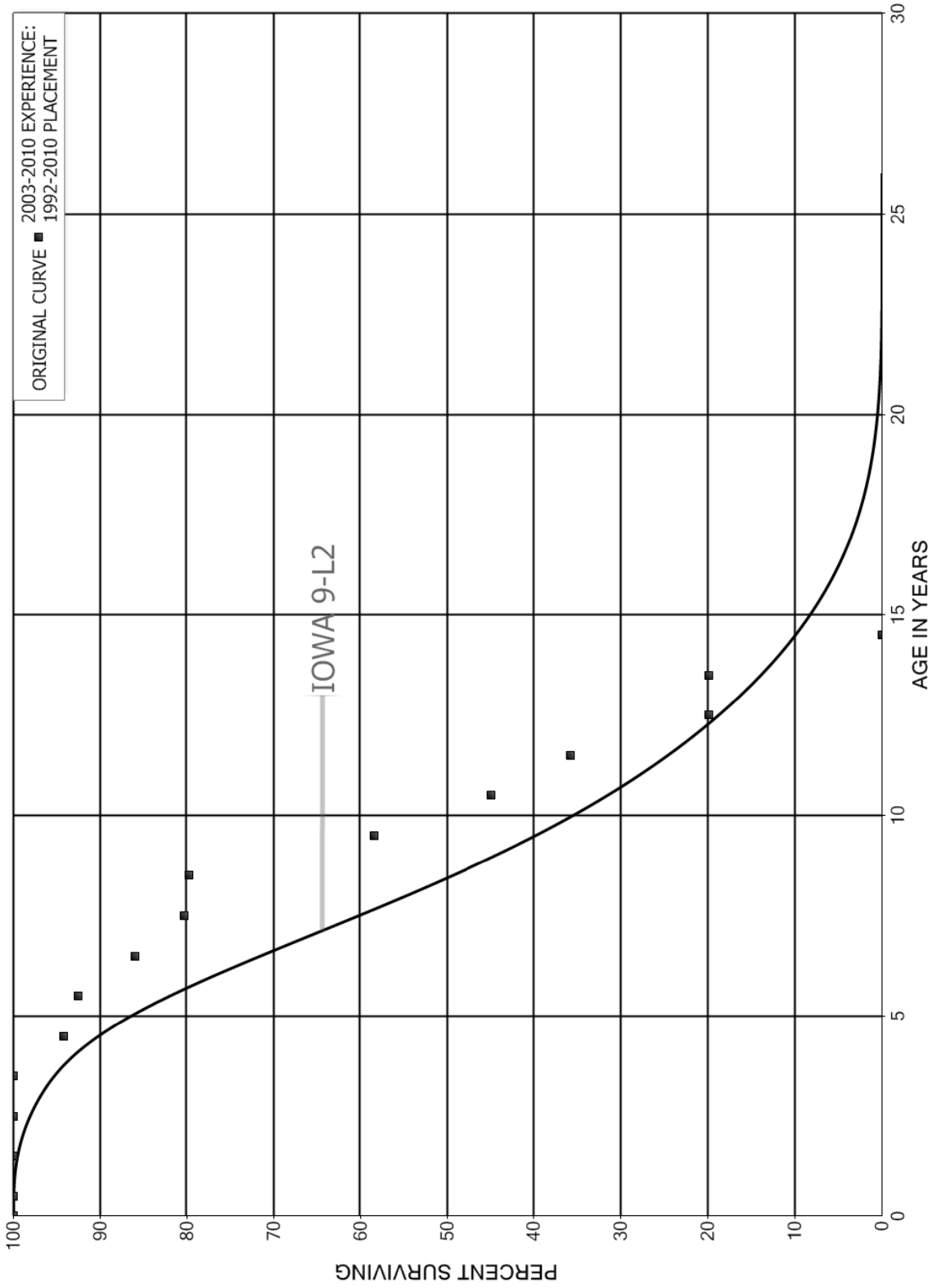
ACCOUNT 5000R - POWER SYSTEM CONTROL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1956-2010 EXPERIENCE BAND 1956-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	37,715	2,210	0.0586	0.9414	1.66
40.5	35,505	19,194	0.5406	0.4594	1.56
41.5	16,311	959	0.0588	0.9412	0.72
42.5	15,353	15,353	1.0000		0.68
43.5					

MANITOBA HYDRO
ACCOUNT 6000E - PASSENGER VEHICLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

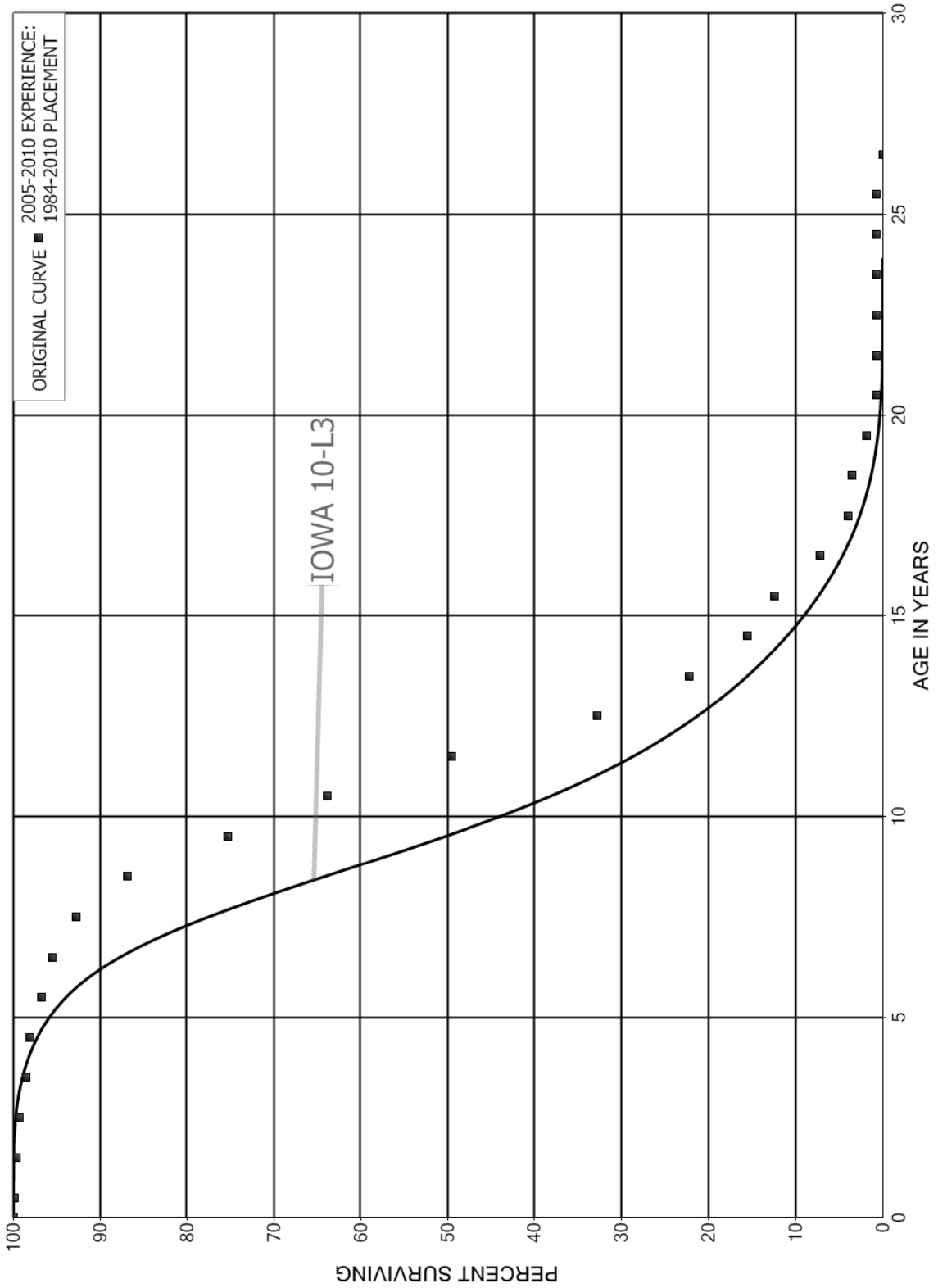
ACCOUNT 6000E - PASSENGER VEHICLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2010 EXPERIENCE BAND 2003-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,144,629		0.0000	1.0000	100.00
0.5	1,292,518		0.0000	1.0000	100.00
1.5	1,045,247		0.0000	1.0000	100.00
2.5	883,784		0.0000	1.0000	100.00
3.5	878,809	51,672	0.0588	0.9412	100.00
4.5	924,009	15,408	0.0167	0.9833	94.12
5.5	859,782	61,826	0.0719	0.9281	92.55
6.5	816,118	53,584	0.0657	0.9343	85.90
7.5	604,785	3,959	0.0065	0.9935	80.26
8.5	483,953	129,577	0.2677	0.7323	79.73
9.5	365,180	84,830	0.2323	0.7677	58.38
10.5	290,852	59,235	0.2037	0.7963	44.82
11.5	149,083	66,226	0.4442	0.5558	35.69
12.5	59,727		0.0000	1.0000	19.84
13.5	37,144	37,144	1.0000		19.84
14.5					

MANITOBA HYDRO
ACCOUNT 6000F - LIGHT TRUCKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

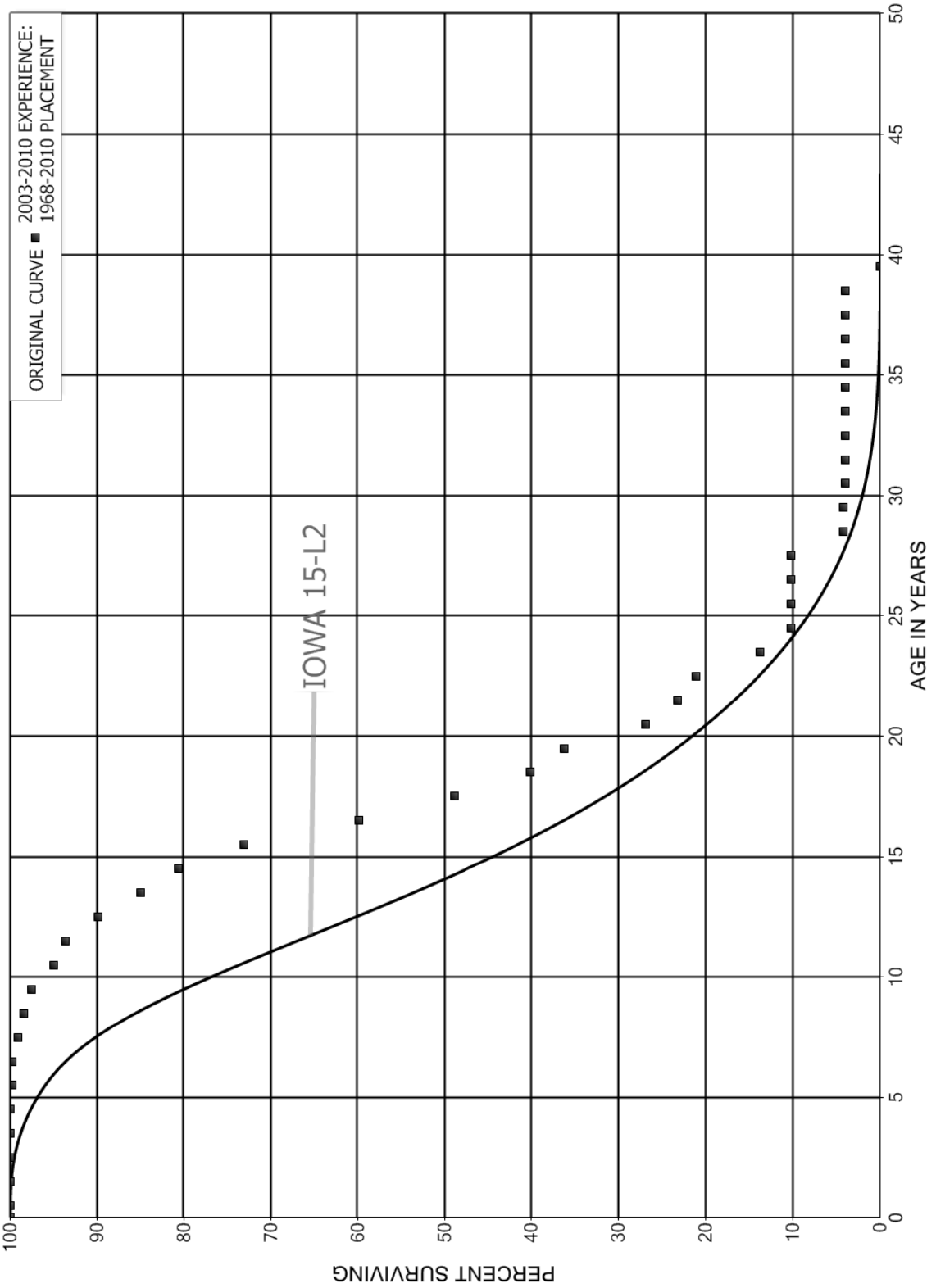
ACCOUNT 6000F - LIGHT TRUCKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1984-2010 EXPERIENCE BAND 2005-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	29,862,771	41,716	0.0014	0.9986	100.00
0.5	33,290,972	66,743	0.0020	0.9980	99.86
1.5	29,271,771	100,880	0.0034	0.9966	99.66
2.5	29,508,824	225,201	0.0076	0.9924	99.32
3.5	32,125,918	158,843	0.0049	0.9951	98.56
4.5	29,109,475	394,148	0.0135	0.9865	98.07
5.5	25,847,621	324,546	0.0126	0.9874	96.74
6.5	22,919,738	665,450	0.0290	0.9710	95.53
7.5	22,183,587	1,410,083	0.0636	0.9364	92.76
8.5	16,841,566	2,251,570	0.1337	0.8663	86.86
9.5	11,978,269	1,817,653	0.1517	0.8483	75.25
10.5	9,022,547	2,018,863	0.2238	0.7762	63.83
11.5	5,174,102	1,761,806	0.3405	0.6595	49.55
12.5	2,876,168	923,560	0.3211	0.6789	32.68
13.5	1,407,080	420,144	0.2986	0.7014	22.18
14.5	894,407	179,168	0.2003	0.7997	15.56
15.5	630,406	268,982	0.4267	0.5733	12.44
16.5	339,432	150,205	0.4425	0.5575	7.13
17.5	184,953	23,990	0.1297	0.8703	3.98
18.5	130,466	61,778	0.4735	0.5265	3.46
19.5	68,688	39,564	0.5760	0.4240	1.82
20.5	51,031		0.0000	1.0000	0.77
21.5	51,031		0.0000	1.0000	0.77
22.5	21,907		0.0000	1.0000	0.77
23.5	21,907		0.0000	1.0000	0.77
24.5	21,907		0.0000	1.0000	0.77
25.5	21,907	21,907	1.0000		0.77
26.5					

MANITOBA HYDRO
ACCOUNT 6000G - HEAVY TRUCKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

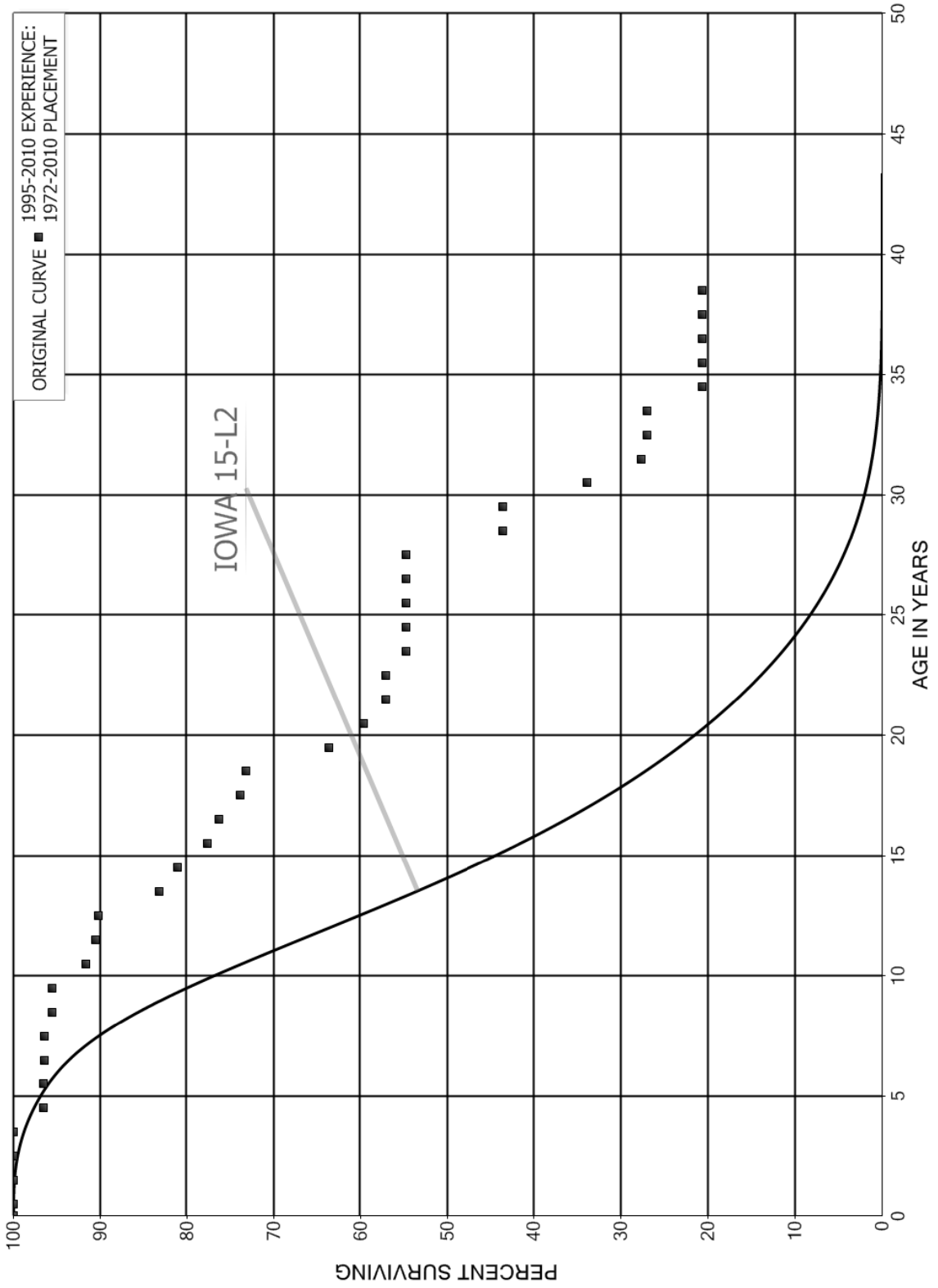
ACCOUNT 6000G - HEAVY TRUCKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1968-2010 EXPERIENCE BAND 2003-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	34,499,261	0	0.0000	1.0000	100.00
0.5	39,807,536		0.0000	1.0000	100.00
1.5	38,775,899		0.0000	1.0000	100.00
2.5	36,839,357		0.0000	1.0000	100.00
3.5	37,034,407	8,560	0.0002	0.9998	100.00
4.5	33,072,522	89,666	0.0027	0.9973	99.98
5.5	32,002,800		0.0000	1.0000	99.71
6.5	29,490,072	174,934	0.0059	0.9941	99.71
7.5	24,819,876	193,135	0.0078	0.9922	99.11
8.5	18,221,992	153,461	0.0084	0.9916	98.34
9.5	16,877,810	443,871	0.0263	0.9737	97.51
10.5	11,275,074	156,411	0.0139	0.9861	94.95
11.5	12,265,628	498,924	0.0407	0.9593	93.63
12.5	9,546,133	515,540	0.0540	0.9460	89.82
13.5	9,048,161	459,939	0.0508	0.9492	84.97
14.5	8,192,878	769,126	0.0939	0.9061	80.65
15.5	7,457,459	1,349,718	0.1810	0.8190	73.08
16.5	6,031,662	1,107,345	0.1836	0.8164	59.86
17.5	4,903,529	880,757	0.1796	0.8204	48.87
18.5	3,672,155	361,963	0.0986	0.9014	40.09
19.5	2,424,911	625,959	0.2581	0.7419	36.14
20.5	1,988,859	266,971	0.1342	0.8658	26.81
21.5	1,481,624	139,260	0.0940	0.9060	23.21
22.5	1,093,427	379,737	0.3473	0.6527	21.03
23.5	713,690	184,993	0.2592	0.7408	13.73
24.5	325,525		0.0000	1.0000	10.17
25.5	341,512		0.0000	1.0000	10.17
26.5	344,512		0.0000	1.0000	10.17
27.5	208,893	123,083	0.5892	0.4108	10.17
28.5	64,437		0.0000	1.0000	4.18
29.5	64,437	3,000	0.0466	0.9534	4.18
30.5	61,437		0.0000	1.0000	3.98
31.5	61,437		0.0000	1.0000	3.98
32.5	61,437		0.0000	1.0000	3.98
33.5	45,450		0.0000	1.0000	3.98
34.5	60,426		0.0000	1.0000	3.98
35.5	60,426		0.0000	1.0000	3.98
36.5	14,976		0.0000	1.0000	3.98
37.5	14,976		0.0000	1.0000	3.98
38.5	14,976	14,976	1.0000		3.98
39.5					

MANITOBA HYDRO
ACCOUNT 6000H - CONSTRUCTION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

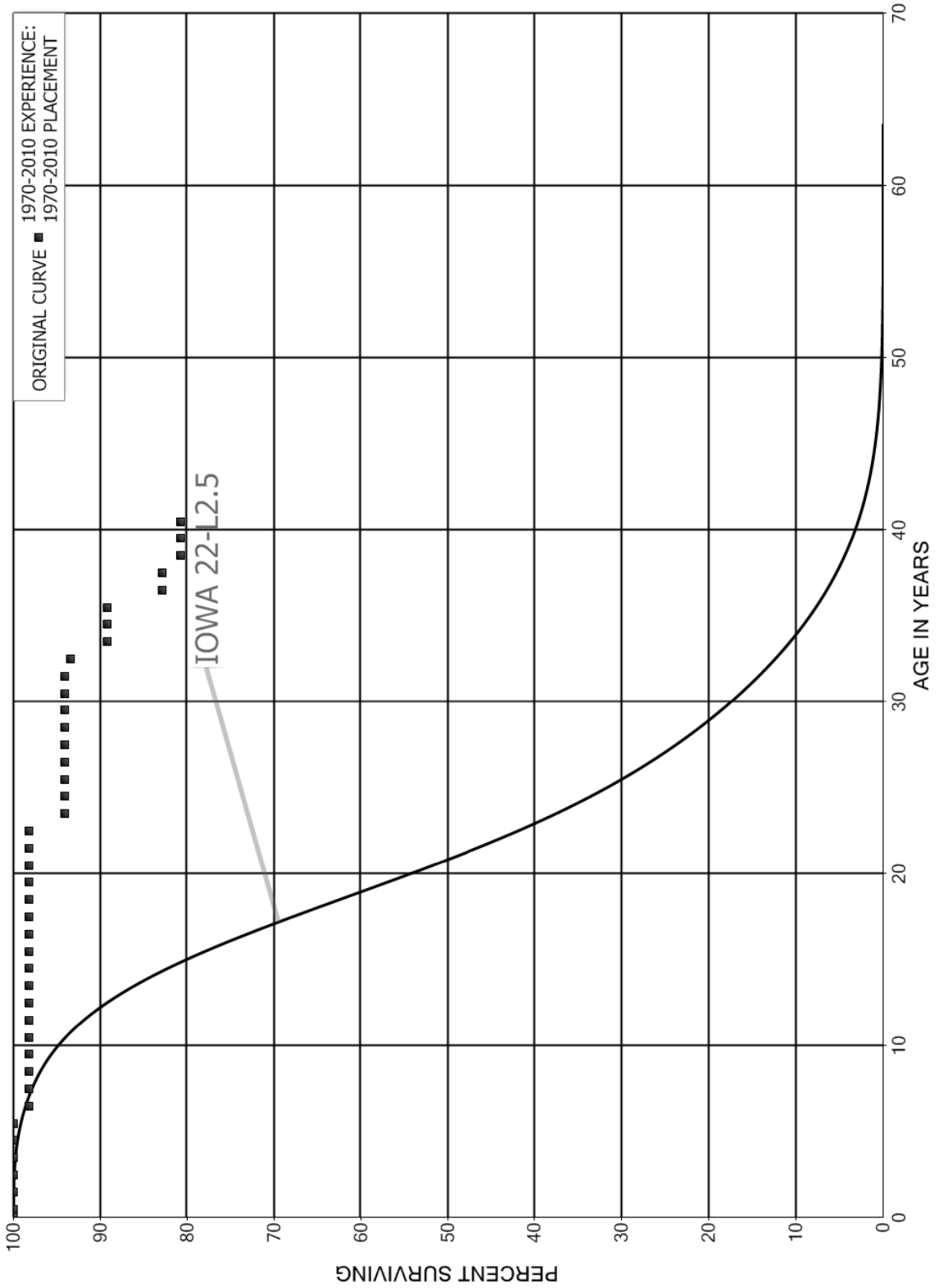
ACCOUNT 6000H - CONSTRUCTION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1972-2010 EXPERIENCE BAND 1995-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	16,495,058		0.0000	1.0000	100.00
0.5	15,720,180	14,735	0.0009	0.9991	100.00
1.5	13,017,768		0.0000	1.0000	99.91
2.5	11,927,278		0.0000	1.0000	99.91
3.5	10,749,707	361,170	0.0336	0.9664	99.91
4.5	9,316,531		0.0000	1.0000	96.55
5.5	9,080,857	11,979	0.0013	0.9987	96.55
6.5	8,396,463		0.0000	1.0000	96.42
7.5	7,475,421	72,225	0.0097	0.9903	96.42
8.5	6,971,468		0.0000	1.0000	95.49
9.5	6,097,786	246,394	0.0404	0.9596	95.49
10.5	5,331,540	67,836	0.0127	0.9873	91.63
11.5	5,229,692	17,746	0.0034	0.9966	90.47
12.5	4,547,484	354,440	0.0779	0.9221	90.16
13.5	3,318,667	80,991	0.0244	0.9756	83.13
14.5	2,676,175	114,340	0.0427	0.9573	81.10
15.5	2,095,569	37,431	0.0179	0.9821	77.64
16.5	2,125,207	68,850	0.0324	0.9676	76.25
17.5	2,216,216	19,827	0.0089	0.9911	73.78
18.5	2,024,959	261,797	0.1293	0.8707	73.12
19.5	1,743,870	109,953	0.0631	0.9369	63.67
20.5	1,636,980	70,318	0.0430	0.9570	59.65
21.5	1,374,345		0.0000	1.0000	57.09
22.5	1,301,835	53,098	0.0408	0.9592	57.09
23.5	1,248,737		0.0000	1.0000	54.76
24.5	1,082,330		0.0000	1.0000	54.76
25.5	1,073,441		0.0000	1.0000	54.76
26.5	1,051,854		0.0000	1.0000	54.76
27.5	989,538	203,164	0.2053	0.7947	54.76
28.5	786,374		0.0000	1.0000	43.52
29.5	786,374	175,581	0.2233	0.7767	43.52
30.5	600,034	110,472	0.1841	0.8159	33.80
31.5	437,732	9,084	0.0208	0.9792	27.58
32.5	398,237		0.0000	1.0000	27.01
33.5	104,071	24,675	0.2371	0.7629	27.01
34.5	79,396		0.0000	1.0000	20.60
35.5	66,965		0.0000	1.0000	20.60
36.5	66,965		0.0000	1.0000	20.60
37.5	66,965		0.0000	1.0000	20.60
38.5					20.60

MANITOBA HYDRO
ACCOUNT 6000I - LARGE SOFT-TRACK EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

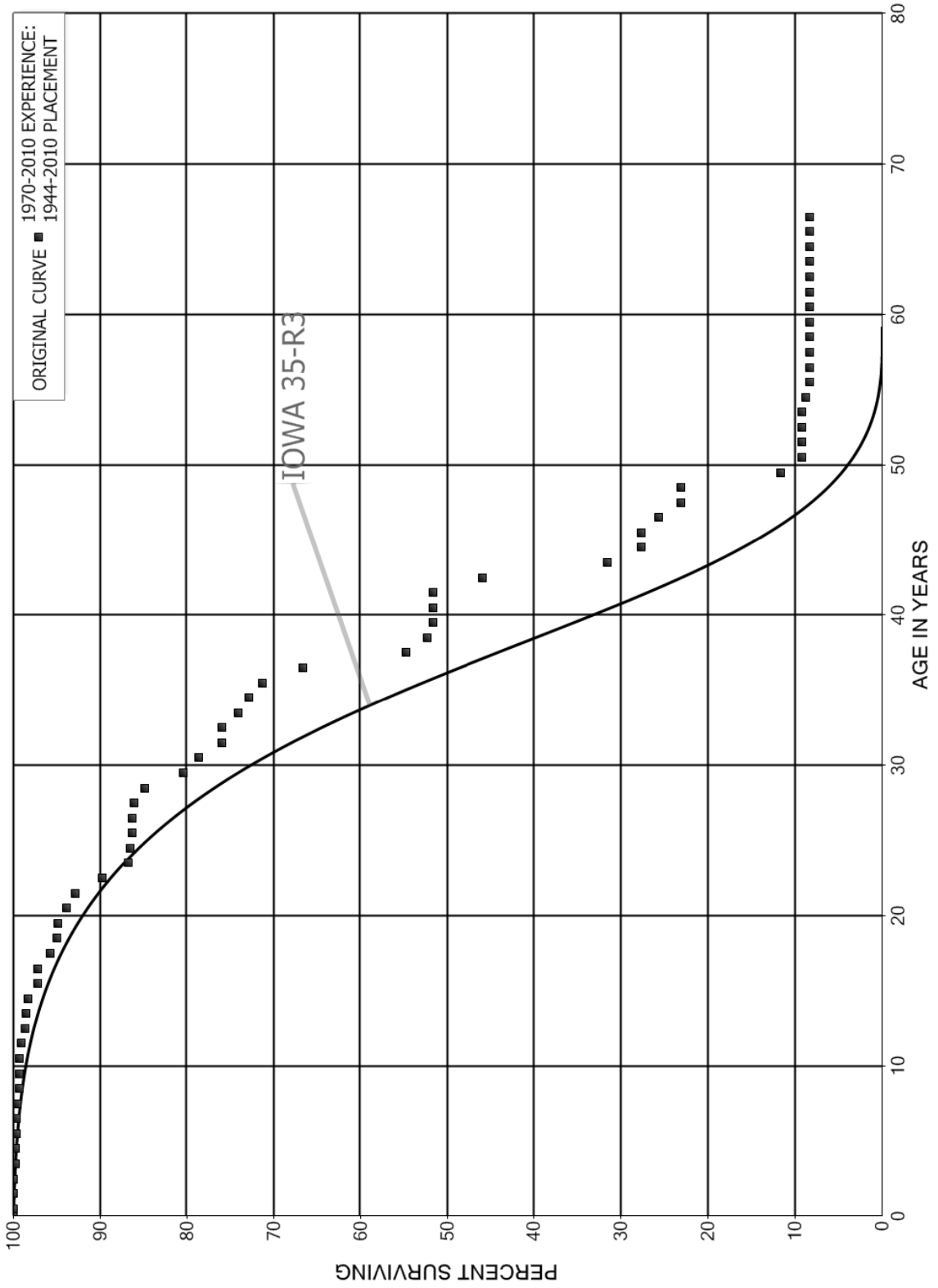
ACCOUNT 6000I - LARGE SOFT-TRACK EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1970-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	13,492,135		0.0000	1.0000	100.00
0.5	12,505,638		0.0000	1.0000	100.00
1.5	10,894,956		0.0000	1.0000	100.00
2.5	9,864,156		0.0000	1.0000	100.00
3.5	8,259,261	0	0.0000	1.0000	100.00
4.5	7,644,524		0.0000	1.0000	100.00
5.5	6,466,430	117,700	0.0182	0.9818	100.00
6.5	6,348,730		0.0000	1.0000	98.18
7.5	6,348,730		0.0000	1.0000	98.18
8.5	4,046,740		0.0000	1.0000	98.18
9.5	3,797,373		0.0000	1.0000	98.18
10.5	3,797,373		0.0000	1.0000	98.18
11.5	3,683,754		0.0000	1.0000	98.18
12.5	2,955,706	125	0.0000	1.0000	98.18
13.5	2,955,564		0.0000	1.0000	98.18
14.5	2,841,233	17	0.0000	1.0000	98.18
15.5	2,448,219		0.0000	1.0000	98.18
16.5	2,377,909		0.0000	1.0000	98.18
17.5	2,002,767		0.0000	1.0000	98.18
18.5	1,919,370		0.0000	1.0000	98.18
19.5	1,919,370		0.0000	1.0000	98.18
20.5	1,919,370		0.0000	1.0000	98.18
21.5	1,919,370		0.0000	1.0000	98.18
22.5	1,919,370	79,282	0.0413	0.9587	98.18
23.5	1,840,088		0.0000	1.0000	94.12
24.5	1,840,088		0.0000	1.0000	94.12
25.5	1,817,712		0.0000	1.0000	94.12
26.5	1,817,712		0.0000	1.0000	94.12
27.5	1,817,712		0.0000	1.0000	94.12
28.5	1,817,712		0.0000	1.0000	94.12
29.5	1,817,712		0.0000	1.0000	94.12
30.5	1,817,712		0.0000	1.0000	94.12
31.5	1,817,712	12,947	0.0071	0.9929	94.12
32.5	1,753,182	79,432	0.0453	0.9547	93.45
33.5	1,653,210		0.0000	1.0000	89.22
34.5	944,493		0.0000	1.0000	89.22
35.5	605,031	42,957	0.0710	0.9290	89.22
36.5	526,251		0.0000	1.0000	82.88
37.5	505,630	13,410	0.0265	0.9735	82.88
38.5	126,383		0.0000	1.0000	80.68
39.5	23,644		0.0000	1.0000	80.68
40.5					80.68

MANITOBA HYDRO
ACCOUNT 6000J - TRAILERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 6000J - TRAILERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1944-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	16,559,528		0.0000	1.0000	100.00
0.5	15,762,536		0.0000	1.0000	100.00
1.5	14,005,344	6,987	0.0005	0.9995	100.00
2.5	13,421,315	35,163	0.0026	0.9974	99.95
3.5	12,098,467	214	0.0000	1.0000	99.69
4.5	11,164,855	4,601	0.0004	0.9996	99.69
5.5	10,600,193	1,284	0.0001	0.9999	99.65
6.5	9,783,454	8,604	0.0009	0.9991	99.63
7.5	9,215,836	19,526	0.0021	0.9979	99.55
8.5	8,672,363	7,753	0.0009	0.9991	99.33
9.5	6,958,308		0.0000	1.0000	99.25
10.5	5,789,993	10,450	0.0018	0.9982	99.25
11.5	5,226,763	23,771	0.0045	0.9955	99.07
12.5	5,098,993	5,351	0.0010	0.9990	98.62
13.5	4,437,087	10,224	0.0023	0.9977	98.51
14.5	3,853,971	44,159	0.0115	0.9885	98.29
15.5	3,452,116		0.0000	1.0000	97.16
16.5	3,137,816	47,297	0.0151	0.9849	97.16
17.5	2,976,522	22,383	0.0075	0.9925	95.70
18.5	2,496,909	3,424	0.0014	0.9986	94.98
19.5	2,114,355	23,505	0.0111	0.9889	94.85
20.5	1,952,440	19,539	0.0100	0.9900	93.79
21.5	1,484,785	49,197	0.0331	0.9669	92.85
22.5	1,368,661	46,750	0.0342	0.9658	89.78
23.5	1,290,184	2,934	0.0023	0.9977	86.71
24.5	1,141,470	3,025	0.0027	0.9973	86.51
25.5	1,092,277		0.0000	1.0000	86.28
26.5	1,066,183	3,025	0.0028	0.9972	86.28
27.5	1,046,415	14,395	0.0138	0.9862	86.04
28.5	1,032,020	53,740	0.0521	0.9479	84.85
29.5	925,585	21,232	0.0229	0.9771	80.44
30.5	848,815	28,204	0.0332	0.9668	78.59
31.5	805,089		0.0000	1.0000	75.98
32.5	741,555	19,130	0.0258	0.9742	75.98
33.5	435,755	6,896	0.0158	0.9842	74.02
34.5	310,906	6,775	0.0218	0.9782	72.85
35.5	236,831	15,387	0.0650	0.9350	71.26
36.5	180,530	32,381	0.1794	0.8206	66.63
37.5	127,395	5,555	0.0436	0.9564	54.68
38.5	113,210	1,359	0.0120	0.9880	52.30

MANITOBA HYDRO

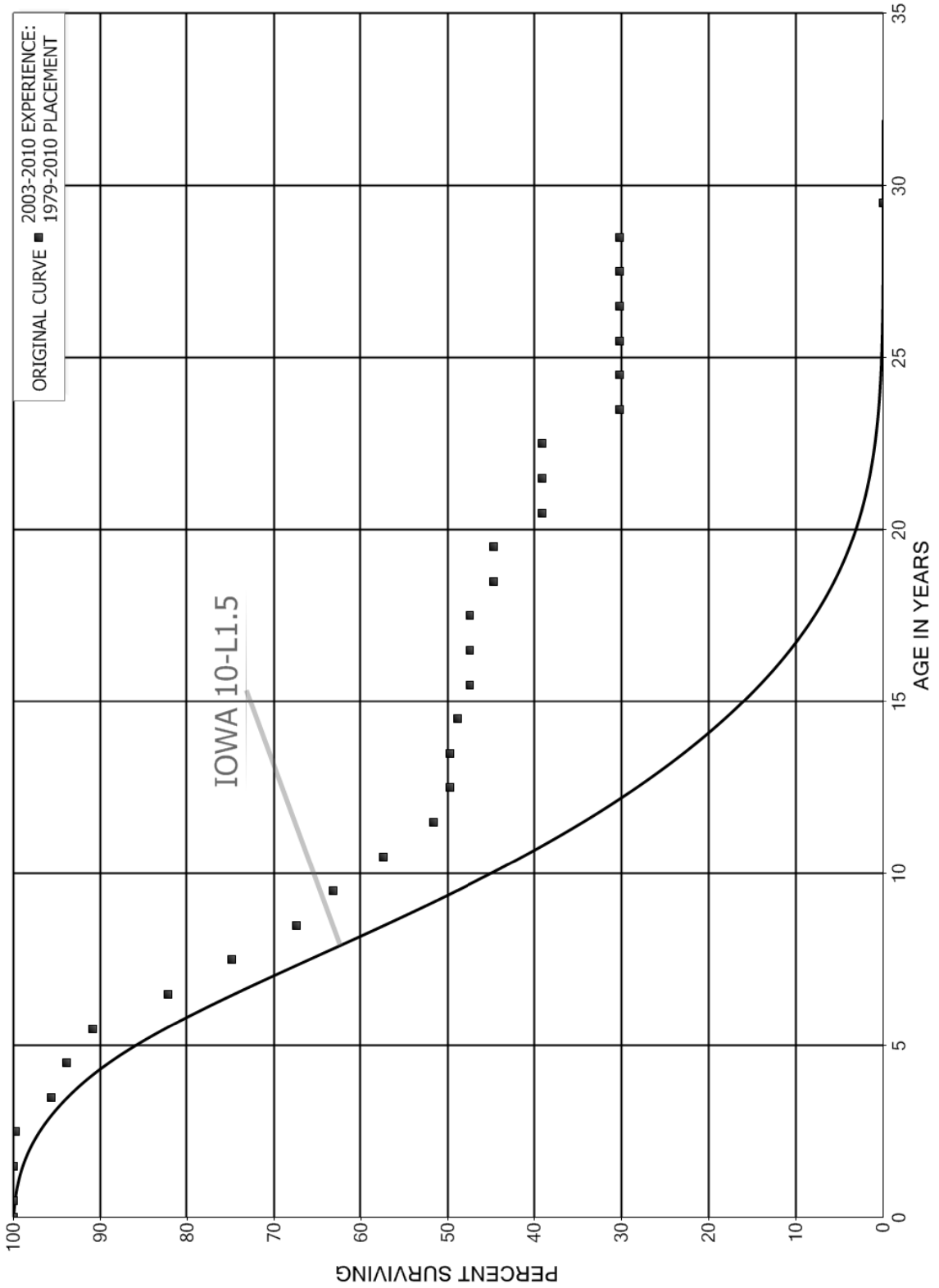
ACCOUNT 6000J - TRAILERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1944-2010 EXPERIENCE BAND 1970-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	89,136		0.0000	1.0000	51.67
40.5	80,776		0.0000	1.0000	51.67
41.5	77,430	8,710	0.1125	0.8875	51.67
42.5	57,580	18,078	0.3140	0.6860	45.86
43.5	33,071	4,087	0.1236	0.8764	31.46
44.5	28,984		0.0000	1.0000	27.57
45.5	28,984	2,034	0.0702	0.9298	27.57
46.5	14,679	1,457	0.0993	0.9007	25.64
47.5	13,222		0.0000	1.0000	23.09
48.5	8,399	4,166	0.4960	0.5040	23.09
49.5	4,232	889	0.2101	0.7899	11.64
50.5	3,342		0.0000	1.0000	9.19
51.5	3,342		0.0000	1.0000	9.19
52.5	3,342		0.0000	1.0000	9.19
53.5	3,342	165	0.0494	0.9506	9.19
54.5	2,860	165	0.0577	0.9423	8.74
55.5	2,695		0.0000	1.0000	8.23
56.5	2,695		0.0000	1.0000	8.23
57.5	2,695		0.0000	1.0000	8.23
58.5	2,695		0.0000	1.0000	8.23
59.5	2,695		0.0000	1.0000	8.23
60.5	2,695		0.0000	1.0000	8.23
61.5	2,695		0.0000	1.0000	8.23
62.5	2,545		0.0000	1.0000	8.23
63.5	810		0.0000	1.0000	8.23
64.5	486		0.0000	1.0000	8.23
65.5	162		0.0000	1.0000	8.23
66.5					8.23

MANITOBA HYDRO
ACCOUNT 6000K - MISCELLANEOUS VEHICLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

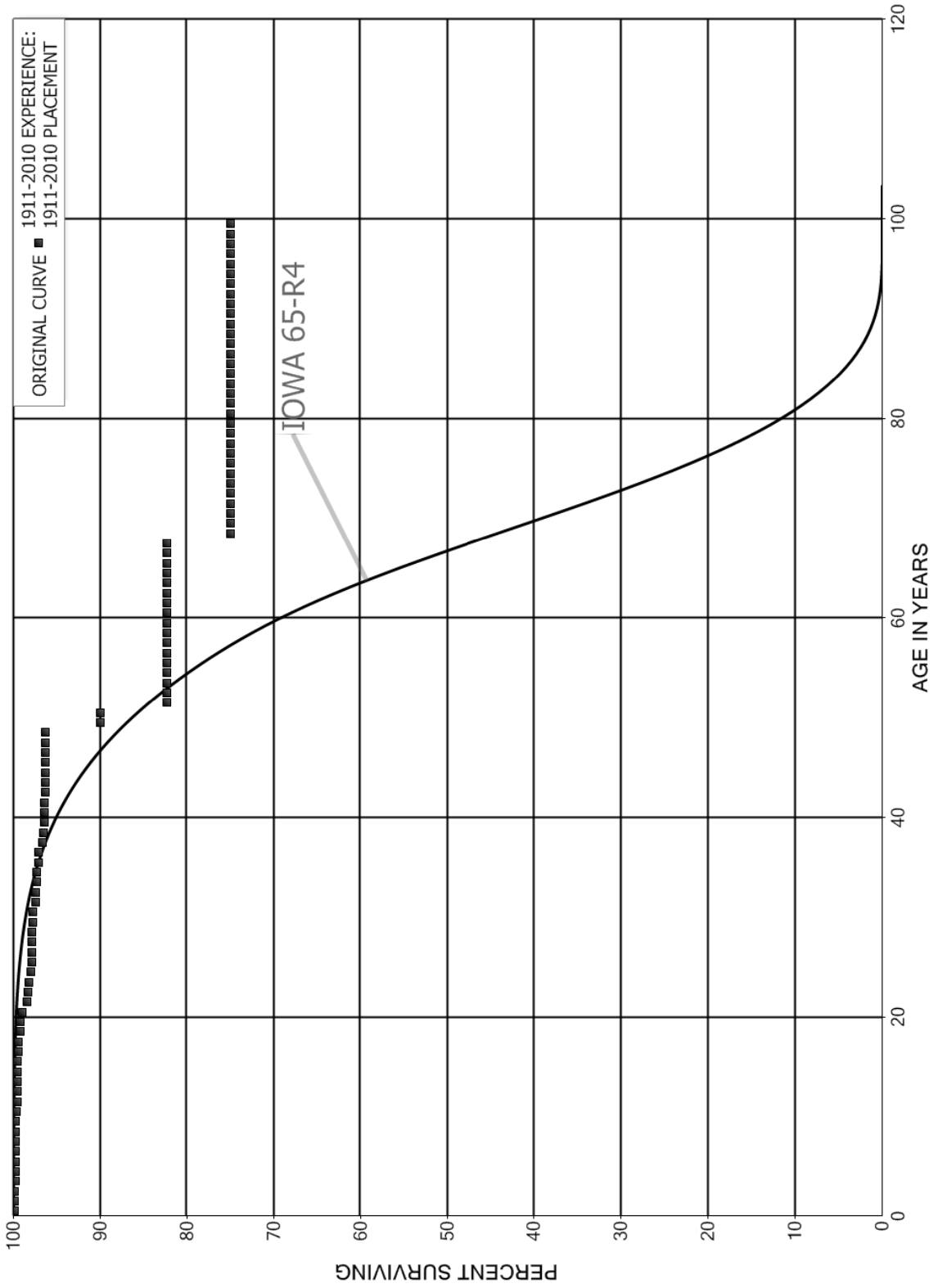
ACCOUNT 6000K - MISCELLANEOUS VEHICLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1979-2010 EXPERIENCE BAND 2003-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,578,879		0.0000	1.0000	100.00
0.5	4,773,684		0.0000	1.0000	100.00
1.5	5,570,061	13,821	0.0025	0.9975	100.00
2.5	5,246,933	217,087	0.0414	0.9586	99.75
3.5	4,564,324	84,805	0.0186	0.9814	95.62
4.5	4,056,485	128,840	0.0318	0.9682	93.85
5.5	3,368,221	321,903	0.0956	0.9044	90.87
6.5	2,416,392	215,055	0.0890	0.9110	82.18
7.5	1,963,518	195,594	0.0996	0.9004	74.87
8.5	1,348,731	85,753	0.0636	0.9364	67.41
9.5	533,513	48,809	0.0915	0.9085	63.12
10.5	339,774	33,723	0.0993	0.9007	57.35
11.5	322,194	11,986	0.0372	0.9628	51.66
12.5	298,367		0.0000	1.0000	49.74
13.5	286,229	5,420	0.0189	0.9811	49.74
14.5	224,262	6,281	0.0280	0.9720	48.79
15.5	169,103		0.0000	1.0000	47.43
16.5	129,350		0.0000	1.0000	47.43
17.5	122,696	7,318	0.0596	0.9404	47.43
18.5	115,378	0	0.0000	1.0000	44.60
19.5	89,029	10,987	0.1234	0.8766	44.60
20.5	42,646		0.0000	1.0000	39.09
21.5	26,489		0.0000	1.0000	39.09
22.5	20,837	4,762	0.2285	0.7715	39.09
23.5	81,978		0.0000	1.0000	30.16
24.5	73,430		0.0000	1.0000	30.16
25.5	65,902		0.0000	1.0000	30.16
26.5	65,902		0.0000	1.0000	30.16
27.5	65,902		0.0000	1.0000	30.16
28.5	65,902	65,902	1.0000		30.16
29.5					

MANITOBA HYDRO
ACCOUNT 8000B - BUILDINGS - GENERAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2010 EXPERIENCE BAND 1911-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	89,283,114	180,709	0.0020	0.9980	100.00
0.5	85,662,256		0.0000	1.0000	99.80
1.5	83,266,167	8,154	0.0001	0.9999	99.80
2.5	81,105,141	17,400	0.0002	0.9998	99.79
3.5	79,957,055	3,491	0.0000	1.0000	99.77
4.5	79,898,575	1,909	0.0000	1.0000	99.76
5.5	79,841,055	10,085	0.0001	0.9999	99.76
6.5	78,148,222	10,168	0.0001	0.9999	99.75
7.5	69,631,511	33,898	0.0005	0.9995	99.73
8.5	66,093,532		0.0000	1.0000	99.69
9.5	65,774,869	44,640	0.0007	0.9993	99.69
10.5	57,446,845	34,550	0.0006	0.9994	99.62
11.5	57,157,018	12,518	0.0002	0.9998	99.56
12.5	53,547,117	21,345	0.0004	0.9996	99.54
13.5	44,744,774	2,326	0.0001	0.9999	99.50
14.5	43,937,784	16,400	0.0004	0.9996	99.49
15.5	42,938,267	3,588	0.0001	0.9999	99.45
16.5	39,896,219	2,137	0.0001	0.9999	99.45
17.5	34,486,143	79,474	0.0023	0.9977	99.44
18.5	32,046,543	13,237	0.0004	0.9996	99.21
19.5	29,644,486	65,304	0.0022	0.9978	99.17
20.5	26,655,482	160,877	0.0060	0.9940	98.95
21.5	25,053,856	6,231	0.0002	0.9998	98.35
22.5	24,089,024	34,017	0.0014	0.9986	98.33
23.5	23,414,218	52,826	0.0023	0.9977	98.19
24.5	23,300,572	29,822	0.0013	0.9987	97.97
25.5	21,778,282		0.0000	1.0000	97.84
26.5	21,335,860		0.0000	1.0000	97.84
27.5	20,508,931	13,504	0.0007	0.9993	97.84
28.5	19,606,730	19,046	0.0010	0.9990	97.78
29.5	16,489,396	2,344	0.0001	0.9999	97.69
30.5	16,235,550	39,393	0.0024	0.9976	97.67
31.5	13,785,050		0.0000	1.0000	97.43
32.5	13,197,949	21,314	0.0016	0.9984	97.43
33.5	12,750,132		0.0000	1.0000	97.28
34.5	11,845,479	26,352	0.0022	0.9978	97.28
35.5	11,329,748		0.0000	1.0000	97.06
36.5	11,047,471	50,211	0.0045	0.9955	97.06
37.5	9,889,330	7,152	0.0007	0.9993	96.62
38.5	8,371,259	16,966	0.0020	0.9980	96.55

MANITOBA HYDRO

ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2010 EXPERIENCE BAND 1911-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	8,262,116		0.0000	1.0000	96.35
40.5	7,605,443		0.0000	1.0000	96.35
41.5	5,906,865	4,504	0.0008	0.9992	96.35
42.5	5,726,232		0.0000	1.0000	96.28
43.5	5,698,642		0.0000	1.0000	96.28
44.5	5,471,094		0.0000	1.0000	96.28
45.5	2,499,647		0.0000	1.0000	96.28
46.5	2,264,709		0.0000	1.0000	96.28
47.5	2,264,709		0.0000	1.0000	96.28
48.5	2,244,074	146,171	0.0651	0.9349	96.28
49.5	2,000,687	13	0.0000	1.0000	90.01
50.5	1,940,222	165,949	0.0855	0.9145	90.01
51.5	1,763,702		0.0000	1.0000	82.31
52.5	154,728		0.0000	1.0000	82.31
53.5	102,295		0.0000	1.0000	82.31
54.5	102,295		0.0000	1.0000	82.31
55.5	102,295		0.0000	1.0000	82.31
56.5	102,295		0.0000	1.0000	82.31
57.5	102,295		0.0000	1.0000	82.31
58.5	102,295		0.0000	1.0000	82.31
59.5	102,295		0.0000	1.0000	82.31
60.5	102,295		0.0000	1.0000	82.31
61.5	102,295		0.0000	1.0000	82.31
62.5	102,295		0.0000	1.0000	82.31
63.5	102,295		0.0000	1.0000	82.31
64.5	102,295		0.0000	1.0000	82.31
65.5	102,295		0.0000	1.0000	82.31
66.5	102,295		0.0000	1.0000	82.31
67.5	102,295	9,099	0.0889	0.9111	82.31
68.5	93,196		0.0000	1.0000	74.99
69.5	93,196		0.0000	1.0000	74.99
70.5	93,196		0.0000	1.0000	74.99
71.5	93,196		0.0000	1.0000	74.99
72.5	93,196		0.0000	1.0000	74.99
73.5	93,196		0.0000	1.0000	74.99
74.5	93,196		0.0000	1.0000	74.99
75.5	93,196		0.0000	1.0000	74.99
76.5	93,196		0.0000	1.0000	74.99
77.5	93,196		0.0000	1.0000	74.99
78.5	93,196		0.0000	1.0000	74.99

MANITOBA HYDRO

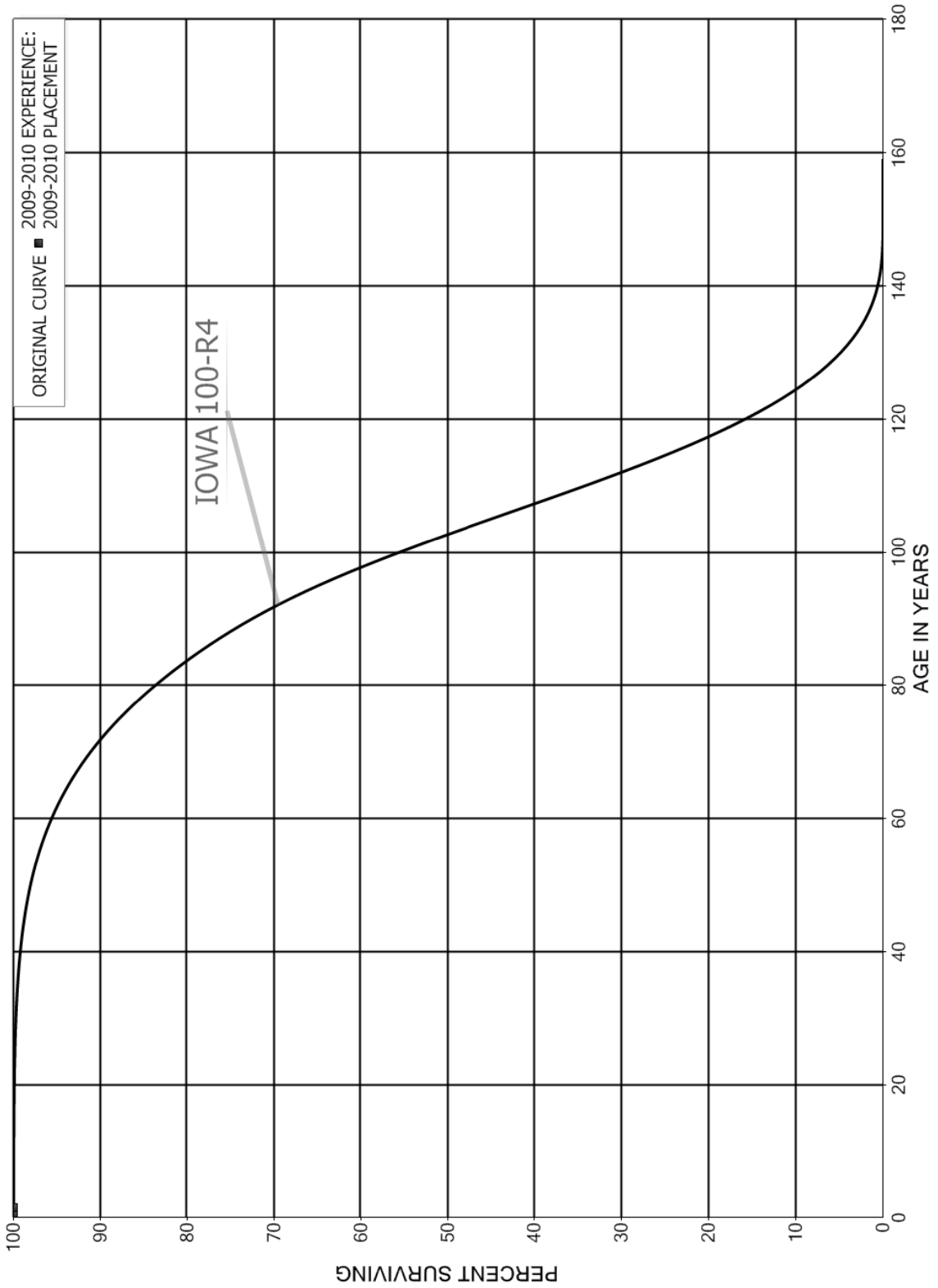
ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2010 EXPERIENCE BAND 1911-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	93,196		0.0000	1.0000	74.99
80.5	93,196		0.0000	1.0000	74.99
81.5	93,196		0.0000	1.0000	74.99
82.5	93,196		0.0000	1.0000	74.99
83.5	93,196		0.0000	1.0000	74.99
84.5	93,196		0.0000	1.0000	74.99
85.5	93,196		0.0000	1.0000	74.99
86.5	93,196		0.0000	1.0000	74.99
87.5	93,196		0.0000	1.0000	74.99
88.5	93,196		0.0000	1.0000	74.99
89.5	93,196		0.0000	1.0000	74.99
90.5	93,196		0.0000	1.0000	74.99
91.5	93,196		0.0000	1.0000	74.99
92.5	93,196		0.0000	1.0000	74.99
93.5	93,196		0.0000	1.0000	74.99
94.5	93,196		0.0000	1.0000	74.99
95.5	93,196		0.0000	1.0000	74.99
96.5	93,196		0.0000	1.0000	74.99
97.5	93,196		0.0000	1.0000	74.99
98.5	93,196		0.0000	1.0000	74.99
99.5					74.99

MANITOBA HYDRO
ACCOUNT 8000D - BUILDING - 360 PORTAGE - CIVIL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

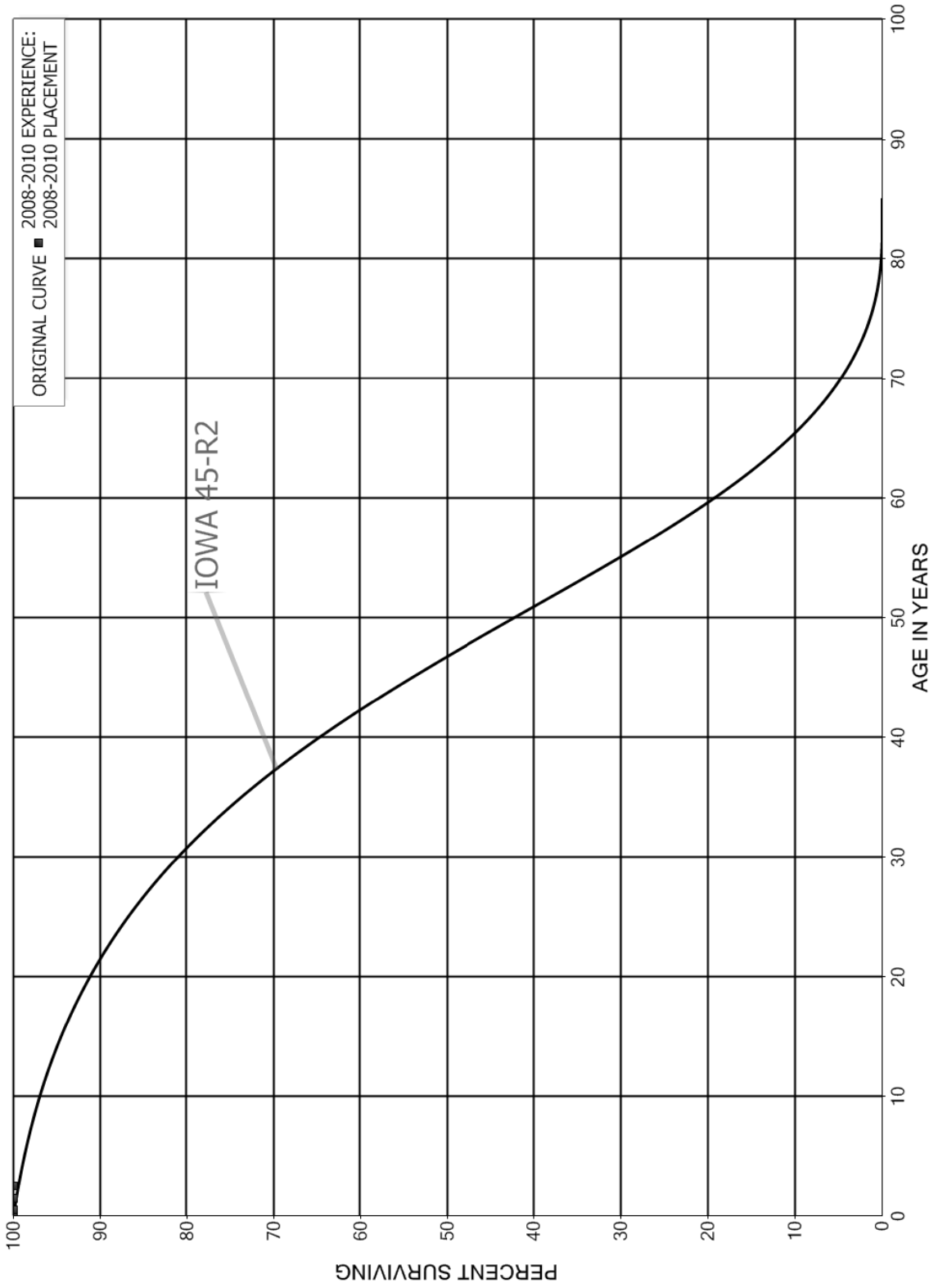
ACCOUNT 8000D - BUILDING - 360 PORTAGE - CIVIL

ORIGINAL LIFE TABLE

PLACEMENT BAND 2009-2010 EXPERIENCE BAND 2009-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	207,228,398		0.0000	1.0000	100.00
0.5	191,915,980		0.0000	1.0000	100.00
1.5					100.00

MANITOBA HYDRO
ACCOUNT 8000E - BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

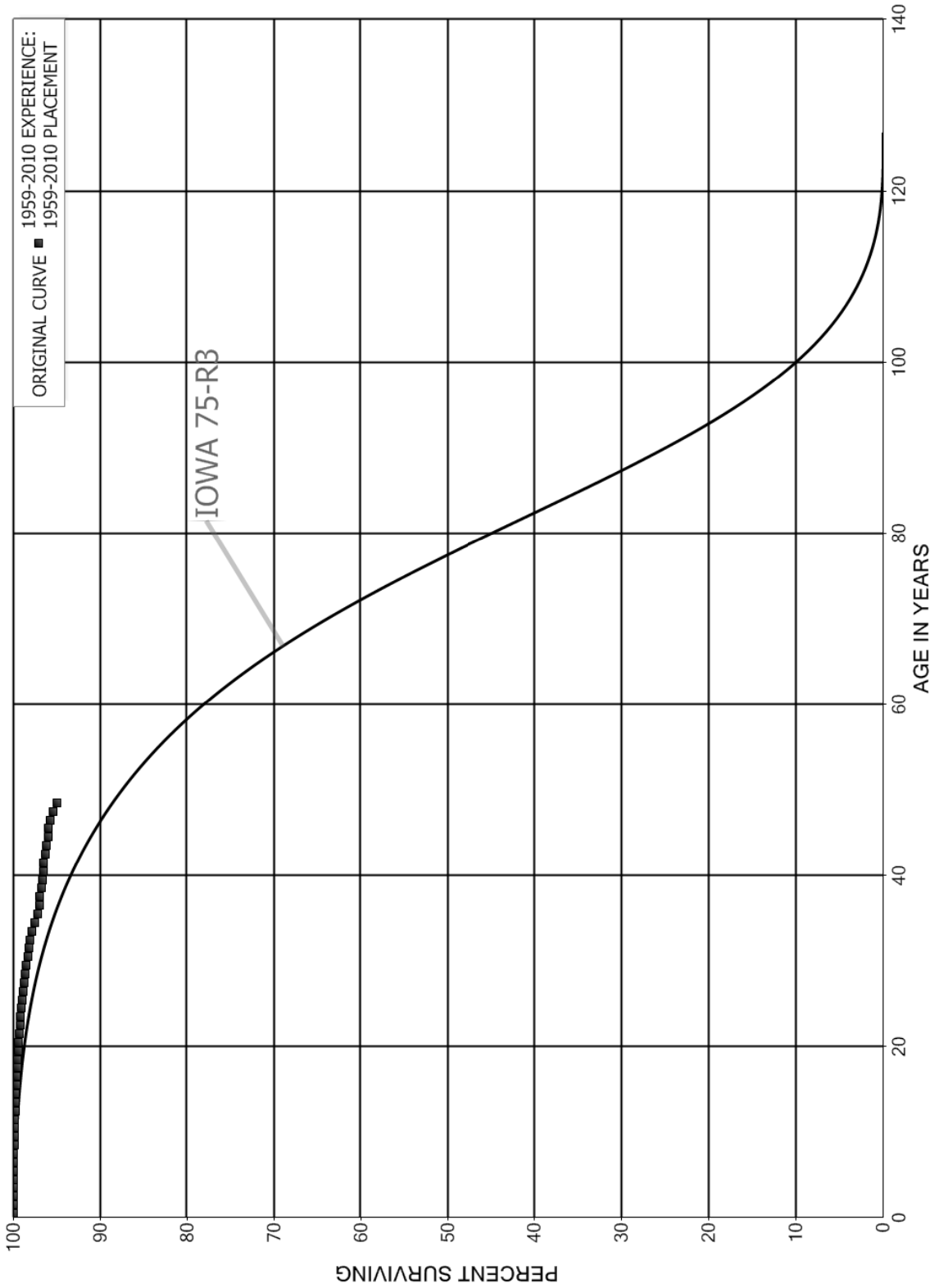
ACCOUNT 8000E - BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 2008-2010 EXPERIENCE BAND 2008-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	65,888,581		0.0000	1.0000	100.00
0.5	61,004,879		0.0000	1.0000	100.00
1.5	70,386		0.0000	1.0000	100.00
2.5					100.00

MANITOBA HYDRO
ACCOUNT A100A - EASEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT A100A - EASEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	50,862,824	3,167	0.0001	0.9999	100.00
0.5	48,271,430	4,536	0.0001	0.9999	99.99
1.5	47,744,959	4,742	0.0001	0.9999	99.98
2.5	46,546,100	4,629	0.0001	0.9999	99.97
3.5	44,846,404	4,913	0.0001	0.9999	99.96
4.5	44,104,036	6,806	0.0002	0.9998	99.95
5.5	43,148,181	6,621	0.0002	0.9998	99.94
6.5	42,250,916	8,006	0.0002	0.9998	99.92
7.5	41,691,845	9,456	0.0002	0.9998	99.90
8.5	40,046,993	6,185	0.0002	0.9998	99.88
9.5	29,101,775	7,507	0.0003	0.9997	99.87
10.5	27,119,665	9,008	0.0003	0.9997	99.84
11.5	25,209,382	7,984	0.0003	0.9997	99.81
12.5	21,272,550	6,850	0.0003	0.9997	99.78
13.5	17,755,167	7,280	0.0004	0.9996	99.74
14.5	16,025,613	11,485	0.0007	0.9993	99.70
15.5	15,055,169	8,934	0.0006	0.9994	99.63
16.5	14,084,664	7,019	0.0005	0.9995	99.57
17.5	13,165,288	6,784	0.0005	0.9995	99.52
18.5	11,879,485	7,835	0.0007	0.9993	99.47
19.5	10,884,858	7,110	0.0007	0.9993	99.41
20.5	9,383,144	5,854	0.0006	0.9994	99.34
21.5	8,603,855	5,623	0.0007	0.9993	99.28
22.5	8,066,633	5,320	0.0007	0.9993	99.21
23.5	7,583,275	8,218	0.0011	0.9989	99.15
24.5	7,130,090	8,195	0.0011	0.9989	99.04
25.5	5,938,250	7,548	0.0013	0.9987	98.93
26.5	5,438,158	5,980	0.0011	0.9989	98.80
27.5	5,043,678	5,333	0.0011	0.9989	98.69
28.5	4,250,514	5,073	0.0012	0.9988	98.59
29.5	3,318,321	5,141	0.0015	0.9985	98.47
30.5	2,942,257	4,413	0.0015	0.9985	98.32
31.5	2,723,343	3,792	0.0014	0.9986	98.17
32.5	2,426,558	4,006	0.0017	0.9983	98.03
33.5	2,212,876	8,120	0.0037	0.9963	97.87
34.5	1,823,597	5,817	0.0032	0.9968	97.51
35.5	1,680,838	3,341	0.0020	0.9980	97.20
36.5	1,518,487	1,305	0.0009	0.9991	97.01
37.5	1,388,453	3,189	0.0023	0.9977	96.92
38.5	1,102,947	1,016	0.0009	0.9991	96.70

MANITOBA HYDRO

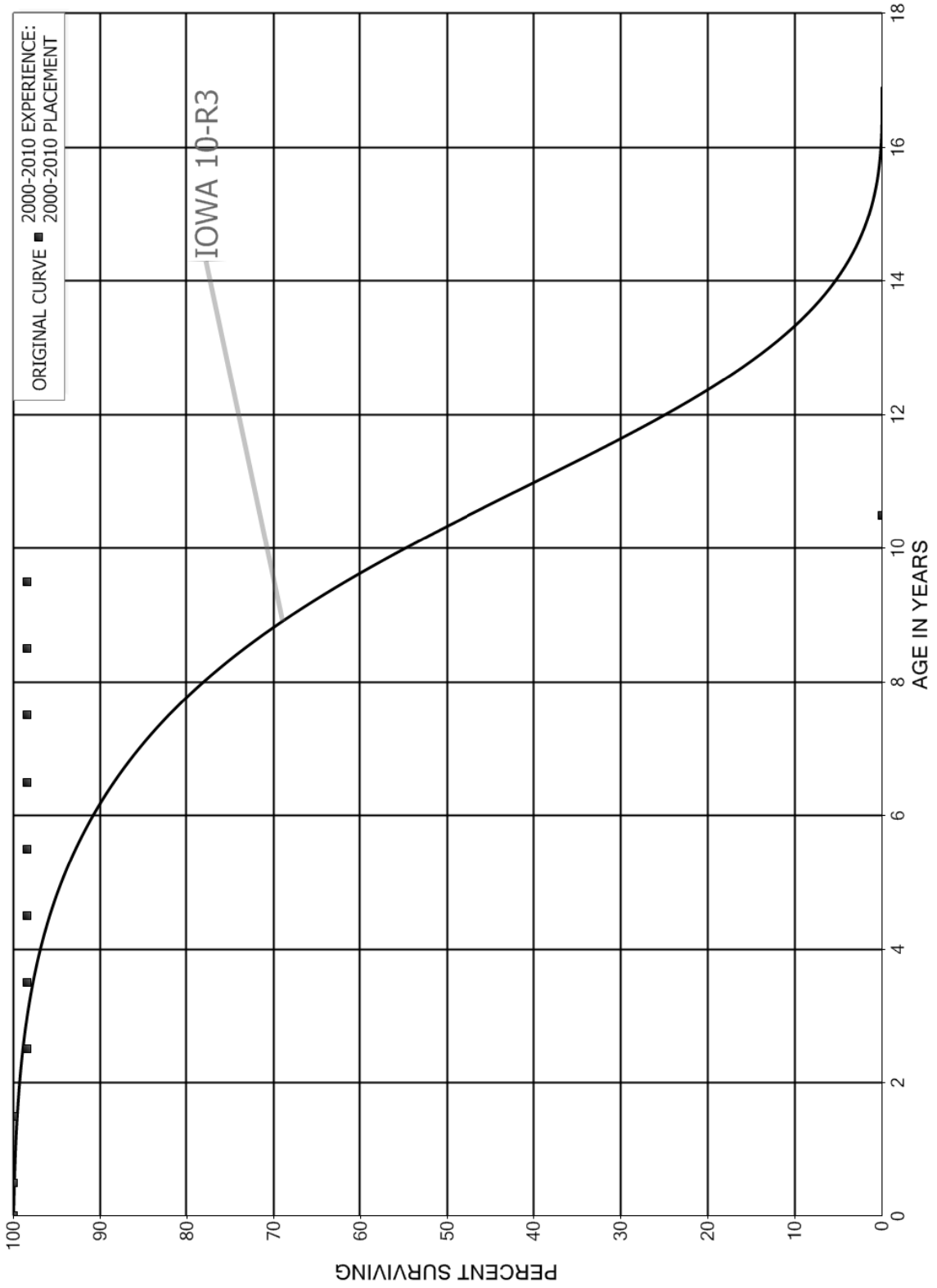
ACCOUNT A100A - EASEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1959-2010 EXPERIENCE BAND 1959-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	811,693	636	0.0008	0.9992	96.61
40.5	645,751	451	0.0007	0.9993	96.54
41.5	601,798	1,119	0.0019	0.9981	96.47
42.5	551,222	831	0.0015	0.9985	96.29
43.5	451,557	727	0.0016	0.9984	96.15
44.5	365,767	180	0.0005	0.9995	95.99
45.5	290,587	508	0.0017	0.9983	95.94
46.5	260,575	918	0.0035	0.9965	95.78
47.5	244,384	1,179	0.0048	0.9952	95.44
48.5					94.98

MANITOBA HYDRO
ACCOUNT A200G - COMPUTER DEVELOPMENT - MAJOR SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



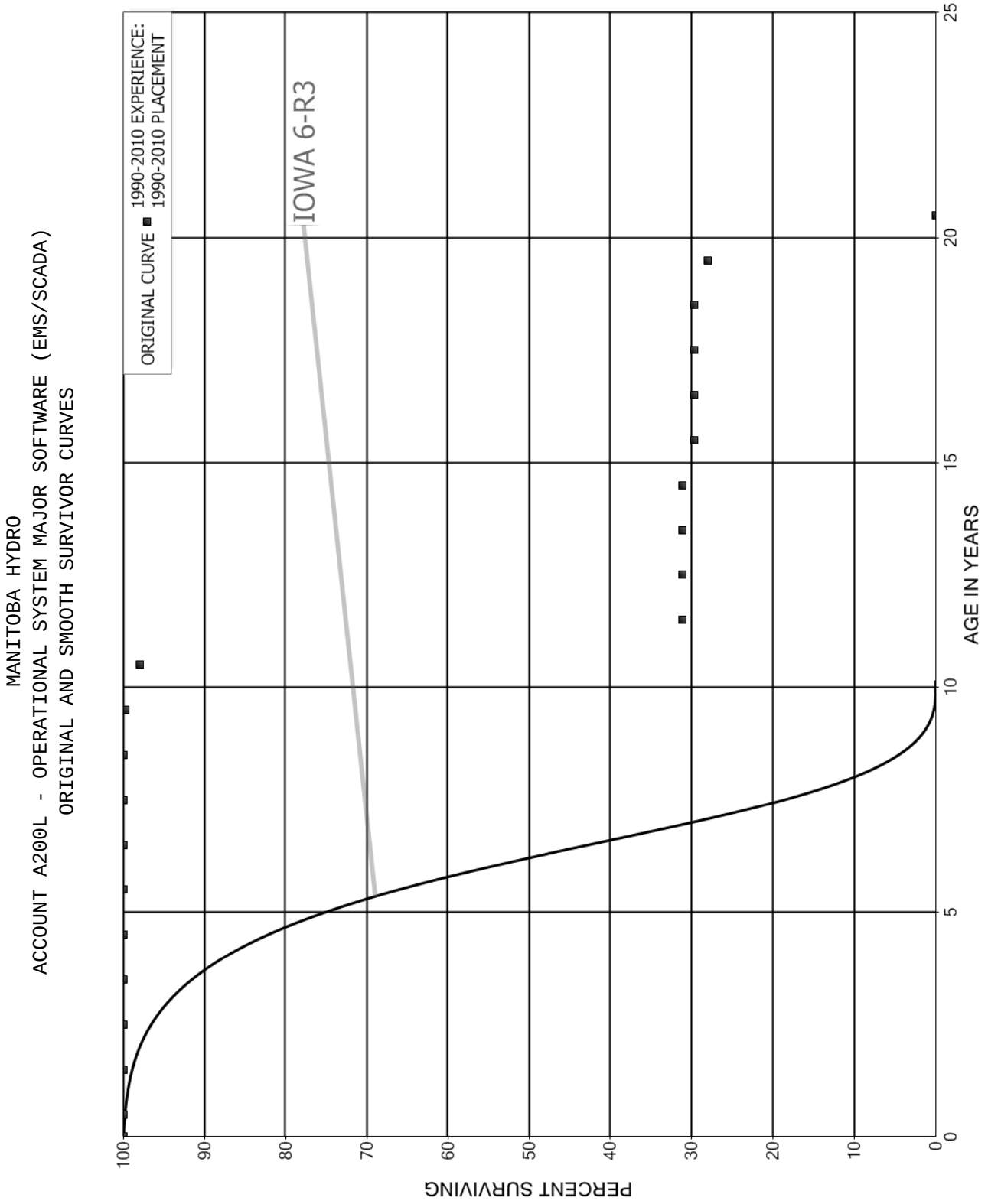
MANITOBA HYDRO

ACCOUNT A200G - COMPUTER DEVELOPMENT - MAJOR SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2000-2010 EXPERIENCE BAND 2000-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	109,483,095	110,000	0.0010	0.9990	100.00
0.5	108,059,437		0.0000	1.0000	99.90
1.5	101,565,995	1,545,031	0.0152	0.9848	99.90
2.5	89,843,875	2,183	0.0000	1.0000	98.38
3.5	76,295,555		0.0000	1.0000	98.38
4.5	53,257,083		0.0000	1.0000	98.38
5.5	41,808,588		0.0000	1.0000	98.38
6.5	28,531,381		0.0000	1.0000	98.38
7.5	23,279,704		0.0000	1.0000	98.38
8.5	15,436,880		0.0000	1.0000	98.38
9.5	6,436,297	6,436,297	1.0000		98.38
10.5					


MANITOBA HYDRO
ACCOUNT A200L - OPERATIONAL SYSTEM MAJOR SOFTWARE (EMS/SCADA)
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1990-2010 EXPERIENCE: 1990-2010 PLACEMENT
IOWA 6-R3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
AGE IN YEARS

MANITOBA HYDRO

ACCOUNT A200L - OPERATIONAL SYSTEM MAJOR SOFTWARE (EMS/SCADA)

ORIGINAL LIFE TABLE

PLACEMENT BAND 1990-2010 EXPERIENCE BAND 1990-2010

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	34,191,858		0.0000	1.0000	100.00
0.5	33,255,916		0.0000	1.0000	100.00
1.5	33,255,916		0.0000	1.0000	100.00
2.5	33,050,289		0.0000	1.0000	100.00
3.5	32,901,209		0.0000	1.0000	100.00
4.5	32,407,886		0.0000	1.0000	100.00
5.5	32,106,433		0.0000	1.0000	100.00
6.5	32,060,244		0.0000	1.0000	100.00
7.5	30,975,048		0.0000	1.0000	100.00
8.5	28,271,044	62,450	0.0022	0.9978	100.00
9.5	28,208,594	523,768	0.0186	0.9814	99.78
10.5	27,684,826	18,896,286	0.6826	0.3174	97.93
11.5	8,788,539		0.0000	1.0000	31.09
12.5	8,788,539		0.0000	1.0000	31.09
13.5	8,692,536		0.0000	1.0000	31.09
14.5	8,692,536	425,324	0.0489	0.9511	31.09
15.5	8,267,212		0.0000	1.0000	29.57
16.5	8,267,212		0.0000	1.0000	29.57
17.5	8,267,212		0.0000	1.0000	29.57
18.5	8,267,212	442,408	0.0535	0.9465	29.57
19.5	7,824,803	7,824,803	1.0000		27.98
20.5					

2014 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES APPLICABLE TO DEPRECIABLE ASSETS IN SERVICE AS OF MARCH 31, 2014

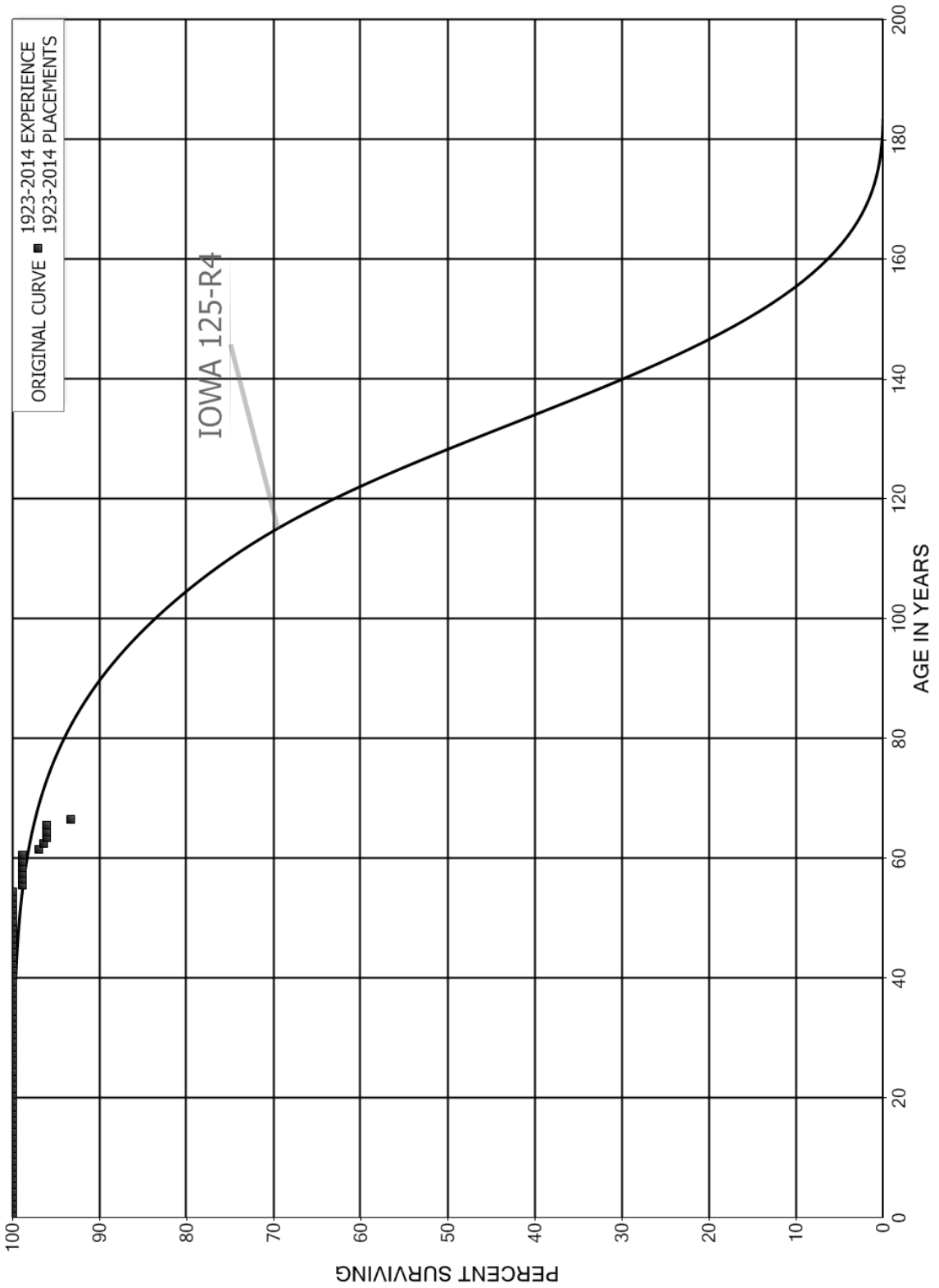
SERVICE LIFE STATISTICS

Prepared by:

Excellence Delivered ***As Promised***

PART V. SERVICE LIFE STATISTICS

MANITOBA HYDRO
ACCOUNT 000A - DAMS, DYKES AND WEIRS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	557,115,669		0.0000	1.0000	100.00
0.5	541,180,383		0.0000	1.0000	100.00
1.5	533,368,558		0.0000	1.0000	100.00
2.5	518,568,900		0.0000	1.0000	100.00
3.5	512,817,968		0.0000	1.0000	100.00
4.5	507,797,640		0.0000	1.0000	100.00
5.5	505,944,950		0.0000	1.0000	100.00
6.5	494,189,922		0.0000	1.0000	100.00
7.5	493,483,607		0.0000	1.0000	100.00
8.5	484,704,289		0.0000	1.0000	100.00
9.5	481,088,664		0.0000	1.0000	100.00
10.5	472,556,104		0.0000	1.0000	100.00
11.5	469,412,193		0.0000	1.0000	100.00
12.5	467,038,332		0.0000	1.0000	100.00
13.5	466,215,198		0.0000	1.0000	100.00
14.5	463,139,641		0.0000	1.0000	100.00
15.5	462,934,485		0.0000	1.0000	100.00
16.5	460,218,341		0.0000	1.0000	100.00
17.5	459,867,645		0.0000	1.0000	100.00
18.5	460,094,857		0.0000	1.0000	100.00
19.5	459,867,645		0.0000	1.0000	100.00
20.5	459,814,163	13,954	0.0000	1.0000	100.00
21.5	452,743,861		0.0000	1.0000	100.00
22.5	439,471,606		0.0000	1.0000	100.00
23.5	423,131,287		0.0000	1.0000	100.00
24.5	419,893,471		0.0000	1.0000	100.00
25.5	419,893,471		0.0000	1.0000	100.00
26.5	419,893,471		0.0000	1.0000	100.00
27.5	419,893,471		0.0000	1.0000	100.00
28.5	406,809,469		0.0000	1.0000	100.00
29.5	405,262,687		0.0000	1.0000	100.00
30.5	385,600,238		0.0000	1.0000	100.00
31.5	385,373,616		0.0000	1.0000	100.00
32.5	385,373,616		0.0000	1.0000	100.00
33.5	385,373,616		0.0000	1.0000	100.00
34.5	385,373,616		0.0000	1.0000	100.00
35.5	323,749,324		0.0000	1.0000	100.00
36.5	106,855,187		0.0000	1.0000	100.00
37.5	106,855,187		0.0000	1.0000	100.00
38.5	106,855,187		0.0000	1.0000	100.00

MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	106,855,187		0.0000	1.0000	100.00
40.5	106,855,187		0.0000	1.0000	100.00
41.5	62,267,931		0.0000	1.0000	100.00
42.5	62,267,931		0.0000	1.0000	100.00
43.5	62,265,107		0.0000	1.0000	100.00
44.5	62,265,107		0.0000	1.0000	100.00
45.5	61,796,000		0.0000	1.0000	100.00
46.5	61,796,000		0.0000	1.0000	100.00
47.5	61,796,000		0.0000	1.0000	100.00
48.5	20,881,841		0.0000	1.0000	100.00
49.5	20,881,841		0.0000	1.0000	100.00
50.5	20,881,841		0.0000	1.0000	100.00
51.5	20,881,841		0.0000	1.0000	100.00
52.5	20,881,841		0.0000	1.0000	100.00
53.5	17,244,716		0.0000	1.0000	100.00
54.5	17,244,716	192,434	0.0112	0.9888	100.00
55.5	17,043,443		0.0000	1.0000	98.88
56.5	11,443,138		0.0000	1.0000	98.88
57.5	11,443,138		0.0000	1.0000	98.88
58.5	11,443,138		0.0000	1.0000	98.88
59.5	8,809,810		0.0000	1.0000	98.88
60.5	8,809,810	175,771	0.0200	0.9800	98.88
61.5	8,631,748	44,894	0.0052	0.9948	96.91
62.5	5,753,070	19,841	0.0034	0.9966	96.40
63.5	5,721,645		0.0000	1.0000	96.07
64.5	5,272,506		0.0000	1.0000	96.07
65.5	5,272,506	155,106	0.0294	0.9706	96.07
66.5	5,117,399	283,771	0.0555	0.9445	93.25
67.5	4,833,629		0.0000	1.0000	88.07
68.5	4,833,629		0.0000	1.0000	88.07
69.5	4,833,629		0.0000	1.0000	88.07
70.5	4,833,629		0.0000	1.0000	88.07
71.5	4,833,629		0.0000	1.0000	88.07
72.5	4,833,629		0.0000	1.0000	88.07
73.5	4,833,629		0.0000	1.0000	88.07
74.5	4,833,629		0.0000	1.0000	88.07
75.5	4,833,629		0.0000	1.0000	88.07
76.5	4,833,629		0.0000	1.0000	88.07
77.5	4,833,629		0.0000	1.0000	88.07
78.5	4,833,629		0.0000	1.0000	88.07

MANITOBA HYDRO

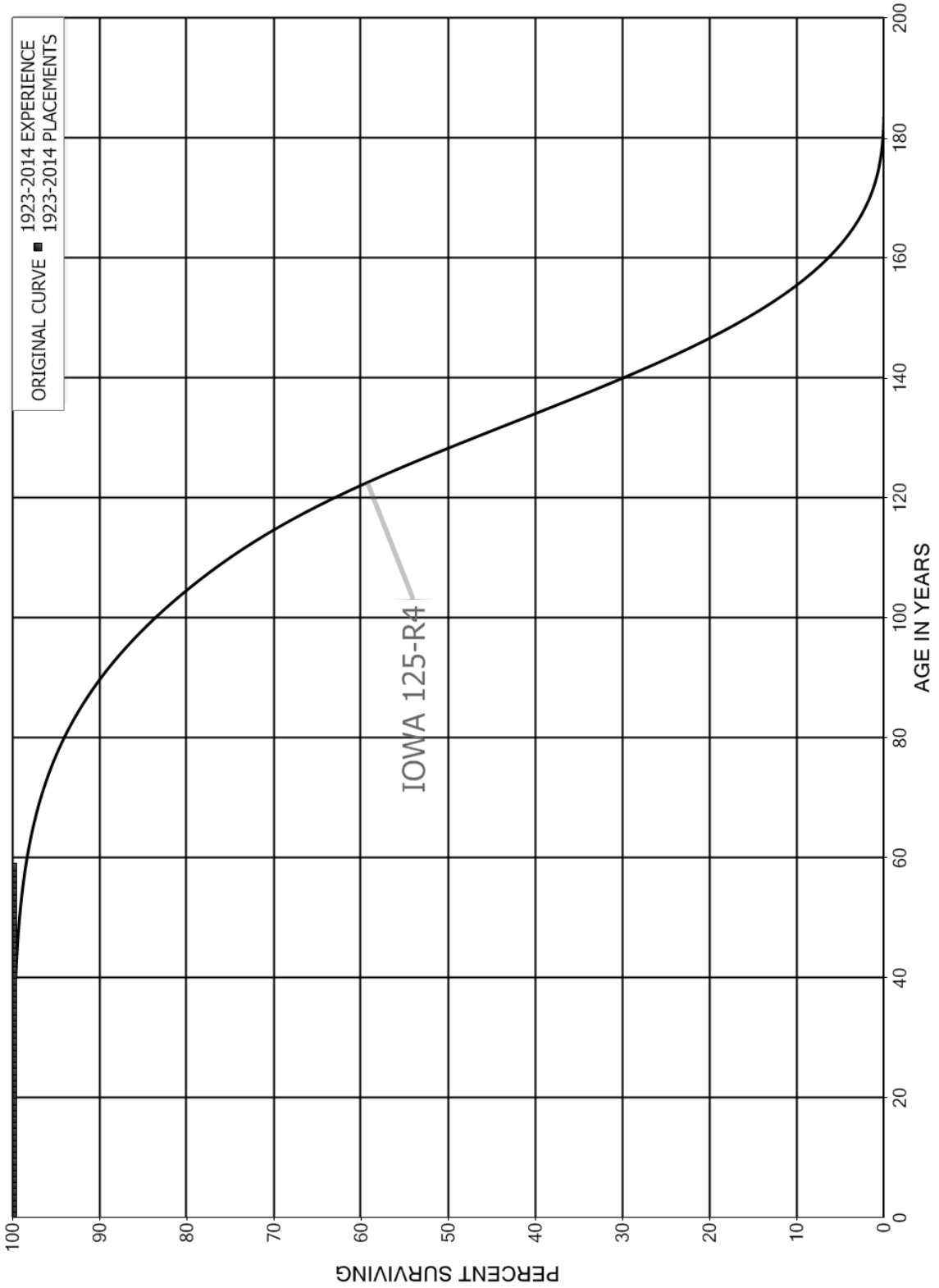
ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	4,833,629		0.0000	1.0000	88.07
80.5	4,833,629		0.0000	1.0000	88.07
81.5	4,833,629		0.0000	1.0000	88.07
82.5	2,211,109		0.0000	1.0000	88.07
83.5	2,211,109		0.0000	1.0000	88.07
84.5	2,211,109		0.0000	1.0000	88.07
85.5	986,481		0.0000	1.0000	88.07
86.5	986,481		0.0000	1.0000	88.07
87.5	967,520		0.0000	1.0000	88.07
88.5	967,520		0.0000	1.0000	88.07
89.5	967,520		0.0000	1.0000	88.07
90.5	931,651		0.0000	1.0000	88.07
91.5					88.07

MANITOBA HYDRO
ACCOUNT 000B - POWERHOUSE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,034,718,330		0.0000	1.0000	100.00
0.5	1,021,564,646		0.0000	1.0000	100.00
1.5	1,016,881,997		0.0000	1.0000	100.00
2.5	1,011,774,568	8,710	0.0000	1.0000	100.00
3.5	1,006,021,911		0.0000	1.0000	100.00
4.5	992,451,878	232,971	0.0002	0.9998	100.00
5.5	977,132,815	9,768	0.0000	1.0000	99.98
6.5	965,468,029		0.0000	1.0000	99.97
7.5	956,676,120		0.0000	1.0000	99.97
8.5	955,437,107		0.0000	1.0000	99.97
9.5	953,663,245	228,094	0.0002	0.9998	99.97
10.5	952,687,337	43,503	0.0000	1.0000	99.95
11.5	907,605,913		0.0000	1.0000	99.95
12.5	907,605,913	12,034	0.0000	1.0000	99.95
13.5	907,575,869		0.0000	1.0000	99.94
14.5	907,172,901		0.0000	1.0000	99.94
15.5	906,853,911		0.0000	1.0000	99.94
16.5	906,623,746		0.0000	1.0000	99.94
17.5	903,517,401		0.0000	1.0000	99.94
18.5	903,127,542		0.0000	1.0000	99.94
19.5	899,401,946		0.0000	1.0000	99.94
20.5	899,274,467		0.0000	1.0000	99.94
21.5	809,234,050		0.0000	1.0000	99.94
22.5	625,266,311		0.0000	1.0000	99.94
23.5	441,271,621		0.0000	1.0000	99.94
24.5	440,619,662		0.0000	1.0000	99.94
25.5	440,619,662		0.0000	1.0000	99.94
26.5	440,579,766		0.0000	1.0000	99.94
27.5	440,502,575		0.0000	1.0000	99.94
28.5	435,985,933		0.0000	1.0000	99.94
29.5	435,985,933		0.0000	1.0000	99.94
30.5	434,998,276		0.0000	1.0000	99.94
31.5	434,998,276		0.0000	1.0000	99.94
32.5	434,998,276		0.0000	1.0000	99.94
33.5	434,998,276		0.0000	1.0000	99.94
34.5	434,905,541		0.0000	1.0000	99.94
35.5	294,596,738		0.0000	1.0000	99.94
36.5	219,786,809		0.0000	1.0000	99.94
37.5	219,786,809		0.0000	1.0000	99.94
38.5	219,786,809	500	0.0000	1.0000	99.94

MANITOBA HYDRO

ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	219,786,309		0.0000	1.0000	99.94
40.5	219,786,309		0.0000	1.0000	99.94
41.5	77,105,979		0.0000	1.0000	99.94
42.5	77,083,060		0.0000	1.0000	99.94
43.5	76,708,390		0.0000	1.0000	99.94
44.5	67,517,441		0.0000	1.0000	99.94
45.5	63,923,548		0.0000	1.0000	99.94
46.5	63,923,548		0.0000	1.0000	99.94
47.5	63,867,469		0.0000	1.0000	99.94
48.5	44,800,153		0.0000	1.0000	99.94
49.5	44,517,189		0.0000	1.0000	99.94
50.5	44,380,413		0.0000	1.0000	99.94
51.5	44,251,793		0.0000	1.0000	99.94
52.5	44,180,989		0.0000	1.0000	99.94
53.5	28,027,057		0.0000	1.0000	99.94
54.5	28,027,057		0.0000	1.0000	99.94
55.5	28,005,730		0.0000	1.0000	99.94
56.5	28,005,730		0.0000	1.0000	99.94
57.5	27,995,013		0.0000	1.0000	99.94
58.5	27,995,013		0.0000	1.0000	99.94
59.5	19,121,525		0.0000	1.0000	99.94
60.5	19,121,525		0.0000	1.0000	99.94
61.5	19,121,525		0.0000	1.0000	99.94
62.5	9,976,187		0.0000	1.0000	99.94
63.5	9,973,098		0.0000	1.0000	99.94
64.5	9,226,769	100,000	0.0108	0.9892	99.94
65.5	9,126,769		0.0000	1.0000	98.86
66.5	9,126,769		0.0000	1.0000	98.86
67.5	9,126,769		0.0000	1.0000	98.86
68.5	9,126,769		0.0000	1.0000	98.86
69.5	9,126,769		0.0000	1.0000	98.86
70.5	9,126,769		0.0000	1.0000	98.86
71.5	9,126,769		0.0000	1.0000	98.86
72.5	9,126,769		0.0000	1.0000	98.86
73.5	9,126,769		0.0000	1.0000	98.86
74.5	9,126,769		0.0000	1.0000	98.86
75.5	9,126,769		0.0000	1.0000	98.86
76.5	9,126,769		0.0000	1.0000	98.86
77.5	9,126,769		0.0000	1.0000	98.86
78.5	9,126,769		0.0000	1.0000	98.86

MANITOBA HYDRO

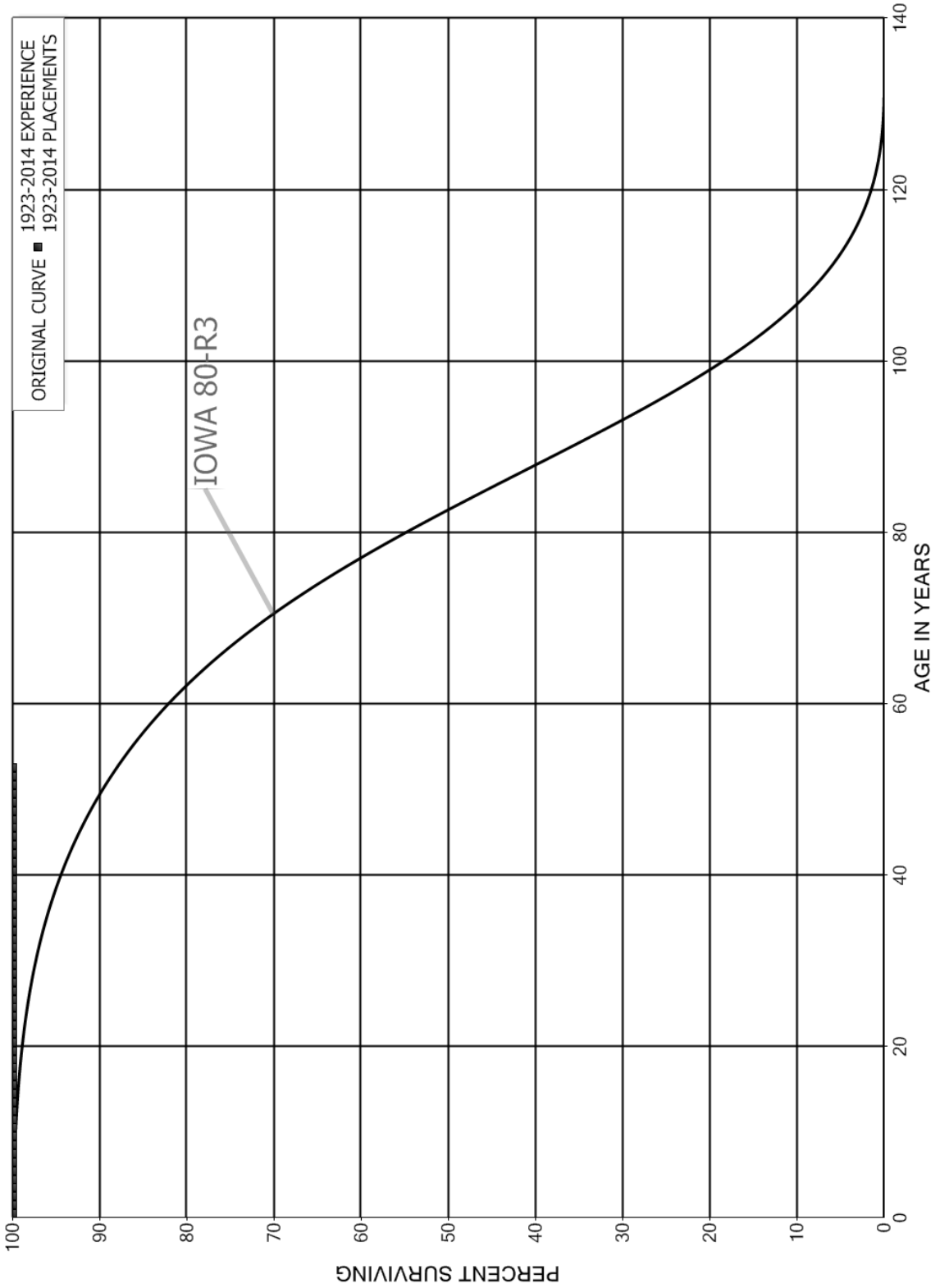
ACCOUNT 000B - POWERHOUSE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	9,126,769		0.0000	1.0000	98.86
80.5	9,126,769		0.0000	1.0000	98.86
81.5	9,126,769		0.0000	1.0000	98.86
82.5	2,154,669		0.0000	1.0000	98.86
83.5	2,154,669		0.0000	1.0000	98.86
84.5	2,154,669		0.0000	1.0000	98.86
85.5	1,357,368		0.0000	1.0000	98.86
86.5	1,252,181		0.0000	1.0000	98.86
87.5	1,004,594		0.0000	1.0000	98.86
88.5	1,004,594		0.0000	1.0000	98.86
89.5	1,004,594		0.0000	1.0000	98.86
90.5	936,361		0.0000	1.0000	98.86
91.5					98.86

MANITOBA HYDRO
ACCOUNT 000D - SPILLWAY
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	383,149,667		0.0000	1.0000	100.00
0.5	376,401,713		0.0000	1.0000	100.00
1.5	375,642,001		0.0000	1.0000	100.00
2.5	373,031,928		0.0000	1.0000	100.00
3.5	372,441,724		0.0000	1.0000	100.00
4.5	369,914,491		0.0000	1.0000	100.00
5.5	368,097,640		0.0000	1.0000	100.00
6.5	367,881,557		0.0000	1.0000	100.00
7.5	367,764,024		0.0000	1.0000	100.00
8.5	367,114,347	1,838	0.0000	1.0000	100.00
9.5	366,503,860		0.0000	1.0000	100.00
10.5	366,503,860		0.0000	1.0000	100.00
11.5	366,503,860		0.0000	1.0000	100.00
12.5	366,503,860		0.0000	1.0000	100.00
13.5	366,503,860		0.0000	1.0000	100.00
14.5	366,503,860		0.0000	1.0000	100.00
15.5	366,503,860		0.0000	1.0000	100.00
16.5	366,474,931		0.0000	1.0000	100.00
17.5	365,496,346		0.0000	1.0000	100.00
18.5	365,496,346		0.0000	1.0000	100.00
19.5	364,586,302		0.0000	1.0000	100.00
20.5	364,326,166		0.0000	1.0000	100.00
21.5	323,636,189		0.0000	1.0000	100.00
22.5	243,205,720		0.0000	1.0000	100.00
23.5	162,775,251		0.0000	1.0000	100.00
24.5	162,775,251		0.0000	1.0000	100.00
25.5	162,775,251		0.0000	1.0000	100.00
26.5	162,775,251		0.0000	1.0000	100.00
27.5	162,775,251		0.0000	1.0000	100.00
28.5	153,160,401		0.0000	1.0000	100.00
29.5	153,160,401		0.0000	1.0000	100.00
30.5	152,522,890		0.0000	1.0000	100.00
31.5	152,522,890		0.0000	1.0000	100.00
32.5	152,522,890		0.0000	1.0000	100.00
33.5	152,522,890		0.0000	1.0000	100.00
34.5	152,522,890		0.0000	1.0000	100.00
35.5	110,724,015		0.0000	1.0000	100.00
36.5	39,517,819		0.0000	1.0000	100.00
37.5	39,517,819		0.0000	1.0000	100.00
38.5	39,517,819		0.0000	1.0000	100.00

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	39,517,819		0.0000	1.0000	100.00
40.5	39,517,819		0.0000	1.0000	100.00
41.5	14,110,860		0.0000	1.0000	100.00
42.5	14,110,860		0.0000	1.0000	100.00
43.5	14,110,860		0.0000	1.0000	100.00
44.5	14,110,860		0.0000	1.0000	100.00
45.5	12,809,593		0.0000	1.0000	100.00
46.5	12,809,593		0.0000	1.0000	100.00
47.5	12,809,593		0.0000	1.0000	100.00
48.5	8,802,525		0.0000	1.0000	100.00
49.5	8,802,525		0.0000	1.0000	100.00
50.5	8,802,525		0.0000	1.0000	100.00
51.5	8,802,525		0.0000	1.0000	100.00
52.5	8,802,525		0.0000	1.0000	100.00
53.5	3,470,596		0.0000	1.0000	100.00
54.5	3,470,596		0.0000	1.0000	100.00
55.5	3,470,596		0.0000	1.0000	100.00
56.5	3,470,596		0.0000	1.0000	100.00
57.5	3,470,596		0.0000	1.0000	100.00
58.5	3,470,596		0.0000	1.0000	100.00
59.5	1,119,158		0.0000	1.0000	100.00
60.5	1,119,158		0.0000	1.0000	100.00
61.5	1,119,158		0.0000	1.0000	100.00
62.5	1,119,158		0.0000	1.0000	100.00
63.5	1,119,158		0.0000	1.0000	100.00
64.5	1,119,158		0.0000	1.0000	100.00
65.5	1,119,158	9,446	0.0084	0.9916	100.00
66.5	1,109,711		0.0000	1.0000	99.16
67.5	1,109,711		0.0000	1.0000	99.16
68.5	1,109,711		0.0000	1.0000	99.16
69.5	1,109,711		0.0000	1.0000	99.16
70.5	1,109,711		0.0000	1.0000	99.16
71.5	1,109,711	16,317	0.0147	0.9853	99.16
72.5	1,093,394		0.0000	1.0000	97.70
73.5	1,093,394		0.0000	1.0000	97.70
74.5	1,093,394		0.0000	1.0000	97.70
75.5	1,093,394		0.0000	1.0000	97.70
76.5	1,093,394		0.0000	1.0000	97.70
77.5	1,093,394		0.0000	1.0000	97.70
78.5	1,093,394		0.0000	1.0000	97.70

MANITOBA HYDRO

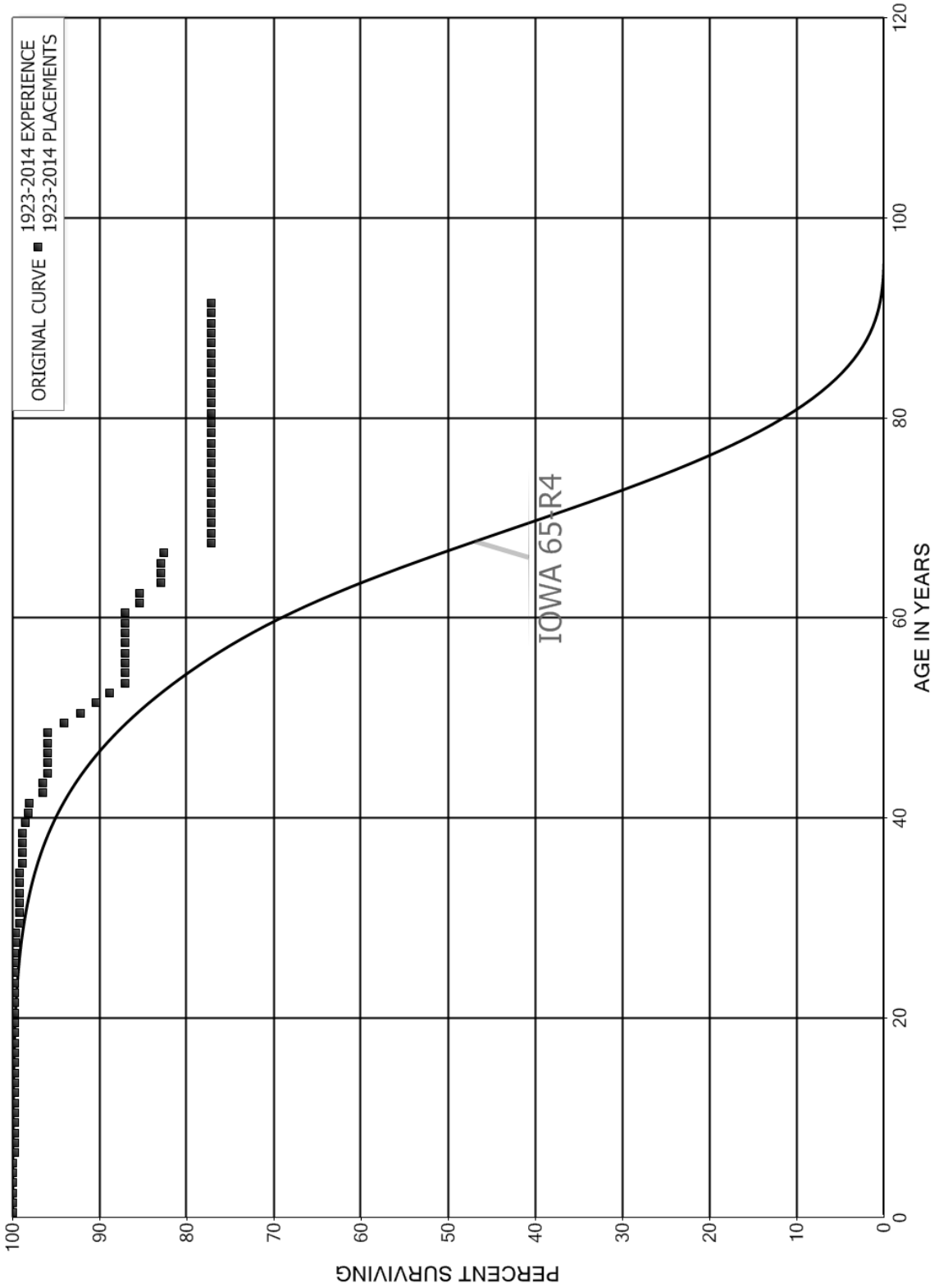
ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	1,093,394		0.0000	1.0000	97.70
80.5	1,093,394		0.0000	1.0000	97.70
81.5	1,093,394		0.0000	1.0000	97.70
82.5	21,434		0.0000	1.0000	97.70
83.5	21,434		0.0000	1.0000	97.70
84.5	21,434		0.0000	1.0000	97.70
85.5	13,575		0.0000	1.0000	97.70
86.5	13,575		0.0000	1.0000	97.70
87.5	13,575		0.0000	1.0000	97.70
88.5	13,575		0.0000	1.0000	97.70
89.5	13,575		0.0000	1.0000	97.70
90.5	13,575		0.0000	1.0000	97.70
91.5					97.70

MANITOBA HYDRO
ACCOUNT 000E - WATER CONTROL SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	333,116,643		0.0000	1.0000	100.00
0.5	320,489,014	312,000	0.0010	0.9990	100.00
1.5	315,811,856		0.0000	1.0000	99.90
2.5	309,157,548		0.0000	1.0000	99.90
3.5	304,562,044		0.0000	1.0000	99.90
4.5	301,301,441		0.0000	1.0000	99.90
5.5	300,904,257	412,657	0.0014	0.9986	99.90
6.5	297,824,541		0.0000	1.0000	99.77
7.5	296,084,166		0.0000	1.0000	99.77
8.5	294,111,907		0.0000	1.0000	99.77
9.5	287,804,149		0.0000	1.0000	99.77
10.5	283,380,010		0.0000	1.0000	99.77
11.5	282,553,379		0.0000	1.0000	99.77
12.5	282,071,776		0.0000	1.0000	99.77
13.5	281,475,601		0.0000	1.0000	99.77
14.5	280,497,359		0.0000	1.0000	99.77
15.5	279,140,306		0.0000	1.0000	99.77
16.5	276,389,995		0.0000	1.0000	99.77
17.5	275,716,854		0.0000	1.0000	99.77
18.5	275,516,373	108,000	0.0004	0.9996	99.77
19.5	269,928,812		0.0000	1.0000	99.73
20.5	269,928,812		0.0000	1.0000	99.73
21.5	238,744,584		0.0000	1.0000	99.73
22.5	191,222,511		0.0000	1.0000	99.73
23.5	142,976,500		0.0000	1.0000	99.73
24.5	142,791,170		0.0000	1.0000	99.73
25.5	142,791,170	6,649	0.0000	1.0000	99.73
26.5	142,784,521	132,000	0.0009	0.9991	99.72
27.5	142,652,521		0.0000	1.0000	99.63
28.5	130,708,045	535,189	0.0041	0.9959	99.63
29.5	130,172,856		0.0000	1.0000	99.22
30.5	129,889,871		0.0000	1.0000	99.22
31.5	129,889,871	1,431	0.0000	1.0000	99.22
32.5	129,888,440		0.0000	1.0000	99.22
33.5	129,871,810		0.0000	1.0000	99.22
34.5	129,871,810	514,808	0.0040	0.9960	99.22
35.5	71,777,543		0.0000	1.0000	98.83
36.5	39,078,975		0.0000	1.0000	98.83
37.5	39,078,975	673	0.0000	1.0000	98.83
38.5	39,028,410	120,343	0.0031	0.9969	98.83

MANITOBA HYDRO

ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	38,718,562	126,334	0.0033	0.9967	98.52
40.5	38,592,228	63,167	0.0016	0.9984	98.20
41.5	21,064,647	321,722	0.0153	0.9847	98.04
42.5	20,742,925		0.0000	1.0000	96.54
43.5	20,233,295	123,283	0.0061	0.9939	96.54
44.5	19,508,112		0.0000	1.0000	95.95
45.5	17,903,268		0.0000	1.0000	95.95
46.5	17,903,268		0.0000	1.0000	95.95
47.5	17,884,404		0.0000	1.0000	95.95
48.5	7,702,557	149,817	0.0195	0.9805	95.95
49.5	7,552,741	149,817	0.0198	0.9802	94.09
50.5	7,402,924	149,817	0.0202	0.9798	92.22
51.5	7,246,360	118,350	0.0163	0.9837	90.35
52.5	7,128,010	149,817	0.0210	0.9790	88.88
53.5	3,947,007		0.0000	1.0000	87.01
54.5	3,947,007		0.0000	1.0000	87.01
55.5	3,943,313		0.0000	1.0000	87.01
56.5	3,943,313		0.0000	1.0000	87.01
57.5	3,931,348		0.0000	1.0000	87.01
58.5	3,928,984		0.0000	1.0000	87.01
59.5	2,977,551		0.0000	1.0000	87.01
60.5	2,977,551	55,273	0.0186	0.9814	87.01
61.5	2,922,277		0.0000	1.0000	85.40
62.5	1,553,014	44,918	0.0289	0.9711	85.40
63.5	1,353,287		0.0000	1.0000	82.93
64.5	1,278,779		0.0000	1.0000	82.93
65.5	1,278,779	4,369	0.0034	0.9966	82.93
66.5	1,274,410	84,443	0.0663	0.9337	82.64
67.5	1,189,968		0.0000	1.0000	77.17
68.5	1,189,968		0.0000	1.0000	77.17
69.5	1,189,968		0.0000	1.0000	77.17
70.5	1,189,968		0.0000	1.0000	77.17
71.5	1,189,968		0.0000	1.0000	77.17
72.5	1,189,968		0.0000	1.0000	77.17
73.5	1,189,968		0.0000	1.0000	77.17
74.5	1,189,968		0.0000	1.0000	77.17
75.5	1,189,968		0.0000	1.0000	77.17
76.5	1,189,968		0.0000	1.0000	77.17
77.5	1,189,968		0.0000	1.0000	77.17
78.5	1,189,968		0.0000	1.0000	77.17

MANITOBA HYDRO

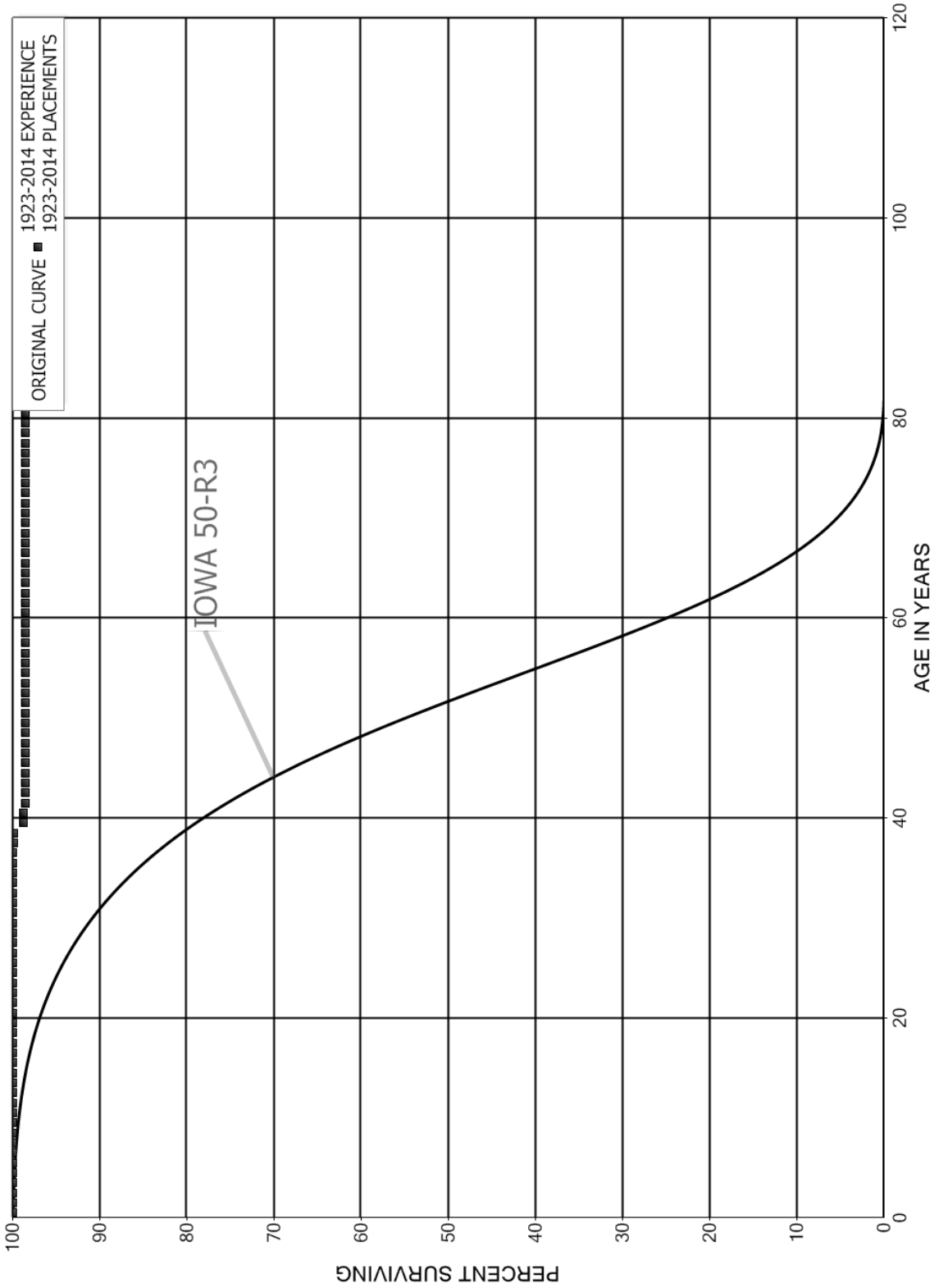
ACCOUNT 000E - WATER CONTROL SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	1,144,538		0.0000	1.0000	77.17
80.5	1,144,538		0.0000	1.0000	77.17
81.5	1,144,538		0.0000	1.0000	77.17
82.5	407,155		0.0000	1.0000	77.17
83.5	407,155		0.0000	1.0000	77.17
84.5	407,155		0.0000	1.0000	77.17
85.5	255,860		0.0000	1.0000	77.17
86.5	180,004		0.0000	1.0000	77.17
87.5	138,900		0.0000	1.0000	77.17
88.5	138,900		0.0000	1.0000	77.17
89.5	138,900		0.0000	1.0000	77.17
90.5	107,139		0.0000	1.0000	77.17
91.5					77.17

MANITOBA HYDRO
ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	111,846,323		0.0000	1.0000	100.00
0.5	111,726,560		0.0000	1.0000	100.00
1.5	108,976,607		0.0000	1.0000	100.00
2.5	98,571,579		0.0000	1.0000	100.00
3.5	65,392,996	9,613	0.0001	0.9999	100.00
4.5	65,315,009	10,898	0.0002	0.9998	99.99
5.5	65,107,321		0.0000	1.0000	99.97
6.5	64,957,630		0.0000	1.0000	99.97
7.5	64,894,179		0.0000	1.0000	99.97
8.5	63,726,726		0.0000	1.0000	99.97
9.5	63,559,412		0.0000	1.0000	99.97
10.5	61,710,157		0.0000	1.0000	99.97
11.5	61,704,304		0.0000	1.0000	99.97
12.5	61,593,597		0.0000	1.0000	99.97
13.5	61,540,963		0.0000	1.0000	99.97
14.5	61,361,162		0.0000	1.0000	99.97
15.5	61,192,151		0.0000	1.0000	99.97
16.5	60,261,247		0.0000	1.0000	99.97
17.5	60,099,964		0.0000	1.0000	99.97
18.5	58,564,949		0.0000	1.0000	99.97
19.5	58,564,949		0.0000	1.0000	99.97
20.5	58,404,768		0.0000	1.0000	99.97
21.5	54,623,092		0.0000	1.0000	99.97
22.5	47,607,295		0.0000	1.0000	99.97
23.5	40,594,386		0.0000	1.0000	99.97
24.5	39,059,971		0.0000	1.0000	99.97
25.5	39,059,971		0.0000	1.0000	99.97
26.5	38,621,912	301	0.0000	1.0000	99.97
27.5	38,569,111		0.0000	1.0000	99.97
28.5	30,676,192	6,288	0.0002	0.9998	99.97
29.5	30,669,894		0.0000	1.0000	99.95
30.5	30,669,894		0.0000	1.0000	99.95
31.5	30,669,894		0.0000	1.0000	99.95
32.5	26,612,498		0.0000	1.0000	99.95
33.5	26,612,498		0.0000	1.0000	99.95
34.5	26,612,498		0.0000	1.0000	99.95
35.5	15,411,748		0.0000	1.0000	99.95
36.5	8,076,752	12,926	0.0016	0.9984	99.95
37.5	8,063,825		0.0000	1.0000	99.79
38.5	8,063,825	84,256	0.0104	0.9896	99.79

MANITOBA HYDRO

ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	7,979,570		0.0000	1.0000	98.74
40.5	7,979,570	19,231	0.0024	0.9976	98.74
41.5	6,359,481		0.0000	1.0000	98.51
42.5	6,359,481		0.0000	1.0000	98.51
43.5	6,359,258		0.0000	1.0000	98.51
44.5	6,359,258		0.0000	1.0000	98.51
45.5	6,112,841		0.0000	1.0000	98.51
46.5	6,112,841		0.0000	1.0000	98.51
47.5	6,112,841		0.0000	1.0000	98.51
48.5	3,838,686		0.0000	1.0000	98.51
49.5	3,838,686		0.0000	1.0000	98.51
50.5	3,838,686		0.0000	1.0000	98.51
51.5	3,838,686		0.0000	1.0000	98.51
52.5	3,838,686		0.0000	1.0000	98.51
53.5	1,057,390		0.0000	1.0000	98.51
54.5	1,057,072		0.0000	1.0000	98.51
55.5	1,020,428		0.0000	1.0000	98.51
56.5	1,020,428		0.0000	1.0000	98.51
57.5	1,020,428		0.0000	1.0000	98.51
58.5	1,020,428		0.0000	1.0000	98.51
59.5	1,006,248		0.0000	1.0000	98.51
60.5	1,006,248		0.0000	1.0000	98.51
61.5	1,006,248		0.0000	1.0000	98.51
62.5	71,393		0.0000	1.0000	98.51
63.5	71,393		0.0000	1.0000	98.51
64.5	71,393		0.0000	1.0000	98.51
65.5	71,393		0.0000	1.0000	98.51
66.5	71,393		0.0000	1.0000	98.51
67.5	71,393		0.0000	1.0000	98.51
68.5	71,393		0.0000	1.0000	98.51
69.5	71,393		0.0000	1.0000	98.51
70.5	71,393		0.0000	1.0000	98.51
71.5	71,393		0.0000	1.0000	98.51
72.5	71,393		0.0000	1.0000	98.51
73.5	71,393		0.0000	1.0000	98.51
74.5	71,393		0.0000	1.0000	98.51
75.5	71,393		0.0000	1.0000	98.51
76.5	71,393		0.0000	1.0000	98.51
77.5	71,393		0.0000	1.0000	98.51
78.5	71,393		0.0000	1.0000	98.51

MANITOBA HYDRO

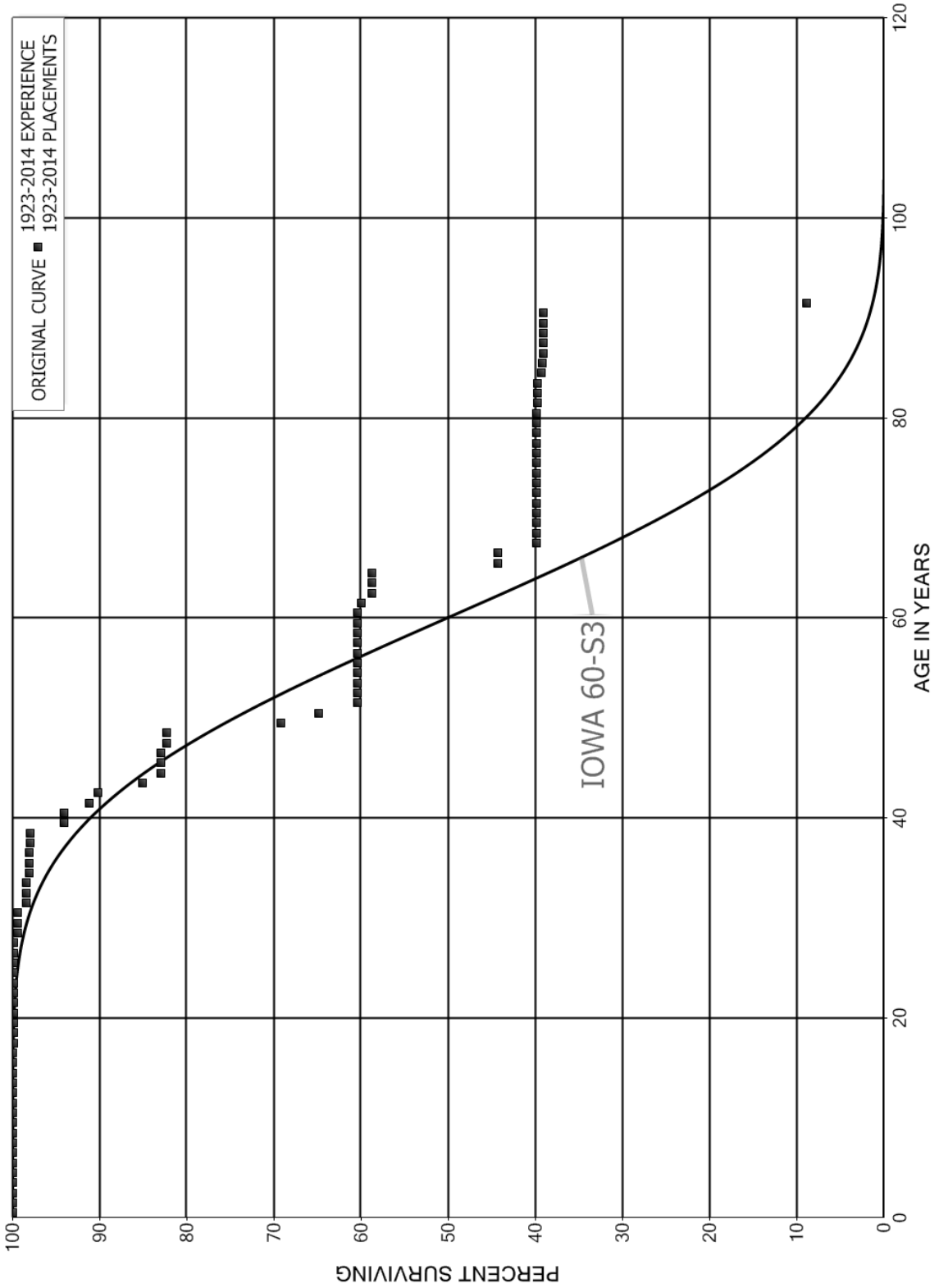
ACCOUNT 000F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	71,393		0.0000	1.0000	98.51
80.5	71,393		0.0000	1.0000	98.51
81.5	71,393		0.0000	1.0000	98.51
82.5					98.51

MANITOBA HYDRO
ACCOUNT 000G - TURBINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,181,000,358	133	0.0000	1.0000	100.00
0.5	1,146,291,982		0.0000	1.0000	100.00
1.5	1,114,970,835		0.0000	1.0000	100.00
2.5	1,047,027,289		0.0000	1.0000	100.00
3.5	1,030,541,040		0.0000	1.0000	100.00
4.5	998,703,266		0.0000	1.0000	100.00
5.5	968,438,701		0.0000	1.0000	100.00
6.5	930,739,448		0.0000	1.0000	100.00
7.5	920,201,495		0.0000	1.0000	100.00
8.5	919,691,395	3,212	0.0000	1.0000	100.00
9.5	904,494,698		0.0000	1.0000	100.00
10.5	884,528,448		0.0000	1.0000	100.00
11.5	864,962,096		0.0000	1.0000	100.00
12.5	836,272,980	50,791	0.0001	0.9999	100.00
13.5	835,098,040	8,539	0.0000	1.0000	99.99
14.5	819,342,639	256,241	0.0003	0.9997	99.99
15.5	805,606,132	227,411	0.0003	0.9997	99.96
16.5	776,948,220	572,631	0.0007	0.9993	99.93
17.5	774,907,493	52,620	0.0001	0.9999	99.86
18.5	752,085,540	19,452	0.0000	1.0000	99.85
19.5	747,083,792	33,870	0.0000	1.0000	99.85
20.5	730,007,043		0.0000	1.0000	99.85
21.5	650,016,676	34,693	0.0001	0.9999	99.85
22.5	487,575,567	34,693	0.0001	0.9999	99.84
23.5	324,431,219	88,136	0.0003	0.9997	99.83
24.5	324,343,083		0.0000	1.0000	99.81
25.5	324,329,889	18,384	0.0001	0.9999	99.81
26.5	321,065,109		0.0000	1.0000	99.80
27.5	320,972,897	1,301,220	0.0041	0.9959	99.80
28.5	316,769,751		0.0000	1.0000	99.40
29.5	316,756,349		0.0000	1.0000	99.40
30.5	316,720,382	3,111,335	0.0098	0.9902	99.40
31.5	313,609,047	316	0.0000	1.0000	98.42
32.5	313,608,731	316	0.0000	1.0000	98.42
33.5	313,608,415	1,036,500	0.0033	0.9967	98.42
34.5	312,571,915	5,048	0.0000	1.0000	98.09
35.5	173,108,205	117,163	0.0007	0.9993	98.09
36.5	106,673,450	49,198	0.0005	0.9995	98.03
37.5	106,623,994		0.0000	1.0000	97.98
38.5	106,601,880	4,239,355	0.0398	0.9602	97.98

MANITOBA HYDRO

ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	102,323,647	51,061	0.0005	0.9995	94.08
40.5	102,272,587	3,068,606	0.0300	0.9700	94.04
41.5	40,568,098	452,852	0.0112	0.9888	91.22
42.5	40,106,054	2,296,527	0.0573	0.9427	90.20
43.5	37,805,840	914,047	0.0242	0.9758	85.03
44.5	36,348,750		0.0000	1.0000	82.98
45.5	34,318,890		0.0000	1.0000	82.98
46.5	33,722,544	298,970	0.0089	0.9911	82.98
47.5	33,304,652		0.0000	1.0000	82.24
48.5	26,714,861	4,249,407	0.1591	0.8409	82.24
49.5	22,442,289	1,416,469	0.0631	0.9369	69.16
50.5	20,994,994	1,416,469	0.0675	0.9325	64.79
51.5	19,578,525		0.0000	1.0000	60.42
52.5	19,578,525		0.0000	1.0000	60.42
53.5	18,014,645		0.0000	1.0000	60.42
54.5	17,994,756		0.0000	1.0000	60.42
55.5	17,981,129		0.0000	1.0000	60.42
56.5	17,971,452		0.0000	1.0000	60.42
57.5	17,962,418		0.0000	1.0000	60.42
58.5	16,063,141		0.0000	1.0000	60.42
59.5	12,897,690	9,848	0.0008	0.9992	60.42
60.5	12,887,842	102,972	0.0080	0.9920	60.38
61.5	8,083,722	155,149	0.0192	0.9808	59.89
62.5	7,584,272	8,461	0.0011	0.9989	58.74
63.5	6,732,793		0.0000	1.0000	58.68
64.5	5,831,550	1,430,635	0.2453	0.7547	58.68
65.5	4,400,914		0.0000	1.0000	44.28
66.5	4,400,914	446,550	0.1015	0.8985	44.28
67.5	3,954,364		0.0000	1.0000	39.79
68.5	3,954,364		0.0000	1.0000	39.79
69.5	3,954,364		0.0000	1.0000	39.79
70.5	3,954,364		0.0000	1.0000	39.79
71.5	3,954,364		0.0000	1.0000	39.79
72.5	3,954,364		0.0000	1.0000	39.79
73.5	3,954,364		0.0000	1.0000	39.79
74.5	3,954,364		0.0000	1.0000	39.79
75.5	3,954,364		0.0000	1.0000	39.79
76.5	3,954,364		0.0000	1.0000	39.79
77.5	3,954,364		0.0000	1.0000	39.79
78.5	3,954,364		0.0000	1.0000	39.79

MANITOBA HYDRO

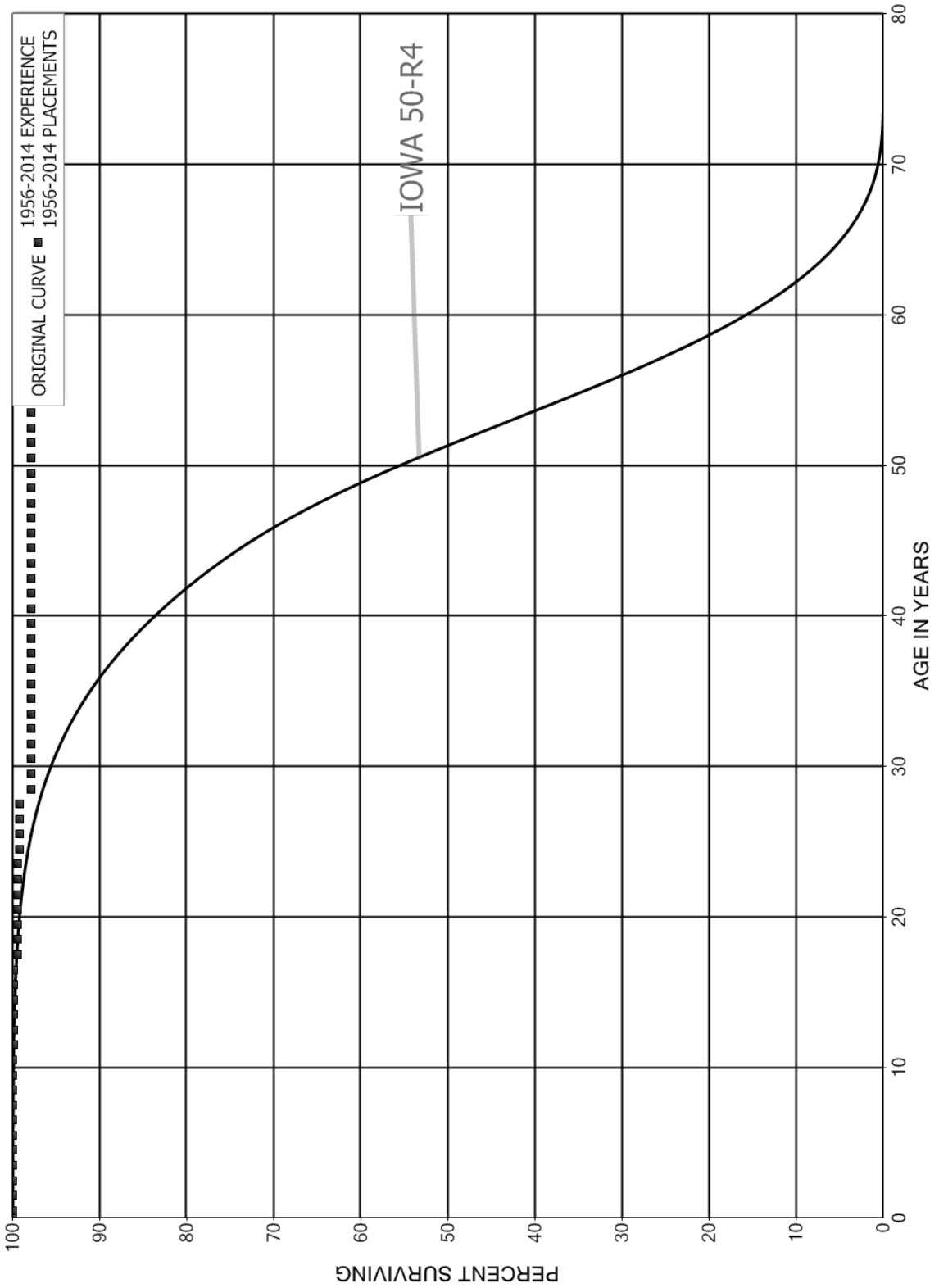
ACCOUNT 000G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	3,954,364		0.0000	1.0000	39.79
80.5	3,954,364	2,023	0.0005	0.9995	39.79
81.5	3,952,341		0.0000	1.0000	39.77
82.5	2,961,486		0.0000	1.0000	39.77
83.5	2,961,486	33,779	0.0114	0.9886	39.77
84.5	2,927,707	6,992	0.0024	0.9976	39.32
85.5	2,081,889	6,992	0.0034	0.9966	39.22
86.5	1,441,356		0.0000	1.0000	39.09
87.5	885,533		0.0000	1.0000	39.09
88.5	885,533		0.0000	1.0000	39.09
89.5	885,533		0.0000	1.0000	39.09
90.5	882,760	682,091	0.7727	0.2273	39.09
91.5					8.89

MANITOBA HYDRO
ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1956-2014 EXPERIENCE BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	35,525,430		0.0000	1.0000	100.00
0.5	33,760,546		0.0000	1.0000	100.00
1.5	30,127,967		0.0000	1.0000	100.00
2.5	25,821,160		0.0000	1.0000	100.00
3.5	24,245,776		0.0000	1.0000	100.00
4.5	23,329,460		0.0000	1.0000	100.00
5.5	22,145,243		0.0000	1.0000	100.00
6.5	20,952,403		0.0000	1.0000	100.00
7.5	20,952,403		0.0000	1.0000	100.00
8.5	20,928,142		0.0000	1.0000	100.00
9.5	20,928,142		0.0000	1.0000	100.00
10.5	20,295,593	38,908	0.0019	0.9981	100.00
11.5	20,256,686		0.0000	1.0000	99.81
12.5	20,256,686		0.0000	1.0000	99.81
13.5	20,256,686		0.0000	1.0000	99.81
14.5	20,256,686		0.0000	1.0000	99.81
15.5	20,020,663		0.0000	1.0000	99.81
16.5	19,882,034	88,651	0.0045	0.9955	99.81
17.5	19,793,383		0.0000	1.0000	99.36
18.5	19,793,383		0.0000	1.0000	99.36
19.5	19,793,383		0.0000	1.0000	99.36
20.5	19,793,383		0.0000	1.0000	99.36
21.5	16,489,732		0.0000	1.0000	99.36
22.5	9,952,099		0.0000	1.0000	99.36
23.5	3,414,466	6,685	0.0020	0.9980	99.36
24.5	3,407,782		0.0000	1.0000	99.17
25.5	3,407,782		0.0000	1.0000	99.17
26.5	3,407,782		0.0000	1.0000	99.17
27.5	3,407,782	44,948	0.0132	0.9868	99.17
28.5	3,362,833		0.0000	1.0000	97.86
29.5	3,362,833		0.0000	1.0000	97.86
30.5	2,868,401		0.0000	1.0000	97.86
31.5	2,868,401		0.0000	1.0000	97.86
32.5	2,868,401		0.0000	1.0000	97.86
33.5	2,868,401		0.0000	1.0000	97.86
34.5	2,868,401		0.0000	1.0000	97.86
35.5	2,868,401		0.0000	1.0000	97.86
36.5	2,868,401		0.0000	1.0000	97.86
37.5	2,868,401		0.0000	1.0000	97.86
38.5	2,868,401		0.0000	1.0000	97.86

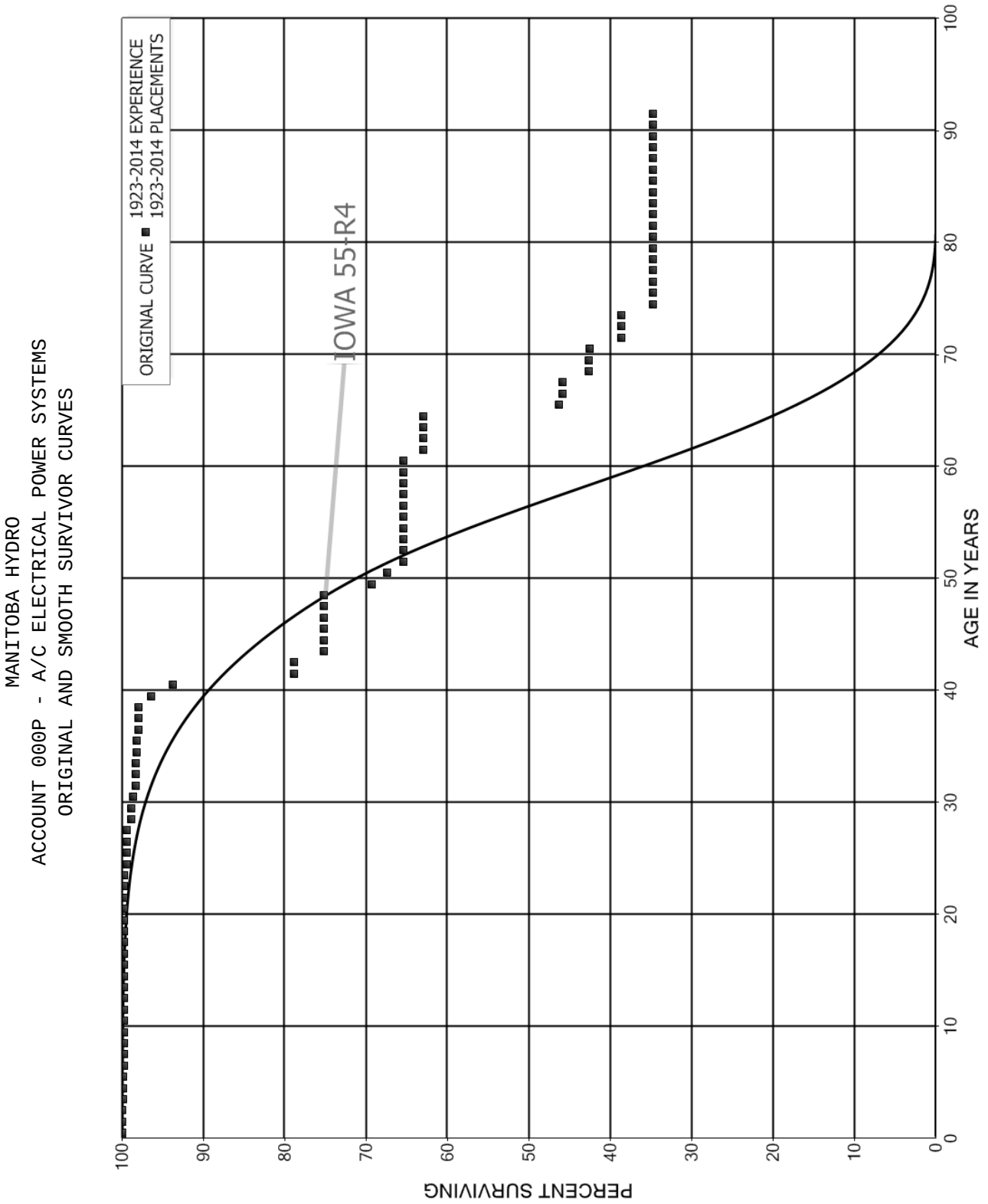
MANITOBA HYDRO

ACCOUNT 000H - GOVERNORS AND EXCITATION SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1956-2014 EXPERIENCE BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,868,401		0.0000	1.0000	97.86
40.5	2,868,401		0.0000	1.0000	97.86
41.5	138,291		0.0000	1.0000	97.86
42.5	138,291		0.0000	1.0000	97.86
43.5	135,002		0.0000	1.0000	97.86
44.5	135,002		0.0000	1.0000	97.86
45.5	118,122		0.0000	1.0000	97.86
46.5	118,122		0.0000	1.0000	97.86
47.5	118,122		0.0000	1.0000	97.86
48.5	118,122		0.0000	1.0000	97.86
49.5	118,122		0.0000	1.0000	97.86
50.5	111,262		0.0000	1.0000	97.86
51.5	111,262		0.0000	1.0000	97.86
52.5	111,262		0.0000	1.0000	97.86
53.5	111,262		0.0000	1.0000	97.86
54.5	36,321		0.0000	1.0000	97.86
55.5	31,481		0.0000	1.0000	97.86
56.5	4,564		0.0000	1.0000	97.86
57.5	3,366		0.0000	1.0000	97.86
58.5					97.86


MANITOBA HYDRO
ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1923-2014 EXPERIENCE
1923-2014 PLACEMENTS
IOWA 55-R4
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0

MANITOBA HYDRO

ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	349,343,268		0.0000	1.0000	100.00
0.5	332,117,875		0.0000	1.0000	100.00
1.5	318,654,510		0.0000	1.0000	100.00
2.5	303,551,074	479,793	0.0016	0.9984	100.00
3.5	291,990,668		0.0000	1.0000	99.84
4.5	273,686,399	112,433	0.0004	0.9996	99.84
5.5	262,754,216	121,682	0.0005	0.9995	99.80
6.5	253,272,510	206	0.0000	1.0000	99.75
7.5	251,211,196	36,079	0.0001	0.9999	99.75
8.5	250,657,779		0.0000	1.0000	99.74
9.5	250,157,388	3,266	0.0000	1.0000	99.74
10.5	246,044,154	2,844	0.0000	1.0000	99.74
11.5	235,307,140		0.0000	1.0000	99.74
12.5	232,030,057	7,100	0.0000	1.0000	99.74
13.5	232,014,324		0.0000	1.0000	99.73
14.5	227,278,447	12,800	0.0001	0.9999	99.73
15.5	225,889,285	285	0.0000	1.0000	99.73
16.5	225,417,595	14,000	0.0001	0.9999	99.73
17.5	223,522,631	61,737	0.0003	0.9997	99.72
18.5	220,525,519	285	0.0000	1.0000	99.70
19.5	219,737,806		0.0000	1.0000	99.70
20.5	217,945,595	3,077	0.0000	1.0000	99.70
21.5	188,157,856	885	0.0000	1.0000	99.69
22.5	130,341,388	20,167	0.0002	0.9998	99.69
23.5	68,236,146	189,310	0.0028	0.9972	99.68
24.5	66,438,577		0.0000	1.0000	99.40
25.5	63,378,118		0.0000	1.0000	99.40
26.5	63,236,544	29,851	0.0005	0.9995	99.40
27.5	63,174,499	316,183	0.0050	0.9950	99.35
28.5	62,128,439	45,026	0.0007	0.9993	98.86
29.5	62,083,413	76,754	0.0012	0.9988	98.79
30.5	62,006,659	245,972	0.0040	0.9960	98.66
31.5	61,760,687		0.0000	1.0000	98.27
32.5	61,207,152	22,875	0.0004	0.9996	98.27
33.5	61,176,167	41,970	0.0007	0.9993	98.24
34.5	61,126,017		0.0000	1.0000	98.17
35.5	33,384,791	71,803	0.0022	0.9978	98.17
36.5	12,807,211	7,093	0.0006	0.9994	97.96
37.5	12,800,118		0.0000	1.0000	97.90
38.5	12,707,354	195,896	0.0154	0.9846	97.90

MANITOBA HYDRO

ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,511,459	350,429	0.0280	0.9720	96.39
40.5	12,144,866	1,920,633	0.1581	0.8419	93.69
41.5	8,129,702		0.0000	1.0000	78.88
42.5	8,094,325	384,200	0.0475	0.9525	78.88
43.5	7,685,352		0.0000	1.0000	75.13
44.5	7,636,028		0.0000	1.0000	75.13
45.5	7,445,830		0.0000	1.0000	75.13
46.5	7,445,830		0.0000	1.0000	75.13
47.5	7,444,972		0.0000	1.0000	75.13
48.5	5,839,545	451,327	0.0773	0.9227	75.13
49.5	5,350,928	150,442	0.0281	0.9719	69.33
50.5	5,189,296	150,442	0.0290	0.9710	67.38
51.5	5,038,854		0.0000	1.0000	65.42
52.5	5,038,854		0.0000	1.0000	65.42
53.5	4,619,767		0.0000	1.0000	65.42
54.5	4,496,939		0.0000	1.0000	65.42
55.5	4,413,544		0.0000	1.0000	65.42
56.5	4,403,786		0.0000	1.0000	65.42
57.5	4,402,136		0.0000	1.0000	65.42
58.5	4,379,548		0.0000	1.0000	65.42
59.5	3,045,849		0.0000	1.0000	65.42
60.5	3,045,849	115,908	0.0381	0.9619	65.42
61.5	2,487,929		0.0000	1.0000	62.93
62.5	1,515,722		0.0000	1.0000	62.93
63.5	1,405,333		0.0000	1.0000	62.93
64.5	1,093,623	289,155	0.2644	0.7356	62.93
65.5	804,468	7,388	0.0092	0.9908	46.29
66.5	797,080		0.0000	1.0000	45.87
67.5	797,080	56,733	0.0712	0.9288	45.87
68.5	740,347		0.0000	1.0000	42.60
69.5	740,347	1,500	0.0020	0.9980	42.60
70.5	738,847	68,056	0.0921	0.9079	42.52
71.5	670,791		0.0000	1.0000	38.60
72.5	670,791		0.0000	1.0000	38.60
73.5	670,791	66,556	0.0992	0.9008	38.60
74.5	604,235		0.0000	1.0000	34.77
75.5	604,235		0.0000	1.0000	34.77
76.5	604,235		0.0000	1.0000	34.77
77.5	604,235		0.0000	1.0000	34.77
78.5	604,235		0.0000	1.0000	34.77

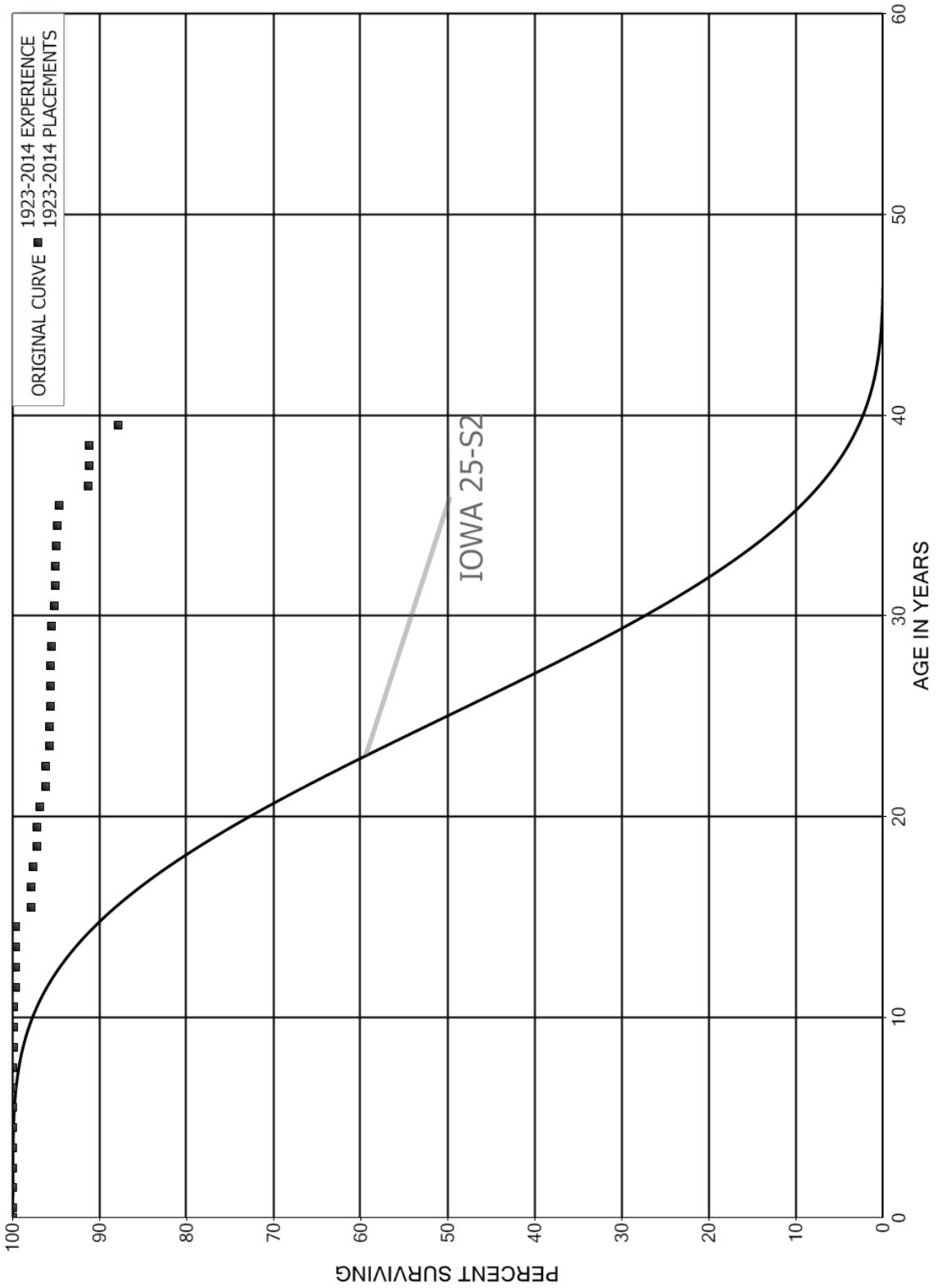
MANITOBA HYDRO

ACCOUNT 000P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014			EXPERIENCE BAND 1923-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	604,235		0.0000	1.0000	34.77
80.5	604,235		0.0000	1.0000	34.77
81.5	604,235		0.0000	1.0000	34.77
82.5	185,317		0.0000	1.0000	34.77
83.5	185,317		0.0000	1.0000	34.77
84.5	185,317		0.0000	1.0000	34.77
85.5	175,686		0.0000	1.0000	34.77
86.5	99,161		0.0000	1.0000	34.77
87.5	4,479		0.0000	1.0000	34.77
88.5	4,479		0.0000	1.0000	34.77
89.5	4,479		0.0000	1.0000	34.77
90.5	3,613		0.0000	1.0000	34.77
91.5					34.77

MANITOBA HYDRO
ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	100,910,965		0.0000	1.0000	100.00
0.5	93,038,639		0.0000	1.0000	100.00
1.5	89,617,407		0.0000	1.0000	100.00
2.5	74,924,871		0.0000	1.0000	100.00
3.5	71,490,259	66,805	0.0009	0.9991	100.00
4.5	68,734,760	200	0.0000	1.0000	99.91
5.5	65,476,311	8,139	0.0001	0.9999	99.91
6.5	63,866,024		0.0000	1.0000	99.89
7.5	62,052,329	20,996	0.0003	0.9997	99.89
8.5	59,039,213	6,000	0.0001	0.9999	99.86
9.5	55,309,698		0.0000	1.0000	99.85
10.5	51,710,396	120,538	0.0023	0.9977	99.85
11.5	50,593,999		0.0000	1.0000	99.62
12.5	42,241,740	1,000	0.0000	1.0000	99.62
13.5	40,872,797	2,020	0.0000	1.0000	99.61
14.5	38,551,750	680,948	0.0177	0.9823	99.61
15.5	35,173,791	6,345	0.0002	0.9998	97.85
16.5	30,595,785	84,566	0.0028	0.9972	97.83
17.5	30,148,600	109,684	0.0036	0.9964	97.56
18.5	30,013,189	5,080	0.0002	0.9998	97.21
19.5	28,814,251	95,255	0.0033	0.9967	97.19
20.5	26,575,416	193,176	0.0073	0.9927	96.87
21.5	24,173,933		0.0000	1.0000	96.17
22.5	19,846,432	85,757	0.0043	0.9957	96.17
23.5	17,079,450		0.0000	1.0000	95.75
24.5	17,073,540	25,233	0.0015	0.9985	95.75
25.5	16,541,466		0.0000	1.0000	95.61
26.5	16,415,905	7,640	0.0005	0.9995	95.61
27.5	16,171,481	7,440	0.0005	0.9995	95.56
28.5	16,052,532	4,547	0.0003	0.9997	95.52
29.5	14,760,017	50,643	0.0034	0.9966	95.49
30.5	14,501,692	9,828	0.0007	0.9993	95.17
31.5	14,009,928	8,828	0.0006	0.9994	95.10
32.5	13,984,742	17,428	0.0012	0.9988	95.04
33.5	13,919,541	8,828	0.0006	0.9994	94.92
34.5	13,900,349	31,173	0.0022	0.9978	94.86
35.5	9,902,439	355,455	0.0359	0.9641	94.65
36.5	7,774,306	7,036	0.0009	0.9991	91.25
37.5	7,762,261		0.0000	1.0000	91.17
38.5	7,625,110	189,470	0.0248	0.9752	91.17

MANITOBA HYDRO

ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	7,242,910	7,116	0.0010	0.9990	88.90
40.5	7,235,794		0.0000	1.0000	88.82
41.5	2,688,930		0.0000	1.0000	88.82
42.5	2,679,930		0.0000	1.0000	88.82
43.5	2,287,148		0.0000	1.0000	88.82
44.5	2,285,275		0.0000	1.0000	88.82
45.5	2,042,276		0.0000	1.0000	88.82
46.5	2,042,276		0.0000	1.0000	88.82
47.5	2,026,845		0.0000	1.0000	88.82
48.5	646,149		0.0000	1.0000	88.82
49.5	646,149		0.0000	1.0000	88.82
50.5	646,149		0.0000	1.0000	88.82
51.5	646,149		0.0000	1.0000	88.82
52.5	646,149		0.0000	1.0000	88.82
53.5	564,219		0.0000	1.0000	88.82
54.5	563,490		0.0000	1.0000	88.82
55.5	563,490		0.0000	1.0000	88.82
56.5	563,490		0.0000	1.0000	88.82
57.5	563,490		0.0000	1.0000	88.82
58.5	563,490		0.0000	1.0000	88.82
59.5	475,938		0.0000	1.0000	88.82
60.5	475,938		0.0000	1.0000	88.82
61.5	475,938		0.0000	1.0000	88.82
62.5	475,938		0.0000	1.0000	88.82
63.5	475,938		0.0000	1.0000	88.82
64.5	475,938		0.0000	1.0000	88.82
65.5	475,938		0.0000	1.0000	88.82
66.5	475,938		0.0000	1.0000	88.82
67.5	475,938		0.0000	1.0000	88.82
68.5	475,938		0.0000	1.0000	88.82
69.5	475,938		0.0000	1.0000	88.82
70.5	475,938		0.0000	1.0000	88.82
71.5	475,938		0.0000	1.0000	88.82
72.5	475,938		0.0000	1.0000	88.82
73.5	475,938		0.0000	1.0000	88.82
74.5	475,938		0.0000	1.0000	88.82
75.5	475,938		0.0000	1.0000	88.82
76.5	475,938		0.0000	1.0000	88.82
77.5	475,938		0.0000	1.0000	88.82
78.5	475,938		0.0000	1.0000	88.82

MANITOBA HYDRO

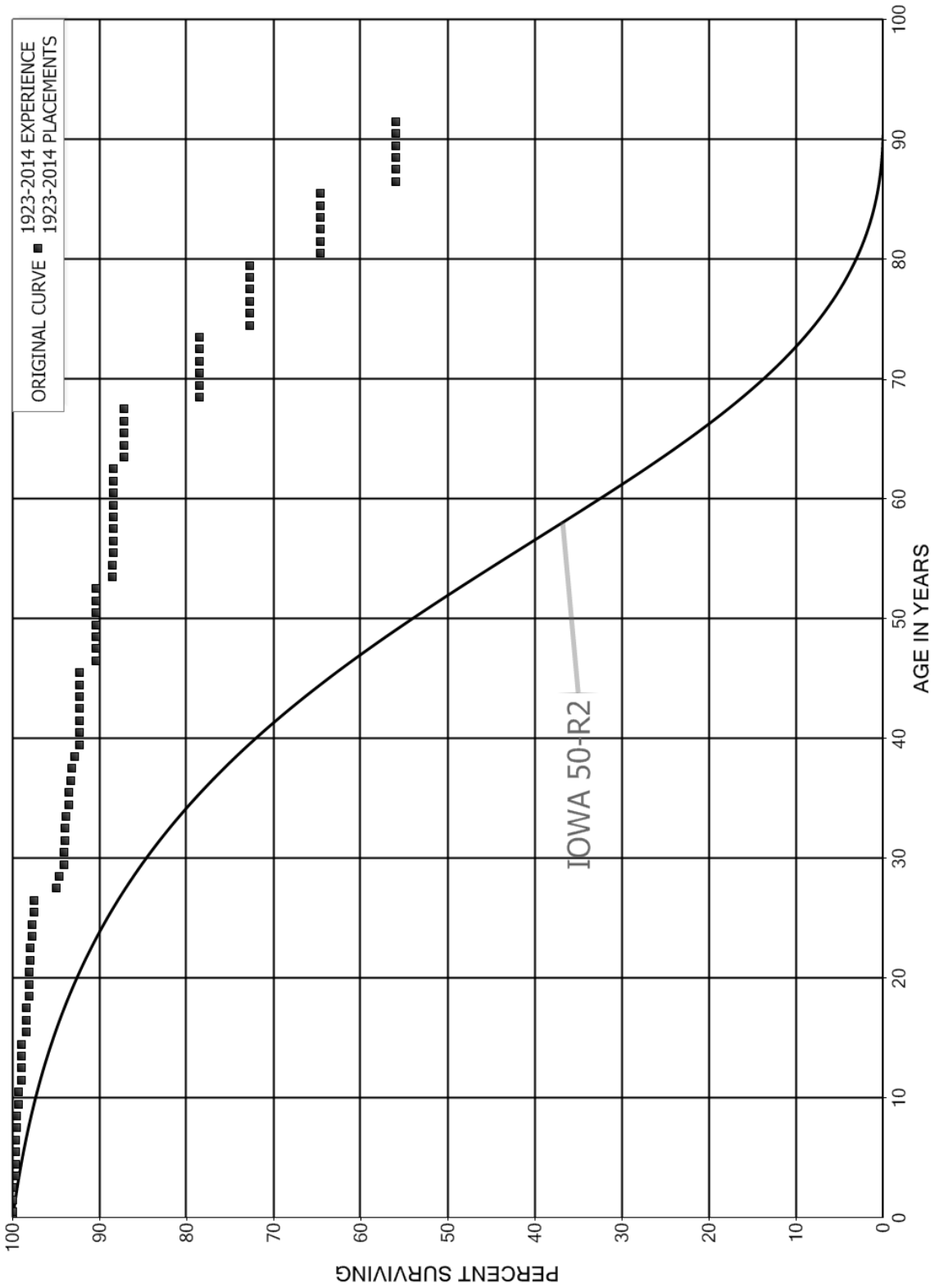
ACCOUNT 000Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	475,938		0.0000	1.0000	88.82
80.5	475,938		0.0000	1.0000	88.82
81.5	475,938		0.0000	1.0000	88.82
82.5	475,938		0.0000	1.0000	88.82
83.5	475,938		0.0000	1.0000	88.82
84.5	475,938		0.0000	1.0000	88.82
85.5	248,803		0.0000	1.0000	88.82
86.5	190,007		0.0000	1.0000	88.82
87.5	134,399		0.0000	1.0000	88.82
88.5	134,399		0.0000	1.0000	88.82
89.5	134,399		0.0000	1.0000	88.82
90.5	98,990		0.0000	1.0000	88.82
91.5					88.82

MANITOBA HYDRO
ACCOUNT 000R - AUXILIARY STATION PROCESSES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	145,812,019		0.0000	1.0000	100.00
0.5	141,755,582		0.0000	1.0000	100.00
1.5	136,574,620	13,946	0.0001	0.9999	100.00
2.5	125,488,108	486,671	0.0039	0.9961	99.99
3.5	114,688,275	610	0.0000	1.0000	99.60
4.5	107,138,991	2,862	0.0000	1.0000	99.60
5.5	104,024,544	3,799	0.0000	1.0000	99.60
6.5	101,310,059	56,418	0.0006	0.9994	99.60
7.5	99,290,202		0.0000	1.0000	99.54
8.5	96,379,221	249,904	0.0026	0.9974	99.54
9.5	95,182,151		0.0000	1.0000	99.28
10.5	90,904,973	353,197	0.0039	0.9961	99.28
11.5	89,776,879		0.0000	1.0000	98.90
12.5	88,659,749		0.0000	1.0000	98.90
13.5	88,252,202		0.0000	1.0000	98.90
14.5	87,187,755	478,500	0.0055	0.9945	98.90
15.5	84,357,679		0.0000	1.0000	98.35
16.5	79,748,612	9,009	0.0001	0.9999	98.35
17.5	73,673,886	190,736	0.0026	0.9974	98.34
18.5	72,701,226		0.0000	1.0000	98.09
19.5	72,180,560		0.0000	1.0000	98.09
20.5	68,606,895	99,000	0.0014	0.9986	98.09
21.5	60,130,062		0.0000	1.0000	97.95
22.5	45,816,760	101,439	0.0022	0.9978	97.95
23.5	30,544,518	4,106	0.0001	0.9999	97.73
24.5	29,157,174	63,238	0.0022	0.9978	97.72
25.5	27,767,808		0.0000	1.0000	97.50
26.5	27,573,668	728,156	0.0264	0.9736	97.50
27.5	26,778,104	86,490	0.0032	0.9968	94.93
28.5	25,966,980	151,066	0.0058	0.9942	94.62
29.5	25,796,829	8,737	0.0003	0.9997	94.07
30.5	24,648,862	19,317	0.0008	0.9992	94.04
31.5	24,605,095	6,065	0.0002	0.9998	93.97
32.5	24,570,569	21,400	0.0009	0.9991	93.94
33.5	24,502,334	102,960	0.0042	0.9958	93.86
34.5	24,386,197		0.0000	1.0000	93.47
35.5	15,420,040	38,000	0.0025	0.9975	93.47
36.5	11,164,856	10,346	0.0009	0.9991	93.24
37.5	11,111,509	31,762	0.0029	0.9971	93.15
38.5	10,973,424	68,121	0.0062	0.9938	92.88

MANITOBA HYDRO

ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	10,901,695		0.0000	1.0000	92.31
40.5	10,904,189		0.0000	1.0000	92.31
41.5	2,535,960	1,312	0.0005	0.9995	92.31
42.5	2,381,587		0.0000	1.0000	92.26
43.5	2,345,258		0.0000	1.0000	92.26
44.5	2,344,535		0.0000	1.0000	92.26
45.5	2,555,359	51,480	0.0201	0.9799	92.26
46.5	2,459,977	600	0.0002	0.9998	90.40
47.5	2,393,632		0.0000	1.0000	90.38
48.5	2,028,646		0.0000	1.0000	90.38
49.5	1,928,648		0.0000	1.0000	90.38
50.5	1,911,207		0.0000	1.0000	90.38
51.5	1,905,547		0.0000	1.0000	90.38
52.5	1,905,313	40,111	0.0211	0.9789	90.38
53.5	1,363,145		0.0000	1.0000	88.48
54.5	1,359,103	600	0.0004	0.9996	88.48
55.5	1,356,141		0.0000	1.0000	88.44
56.5	1,352,085	1,213	0.0009	0.9991	88.44
57.5	1,347,311		0.0000	1.0000	88.36
58.5	1,347,311		0.0000	1.0000	88.36
59.5	879,748		0.0000	1.0000	88.36
60.5	879,748		0.0000	1.0000	88.36
61.5	879,603		0.0000	1.0000	88.36
62.5	467,314	6,000	0.0128	0.9872	88.36
63.5	461,216		0.0000	1.0000	87.22
64.5	437,426		0.0000	1.0000	87.22
65.5	437,426		0.0000	1.0000	87.22
66.5	437,426		0.0000	1.0000	87.22
67.5	437,426	43,712	0.0999	0.9001	87.22
68.5	393,714		0.0000	1.0000	78.51
69.5	393,714		0.0000	1.0000	78.51
70.5	393,714		0.0000	1.0000	78.51
71.5	393,714		0.0000	1.0000	78.51
72.5	393,714		0.0000	1.0000	78.51
73.5	393,714	29,068	0.0738	0.9262	78.51
74.5	364,647		0.0000	1.0000	72.71
75.5	364,647		0.0000	1.0000	72.71
76.5	364,647		0.0000	1.0000	72.71
77.5	364,647		0.0000	1.0000	72.71
78.5	364,647		0.0000	1.0000	72.71

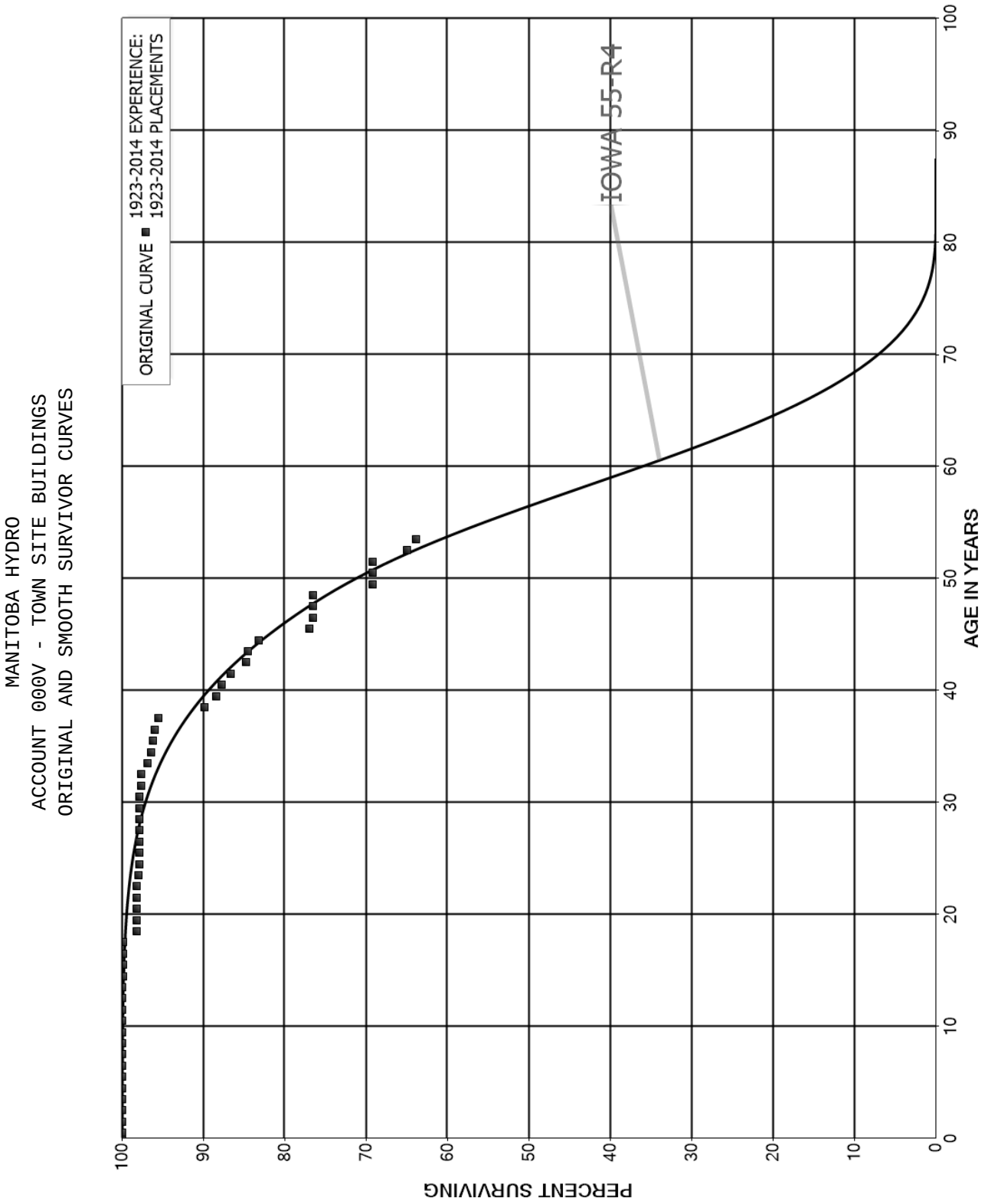
MANITOBA HYDRO

ACCOUNT 000R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	364,647	40,484	0.1110	0.8890	72.71
80.5	324,162		0.0000	1.0000	64.64
81.5	324,162		0.0000	1.0000	64.64
82.5	47,772		0.0000	1.0000	64.64
83.5	47,772		0.0000	1.0000	64.64
84.5	47,772		0.0000	1.0000	64.64
85.5	21,135	2,823	0.1336	0.8664	64.64
86.5	18,312		0.0000	1.0000	56.00
87.5	18,210		0.0000	1.0000	56.00
88.5	18,210		0.0000	1.0000	56.00
89.5	18,210		0.0000	1.0000	56.00
90.5	18,210		0.0000	1.0000	56.00
91.5					56.00


MANITOBA HYDRO
ACCOUNT 000V - TOWN SITE BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1923-2014 EXPERIENCE: 1923-2014 PLACEMENTS
IOWA 55-R4
PERCENT SURVIVING
AGE IN YEARS
100
90
80
70
60
50
40
30
20
10
0

MANITOBA HYDRO

ACCOUNT 000V - TOWN SITE BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	93,892,479		0.0000	1.0000	100.00
0.5	87,276,945		0.0000	1.0000	100.00
1.5	80,445,955		0.0000	1.0000	100.00
2.5	66,379,528		0.0000	1.0000	100.00
3.5	65,582,642		0.0000	1.0000	100.00
4.5	64,661,564		0.0000	1.0000	100.00
5.5	63,191,639		0.0000	1.0000	100.00
6.5	59,995,545		0.0000	1.0000	100.00
7.5	56,967,221		0.0000	1.0000	100.00
8.5	52,480,078		0.0000	1.0000	100.00
9.5	52,086,703	4,325	0.0001	0.9999	100.00
10.5	51,962,583		0.0000	1.0000	99.99
11.5	51,911,391		0.0000	1.0000	99.99
12.5	51,858,649		0.0000	1.0000	99.99
13.5	50,606,529	75,423	0.0015	0.9985	99.99
14.5	48,259,428		0.0000	1.0000	99.84
15.5	45,675,310		0.0000	1.0000	99.84
16.5	45,009,576		0.0000	1.0000	99.84
17.5	44,003,470	731,713	0.0166	0.9834	99.84
18.5	42,965,562		0.0000	1.0000	98.18
19.5	42,792,737		0.0000	1.0000	98.18
20.5	39,054,405		0.0000	1.0000	98.18
21.5	38,684,646	15,000	0.0004	0.9996	98.18
22.5	37,146,469	85,808	0.0023	0.9977	98.14
23.5	35,255,681	10,965	0.0003	0.9997	97.92
24.5	33,292,752		0.0000	1.0000	97.89
25.5	28,502,472	761	0.0000	1.0000	97.89
26.5	28,501,711		0.0000	1.0000	97.88
27.5	28,448,746		0.0000	1.0000	97.88
28.5	22,922,262	4,433	0.0002	0.9998	97.88
29.5	22,925,249	9,114	0.0004	0.9996	97.87
30.5	22,908,715	45,101	0.0020	0.9980	97.83
31.5	22,863,614	3,618	0.0002	0.9998	97.63
32.5	21,997,002	169,076	0.0077	0.9923	97.62
33.5	21,416,047	108,958	0.0051	0.9949	96.87
34.5	21,307,089	48,375	0.0023	0.9977	96.38
35.5	10,604,962	28,769	0.0027	0.9973	96.16
36.5	10,572,361	40,564	0.0038	0.9962	95.90
37.5	10,523,506	622,767	0.0592	0.9408	95.53
38.5	13,755,689	227,166	0.0165	0.9835	89.87

MANITOBA HYDRO

ACCOUNT 000V - TOWN SITE BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,714,532	92,580	0.0073	0.9927	88.39
40.5	12,415,123	156,469	0.0126	0.9874	87.75
41.5	2,136,126	46,332	0.0217	0.9783	86.64
42.5	1,915,900	4,833	0.0025	0.9975	84.76
43.5	1,911,066	31,908	0.0167	0.9833	84.55
44.5	1,879,159	139,698	0.0743	0.9257	83.14
45.5	604,592	3,874	0.0064	0.9936	76.96
46.5	600,718		0.0000	1.0000	76.46
47.5	549,338		0.0000	1.0000	76.46
48.5	518,370	49,726	0.0959	0.9041	76.46
49.5	439,590		0.0000	1.0000	69.13
50.5	439,590		0.0000	1.0000	69.13
51.5	439,590	26,762	0.0609	0.9391	69.13
52.5	412,828	6,572	0.0159	0.9841	64.92
53.5	406,257		0.0000	1.0000	63.89
54.5	406,268		0.0000	1.0000	63.89
55.5	406,268	1,012	0.0025	0.9975	63.89
56.5	405,256	7,150	0.0176	0.9824	63.73
57.5	398,106		0.0000	1.0000	62.60
58.5	398,106	87,285	0.2193	0.7807	62.60
59.5	310,810		0.0000	1.0000	48.88
60.5	310,810		0.0000	1.0000	48.88
61.5	310,810		0.0000	1.0000	48.88
62.5	310,810	7,300	0.0235	0.9765	48.88
63.5	303,510		0.0000	1.0000	47.73
64.5	303,510		0.0000	1.0000	47.73
65.5	303,510		0.0000	1.0000	47.73
66.5	303,510		0.0000	1.0000	47.73
67.5	303,510	35,256	0.1162	0.8838	47.73
68.5	268,254	15,326	0.0571	0.9429	42.18
69.5	252,929	5,903	0.0233	0.9767	39.77
70.5	247,025		0.0000	1.0000	38.85
71.5	247,025		0.0000	1.0000	38.85
72.5	247,025		0.0000	1.0000	38.85
73.5	247,025	2,559	0.0104	0.9896	38.85
74.5	244,467		0.0000	1.0000	38.44
75.5	244,467		0.0000	1.0000	38.44
76.5	244,467		0.0000	1.0000	38.44
77.5	244,467		0.0000	1.0000	38.44
78.5	244,467	180,001	0.7363	0.2637	38.44

MANITOBA HYDRO

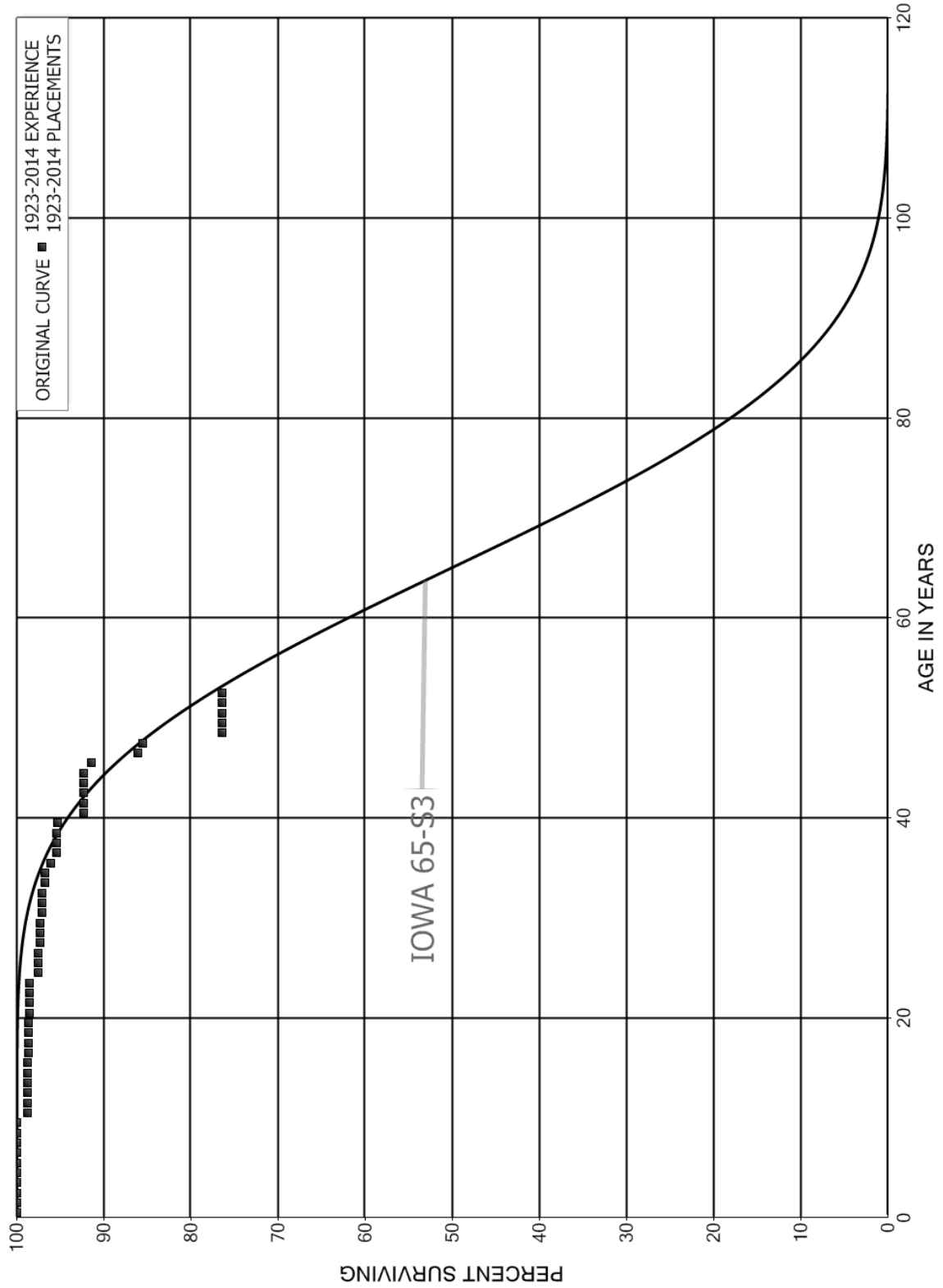
ACCOUNT 000V - TOWN SITE BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	64,466	4,000	0.0620	0.9380	10.14
80.5	60,466	60,466	1.0000		9.51
81.5					

MANITOBA HYDRO
ACCOUNT 000X - SUPPORT BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	52,076,777		0.0000	1.0000	100.00
0.5	50,607,890		0.0000	1.0000	100.00
1.5	49,838,884		0.0000	1.0000	100.00
2.5	42,751,864		0.0000	1.0000	100.00
3.5	42,528,147		0.0000	1.0000	100.00
4.5	40,428,236		0.0000	1.0000	100.00
5.5	39,524,992	8,065	0.0002	0.9998	100.00
6.5	38,928,911	27,085	0.0007	0.9993	99.98
7.5	38,621,816		0.0000	1.0000	99.91
8.5	38,212,086		0.0000	1.0000	99.91
9.5	37,801,789	435,525	0.0115	0.9885	99.91
10.5	34,455,141		0.0000	1.0000	98.76
11.5	28,935,743		0.0000	1.0000	98.76
12.5	28,526,812		0.0000	1.0000	98.76
13.5	28,140,826		0.0000	1.0000	98.76
14.5	27,180,341		0.0000	1.0000	98.76
15.5	26,358,942	30,000	0.0011	0.9989	98.76
16.5	21,608,411		0.0000	1.0000	98.65
17.5	21,161,818	5,000	0.0002	0.9998	98.65
18.5	20,929,607		0.0000	1.0000	98.62
19.5	20,077,563	33,287	0.0017	0.9983	98.62
20.5	19,908,254		0.0000	1.0000	98.46
21.5	13,584,265		0.0000	1.0000	98.46
22.5	13,096,970		0.0000	1.0000	98.46
23.5	11,303,943	105,000	0.0093	0.9907	98.46
24.5	11,063,393		0.0000	1.0000	97.55
25.5	9,681,217		0.0000	1.0000	97.55
26.5	9,681,217	24,541	0.0025	0.9975	97.55
27.5	8,844,373	3,750	0.0004	0.9996	97.30
28.5	8,840,622		0.0000	1.0000	97.26
29.5	5,254,654	13,076	0.0025	0.9975	97.26
30.5	5,188,614		0.0000	1.0000	97.01
31.5	5,162,507	140	0.0000	1.0000	97.01
32.5	5,162,366	13,913	0.0027	0.9973	97.01
33.5	5,148,453		0.0000	1.0000	96.75
34.5	5,148,387	36,237	0.0070	0.9930	96.75
35.5	5,112,150	33,826	0.0066	0.9934	96.07
36.5	4,872,818	1,939	0.0004	0.9996	95.43
37.5	4,871,271	2,049	0.0004	0.9996	95.40
38.5	1,098,150	1,132	0.0010	0.9990	95.36

MANITOBA HYDRO

ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,093,187	34,550	0.0316	0.9684	95.26
40.5	1,056,179		0.0000	1.0000	92.25
41.5	960,144		0.0000	1.0000	92.25
42.5	1,134,038		0.0000	1.0000	92.25
43.5	1,090,218		0.0000	1.0000	92.25
44.5	1,090,218	9,816	0.0090	0.9910	92.25
45.5	2,041,376	119,046	0.0583	0.9417	91.42
46.5	1,919,314	12,848	0.0067	0.9933	86.09
47.5	1,906,466	203,500	0.1067	0.8933	85.51
48.5	627,607		0.0000	1.0000	76.38
49.5	617,576		0.0000	1.0000	76.38
50.5	617,576		0.0000	1.0000	76.38
51.5	617,576		0.0000	1.0000	76.38
52.5	617,576		0.0000	1.0000	76.38
53.5	421,441		0.0000	1.0000	76.38
54.5	421,441		0.0000	1.0000	76.38
55.5	421,441		0.0000	1.0000	76.38
56.5	418,391		0.0000	1.0000	76.38
57.5	418,391	15	0.0000	1.0000	76.38
58.5	418,375		0.0000	1.0000	76.38
59.5	418,375		0.0000	1.0000	76.38
60.5	418,375		0.0000	1.0000	76.38
61.5	418,375		0.0000	1.0000	76.38
62.5	418,375		0.0000	1.0000	76.38
63.5	418,375		0.0000	1.0000	76.38
64.5	418,375		0.0000	1.0000	76.38
65.5	418,375		0.0000	1.0000	76.38
66.5	418,375		0.0000	1.0000	76.38
67.5	418,375	5,406	0.0129	0.9871	76.38
68.5	412,969		0.0000	1.0000	75.39
69.5	412,969		0.0000	1.0000	75.39
70.5	412,969		0.0000	1.0000	75.39
71.5	412,969		0.0000	1.0000	75.39
72.5	412,969		0.0000	1.0000	75.39
73.5	412,969		0.0000	1.0000	75.39
74.5	412,969		0.0000	1.0000	75.39
75.5	412,969		0.0000	1.0000	75.39
76.5	412,969		0.0000	1.0000	75.39
77.5	412,969		0.0000	1.0000	75.39
78.5	412,969		0.0000	1.0000	75.39

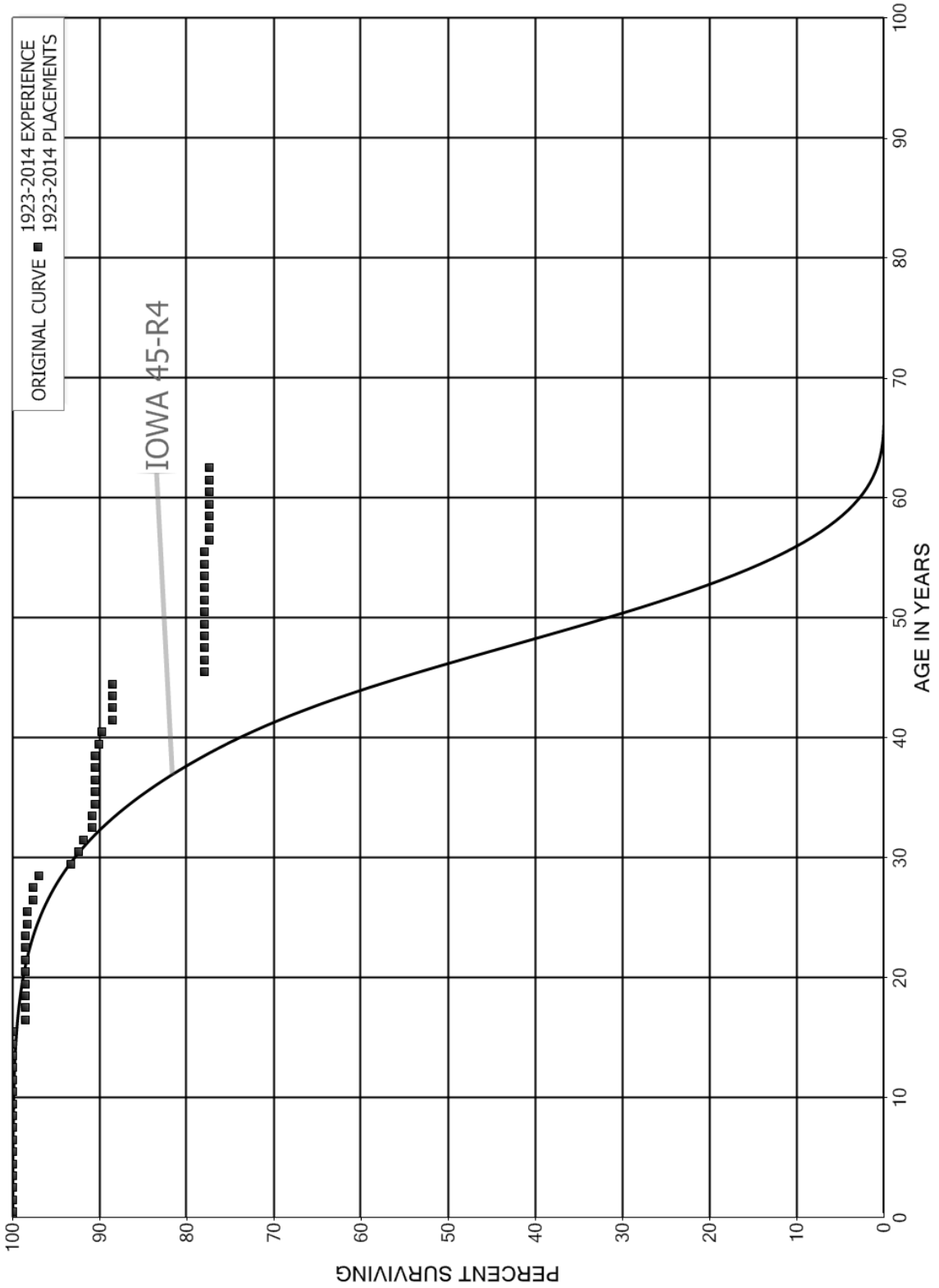
MANITOBA HYDRO

ACCOUNT 000X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014			EXPERIENCE BAND 1923-2014		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	412,969		0.0000	1.0000	75.39
80.5	412,969		0.0000	1.0000	75.39
81.5	412,969		0.0000	1.0000	75.39
82.5	412,969		0.0000	1.0000	75.39
83.5	412,969		0.0000	1.0000	75.39
84.5	412,969		0.0000	1.0000	75.39
85.5	412,969		0.0000	1.0000	75.39
86.5	412,969		0.0000	1.0000	75.39
87.5	412,969		0.0000	1.0000	75.39
88.5	412,969		0.0000	1.0000	75.39
89.5	412,969		0.0000	1.0000	75.39
90.5	412,969		0.0000	1.0000	75.39
91.5					75.39

MANITOBA HYDRO
ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	31,965,194		0.0000	1.0000	100.00
0.5	31,734,908		0.0000	1.0000	100.00
1.5	31,499,681		0.0000	1.0000	100.00
2.5	26,291,606		0.0000	1.0000	100.00
3.5	25,319,392		0.0000	1.0000	100.00
4.5	24,631,705	10,065	0.0004	0.9996	100.00
5.5	24,117,993	17	0.0000	1.0000	99.96
6.5	23,534,255		0.0000	1.0000	99.96
7.5	24,102,093		0.0000	1.0000	99.96
8.5	22,514,803		0.0000	1.0000	99.96
9.5	17,755,270		0.0000	1.0000	99.96
10.5	17,086,218		0.0000	1.0000	99.96
11.5	17,132,122	2,648	0.0002	0.9998	99.96
12.5	15,167,034		0.0000	1.0000	99.94
13.5	11,324,314		0.0000	1.0000	99.94
14.5	11,054,893		0.0000	1.0000	99.94
15.5	11,312,722	160,237	0.0142	0.9858	99.94
16.5	7,532,125		0.0000	1.0000	98.53
17.5	4,746,336		0.0000	1.0000	98.53
18.5	4,514,584		0.0000	1.0000	98.53
19.5	4,202,090		0.0000	1.0000	98.53
20.5	4,188,176		0.0000	1.0000	98.53
21.5	4,557,935		0.0000	1.0000	98.53
22.5	4,389,622		0.0000	1.0000	98.53
23.5	4,723,139	13,660	0.0029	0.9971	98.53
24.5	4,114,948		0.0000	1.0000	98.24
25.5	3,627,056	22,099	0.0061	0.9939	98.24
26.5	3,055,326		0.0000	1.0000	97.64
27.5	2,744,228	21,075	0.0077	0.9923	97.64
28.5	2,403,353	89,800	0.0374	0.9626	96.89
29.5	2,193,228	21,333	0.0097	0.9903	93.27
30.5	2,147,758	13,038	0.0061	0.9939	92.37
31.5	2,090,274	21,589	0.0103	0.9897	91.81
32.5	2,068,684		0.0000	1.0000	90.86
33.5	2,068,684	8,629	0.0042	0.9958	90.86
34.5	2,060,055		0.0000	1.0000	90.48
35.5	2,060,055		0.0000	1.0000	90.48
36.5	2,060,055		0.0000	1.0000	90.48
37.5	2,060,055		0.0000	1.0000	90.48
38.5	2,060,055	10,059	0.0049	0.9951	90.48

MANITOBA HYDRO

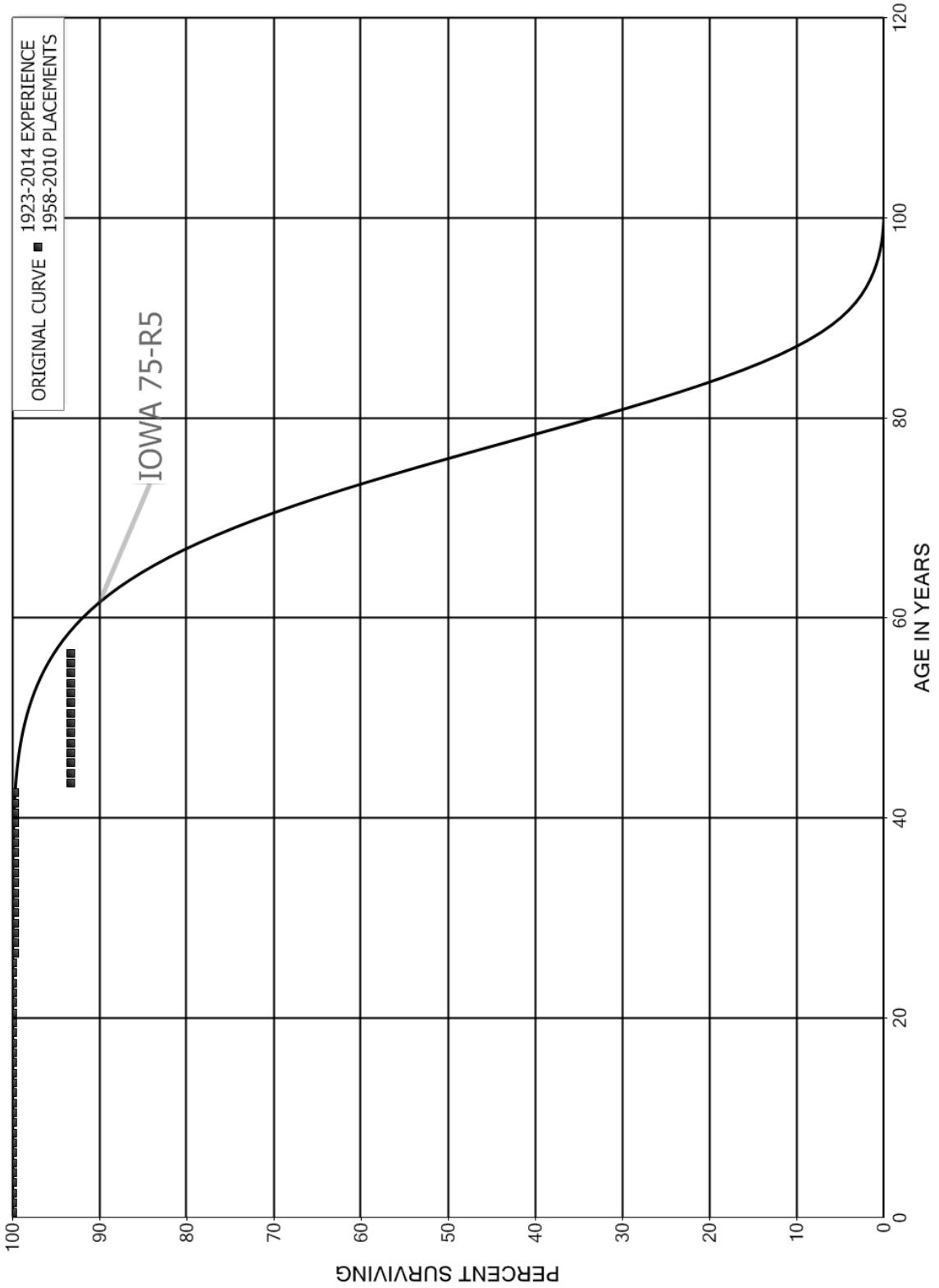
ACCOUNT 000Y - TOWN SITE OTHER INFRASTRUCTURE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,049,997	6,270	0.0031	0.9969	90.04
40.5	2,125,685	30,675	0.0144	0.9856	89.76
41.5	732,179		0.0000	1.0000	88.47
42.5	732,179		0.0000	1.0000	88.47
43.5	732,179		0.0000	1.0000	88.47
44.5	732,179	86,788	0.1185	0.8815	88.47
45.5	323,103		0.0000	1.0000	77.98
46.5	323,103		0.0000	1.0000	77.98
47.5	323,103		0.0000	1.0000	77.98
48.5	323,103		0.0000	1.0000	77.98
49.5	323,103		0.0000	1.0000	77.98
50.5	323,103		0.0000	1.0000	77.98
51.5	323,103		0.0000	1.0000	77.98
52.5	323,103		0.0000	1.0000	77.98
53.5	323,103		0.0000	1.0000	77.98
54.5	323,103		0.0000	1.0000	77.98
55.5	323,103	2,500	0.0077	0.9923	77.98
56.5	320,603		0.0000	1.0000	77.38
57.5	320,603		0.0000	1.0000	77.38
58.5	320,603		0.0000	1.0000	77.38
59.5	320,603		0.0000	1.0000	77.38
60.5	320,603		0.0000	1.0000	77.38
61.5	320,603		0.0000	1.0000	77.38
62.5	320,603	45,430	0.1417	0.8583	77.38
63.5	275,173		0.0000	1.0000	66.41
64.5	275,173		0.0000	1.0000	66.41
65.5	275,173		0.0000	1.0000	66.41
66.5	275,173		0.0000	1.0000	66.41
67.5	275,173	79,771	0.2899	0.7101	66.41
68.5	195,402		0.0000	1.0000	47.16
69.5	195,402	88,819	0.4545	0.5455	47.16
70.5	106,582		0.0000	1.0000	25.72
71.5	106,582		0.0000	1.0000	25.72
72.5	106,582		0.0000	1.0000	25.72
73.5	106,582	43,405	0.4072	0.5928	25.72
74.5	63,177		0.0000	1.0000	15.25
75.5	63,177		0.0000	1.0000	15.25
76.5	63,177		0.0000	1.0000	15.25
77.5	63,177		0.0000	1.0000	15.25
78.5	63,177		0.0000	1.0000	15.25
79.5	108,607	108,607	1.0000		15.25
80.5					

MANITOBA HYDRO
ACCOUNT 1200B - POWERHOUSE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200B - POWERHOUSE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2010 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	34,414,892		0.0000	1.0000	100.00
0.5	34,414,892		0.0000	1.0000	100.00
1.5	34,414,892		0.0000	1.0000	100.00
2.5	34,414,892		0.0000	1.0000	100.00
3.5	34,403,892		0.0000	1.0000	100.00
4.5	34,031,602		0.0000	1.0000	100.00
5.5	33,322,638		0.0000	1.0000	100.00
6.5	32,526,652		0.0000	1.0000	100.00
7.5	30,867,444		0.0000	1.0000	100.00
8.5	30,021,152		0.0000	1.0000	100.00
9.5	29,864,637		0.0000	1.0000	100.00
10.5	29,775,358		0.0000	1.0000	100.00
11.5	14,860,867		0.0000	1.0000	100.00
12.5	14,860,867		0.0000	1.0000	100.00
13.5	14,860,867		0.0000	1.0000	100.00
14.5	14,860,867		0.0000	1.0000	100.00
15.5	14,860,867		0.0000	1.0000	100.00
16.5	14,860,867		0.0000	1.0000	100.00
17.5	14,857,742		0.0000	1.0000	100.00
18.5	14,857,742		0.0000	1.0000	100.00
19.5	14,737,270		0.0000	1.0000	100.00
20.5	14,737,270		0.0000	1.0000	100.00
21.5	14,737,270		0.0000	1.0000	100.00
22.5	14,737,270		0.0000	1.0000	100.00
23.5	14,699,651		0.0000	1.0000	100.00
24.5	14,699,651		0.0000	1.0000	100.00
25.5	14,568,146	42,494	0.0029	0.9971	100.00
26.5	14,525,653		0.0000	1.0000	99.71
27.5	14,525,653		0.0000	1.0000	99.71
28.5	14,525,653		0.0000	1.0000	99.71
29.5	14,291,951		0.0000	1.0000	99.71
30.5	14,291,951		0.0000	1.0000	99.71
31.5	14,166,551		0.0000	1.0000	99.71
32.5	14,166,551		0.0000	1.0000	99.71
33.5	14,166,551		0.0000	1.0000	99.71
34.5	14,166,551	4,574	0.0003	0.9997	99.71
35.5	14,161,977		0.0000	1.0000	99.68
36.5	14,161,977		0.0000	1.0000	99.68
37.5	14,044,132		0.0000	1.0000	99.68
38.5	14,044,132		0.0000	1.0000	99.68

MANITOBA HYDRO

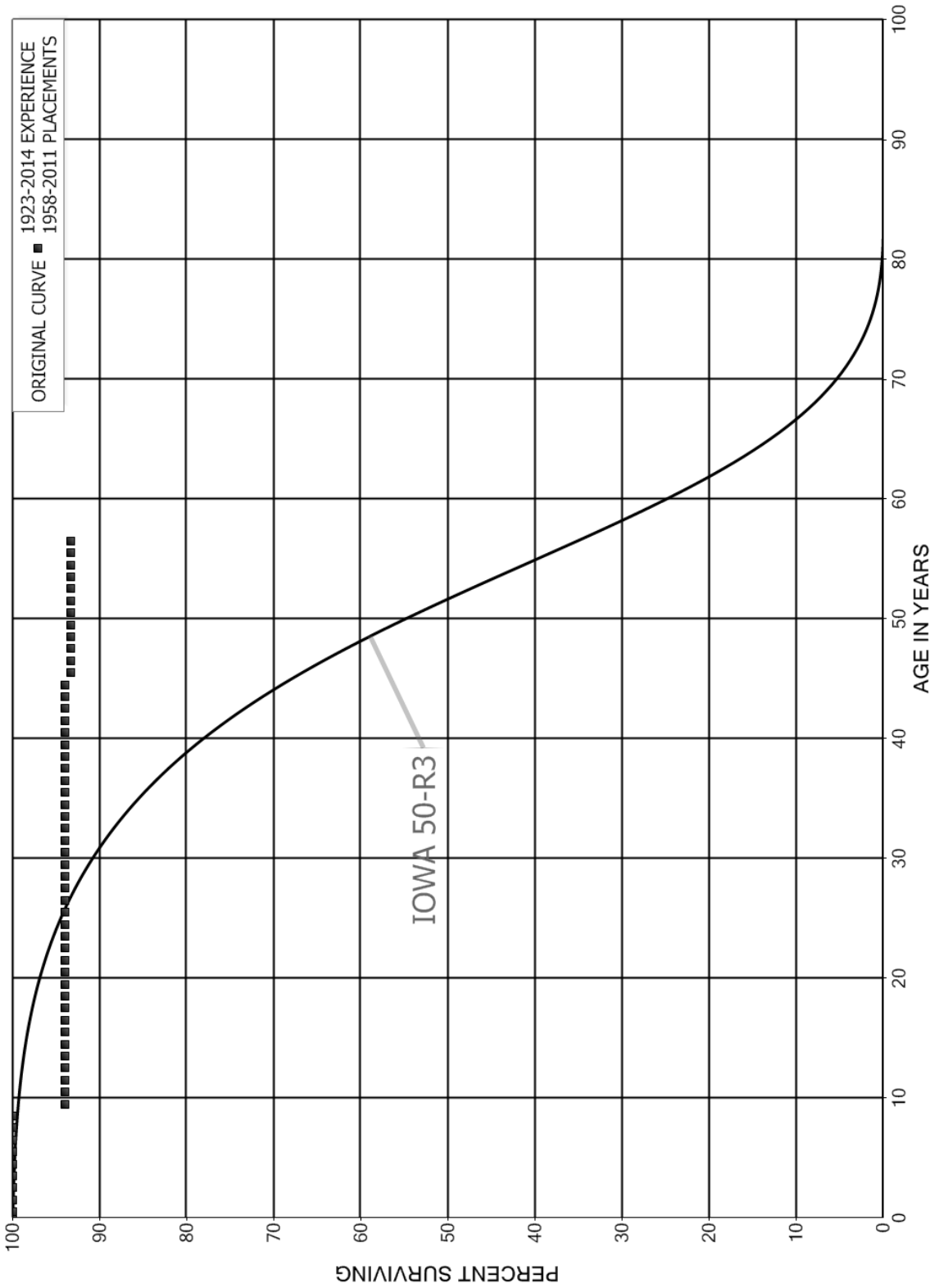
ACCOUNT 1200B - POWERHOUSE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2010 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	14,044,132		0.0000	1.0000	99.68
40.5	14,036,173		0.0000	1.0000	99.68
41.5	14,036,173		0.0000	1.0000	99.68
42.5	14,036,173	893,465	0.0637	0.9363	99.68
43.5	13,140,490		0.0000	1.0000	93.33
44.5	9,472,948		0.0000	1.0000	93.33
45.5	9,472,948		0.0000	1.0000	93.33
46.5	9,472,948		0.0000	1.0000	93.33
47.5	9,472,948		0.0000	1.0000	93.33
48.5	9,472,948		0.0000	1.0000	93.33
49.5	9,472,948		0.0000	1.0000	93.33
50.5	9,472,948		0.0000	1.0000	93.33
51.5	9,472,948		0.0000	1.0000	93.33
52.5	9,472,948		0.0000	1.0000	93.33
53.5	4,007,021		0.0000	1.0000	93.33
54.5	4,007,021		0.0000	1.0000	93.33
55.5	4,004,277		0.0000	1.0000	93.33
56.5					93.33

MANITOBA HYDRO
ACCOUNT 1200F - ROADS AND SITE IMPROVEMENTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2011 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	5,986,003		0.0000	1.0000	100.00
0.5	5,986,003		0.0000	1.0000	100.00
1.5	5,986,003		0.0000	1.0000	100.00
2.5	5,986,003		0.0000	1.0000	100.00
3.5	5,978,785		0.0000	1.0000	100.00
4.5	5,965,372		0.0000	1.0000	100.00
5.5	5,814,854		0.0000	1.0000	100.00
6.5	5,473,006		0.0000	1.0000	100.00
7.5	5,473,006		0.0000	1.0000	100.00
8.5	5,441,990	331,511	0.0609	0.9391	100.00
9.5	5,000,896		0.0000	1.0000	93.91
10.5	5,000,896		0.0000	1.0000	93.91
11.5	5,000,896		0.0000	1.0000	93.91
12.5	5,000,896		0.0000	1.0000	93.91
13.5	5,000,896		0.0000	1.0000	93.91
14.5	4,719,134		0.0000	1.0000	93.91
15.5	4,719,134		0.0000	1.0000	93.91
16.5	4,201,206		0.0000	1.0000	93.91
17.5	3,164,755		0.0000	1.0000	93.91
18.5	2,382,418		0.0000	1.0000	93.91
19.5	1,168,241		0.0000	1.0000	93.91
20.5	1,164,230		0.0000	1.0000	93.91
21.5	1,126,158		0.0000	1.0000	93.91
22.5	1,126,158		0.0000	1.0000	93.91
23.5	1,126,158		0.0000	1.0000	93.91
24.5	778,018		0.0000	1.0000	93.91
25.5	778,018		0.0000	1.0000	93.91
26.5	778,018		0.0000	1.0000	93.91
27.5	778,018		0.0000	1.0000	93.91
28.5	778,018		0.0000	1.0000	93.91
29.5	778,018		0.0000	1.0000	93.91
30.5	778,018		0.0000	1.0000	93.91
31.5	778,018		0.0000	1.0000	93.91
32.5	778,018		0.0000	1.0000	93.91
33.5	778,018		0.0000	1.0000	93.91
34.5	778,018		0.0000	1.0000	93.91
35.5	778,018		0.0000	1.0000	93.91
36.5	778,018		0.0000	1.0000	93.91
37.5	778,018		0.0000	1.0000	93.91
38.5	778,018		0.0000	1.0000	93.91

MANITOBA HYDRO

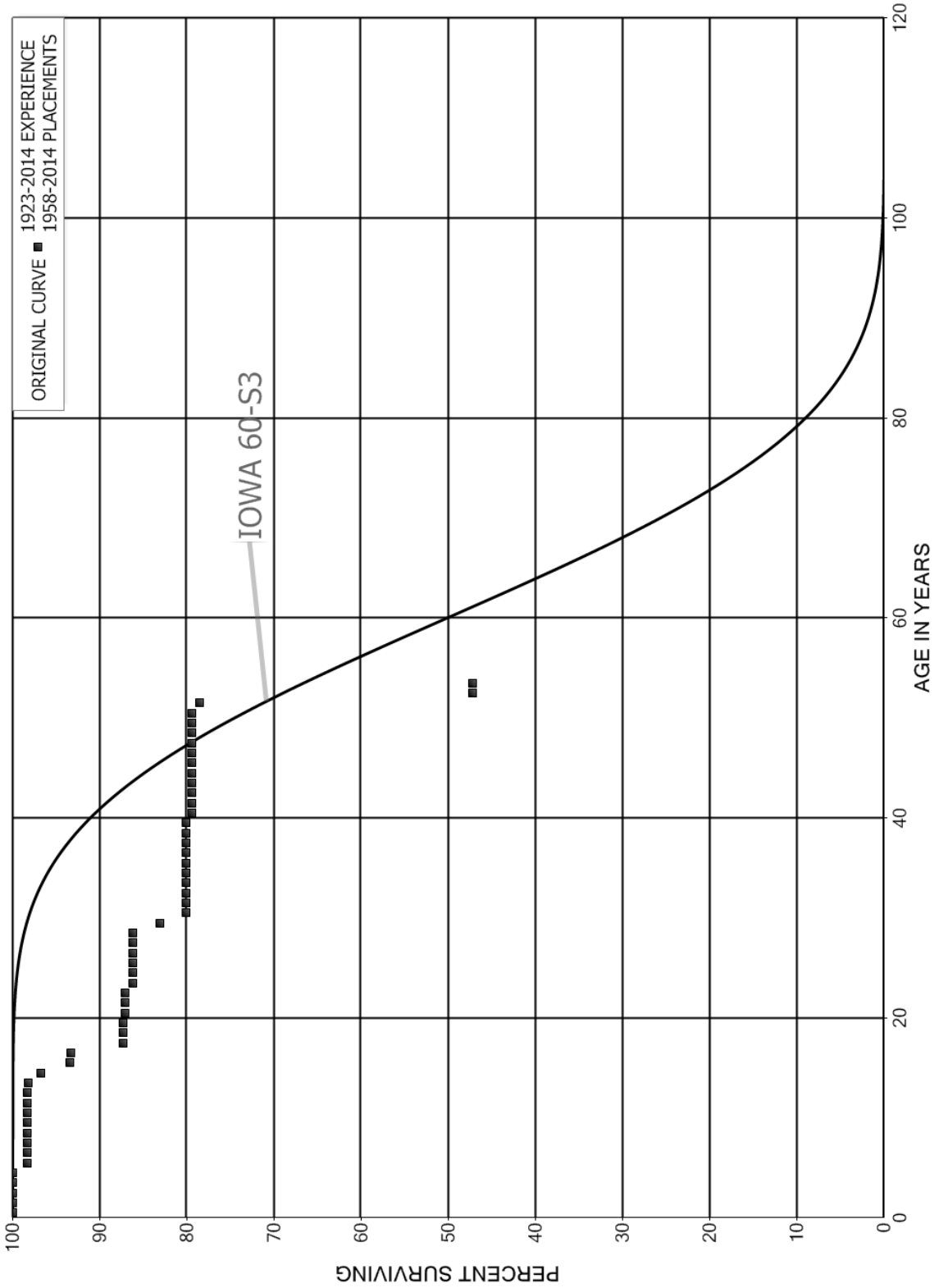
ACCOUNT 1200F - ROADS AND SITE IMPROVEMENTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2011 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	778,018		0.0000	1.0000	93.91
40.5	778,018		0.0000	1.0000	93.91
41.5	778,018		0.0000	1.0000	93.91
42.5	778,018		0.0000	1.0000	93.91
43.5	778,018		0.0000	1.0000	93.91
44.5	709,283	4,500	0.0063	0.9937	93.91
45.5	704,783		0.0000	1.0000	93.31
46.5	704,783		0.0000	1.0000	93.31
47.5	704,783		0.0000	1.0000	93.31
48.5	704,783		0.0000	1.0000	93.31
49.5	704,783		0.0000	1.0000	93.31
50.5	704,783		0.0000	1.0000	93.31
51.5	704,783		0.0000	1.0000	93.31
52.5	700,756		0.0000	1.0000	93.31
53.5	132,389		0.0000	1.0000	93.31
54.5	132,389		0.0000	1.0000	93.31
55.5	132,389		0.0000	1.0000	93.31
56.5					93.31

MANITOBA HYDRO
ACCOUNT 1200G - TURBINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	63,076,767		0.0000	1.0000	100.00
0.5	63,076,744		0.0000	1.0000	100.00
1.5	63,076,744		0.0000	1.0000	100.00
2.5	63,076,744		0.0000	1.0000	100.00
3.5	61,667,096		0.0000	1.0000	100.00
4.5	61,667,096	1,032,258	0.0167	0.9833	100.00
5.5	60,125,132		0.0000	1.0000	98.33
6.5	60,125,132		0.0000	1.0000	98.33
7.5	58,973,149	38,023	0.0006	0.9994	98.33
8.5	50,002,981		0.0000	1.0000	98.26
9.5	43,207,521		0.0000	1.0000	98.26
10.5	41,160,918		0.0000	1.0000	98.26
11.5	31,399,745		0.0000	1.0000	98.26
12.5	31,399,745	16,552	0.0005	0.9995	98.26
13.5	31,383,193	465,678	0.0148	0.9852	98.21
14.5	29,656,312	1,013,211	0.0342	0.9658	96.75
15.5	28,507,915	33,636	0.0012	0.9988	93.45
16.5	28,339,830	1,825,978	0.0644	0.9356	93.34
17.5	26,157,663		0.0000	1.0000	87.32
18.5	22,077,706		0.0000	1.0000	87.32
19.5	20,925,770	54,976	0.0026	0.9974	87.32
20.5	20,736,105		0.0000	1.0000	87.09
21.5	17,819,561		0.0000	1.0000	87.09
22.5	17,819,561	180,000	0.0101	0.9899	87.09
23.5	17,639,561		0.0000	1.0000	86.21
24.5	17,639,561		0.0000	1.0000	86.21
25.5	17,639,561		0.0000	1.0000	86.21
26.5	17,639,561		0.0000	1.0000	86.21
27.5	17,639,561		0.0000	1.0000	86.21
28.5	17,639,561	641,921	0.0364	0.9636	86.21
29.5	16,997,640	622,558	0.0366	0.9634	83.08
30.5	13,289,841		0.0000	1.0000	80.03
31.5	13,289,841		0.0000	1.0000	80.03
32.5	13,289,841		0.0000	1.0000	80.03
33.5	13,289,841		0.0000	1.0000	80.03
34.5	13,289,841		0.0000	1.0000	80.03
35.5	13,289,841		0.0000	1.0000	80.03
36.5	13,034,312		0.0000	1.0000	80.03
37.5	13,034,312		0.0000	1.0000	80.03
38.5	12,459,532		0.0000	1.0000	80.03

MANITOBA HYDRO

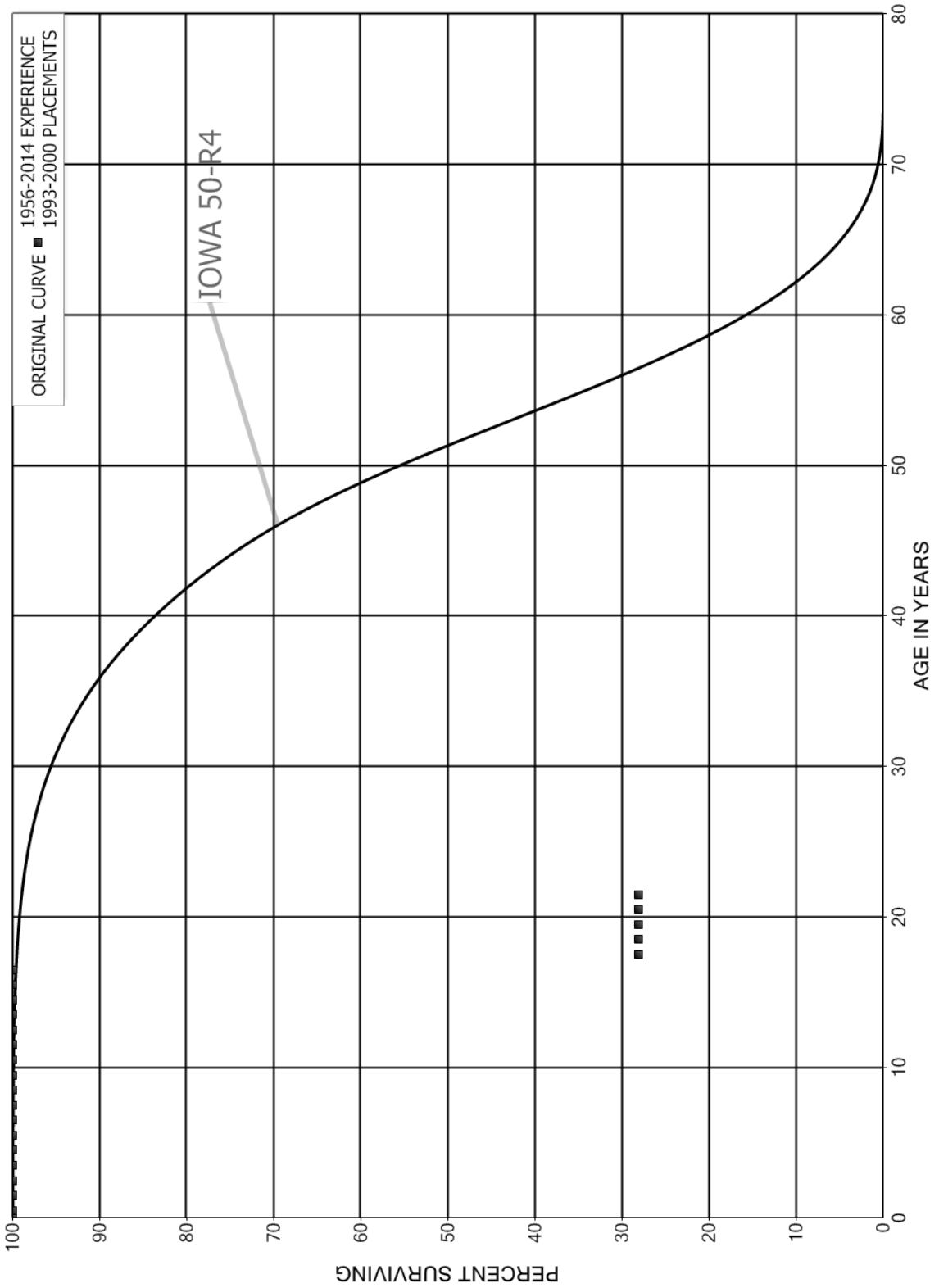
ACCOUNT 1200G - TURBINES AND GENERATORS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,454,984	107,764	0.0087	0.9913	80.03
40.5	12,347,220		0.0000	1.0000	79.34
41.5	12,347,220		0.0000	1.0000	79.34
42.5	12,347,220		0.0000	1.0000	79.34
43.5	12,347,220		0.0000	1.0000	79.34
44.5	8,513,706		0.0000	1.0000	79.34
45.5	8,513,706		0.0000	1.0000	79.34
46.5	8,513,706		0.0000	1.0000	79.34
47.5	8,513,706		0.0000	1.0000	79.34
48.5	8,513,706		0.0000	1.0000	79.34
49.5	8,513,706		0.0000	1.0000	79.34
50.5	8,513,706	84,744	0.0100	0.9900	79.34
51.5	8,428,962	3,364,869	0.3992	0.6008	78.55
52.5	5,064,093		0.0000	1.0000	47.19
53.5					47.19

MANITOBA HYDRO
ACCOUNT 1200H - GOVERNORS AND EXCITATION SYSTEM
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

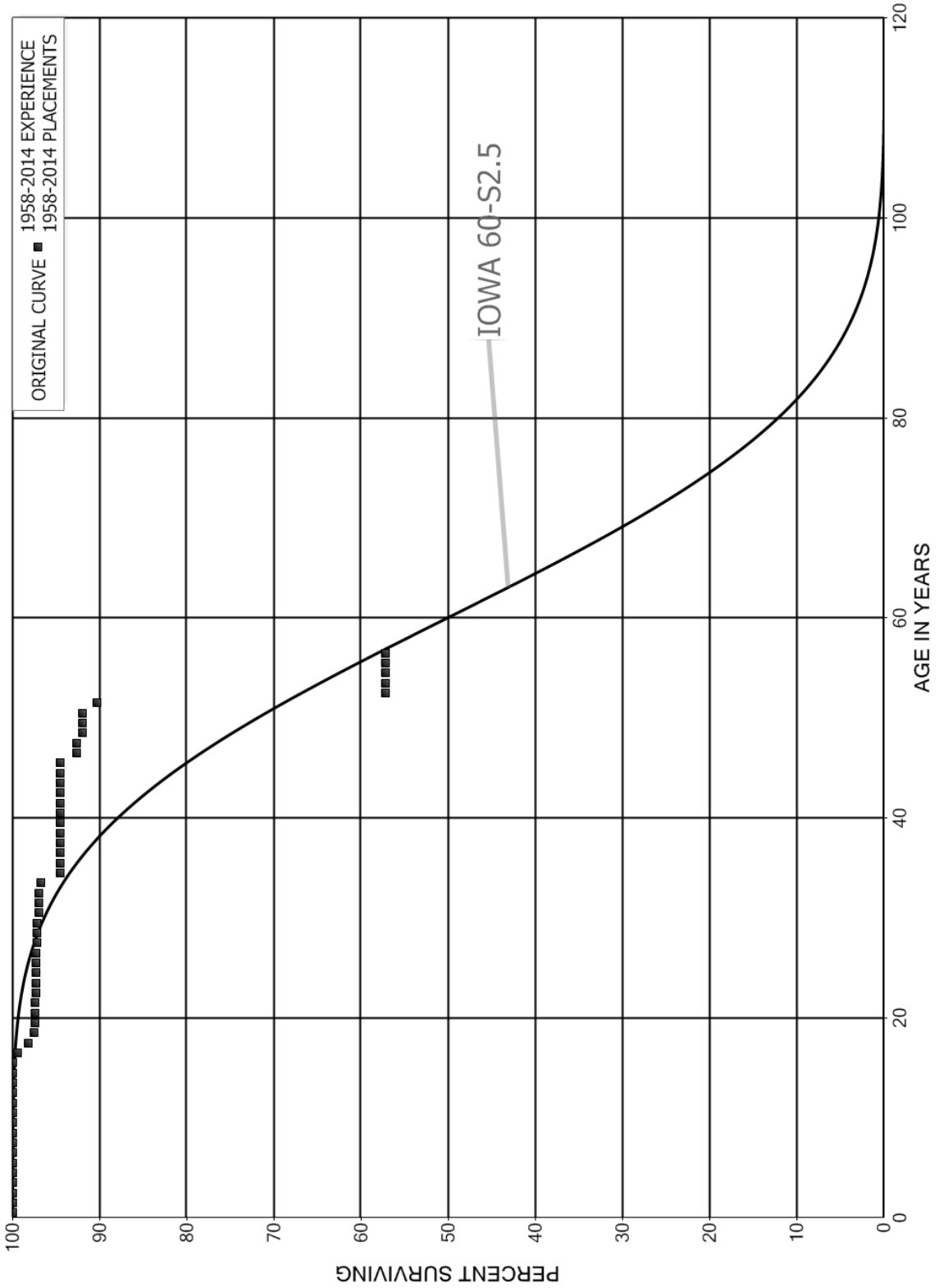
ACCOUNT 1200H - GOVERNORS AND EXCITATION SYSTEM

ORIGINAL LIFE TABLE

PLACEMENT BAND 1993-2000 EXPERIENCE BAND 1956-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,405,601		0.0000	1.0000	100.00
0.5	2,405,601		0.0000	1.0000	100.00
1.5	2,405,601		0.0000	1.0000	100.00
2.5	2,405,601		0.0000	1.0000	100.00
3.5	2,405,601		0.0000	1.0000	100.00
4.5	2,405,601		0.0000	1.0000	100.00
5.5	2,405,601		0.0000	1.0000	100.00
6.5	2,405,601		0.0000	1.0000	100.00
7.5	2,405,601		0.0000	1.0000	100.00
8.5	2,405,601		0.0000	1.0000	100.00
9.5	2,405,601		0.0000	1.0000	100.00
10.5	2,405,601		0.0000	1.0000	100.00
11.5	2,405,601		0.0000	1.0000	100.00
12.5	2,405,601		0.0000	1.0000	100.00
13.5	2,405,601		0.0000	1.0000	100.00
14.5	61,740		0.0000	1.0000	100.00
15.5	61,740		0.0000	1.0000	100.00
16.5	61,740	44,433	0.7197	0.2803	100.00
17.5	17,307		0.0000	1.0000	28.03
18.5	17,307		0.0000	1.0000	28.03
19.5	17,307		0.0000	1.0000	28.03
20.5	17,307		0.0000	1.0000	28.03
21.5					28.03

MANITOBA HYDRO
ACCOUNT 1200J - STEAM GENERATORS AND AUXILIARIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200J - STEAM GENERATORS AND AUXILIARIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1958-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	88,179,668	75,254	0.0009	0.9991	100.00
0.5	87,275,015		0.0000	1.0000	99.91
1.5	87,273,527		0.0000	1.0000	99.91
2.5	87,272,410		0.0000	1.0000	99.91
3.5	84,643,988		0.0000	1.0000	99.91
4.5	73,810,370	1,800	0.0000	1.0000	99.91
5.5	72,363,541		0.0000	1.0000	99.91
6.5	72,348,158		0.0000	1.0000	99.91
7.5	70,297,297		0.0000	1.0000	99.91
8.5	66,865,348		0.0000	1.0000	99.91
9.5	57,654,103		0.0000	1.0000	99.91
10.5	57,290,874		0.0000	1.0000	99.91
11.5	34,052,412		0.0000	1.0000	99.91
12.5	34,052,412	261	0.0000	1.0000	99.91
13.5	34,052,151		0.0000	1.0000	99.91
14.5	33,890,613	3,104	0.0001	0.9999	99.91
15.5	33,528,899	182,238	0.0054	0.9946	99.90
16.5	32,841,641	378,928	0.0115	0.9885	99.36
17.5	32,424,216	233,442	0.0072	0.9928	98.21
18.5	28,279,644	25,134	0.0009	0.9991	97.51
19.5	23,962,503		0.0000	1.0000	97.42
20.5	22,656,115	8,500	0.0004	0.9996	97.42
21.5	21,282,208	12,739	0.0006	0.9994	97.38
22.5	21,090,720		0.0000	1.0000	97.32
23.5	21,090,720	17,425	0.0008	0.9992	97.32
24.5	21,073,295		0.0000	1.0000	97.24
25.5	21,011,617		0.0000	1.0000	97.24
26.5	20,770,348	21,314	0.0010	0.9990	97.24
27.5	20,749,034		0.0000	1.0000	97.14
28.5	20,749,034		0.0000	1.0000	97.14
29.5	20,749,034	40,118	0.0019	0.9981	97.14
30.5	20,708,916		0.0000	1.0000	96.96
31.5	20,400,982		0.0000	1.0000	96.96
32.5	20,394,164	55,000	0.0027	0.9973	96.96
33.5	20,339,164	456,792	0.0225	0.9775	96.69
34.5	19,685,289		0.0000	1.0000	94.52
35.5	19,526,440		0.0000	1.0000	94.52
36.5	19,376,424		0.0000	1.0000	94.52
37.5	19,376,424		0.0000	1.0000	94.52
38.5	19,373,391		0.0000	1.0000	94.52

MANITOBA HYDRO

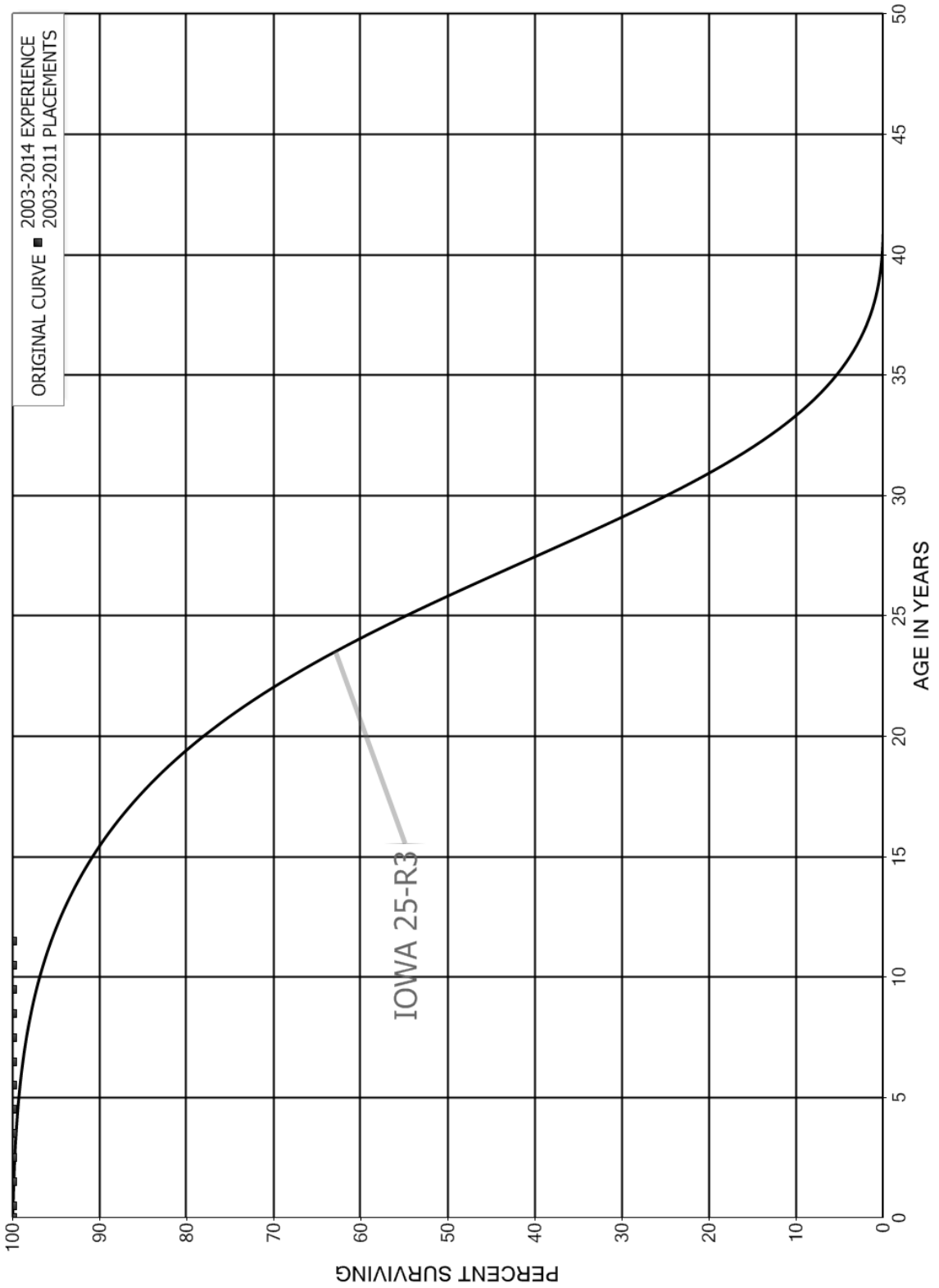
ACCOUNT 1200J - STEAM GENERATORS AND AUXILIARIES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1958-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	19,373,391		0.0000	1.0000	94.52
40.5	19,368,281		0.0000	1.0000	94.52
41.5	19,368,281		0.0000	1.0000	94.52
42.5	19,368,281		0.0000	1.0000	94.52
43.5	18,167,851		0.0000	1.0000	94.52
44.5	11,321,608		0.0000	1.0000	94.52
45.5	11,165,539	219,766	0.0197	0.9803	94.52
46.5	10,945,773		0.0000	1.0000	92.66
47.5	10,843,723	77,069	0.0071	0.9929	92.66
48.5	10,766,654		0.0000	1.0000	92.00
49.5	10,766,654		0.0000	1.0000	92.00
50.5	10,766,654	198,916	0.0185	0.9815	92.00
51.5	10,551,630	3,867,271	0.3665	0.6335	90.30
52.5	6,667,927		0.0000	1.0000	57.21
53.5	250,103		0.0000	1.0000	57.21
54.5	250,103		0.0000	1.0000	57.21
55.5	249,370		0.0000	1.0000	57.21
56.5					57.21

MANITOBA HYDRO
ACCOUNT 1200K - COMBUSTION TURBINE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

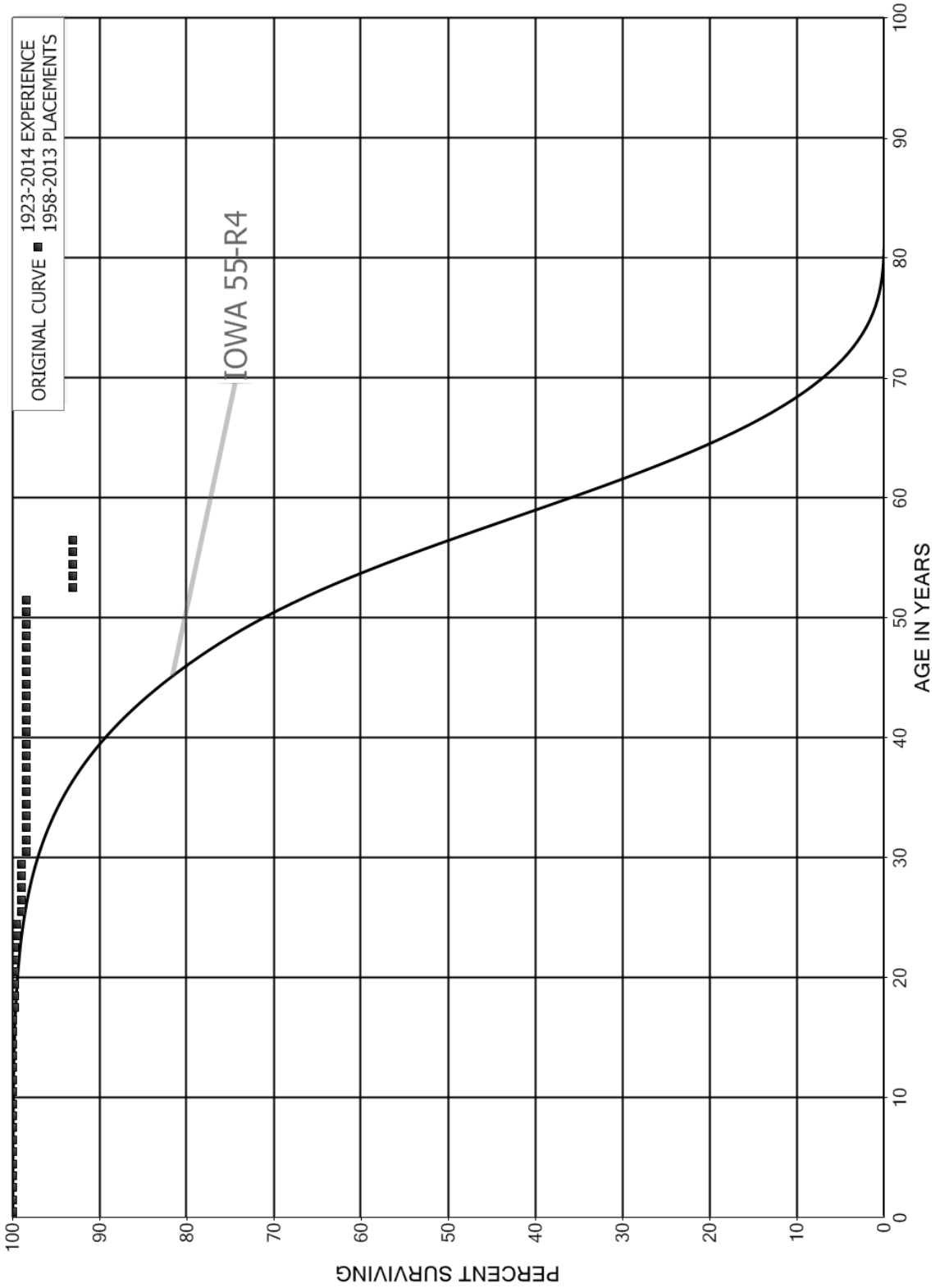
ACCOUNT 1200K - COMBUSTION TURBINE

ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2011 EXPERIENCE BAND 2003-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	321,080,803		0.0000	1.0000	100.00
0.5	143,305,351	1,603	0.0000	1.0000	100.00
1.5	143,303,747		0.0000	1.0000	100.00
2.5	143,303,747		0.0000	1.0000	100.00
3.5	143,284,091		0.0000	1.0000	100.00
4.5	139,588,930		0.0000	1.0000	100.00
5.5	137,893,300		0.0000	1.0000	100.00
6.5	137,883,392		0.0000	1.0000	100.00
7.5	137,791,333		0.0000	1.0000	100.00
8.5	137,791,333		0.0000	1.0000	100.00
9.5	135,896,437		0.0000	1.0000	100.00
10.5	135,538,131		0.0000	1.0000	100.00
11.5					100.00

MANITOBA HYDRO
ACCOUNT 1200P - A/C ELECTRICAL POWER SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2013 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	18,264,264		0.0000	1.0000	100.00
0.5	18,150,089		0.0000	1.0000	100.00
1.5	18,039,668		0.0000	1.0000	100.00
2.5	18,039,668		0.0000	1.0000	100.00
3.5	17,683,115		0.0000	1.0000	100.00
4.5	17,663,218		0.0000	1.0000	100.00
5.5	17,500,601		0.0000	1.0000	100.00
6.5	17,494,873		0.0000	1.0000	100.00
7.5	16,989,752		0.0000	1.0000	100.00
8.5	16,975,635		0.0000	1.0000	100.00
9.5	16,895,024		0.0000	1.0000	100.00
10.5	16,842,807		0.0000	1.0000	100.00
11.5	10,782,610		0.0000	1.0000	100.00
12.5	10,782,418		0.0000	1.0000	100.00
13.5	10,782,418		0.0000	1.0000	100.00
14.5	10,612,194		0.0000	1.0000	100.00
15.5	10,445,871		0.0000	1.0000	100.00
16.5	10,131,843	26,796	0.0026	0.9974	100.00
17.5	8,414,637		0.0000	1.0000	99.74
18.5	5,500,065		0.0000	1.0000	99.74
19.5	5,092,040		0.0000	1.0000	99.74
20.5	5,091,654		0.0000	1.0000	99.74
21.5	4,212,671		0.0000	1.0000	99.74
22.5	4,212,671	8,000	0.0019	0.9981	99.74
23.5	4,204,671		0.0000	1.0000	99.55
24.5	4,204,671	23,574	0.0056	0.9944	99.55
25.5	4,181,097		0.0000	1.0000	98.99
26.5	4,181,097		0.0000	1.0000	98.99
27.5	4,181,097		0.0000	1.0000	98.99
28.5	4,136,468		0.0000	1.0000	98.99
29.5	4,136,468	24,328	0.0059	0.9941	98.99
30.5	4,098,183		0.0000	1.0000	98.41
31.5	4,098,183		0.0000	1.0000	98.41
32.5	4,098,183		0.0000	1.0000	98.41
33.5	4,098,183		0.0000	1.0000	98.41
34.5	4,098,183		0.0000	1.0000	98.41
35.5	4,098,183		0.0000	1.0000	98.41
36.5	4,098,183		0.0000	1.0000	98.41
37.5	4,098,183		0.0000	1.0000	98.41
38.5	4,098,183		0.0000	1.0000	98.41

MANITOBA HYDRO

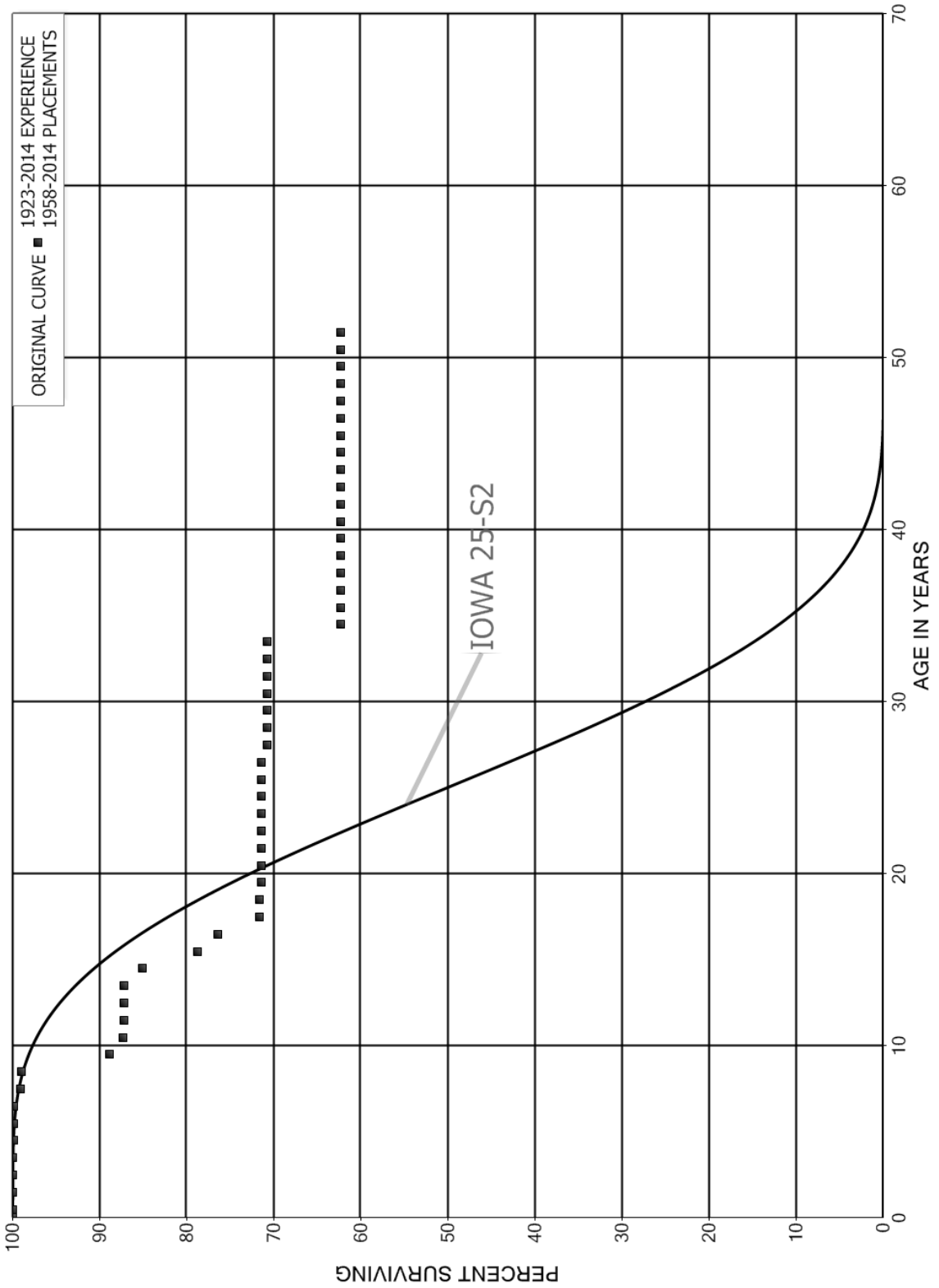
ACCOUNT 1200P - A/C ELECTRICAL POWER SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2013 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,096,047		0.0000	1.0000	98.41
40.5	4,096,047		0.0000	1.0000	98.41
41.5	4,096,047		0.0000	1.0000	98.41
42.5	4,096,047		0.0000	1.0000	98.41
43.5	4,096,047		0.0000	1.0000	98.41
44.5	3,027,282		0.0000	1.0000	98.41
45.5	3,027,282		0.0000	1.0000	98.41
46.5	3,027,282		0.0000	1.0000	98.41
47.5	3,027,282		0.0000	1.0000	98.41
48.5	3,027,282		0.0000	1.0000	98.41
49.5	3,027,282		0.0000	1.0000	98.41
50.5	3,027,282		0.0000	1.0000	98.41
51.5	3,027,282	165,169	0.0546	0.9454	98.41
52.5	2,862,113		0.0000	1.0000	93.04
53.5	1,011,851		0.0000	1.0000	93.04
54.5	1,011,851		0.0000	1.0000	93.04
55.5	996,490		0.0000	1.0000	93.04
56.5					93.04

MANITOBA HYDRO
ACCOUNT 1200Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	46,480,597		0.0000	1.0000	100.00
0.5	46,418,200		0.0000	1.0000	100.00
1.5	46,242,425		0.0000	1.0000	100.00
2.5	45,714,693		0.0000	1.0000	100.00
3.5	45,681,083	55,315	0.0012	0.9988	100.00
4.5	45,571,679		0.0000	1.0000	99.88
5.5	45,022,782	36,998	0.0008	0.9992	99.88
6.5	44,251,024	313,182	0.0071	0.9929	99.80
7.5	43,822,904	61,536	0.0014	0.9986	99.09
8.5	43,230,040	4,418,179	0.1022	0.8978	98.95
9.5	38,680,977	667,574	0.0173	0.9827	88.84
10.5	37,678,833	50,853	0.0013	0.9987	87.31
11.5	37,508,189		0.0000	1.0000	87.19
12.5	37,193,951		0.0000	1.0000	87.19
13.5	37,193,951	887,957	0.0239	0.9761	87.19
14.5	35,161,687	2,638,387	0.0750	0.9250	85.11
15.5	32,489,388	963,839	0.0297	0.9703	78.72
16.5	29,305,513	1,812,717	0.0619	0.9381	76.38
17.5	23,032,997	26,307	0.0011	0.9989	71.66
18.5	10,553,472	21,973	0.0021	0.9979	71.58
19.5	6,757,891		0.0000	1.0000	71.43
20.5	5,243,273		0.0000	1.0000	71.43
21.5	4,960,317	5,814	0.0012	0.9988	71.43
22.5	4,954,503		0.0000	1.0000	71.35
23.5	4,733,655		0.0000	1.0000	71.35
24.5	4,733,655		0.0000	1.0000	71.35
25.5	4,733,655		0.0000	1.0000	71.35
26.5	4,733,655	41,175	0.0087	0.9913	71.35
27.5	4,687,804		0.0000	1.0000	70.72
28.5	4,642,497		0.0000	1.0000	70.72
29.5	4,542,635		0.0000	1.0000	70.72
30.5	4,542,635		0.0000	1.0000	70.72
31.5	4,542,635		0.0000	1.0000	70.72
32.5	4,542,635		0.0000	1.0000	70.72
33.5	4,542,635	541,068	0.1191	0.8809	70.72
34.5	3,973,086		0.0000	1.0000	62.30
35.5	3,940,917		0.0000	1.0000	62.30
36.5	3,939,178		0.0000	1.0000	62.30
37.5	3,939,178		0.0000	1.0000	62.30
38.5	3,939,178		0.0000	1.0000	62.30

MANITOBA HYDRO

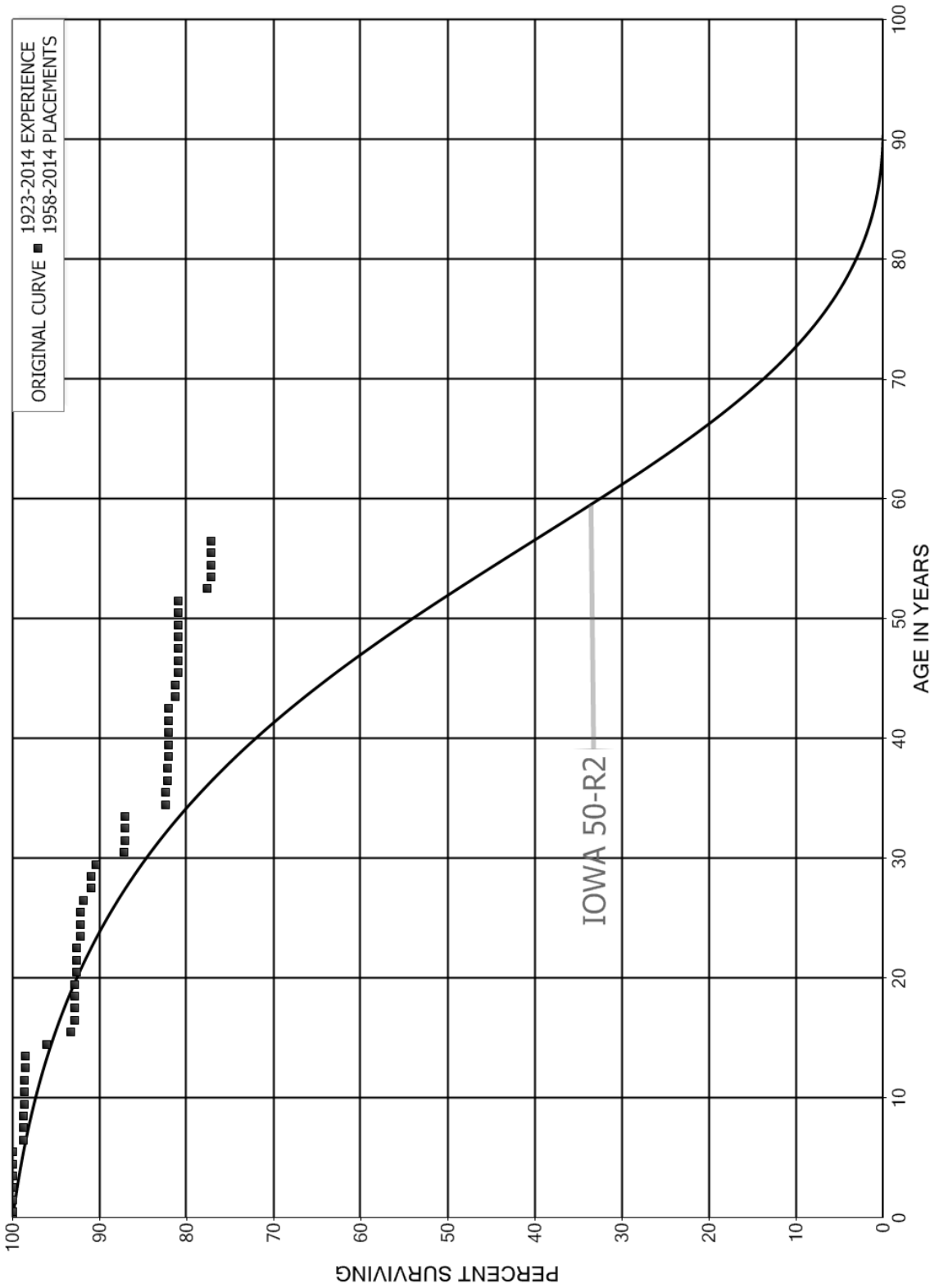
ACCOUNT 1200Q - INSTRUMENTATION, CONTROL AND D/C SYSTEMS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,939,178		0.0000	1.0000	62.30
40.5	3,939,178		0.0000	1.0000	62.30
41.5	3,931,143		0.0000	1.0000	62.30
42.5	3,931,143		0.0000	1.0000	62.30
43.5	3,931,143		0.0000	1.0000	62.30
44.5	1,673,161		0.0000	1.0000	62.30
45.5	1,673,161		0.0000	1.0000	62.30
46.5	1,673,161		0.0000	1.0000	62.30
47.5	1,673,161		0.0000	1.0000	62.30
48.5	1,673,091		0.0000	1.0000	62.30
49.5	1,673,091		0.0000	1.0000	62.30
50.5	1,673,091		0.0000	1.0000	62.30
51.5	1,673,091	559,931	0.3347	0.6653	62.30
52.5	1,107,691		0.0000	1.0000	41.45
53.5	1,025,085		0.0000	1.0000	41.45
54.5	1,025,085		0.0000	1.0000	41.45
55.5	970,652		0.0000	1.0000	41.45
56.5					41.45

MANITOBA HYDRO
ACCOUNT 1200R - AUXILIARY STATION PROCESSES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	79,265,054		0.0000	1.0000	100.00
0.5	78,584,274		0.0000	1.0000	100.00
1.5	78,253,340		0.0000	1.0000	100.00
2.5	78,038,115		0.0000	1.0000	100.00
3.5	77,977,115		0.0000	1.0000	100.00
4.5	77,669,429	16,117	0.0002	0.9998	100.00
5.5	75,728,991	959,472	0.0127	0.9873	99.98
6.5	74,124,883	16,100	0.0002	0.9998	98.71
7.5	70,226,632		0.0000	1.0000	98.69
8.5	69,967,062	46,107	0.0007	0.9993	98.69
9.5	68,688,430	231	0.0000	1.0000	98.63
10.5	67,296,975	36,734	0.0005	0.9995	98.63
11.5	57,080,591	46,729	0.0008	0.9992	98.57
12.5	55,346,721	4,553	0.0001	0.9999	98.49
13.5	55,294,191	1,371,150	0.0248	0.9752	98.48
14.5	51,488,918	1,455,378	0.0283	0.9717	96.04
15.5	48,783,551	235,226	0.0048	0.9952	93.33
16.5	47,665,860	27,600	0.0006	0.9994	92.88
17.5	44,928,328	19,302	0.0004	0.9996	92.82
18.5	22,427,606		0.0000	1.0000	92.78
19.5	20,081,890	46,375	0.0023	0.9977	92.78
20.5	18,225,912		0.0000	1.0000	92.57
21.5	15,560,197		0.0000	1.0000	92.57
22.5	15,347,195	72,492	0.0047	0.9953	92.57
23.5	14,575,083	1,216	0.0001	0.9999	92.13
24.5	14,399,362		0.0000	1.0000	92.12
25.5	14,390,025	39,485	0.0027	0.9973	92.12
26.5	13,251,344	124,596	0.0094	0.9906	91.87
27.5	13,096,172	4,178	0.0003	0.9997	91.01
28.5	13,056,004	78,128	0.0060	0.9940	90.98
29.5	12,977,876	464,878	0.0358	0.9642	90.43
30.5	12,456,902	13,981	0.0011	0.9989	87.19
31.5	12,016,709		0.0000	1.0000	87.10
32.5	12,002,260		0.0000	1.0000	87.10
33.5	11,996,359	647,311	0.0540	0.9460	87.10
34.5	11,263,696		0.0000	1.0000	82.40
35.5	11,038,399	34,197	0.0031	0.9969	82.40
36.5	11,002,365		0.0000	1.0000	82.14
37.5	10,986,769	10,144	0.0009	0.9991	82.14
38.5	10,963,949		0.0000	1.0000	82.07

MANITOBA HYDRO

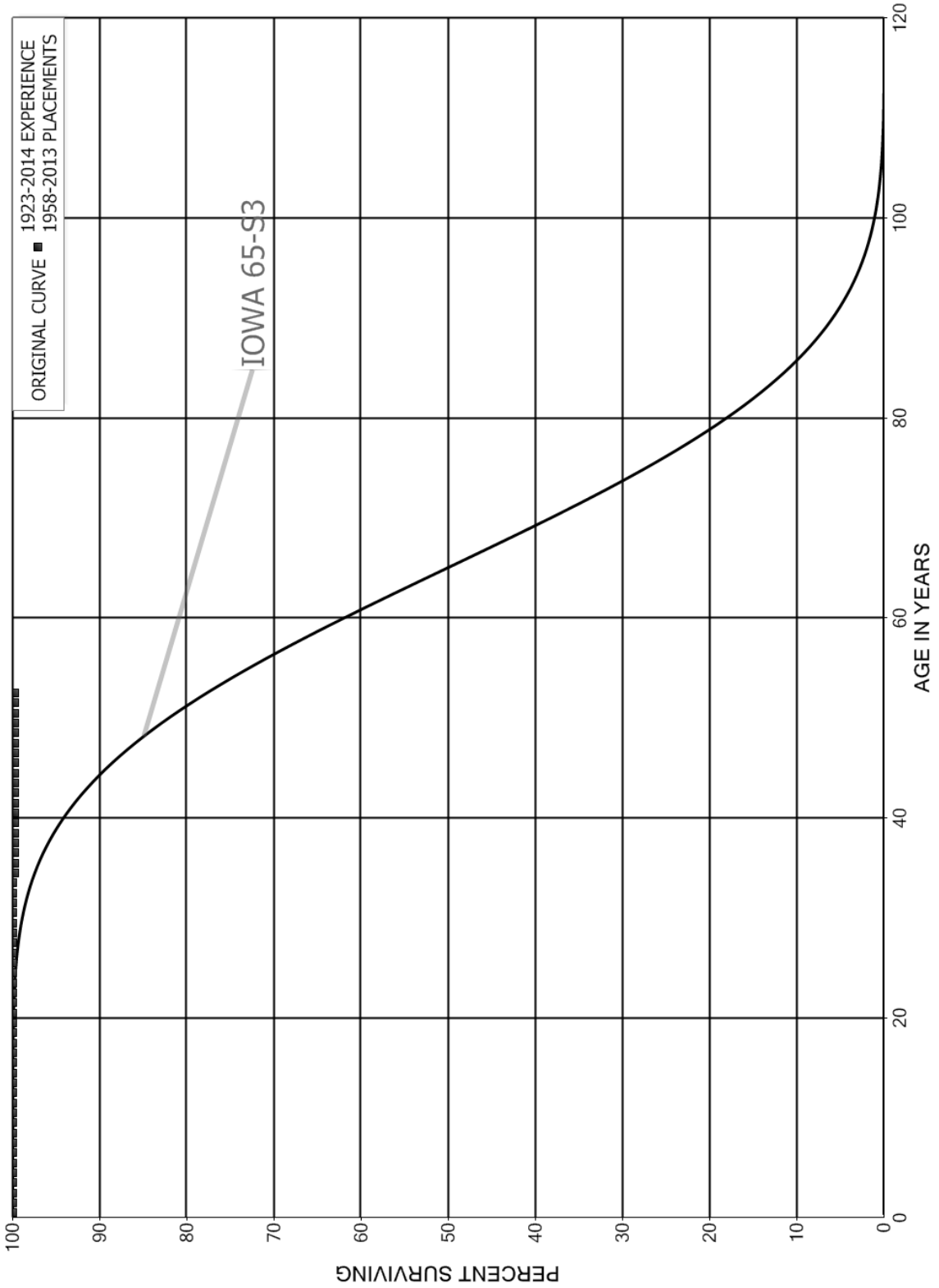
ACCOUNT 1200R - AUXILIARY STATION PROCESSES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	10,958,349		0.0000	1.0000	82.07
40.5	10,876,610		0.0000	1.0000	82.07
41.5	10,872,069		0.0000	1.0000	82.07
42.5	10,798,594	96,785	0.0090	0.9910	82.07
43.5	9,564,711	10,144	0.0011	0.9989	81.33
44.5	8,751,628	36,619	0.0042	0.9958	81.24
45.5	8,710,154		0.0000	1.0000	80.90
46.5	8,664,564		0.0000	1.0000	80.90
47.5	8,664,564		0.0000	1.0000	80.90
48.5	8,664,564		0.0000	1.0000	80.90
49.5	8,664,564		0.0000	1.0000	80.90
50.5	8,664,564		0.0000	1.0000	80.90
51.5	8,664,564	355,563	0.0410	0.9590	80.90
52.5	8,309,001	41,259	0.0050	0.9950	77.58
53.5	4,764,269		0.0000	1.0000	77.20
54.5	4,764,269		0.0000	1.0000	77.20
55.5	4,727,056		0.0000	1.0000	77.20
56.5					77.20

MANITOBA HYDRO
ACCOUNT 1200X - SUPPORT BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 1200X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2013 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,151,702		0.0000	1.0000	100.00
0.5	9,151,702		0.0000	1.0000	100.00
1.5	8,524,060		0.0000	1.0000	100.00
2.5	8,524,060		0.0000	1.0000	100.00
3.5	8,524,060		0.0000	1.0000	100.00
4.5	8,290,358		0.0000	1.0000	100.00
5.5	8,148,910		0.0000	1.0000	100.00
6.5	8,088,169		0.0000	1.0000	100.00
7.5	8,039,029		0.0000	1.0000	100.00
8.5	7,874,818		0.0000	1.0000	100.00
9.5	7,874,818		0.0000	1.0000	100.00
10.5	7,874,818		0.0000	1.0000	100.00
11.5	7,874,818		0.0000	1.0000	100.00
12.5	7,874,281		0.0000	1.0000	100.00
13.5	7,874,281		0.0000	1.0000	100.00
14.5	7,824,316		0.0000	1.0000	100.00
15.5	7,824,316		0.0000	1.0000	100.00
16.5	7,658,476		0.0000	1.0000	100.00
17.5	7,098,972		0.0000	1.0000	100.00
18.5	1,527,838		0.0000	1.0000	100.00
19.5	1,395,233		0.0000	1.0000	100.00
20.5	1,243,621		0.0000	1.0000	100.00
21.5	1,243,621		0.0000	1.0000	100.00
22.5	1,243,621		0.0000	1.0000	100.00
23.5	1,243,621		0.0000	1.0000	100.00
24.5	1,243,621		0.0000	1.0000	100.00
25.5	1,243,621		0.0000	1.0000	100.00
26.5	1,243,621		0.0000	1.0000	100.00
27.5	1,243,621		0.0000	1.0000	100.00
28.5	1,243,621		0.0000	1.0000	100.00
29.5	1,243,621		0.0000	1.0000	100.00
30.5	1,243,621		0.0000	1.0000	100.00
31.5	1,114,227		0.0000	1.0000	100.00
32.5	1,111,707		0.0000	1.0000	100.00
33.5	992,098	2,230	0.0022	0.9978	100.00
34.5	982,733		0.0000	1.0000	99.78
35.5	982,733		0.0000	1.0000	99.78
36.5	980,174		0.0000	1.0000	99.78
37.5	980,174		0.0000	1.0000	99.78
38.5	959,485		0.0000	1.0000	99.78

MANITOBA HYDRO

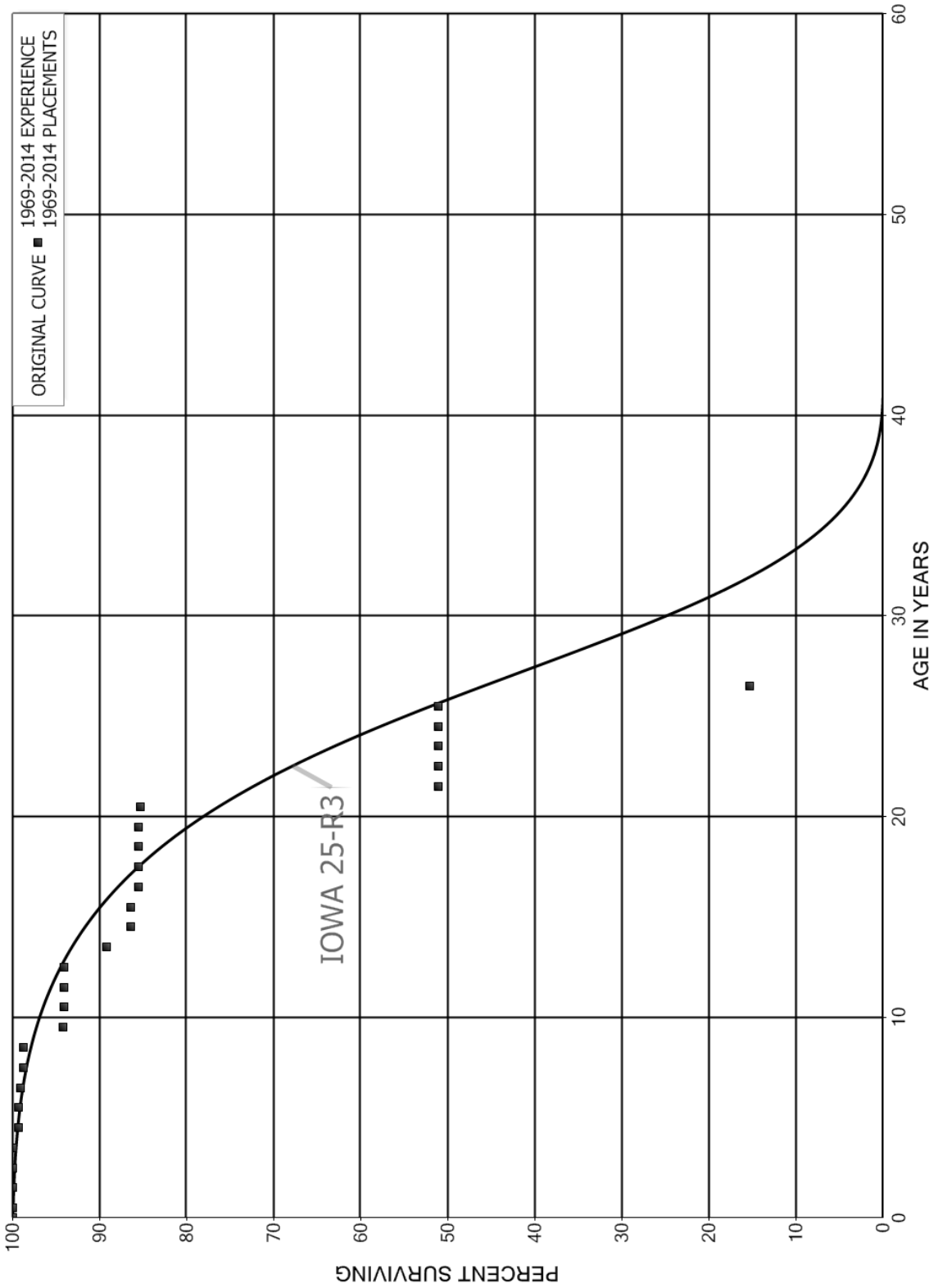
ACCOUNT 1200X - SUPPORT BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2013 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	959,485		0.0000	1.0000	99.78
40.5	959,485		0.0000	1.0000	99.78
41.5	959,485		0.0000	1.0000	99.78
42.5	874,113		0.0000	1.0000	99.78
43.5	867,886		0.0000	1.0000	99.78
44.5	867,886		0.0000	1.0000	99.78
45.5	867,886		0.0000	1.0000	99.78
46.5	867,886		0.0000	1.0000	99.78
47.5	867,886		0.0000	1.0000	99.78
48.5	867,886		0.0000	1.0000	99.78
49.5	867,886		0.0000	1.0000	99.78
50.5	867,886		0.0000	1.0000	99.78
51.5	867,886		0.0000	1.0000	99.78
52.5	867,886		0.0000	1.0000	99.78
53.5	404,614		0.0000	1.0000	99.78
54.5	404,614	44,414	0.1098	0.8902	99.78
55.5	350,393		0.0000	1.0000	88.82
56.5					88.82

MANITOBA HYDRO
ACCOUNT 1300B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

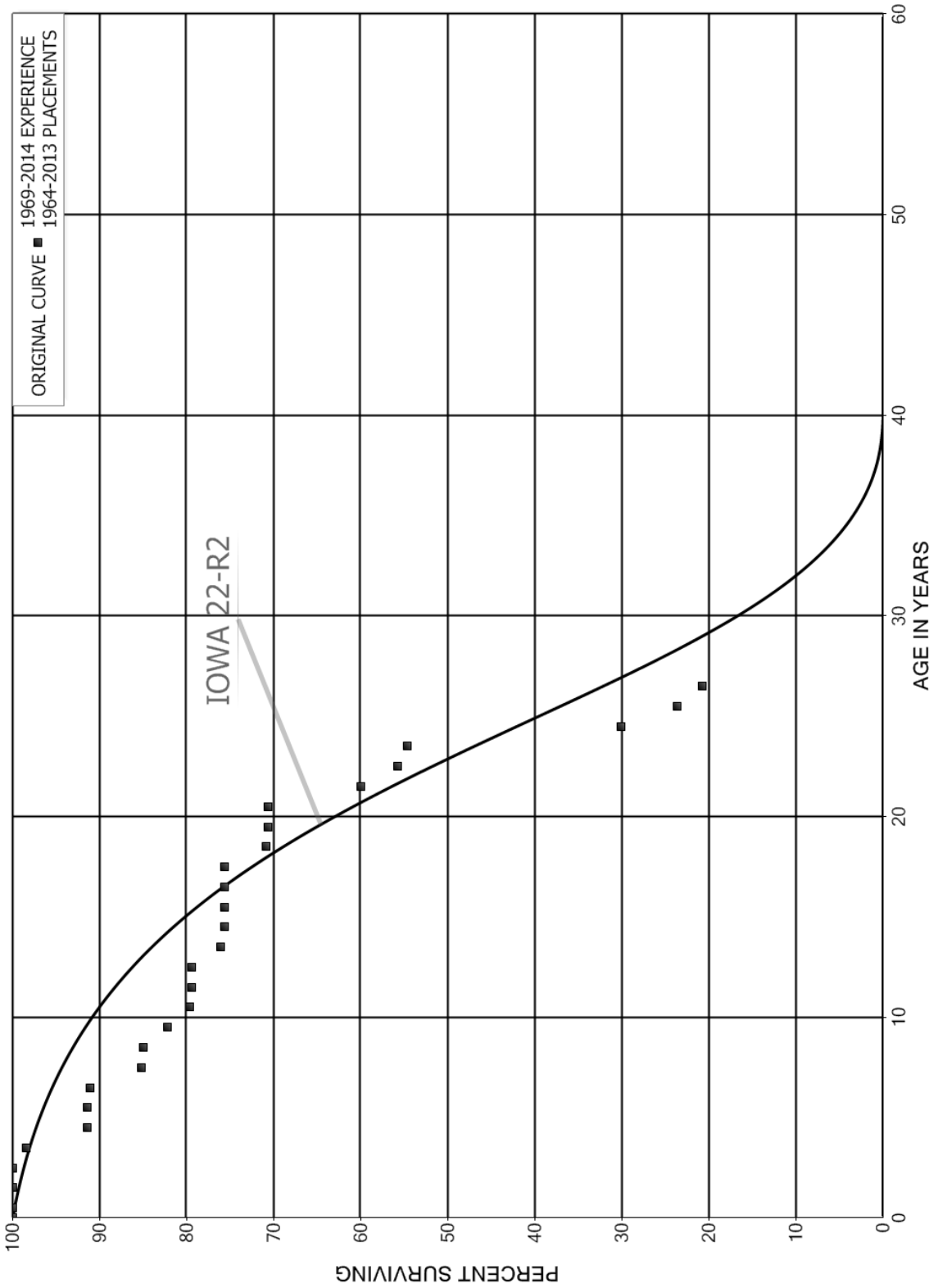
ACCOUNT 1300B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-2014 EXPERIENCE BAND 1969-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,879,370		0.0000	1.0000	100.00
0.5	9,788,906		0.0000	1.0000	100.00
1.5	9,679,621		0.0000	1.0000	100.00
2.5	9,329,698		0.0000	1.0000	100.00
3.5	8,944,996	60,586	0.0068	0.9932	100.00
4.5	8,884,410		0.0000	1.0000	99.32
5.5	8,884,410	22,809	0.0026	0.9974	99.32
6.5	8,758,907	27,966	0.0032	0.9968	99.07
7.5	8,665,793		0.0000	1.0000	98.75
8.5	8,665,793	405,204	0.0468	0.9532	98.75
9.5	8,236,296	2,480	0.0003	0.9997	94.13
10.5	6,104,808		0.0000	1.0000	94.11
11.5	6,099,498		0.0000	1.0000	94.11
12.5	6,099,498	321,916	0.0528	0.9472	94.11
13.5	5,458,073	165,048	0.0302	0.9698	89.14
14.5	2,397,932		0.0000	1.0000	86.44
15.5	2,397,932	25,439	0.0106	0.9894	86.44
16.5	1,709,118		0.0000	1.0000	85.53
17.5	136,032		0.0000	1.0000	85.53
18.5	136,032		0.0000	1.0000	85.53
19.5	136,032	359	0.0026	0.9974	85.53
20.5	128,257	51,461	0.4012	0.5988	85.30
21.5	76,796		0.0000	1.0000	51.08
22.5	76,796		0.0000	1.0000	51.08
23.5	76,796		0.0000	1.0000	51.08
24.5	76,796		0.0000	1.0000	51.08
25.5	76,796	53,817	0.7008	0.2992	51.08
26.5	22,979	22,979	1.0000		15.28
27.5					

MANITOBA HYDRO
ACCOUNT 1300N - ENGINES AND GENERATORS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

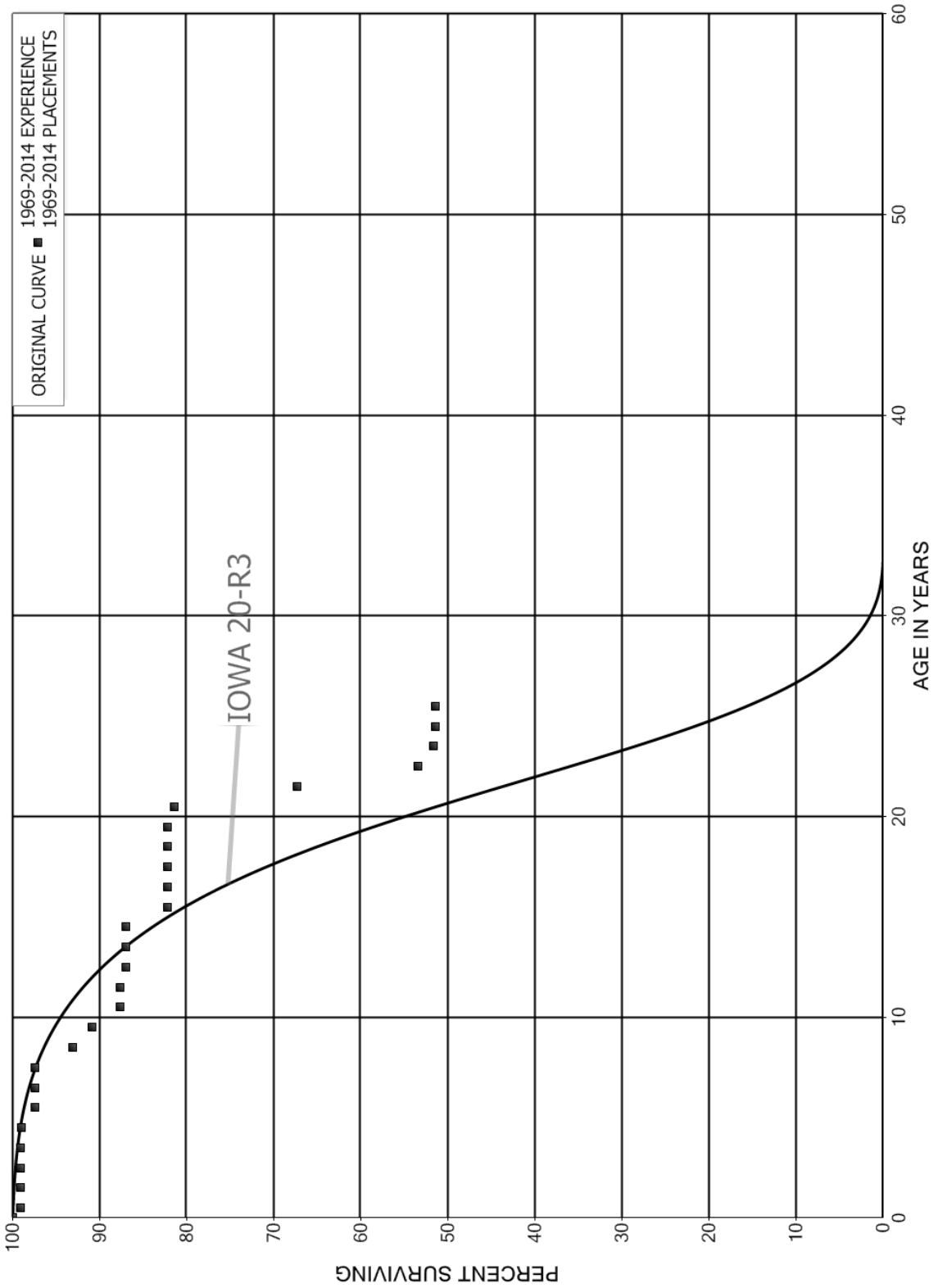
ACCOUNT 1300N - ENGINES AND GENERATORS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1964-2013 EXPERIENCE BAND 1969-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	21,604,669	877	0.0000	1.0000	100.00
0.5	22,600,163		0.0000	1.0000	100.00
1.5	22,558,705		0.0000	1.0000	100.00
2.5	22,558,705	357,976	0.0159	0.9841	100.00
3.5	22,200,729	1,584,426	0.0714	0.9286	98.41
4.5	19,491,347	4,252	0.0002	0.9998	91.39
5.5	19,133,468	59,016	0.0031	0.9969	91.37
6.5	19,074,453	1,241,979	0.0651	0.9349	91.08
7.5	17,173,612	41,828	0.0024	0.9976	85.15
8.5	15,664,277	512,047	0.0327	0.9673	84.95
9.5	14,594,892	462,498	0.0317	0.9683	82.17
10.5	8,451,713	22,006	0.0026	0.9974	79.57
11.5	8,429,708		0.0000	1.0000	79.36
12.5	8,429,708	348,353	0.0413	0.9587	79.36
13.5	7,498,647	43,232	0.0058	0.9942	76.08
14.5	5,006,474	3,810	0.0008	0.9992	75.64
15.5	4,988,279		0.0000	1.0000	75.58
16.5	4,283,589		0.0000	1.0000	75.58
17.5	1,643,231	103,147	0.0628	0.9372	75.58
18.5	1,540,084	3,961	0.0026	0.9974	70.84
19.5	1,485,123		0.0000	1.0000	70.66
20.5	1,098,786	165,764	0.1509	0.8491	70.66
21.5	918,637	64,832	0.0706	0.9294	60.00
22.5	853,805	18,325	0.0215	0.9785	55.76
23.5	739,923	332,781	0.4498	0.5502	54.57
24.5	407,142	86,932	0.2135	0.7865	30.02
25.5	320,210	38,583	0.1205	0.8795	23.61
26.5	281,627	79,786	0.2833	0.7167	20.77
27.5	201,842	57,196	0.2834	0.7166	14.88
28.5	144,646	35,224	0.2435	0.7565	10.67
29.5	109,422	37,484	0.3426	0.6574	8.07
30.5	71,938	12,230	0.1700	0.8300	5.31
31.5	59,708	20,074	0.3362	0.6638	4.40
32.5	39,634	5,041	0.1272	0.8728	2.92
33.5	34,593	16,097	0.4653	0.5347	2.55
34.5	18,497	18,497	1.0000		1.36
35.5					

MANITOBA HYDRO
ACCOUNT 1300Q - ACCESSORY STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

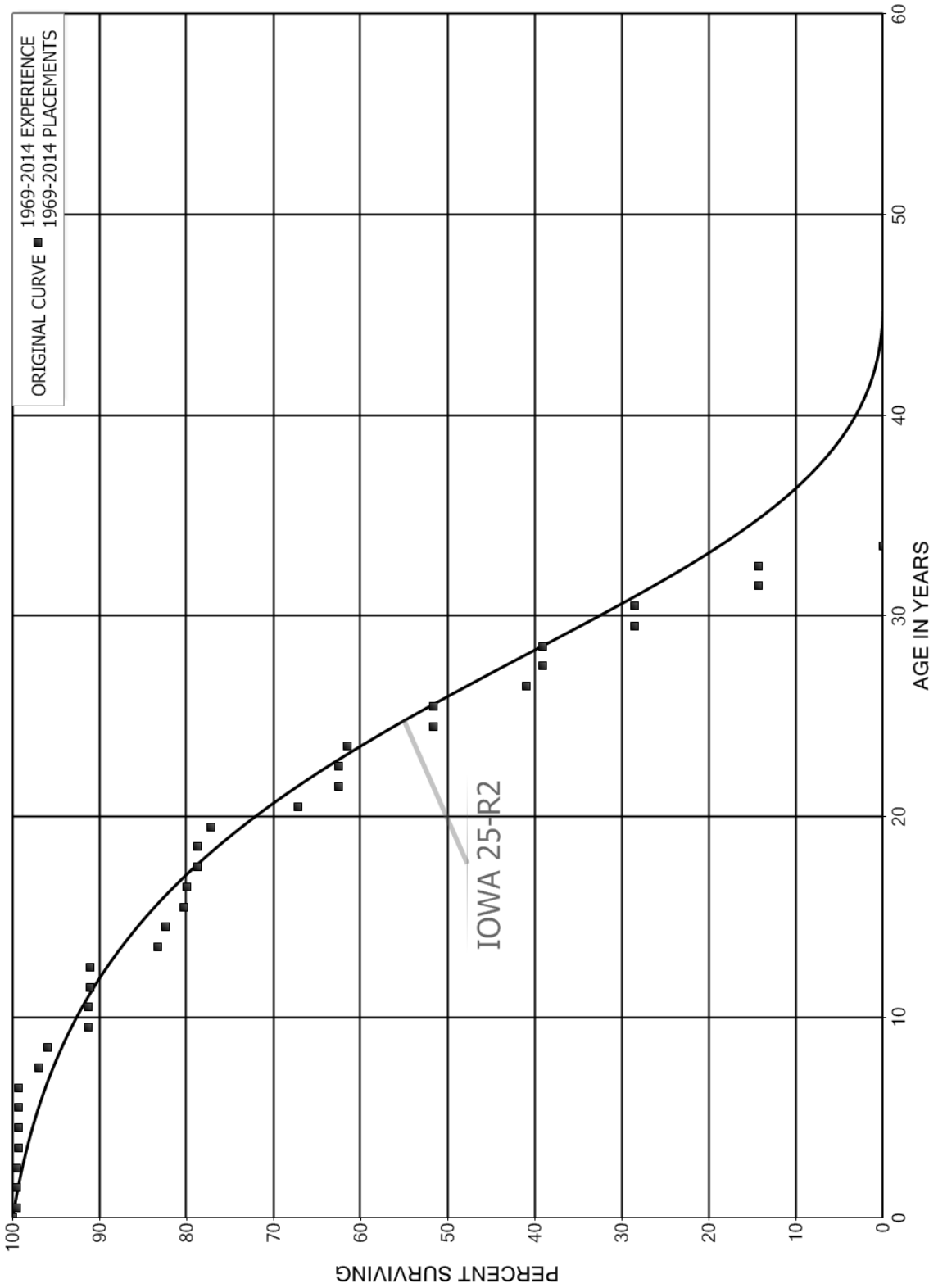
ACCOUNT 1300Q - ACCESSORY STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-2014 EXPERIENCE BAND 1969-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	22,688,082	220,998	0.0097	0.9903	100.00
0.5	22,138,805	629	0.0000	1.0000	99.03
1.5	22,086,810		0.0000	1.0000	99.02
2.5	15,986,012		0.0000	1.0000	99.02
3.5	13,361,629	16,934	0.0013	0.9987	99.02
4.5	13,180,880	207,187	0.0157	0.9843	98.90
5.5	12,899,062		0.0000	1.0000	97.34
6.5	11,239,439	116	0.0000	1.0000	97.34
7.5	11,150,018	493,353	0.0442	0.9558	97.34
8.5	10,452,585	243,218	0.0233	0.9767	93.03
9.5	10,153,974	366,421	0.0361	0.9639	90.87
10.5	7,844,810	1,720	0.0002	0.9998	87.59
11.5	7,815,380	53,632	0.0069	0.9931	87.57
12.5	7,105,337		0.0000	1.0000	86.97
13.5	6,155,872	3,828	0.0006	0.9994	86.97
14.5	4,230,393	229,472	0.0542	0.9458	86.92
15.5	4,000,920		0.0000	1.0000	82.20
16.5	3,198,071		0.0000	1.0000	82.20
17.5	1,052,118		0.0000	1.0000	82.20
18.5	1,052,118		0.0000	1.0000	82.20
19.5	1,052,118	9,808	0.0093	0.9907	82.20
20.5	261,642	45,460	0.1737	0.8263	81.44
21.5	216,182	44,556	0.2061	0.7939	67.29
22.5	171,625	5,924	0.0345	0.9655	53.42
23.5	163,871	736	0.0045	0.9955	51.57
24.5	163,134		0.0000	1.0000	51.34
25.5	163,134	20,443	0.1253	0.8747	51.34
26.5	142,691	9,734	0.0682	0.9318	44.91
27.5	132,957	132,900	0.9996	0.0004	41.85
28.5	57		0.0000	1.0000	0.02
29.5	57		0.0000	1.0000	0.02
30.5	57	57	1.0000		0.02
31.5					

MANITOBA HYDRO
ACCOUNT 1300T - FUEL STORAGE AND HANDLING
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

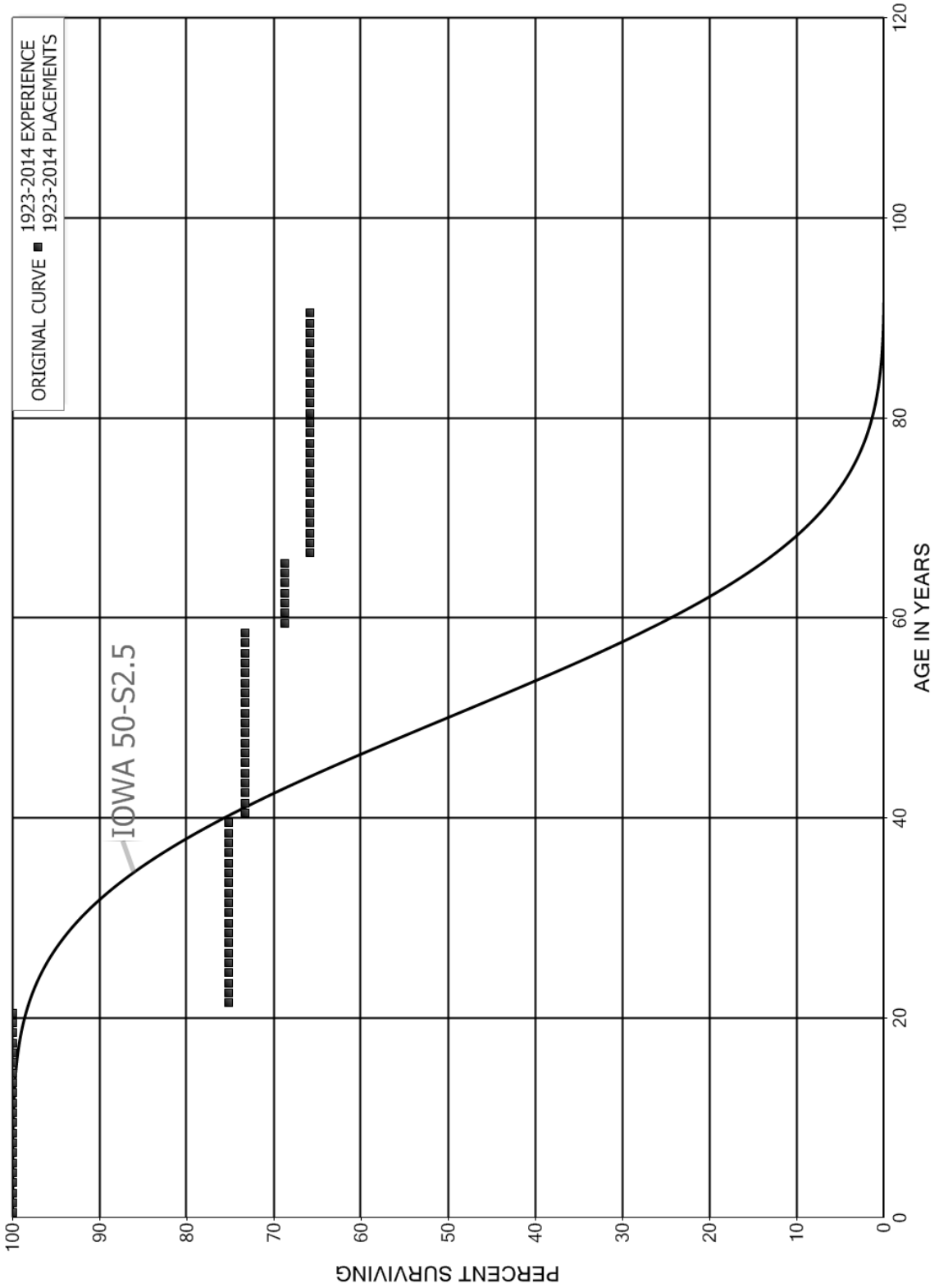
ACCOUNT 1300T - FUEL STORAGE AND HANDLING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1969-2014 EXPERIENCE BAND 1969-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	6,445,863	31,628	0.0049	0.9951	100.00
0.5	6,105,312		0.0000	1.0000	99.51
1.5	6,105,312		0.0000	1.0000	99.51
2.5	6,198,641	11,219	0.0018	0.9982	99.51
3.5	6,187,422		0.0000	1.0000	99.33
4.5	6,084,638		0.0000	1.0000	99.33
5.5	6,107,630		0.0000	1.0000	99.33
6.5	6,119,062	145,254	0.0237	0.9763	99.33
7.5	5,973,808	60,326	0.0101	0.9899	96.97
8.5	5,615,473	274,808	0.0489	0.9511	95.99
9.5	5,410,917	695	0.0001	0.9999	91.29
10.5	2,880,662	6,211	0.0022	0.9978	91.28
11.5	2,874,451		0.0000	1.0000	91.09
12.5	2,659,947	228,240	0.0858	0.9142	91.09
13.5	2,115,055	23,290	0.0110	0.9890	83.27
14.5	1,526,375	38,850	0.0255	0.9745	82.35
15.5	1,487,525	5,325	0.0036	0.9964	80.26
16.5	1,472,238	22,931	0.0156	0.9844	79.97
17.5	487,615	229	0.0005	0.9995	78.72
18.5	300,546	5,834	0.0194	0.9806	78.69
19.5	294,712	38,173	0.1295	0.8705	77.16
20.5	221,835	15,393	0.0694	0.9306	67.17
21.5	181,207		0.0000	1.0000	62.50
22.5	181,207	2,928	0.0162	0.9838	62.50
23.5	178,279	28,746	0.1612	0.8388	61.50
24.5	149,533		0.0000	1.0000	51.58
25.5	149,533	30,820	0.2061	0.7939	51.58
26.5	118,712	5,418	0.0456	0.9544	40.95
27.5	113,294		0.0000	1.0000	39.08
28.5	113,294	30,545	0.2696	0.7304	39.08
29.5	82,749		0.0000	1.0000	28.54
30.5	601	301	0.5012	0.4988	28.54
31.5	300		0.0000	1.0000	14.24
32.5	300	300	1.0000		14.24
33.5					

MANITOBA HYDRO
ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	11,145,551		0.0000	1.0000	100.00
0.5	7,631,456		0.0000	1.0000	100.00
1.5	5,738,496		0.0000	1.0000	100.00
2.5	4,212,946		0.0000	1.0000	100.00
3.5	4,212,946		0.0000	1.0000	100.00
4.5	4,212,946		0.0000	1.0000	100.00
5.5	4,212,946		0.0000	1.0000	100.00
6.5	3,761,975		0.0000	1.0000	100.00
7.5	3,525,385		0.0000	1.0000	100.00
8.5	3,505,941		0.0000	1.0000	100.00
9.5	3,505,941		0.0000	1.0000	100.00
10.5	3,505,941		0.0000	1.0000	100.00
11.5	3,487,836		0.0000	1.0000	100.00
12.5	3,450,133		0.0000	1.0000	100.00
13.5	3,287,169		0.0000	1.0000	100.00
14.5	3,050,719		0.0000	1.0000	100.00
15.5	1,703,056		0.0000	1.0000	100.00
16.5	491,868		0.0000	1.0000	100.00
17.5	491,868		0.0000	1.0000	100.00
18.5	491,868		0.0000	1.0000	100.00
19.5	491,868		0.0000	1.0000	100.00
20.5	491,868	122,342	0.2487	0.7513	100.00
21.5	240,543		0.0000	1.0000	75.13
22.5	240,543		0.0000	1.0000	75.13
23.5	240,543		0.0000	1.0000	75.13
24.5	240,543		0.0000	1.0000	75.13
25.5	219,959		0.0000	1.0000	75.13
26.5	219,959		0.0000	1.0000	75.13
27.5	219,959		0.0000	1.0000	75.13
28.5	219,959		0.0000	1.0000	75.13
29.5	219,959		0.0000	1.0000	75.13
30.5	219,959		0.0000	1.0000	75.13
31.5	219,959		0.0000	1.0000	75.13
32.5	219,959		0.0000	1.0000	75.13
33.5	219,959		0.0000	1.0000	75.13
34.5	219,959		0.0000	1.0000	75.13
35.5	169,463		0.0000	1.0000	75.13
36.5	169,463		0.0000	1.0000	75.13
37.5	169,463		0.0000	1.0000	75.13
38.5	169,463		0.0000	1.0000	75.13

MANITOBA HYDRO

ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	169,463	4,066	0.0240	0.9760	75.13
40.5	165,397		0.0000	1.0000	73.32
41.5	158,625		0.0000	1.0000	73.32
42.5	158,625		0.0000	1.0000	73.32
43.5	158,625		0.0000	1.0000	73.32
44.5	158,625		0.0000	1.0000	73.32
45.5	149,818		0.0000	1.0000	73.32
46.5	149,818		0.0000	1.0000	73.32
47.5	149,818		0.0000	1.0000	73.32
48.5	69,251		0.0000	1.0000	73.32
49.5	69,251		0.0000	1.0000	73.32
50.5	69,251		0.0000	1.0000	73.32
51.5	31,079		0.0000	1.0000	73.32
52.5	31,079		0.0000	1.0000	73.32
53.5	31,079		0.0000	1.0000	73.32
54.5	31,079		0.0000	1.0000	73.32
55.5	31,079		0.0000	1.0000	73.32
56.5	31,079		0.0000	1.0000	73.32
57.5	31,079		0.0000	1.0000	73.32
58.5	31,079	1,948	0.0627	0.9373	73.32
59.5	29,132		0.0000	1.0000	68.73
60.5	29,132		0.0000	1.0000	68.73
61.5	29,132		0.0000	1.0000	68.73
62.5	29,132		0.0000	1.0000	68.73
63.5	29,132		0.0000	1.0000	68.73
64.5	29,132		0.0000	1.0000	68.73
65.5	16,509	700	0.0424	0.9576	68.73
66.5	15,809		0.0000	1.0000	65.81
67.5	15,809		0.0000	1.0000	65.81
68.5	15,809		0.0000	1.0000	65.81
69.5	15,809		0.0000	1.0000	65.81
70.5	15,809		0.0000	1.0000	65.81
71.5	15,809		0.0000	1.0000	65.81
72.5	15,809		0.0000	1.0000	65.81
73.5	15,809		0.0000	1.0000	65.81
74.5	15,809		0.0000	1.0000	65.81
75.5	15,809		0.0000	1.0000	65.81
76.5	15,809		0.0000	1.0000	65.81
77.5	15,809		0.0000	1.0000	65.81
78.5	15,809		0.0000	1.0000	65.81

MANITOBA HYDRO

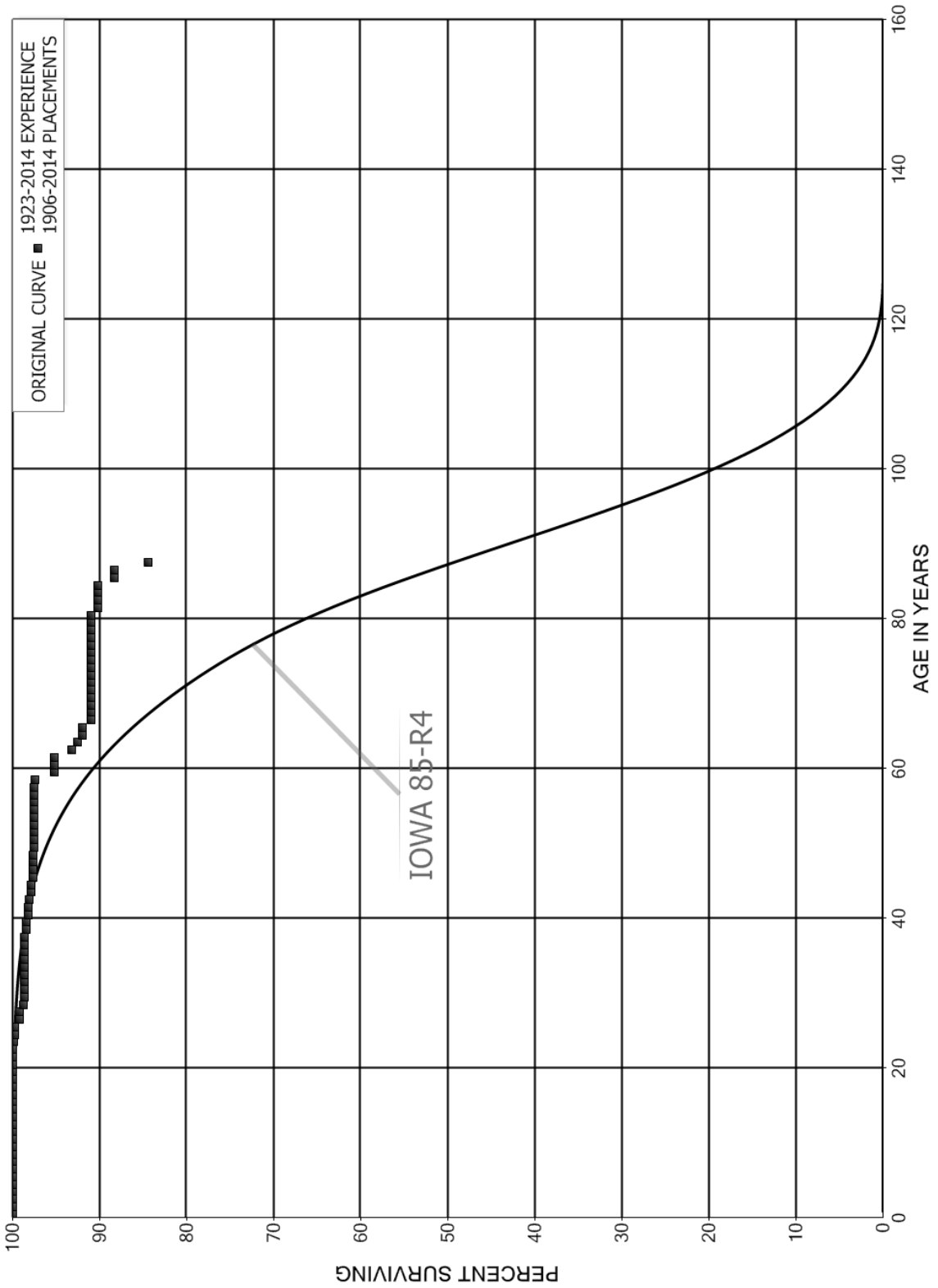
ACCOUNT 2000F - ROADS, TRAILS AND BRIDGES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	15,809		0.0000	1.0000	65.81
80.5	15,809		0.0000	1.0000	65.81
81.5	15,809		0.0000	1.0000	65.81
82.5	15,809		0.0000	1.0000	65.81
83.5	15,809		0.0000	1.0000	65.81
84.5	4,982		0.0000	1.0000	65.81
85.5	4,982		0.0000	1.0000	65.81
86.5	4,982		0.0000	1.0000	65.81
87.5	4,982		0.0000	1.0000	65.81
88.5	4,982		0.0000	1.0000	65.81
89.5	4,982		0.0000	1.0000	65.81
90.5	4,982		0.0000	1.0000	65.81
91.5					65.81

MANITOBA HYDRO
ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1906-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	593,611,896	23,995	0.0000	1.0000	100.00
0.5	586,816,341	12,558	0.0000	1.0000	100.00
1.5	467,580,715		0.0000	1.0000	99.99
2.5	425,909,975		0.0000	1.0000	99.99
3.5	420,170,825	86	0.0000	1.0000	99.99
4.5	418,065,648		0.0000	1.0000	99.99
5.5	416,956,011	3,977	0.0000	1.0000	99.99
6.5	412,852,948	1,784	0.0000	1.0000	99.99
7.5	407,444,867		0.0000	1.0000	99.99
8.5	404,313,630	7,135	0.0000	1.0000	99.99
9.5	403,164,951	3,176	0.0000	1.0000	99.99
10.5	322,445,207		0.0000	1.0000	99.99
11.5	312,543,541		0.0000	1.0000	99.99
12.5	309,085,397	7,526	0.0000	1.0000	99.99
13.5	287,697,117		0.0000	1.0000	99.99
14.5	284,446,518		0.0000	1.0000	99.99
15.5	255,330,450	573	0.0000	1.0000	99.99
16.5	214,318,276	39,402	0.0002	0.9998	99.99
17.5	194,699,921		0.0000	1.0000	99.97
18.5	193,960,145		0.0000	1.0000	99.97
19.5	189,749,031	71,732	0.0004	0.9996	99.97
20.5	188,679,741	355	0.0000	1.0000	99.93
21.5	188,141,210		0.0000	1.0000	99.93
22.5	184,119,394	241,121	0.0013	0.9987	99.93
23.5	182,425,035	68,000	0.0004	0.9996	99.80
24.5	179,866,116	2,000	0.0000	1.0000	99.76
25.5	159,398,691	977,766	0.0061	0.9939	99.76
26.5	158,030,334	2,392	0.0000	1.0000	99.15
27.5	157,702,848	749,602	0.0048	0.9952	99.15
28.5	156,647,190	91,411	0.0006	0.9994	98.68
29.5	140,900,324	25,130	0.0002	0.9998	98.62
30.5	140,112,450		0.0000	1.0000	98.60
31.5	140,112,450	2,483	0.0000	1.0000	98.60
32.5	133,377,860	3,561	0.0000	1.0000	98.60
33.5	133,149,375	6,697	0.0001	0.9999	98.60
34.5	123,717,169		0.0000	1.0000	98.59
35.5	122,769,647	20,423	0.0002	0.9998	98.59
36.5	119,607,084		0.0000	1.0000	98.58
37.5	115,469,581	217,174	0.0019	0.9981	98.58
38.5	113,911,017	46,170	0.0004	0.9996	98.39

MANITOBA HYDRO

ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1906-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	113,017,700	153,575	0.0014	0.9986	98.35
40.5	110,099,420	74,318	0.0007	0.9993	98.22
41.5	108,046,090	50,557	0.0005	0.9995	98.15
42.5	103,095,012	292,773	0.0028	0.9972	98.10
43.5	24,399,313	11,480	0.0005	0.9995	97.83
44.5	22,842,400	34,797	0.0015	0.9985	97.78
45.5	18,889,297	616	0.0000	1.0000	97.63
46.5	16,057,343		0.0000	1.0000	97.63
47.5	9,212,721	5,375	0.0006	0.9994	97.63
48.5	9,067,201	4,044	0.0004	0.9996	97.57
49.5	7,712,334	2,190	0.0003	0.9997	97.53
50.5	7,687,167		0.0000	1.0000	97.50
51.5	7,553,814		0.0000	1.0000	97.50
52.5	5,600,684		0.0000	1.0000	97.50
53.5	5,466,123	1,064	0.0002	0.9998	97.50
54.5	5,450,848		0.0000	1.0000	97.48
55.5	5,225,008		0.0000	1.0000	97.48
56.5	5,131,345	73	0.0000	1.0000	97.48
57.5	5,131,272	1,626	0.0003	0.9997	97.48
58.5	4,205,202	96,590	0.0230	0.9770	97.45
59.5	4,106,412		0.0000	1.0000	95.21
60.5	4,106,071	2,410	0.0006	0.9994	95.21
61.5	4,091,415	83,486	0.0204	0.9796	95.15
62.5	3,253,375	23,169	0.0071	0.9929	93.21
63.5	3,230,206	22,092	0.0068	0.9932	92.55
64.5	2,782,406		0.0000	1.0000	91.92
65.5	2,407,991	25,079	0.0104	0.9896	91.92
66.5	2,381,465		0.0000	1.0000	90.96
67.5	2,381,465		0.0000	1.0000	90.96
68.5	2,380,536		0.0000	1.0000	90.96
69.5	2,380,536		0.0000	1.0000	90.96
70.5	2,380,536		0.0000	1.0000	90.96
71.5	2,380,536		0.0000	1.0000	90.96
72.5	2,380,536		0.0000	1.0000	90.96
73.5	2,380,536		0.0000	1.0000	90.96
74.5	2,380,536		0.0000	1.0000	90.96
75.5	2,380,424		0.0000	1.0000	90.96
76.5	2,380,424		0.0000	1.0000	90.96
77.5	2,380,424		0.0000	1.0000	90.96
78.5	2,380,424		0.0000	1.0000	90.96

MANITOBA HYDRO

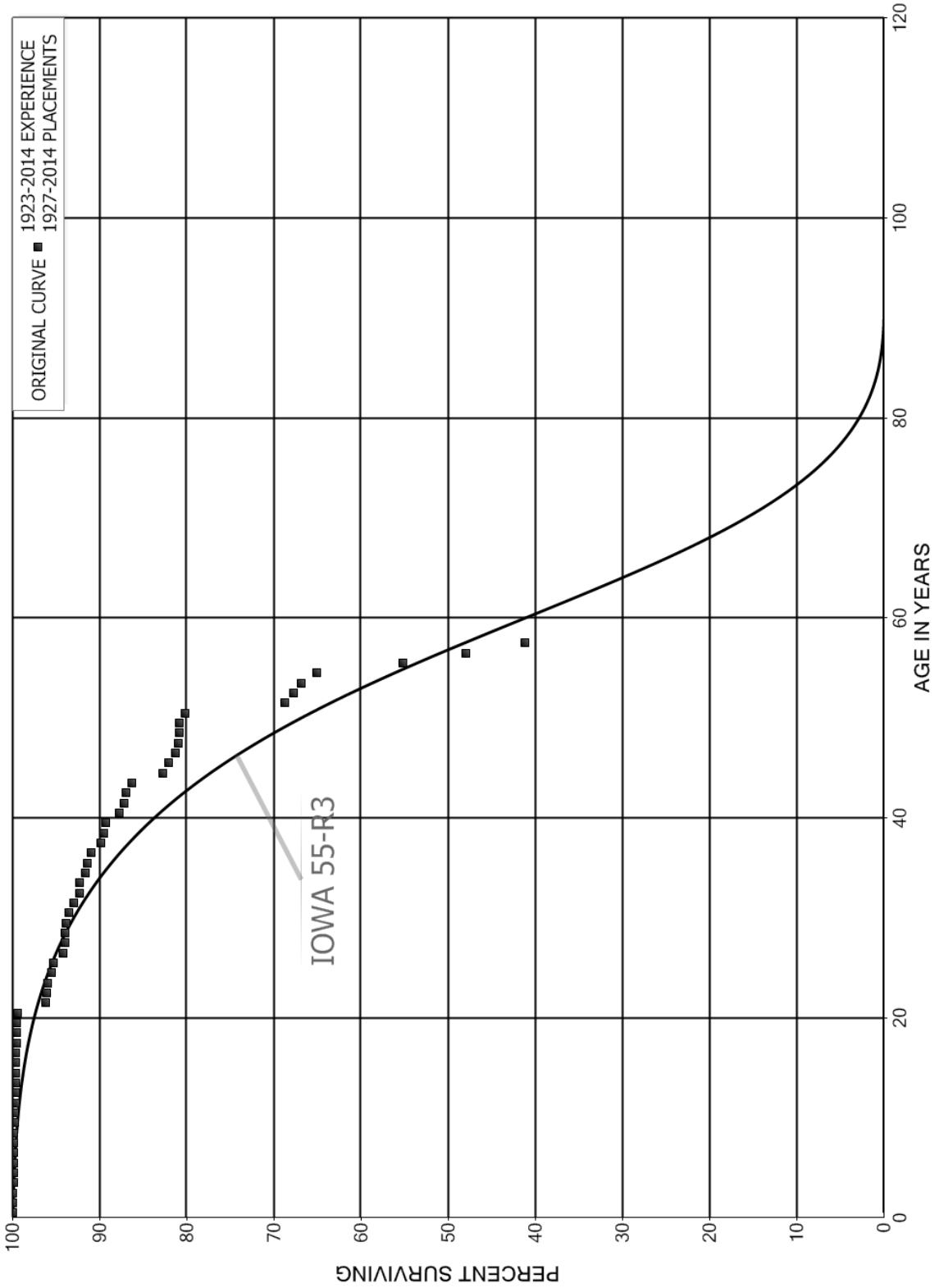
ACCOUNT 2000G - METAL TOWERS AND CONCRETE POLES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1906-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,380,424		0.0000	1.0000	90.96
80.5	2,380,424	21,287	0.0089	0.9911	90.96
81.5	2,359,137		0.0000	1.0000	90.15
82.5	2,359,137		0.0000	1.0000	90.15
83.5	1,359,137		0.0000	1.0000	90.15
84.5	861,166	17,508	0.0203	0.9797	90.15
85.5	843,658		0.0000	1.0000	88.31
86.5	789,782	35,033	0.0444	0.9556	88.31
87.5	185,908		0.0000	1.0000	84.40
88.5	67,433		0.0000	1.0000	84.40
89.5	67,433		0.0000	1.0000	84.40
90.5	67,433		0.0000	1.0000	84.40
91.5					84.40

MANITOBA HYDRO
ACCOUNT 2000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1927-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	125,313,970	49,377	0.0004	0.9996	100.00
0.5	120,798,150	1,258	0.0000	1.0000	99.96
1.5	115,986,878	3,401	0.0000	1.0000	99.96
2.5	111,953,125	108,386	0.0010	0.9990	99.96
3.5	109,201,343	11,791	0.0001	0.9999	99.86
4.5	104,357,180	2,571	0.0000	1.0000	99.85
5.5	103,175,009	16,460	0.0002	0.9998	99.85
6.5	98,326,787	11,499	0.0001	0.9999	99.83
7.5	88,166,485	19,585	0.0002	0.9998	99.82
8.5	86,111,569	64,424	0.0007	0.9993	99.80
9.5	83,726,722	3,696	0.0000	1.0000	99.72
10.5	82,624,942	42,292	0.0005	0.9995	99.72
11.5	74,668,134	7,229	0.0001	0.9999	99.67
12.5	71,661,566	4,787	0.0001	0.9999	99.66
13.5	69,069,839	10,095	0.0001	0.9999	99.65
14.5	68,597,592	27,551	0.0004	0.9996	99.64
15.5	66,058,251	21,730	0.0003	0.9997	99.60
16.5	57,905,724	10,826	0.0002	0.9998	99.56
17.5	51,199,806	1,223	0.0000	1.0000	99.54
18.5	51,009,892	7,406	0.0001	0.9999	99.54
19.5	46,996,414	48,916	0.0010	0.9990	99.53
20.5	46,357,561	1,509,552	0.0326	0.9674	99.42
21.5	40,842,357	61,424	0.0015	0.9985	96.19
22.5	34,667,587	23,118	0.0007	0.9993	96.04
23.5	33,036,661	174,465	0.0053	0.9947	95.98
24.5	27,229,409	44,857	0.0016	0.9984	95.47
25.5	26,851,001	312,789	0.0116	0.9884	95.31
26.5	26,047,038	53,998	0.0021	0.9979	94.20
27.5	25,923,638	29,849	0.0012	0.9988	94.01
28.5	25,877,760	29,935	0.0012	0.9988	93.90
29.5	22,471,548	75,020	0.0033	0.9967	93.79
30.5	22,269,709	114,849	0.0052	0.9948	93.48
31.5	22,085,637	158,313	0.0072	0.9928	93.00
32.5	20,332,793	21,207	0.0010	0.9990	92.33
33.5	20,189,340	138,375	0.0069	0.9931	92.23
34.5	16,551,849	32,787	0.0020	0.9980	91.60
35.5	16,454,636	75,922	0.0046	0.9954	91.42
36.5	13,974,811	182,881	0.0131	0.9869	91.00
37.5	13,745,681	43,764	0.0032	0.9968	89.81
38.5	11,688,301	33,489	0.0029	0.9971	89.52

MANITOBA HYDRO

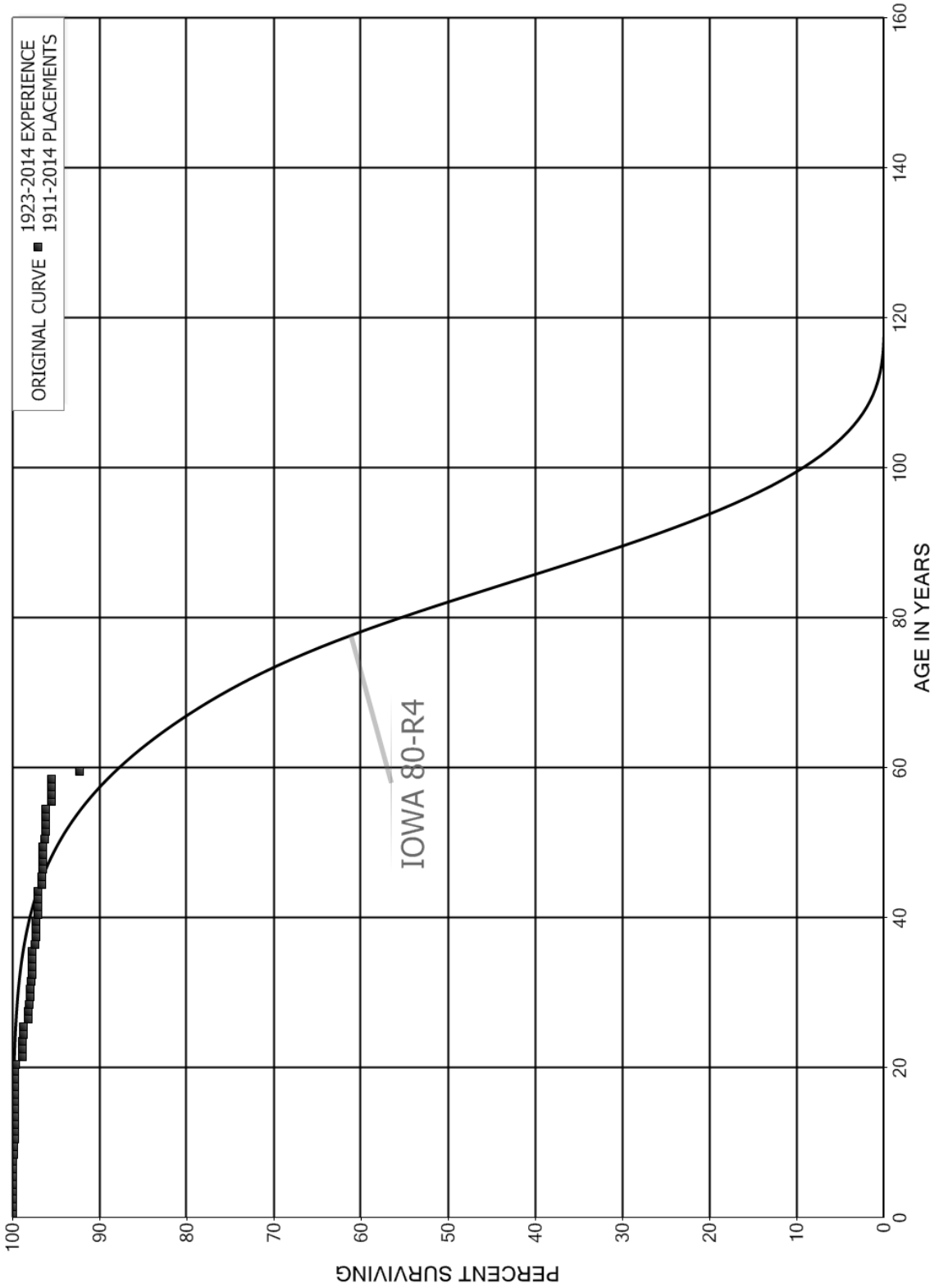
ACCOUNT 2000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1927-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	8,943,726	150,421	0.0168	0.9832	89.26
40.5	8,419,285	57,195	0.0068	0.9932	87.76
41.5	7,807,044	18,931	0.0024	0.9976	87.17
42.5	5,983,481	44,930	0.0075	0.9925	86.96
43.5	4,025,676	167,527	0.0416	0.9584	86.30
44.5	3,457,489	27,873	0.0081	0.9919	82.71
45.5	2,993,824	26,582	0.0089	0.9911	82.04
46.5	2,687,456	14,007	0.0052	0.9948	81.32
47.5	1,872,256	887	0.0005	0.9995	80.89
48.5	1,380,741	137	0.0001	0.9999	80.85
49.5	1,375,536	10,497	0.0076	0.9924	80.85
50.5	1,364,889	195,372	0.1431	0.8569	80.23
51.5	1,085,845	16,769	0.0154	0.9846	68.74
52.5	1,063,204	12,597	0.0118	0.9882	67.68
53.5	665,414	18,203	0.0274	0.9726	66.88
54.5	645,609	98,363	0.1524	0.8476	65.05
55.5	534,083	69,635	0.1304	0.8696	55.14
56.5	464,448	65,545	0.1411	0.8589	47.95
57.5	373,667	17,120	0.0458	0.9542	41.18
58.5	276,905	112,396	0.4059	0.5941	39.30
59.5	141,810	121,810	0.8590	0.1410	23.35
60.5	10,088	7,235	0.7171	0.2829	3.29
61.5	2,854		0.0000	1.0000	0.93
62.5	2,854		0.0000	1.0000	0.93
63.5	1,851		0.0000	1.0000	0.93
64.5					0.93

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	415,624,859	72,330	0.0002	0.9998	100.00
0.5	411,041,555	6,953	0.0000	1.0000	99.98
1.5	380,365,116	20,103	0.0001	0.9999	99.98
2.5	366,616,331	81,309	0.0002	0.9998	99.98
3.5	362,905,083	6,533	0.0000	1.0000	99.95
4.5	360,578,701	800	0.0000	1.0000	99.95
5.5	359,379,148	14,647	0.0000	1.0000	99.95
6.5	355,029,078	157,634	0.0004	0.9996	99.95
7.5	338,554,785	172,165	0.0005	0.9995	99.90
8.5	335,337,586	240,108	0.0007	0.9993	99.85
9.5	328,807,871	13,645	0.0000	1.0000	99.78
10.5	268,436,986	10,661	0.0000	1.0000	99.78
11.5	255,041,838	9,064	0.0000	1.0000	99.77
12.5	241,172,545	95,935	0.0004	0.9996	99.77
13.5	229,602,628	10,812	0.0000	1.0000	99.73
14.5	225,878,841	11,385	0.0001	0.9999	99.72
15.5	209,288,598	25,187	0.0001	0.9999	99.72
16.5	194,062,163	10,501	0.0001	0.9999	99.71
17.5	175,391,479	517	0.0000	1.0000	99.70
18.5	174,945,104	38,713	0.0002	0.9998	99.70
19.5	170,536,896	17,720	0.0001	0.9999	99.68
20.5	168,650,497	1,428,380	0.0085	0.9915	99.67
21.5	164,759,554	23,915	0.0001	0.9999	98.83
22.5	160,353,019	38,117	0.0002	0.9998	98.81
23.5	157,700,122	13,678	0.0001	0.9999	98.79
24.5	148,291,313	964	0.0000	1.0000	98.78
25.5	141,768,824	842,693	0.0059	0.9941	98.78
26.5	140,504,182	98,553	0.0007	0.9993	98.19
27.5	140,392,598	97,784	0.0007	0.9993	98.12
28.5	140,275,007	78,173	0.0006	0.9994	98.05
29.5	118,095,090	27,968	0.0002	0.9998	98.00
30.5	117,704,882	198,549	0.0017	0.9983	97.98
31.5	117,421,486	54,270	0.0005	0.9995	97.81
32.5	112,945,532	4,282	0.0000	1.0000	97.77
33.5	112,504,630	53,355	0.0005	0.9995	97.76
34.5	105,661,680	33,318	0.0003	0.9997	97.72
35.5	105,083,022	331,062	0.0032	0.9968	97.68
36.5	102,117,640	59,358	0.0006	0.9994	97.38
37.5	96,818,411	53,918	0.0006	0.9994	97.32
38.5	93,730,765	983	0.0000	1.0000	97.27

MANITOBA HYDRO

ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	90,175,621	191,288	0.0021	0.9979	97.27
40.5	86,780,381	43	0.0000	1.0000	97.06
41.5	84,918,577	6,522	0.0001	0.9999	97.06
42.5	81,359,848	22,796	0.0003	0.9997	97.05
43.5	26,615,629	124,453	0.0047	0.9953	97.02
44.5	25,316,693	2,272	0.0001	0.9999	96.57
45.5	23,458,859	1,925	0.0001	0.9999	96.56
46.5	22,707,290		0.0000	1.0000	96.55
47.5	12,223,732		0.0000	1.0000	96.55
48.5	11,646,229	1,242	0.0001	0.9999	96.55
49.5	10,319,114	27,091	0.0026	0.9974	96.54
50.5	10,215,260	9,937	0.0010	0.9990	96.29
51.5	10,027,163	4,889	0.0005	0.9995	96.20
52.5	7,819,565		0.0000	1.0000	96.15
53.5	6,552,523		0.0000	1.0000	96.15
54.5	6,543,418	40,592	0.0062	0.9938	96.15
55.5	6,456,895		0.0000	1.0000	95.55
56.5	6,445,337	235	0.0000	1.0000	95.55
57.5	6,200,956	103	0.0000	1.0000	95.55
58.5	5,183,390	179,798	0.0347	0.9653	95.55
59.5	4,789,385		0.0000	1.0000	92.23
60.5	4,789,385	67	0.0000	1.0000	92.23
61.5	4,607,933	51,893	0.0113	0.9887	92.23
62.5	3,932,284	14,732	0.0037	0.9963	91.19
63.5	3,506,449	42,961	0.0123	0.9877	90.85
64.5	2,951,247		0.0000	1.0000	89.74
65.5	2,532,878	18,277	0.0072	0.9928	89.74
66.5	2,514,005	6,865	0.0027	0.9973	89.09
67.5	2,507,140		0.0000	1.0000	88.85
68.5	2,506,086		0.0000	1.0000	88.85
69.5	2,506,086		0.0000	1.0000	88.85
70.5	2,506,086		0.0000	1.0000	88.85
71.5	2,506,086		0.0000	1.0000	88.85
72.5	2,506,086		0.0000	1.0000	88.85
73.5	2,506,086		0.0000	1.0000	88.85
74.5	2,506,086	15,280	0.0061	0.9939	88.85
75.5	2,490,360		0.0000	1.0000	88.31
76.5	2,490,360		0.0000	1.0000	88.31
77.5	2,490,360		0.0000	1.0000	88.31
78.5	2,490,360		0.0000	1.0000	88.31

MANITOBA HYDRO

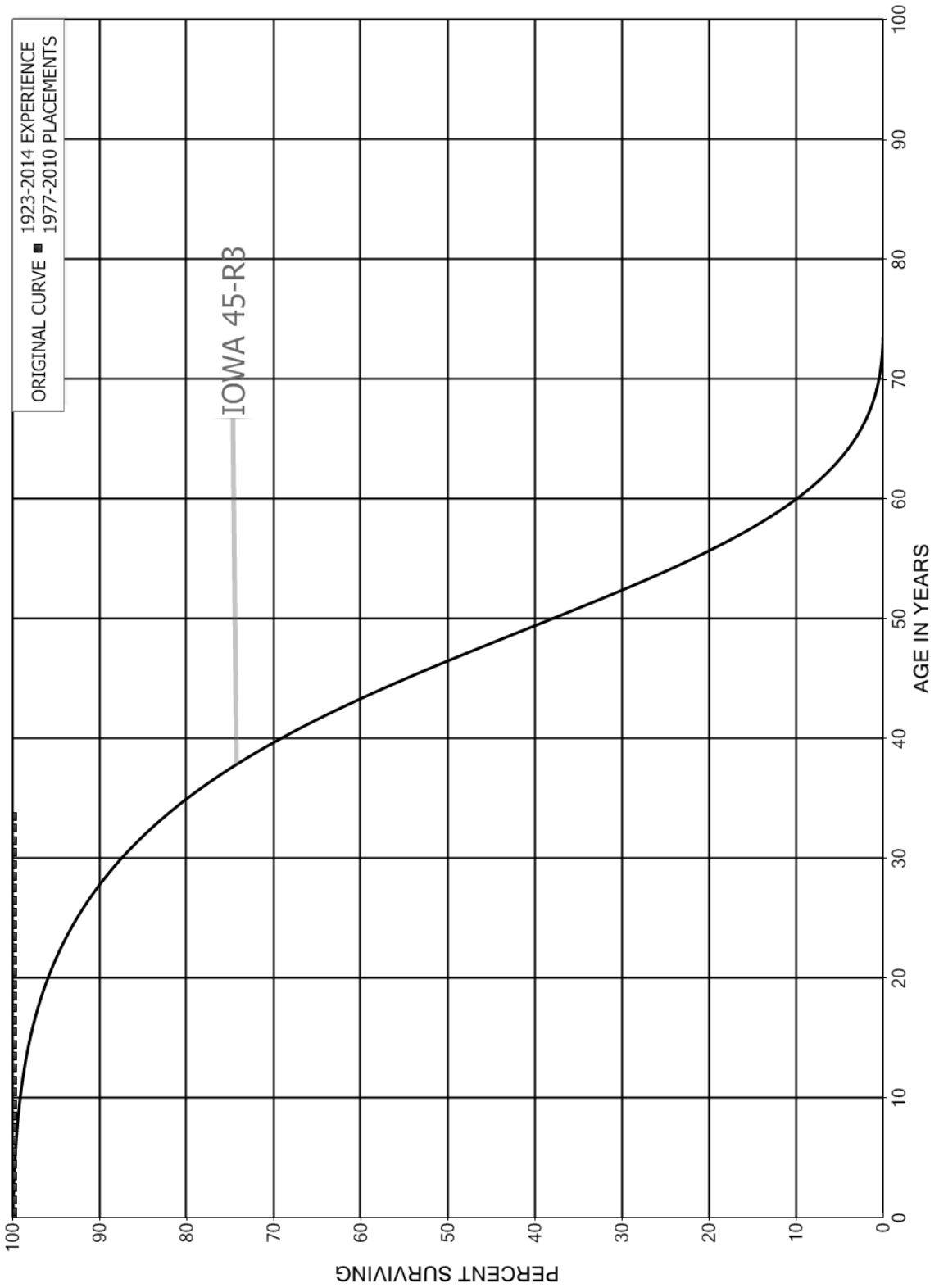
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,490,360		0.0000	1.0000	88.31
80.5	2,490,360	119	0.0000	1.0000	88.31
81.5	2,490,241		0.0000	1.0000	88.30
82.5	2,490,241		0.0000	1.0000	88.30
83.5	990,241		0.0000	1.0000	88.30
84.5	468,177		0.0000	1.0000	88.30
85.5	468,177		0.0000	1.0000	88.30
86.5	428,814		0.0000	1.0000	88.30
87.5	113,957		0.0000	1.0000	88.30
88.5	51,029	1,620	0.0317	0.9683	88.30
89.5	49,409		0.0000	1.0000	85.50
90.5	49,409		0.0000	1.0000	85.50
91.5					85.50

MANITOBA HYDRO
ACCOUNT 2000M - UNDERGROUND CABLE AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

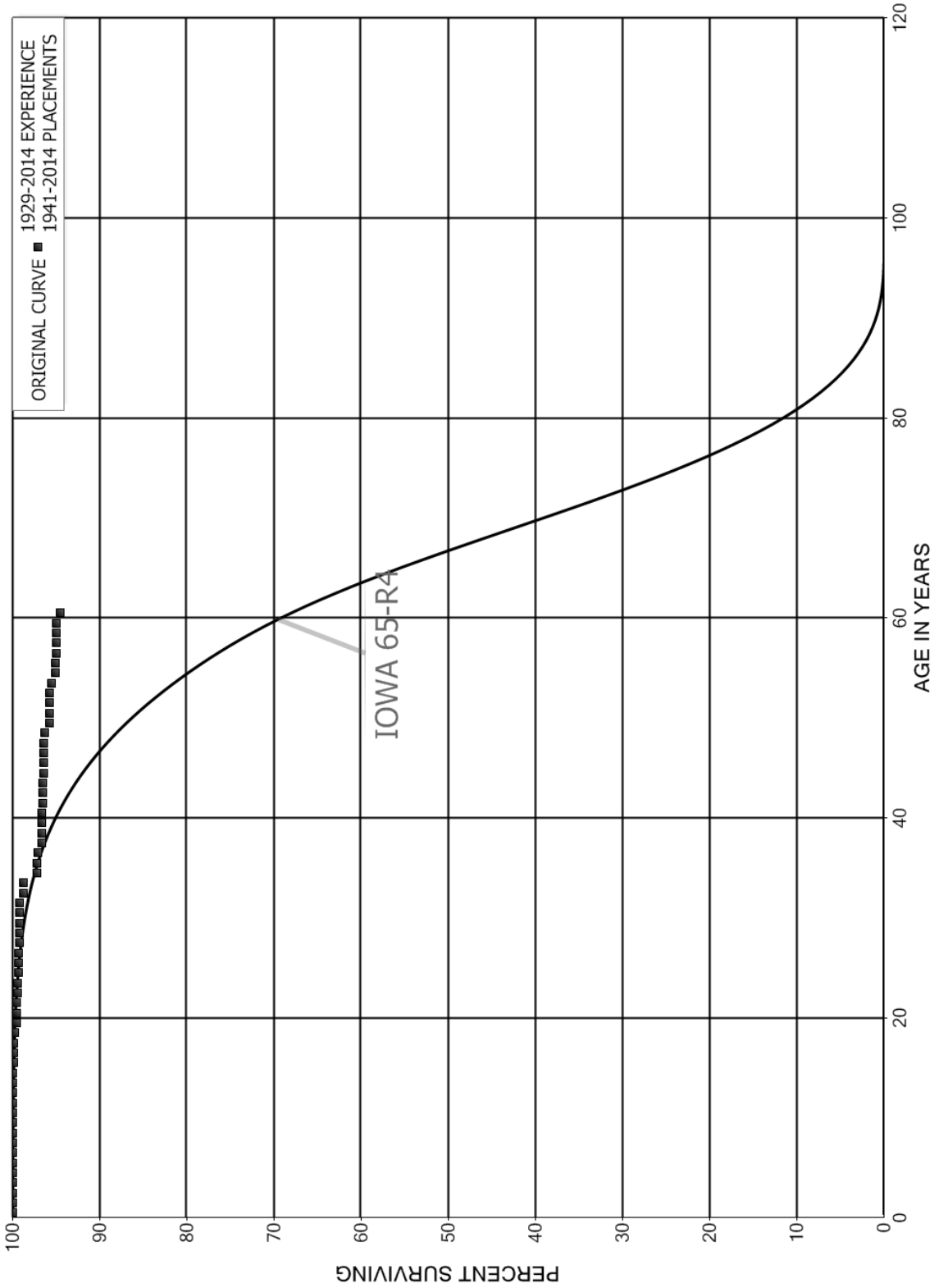
ACCOUNT 2000M - UNDERGROUND CABLE AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1977-2010 EXPERIENCE BAND 1923-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,167,855		0.0000	1.0000	100.00
0.5	1,167,763		0.0000	1.0000	100.00
1.5	1,163,975		0.0000	1.0000	100.00
2.5	1,163,975		0.0000	1.0000	100.00
3.5	1,163,975		0.0000	1.0000	100.00
4.5	1,163,975		0.0000	1.0000	100.00
5.5	1,163,975		0.0000	1.0000	100.00
6.5	1,163,975		0.0000	1.0000	100.00
7.5	1,163,975		0.0000	1.0000	100.00
8.5	1,163,975		0.0000	1.0000	100.00
9.5	987,317		0.0000	1.0000	100.00
10.5	987,317		0.0000	1.0000	100.00
11.5	987,317		0.0000	1.0000	100.00
12.5	986,702		0.0000	1.0000	100.00
13.5	960,628		0.0000	1.0000	100.00
14.5	960,628		0.0000	1.0000	100.00
15.5	960,628		0.0000	1.0000	100.00
16.5	960,628		0.0000	1.0000	100.00
17.5	960,628		0.0000	1.0000	100.00
18.5	960,628		0.0000	1.0000	100.00
19.5	960,628		0.0000	1.0000	100.00
20.5	960,628		0.0000	1.0000	100.00
21.5	960,628		0.0000	1.0000	100.00
22.5	960,628		0.0000	1.0000	100.00
23.5	960,535		0.0000	1.0000	100.00
24.5	960,535		0.0000	1.0000	100.00
25.5	960,535		0.0000	1.0000	100.00
26.5	960,535		0.0000	1.0000	100.00
27.5	960,535		0.0000	1.0000	100.00
28.5	960,535		0.0000	1.0000	100.00
29.5	954,613		0.0000	1.0000	100.00
30.5	954,613		0.0000	1.0000	100.00
31.5	954,613		0.0000	1.0000	100.00
32.5	954,613		0.0000	1.0000	100.00
33.5	414,801		0.0000	1.0000	100.00
34.5	414,801		0.0000	1.0000	100.00
35.5	414,801		0.0000	1.0000	100.00
36.5	414,801		0.0000	1.0000	100.00
37.5					100.00

MANITOBA HYDRO
ACCOUNT 3000B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1941-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	172,183,833	3,687	0.0000	1.0000	100.00
0.5	167,916,006	1,339	0.0000	1.0000	100.00
1.5	150,925,873	1,544	0.0000	1.0000	100.00
2.5	105,371,750	2,029	0.0000	1.0000	100.00
3.5	102,848,746	4,788	0.0000	1.0000	99.99
4.5	101,251,515	4,824	0.0000	1.0000	99.99
5.5	99,381,035	4,672	0.0000	1.0000	99.98
6.5	97,964,059	9,375	0.0001	0.9999	99.98
7.5	96,534,435	6,915	0.0001	0.9999	99.97
8.5	94,899,853	13,028	0.0001	0.9999	99.96
9.5	93,169,469	11,578	0.0001	0.9999	99.95
10.5	90,827,292	8,738	0.0001	0.9999	99.94
11.5	89,865,531	11,519	0.0001	0.9999	99.93
12.5	86,316,159	7,760	0.0001	0.9999	99.91
13.5	85,996,383	4,976	0.0001	0.9999	99.91
14.5	85,611,918	71,986	0.0008	0.9992	99.90
15.5	83,429,360	7,434	0.0001	0.9999	99.82
16.5	82,573,249	14,598	0.0002	0.9998	99.81
17.5	80,222,378	9,126	0.0001	0.9999	99.79
18.5	79,764,189	195,060	0.0024	0.9976	99.78
19.5	79,374,453	6,078	0.0001	0.9999	99.53
20.5	78,840,277	47,182	0.0006	0.9994	99.53
21.5	77,649,403	20,913	0.0003	0.9997	99.47
22.5	77,154,748	10,083	0.0001	0.9999	99.44
23.5	72,935,598	69,013	0.0009	0.9991	99.43
24.5	71,351,621	39,151	0.0005	0.9995	99.33
25.5	70,544,885	17,059	0.0002	0.9998	99.28
26.5	70,281,595	22,997	0.0003	0.9997	99.25
27.5	70,123,283	10,129	0.0001	0.9999	99.22
28.5	70,040,949	18,666	0.0003	0.9997	99.21
29.5	69,864,136	11,798	0.0002	0.9998	99.18
30.5	60,357,328	3,304	0.0001	0.9999	99.16
31.5	60,225,817	289,044	0.0048	0.9952	99.16
32.5	59,599,554	6,718	0.0001	0.9999	98.68
33.5	59,240,884	914,987	0.0154	0.9846	98.67
34.5	58,061,715	4,635	0.0001	0.9999	97.15
35.5	56,612,530	16,566	0.0003	0.9997	97.14
36.5	30,915,722	150,628	0.0049	0.9951	97.11
37.5	30,527,619	5,596	0.0002	0.9998	96.64
38.5	15,174,169	2,366	0.0002	0.9998	96.62

MANITOBA HYDRO

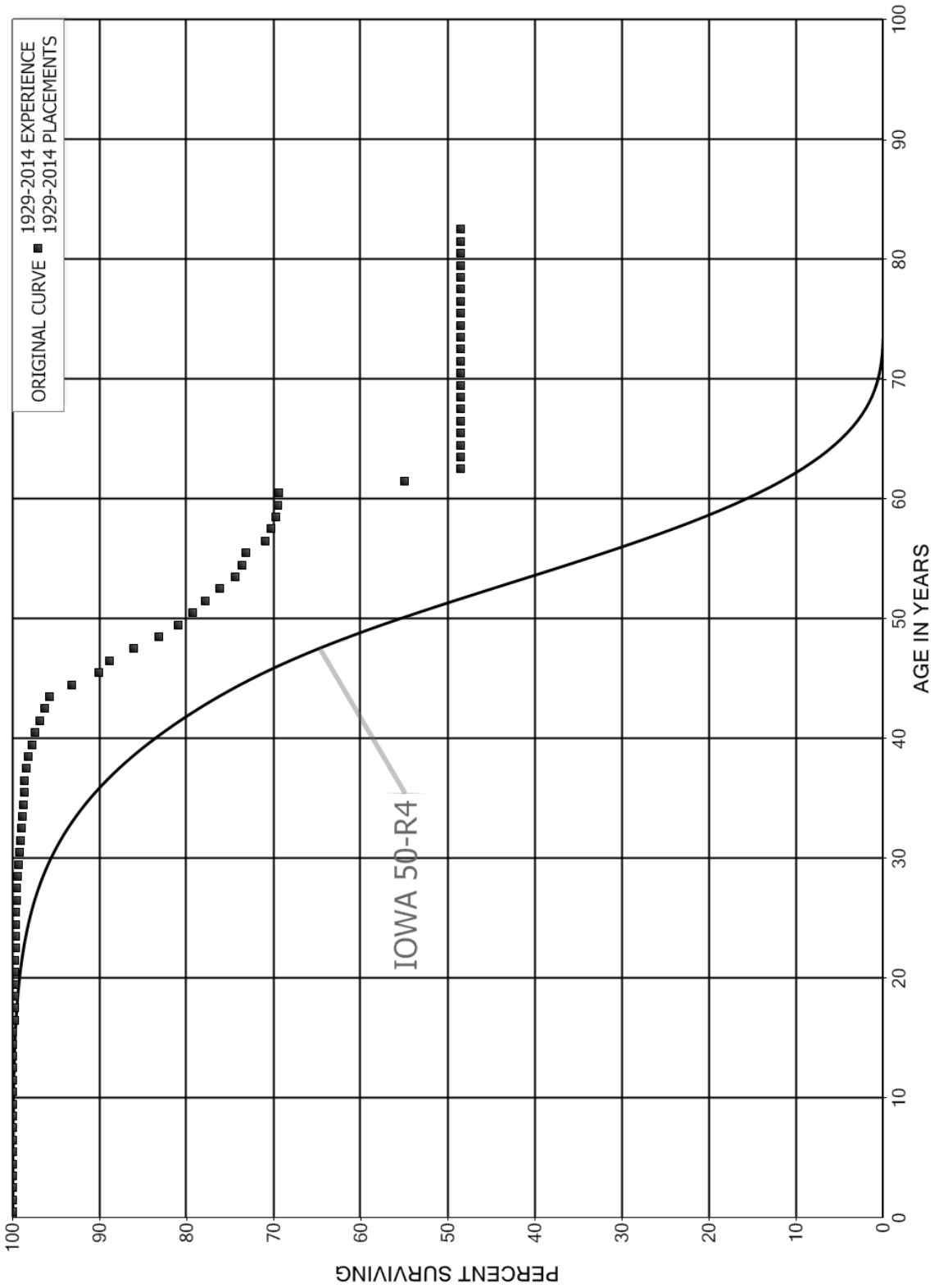
ACCOUNT 3000B - BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1941-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	14,925,222	1,131	0.0001	0.9999	96.61
40.5	14,887,314	13,866	0.0009	0.9991	96.60
41.5	14,800,258	1,818	0.0001	0.9999	96.51
42.5	14,622,615	2,485	0.0002	0.9998	96.50
43.5	6,906,517	2,877	0.0004	0.9996	96.48
44.5	6,892,691	2,803	0.0004	0.9996	96.44
45.5	6,841,915	2,015	0.0003	0.9997	96.40
46.5	6,418,608	2,096	0.0003	0.9997	96.37
47.5	5,536,075	1,910	0.0003	0.9997	96.34
48.5	5,118,664	28,179	0.0055	0.9945	96.31
49.5	5,053,252	2,075	0.0004	0.9996	95.78
50.5	4,837,826	557	0.0001	0.9999	95.74
51.5	4,618,686	560	0.0001	0.9999	95.73
52.5	4,333,384	9,042	0.0021	0.9979	95.72
53.5	4,277,346	21,522	0.0050	0.9950	95.52
54.5	4,248,428	1,013	0.0002	0.9998	95.04
55.5	4,078,666	765	0.0002	0.9998	95.01
56.5	4,042,469	441	0.0001	0.9999	94.99
57.5	3,981,259	144	0.0000	1.0000	94.98
58.5	3,803,873	193	0.0001	0.9999	94.98
59.5	3,764,732	19,065	0.0051	0.9949	94.98
60.5	3,745,636	41,887	0.0112	0.9888	94.50
61.5	88,667	441	0.0050	0.9950	93.44
62.5	62,852	0	0.0000	1.0000	92.97
63.5	62,176	5,478	0.0881	0.9119	92.97
64.5					84.78

MANITOBA HYDRO
ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK

ORIGINAL LIFE TABLE

PLACEMENT BAND 1929-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	316,891,828	7,369	0.0000	1.0000	100.00
0.5	309,677,456	7,027	0.0000	1.0000	100.00
1.5	241,550,195	22,598	0.0001	0.9999	100.00
2.5	231,039,663	5,106	0.0000	1.0000	99.99
3.5	228,011,872	8,357	0.0000	1.0000	99.98
4.5	225,184,988	14,254	0.0001	0.9999	99.98
5.5	221,062,978	6,807	0.0000	1.0000	99.97
6.5	213,031,601	23,249	0.0001	0.9999	99.97
7.5	206,251,236	1,471	0.0000	1.0000	99.96
8.5	199,159,192	27,957	0.0001	0.9999	99.96
9.5	196,275,328	3,523	0.0000	1.0000	99.95
10.5	191,946,989	2,693	0.0000	1.0000	99.94
11.5	184,114,713	3,930	0.0000	1.0000	99.94
12.5	180,312,509	43,759	0.0002	0.9998	99.94
13.5	178,066,738	798	0.0000	1.0000	99.92
14.5	174,665,697	3,391	0.0000	1.0000	99.92
15.5	167,179,731	287,957	0.0017	0.9983	99.91
16.5	163,034,444	3,883	0.0000	1.0000	99.74
17.5	155,089,530	4,060	0.0000	1.0000	99.74
18.5	151,358,836	5,815	0.0000	1.0000	99.74
19.5	147,365,516	13,466	0.0001	0.9999	99.73
20.5	146,175,475	74,785	0.0005	0.9995	99.72
21.5	144,762,152	20,407	0.0001	0.9999	99.67
22.5	142,810,346	31,781	0.0002	0.9998	99.66
23.5	142,150,502	53,563	0.0004	0.9996	99.64
24.5	139,244,898	39,433	0.0003	0.9997	99.60
25.5	136,794,240	54,961	0.0004	0.9996	99.57
26.5	136,015,504	108,431	0.0008	0.9992	99.53
27.5	135,411,075	99,602	0.0007	0.9993	99.45
28.5	134,523,808	126,242	0.0009	0.9991	99.38
29.5	133,701,046	128,161	0.0010	0.9990	99.28
30.5	114,303,793	114,116	0.0010	0.9990	99.19
31.5	113,494,065	140,536	0.0012	0.9988	99.09
32.5	112,848,897	140,918	0.0012	0.9988	98.97
33.5	110,539,566	120,104	0.0011	0.9989	98.84
34.5	109,443,437	87,175	0.0008	0.9992	98.74
35.5	108,017,256	101,236	0.0009	0.9991	98.66
36.5	53,609,469	96,926	0.0018	0.9982	98.57
37.5	53,078,921	135,228	0.0025	0.9975	98.39
38.5	21,786,268	100,229	0.0046	0.9954	98.14

MANITOBA HYDRO

ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	20,826,581	69,573	0.0033	0.9967	97.69
40.5	20,617,048	121,216	0.0059	0.9941	97.36
41.5	20,305,916	98,617	0.0049	0.9951	96.79
42.5	20,111,976	132,262	0.0066	0.9934	96.32
43.5	4,691,226	121,974	0.0260	0.9740	95.68
44.5	4,480,098	150,338	0.0336	0.9664	93.20
45.5	4,188,161	57,769	0.0138	0.9862	90.07
46.5	4,030,304	124,614	0.0309	0.9691	88.83
47.5	3,702,813	127,102	0.0343	0.9657	86.08
48.5	3,114,295	82,388	0.0265	0.9735	83.12
49.5	3,022,856	62,828	0.0208	0.9792	80.93
50.5	2,958,493	53,741	0.0182	0.9818	79.24
51.5	2,855,816	61,457	0.0215	0.9785	77.80
52.5	2,778,126	64,986	0.0234	0.9766	76.13
53.5	2,506,364	23,753	0.0095	0.9905	74.35
54.5	2,479,891	16,131	0.0065	0.9935	73.64
55.5	2,597,123	76,628	0.0295	0.9705	73.16
56.5	2,259,964	22,660	0.0100	0.9900	71.01
57.5	2,237,071	19,407	0.0087	0.9913	70.29
58.5	2,498,540	5,026	0.0020	0.9980	69.68
59.5	2,113,693	3,385	0.0016	0.9984	69.54
60.5	2,106,933	438,246	0.2080	0.7920	69.43
61.5	43,086	5,081	0.1179	0.8821	54.99
62.5	17,974		0.0000	1.0000	48.51
63.5	18,338		0.0000	1.0000	48.51
64.5	15,556		0.0000	1.0000	48.51
65.5	15,556		0.0000	1.0000	48.51
66.5	15,556		0.0000	1.0000	48.51
67.5	15,556		0.0000	1.0000	48.51
68.5	15,556		0.0000	1.0000	48.51
69.5	15,556		0.0000	1.0000	48.51
70.5	15,556		0.0000	1.0000	48.51
71.5	15,556		0.0000	1.0000	48.51
72.5	15,556		0.0000	1.0000	48.51
73.5	15,556		0.0000	1.0000	48.51
74.5	15,556		0.0000	1.0000	48.51
75.5	15,556		0.0000	1.0000	48.51
76.5	15,556		0.0000	1.0000	48.51
77.5	15,556		0.0000	1.0000	48.51
78.5	15,556		0.0000	1.0000	48.51

MANITOBA HYDRO

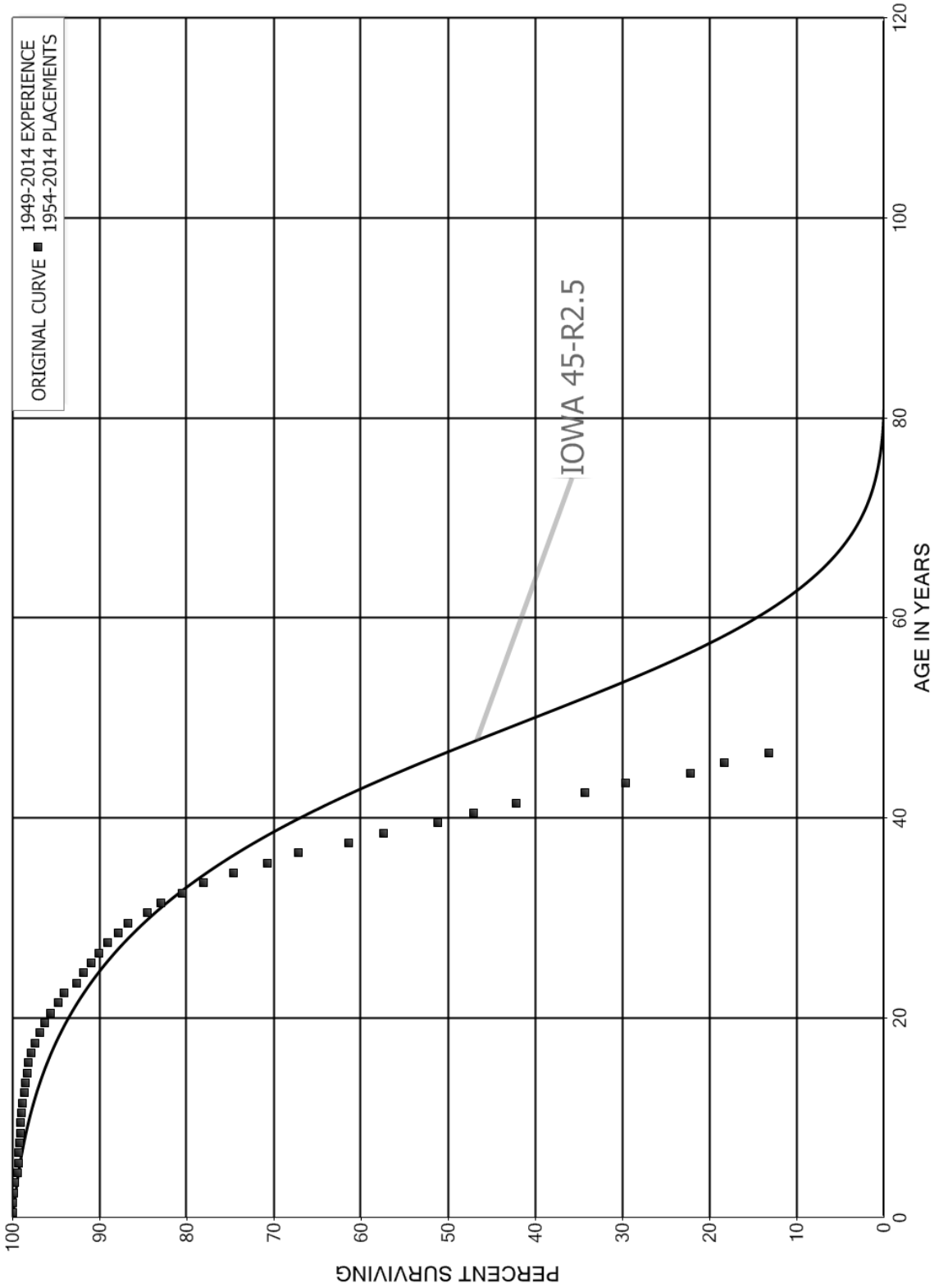
ACCOUNT 3000F - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1929-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	15,556		0.0000	1.0000	48.51
80.5	13,935		0.0000	1.0000	48.51
81.5	13,935		0.0000	1.0000	48.51
82.5					48.51

MANITOBA HYDRO
ACCOUNT 3000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1954-2014 EXPERIENCE BAND 1949-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10,027,579	3,764	0.0004	0.9996	100.00
0.5	9,322,287	648	0.0001	0.9999	99.96
1.5	9,304,678	9,027	0.0010	0.9990	99.96
2.5	9,198,475	9,096	0.0010	0.9990	99.86
3.5	8,662,168	34,549	0.0040	0.9960	99.76
4.5	8,180,503	5,027	0.0006	0.9994	99.36
5.5	7,125,320	2,877	0.0004	0.9996	99.30
6.5	7,042,555	7,001	0.0010	0.9990	99.26
7.5	6,683,674	4,658	0.0007	0.9993	99.16
8.5	6,461,817	4,303	0.0007	0.9993	99.09
9.5	6,281,295	6,979	0.0011	0.9989	99.03
10.5	6,194,134	5,324	0.0009	0.9991	98.92
11.5	5,804,141	10,707	0.0018	0.9982	98.83
12.5	4,494,285	6,952	0.0015	0.9985	98.65
13.5	4,443,760	7,580	0.0017	0.9983	98.50
14.5	4,196,976	8,634	0.0021	0.9979	98.33
15.5	3,865,272	12,924	0.0033	0.9967	98.13
16.5	3,318,629	12,590	0.0038	0.9962	97.80
17.5	2,622,498	14,860	0.0057	0.9943	97.43
18.5	2,286,542	12,806	0.0056	0.9944	96.88
19.5	2,067,989	14,895	0.0072	0.9928	96.33
20.5	1,778,228	16,016	0.0090	0.9910	95.64
21.5	1,651,754	11,848	0.0072	0.9928	94.78
22.5	1,571,078	24,350	0.0155	0.9845	94.10
23.5	1,330,486	11,548	0.0087	0.9913	92.64
24.5	1,230,428	12,070	0.0098	0.9902	91.84
25.5	1,097,471	10,992	0.0100	0.9900	90.93
26.5	1,001,649	10,975	0.0110	0.9890	90.02
27.5	910,023	12,641	0.0139	0.9861	89.04
28.5	876,358	10,528	0.0120	0.9880	87.80
29.5	861,241	21,936	0.0255	0.9745	86.75
30.5	822,101	15,442	0.0188	0.9812	84.54
31.5	806,659	23,333	0.0289	0.9711	82.95
32.5	758,063	23,437	0.0309	0.9691	80.55
33.5	731,054	31,888	0.0436	0.9564	78.06
34.5	697,071	36,413	0.0522	0.9478	74.65
35.5	636,821	32,551	0.0511	0.9489	70.75
36.5	600,269	51,731	0.0862	0.9138	67.14
37.5	542,090	35,443	0.0654	0.9346	61.35
38.5	491,978	52,454	0.1066	0.8934	57.34

MANITOBA HYDRO

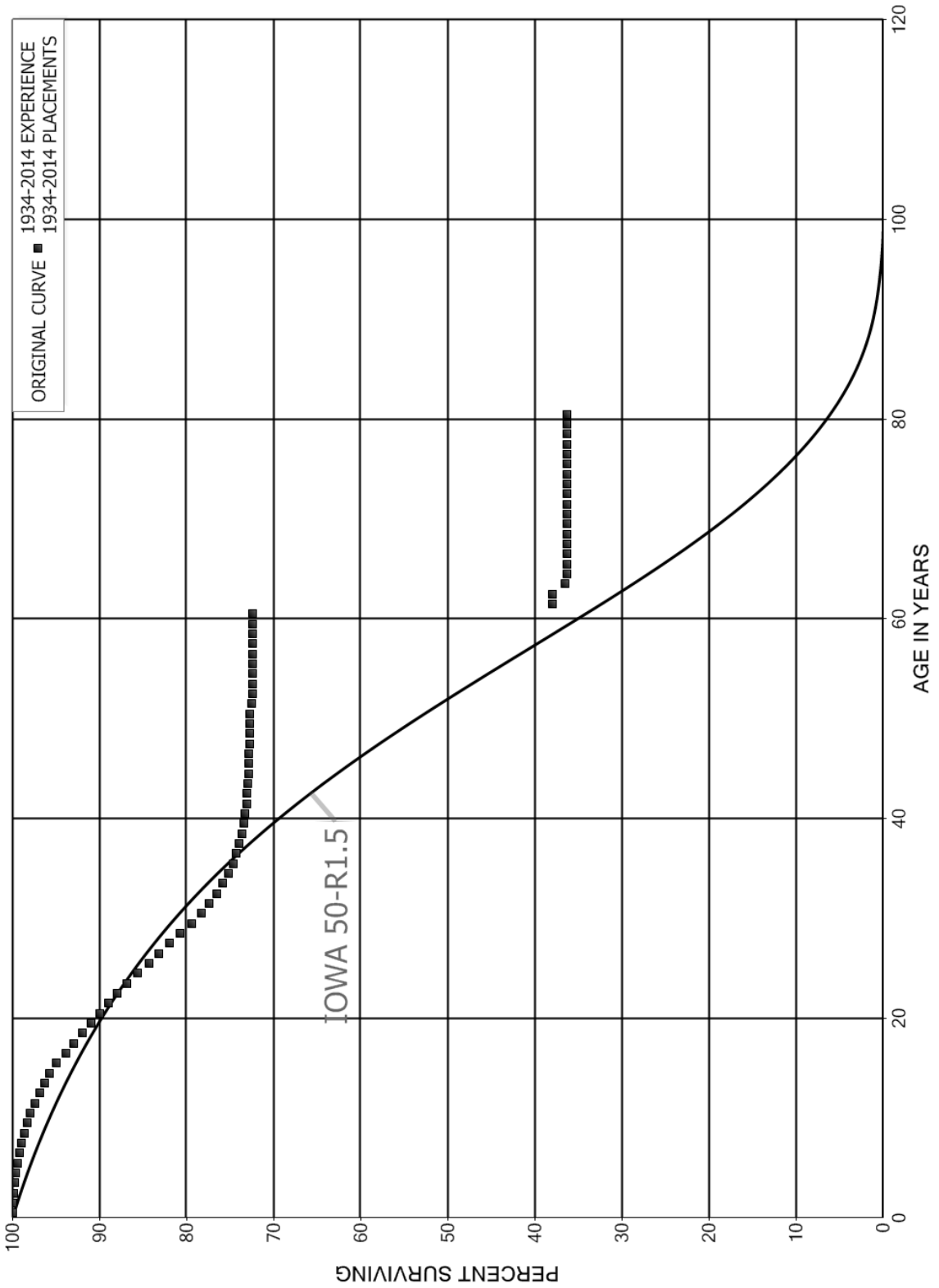
ACCOUNT 3000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1954-2014 EXPERIENCE BAND 1949-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	413,012	33,881	0.0820	0.9180	51.23
40.5	374,398	38,652	0.1032	0.8968	47.02
41.5	331,415	61,703	0.1862	0.8138	42.17
42.5	263,985	35,833	0.1357	0.8643	34.32
43.5	243,170	61,442	0.2527	0.7473	29.66
44.5	180,658	31,238	0.1729	0.8271	22.17
45.5	148,933	41,745	0.2803	0.7197	18.33
46.5	115,201	56,959	0.4944	0.5056	13.19
47.5	58,236	15,572	0.2674	0.7326	6.67
48.5	42,583	27,554	0.6471	0.3529	4.89
49.5	15,266	3,152	0.2065	0.7935	1.72
50.5	18,908	1,438	0.0761	0.9239	1.37
51.5	16,700	1,566	0.0938	0.9062	1.26
52.5	15,134		0.0000	1.0000	1.15
53.5	13,477		0.0000	1.0000	1.15
54.5	13,094		0.0000	1.0000	1.15
55.5	12,393		0.0000	1.0000	1.15
56.5	11,981		0.0000	1.0000	1.15
57.5	11,390		0.0000	1.0000	1.15
58.5	10,570		0.0000	1.0000	1.15
59.5	675		0.0000	1.0000	1.15
60.5					1.15

MANITOBA HYDRO
ACCOUNT 3100R - POWER TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100R - POWER TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014 EXPERIENCE BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	400,268,395	101,411	0.0003	0.9997	100.00
0.5	396,056,010	160,466	0.0004	0.9996	99.97
1.5	383,669,847	268,409	0.0007	0.9993	99.93
2.5	381,845,297	409,805	0.0011	0.9989	99.86
3.5	366,352,570	451,033	0.0012	0.9988	99.76
4.5	344,765,622	759,770	0.0022	0.9978	99.63
5.5	313,967,166	726,578	0.0023	0.9977	99.41
6.5	311,866,441	840,625	0.0027	0.9973	99.18
7.5	310,170,258	883,414	0.0028	0.9972	98.92
8.5	303,567,301	1,026,104	0.0034	0.9966	98.64
9.5	301,550,991	1,104,291	0.0037	0.9963	98.30
10.5	274,234,813	1,457,498	0.0053	0.9947	97.94
11.5	264,476,069	1,508,719	0.0057	0.9943	97.42
12.5	257,774,445	1,450,145	0.0056	0.9944	96.87
13.5	252,718,204	1,645,024	0.0065	0.9935	96.32
14.5	238,430,987	1,997,884	0.0084	0.9916	95.69
15.5	230,849,066	2,610,026	0.0113	0.9887	94.89
16.5	213,511,983	2,046,477	0.0096	0.9904	93.82
17.5	197,449,056	1,999,461	0.0101	0.9899	92.92
18.5	183,071,522	2,072,660	0.0113	0.9887	91.98
19.5	171,645,730	1,909,404	0.0111	0.9889	90.94
20.5	160,890,541	1,725,597	0.0107	0.9893	89.93
21.5	149,422,350	1,735,391	0.0116	0.9884	88.96
22.5	140,877,813	1,766,071	0.0125	0.9875	87.93
23.5	129,613,000	1,832,939	0.0141	0.9859	86.83
24.5	123,057,337	1,847,181	0.0150	0.9850	85.60
25.5	115,113,542	1,611,797	0.0140	0.9860	84.31
26.5	106,155,843	1,559,087	0.0147	0.9853	83.13
27.5	96,104,146	1,355,890	0.0141	0.9859	81.91
28.5	89,736,547	1,463,049	0.0163	0.9837	80.76
29.5	84,786,731	1,213,948	0.0143	0.9857	79.44
30.5	79,265,413	924,763	0.0117	0.9883	78.30
31.5	78,068,548	836,560	0.0107	0.9893	77.39
32.5	74,293,810	664,814	0.0089	0.9911	76.56
33.5	67,067,899	662,295	0.0099	0.9901	75.87
34.5	66,405,604	447,875	0.0067	0.9933	75.13
35.5	61,279,732	318,575	0.0052	0.9948	74.62
36.5	58,470,671	264,538	0.0045	0.9955	74.23
37.5	56,079,577	174,261	0.0031	0.9969	73.89
38.5	51,770,829	210,651	0.0041	0.9959	73.66

MANITOBA HYDRO

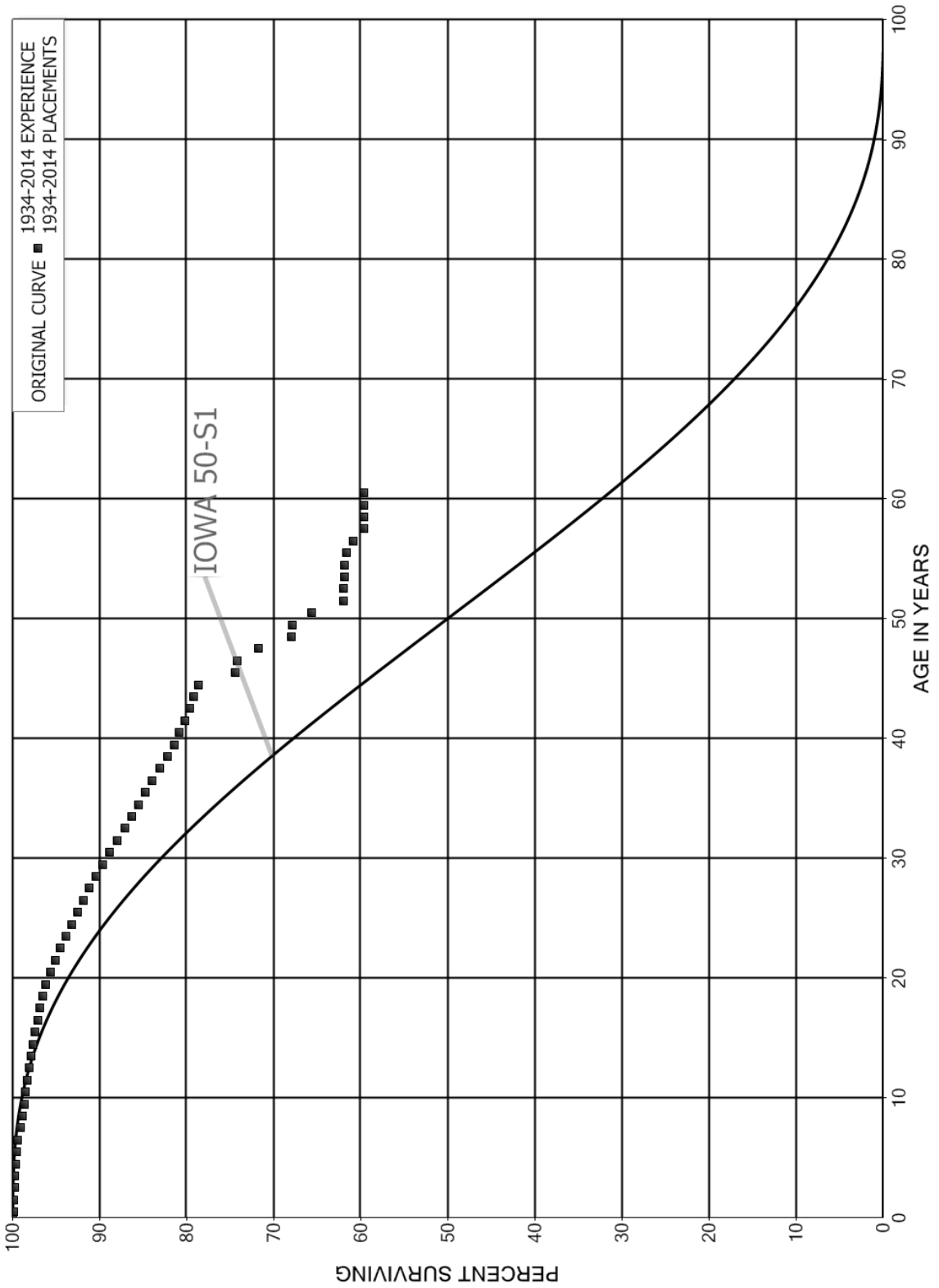
ACCOUNT 3100R - POWER TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014 EXPERIENCE BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	48,722,152	60,617	0.0012	0.9988	73.37
40.5	45,496,123	98,203	0.0022	0.9978	73.27
41.5	43,374,948	25,583	0.0006	0.9994	73.12
42.5	38,436,791	80,083	0.0021	0.9979	73.07
43.5	30,708,506	15,370	0.0005	0.9995	72.92
44.5	29,468,134	6,835	0.0002	0.9998	72.88
45.5	27,204,264	1,115	0.0000	1.0000	72.87
46.5	24,172,625	41,684	0.0017	0.9983	72.86
47.5	22,441,523		0.0000	1.0000	72.74
48.5	21,206,836		0.0000	1.0000	72.74
49.5	18,228,197		0.0000	1.0000	72.74
50.5	10,874,213	37,439	0.0034	0.9966	72.74
51.5	9,435,276	5,975	0.0006	0.9994	72.49
52.5	8,590,017		0.0000	1.0000	72.44
53.5	7,908,833		0.0000	1.0000	72.44
54.5	6,779,697		0.0000	1.0000	72.44
55.5	6,211,053		0.0000	1.0000	72.44
56.5	5,851,561		0.0000	1.0000	72.44
57.5	5,417,092		0.0000	1.0000	72.44
58.5	4,951,421		0.0000	1.0000	72.44
59.5	4,663,040		0.0000	1.0000	72.44
60.5	4,079,812	1,941,989	0.4760	0.5240	72.44
61.5	2,002,239		0.0000	1.0000	37.96
62.5	1,805,705	70,230	0.0389	0.9611	37.96
63.5	1,506,199	9,066	0.0060	0.9940	36.48
64.5	943,015		0.0000	1.0000	36.26
65.5	461,583		0.0000	1.0000	36.26
66.5	408,815		0.0000	1.0000	36.26
67.5	329,476		0.0000	1.0000	36.26
68.5	329,476		0.0000	1.0000	36.26
69.5	108,300		0.0000	1.0000	36.26
70.5	108,300		0.0000	1.0000	36.26
71.5	93,357		0.0000	1.0000	36.26
72.5	47,828		0.0000	1.0000	36.26
73.5	44,455		0.0000	1.0000	36.26
74.5	14,102		0.0000	1.0000	36.26
75.5	10,860		0.0000	1.0000	36.26
76.5	8,809		0.0000	1.0000	36.26
77.5	8,809		0.0000	1.0000	36.26
78.5	8,809		0.0000	1.0000	36.26
79.5	8,809		0.0000	1.0000	36.26
80.5					36.26

MANITOBA HYDRO
ACCOUNT 3100S - OTHER TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100S - OTHER TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1934-2014 EXPERIENCE BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	127,358,920	204,377	0.0016	0.9984	100.00
0.5	121,063,507	32,205	0.0003	0.9997	99.84
1.5	109,633,566	50,050	0.0005	0.9995	99.81
2.5	107,057,826	83,146	0.0008	0.9992	99.77
3.5	102,172,525	68,621	0.0007	0.9993	99.69
4.5	97,276,784	145,424	0.0015	0.9985	99.62
5.5	94,429,076	107,307	0.0011	0.9989	99.47
6.5	88,364,433	267,322	0.0030	0.9970	99.36
7.5	87,617,597	164,957	0.0019	0.9981	99.06
8.5	85,816,857	211,814	0.0025	0.9975	98.87
9.5	84,432,605	151,404	0.0018	0.9982	98.63
10.5	82,115,134	127,631	0.0016	0.9984	98.45
11.5	79,576,881	171,258	0.0022	0.9978	98.30
12.5	78,058,548	198,576	0.0025	0.9975	98.09
13.5	75,076,820	158,370	0.0021	0.9979	97.84
14.5	72,559,468	207,947	0.0029	0.9971	97.63
15.5	70,062,465	186,852	0.0027	0.9973	97.35
16.5	66,912,339	192,331	0.0029	0.9971	97.09
17.5	63,109,537	207,640	0.0033	0.9967	96.81
18.5	56,537,264	216,251	0.0038	0.9962	96.50
19.5	49,877,667	244,698	0.0049	0.9951	96.13
20.5	43,367,934	257,293	0.0059	0.9941	95.65
21.5	39,491,575	250,842	0.0064	0.9936	95.09
22.5	35,977,554	231,616	0.0064	0.9936	94.48
23.5	33,412,889	264,781	0.0079	0.9921	93.88
24.5	31,207,378	221,637	0.0071	0.9929	93.13
25.5	28,687,045	188,653	0.0066	0.9934	92.47
26.5	27,453,044	207,541	0.0076	0.9924	91.86
27.5	25,997,869	204,663	0.0079	0.9921	91.17
28.5	23,769,887	214,880	0.0090	0.9910	90.45
29.5	22,822,880	213,120	0.0093	0.9907	89.63
30.5	21,531,920	204,813	0.0095	0.9905	88.79
31.5	20,424,558	207,677	0.0102	0.9898	87.95
32.5	19,735,037	175,970	0.0089	0.9911	87.06
33.5	17,239,420	159,082	0.0092	0.9908	86.28
34.5	16,615,338	150,676	0.0091	0.9909	85.48
35.5	15,974,757	139,226	0.0087	0.9913	84.71
36.5	11,546,176	130,563	0.0113	0.9887	83.97
37.5	10,667,386	110,252	0.0103	0.9897	83.02
38.5	9,457,910	86,686	0.0092	0.9908	82.16

MANITOBA HYDRO

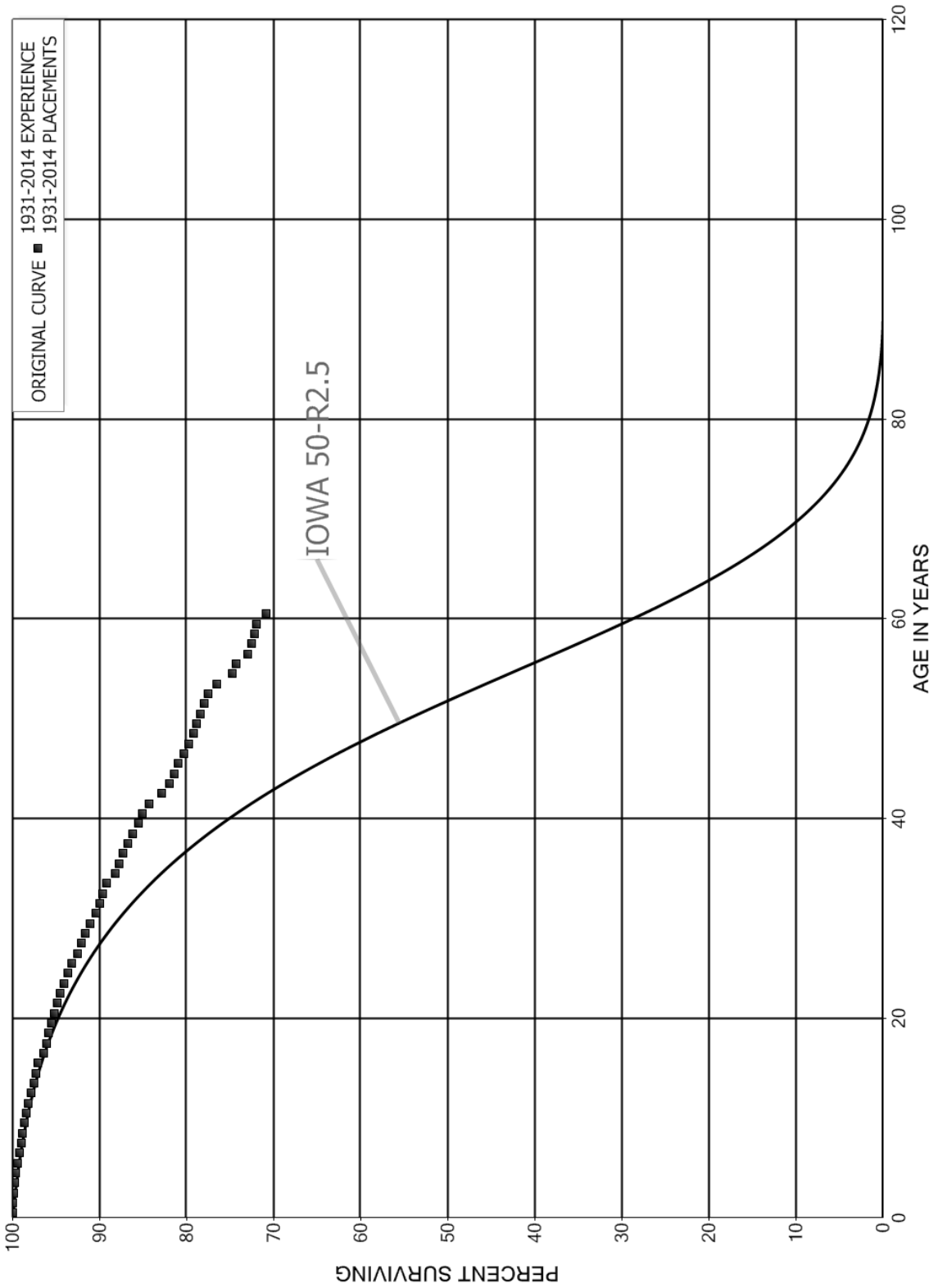
ACCOUNT 3100S - OTHER TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1934-2014 EXPERIENCE BAND 1934-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	8,707,410	59,703	0.0069	0.9931	81.41
40.5	8,041,738	65,219	0.0081	0.9919	80.85
41.5	7,599,521	55,445	0.0073	0.9927	80.20
42.5	7,244,102	37,010	0.0051	0.9949	79.61
43.5	5,333,280	39,288	0.0074	0.9926	79.20
44.5	4,855,313	259,699	0.0535	0.9465	78.62
45.5	4,399,935	13,949	0.0032	0.9968	74.41
46.5	3,962,644	129,750	0.0327	0.9673	74.18
47.5	3,458,612	184,825	0.0534	0.9466	71.75
48.5	2,964,948	3,690	0.0012	0.9988	67.92
49.5	2,642,439	88,377	0.0334	0.9666	67.83
50.5	1,959,829	108,697	0.0555	0.9445	65.56
51.5	1,667,444	941	0.0006	0.9994	61.93
52.5	1,609,226	283	0.0002	0.9998	61.89
53.5	1,377,990	47	0.0000	1.0000	61.88
54.5	1,179,547	4,464	0.0038	0.9962	61.88
55.5	1,170,673	15,836	0.0135	0.9865	61.64
56.5	945,698	18,470	0.0195	0.9805	60.81
57.5	905,630		0.0000	1.0000	59.62
58.5	889,884		0.0000	1.0000	59.62
59.5	827,644		0.0000	1.0000	59.62
60.5	798,106	525,883	0.6589	0.3411	59.62
61.5	261,908		0.0000	1.0000	20.34
62.5	56,355		0.0000	1.0000	20.34
63.5	56,355		0.0000	1.0000	20.34
64.5	56,355		0.0000	1.0000	20.34
65.5	16,420		0.0000	1.0000	20.34
66.5	16,420		0.0000	1.0000	20.34
67.5	16,420		0.0000	1.0000	20.34
68.5	16,420		0.0000	1.0000	20.34
69.5	16,420		0.0000	1.0000	20.34
70.5	16,420		0.0000	1.0000	20.34
71.5	16,420		0.0000	1.0000	20.34
72.5	16,420		0.0000	1.0000	20.34
73.5	16,420		0.0000	1.0000	20.34
74.5	16,420		0.0000	1.0000	20.34
75.5					20.34

MANITOBA HYDRO
ACCOUNT 3100T - INTERRUPTING EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100T - INTERRUPTING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1931-2014 EXPERIENCE BAND 1931-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	234,269,207	48,813	0.0002	0.9998	100.00
0.5	231,631,734	108,499	0.0005	0.9995	99.98
1.5	205,641,768	182,492	0.0009	0.9991	99.93
2.5	202,209,896	218,173	0.0011	0.9989	99.84
3.5	196,853,878	243,305	0.0012	0.9988	99.74
4.5	193,707,089	357,589	0.0018	0.9982	99.61
5.5	183,122,040	407,571	0.0022	0.9978	99.43
6.5	174,570,942	370,098	0.0021	0.9979	99.21
7.5	172,003,213	355,412	0.0021	0.9979	99.00
8.5	165,439,358	363,883	0.0022	0.9978	98.79
9.5	153,852,458	316,905	0.0021	0.9979	98.58
10.5	151,218,188	296,429	0.0020	0.9980	98.37
11.5	146,228,649	509,575	0.0035	0.9965	98.18
12.5	143,688,561	450,811	0.0031	0.9969	97.84
13.5	139,719,045	348,158	0.0025	0.9975	97.53
14.5	134,967,871	380,351	0.0028	0.9972	97.29
15.5	131,685,843	855,576	0.0065	0.9935	97.01
16.5	125,122,750	374,184	0.0030	0.9970	96.38
17.5	119,212,919	349,109	0.0029	0.9971	96.09
18.5	109,037,906	300,738	0.0028	0.9972	95.81
19.5	103,722,043	376,741	0.0036	0.9964	95.55
20.5	99,050,636	361,556	0.0037	0.9963	95.20
21.5	97,380,075	387,381	0.0040	0.9960	94.85
22.5	90,944,635	376,036	0.0041	0.9959	94.48
23.5	83,140,991	423,774	0.0051	0.9949	94.09
24.5	79,916,564	343,201	0.0043	0.9957	93.61
25.5	76,304,868	530,951	0.0070	0.9930	93.20
26.5	69,027,135	376,749	0.0055	0.9945	92.56
27.5	66,706,188	295,130	0.0044	0.9956	92.05
28.5	64,762,730	372,137	0.0057	0.9943	91.64
29.5	63,931,953	474,665	0.0074	0.9926	91.12
30.5	62,997,999	367,718	0.0058	0.9942	90.44
31.5	62,576,831	226,547	0.0036	0.9964	89.91
32.5	61,857,676	298,390	0.0048	0.9952	89.59
33.5	58,712,998	678,936	0.0116	0.9884	89.16
34.5	57,918,118	248,723	0.0043	0.9957	88.12
35.5	48,733,404	253,352	0.0052	0.9948	87.75
36.5	41,173,760	263,245	0.0064	0.9936	87.29
37.5	40,426,188	262,372	0.0065	0.9935	86.73
38.5	38,251,978	299,161	0.0078	0.9922	86.17

MANITOBA HYDRO

ACCOUNT 3100T - INTERRUPTING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1931-2014 EXPERIENCE BAND 1931-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	37,351,519	209,273	0.0056	0.9944	85.49
40.5	36,249,659	309,217	0.0085	0.9915	85.02
41.5	35,249,331	601,933	0.0171	0.9829	84.29
42.5	32,701,204	347,447	0.0106	0.9894	82.85
43.5	28,264,185	214,952	0.0076	0.9924	81.97
44.5	27,428,807	153,385	0.0056	0.9944	81.35
45.5	25,883,546	187,681	0.0073	0.9927	80.89
46.5	24,654,456	173,701	0.0070	0.9930	80.31
47.5	22,902,365	163,809	0.0072	0.9928	79.74
48.5	19,769,900	94,071	0.0048	0.9952	79.17
49.5	18,607,542	106,179	0.0057	0.9943	78.79
50.5	16,207,733	90,087	0.0056	0.9944	78.34
51.5	15,365,615	68,788	0.0045	0.9955	77.91
52.5	13,872,042	192,017	0.0138	0.9862	77.56
53.5	11,689,872	271,627	0.0232	0.9768	76.49
54.5	10,080,840	55,479	0.0055	0.9945	74.71
55.5	9,192,349	170,423	0.0185	0.9815	74.30
56.5	7,140,614	38,827	0.0054	0.9946	72.92
57.5	5,868,645	24,864	0.0042	0.9958	72.52
58.5	5,200,172	16,377	0.0031	0.9969	72.22
59.5	4,185,885	68,092	0.0163	0.9837	71.99
60.5	3,309,615	816,897	0.2468	0.7532	70.82
61.5	2,208,922	2,734	0.0012	0.9988	53.34
62.5	1,720,220	34,434	0.0200	0.9800	53.27
63.5	1,148,074		0.0000	1.0000	52.21
64.5	879,407		0.0000	1.0000	52.21
65.5	753,913		0.0000	1.0000	52.21
66.5	279,139		0.0000	1.0000	52.21
67.5	279,139		0.0000	1.0000	52.21
68.5	149,971		0.0000	1.0000	52.21
69.5	149,971		0.0000	1.0000	52.21
70.5	149,971		0.0000	1.0000	52.21
71.5	58,250		0.0000	1.0000	52.21
72.5	58,250		0.0000	1.0000	52.21
73.5	58,250	27,500	0.4721	0.5279	52.21
74.5	24,923		0.0000	1.0000	27.56
75.5	15,831		0.0000	1.0000	27.56
76.5	15,831		0.0000	1.0000	27.56
77.5	15,831		0.0000	1.0000	27.56
78.5	15,831		0.0000	1.0000	27.56

MANITOBA HYDRO

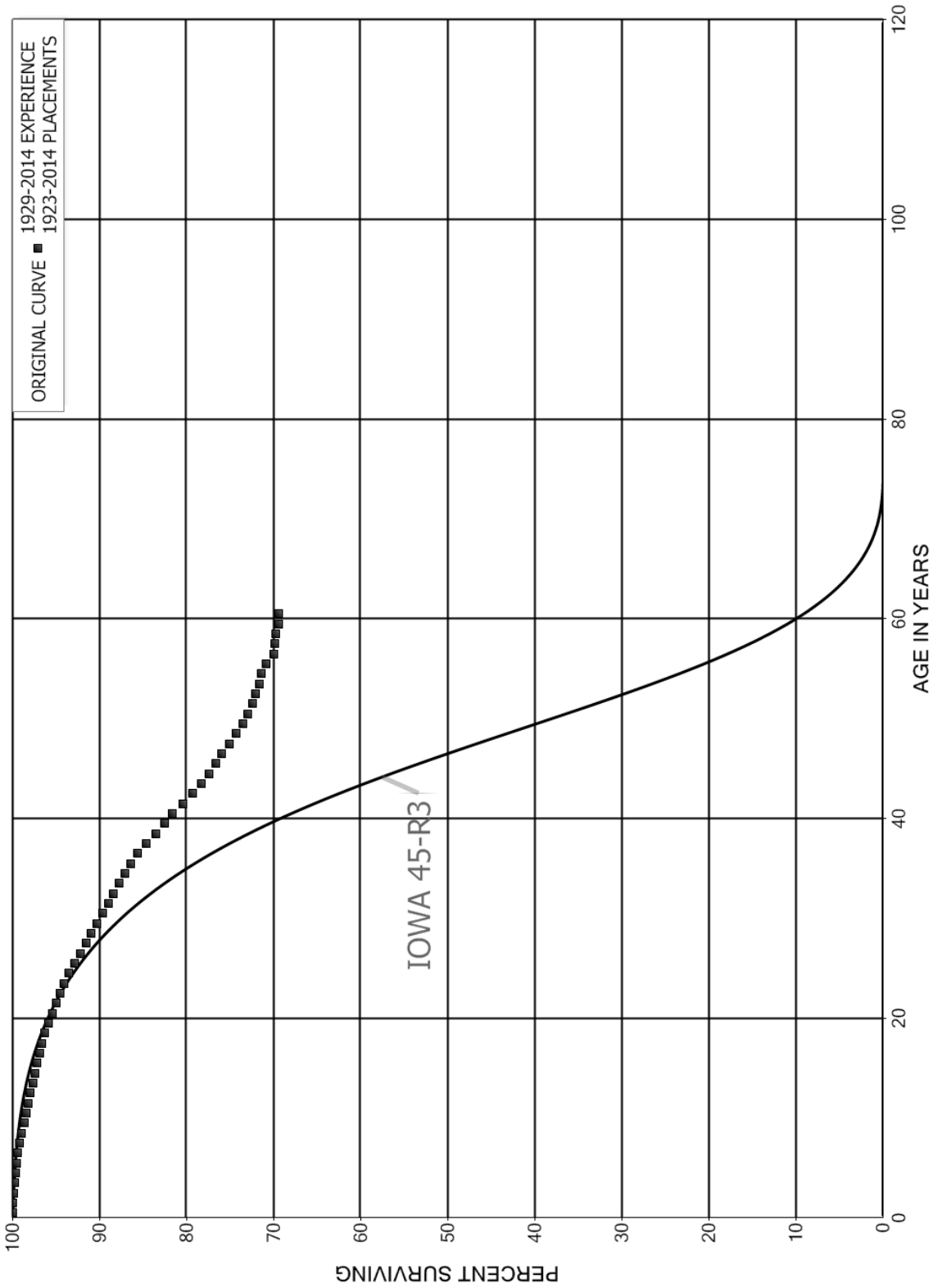
ACCOUNT 3100T - INTERRUPTING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1931-2014 EXPERIENCE BAND 1931-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	15,831		0.0000	1.0000	27.56
80.5	15,831		0.0000	1.0000	27.56
81.5	15,831		0.0000	1.0000	27.56
82.5					27.56

MANITOBA HYDRO
ACCOUNT 3100U - OTHER STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	595,688,415	328,920	0.0006	0.9994	100.00
0.5	587,335,769	295,758	0.0005	0.9995	99.94
1.5	553,666,808	416,529	0.0008	0.9992	99.89
2.5	546,458,677	564,431	0.0010	0.9990	99.82
3.5	535,216,694	467,364	0.0009	0.9991	99.72
4.5	515,173,339	634,731	0.0012	0.9988	99.63
5.5	496,932,324	800,660	0.0016	0.9984	99.51
6.5	471,375,357	802,527	0.0017	0.9983	99.35
7.5	446,754,647	1,278,737	0.0029	0.9971	99.18
8.5	417,552,898	1,102,771	0.0026	0.9974	98.89
9.5	404,088,769	771,750	0.0019	0.9981	98.63
10.5	384,760,638	857,580	0.0022	0.9978	98.44
11.5	359,810,170	945,816	0.0026	0.9974	98.22
12.5	338,861,953	1,047,523	0.0031	0.9969	97.97
13.5	326,360,393	821,155	0.0025	0.9975	97.66
14.5	307,396,546	898,024	0.0029	0.9971	97.42
15.5	277,610,682	772,229	0.0028	0.9972	97.13
16.5	257,050,178	787,927	0.0031	0.9969	96.86
17.5	217,387,712	711,241	0.0033	0.9967	96.57
18.5	201,087,570	784,586	0.0039	0.9961	96.25
19.5	178,888,120	821,045	0.0046	0.9954	95.87
20.5	168,516,190	775,027	0.0046	0.9954	95.43
21.5	159,490,279	831,458	0.0052	0.9948	95.00
22.5	150,415,156	771,492	0.0051	0.9949	94.50
23.5	145,363,377	873,101	0.0060	0.9940	94.02
24.5	134,654,062	897,627	0.0067	0.9933	93.45
25.5	124,650,374	850,615	0.0068	0.9932	92.83
26.5	121,002,433	877,731	0.0073	0.9927	92.19
27.5	117,901,310	742,671	0.0063	0.9937	91.53
28.5	113,489,982	779,766	0.0069	0.9931	90.95
29.5	110,682,711	910,942	0.0082	0.9918	90.32
30.5	106,738,356	687,012	0.0064	0.9936	89.58
31.5	103,336,643	643,435	0.0062	0.9938	89.00
32.5	97,620,522	811,627	0.0083	0.9917	88.45
33.5	86,850,998	673,641	0.0078	0.9922	87.71
34.5	78,791,556	576,186	0.0073	0.9927	87.03
35.5	71,835,664	658,131	0.0092	0.9908	86.40
36.5	54,929,182	615,913	0.0112	0.9888	85.61
37.5	52,519,549	708,862	0.0135	0.9865	84.65
38.5	48,008,857	565,196	0.0118	0.9882	83.50

MANITOBA HYDRO

ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	44,392,579	512,607	0.0115	0.9885	82.52
40.5	42,707,621	589,982	0.0138	0.9862	81.57
41.5	40,900,604	576,407	0.0141	0.9859	80.44
42.5	39,432,017	495,930	0.0126	0.9874	79.31
43.5	33,830,828	394,327	0.0117	0.9883	78.31
44.5	32,438,863	334,385	0.0103	0.9897	77.40
45.5	31,010,954	269,082	0.0087	0.9913	76.60
46.5	27,801,017	305,904	0.0110	0.9890	75.93
47.5	23,254,715	235,618	0.0101	0.9899	75.10
48.5	21,631,049	232,462	0.0107	0.9893	74.34
49.5	20,970,624	180,829	0.0086	0.9914	73.54
50.5	20,467,079	134,497	0.0066	0.9934	72.91
51.5	19,928,804	110,681	0.0056	0.9944	72.43
52.5	19,388,239	102,396	0.0053	0.9947	72.02
53.5	18,512,886	75,192	0.0041	0.9959	71.64
54.5	18,237,714	133,619	0.0073	0.9927	71.35
55.5	17,989,713	225,055	0.0125	0.9875	70.83
56.5	17,484,938	37,223	0.0021	0.9979	69.94
57.5	17,346,800	21,178	0.0012	0.9988	69.79
58.5	17,297,212	69,379	0.0040	0.9960	69.71
59.5	17,477,926	16,321	0.0009	0.9991	69.43
60.5	17,456,141	1,794,860	0.1028	0.8972	69.37
61.5	906,984	1,831	0.0020	0.9980	62.23
62.5	703,044	277	0.0004	0.9996	62.11
63.5	731,436	30,484	0.0417	0.9583	62.08
64.5	899,947	2,732	0.0030	0.9970	59.50
65.5	946,705		0.0000	1.0000	59.31
66.5	947,288		0.0000	1.0000	59.31
67.5	923,819	7,444	0.0081	0.9919	59.31
68.5	916,967		0.0000	1.0000	58.84
69.5	930,792	33,004	0.0355	0.9645	58.84
70.5	900,428		0.0000	1.0000	56.75
71.5	900,908		0.0000	1.0000	56.75
72.5	903,139		0.0000	1.0000	56.75
73.5	904,280		0.0000	1.0000	56.75
74.5	900,282	1,200	0.0013	0.9987	56.75
75.5	901,121		0.0000	1.0000	56.67
76.5	901,121		0.0000	1.0000	56.67
77.5	845,521		0.0000	1.0000	56.67
78.5	845,521		0.0000	1.0000	56.67

MANITOBA HYDRO

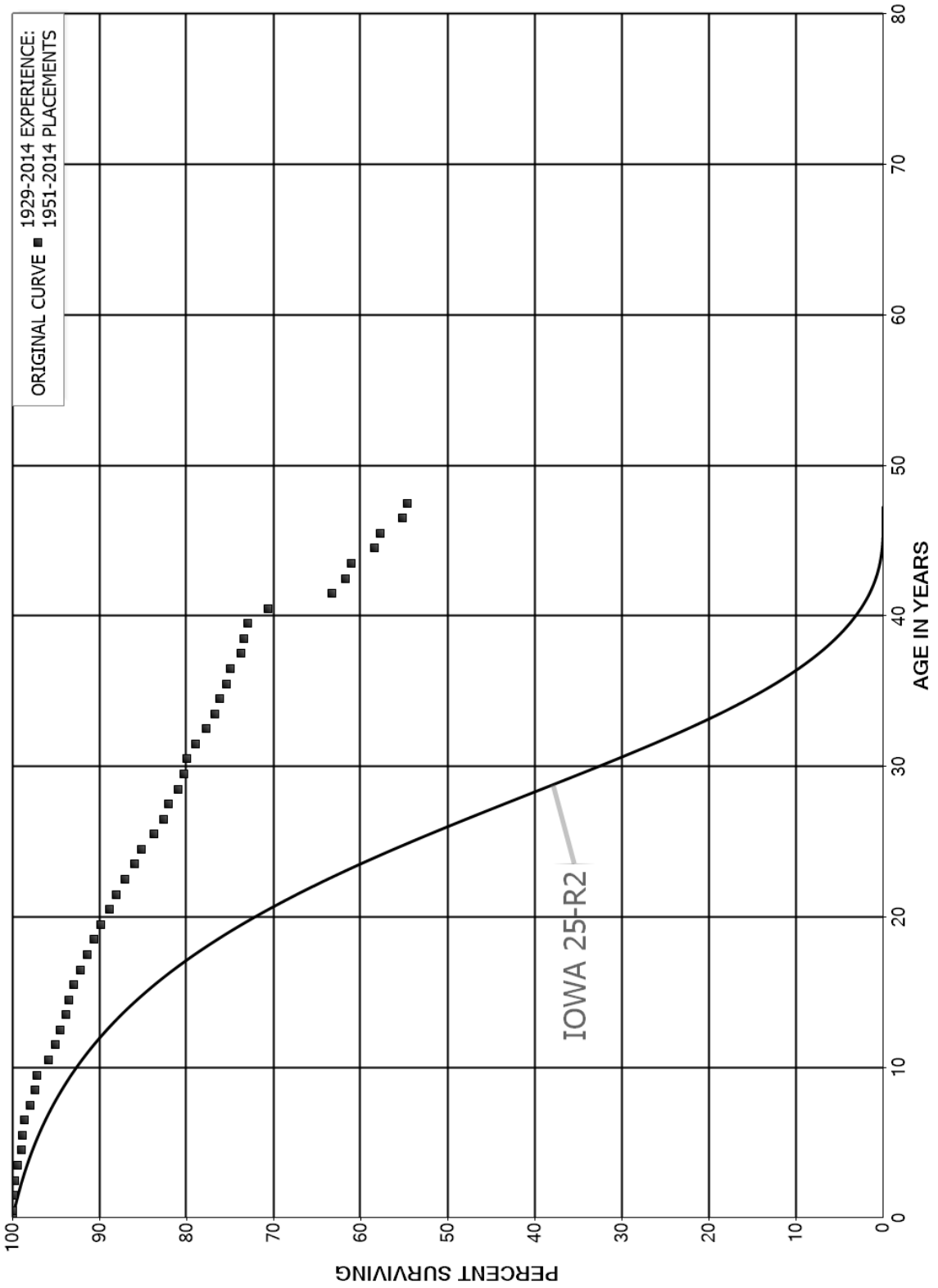
ACCOUNT 3100U - OTHER STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	835,074		0.0000	1.0000	56.67
80.5	821,921	30,926	0.0376	0.9624	56.67
81.5	790,995		0.0000	1.0000	54.54
82.5	840,006		0.0000	1.0000	54.54
83.5	575,729		0.0000	1.0000	54.54
84.5	575,729		0.0000	1.0000	54.54
85.5	276,404		0.0000	1.0000	54.54
86.5	104,412		0.0000	1.0000	54.54
87.5	10,184		0.0000	1.0000	54.54
88.5	10,184		0.0000	1.0000	54.54
89.5	10,184		0.0000	1.0000	54.54
90.5					54.54

MANITOBA HYDRO
ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	243,538,147	94,453	0.0004	0.9996	100.00
0.5	229,076,974	188,322	0.0008	0.9992	99.96
1.5	177,170,061	248,236	0.0014	0.9986	99.88
2.5	163,795,366	650,417	0.0040	0.9960	99.74
3.5	157,164,114	602,689	0.0038	0.9962	99.34
4.5	147,746,035	263,245	0.0018	0.9982	98.96
5.5	139,521,853	295,370	0.0021	0.9979	98.79
6.5	125,072,275	757,567	0.0061	0.9939	98.58
7.5	112,170,413	627,399	0.0056	0.9944	97.98
8.5	104,327,776	250,912	0.0024	0.9976	97.43
9.5	99,324,370	1,422,307	0.0143	0.9857	97.20
10.5	92,765,772	704,399	0.0076	0.9924	95.81
11.5	88,290,702	510,561	0.0058	0.9942	95.08
12.5	83,453,290	574,216	0.0069	0.9931	94.53
13.5	80,378,962	344,245	0.0043	0.9957	93.88
14.5	76,402,704	406,743	0.0053	0.9947	93.48
15.5	70,079,612	604,684	0.0086	0.9914	92.98
16.5	63,362,471	534,229	0.0084	0.9916	92.18
17.5	48,346,853	398,072	0.0082	0.9918	91.40
18.5	44,669,299	374,346	0.0084	0.9916	90.65
19.5	40,908,324	494,593	0.0121	0.9879	89.89
20.5	39,420,226	335,145	0.0085	0.9915	88.80
21.5	35,710,849	410,373	0.0115	0.9885	88.04
22.5	33,347,448	407,568	0.0122	0.9878	87.03
23.5	31,688,862	284,581	0.0090	0.9910	85.97
24.5	27,137,979	467,448	0.0172	0.9828	85.20
25.5	22,889,957	304,216	0.0133	0.9867	83.73
26.5	21,332,201	143,117	0.0067	0.9933	82.62
27.5	19,307,062	264,224	0.0137	0.9863	82.06
28.5	17,859,499	155,474	0.0087	0.9913	80.94
29.5	17,161,840	62,819	0.0037	0.9963	80.23
30.5	16,218,119	189,295	0.0117	0.9883	79.94
31.5	15,638,469	256,194	0.0164	0.9836	79.01
32.5	15,080,526	196,083	0.0130	0.9870	77.71
33.5	13,743,314	98,638	0.0072	0.9928	76.70
34.5	12,631,110	127,876	0.0101	0.9899	76.15
35.5	11,609,195	61,704	0.0053	0.9947	75.38
36.5	9,929,272	172,939	0.0174	0.9826	74.98
37.5	9,474,873	33,310	0.0035	0.9965	73.68
38.5	9,032,319	59,445	0.0066	0.9934	73.42

MANITOBA HYDRO

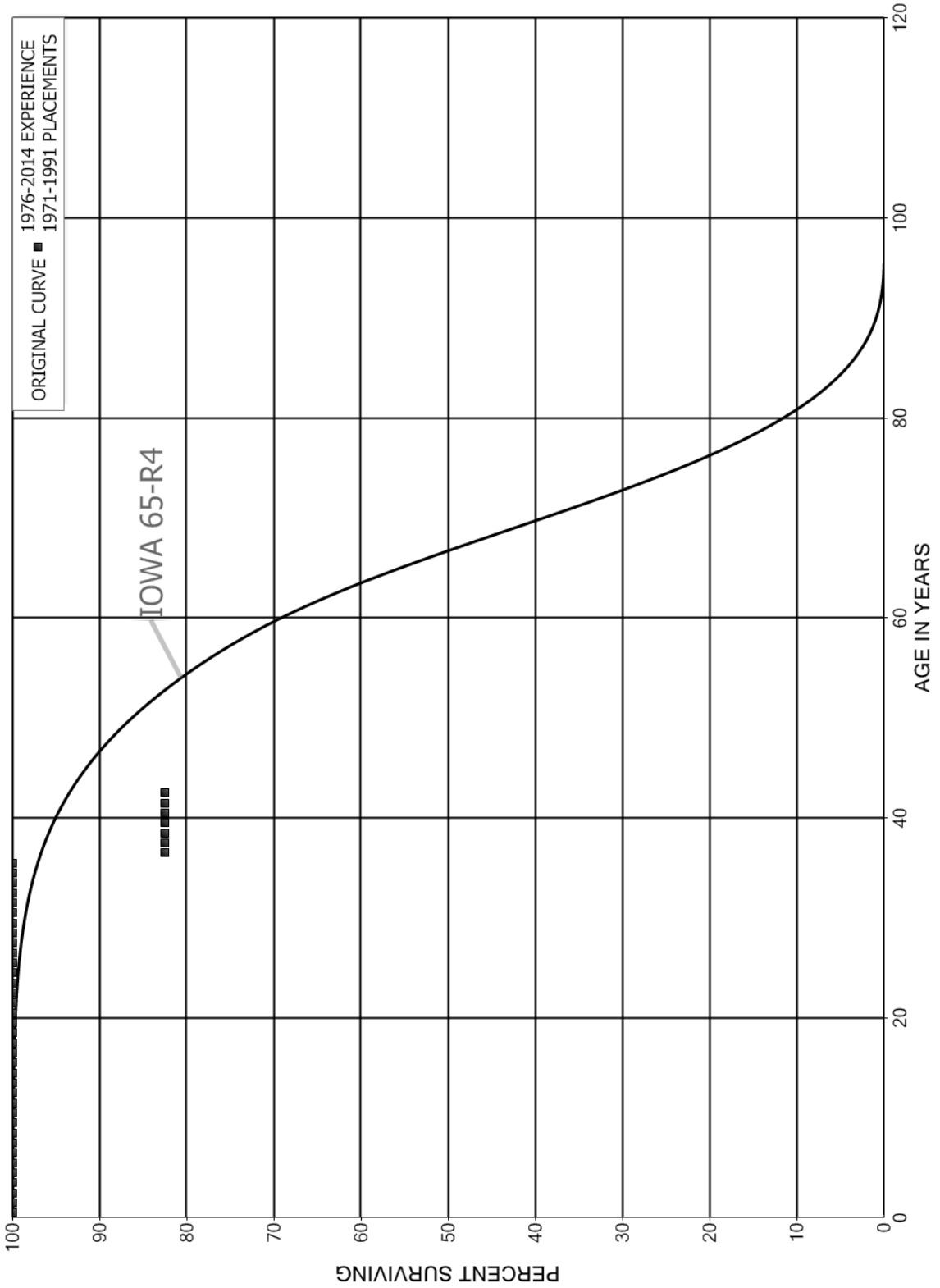
ACCOUNT 3100V - ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2014 EXPERIENCE BAND 1929-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	8,649,741	278,417	0.0322	0.9678	72.93
40.5	8,257,422	855,745	0.1036	0.8964	70.59
41.5	1,346,149	32,701	0.0243	0.9757	63.27
42.5	1,259,283	13,087	0.0104	0.9896	61.73
43.5	830,170	37,055	0.0446	0.9554	61.09
44.5	723,991	7,860	0.0109	0.9891	58.37
45.5	641,612	28,775	0.0448	0.9552	57.73
46.5	539,746	5,486	0.0102	0.9898	55.14
47.5	370,482	3,115	0.0084	0.9916	54.58
48.5	319,178	2,323	0.0073	0.9927	54.12
49.5	314,789	69,630	0.2212	0.7788	53.73
50.5	311,331	3,062	0.0098	0.9902	41.84
51.5	302,174	67,924	0.2248	0.7752	41.43
52.5	184,932	7,170	0.0388	0.9612	32.12
53.5	137,922	81,861	0.5935	0.4065	30.87
54.5	74,874	1,237	0.0165	0.9835	12.55
55.5	88,177	1,476	0.0167	0.9833	12.34
56.5	87,405	723	0.0083	0.9917	12.14
57.5	70,403	876	0.0124	0.9876	12.04
58.5	42,399	443	0.0105	0.9895	11.89
59.5	25,958	205	0.0079	0.9921	11.76
60.5	8,086	93	0.0115	0.9885	11.67
61.5	749	13	0.0172	0.9828	11.53
62.5	105	5	0.0459	0.9541	11.34
63.5					10.82

MANITOBA HYDRO
ACCOUNT 3200M - SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3200M - SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-1991 EXPERIENCE BAND 1976-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	124,325,573		0.0000	1.0000	100.00
0.5	124,325,573		0.0000	1.0000	100.00
1.5	124,325,573		0.0000	1.0000	100.00
2.5	124,325,573		0.0000	1.0000	100.00
3.5	124,325,573		0.0000	1.0000	100.00
4.5	128,897,292		0.0000	1.0000	100.00
5.5	128,897,292		0.0000	1.0000	100.00
6.5	128,897,292		0.0000	1.0000	100.00
7.5	128,897,292		0.0000	1.0000	100.00
8.5	128,897,292		0.0000	1.0000	100.00
9.5	128,897,292		0.0000	1.0000	100.00
10.5	128,897,292		0.0000	1.0000	100.00
11.5	128,897,292		0.0000	1.0000	100.00
12.5	128,897,292		0.0000	1.0000	100.00
13.5	128,897,292		0.0000	1.0000	100.00
14.5	128,897,292		0.0000	1.0000	100.00
15.5	128,897,292		0.0000	1.0000	100.00
16.5	128,897,292		0.0000	1.0000	100.00
17.5	128,897,292		0.0000	1.0000	100.00
18.5	128,897,292		0.0000	1.0000	100.00
19.5	128,897,292		0.0000	1.0000	100.00
20.5	128,897,292		0.0000	1.0000	100.00
21.5	128,897,292		0.0000	1.0000	100.00
22.5	128,897,292		0.0000	1.0000	100.00
23.5	44,102,755		0.0000	1.0000	100.00
24.5	39,236,043		0.0000	1.0000	100.00
25.5	39,236,043		0.0000	1.0000	100.00
26.5	39,236,043		0.0000	1.0000	100.00
27.5	39,236,043		0.0000	1.0000	100.00
28.5	39,236,043		0.0000	1.0000	100.00
29.5	39,236,043		0.0000	1.0000	100.00
30.5	39,236,043		0.0000	1.0000	100.00
31.5	39,236,043		0.0000	1.0000	100.00
32.5	39,236,043		0.0000	1.0000	100.00
33.5	39,236,043		0.0000	1.0000	100.00
34.5	39,236,043		0.0000	1.0000	100.00
35.5	39,236,043	6,870,487	0.1751	0.8249	100.00
36.5	21,811,934		0.0000	1.0000	82.49
37.5	21,811,934		0.0000	1.0000	82.49
38.5	4,571,720		0.0000	1.0000	82.49

MANITOBA HYDRO

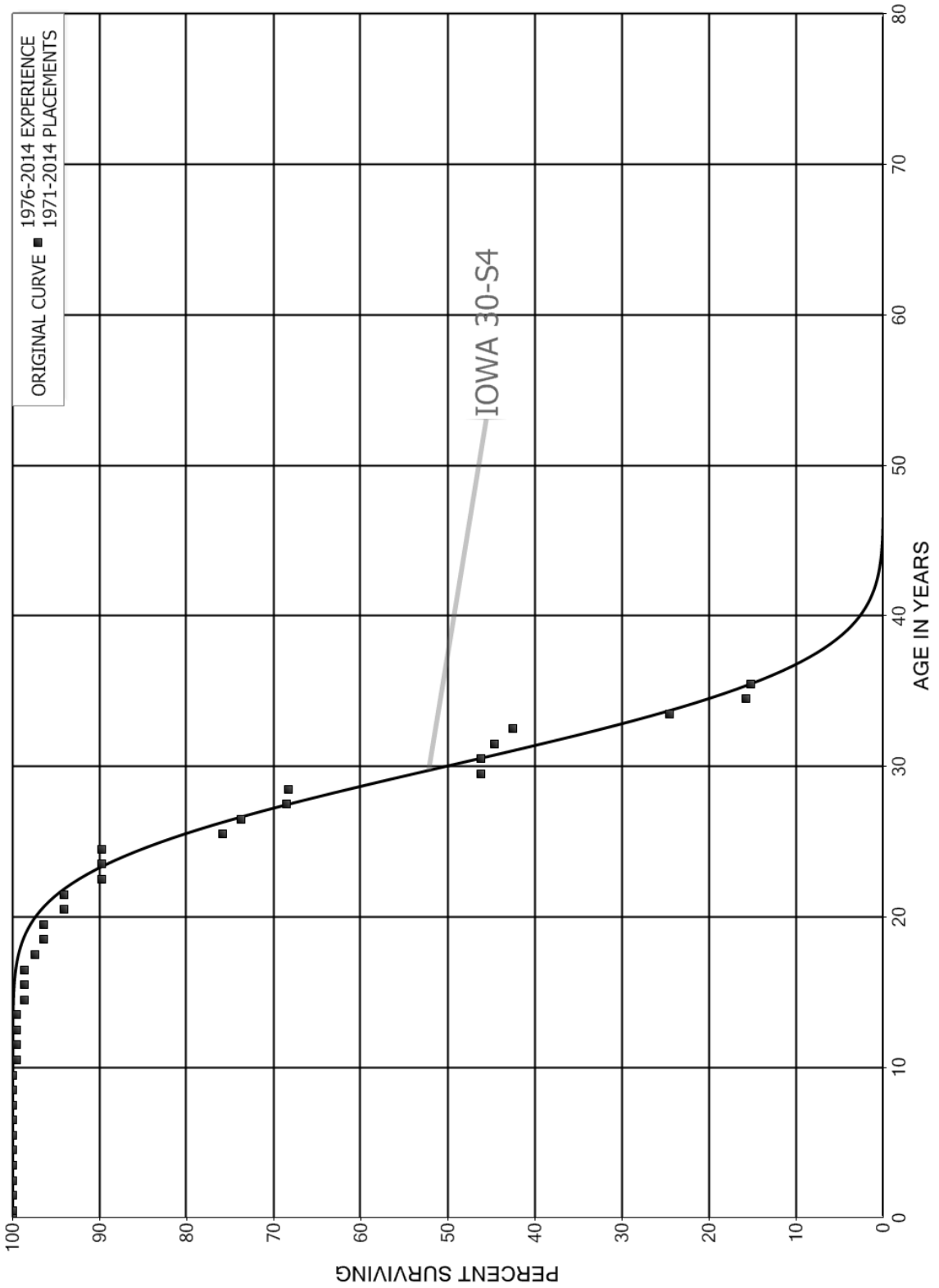
ACCOUNT 3200M - SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-1991 EXPERIENCE BAND 1976-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,571,720		0.0000	1.0000	82.49
40.5	4,571,720		0.0000	1.0000	82.49
41.5	4,571,720		0.0000	1.0000	82.49
42.5	4,571,720		0.0000	1.0000	82.49
43.5					82.49

MANITOBA HYDRO
ACCOUNT 3200P - HVDC CONVERTER EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3200P - HVDC CONVERTER EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1976-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	508,055,525		0.0000	1.0000	100.00
0.5	494,048,245	122,000	0.0002	0.9998	100.00
1.5	473,666,764		0.0000	1.0000	99.98
2.5	460,712,333		0.0000	1.0000	99.98
3.5	448,675,621		0.0000	1.0000	99.98
4.5	459,901,904		0.0000	1.0000	99.98
5.5	458,780,374		0.0000	1.0000	99.98
6.5	422,765,171		0.0000	1.0000	99.98
7.5	415,251,561		0.0000	1.0000	99.98
8.5	400,258,830		0.0000	1.0000	99.98
9.5	341,278,796	1,750,000	0.0051	0.9949	99.98
10.5	304,984,029		0.0000	1.0000	99.46
11.5	279,545,027		0.0000	1.0000	99.46
12.5	268,644,950		0.0000	1.0000	99.46
13.5	248,679,267	2,000,000	0.0080	0.9920	99.46
14.5	231,108,485		0.0000	1.0000	98.66
15.5	225,627,453		0.0000	1.0000	98.66
16.5	215,178,243	2,659,964	0.0124	0.9876	98.66
17.5	167,492,570	1,790,472	0.0107	0.9893	97.44
18.5	160,913,102		0.0000	1.0000	96.40
19.5	88,879,965	2,200,000	0.0248	0.9752	96.40
20.5	86,679,965		0.0000	1.0000	94.02
21.5	86,679,965	4,000,287	0.0462	0.9538	94.02
22.5	82,679,678		0.0000	1.0000	89.68
23.5	82,679,678		0.0000	1.0000	89.68
24.5	82,679,678	12,746,121	0.1542	0.8458	89.68
25.5	69,933,557	1,926,205	0.0275	0.9725	75.85
26.5	68,007,352	4,838,548	0.0711	0.9289	73.76
27.5	63,168,804	252,000	0.0040	0.9960	68.51
28.5	62,916,804	20,303,803	0.3227	0.6773	68.24
29.5	42,613,001		0.0000	1.0000	46.22
30.5	40,986,010	1,468,179	0.0358	0.9642	46.22
31.5	39,517,831	1,850,000	0.0468	0.9532	44.56
32.5	37,667,831	15,979,486	0.4242	0.5758	42.48
33.5	21,688,345	7,760,051	0.3578	0.6422	24.46
34.5	13,928,293	497,499	0.0357	0.9643	15.71
35.5	13,430,795	1,000,000	0.0745	0.9255	15.15
36.5	2,261,117		0.0000	1.0000	14.02
37.5	2,261,117	750,000	0.3317	0.6683	14.02
38.5	1,247,138		0.0000	1.0000	9.37

MANITOBA HYDRO

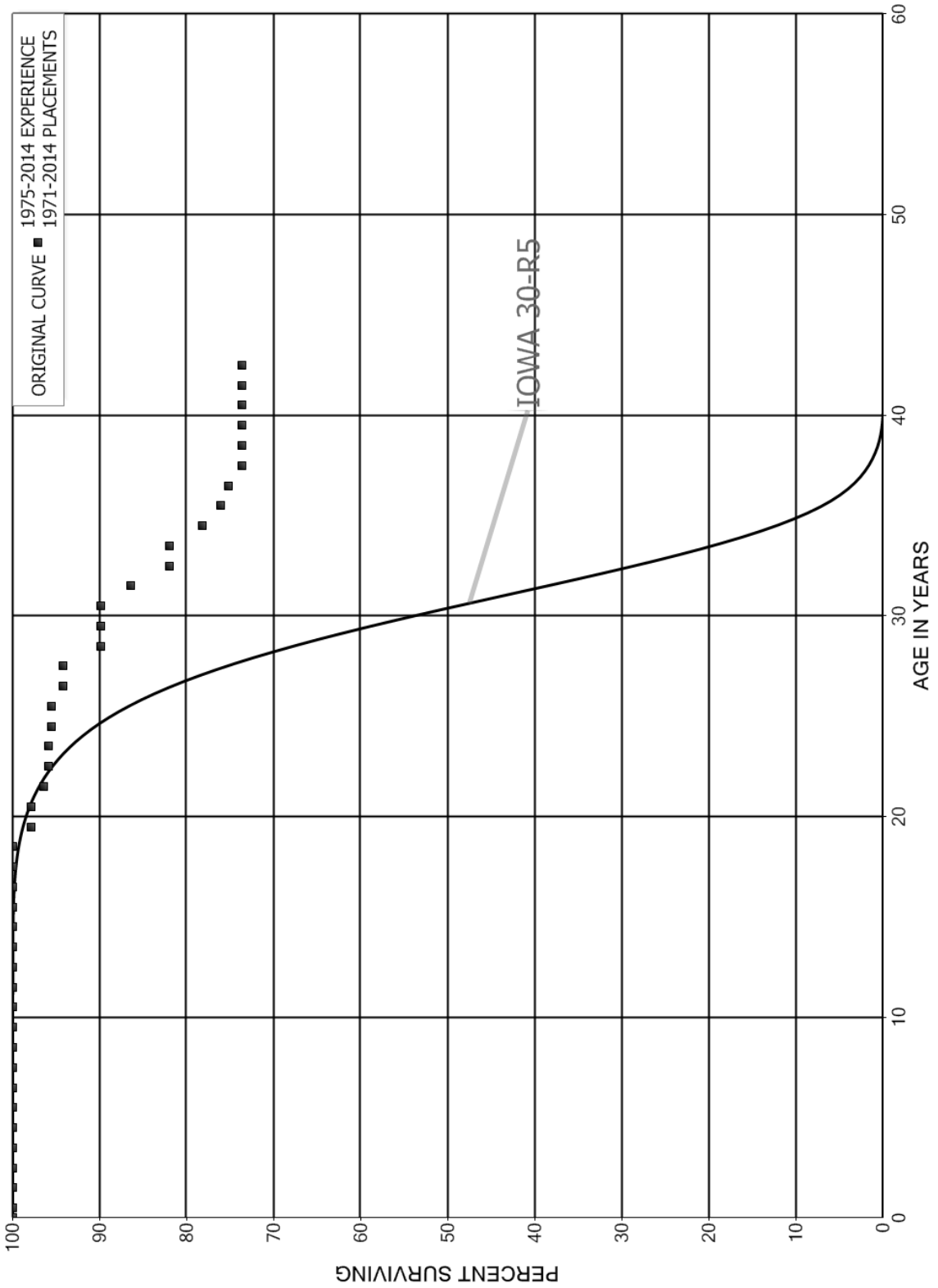
ACCOUNT 3200P - HVDC CONVERTER EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1976-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,247,138		0.0000	1.0000	9.37
40.5	1,247,138		0.0000	1.0000	9.37
41.5	1,247,138	63,726	0.0511	0.9489	9.37
42.5	1,183,412	760,743	0.6428	0.3572	8.89
43.5					3.18

MANITOBA HYDRO
ACCOUNT 3200S - HVDC SERIALIZED EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3200S - HVDC SERIALIZED EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1975-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	228,674,928	2,076	0.0000	1.0000	100.00
0.5	227,170,296		0.0000	1.0000	100.00
1.5	225,327,294		0.0000	1.0000	100.00
2.5	219,280,206		0.0000	1.0000	100.00
3.5	222,003,531		0.0000	1.0000	100.00
4.5	217,629,747		0.0000	1.0000	100.00
5.5	213,228,344		0.0000	1.0000	100.00
6.5	211,691,327	0	0.0000	1.0000	100.00
7.5	209,869,661		0.0000	1.0000	100.00
8.5	208,461,862	6,386	0.0000	1.0000	100.00
9.5	204,636,832		0.0000	1.0000	100.00
10.5	198,234,420		0.0000	1.0000	100.00
11.5	176,844,149	70,513	0.0004	0.9996	100.00
12.5	161,388,517		0.0000	1.0000	99.96
13.5	150,835,752		0.0000	1.0000	99.96
14.5	138,951,300		0.0000	1.0000	99.96
15.5	134,661,473	13,099	0.0001	0.9999	99.96
16.5	133,917,275	31,821	0.0002	0.9998	99.95
17.5	128,854,654		0.0000	1.0000	99.92
18.5	127,158,013	2,626,221	0.0207	0.9793	99.92
19.5	124,531,792		0.0000	1.0000	97.86
20.5	124,418,050	1,902,446	0.0153	0.9847	97.86
21.5	121,480,402	648,304	0.0053	0.9947	96.36
22.5	120,719,052	2,234	0.0000	1.0000	95.85
23.5	120,716,818	460,510	0.0038	0.9962	95.85
24.5	120,231,088		0.0000	1.0000	95.48
25.5	119,843,229	1,630,812	0.0136	0.9864	95.48
26.5	118,212,417		0.0000	1.0000	94.18
27.5	118,212,417	5,425,000	0.0459	0.9541	94.18
28.5	112,725,580		0.0000	1.0000	89.86
29.5	112,725,580		0.0000	1.0000	89.86
30.5	95,817,671	3,741,611	0.0390	0.9610	89.86
31.5	92,064,259	4,712,125	0.0512	0.9488	86.35
32.5	85,134,747		0.0000	1.0000	81.93
33.5	85,064,969	3,872,326	0.0455	0.9545	81.93
34.5	81,192,643	2,250,000	0.0277	0.9723	78.20
35.5	78,942,643	944,992	0.0120	0.9880	76.03
36.5	46,002,521	943,933	0.0205	0.9795	75.12
37.5	45,058,588		0.0000	1.0000	73.58
38.5	11,331,566		0.0000	1.0000	73.58

MANITOBA HYDRO

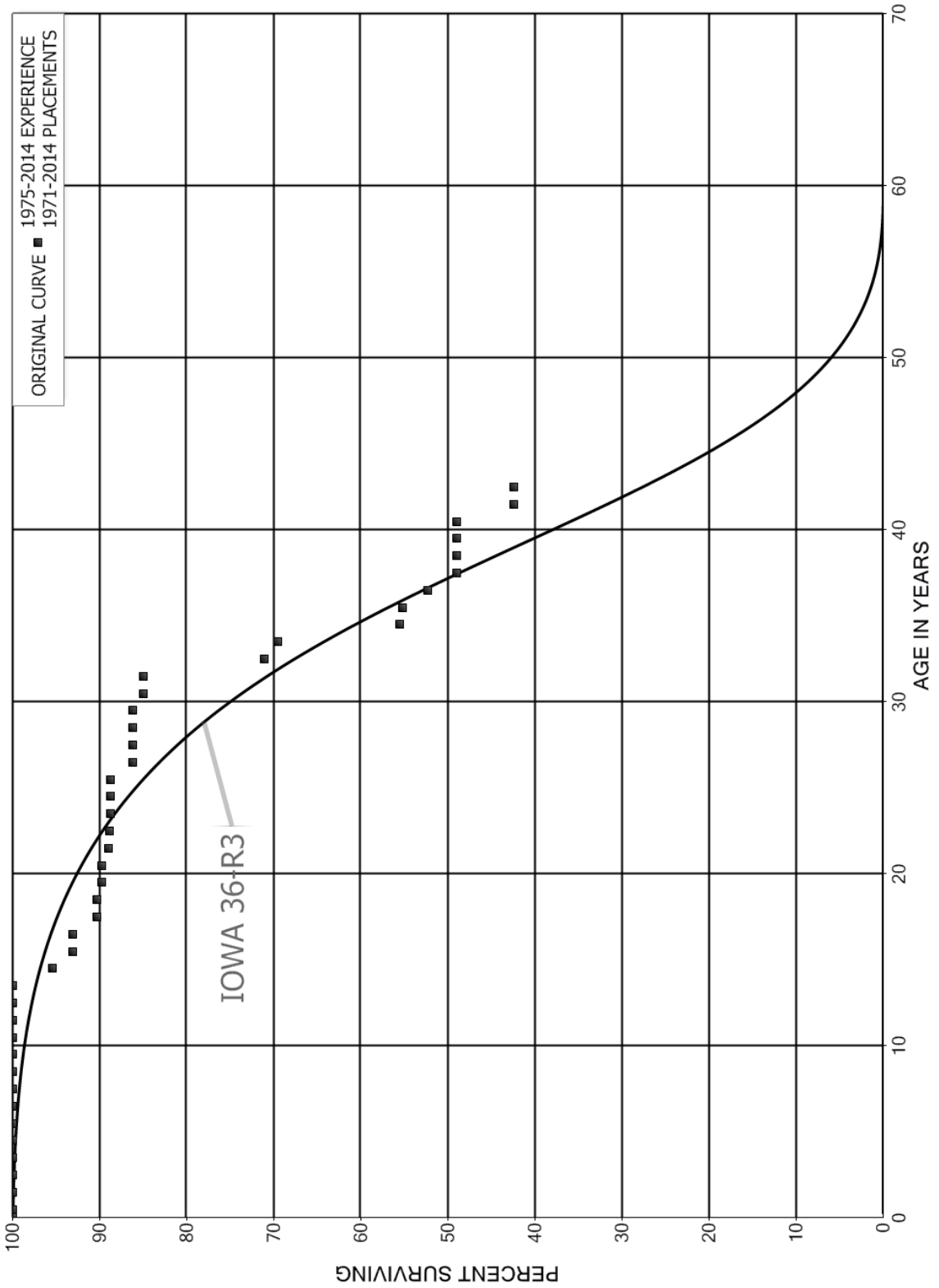
ACCOUNT 3200S - HVDC SERIALIZED EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1975-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	11,331,566		0.0000	1.0000	73.58
40.5	11,331,566		0.0000	1.0000	73.58
41.5	11,331,566		0.0000	1.0000	73.58
42.5	11,331,566	872,323	0.0770	0.9230	73.58
43.5					67.92

MANITOBA HYDRO
ACCOUNT 3200U - HVDC ACCESSORY STATION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3200U - HVDC ACCESSORY STATION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1975-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	186,298,636	11,540	0.0001	0.9999	100.00
0.5	183,623,667		0.0000	1.0000	99.99
1.5	177,086,138		0.0000	1.0000	99.99
2.5	169,395,517		0.0000	1.0000	99.99
3.5	163,270,340		0.0000	1.0000	99.99
4.5	151,624,131		0.0000	1.0000	99.99
5.5	135,773,541	64,661	0.0005	0.9995	99.99
6.5	128,042,734		0.0000	1.0000	99.95
7.5	119,081,434		0.0000	1.0000	99.95
8.5	108,238,829		0.0000	1.0000	99.95
9.5	93,748,151	0	0.0000	1.0000	99.95
10.5	84,405,972		0.0000	1.0000	99.95
11.5	79,083,154		0.0000	1.0000	99.95
12.5	76,899,357	7,731	0.0001	0.9999	99.95
13.5	75,408,241	3,424,815	0.0454	0.9546	99.94
14.5	70,701,630	1,718,705	0.0243	0.9757	95.40
15.5	66,432,919	31,476	0.0005	0.9995	93.08
16.5	60,417,656	1,784,905	0.0295	0.9705	93.03
17.5	53,188,883	722	0.0000	1.0000	90.29
18.5	50,070,008	293,390	0.0059	0.9941	90.28
19.5	49,247,219		0.0000	1.0000	89.76
20.5	49,109,900	462,440	0.0094	0.9906	89.76
21.5	46,026,106	38,796	0.0008	0.9992	88.91
22.5	44,380,541	52,000	0.0012	0.9988	88.84
23.5	39,579,003	0	0.0000	1.0000	88.73
24.5	38,647,209	7,623	0.0002	0.9998	88.73
25.5	35,267,070	988,974	0.0280	0.9720	88.71
26.5	31,987,326		0.0000	1.0000	86.23
27.5	29,602,135		0.0000	1.0000	86.23
28.5	28,711,130		0.0000	1.0000	86.23
29.5	27,839,064	395,764	0.0142	0.9858	86.23
30.5	26,358,867		0.0000	1.0000	85.00
31.5	26,149,606	4,293,524	0.1642	0.8358	85.00
32.5	21,326,402	473,870	0.0222	0.9778	71.04
33.5	20,294,909	4,077,088	0.2009	0.7991	69.47
34.5	16,119,879	100,000	0.0062	0.9938	55.51
35.5	16,004,664	847,890	0.0530	0.9470	55.17
36.5	11,797,478	732,154	0.0621	0.9379	52.24
37.5	11,065,324		0.0000	1.0000	49.00
38.5	3,245,388		0.0000	1.0000	49.00

MANITOBA HYDRO

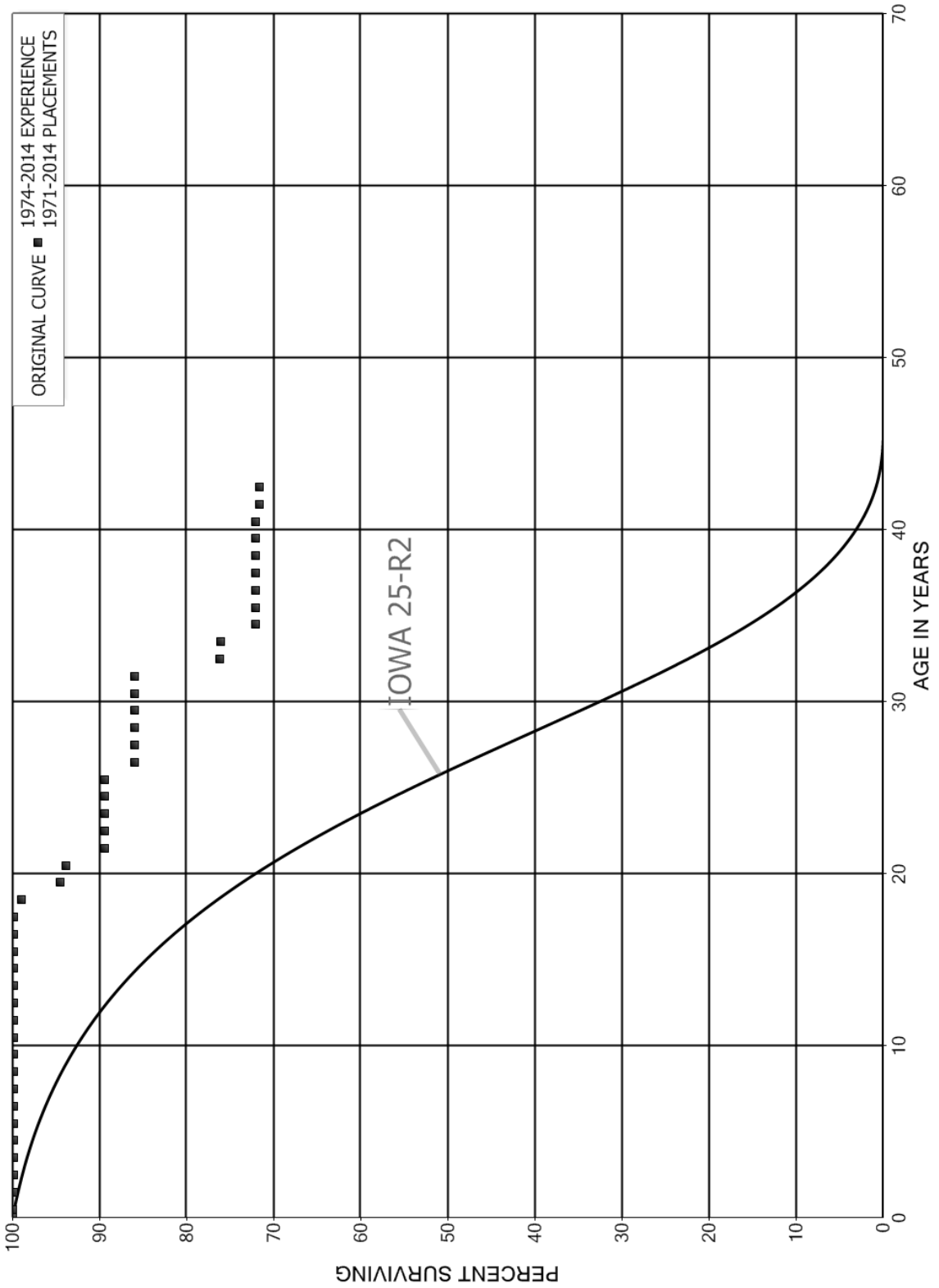
ACCOUNT 3200U - HVDC ACCESSORY STATION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1975-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,245,388		0.0000	1.0000	49.00
40.5	3,245,388	434,701	0.1339	0.8661	49.00
41.5	2,810,687		0.0000	1.0000	42.44
42.5	2,810,687	47,008	0.0167	0.9833	42.44
43.5					41.73

MANITOBA HYDRO
ACCOUNT 3200V - HVDC ELECTRONIC EQUIPMENT AND BATTERIES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 3200V - HVDC ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1974-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	52,490,838	1	0.0000	1.0000	100.00
0.5	47,088,945	64,502	0.0014	0.9986	100.00
1.5	46,945,855		0.0000	1.0000	99.86
2.5	43,362,695	0	0.0000	1.0000	99.86
3.5	43,311,053		0.0000	1.0000	99.86
4.5	42,952,436		0.0000	1.0000	99.86
5.5	42,637,825		0.0000	1.0000	99.86
6.5	42,576,876		0.0000	1.0000	99.86
7.5	42,512,382		0.0000	1.0000	99.86
8.5	42,348,895		0.0000	1.0000	99.86
9.5	42,136,758		0.0000	1.0000	99.86
10.5	42,136,758		0.0000	1.0000	99.86
11.5	42,102,155		0.0000	1.0000	99.86
12.5	42,079,215		0.0000	1.0000	99.86
13.5	42,038,200	70	0.0000	1.0000	99.86
14.5	41,296,862	33,420	0.0008	0.9992	99.86
15.5	38,366,500		0.0000	1.0000	99.78
16.5	37,701,592		0.0000	1.0000	99.78
17.5	34,181,473	300,592	0.0088	0.9912	99.78
18.5	33,636,557	1,483,360	0.0441	0.9559	98.90
19.5	32,133,332	226,415	0.0070	0.9930	94.54
20.5	31,865,997	1,505,829	0.0473	0.9527	93.88
21.5	29,510,049		0.0000	1.0000	89.44
22.5	28,949,849	0	0.0000	1.0000	89.44
23.5	28,615,507		0.0000	1.0000	89.44
24.5	28,276,149		0.0000	1.0000	89.44
25.5	27,427,925	1,055,413	0.0385	0.9615	89.44
26.5	26,372,512		0.0000	1.0000	86.00
27.5	26,343,772		0.0000	1.0000	86.00
28.5	26,088,961		0.0000	1.0000	86.00
29.5	25,805,898	2,477	0.0001	0.9999	86.00
30.5	22,029,577		0.0000	1.0000	85.99
31.5	22,029,577	2,525,116	0.1146	0.8854	85.99
32.5	19,504,461	16,891	0.0009	0.9991	76.13
33.5	19,487,570	1,039,184	0.0533	0.9467	76.07
34.5	18,448,385		0.0000	1.0000	72.01
35.5	18,448,385		0.0000	1.0000	72.01
36.5	10,492,906	0	0.0000	1.0000	72.01
37.5	10,492,906		0.0000	1.0000	72.01
38.5	3,693,756		0.0000	1.0000	72.01

MANITOBA HYDRO

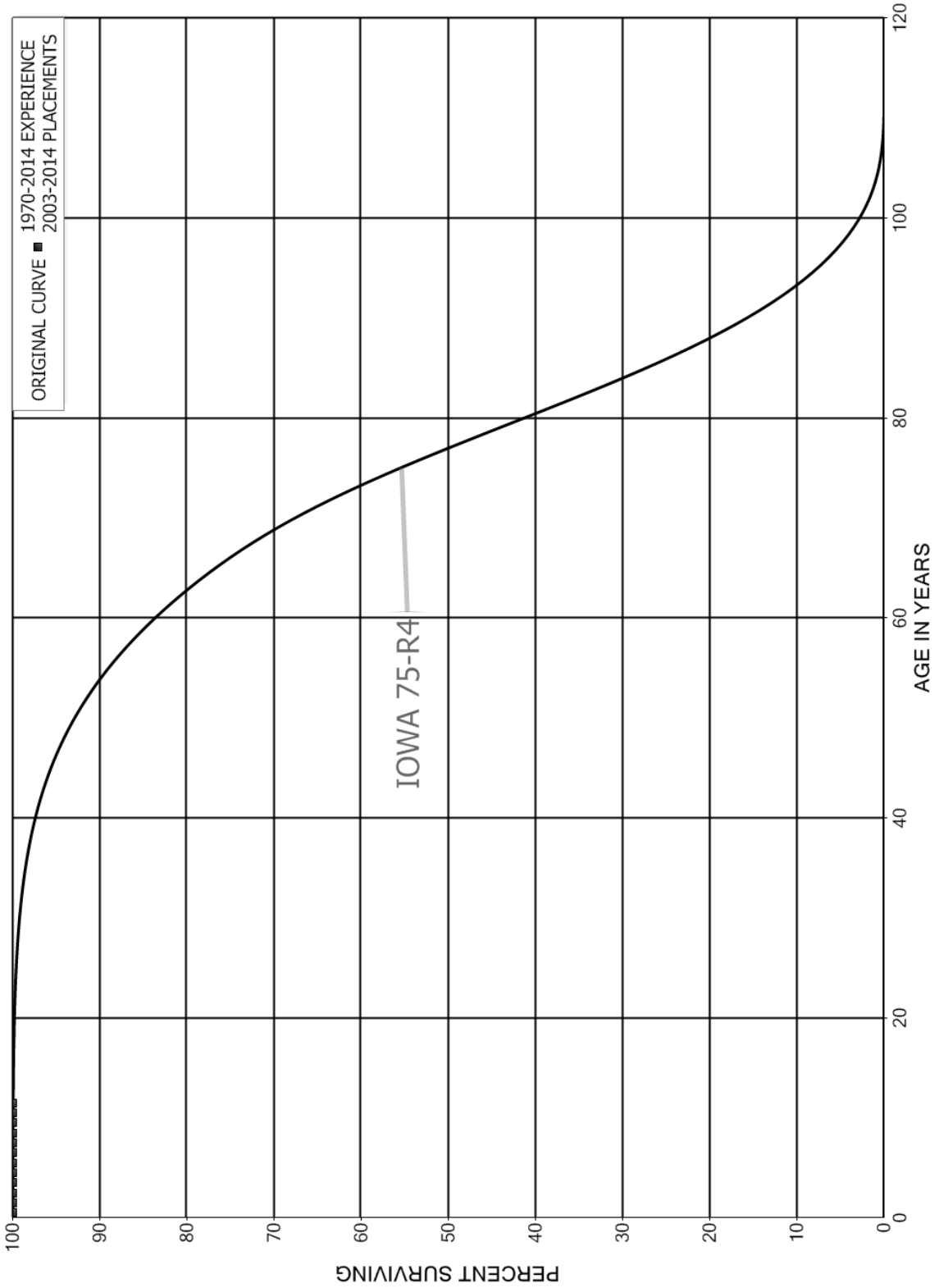
ACCOUNT 3200V - HVDC ELECTRONIC EQUIPMENT AND BATTERIES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1974-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,693,756		0.0000	1.0000	72.01
40.5	3,693,756	18,016	0.0049	0.9951	72.01
41.5	3,675,739		0.0000	1.0000	71.66
42.5	3,675,739		0.0000	1.0000	71.66
43.5					71.66

MANITOBA HYDRO
ACCOUNT 4000A - CONCRETE DUCTLINE AND MANHOLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

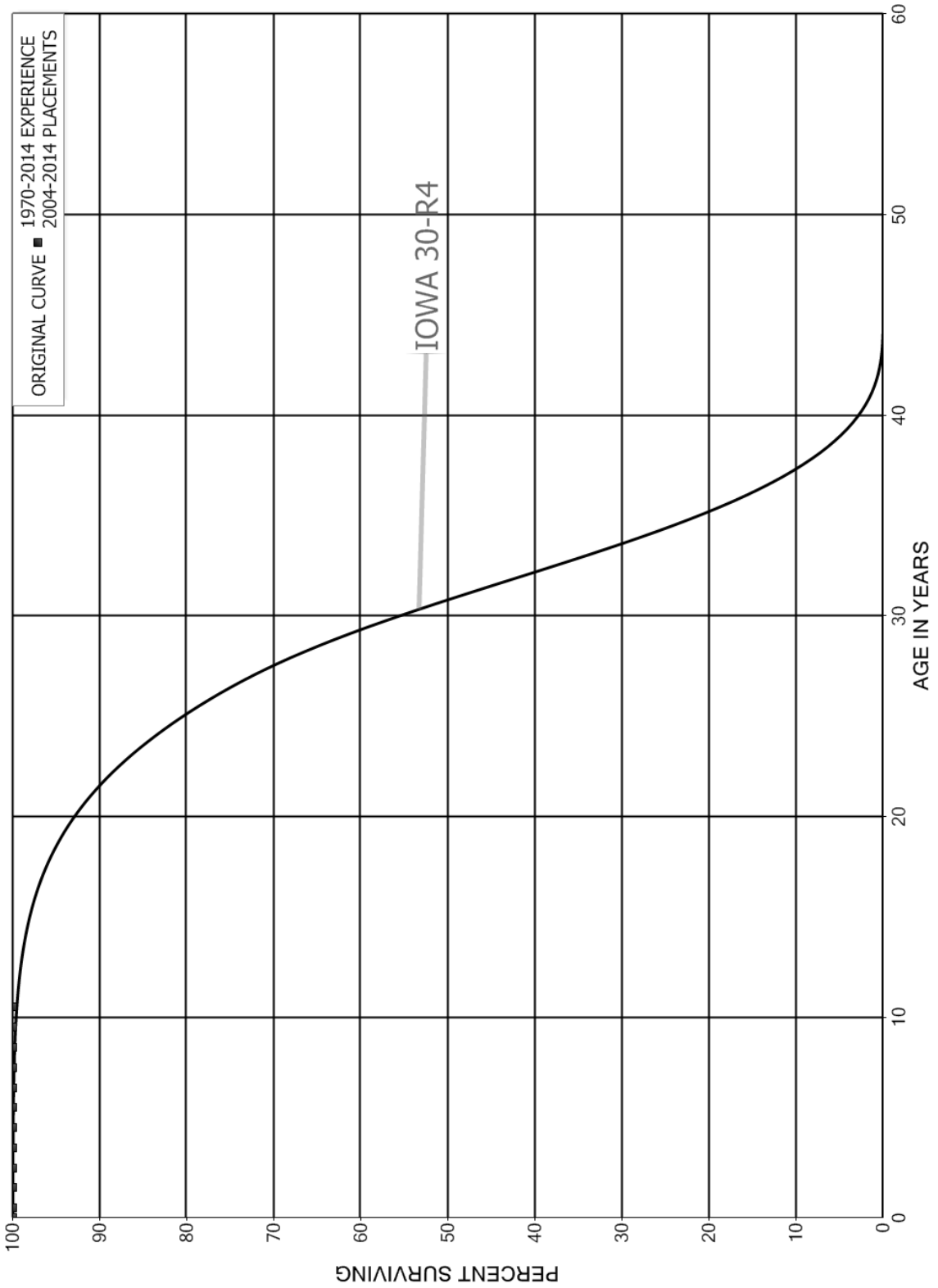
ACCOUNT 4000A - CONCRETE DUCTLINE AND MANHOLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 2003-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	72,073,416		0.0000	1.0000	100.00
0.5	68,712,521		0.0000	1.0000	100.00
1.5	67,914,244		0.0000	1.0000	100.00
2.5	67,724,701		0.0000	1.0000	100.00
3.5	64,235,270		0.0000	1.0000	100.00
4.5	62,611,926		0.0000	1.0000	100.00
5.5	59,077,301		0.0000	1.0000	100.00
6.5	58,869,131		0.0000	1.0000	100.00
7.5	58,350,343		0.0000	1.0000	100.00
8.5	57,610,494		0.0000	1.0000	100.00
9.5	57,276,385		0.0000	1.0000	100.00
10.5	55,704,759		0.0000	1.0000	100.00
11.5					100.00

MANITOBA HYDRO
ACCOUNT 4000C - CONCRETE DUCTLINE AND MANHOLE REFURBISHMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

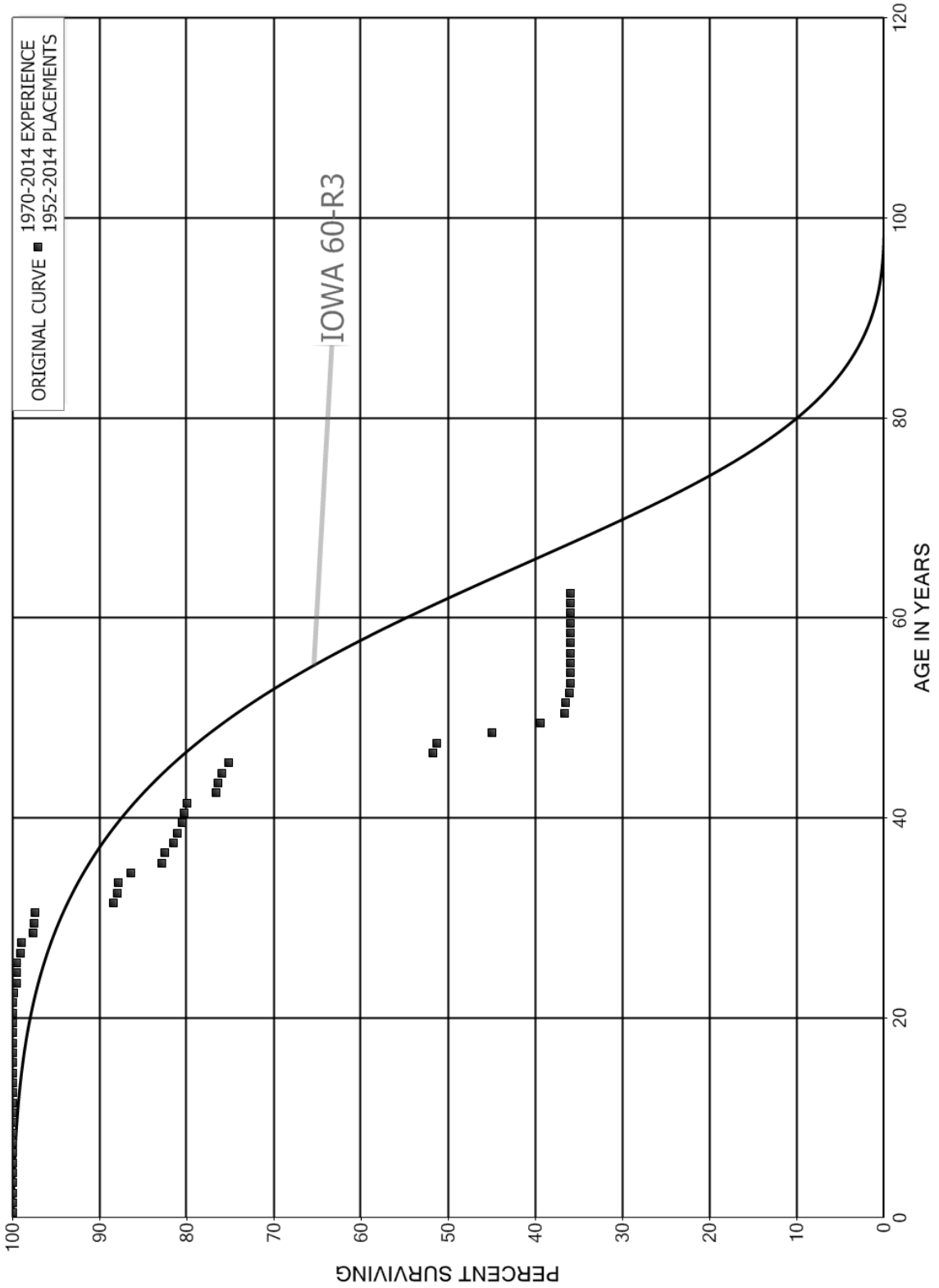
ACCOUNT 4000C - CONCRETE DUCTLINE AND MANHOLE REFURBISHMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 2004-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	7,368,727		0.0000	1.0000	100.00
0.5	6,122,933		0.0000	1.0000	100.00
1.5	3,861,557		0.0000	1.0000	100.00
2.5	3,202,437		0.0000	1.0000	100.00
3.5	2,908,307		0.0000	1.0000	100.00
4.5	1,628,079		0.0000	1.0000	100.00
5.5	1,289,442		0.0000	1.0000	100.00
6.5	830,042		0.0000	1.0000	100.00
7.5	589,831		0.0000	1.0000	100.00
8.5	474,350		0.0000	1.0000	100.00
9.5	118,501		0.0000	1.0000	100.00
10.5					100.00

MANITOBA HYDRO
ACCOUNT 4000G - METAL TOWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000G - METAL TOWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1952-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10,841,965		0.0000	1.0000	100.00
0.5	9,616,372		0.0000	1.0000	100.00
1.5	5,773,567		0.0000	1.0000	100.00
2.5	5,799,352	0	0.0000	1.0000	100.00
3.5	4,822,863	3	0.0000	1.0000	100.00
4.5	4,633,401	54	0.0000	1.0000	100.00
5.5	4,653,473	0	0.0000	1.0000	100.00
6.5	4,655,631	1	0.0000	1.0000	100.00
7.5	3,886,232	23	0.0000	1.0000	100.00
8.5	3,858,302	134	0.0000	1.0000	100.00
9.5	3,809,537	0	0.0000	1.0000	99.99
10.5	3,555,629	181	0.0001	0.9999	99.99
11.5	3,541,102	3	0.0000	1.0000	99.99
12.5	2,213,373	4	0.0000	1.0000	99.99
13.5	2,214,480	105	0.0000	1.0000	99.99
14.5	2,246,184	89	0.0000	1.0000	99.98
15.5	2,246,998	28	0.0000	1.0000	99.98
16.5	2,229,362	113	0.0001	0.9999	99.98
17.5	2,000,164	98	0.0000	1.0000	99.97
18.5	717,305	62	0.0001	0.9999	99.97
19.5	717,243	59	0.0001	0.9999	99.96
20.5	717,183	40	0.0001	0.9999	99.95
21.5	717,144	734	0.0010	0.9990	99.95
22.5	716,409	2,070	0.0029	0.9971	99.84
23.5	714,340	113	0.0002	0.9998	99.56
24.5	714,227	255	0.0004	0.9996	99.54
25.5	713,971	2,955	0.0041	0.9959	99.50
26.5	711,016	729	0.0010	0.9990	99.09
27.5	710,287	9,619	0.0135	0.9865	98.99
28.5	700,668	1,048	0.0015	0.9985	97.65
29.5	699,620	424	0.0006	0.9994	97.50
30.5	699,196	64,858	0.0928	0.9072	97.45
31.5	634,057	3,419	0.0054	0.9946	88.41
32.5	630,638	788	0.0012	0.9988	87.93
33.5	629,850	9,974	0.0158	0.9842	87.82
34.5	619,876	26,015	0.0420	0.9580	86.43
35.5	593,861	2,287	0.0039	0.9961	82.80
36.5	567,902	6,711	0.0118	0.9882	82.48
37.5	561,190	2,788	0.0050	0.9950	81.51
38.5	558,403	3,946	0.0071	0.9929	81.10

MANITOBA HYDRO

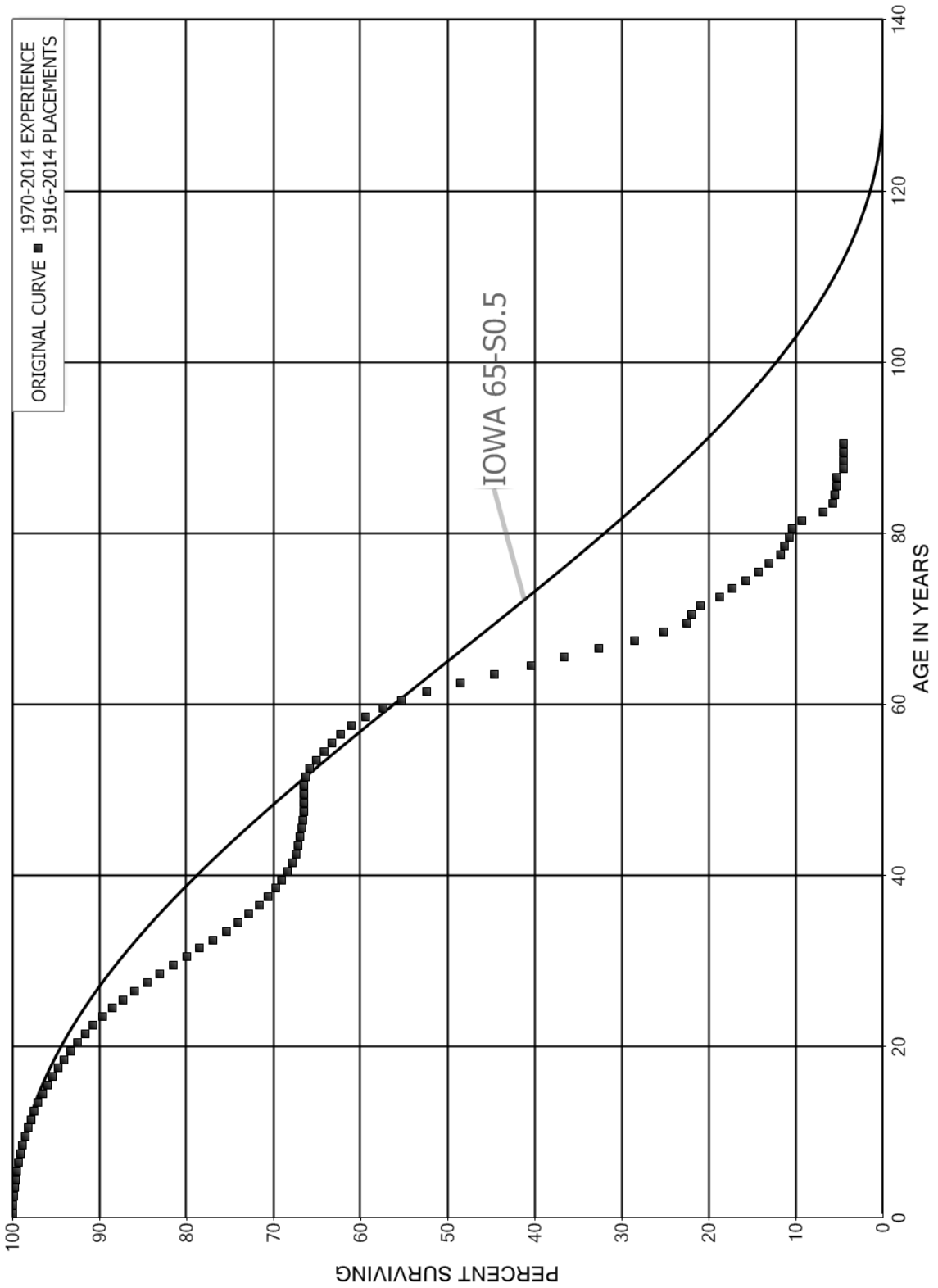
ACCOUNT 4000G - METAL TOWERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1952-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	554,457	1,721	0.0031	0.9969	80.53
40.5	552,736	2,319	0.0042	0.9958	80.28
41.5	498,446	20,858	0.0418	0.9582	79.94
42.5	477,587	1,119	0.0023	0.9977	76.60
43.5	476,469	2,789	0.0059	0.9941	76.42
44.5	211,686	2,232	0.0105	0.9895	75.97
45.5	206,759	64,592	0.3124	0.6876	75.17
46.5	139,810	973	0.0070	0.9930	51.69
47.5	120,586	15,077	0.1250	0.8750	51.33
48.5	84,304	10,441	0.1239	0.8761	44.91
49.5	69,635	4,872	0.0700	0.9300	39.35
50.5	52,660	183	0.0035	0.9965	36.59
51.5	51,245	588	0.0115	0.9885	36.47
52.5	47,946	132	0.0028	0.9972	36.05
53.5	46,899		0.0000	1.0000	35.95
54.5	46,128		0.0000	1.0000	35.95
55.5	27,183		0.0000	1.0000	35.95
56.5	26,674		0.0000	1.0000	35.95
57.5	25,050		0.0000	1.0000	35.95
58.5	24,730		0.0000	1.0000	35.95
59.5	2,653		0.0000	1.0000	35.95
60.5	2,493		0.0000	1.0000	35.95
61.5	317		0.0000	1.0000	35.95
62.5					35.95

MANITOBA HYDRO
ACCOUNT 4000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	667,290,761	179,215	0.0003	0.9997	100.00
0.5	649,513,268	412,099	0.0006	0.9994	99.97
1.5	632,583,982	502,104	0.0008	0.9992	99.91
2.5	610,565,097	610,114	0.0010	0.9990	99.83
3.5	596,625,112	743,450	0.0012	0.9988	99.73
4.5	586,991,845	875,901	0.0015	0.9985	99.61
5.5	570,398,954	1,017,082	0.0018	0.9982	99.46
6.5	552,213,702	1,170,005	0.0021	0.9979	99.28
7.5	537,395,618	1,304,396	0.0024	0.9976	99.07
8.5	524,326,618	1,489,426	0.0028	0.9972	98.83
9.5	512,575,543	1,680,007	0.0033	0.9967	98.55
10.5	496,005,173	1,846,241	0.0037	0.9963	98.23
11.5	480,609,384	1,967,550	0.0041	0.9959	97.86
12.5	465,185,945	2,124,178	0.0046	0.9954	97.46
13.5	453,122,998	2,302,113	0.0051	0.9949	97.01
14.5	441,157,095	2,455,091	0.0056	0.9944	96.52
15.5	429,106,347	2,606,412	0.0061	0.9939	95.98
16.5	416,685,381	2,720,853	0.0065	0.9935	95.40
17.5	401,660,611	2,906,252	0.0072	0.9928	94.78
18.5	384,876,586	3,089,209	0.0080	0.9920	94.09
19.5	376,558,734	3,253,897	0.0086	0.9914	93.34
20.5	361,400,126	3,452,971	0.0096	0.9904	92.53
21.5	345,291,631	3,602,798	0.0104	0.9896	91.65
22.5	330,018,321	3,735,254	0.0113	0.9887	90.69
23.5	309,283,121	3,905,899	0.0126	0.9874	89.66
24.5	290,787,483	4,048,712	0.0139	0.9861	88.53
25.5	270,526,037	4,134,689	0.0153	0.9847	87.30
26.5	251,207,305	4,184,716	0.0167	0.9833	85.96
27.5	237,001,160	4,131,427	0.0174	0.9826	84.53
28.5	222,312,065	4,071,944	0.0183	0.9817	83.06
29.5	208,079,458	3,927,558	0.0189	0.9811	81.54
30.5	192,604,952	3,728,715	0.0194	0.9806	80.00
31.5	179,855,555	3,481,656	0.0194	0.9806	78.45
32.5	165,679,867	3,235,523	0.0195	0.9805	76.93
33.5	158,352,700	2,886,005	0.0182	0.9818	75.43
34.5	145,643,721	2,501,856	0.0172	0.9828	74.05
35.5	138,453,675	2,135,399	0.0154	0.9846	72.78
36.5	127,821,591	1,848,608	0.0145	0.9855	71.66
37.5	123,893,515	1,506,320	0.0122	0.9878	70.62
38.5	116,304,309	1,193,207	0.0103	0.9897	69.76

MANITOBA HYDRO

ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	106,081,307	978,649	0.0092	0.9908	69.05
40.5	99,511,024	809,294	0.0081	0.9919	68.41
41.5	97,604,273	591,087	0.0061	0.9939	67.86
42.5	94,949,239	426,260	0.0045	0.9955	67.44
43.5	92,985,091	328,692	0.0035	0.9965	67.14
44.5	86,438,991	232,206	0.0027	0.9973	66.90
45.5	84,671,316	138,341	0.0016	0.9984	66.72
46.5	80,772,261	84,798	0.0010	0.9990	66.62
47.5	77,444,802	55,459	0.0007	0.9993	66.55
48.5	75,640,667	27,479	0.0004	0.9996	66.50
49.5	69,681,312	17,273	0.0002	0.9998	66.47
50.5	68,309,760	181,385	0.0027	0.9973	66.46
51.5	67,152,544	505,600	0.0075	0.9925	66.28
52.5	64,859,599	662,317	0.0102	0.9898	65.78
53.5	61,533,144	912,034	0.0148	0.9852	65.11
54.5	56,199,156	739,573	0.0132	0.9868	64.15
55.5	53,623,858	856,692	0.0160	0.9840	63.30
56.5	50,656,707	1,019,601	0.0201	0.9799	62.29
57.5	47,688,354	1,272,918	0.0267	0.9733	61.04
58.5	44,174,764	1,495,811	0.0339	0.9661	59.41
59.5	39,798,548	1,493,881	0.0375	0.9625	57.40
60.5	35,160,086	1,839,825	0.0523	0.9477	55.24
61.5	29,332,890	2,176,155	0.0742	0.9258	52.35
62.5	24,218,227	1,943,805	0.0803	0.9197	48.47
63.5	19,953,043	1,857,146	0.0931	0.9069	44.58
64.5	10,871,583	1,023,286	0.0941	0.9059	40.43
65.5	7,295,681	802,360	0.1100	0.8900	36.62
66.5	4,748,497	602,848	0.1270	0.8730	32.59
67.5	2,816,699	325,064	0.1154	0.8846	28.46
68.5	1,512,132	162,656	0.1076	0.8924	25.17
69.5	475,214	10,003	0.0210	0.9790	22.46
70.5	443,302	21,733	0.0490	0.9510	21.99
71.5	413,196	43,768	0.1059	0.8941	20.91
72.5	364,527	28,229	0.0774	0.9226	18.70
73.5	317,014	28,133	0.0887	0.9113	17.25
74.5	208,788	18,953	0.0908	0.9092	15.72
75.5	177,772	14,594	0.0821	0.9179	14.29
76.5	149,919	15,571	0.1039	0.8961	13.12
77.5	117,830	5,233	0.0444	0.9556	11.76
78.5	100,105	4,075	0.0407	0.9593	11.23

MANITOBA HYDRO

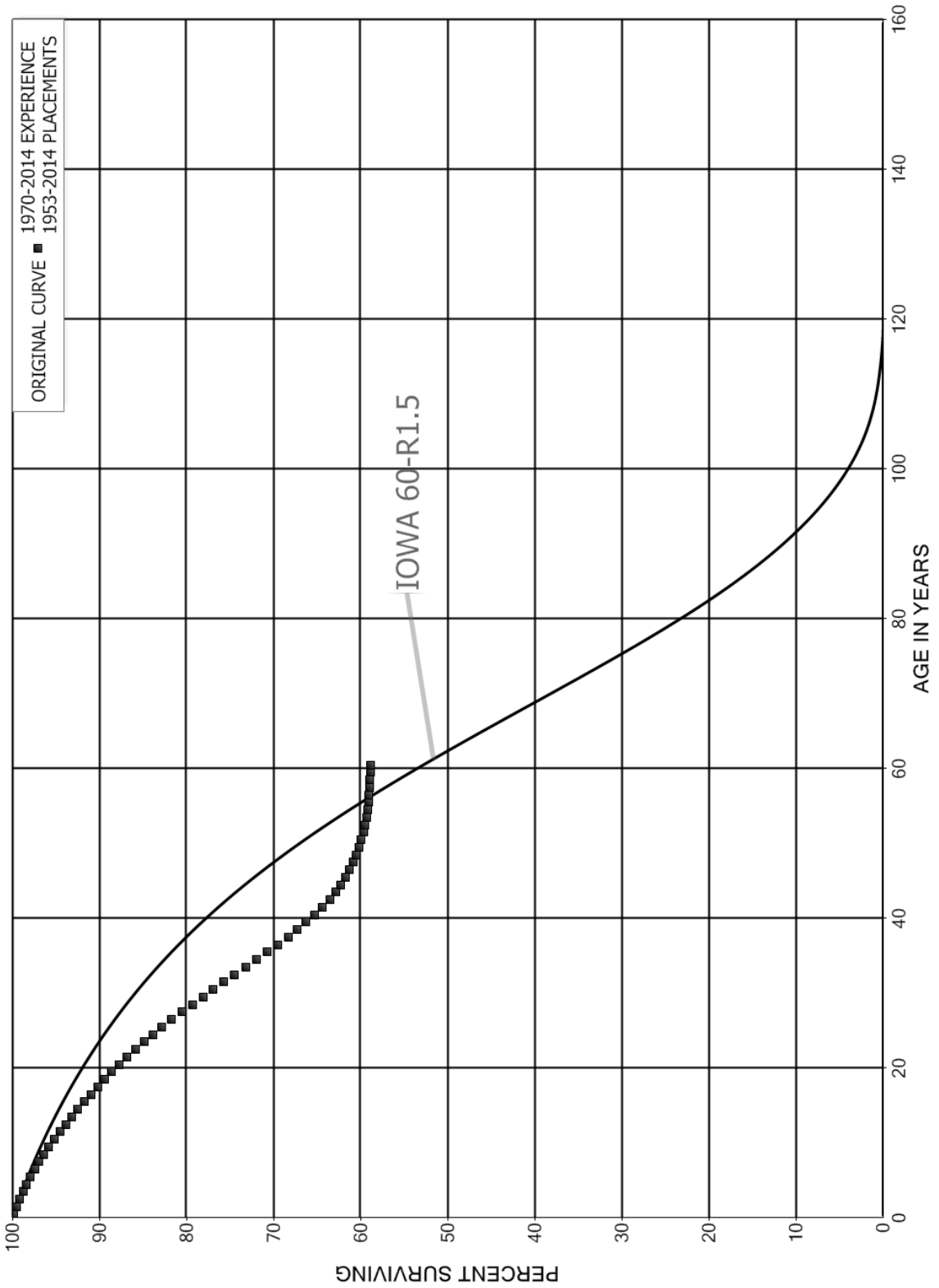
ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	78,169	2,922	0.0374	0.9626	10.78
80.5	69,878	7,522	0.1076	0.8924	10.37
81.5	58,009	15,356	0.2647	0.7353	9.26
82.5	39,800	6,473	0.1626	0.8374	6.81
83.5	30,458	985	0.0323	0.9677	5.70
84.5	10,564	392	0.0371	0.9629	5.52
85.5	4,434		0.0000	1.0000	5.31
86.5	1,826	261	0.1430	0.8570	5.31
87.5	652		0.0000	1.0000	4.55
88.5	261		0.0000	1.0000	4.55
89.5	261		0.0000	1.0000	4.55
90.5					4.55

MANITOBA HYDRO
ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	741,944,511	1,141,327	0.0015	0.9985	100.00
0.5	721,539,917	2,375,677	0.0033	0.9967	99.85
1.5	700,957,880	2,531,042	0.0036	0.9964	99.52
2.5	675,575,141	2,703,245	0.0040	0.9960	99.16
3.5	658,718,971	2,801,977	0.0043	0.9957	98.76
4.5	646,354,717	2,942,348	0.0046	0.9954	98.34
5.5	626,186,714	3,056,147	0.0049	0.9951	97.89
6.5	604,266,647	3,179,212	0.0053	0.9947	97.42
7.5	586,264,566	3,277,551	0.0056	0.9944	96.90
8.5	570,058,841	3,427,206	0.0060	0.9940	96.36
9.5	554,088,195	3,514,032	0.0063	0.9937	95.78
10.5	534,045,981	3,587,901	0.0067	0.9933	95.17
11.5	515,188,820	3,528,167	0.0068	0.9932	94.54
12.5	496,223,788	3,621,303	0.0073	0.9927	93.89
13.5	480,982,560	3,693,768	0.0077	0.9923	93.20
14.5	465,555,232	3,717,800	0.0080	0.9920	92.49
15.5	449,892,316	3,701,906	0.0082	0.9918	91.75
16.5	433,788,385	3,640,071	0.0084	0.9916	90.99
17.5	410,758,598	3,666,542	0.0089	0.9911	90.23
18.5	386,591,813	3,612,664	0.0093	0.9907	89.42
19.5	363,831,170	3,589,864	0.0099	0.9901	88.59
20.5	341,820,448	3,576,338	0.0105	0.9895	87.71
21.5	320,684,961	3,501,619	0.0109	0.9891	86.80
22.5	301,873,778	3,400,795	0.0113	0.9887	85.85
23.5	278,208,527	3,303,650	0.0119	0.9881	84.88
24.5	257,586,981	3,242,809	0.0126	0.9874	83.87
25.5	236,870,586	3,145,916	0.0133	0.9867	82.82
26.5	217,373,949	3,135,180	0.0144	0.9856	81.72
27.5	203,435,145	3,048,617	0.0150	0.9850	80.54
28.5	188,936,927	2,914,678	0.0154	0.9846	79.33
29.5	174,911,983	2,669,318	0.0153	0.9847	78.11
30.5	159,755,199	2,577,984	0.0161	0.9839	76.92
31.5	147,386,735	2,351,624	0.0160	0.9840	75.68
32.5	133,489,194	2,221,123	0.0166	0.9834	74.47
33.5	126,805,236	2,152,576	0.0170	0.9830	73.23
34.5	114,037,594	1,991,681	0.0175	0.9825	71.99
35.5	106,983,287	1,811,622	0.0169	0.9831	70.73
36.5	96,029,165	1,652,914	0.0172	0.9828	69.53
37.5	92,113,238	1,422,419	0.0154	0.9846	68.33
38.5	84,121,545	1,227,408	0.0146	0.9854	67.28

MANITOBA HYDRO

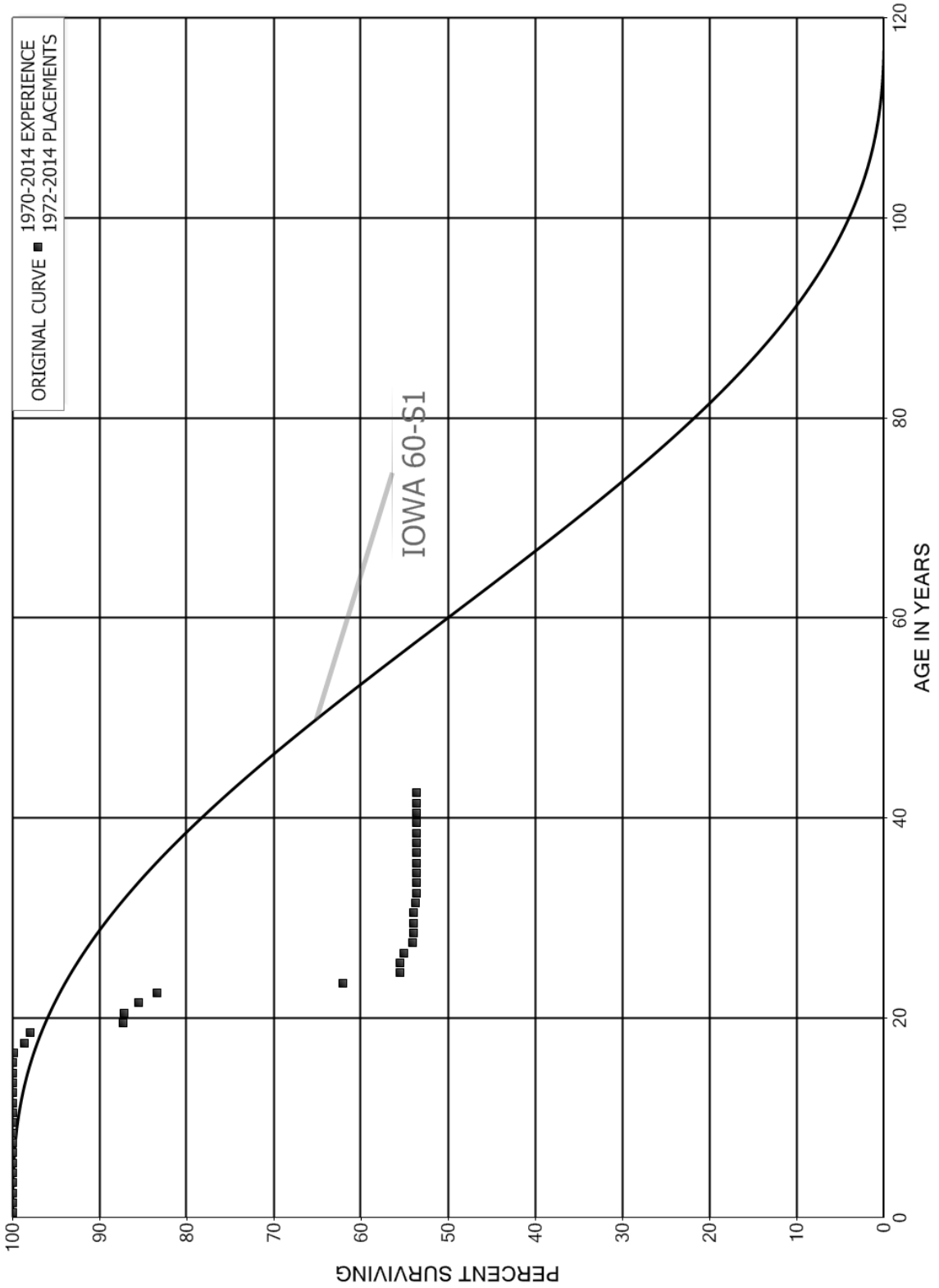
ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1953-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	73,083,189	1,078,033	0.0148	0.9852	66.30
40.5	65,951,548	975,545	0.0148	0.9852	65.32
41.5	63,768,846	832,691	0.0131	0.9869	64.35
42.5	60,600,464	694,564	0.0115	0.9885	63.51
43.5	58,242,310	504,241	0.0087	0.9913	62.79
44.5	51,059,594	430,695	0.0084	0.9916	62.24
45.5	48,950,938	358,211	0.0073	0.9927	61.72
46.5	44,553,980	304,002	0.0068	0.9932	61.26
47.5	40,768,443	243,393	0.0060	0.9940	60.85
48.5	38,637,521	190,294	0.0049	0.9951	60.48
49.5	32,084,117	153,849	0.0048	0.9952	60.19
50.5	30,477,575	125,399	0.0041	0.9959	59.90
51.5	29,305,062	98,540	0.0034	0.9966	59.65
52.5	27,289,271	71,814	0.0026	0.9974	59.45
53.5	24,344,356	47,795	0.0020	0.9980	59.29
54.5	19,553,904	32,126	0.0016	0.9984	59.18
55.5	17,552,917	19,830	0.0011	0.9989	59.08
56.5	15,269,567	16,356	0.0011	0.9989	59.01
57.5	13,163,126	10,780	0.0008	0.9992	58.95
58.5	10,749,169	8,834	0.0008	0.9992	58.90
59.5	7,651,028	1,830	0.0002	0.9998	58.85
60.5	4,276,556		0.0000	1.0000	58.84
61.5					58.84

MANITOBA HYDRO
ACCOUNT 4000M - UNDERGROUND CABLE AND DEVICES - 66 Kv
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000M - UNDERGROUND CABLE AND DEVICES - 66 Kv

ORIGINAL LIFE TABLE

PLACEMENT BAND 1972-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	28,139,396	257	0.0000	1.0000	100.00
0.5	25,901,696	6,555	0.0003	0.9997	100.00
1.5	20,456,817	1,127	0.0001	0.9999	99.97
2.5	19,897,942	3,906	0.0002	0.9998	99.97
3.5	19,488,548	180	0.0000	1.0000	99.95
4.5	19,413,449	358	0.0000	1.0000	99.95
5.5	19,026,267	2,862	0.0002	0.9998	99.95
6.5	18,731,909	515	0.0000	1.0000	99.93
7.5	12,836,033	674	0.0001	0.9999	99.93
8.5	12,780,531	199	0.0000	1.0000	99.92
9.5	12,546,118	16	0.0000	1.0000	99.92
10.5	12,484,532	1,177	0.0001	0.9999	99.92
11.5	2,491,449	147	0.0001	0.9999	99.91
12.5	2,484,687	289	0.0001	0.9999	99.91
13.5	2,484,397	15	0.0000	1.0000	99.89
14.5	2,484,382	14	0.0000	1.0000	99.89
15.5	2,483,117	604	0.0002	0.9998	99.89
16.5	1,024,599	13,205	0.0129	0.9871	99.87
17.5	835,710	5,373	0.0064	0.9936	98.58
18.5	790,487	86,425	0.1093	0.8907	97.95
19.5	700,494	200	0.0003	0.9997	87.24
20.5	700,294	13,420	0.0192	0.9808	87.21
21.5	326,906	8,372	0.0256	0.9744	85.54
22.5	295,408	75,468	0.2555	0.7445	83.35
23.5	195,948	20,776	0.1060	0.8940	62.06
24.5	175,172	41	0.0002	0.9998	55.48
25.5	175,130	1,283	0.0073	0.9927	55.46
26.5	173,847	3,326	0.0191	0.9809	55.06
27.5	166,962	40	0.0002	0.9998	54.01
28.5	166,922	204	0.0012	0.9988	53.99
29.5	166,718	0	0.0000	1.0000	53.93
30.5	166,717	788	0.0047	0.9953	53.93
31.5	165,930	40	0.0002	0.9998	53.67
32.5	165,890	39	0.0002	0.9998	53.66
33.5	165,851	2	0.0000	1.0000	53.65
34.5	165,849		0.0000	1.0000	53.65
35.5	165,849		0.0000	1.0000	53.65
36.5	157,377		0.0000	1.0000	53.65
37.5	21,448		0.0000	1.0000	53.65
38.5	21,221		0.0000	1.0000	53.65

MANITOBA HYDRO

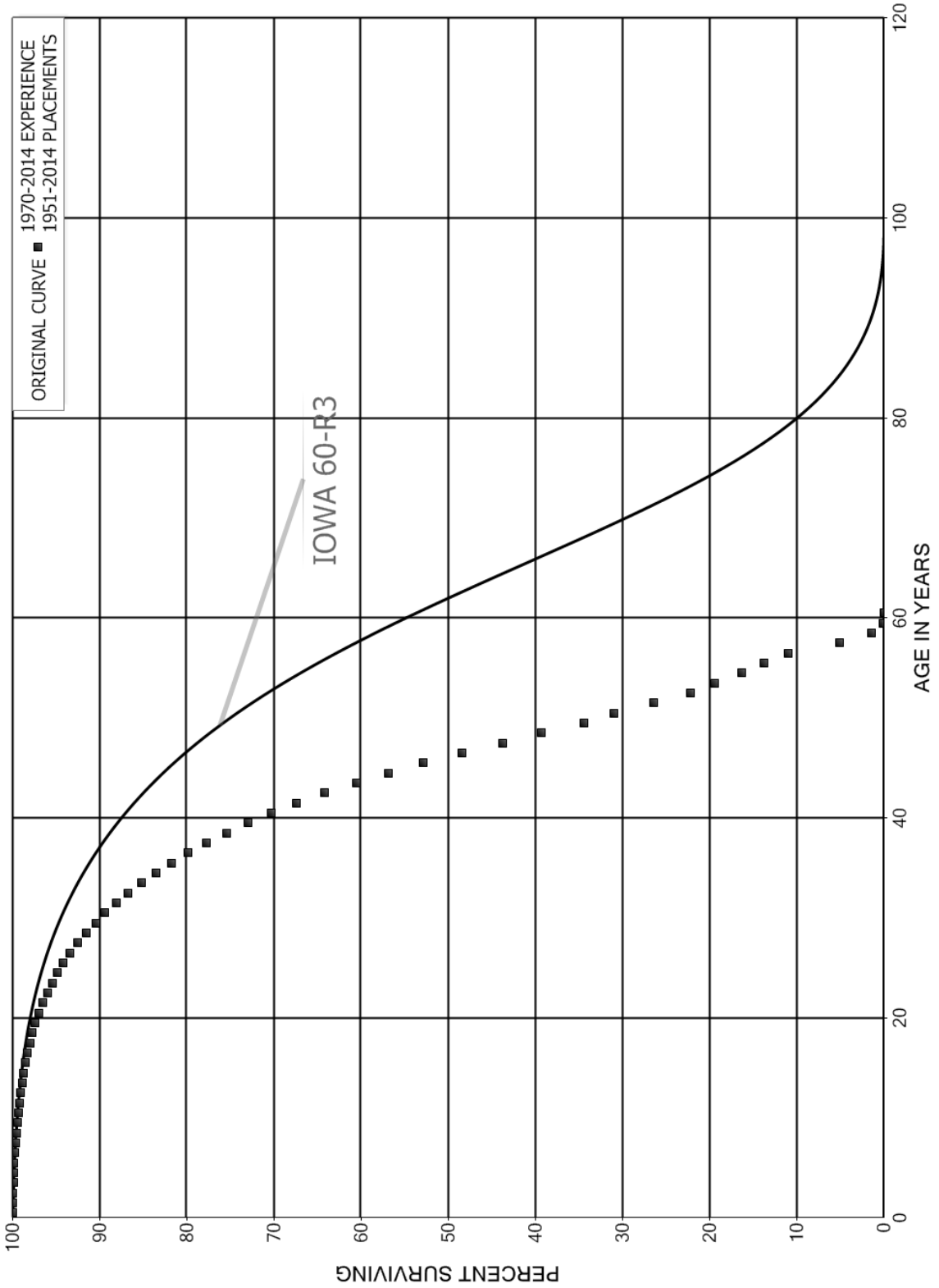
ACCOUNT 4000M - UNDERGROUND CABLE AND DEVICES - 66 Kv

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1972-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	21,221		0.0000	1.0000	53.65
40.5	21,221		0.0000	1.0000	53.65
41.5	800		0.0000	1.0000	53.65
42.5					53.65

MANITOBA HYDRO
ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	384,332,347	45,114	0.0001	0.9999	100.00
0.5	348,606,647	97,477	0.0003	0.9997	99.99
1.5	304,468,446	102,940	0.0003	0.9997	99.96
2.5	286,273,929	112,996	0.0004	0.9996	99.93
3.5	266,305,876	127,850	0.0005	0.9995	99.89
4.5	248,023,561	137,411	0.0006	0.9994	99.84
5.5	223,671,249	143,251	0.0006	0.9994	99.78
6.5	206,101,780	157,765	0.0008	0.9992	99.72
7.5	193,344,544	172,228	0.0009	0.9991	99.64
8.5	177,204,524	190,232	0.0011	0.9989	99.55
9.5	162,723,632	202,000	0.0012	0.9988	99.45
10.5	152,162,627	210,065	0.0014	0.9986	99.32
11.5	143,950,579	222,248	0.0015	0.9985	99.19
12.5	136,275,977	241,413	0.0018	0.9982	99.03
13.5	126,686,044	235,881	0.0019	0.9981	98.86
14.5	113,926,421	227,365	0.0020	0.9980	98.67
15.5	102,682,089	236,525	0.0023	0.9977	98.48
16.5	95,718,180	246,724	0.0026	0.9974	98.25
17.5	87,459,778	264,510	0.0030	0.9970	98.00
18.5	82,476,221	292,220	0.0035	0.9965	97.70
19.5	75,303,915	319,265	0.0042	0.9958	97.36
20.5	70,350,846	344,767	0.0049	0.9951	96.94
21.5	66,910,480	359,782	0.0054	0.9946	96.47
22.5	63,385,695	362,578	0.0057	0.9943	95.95
23.5	58,756,262	360,257	0.0061	0.9939	95.40
24.5	52,811,492	364,231	0.0069	0.9931	94.81
25.5	49,085,985	372,881	0.0076	0.9924	94.16
26.5	38,777,065	395,231	0.0102	0.9898	93.45
27.5	31,878,231	342,165	0.0107	0.9893	92.49
28.5	29,769,610	359,160	0.0121	0.9879	91.50
29.5	26,614,745	291,970	0.0110	0.9890	90.40
30.5	25,172,156	374,309	0.0149	0.9851	89.40
31.5	23,042,246	360,343	0.0156	0.9844	88.08
32.5	21,641,673	384,672	0.0178	0.9822	86.70
33.5	19,539,339	379,491	0.0194	0.9806	85.16
34.5	16,774,353	358,373	0.0214	0.9786	83.50
35.5	14,124,882	327,717	0.0232	0.9768	81.72
36.5	11,298,221	296,513	0.0262	0.9738	79.82
37.5	8,837,949	261,416	0.0296	0.9704	77.73
38.5	5,888,046	192,715	0.0327	0.9673	75.43

MANITOBA HYDRO

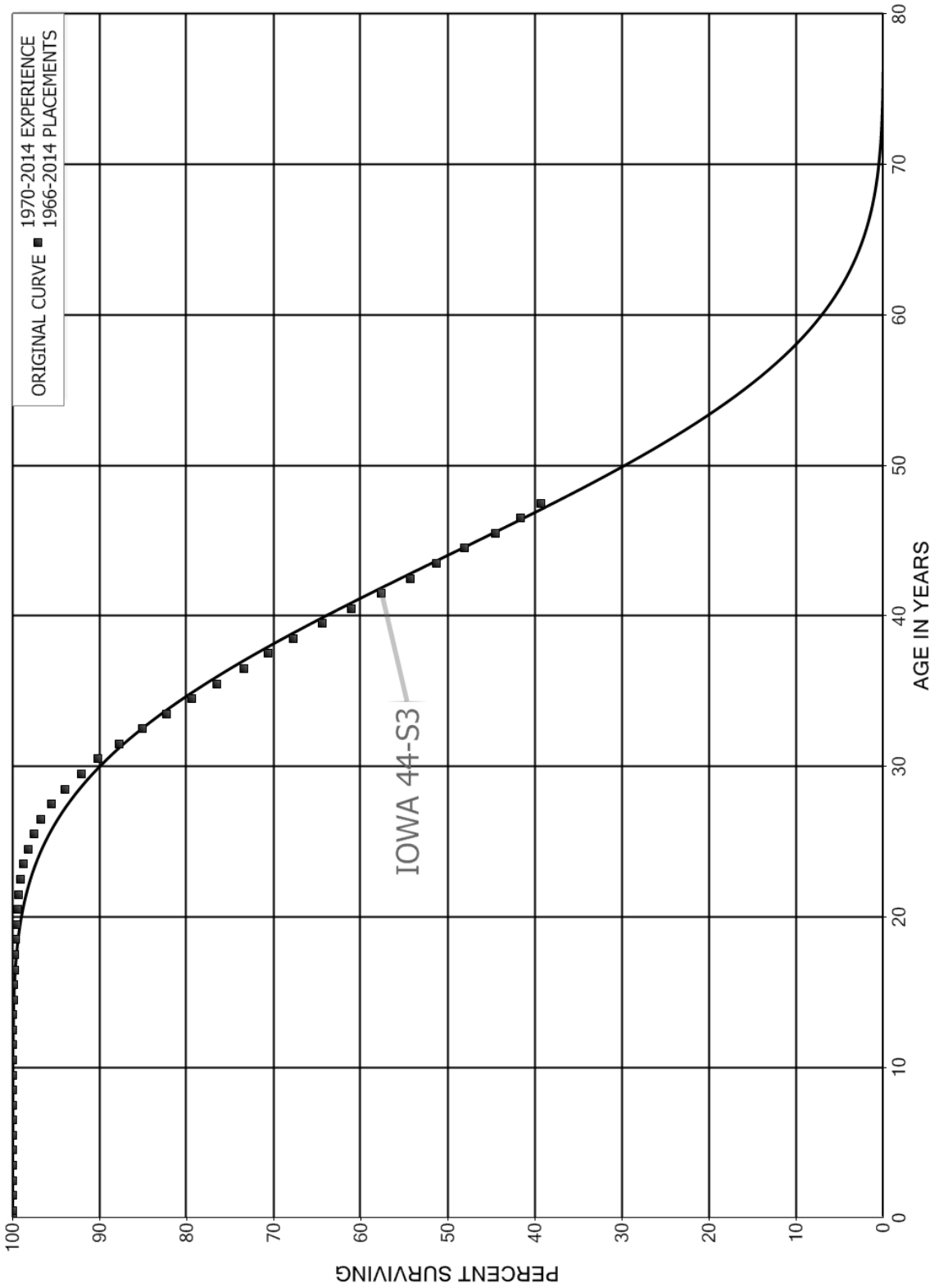
ACCOUNT 4000N - UNDERGROUND CABLE AND DEVICES - PRIMARY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	4,467,264	163,150	0.0365	0.9635	72.96
40.5	3,350,548	138,393	0.0413	0.9587	70.30
41.5	2,537,960	123,030	0.0485	0.9515	67.39
42.5	1,912,172	106,391	0.0556	0.9444	64.13
43.5	1,365,596	84,145	0.0616	0.9384	60.56
44.5	1,019,419	70,988	0.0696	0.9304	56.83
45.5	784,567	66,681	0.0850	0.9150	52.87
46.5	502,258	47,838	0.0952	0.9048	48.38
47.5	284,068	28,861	0.1016	0.8984	43.77
48.5	161,422	20,029	0.1241	0.8759	39.32
49.5	89,315	9,154	0.1025	0.8975	34.44
50.5	67,033	9,907	0.1478	0.8522	30.91
51.5	55,228	8,688	0.1573	0.8427	26.34
52.5	10,592	1,340	0.1265	0.8735	22.20
53.5	8,508	1,362	0.1601	0.8399	19.39
54.5	6,468	1,000	0.1546	0.8454	16.29
55.5	4,989	1,002	0.2008	0.7992	13.77
56.5	3,668	1,989	0.5423	0.4577	11.00
57.5	1,505	1,102	0.7321	0.2679	5.04
58.5	403	383	0.9501	0.0499	1.35
59.5	20	20	1.0000		0.07
60.5					

MANITOBA HYDRO
ACCOUNT 4000P - UNDEGROUND CABLE AND DEVICES - SECONDARY
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000P - UNDEGROUND CABLE AND DEVICES - SECONDARY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1966-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	255,131,347	383	0.0000	1.0000	100.00
0.5	247,865,450	1,178	0.0000	1.0000	100.00
1.5	237,456,171	1,935	0.0000	1.0000	100.00
2.5	228,991,210	2,882	0.0000	1.0000	100.00
3.5	214,976,188	3,461	0.0000	1.0000	100.00
4.5	199,596,425	4,222	0.0000	1.0000	100.00
5.5	179,271,698	5,041	0.0000	1.0000	99.99
6.5	164,728,700	5,820	0.0000	1.0000	99.99
7.5	153,435,536	6,461	0.0000	1.0000	99.99
8.5	139,667,164	6,893	0.0000	1.0000	99.98
9.5	125,803,067	7,963	0.0001	0.9999	99.98
10.5	115,098,309	12,120	0.0001	0.9999	99.97
11.5	107,228,337	18,949	0.0002	0.9998	99.96
12.5	100,277,081	26,703	0.0003	0.9997	99.94
13.5	92,544,603	35,326	0.0004	0.9996	99.92
14.5	82,836,277	41,675	0.0005	0.9995	99.88
15.5	73,794,822	41,255	0.0006	0.9994	99.83
16.5	68,150,509	48,125	0.0007	0.9993	99.77
17.5	62,400,108	44,572	0.0007	0.9993	99.70
18.5	58,986,721	48,582	0.0008	0.9992	99.63
19.5	54,015,514	58,666	0.0011	0.9989	99.55
20.5	50,631,113	84,768	0.0017	0.9983	99.44
21.5	48,317,065	108,273	0.0022	0.9978	99.27
22.5	45,920,957	157,905	0.0034	0.9966	99.05
23.5	42,665,637	243,088	0.0057	0.9943	98.71
24.5	38,350,303	260,095	0.0068	0.9932	98.15
25.5	35,626,619	277,203	0.0078	0.9922	97.48
26.5	28,025,981	358,196	0.0128	0.9872	96.72
27.5	22,845,447	368,638	0.0161	0.9839	95.49
28.5	21,158,479	416,097	0.0197	0.9803	93.95
29.5	18,641,417	391,738	0.0210	0.9790	92.10
30.5	17,378,863	466,409	0.0268	0.9732	90.16
31.5	15,574,767	481,215	0.0309	0.9691	87.74
32.5	14,296,512	467,541	0.0327	0.9673	85.03
33.5	12,508,752	440,031	0.0352	0.9648	82.25
34.5	10,238,486	373,125	0.0364	0.9636	79.36
35.5	8,124,877	321,861	0.0396	0.9604	76.47
36.5	5,946,613	229,314	0.0386	0.9614	73.44
37.5	4,175,226	171,312	0.0410	0.9590	70.61
38.5	2,208,168	108,200	0.0490	0.9510	67.71

MANITOBA HYDRO

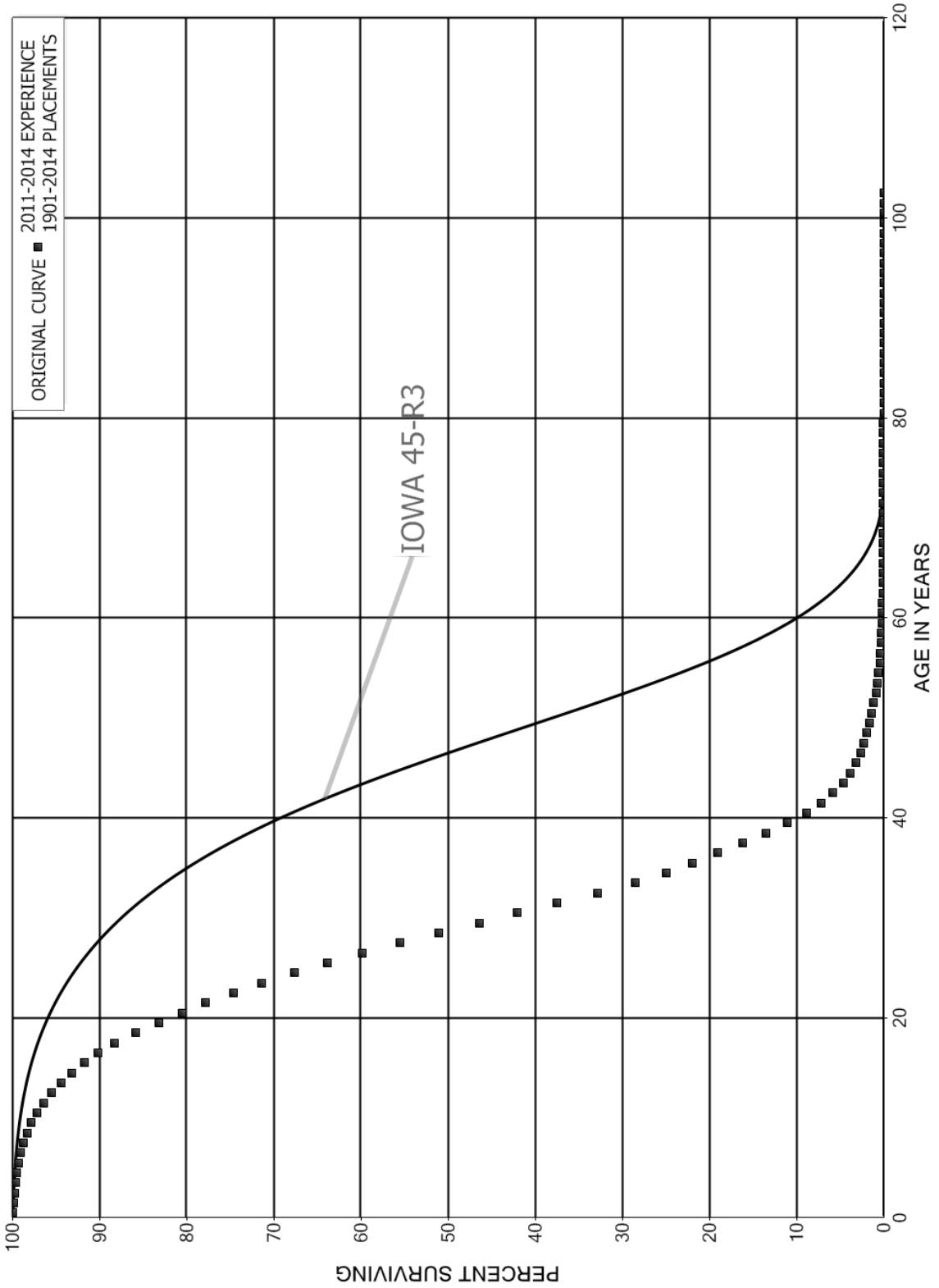
ACCOUNT 4000P - UNDEGROUND CABLE AND DEVICES - SECONDARY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1966-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,355,873	71,092	0.0524	0.9476	64.39
40.5	779,162	43,840	0.0563	0.9437	61.02
41.5	435,490	24,902	0.0572	0.9428	57.58
42.5	232,195	12,783	0.0551	0.9449	54.29
43.5	101,674	6,361	0.0626	0.9374	51.30
44.5	45,871	3,438	0.0750	0.9250	48.09
45.5	22,339	1,429	0.0640	0.9360	44.49
46.5	5,537	320	0.0577	0.9423	41.64
47.5					39.24

MANITOBA HYDRO
ACCOUNT 4000Q - SERIALIZED EQUIPMENT - OVERHEAD
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000Q - SERIALIZED EQUIPMENT - OVERHEAD

ORIGINAL LIFE TABLE

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 2011-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	38,669,837	19,371	0.0005	0.9995	100.00
0.5	49,930,714	43,672	0.0009	0.9991	99.95
1.5	54,915,065	51,080	0.0009	0.9991	99.86
2.5	53,857,024	61,730	0.0011	0.9989	99.77
3.5	53,510,578	75,282	0.0014	0.9986	99.66
4.5	50,901,261	93,297	0.0018	0.9982	99.52
5.5	47,486,095	113,075	0.0024	0.9976	99.33
6.5	40,532,021	136,922	0.0034	0.9966	99.10
7.5	34,034,254	150,848	0.0044	0.9956	98.76
8.5	29,173,658	146,348	0.0050	0.9950	98.32
9.5	24,797,512	160,212	0.0065	0.9935	97.83
10.5	25,574,132	202,266	0.0079	0.9921	97.20
11.5	24,629,514	238,540	0.0097	0.9903	96.43
12.5	24,296,421	267,289	0.0110	0.9890	95.50
13.5	23,842,022	326,095	0.0137	0.9863	94.45
14.5	23,809,802	354,710	0.0149	0.9851	93.15
15.5	23,237,672	413,343	0.0178	0.9822	91.77
16.5	21,045,969	438,531	0.0208	0.9792	90.13
17.5	18,316,858	498,557	0.0272	0.9728	88.26
18.5	16,431,168	507,346	0.0309	0.9691	85.85
19.5	14,974,154	493,418	0.0330	0.9670	83.20
20.5	13,652,881	454,694	0.0333	0.9667	80.46
21.5	15,250,663	611,765	0.0401	0.9599	77.78
22.5	14,281,030	623,941	0.0437	0.9563	74.66
23.5	13,156,623	691,012	0.0525	0.9475	71.40
24.5	13,188,308	752,662	0.0571	0.9429	67.65
25.5	13,102,170	818,344	0.0625	0.9375	63.79
26.5	11,936,463	856,103	0.0717	0.9283	59.80
27.5	12,180,528	968,699	0.0795	0.9205	55.51
28.5	11,457,989	1,057,886	0.0923	0.9077	51.10
29.5	10,437,837	972,256	0.0931	0.9069	46.38
30.5	9,794,549	1,058,306	0.1081	0.8919	42.06
31.5	8,090,485	999,862	0.1236	0.8764	37.52
32.5	6,474,822	871,762	0.1346	0.8654	32.88
33.5	6,450,183	790,391	0.1225	0.8775	28.45
34.5	7,259,660	876,493	0.1207	0.8793	24.97
35.5	7,125,735	951,348	0.1335	0.8665	21.95
36.5	6,958,410	1,052,450	0.1512	0.8488	19.02
37.5	5,858,932	962,665	0.1643	0.8357	16.14
38.5	4,349,242	786,601	0.1809	0.8191	13.49

MANITOBA HYDRO

ACCOUNT 4000Q - SERIALIZED EQUIPMENT - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 2011-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,397,622	674,364	0.1985	0.8015	11.05
40.5	2,700,084	497,985	0.1844	0.8156	8.86
41.5	2,139,340	397,679	0.1859	0.8141	7.22
42.5	1,649,027	353,648	0.2145	0.7855	5.88
43.5	1,444,670	256,808	0.1778	0.8222	4.62
44.5	1,190,795	207,724	0.1744	0.8256	3.80
45.5	943,894	147,623	0.1564	0.8436	3.14
46.5	834,451	121,777	0.1459	0.8541	2.65
47.5	660,889	107,802	0.1631	0.8369	2.26
48.5	503,088	73,064	0.1452	0.8548	1.89
49.5	413,787	52,482	0.1268	0.8732	1.62
50.5	379,144	72,149	0.1903	0.8097	1.41
51.5	253,583	57,303	0.2260	0.7740	1.14
52.5	197,052	28,001	0.1421	0.8579	0.88
53.5	158,731	27,368	0.1724	0.8276	0.76
54.5	130,411	39,786	0.3051	0.6949	0.63
55.5	111,892	20,639	0.1845	0.8155	0.44
56.5	115,544	23,911	0.2069	0.7931	0.36
57.5	103,372	16,510	0.1597	0.8403	0.28
58.5	94,197	14,591	0.1549	0.8451	0.24
59.5	88,499	15,352	0.1735	0.8265	0.20
60.5	75,550	17,864	0.2365	0.7635	0.17
61.5	61,426	10,051	0.1636	0.8364	0.13
62.5	63,985	15,795	0.2469	0.7531	0.11
63.5	56,421	9,984	0.1770	0.8230	0.08
64.5	52,118	8,068	0.1548	0.8452	0.07
65.5	44,500	4,703	0.1057	0.8943	0.06
66.5	37,896	4,682	0.1235	0.8765	0.05
67.5	24,240	1,548	0.0638	0.9362	0.04
68.5	17,535	1,388	0.0792	0.9208	0.04
69.5	17,804	4,333	0.2434	0.7566	0.04
70.5	12,751	1,931	0.1515	0.8485	0.03
71.5	10,083	413	0.0410	0.9590	0.02
72.5	8,460	871	0.1029	0.8971	0.02
73.5	4,478	252	0.0564	0.9436	0.02
74.5	2,224	363	0.1631	0.8369	0.02
75.5	2,153	172	0.0799	0.9201	0.02
76.5	1,839	69	0.0377	0.9623	0.02
77.5	1,406	105	0.0748	0.9252	0.01
78.5	1,221	129	0.1056	0.8944	0.01

MANITOBA HYDRO

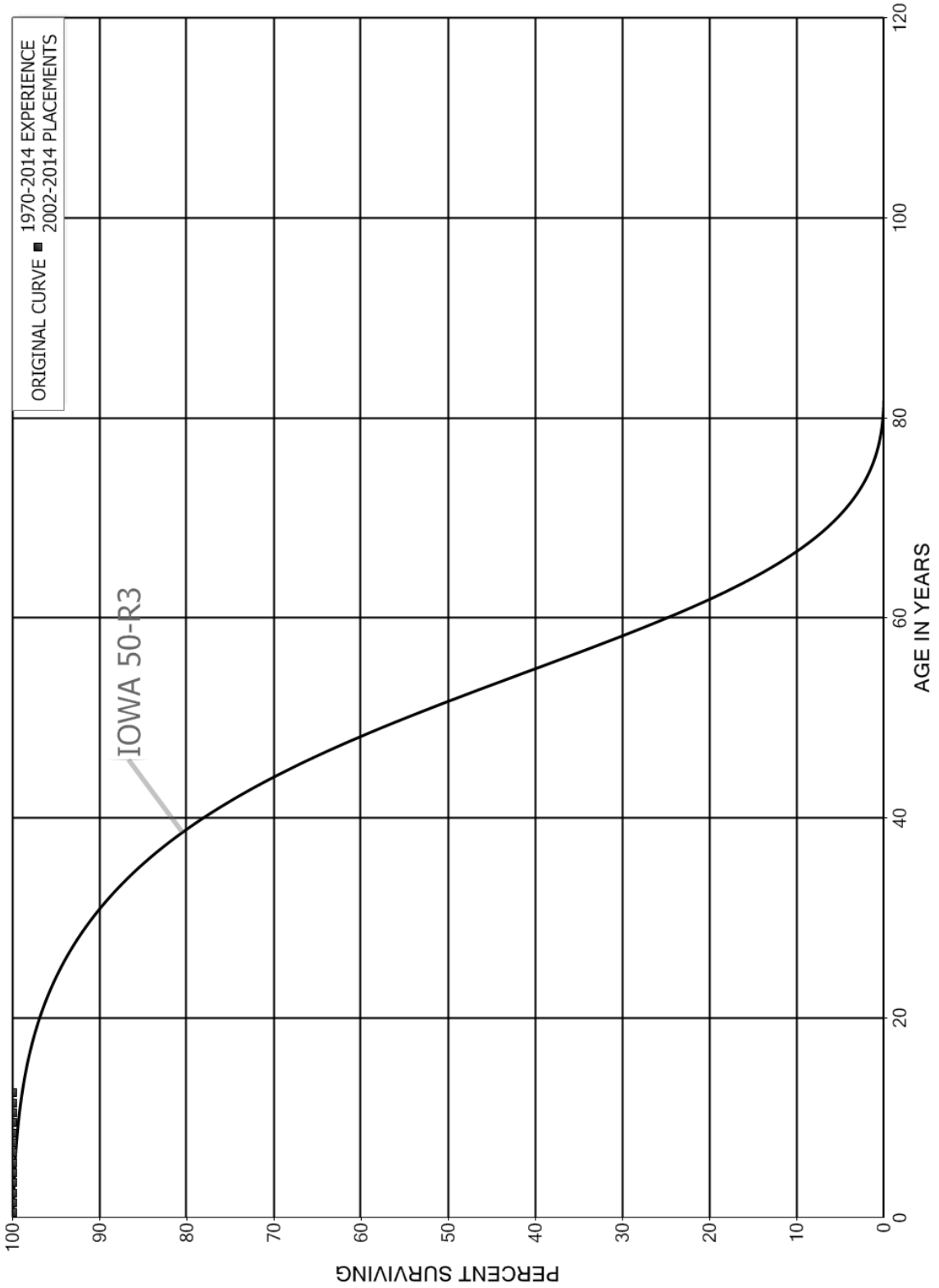
ACCOUNT 4000Q - SERIALIZED EQUIPMENT - OVERHEAD

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 2011-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	1,332	516	0.3871	0.6129	0.01
80.5	3,013	1,461	0.4849	0.5151	0.01
81.5	4,759	1,964	0.4126	0.5874	0.00
82.5	5,210	1,402	0.2692	0.7308	0.00
83.5	4,821	952	0.1975	0.8025	0.00
84.5	3,603	643	0.1785	0.8215	0.00
85.5	3,798	1,127	0.2966	0.7034	0.00
86.5	3,486	1,159	0.3325	0.6675	0.00
87.5	3,079	813	0.2640	0.7360	0.00
88.5	3,976	922	0.2319	0.7681	0.00
89.5	2,347	218	0.0930	0.9070	0.00
90.5	1,472	52	0.0353	0.9647	0.00
91.5	1,581	203	0.1285	0.8715	0.00
92.5	454		0.0000	1.0000	0.00
93.5	440	60	0.1357	0.8643	0.00
94.5	380		0.0000	1.0000	0.00
95.5	251	112	0.4460	0.5540	0.00
96.5	139		0.0000	1.0000	0.00
97.5	395	142	0.3599	0.6401	0.00
98.5	1,674	654	0.3908	0.6092	0.00
99.5	906		0.0000	1.0000	0.00
100.5	906		0.0000	1.0000	0.00
101.5	767		0.0000	1.0000	0.00
102.5					0.00

MANITOBA HYDRO
ACCOUNT 4000R - DSC - HIGH VOLTAGE TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

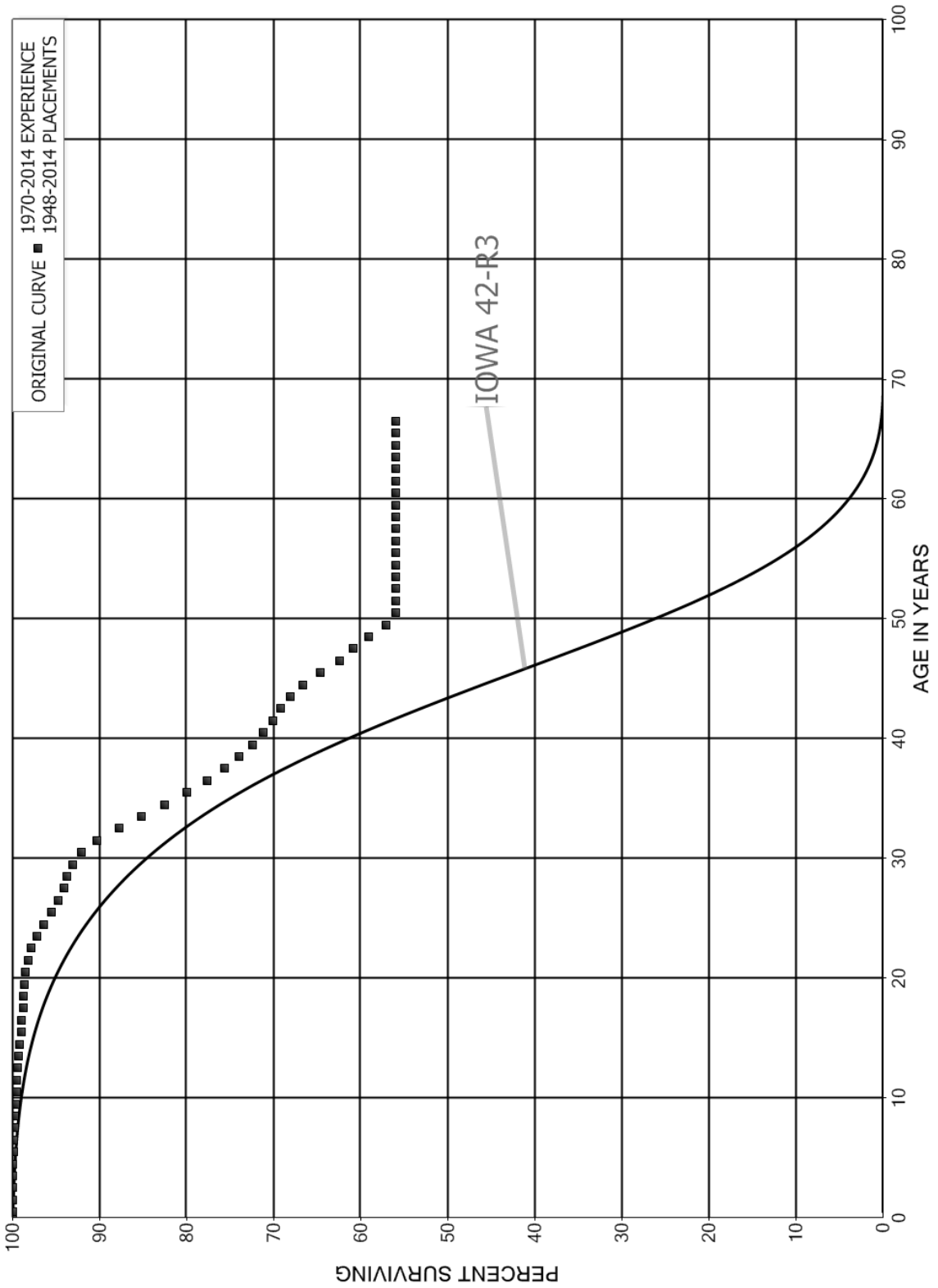
ACCOUNT 4000R - DSC - HIGH VOLTAGE TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2002-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	25,320,598		0.0000	1.0000	100.00
0.5	18,118,117		0.0000	1.0000	100.00
1.5	15,011,280		0.0000	1.0000	100.00
2.5	11,172,386		0.0000	1.0000	100.00
3.5	8,531,120		0.0000	1.0000	100.00
4.5	5,804,834		0.0000	1.0000	100.00
5.5	4,050,141		0.0000	1.0000	100.00
6.5	3,122,385		0.0000	1.0000	100.00
7.5	2,829,205		0.0000	1.0000	100.00
8.5	2,244,920		0.0000	1.0000	100.00
9.5	849,154		0.0000	1.0000	100.00
10.5	270,153		0.0000	1.0000	100.00
11.5	270,153		0.0000	1.0000	100.00
12.5					100.00

MANITOBA HYDRO
ACCOUNT 4000S - SERIALIZED EQUIPMENT - UNDERGROUND
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000S - SERIALIZED EQUIPMENT - UNDERGROUND

ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	219,584,029	11,197	0.0001	0.9999	100.00
0.5	217,167,346	31,225	0.0001	0.9999	99.99
1.5	209,297,434	40,154	0.0002	0.9998	99.98
2.5	192,122,598	54,117	0.0003	0.9997	99.96
3.5	182,946,533	70,823	0.0004	0.9996	99.93
4.5	169,049,981	78,418	0.0005	0.9995	99.89
5.5	161,636,139	81,412	0.0005	0.9995	99.85
6.5	149,345,495	80,917	0.0005	0.9995	99.80
7.5	127,090,419	75,430	0.0006	0.9994	99.74
8.5	114,671,064	72,349	0.0006	0.9994	99.68
9.5	105,838,817	76,615	0.0007	0.9993	99.62
10.5	94,666,621	85,246	0.0009	0.9991	99.55
11.5	87,160,477	92,147	0.0011	0.9989	99.46
12.5	81,725,045	92,165	0.0011	0.9989	99.35
13.5	77,752,944	90,075	0.0012	0.9988	99.24
14.5	71,672,211	86,394	0.0012	0.9988	99.13
15.5	65,828,585	78,472	0.0012	0.9988	99.01
16.5	60,694,191	68,803	0.0011	0.9989	98.89
17.5	56,234,802	58,289	0.0010	0.9990	98.78
18.5	52,783,701	50,069	0.0009	0.9991	98.68
19.5	49,554,791	63,910	0.0013	0.9987	98.58
20.5	45,605,847	111,544	0.0024	0.9976	98.46
21.5	43,324,714	180,430	0.0042	0.9958	98.21
22.5	42,137,399	279,412	0.0066	0.9934	97.81
23.5	40,632,384	327,588	0.0081	0.9919	97.16
24.5	38,323,136	334,665	0.0087	0.9913	96.37
25.5	35,543,493	299,110	0.0084	0.9916	95.53
26.5	31,677,596	208,838	0.0066	0.9934	94.73
27.5	26,822,074	119,983	0.0045	0.9955	94.10
28.5	22,679,673	149,845	0.0066	0.9934	93.68
29.5	18,737,317	194,207	0.0104	0.9896	93.06
30.5	16,908,717	339,564	0.0201	0.9799	92.10
31.5	16,000,404	439,842	0.0275	0.9725	90.25
32.5	15,141,691	444,203	0.0293	0.9707	87.77
33.5	13,882,078	432,881	0.0312	0.9688	85.19
34.5	12,496,757	383,012	0.0306	0.9694	82.54
35.5	10,776,704	321,758	0.0299	0.9701	80.01
36.5	8,894,934	235,710	0.0265	0.9735	77.62
37.5	7,104,907	152,526	0.0215	0.9785	75.56
38.5	5,167,732	106,331	0.0206	0.9794	73.94

MANITOBA HYDRO

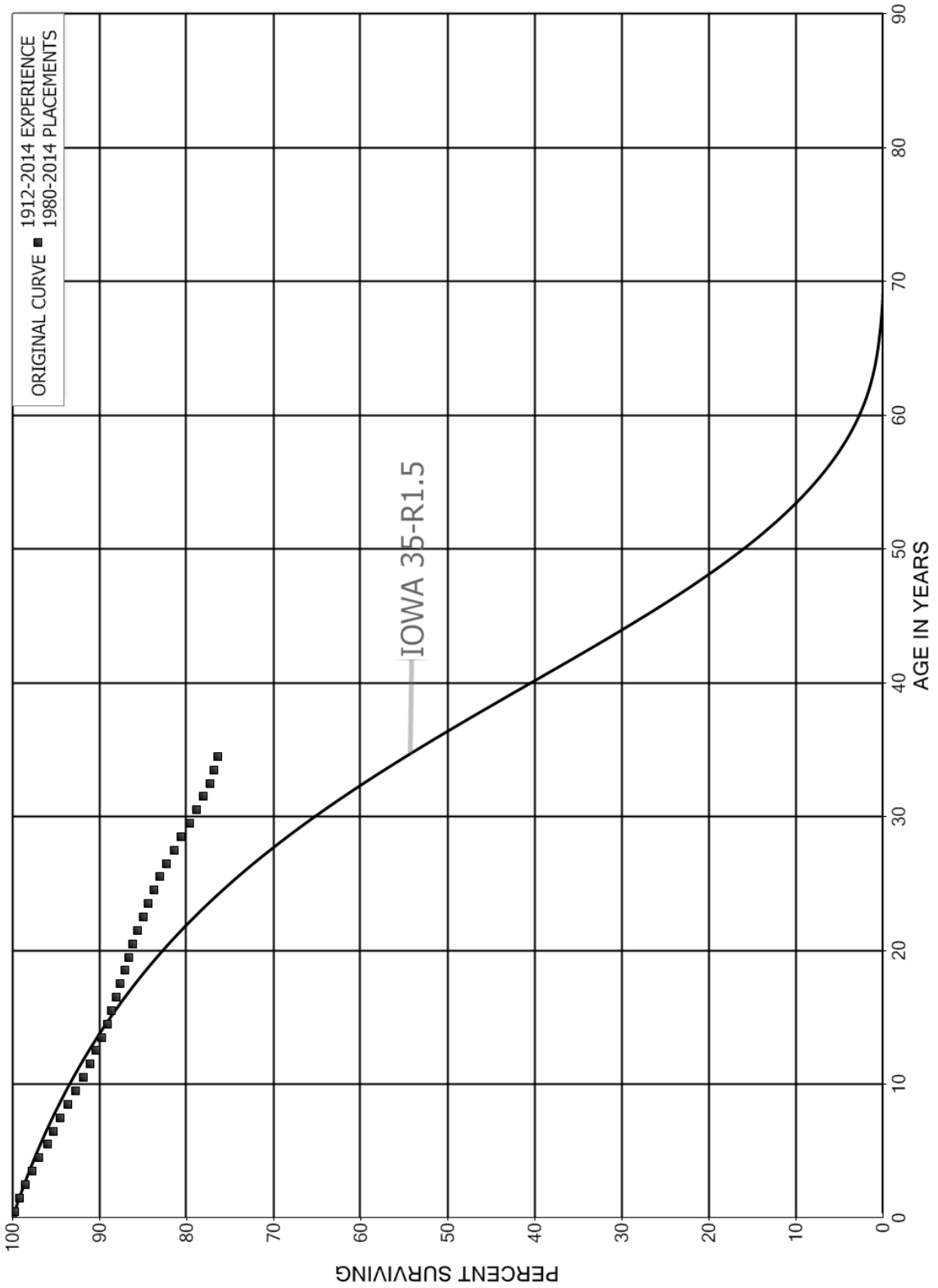
ACCOUNT 4000S - SERIALIZED EQUIPMENT - UNDERGROUND

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1948-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,969,034	69,932	0.0176	0.9824	72.42
40.5	2,932,910	45,275	0.0154	0.9846	71.14
41.5	2,542,221	32,904	0.0129	0.9871	70.04
42.5	1,758,106	27,806	0.0158	0.9842	69.14
43.5	1,378,030	28,058	0.0204	0.9796	68.04
44.5	912,860	27,492	0.0301	0.9699	66.66
45.5	623,312	21,745	0.0349	0.9651	64.65
46.5	461,878	11,810	0.0256	0.9744	62.40
47.5	300,909	8,653	0.0288	0.9712	60.80
48.5	200,203	6,753	0.0337	0.9663	59.05
49.5	118,225	2,382	0.0201	0.9799	57.06
50.5	50,134		0.0000	1.0000	55.91
51.5	27,274		0.0000	1.0000	55.91
52.5	21,250		0.0000	1.0000	55.91
53.5	17,503		0.0000	1.0000	55.91
54.5	6,777		0.0000	1.0000	55.91
55.5	6,777		0.0000	1.0000	55.91
56.5	6,777		0.0000	1.0000	55.91
57.5	6,777		0.0000	1.0000	55.91
58.5	6,777		0.0000	1.0000	55.91
59.5	6,777		0.0000	1.0000	55.91
60.5	6,777		0.0000	1.0000	55.91
61.5	6,777		0.0000	1.0000	55.91
62.5	6,777		0.0000	1.0000	55.91
63.5	6,777		0.0000	1.0000	55.91
64.5	1,011		0.0000	1.0000	55.91
65.5	1,011		0.0000	1.0000	55.91
66.5					55.91

MANITOBA HYDRO
ACCOUNT 4000W - DISTRIBUTION SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

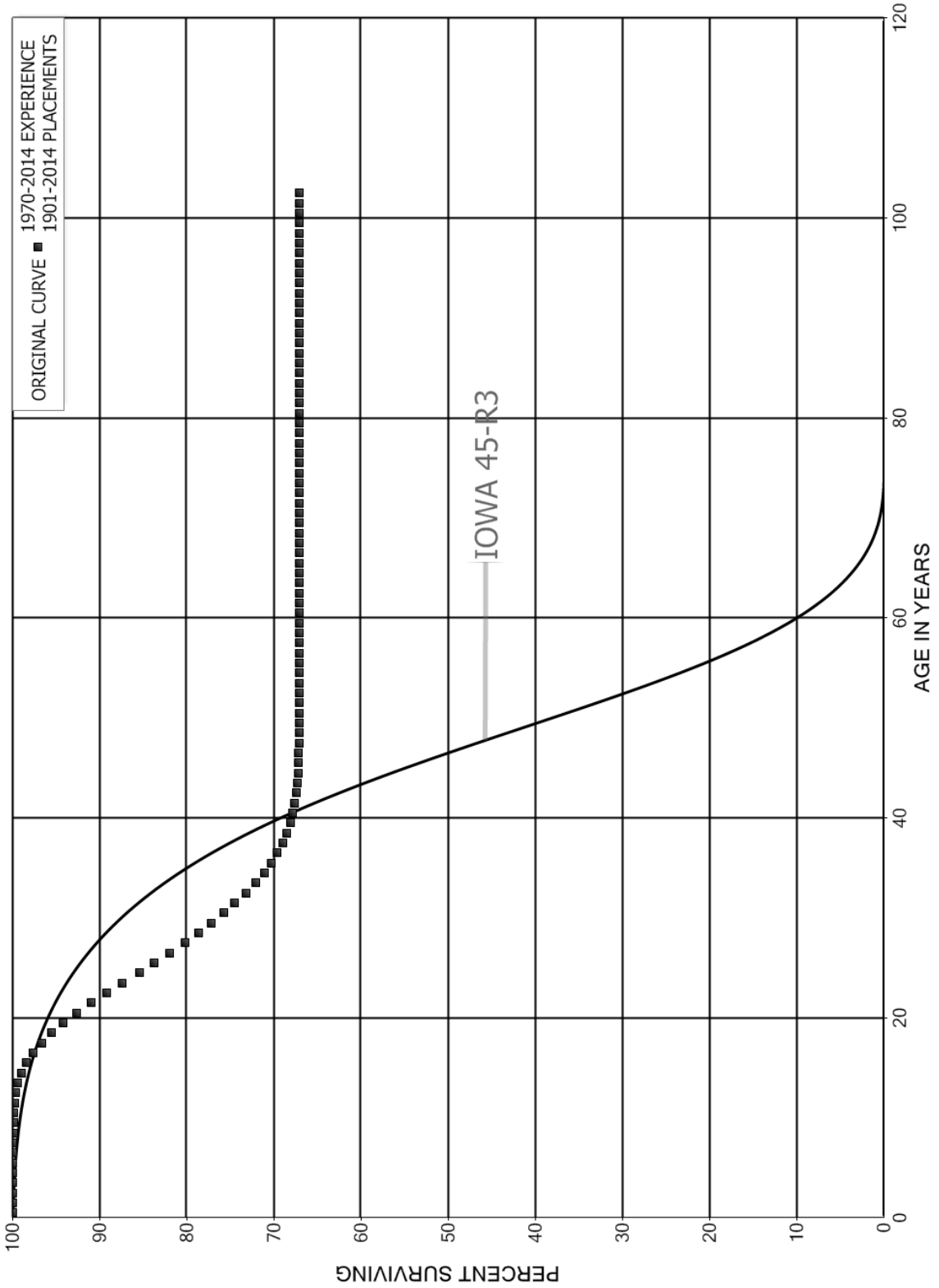
ACCOUNT 4000W - DISTRIBUTION SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1980-2014 EXPERIENCE BAND 1912-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	79,976,983	217,020	0.0027	0.9973	100.00
0.5	77,132,866	452,147	0.0059	0.9941	99.73
1.5	73,812,905	492,238	0.0067	0.9933	99.14
2.5	71,543,236	537,298	0.0075	0.9925	98.48
3.5	69,146,442	593,713	0.0086	0.9914	97.74
4.5	66,769,748	620,659	0.0093	0.9907	96.90
5.5	64,534,929	519,460	0.0080	0.9920	96.00
6.5	62,312,109	496,507	0.0080	0.9920	95.23
7.5	60,232,421	572,777	0.0095	0.9905	94.47
8.5	58,013,695	531,379	0.0092	0.9908	93.57
9.5	55,788,776	524,556	0.0094	0.9906	92.72
10.5	53,443,531	448,920	0.0084	0.9916	91.84
11.5	51,569,355	414,697	0.0080	0.9920	91.07
12.5	49,427,183	346,387	0.0070	0.9930	90.34
13.5	47,221,675	319,297	0.0068	0.9932	89.71
14.5	44,587,446	262,846	0.0059	0.9941	89.10
15.5	42,361,115	261,059	0.0062	0.9938	88.58
16.5	40,317,215	213,111	0.0053	0.9947	88.03
17.5	37,910,133	215,654	0.0057	0.9943	87.56
18.5	34,621,019	191,635	0.0055	0.9945	87.07
19.5	31,532,052	167,604	0.0053	0.9947	86.58
20.5	28,348,063	183,252	0.0065	0.9935	86.12
21.5	25,632,794	171,115	0.0067	0.9933	85.57
22.5	22,611,468	151,833	0.0067	0.9933	85.00
23.5	19,233,414	168,289	0.0087	0.9913	84.43
24.5	16,725,247	134,233	0.0080	0.9920	83.69
25.5	16,253,889	145,995	0.0090	0.9910	83.02
26.5	12,650,603	126,678	0.0100	0.9900	82.27
27.5	10,374,972	110,564	0.0107	0.9893	81.45
28.5	7,227,294	86,822	0.0120	0.9880	80.58
29.5	5,129,085	47,137	0.0092	0.9908	79.61
30.5	3,514,853	33,835	0.0096	0.9904	78.88
31.5	2,368,067	25,773	0.0109	0.9891	78.12
32.5	1,318,719	7,379	0.0056	0.9944	77.27
33.5	550,331	2,961	0.0054	0.9946	76.84
34.5					76.42

MANITOBA HYDRO
ACCOUNT 4000X - SREET LIGHTING
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4000X - SREET LIGHTING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	187,353,757	7,692	0.0000	1.0000	100.00
0.5	189,419,780	15,574	0.0001	0.9999	100.00
1.5	186,785,346	14,156	0.0001	0.9999	99.99
2.5	181,192,682	16,722	0.0001	0.9999	99.98
3.5	177,371,881	20,348	0.0001	0.9999	99.97
4.5	175,367,321	23,910	0.0001	0.9999	99.96
5.5	173,028,872	27,600	0.0002	0.9998	99.95
6.5	164,854,755	31,152	0.0002	0.9998	99.93
7.5	158,600,965	37,385	0.0002	0.9998	99.91
8.5	152,902,960	47,895	0.0003	0.9997	99.89
9.5	147,561,276	73,941	0.0005	0.9995	99.86
10.5	142,171,686	115,631	0.0008	0.9992	99.81
11.5	137,423,871	217,454	0.0016	0.9984	99.72
12.5	132,313,511	298,127	0.0023	0.9977	99.57
13.5	128,813,296	530,481	0.0041	0.9959	99.34
14.5	126,025,737	749,165	0.0059	0.9941	98.93
15.5	122,735,050	909,065	0.0074	0.9926	98.35
16.5	118,951,646	1,201,850	0.0101	0.9899	97.62
17.5	114,196,525	1,314,915	0.0115	0.9885	96.63
18.5	110,608,795	1,548,638	0.0140	0.9860	95.52
19.5	107,159,253	1,720,247	0.0161	0.9839	94.18
20.5	102,705,289	1,858,829	0.0181	0.9819	92.67
21.5	98,914,529	1,949,620	0.0197	0.9803	90.99
22.5	94,423,192	1,872,107	0.0198	0.9802	89.20
23.5	90,485,342	2,057,738	0.0227	0.9773	87.43
24.5	84,862,842	1,713,979	0.0202	0.9798	85.44
25.5	78,398,040	1,677,666	0.0214	0.9786	83.72
26.5	72,284,515	1,509,287	0.0209	0.9791	81.92
27.5	64,769,827	1,251,410	0.0193	0.9807	80.21
28.5	57,633,700	1,092,200	0.0190	0.9810	78.66
29.5	52,676,602	961,955	0.0183	0.9817	77.17
30.5	48,158,445	822,445	0.0171	0.9829	75.76
31.5	44,329,968	771,057	0.0174	0.9826	74.47
32.5	42,516,285	630,670	0.0148	0.9852	73.17
33.5	39,833,195	554,680	0.0139	0.9861	72.09
34.5	37,710,007	434,881	0.0115	0.9885	71.09
35.5	34,901,537	349,808	0.0100	0.9900	70.27
36.5	30,989,814	280,820	0.0091	0.9909	69.56
37.5	27,355,773	185,439	0.0068	0.9932	68.93
38.5	24,201,666	141,301	0.0058	0.9942	68.46

MANITOBA HYDRO

ACCOUNT 4000X - SREET LIGHTING

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	21,828,969	88,007	0.0040	0.9960	68.06
40.5	19,703,159	58,046	0.0029	0.9971	67.79
41.5	17,781,573	45,901	0.0026	0.9974	67.59
42.5	15,702,073	27,350	0.0017	0.9983	67.42
43.5	14,457,042	20,446	0.0014	0.9986	67.30
44.5	13,233,084	9,479	0.0007	0.9993	67.20
45.5	12,162,454	6,236	0.0005	0.9995	67.15
46.5	11,169,604	2,233	0.0002	0.9998	67.12
47.5	10,308,877	2,156	0.0002	0.9998	67.11
48.5	9,569,668		0.0000	1.0000	67.09
49.5	8,551,306		0.0000	1.0000	67.09
50.5	7,858,983		0.0000	1.0000	67.09
51.5	7,082,545		0.0000	1.0000	67.09
52.5	6,366,134		0.0000	1.0000	67.09
53.5	5,430,672		0.0000	1.0000	67.09
54.5	4,451,027		0.0000	1.0000	67.09
55.5	3,843,328		0.0000	1.0000	67.09
56.5	3,392,309		0.0000	1.0000	67.09
57.5	3,038,600		0.0000	1.0000	67.09
58.5	2,513,775		0.0000	1.0000	67.09
59.5	1,867,007		0.0000	1.0000	67.09
60.5	1,410,564		0.0000	1.0000	67.09
61.5	966,921		0.0000	1.0000	67.09
62.5	686,924		0.0000	1.0000	67.09
63.5	400,460		0.0000	1.0000	67.09
64.5	67,374		0.0000	1.0000	67.09
65.5	63,781		0.0000	1.0000	67.09
66.5	63,781		0.0000	1.0000	67.09
67.5	62,104		0.0000	1.0000	67.09
68.5	60,637		0.0000	1.0000	67.09
69.5	58,122		0.0000	1.0000	67.09
70.5	57,044		0.0000	1.0000	67.09
71.5	55,966		0.0000	1.0000	67.09
72.5	55,966		0.0000	1.0000	67.09
73.5	54,618		0.0000	1.0000	67.09
74.5	52,073		0.0000	1.0000	67.09
75.5	51,774		0.0000	1.0000	67.09
76.5	51,175		0.0000	1.0000	67.09
77.5	50,726		0.0000	1.0000	67.09
78.5	49,378		0.0000	1.0000	67.09

MANITOBA HYDRO

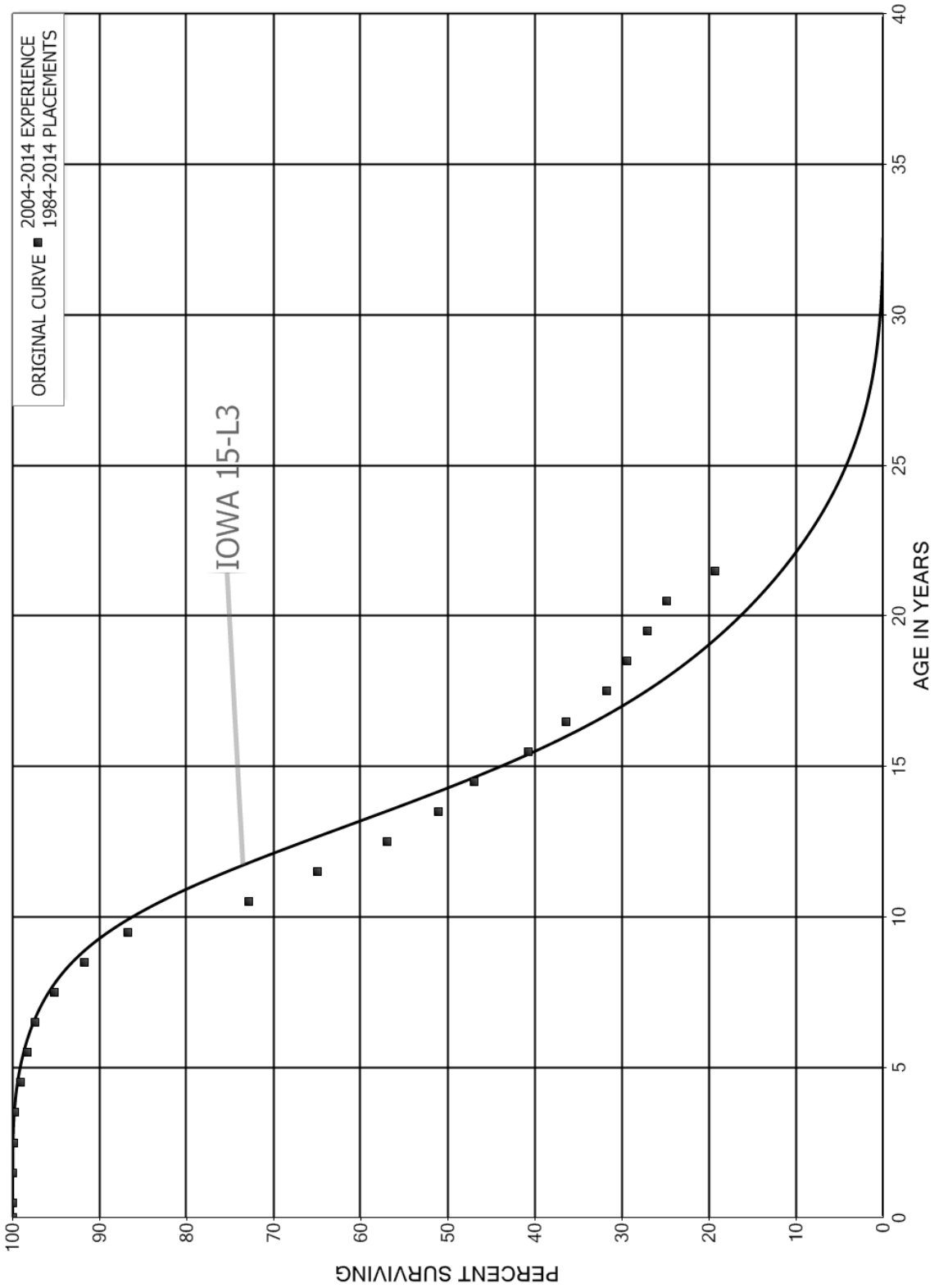
ACCOUNT 4000X - SREET LIGHTING

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1901-2014 EXPERIENCE BAND 1970-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	49,378		0.0000	1.0000	67.09
80.5	47,582		0.0000	1.0000	67.09
81.5	45,015		0.0000	1.0000	67.09
82.5	44,438		0.0000	1.0000	67.09
83.5	39,818		0.0000	1.0000	67.09
84.5	38,663		0.0000	1.0000	67.09
85.5	35,198		0.0000	1.0000	67.09
86.5	33,273		0.0000	1.0000	67.09
87.5	30,194		0.0000	1.0000	67.09
88.5	27,884		0.0000	1.0000	67.09
89.5	23,800		0.0000	1.0000	67.09
90.5	21,758		0.0000	1.0000	67.09
91.5	20,521		0.0000	1.0000	67.09
92.5	18,046		0.0000	1.0000	67.09
93.5	15,880		0.0000	1.0000	67.09
94.5	14,334		0.0000	1.0000	67.09
95.5	12,787		0.0000	1.0000	67.09
96.5	12,787		0.0000	1.0000	67.09
97.5	12,787		0.0000	1.0000	67.09
98.5	12,065		0.0000	1.0000	67.09
99.5	11,137		0.0000	1.0000	67.09
100.5	9,796		0.0000	1.0000	67.09
101.5	6,393		0.0000	1.0000	67.09
102.5					67.09

MANITOBA HYDRO
ACCOUNT 4900V - METERS - ELECTRONIC
ORIGINAL AND SMOOTH SURVIVOR CURVES



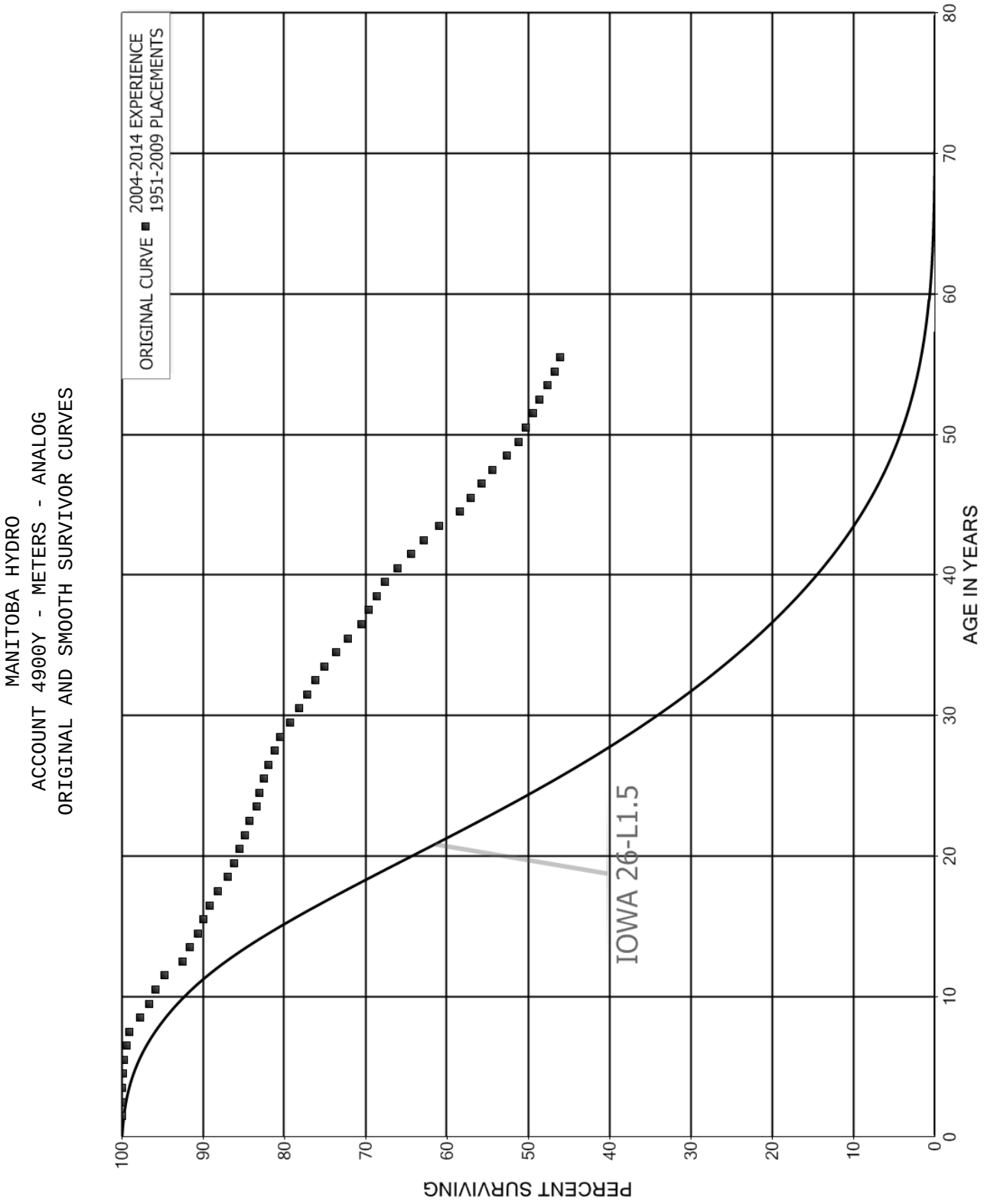
MANITOBA HYDRO

ACCOUNT 4900V - METERS - ELECTRONIC

ORIGINAL LIFE TABLE

PLACEMENT BAND 1984-2014 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	36,123,775	2,513	0.0001	0.9999	100.00
0.5	32,943,264	18,751	0.0006	0.9994	99.99
1.5	29,889,188	25,943	0.0009	0.9991	99.94
2.5	26,276,009	43,482	0.0017	0.9983	99.85
3.5	24,263,007	154,725	0.0064	0.9936	99.68
4.5	21,644,499	162,865	0.0075	0.9925	99.05
5.5	20,071,571	179,821	0.0090	0.9910	98.30
6.5	17,529,753	398,525	0.0227	0.9773	97.42
7.5	14,535,986	526,188	0.0362	0.9638	95.21
8.5	11,367,376	619,155	0.0545	0.9455	91.76
9.5	9,234,051	1,481,523	0.1604	0.8396	86.76
10.5	5,561,978	603,153	0.1084	0.8916	72.84
11.5	5,176,164	637,411	0.1231	0.8769	64.94
12.5	4,461,306	459,095	0.1029	0.8971	56.95
13.5	3,765,464	306,242	0.0813	0.9187	51.09
14.5	3,155,621	417,939	0.1324	0.8676	46.93
15.5	2,580,479	270,818	0.1049	0.8951	40.72
16.5	2,185,226	284,579	0.1302	0.8698	36.44
17.5	1,778,170	127,381	0.0716	0.9284	31.70
18.5	1,481,874	117,779	0.0795	0.9205	29.43
19.5	1,332,954	113,362	0.0850	0.9150	27.09
20.5	1,170,371	260,038	0.2222	0.7778	24.78
21.5	734,436	27,399	0.0373	0.9627	19.28
22.5	111,438	2,447	0.0220	0.9780	18.56
23.5	75,608	11,614	0.1536	0.8464	18.15
24.5	49,150	14,141	0.2877	0.7123	15.36
25.5	19,263	1,284	0.0667	0.9333	10.94
26.5					10.21


MANITOBA HYDRO
ACCOUNT 4900Y - METERS - ANALOG
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 2004-2014 EXPERIENCE
1951-2009 PLACEMENTS
IOWA 26-L1.5
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
AGE IN YEARS
0
10
20
30
40
50
60
70
80

MANITOBA HYDRO

ACCOUNT 4900Y - METERS - ANALOG

ORIGINAL LIFE TABLE

PLACEMENT BAND 1951-2009 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	1,152,500		0.0000	1.0000	100.00
0.5	1,674,770	226	0.0001	0.9999	100.00
1.5	3,125,507	282	0.0001	0.9999	99.99
2.5	4,722,030	3,471	0.0007	0.9993	99.98
3.5	5,633,356	2,798	0.0005	0.9995	99.90
4.5	7,151,576	9,842	0.0014	0.9986	99.85
5.5	8,129,301	25,017	0.0031	0.9969	99.72
6.5	8,362,330	30,615	0.0037	0.9963	99.41
7.5	9,153,680	119,497	0.0131	0.9869	99.05
8.5	10,052,468	113,947	0.0113	0.9887	97.75
9.5	10,861,298	86,382	0.0080	0.9920	96.65
10.5	11,232,970	135,298	0.0120	0.9880	95.88
11.5	11,733,134	273,366	0.0233	0.9767	94.72
12.5	12,069,461	121,951	0.0101	0.9899	92.51
13.5	12,777,002	131,899	0.0103	0.9897	91.58
14.5	13,006,794	104,507	0.0080	0.9920	90.63
15.5	12,783,066	100,588	0.0079	0.9921	89.91
16.5	13,876,793	150,859	0.0109	0.9891	89.20
17.5	16,671,477	239,184	0.0143	0.9857	88.23
18.5	17,421,107	167,538	0.0096	0.9904	86.96
19.5	17,670,905	129,688	0.0073	0.9927	86.13
20.5	17,630,323	132,143	0.0075	0.9925	85.49
21.5	18,507,652	116,336	0.0063	0.9937	84.85
22.5	19,292,240	199,588	0.0103	0.9897	84.32
23.5	18,695,442	92,056	0.0049	0.9951	83.45
24.5	17,984,288	106,750	0.0059	0.9941	83.04
25.5	18,026,714	135,364	0.0075	0.9925	82.54
26.5	18,197,134	158,726	0.0087	0.9913	81.92
27.5	16,576,557	148,659	0.0090	0.9910	81.21
28.5	14,146,195	206,279	0.0146	0.9854	80.48
29.5	12,932,425	181,777	0.0141	0.9859	79.31
30.5	11,633,618	158,406	0.0136	0.9864	78.19
31.5	10,885,876	136,640	0.0126	0.9874	77.13
32.5	9,331,777	132,467	0.0142	0.9858	76.16
33.5	7,883,174	150,310	0.0191	0.9809	75.08
34.5	6,920,295	134,237	0.0194	0.9806	73.65
35.5	5,672,249	132,315	0.0233	0.9767	72.22
36.5	4,910,328	67,829	0.0138	0.9862	70.53
37.5	3,892,986	50,259	0.0129	0.9871	69.56
38.5	3,681,567	57,063	0.0155	0.9845	68.66

MANITOBA HYDRO

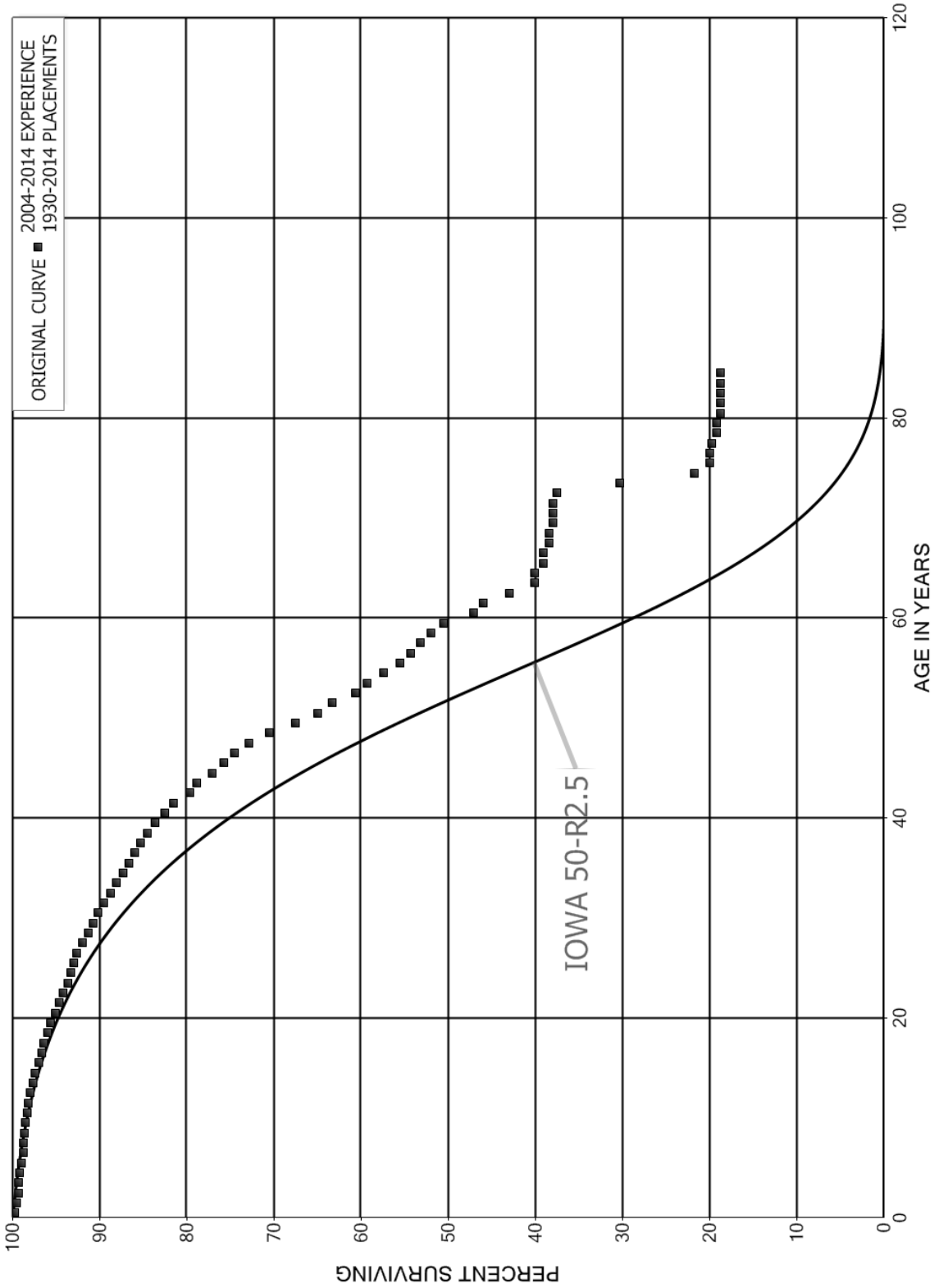
ACCOUNT 4900Y - METERS - ANALOG

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1951-2009 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,347,685	76,093	0.0227	0.9773	67.60
40.5	2,942,531	74,037	0.0252	0.9748	66.06
41.5	2,976,915	73,696	0.0248	0.9752	64.40
42.5	2,714,558	78,327	0.0289	0.9711	62.81
43.5	2,362,382	99,672	0.0422	0.9578	60.99
44.5	2,032,933	48,084	0.0237	0.9763	58.42
45.5	1,708,920	38,859	0.0227	0.9773	57.04
46.5	1,460,351	34,857	0.0239	0.9761	55.74
47.5	1,234,134	40,272	0.0326	0.9674	54.41
48.5	1,070,987	29,095	0.0272	0.9728	52.63
49.5	820,079	14,885	0.0182	0.9818	51.21
50.5	662,531	12,275	0.0185	0.9815	50.28
51.5	510,896	7,818	0.0153	0.9847	49.34
52.5	379,428	7,628	0.0201	0.9799	48.59
53.5	234,391	4,238	0.0181	0.9819	47.61
54.5	159,578	2,294	0.0144	0.9856	46.75
55.5	92,194	1,648	0.0179	0.9821	46.08
56.5	44,310	1,060	0.0239	0.9761	45.26
57.5	23,220	554	0.0239	0.9761	44.17
58.5	14,694	63	0.0043	0.9957	43.12
59.5	176		0.0000	1.0000	42.93
60.5	176		0.0000	1.0000	42.93
61.5	176		0.0000	1.0000	42.93
62.5	176		0.0000	1.0000	42.93
63.5					42.93

MANITOBA HYDRO
ACCOUNT 4900Z - METERING TRANSFORMERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 4900Z - METERING TRANSFORMERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1930-2014 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10,470,916	28,504	0.0027	0.9973	100.00
0.5	10,385,597	22,391	0.0022	0.9978	99.73
1.5	9,404,900	16,435	0.0017	0.9983	99.51
2.5	8,734,587	4,320	0.0005	0.9995	99.34
3.5	8,185,232	8,870	0.0011	0.9989	99.29
4.5	7,871,324	20,692	0.0026	0.9974	99.18
5.5	7,437,153	11,785	0.0016	0.9984	98.92
6.5	7,632,740	5,395	0.0007	0.9993	98.76
7.5	7,025,347	7,007	0.0010	0.9990	98.69
8.5	6,892,179	4,956	0.0007	0.9993	98.60
9.5	6,297,793	17,046	0.0027	0.9973	98.53
10.5	5,931,750	8,361	0.0014	0.9986	98.26
11.5	5,171,122	11,316	0.0022	0.9978	98.12
12.5	4,673,184	13,662	0.0029	0.9971	97.91
13.5	4,548,835	11,334	0.0025	0.9975	97.62
14.5	4,410,952	16,845	0.0038	0.9962	97.38
15.5	4,252,182	18,282	0.0043	0.9957	97.00
16.5	3,987,807	9,256	0.0023	0.9977	96.59
17.5	3,734,493	14,364	0.0038	0.9962	96.36
18.5	3,850,538	15,920	0.0041	0.9959	95.99
19.5	3,609,516	18,181	0.0050	0.9950	95.60
20.5	3,515,273	16,740	0.0048	0.9952	95.11
21.5	3,480,858	19,689	0.0057	0.9943	94.66
22.5	3,548,966	18,052	0.0051	0.9949	94.13
23.5	3,485,869	12,489	0.0036	0.9964	93.65
24.5	3,314,422	11,688	0.0035	0.9965	93.31
25.5	3,209,889	13,548	0.0042	0.9958	92.98
26.5	3,075,751	22,863	0.0074	0.9926	92.59
27.5	2,922,386	19,856	0.0068	0.9932	91.90
28.5	2,846,273	18,742	0.0066	0.9934	91.28
29.5	2,629,729	15,782	0.0060	0.9940	90.68
30.5	2,594,594	17,024	0.0066	0.9934	90.13
31.5	2,581,651	24,153	0.0094	0.9906	89.54
32.5	2,457,354	16,346	0.0067	0.9933	88.70
33.5	2,305,444	22,289	0.0097	0.9903	88.11
34.5	2,184,059	16,027	0.0073	0.9927	87.26
35.5	1,964,224	14,869	0.0076	0.9924	86.62
36.5	1,774,604	14,569	0.0082	0.9918	85.96
37.5	1,554,071	13,540	0.0087	0.9913	85.26
38.5	1,358,086	15,338	0.0113	0.9887	84.52

MANITOBA HYDRO

ACCOUNT 4900Z - METERING TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1930-2014 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,097,671	14,288	0.0130	0.9870	83.56
40.5	885,505	10,830	0.0122	0.9878	82.47
41.5	728,221	16,467	0.0226	0.9774	81.47
42.5	587,369	6,089	0.0104	0.9896	79.62
43.5	472,420	10,292	0.0218	0.9782	78.80
44.5	383,932	6,666	0.0174	0.9826	77.08
45.5	313,594	5,040	0.0161	0.9839	75.74
46.5	279,201	6,242	0.0224	0.9776	74.53
47.5	239,852	7,685	0.0320	0.9680	72.86
48.5	200,533	8,440	0.0421	0.9579	70.52
49.5	157,800	6,210	0.0394	0.9606	67.56
50.5	123,329	3,090	0.0251	0.9749	64.90
51.5	108,973	4,534	0.0416	0.9584	63.27
52.5	94,595	2,122	0.0224	0.9776	60.64
53.5	78,195	2,527	0.0323	0.9677	59.28
54.5	65,199	2,160	0.0331	0.9669	57.36
55.5	53,542	1,089	0.0203	0.9797	55.46
56.5	46,187	1,006	0.0218	0.9782	54.34
57.5	34,639	801	0.0231	0.9769	53.15
58.5	29,842	791	0.0265	0.9735	51.92
59.5	20,459	1,395	0.0682	0.9318	50.55
60.5	16,326	408	0.0250	0.9750	47.10
61.5	14,873	950	0.0638	0.9362	45.92
62.5	11,045	752	0.0681	0.9319	42.99
63.5	9,536		0.0000	1.0000	40.06
64.5	7,986	191	0.0240	0.9760	40.06
65.5	6,283		0.0000	1.0000	39.10
66.5	5,458	93	0.0171	0.9829	39.10
67.5	5,309		0.0000	1.0000	38.43
68.5	2,405	31	0.0127	0.9873	38.43
69.5	2,306		0.0000	1.0000	37.94
70.5	5,726		0.0000	1.0000	37.94
71.5	7,206	79	0.0109	0.9891	37.94
72.5	6,790	1,315	0.1937	0.8063	37.53
73.5	5,483	1,546	0.2820	0.7180	30.26
74.5	3,814	314	0.0824	0.9176	21.73
75.5	3,436		0.0000	1.0000	19.94
76.5	3,296	43	0.0132	0.9868	19.94
77.5	3,191	74	0.0232	0.9768	19.67
78.5	2,842		0.0000	1.0000	19.22

MANITOBA HYDRO

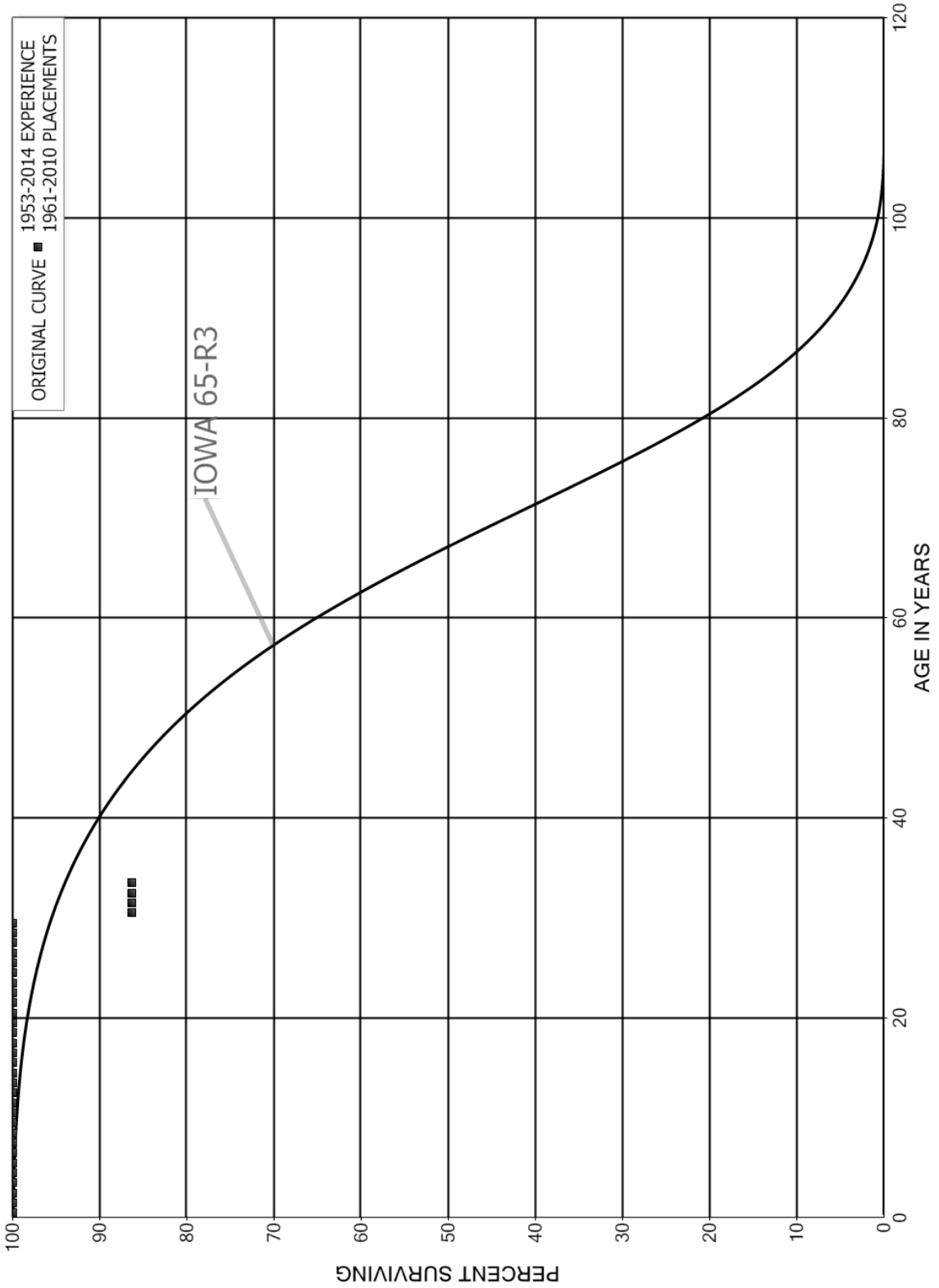
ACCOUNT 4900Z - METERING TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1930-2014 EXPERIENCE BAND 2004-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,842	76	0.0269	0.9731	19.22
80.5	2,407		0.0000	1.0000	18.70
81.5	415		0.0000	1.0000	18.70
82.5	353		0.0000	1.0000	18.70
83.5	281		0.0000	1.0000	18.70
84.5					18.70

MANITOBA HYDRO
ACCOUNT 5000B - BUILDINGS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000B - BUILDINGS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	4,310,836		0.0000	1.0000	100.00
0.5	4,310,836		0.0000	1.0000	100.00
1.5	4,310,836		0.0000	1.0000	100.00
2.5	4,310,836		0.0000	1.0000	100.00
3.5	4,310,836		0.0000	1.0000	100.00
4.5	4,295,538		0.0000	1.0000	100.00
5.5	4,295,538		0.0000	1.0000	100.00
6.5	4,295,538		0.0000	1.0000	100.00
7.5	4,103,558		0.0000	1.0000	100.00
8.5	4,103,558		0.0000	1.0000	100.00
9.5	3,818,445		0.0000	1.0000	100.00
10.5	2,762,601		0.0000	1.0000	100.00
11.5	1,895,363		0.0000	1.0000	100.00
12.5	1,851,603		0.0000	1.0000	100.00
13.5	1,208,108		0.0000	1.0000	100.00
14.5	1,032,929		0.0000	1.0000	100.00
15.5	1,032,929		0.0000	1.0000	100.00
16.5	1,032,929		0.0000	1.0000	100.00
17.5	858,391		0.0000	1.0000	100.00
18.5	858,391		0.0000	1.0000	100.00
19.5	858,391		0.0000	1.0000	100.00
20.5	858,391		0.0000	1.0000	100.00
21.5	858,391		0.0000	1.0000	100.00
22.5	772,289		0.0000	1.0000	100.00
23.5	701,211		0.0000	1.0000	100.00
24.5	494,098		0.0000	1.0000	100.00
25.5	376,247		0.0000	1.0000	100.00
26.5	376,247		0.0000	1.0000	100.00
27.5	376,247		0.0000	1.0000	100.00
28.5	376,247		0.0000	1.0000	100.00
29.5	275,735	37,826	0.1372	0.8628	100.00
30.5	237,910		0.0000	1.0000	86.28
31.5	164,184		0.0000	1.0000	86.28
32.5	164,184		0.0000	1.0000	86.28
33.5	112,056		0.0000	1.0000	86.28
34.5	19,862		0.0000	1.0000	86.28
35.5	19,862		0.0000	1.0000	86.28
36.5	19,862		0.0000	1.0000	86.28
37.5	19,862		0.0000	1.0000	86.28
38.5	19,862		0.0000	1.0000	86.28

MANITOBA HYDRO

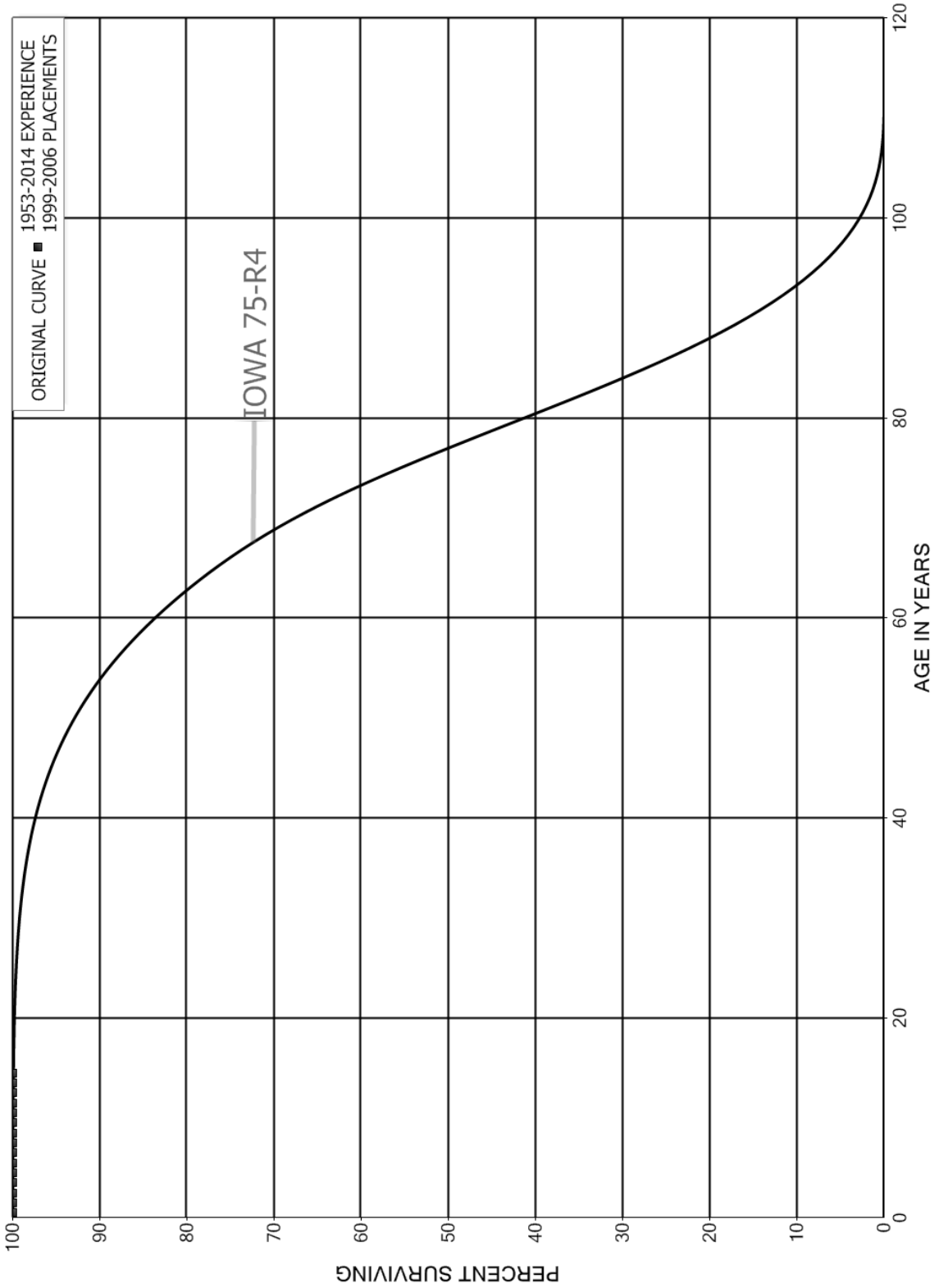
ACCOUNT 5000B - BUILDINGS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1961-2010 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	5,602		0.0000	1.0000	86.28
40.5	5,602		0.0000	1.0000	86.28
41.5	5,602		0.0000	1.0000	86.28
42.5	5,602		0.0000	1.0000	86.28
43.5	5,602		0.0000	1.0000	86.28
44.5	5,602		0.0000	1.0000	86.28
45.5	5,602		0.0000	1.0000	86.28
46.5	5,602		0.0000	1.0000	86.28
47.5	5,602		0.0000	1.0000	86.28
48.5	5,602	701	0.1251	0.8749	86.28
49.5					75.49

MANITOBA HYDRO
ACCOUNT 5000D - BUILDING - SYSTEM CONTROL CENTRE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

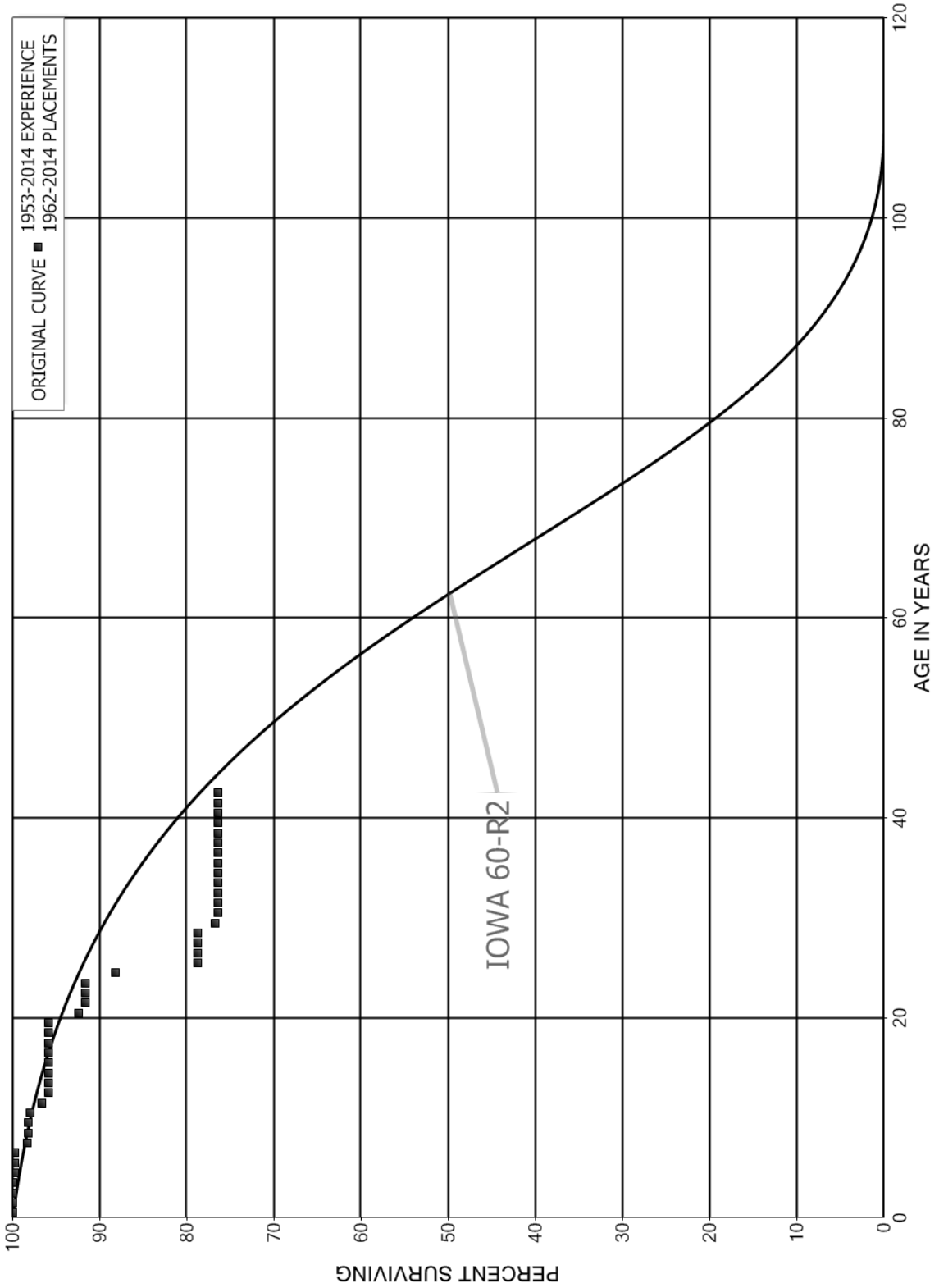
ACCOUNT 5000D - BUILDING - SYSTEM CONTROL CENTRE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1999-2006 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	15,857,686		0.0000	1.0000	100.00
0.5	15,857,686		0.0000	1.0000	100.00
1.5	15,857,686		0.0000	1.0000	100.00
2.5	15,857,686		0.0000	1.0000	100.00
3.5	15,857,686		0.0000	1.0000	100.00
4.5	15,857,686		0.0000	1.0000	100.00
5.5	15,857,686		0.0000	1.0000	100.00
6.5	15,857,686		0.0000	1.0000	100.00
7.5	15,857,686		0.0000	1.0000	100.00
8.5	15,857,568		0.0000	1.0000	100.00
9.5	15,857,568		0.0000	1.0000	100.00
10.5	15,857,568		0.0000	1.0000	100.00
11.5	15,857,568		0.0000	1.0000	100.00
12.5	15,857,460		0.0000	1.0000	100.00
13.5	15,853,541		0.0000	1.0000	100.00
14.5	15,765,449		0.0000	1.0000	100.00
15.5					100.00

MANITOBA HYDRO
ACCOUNT 5000G - COMMUNICATION TOWERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000G - COMMUNICATION TOWERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1962-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,387,386		0.0000	1.0000	100.00
0.5	9,352,282		0.0000	1.0000	100.00
1.5	9,325,055	12	0.0000	1.0000	100.00
2.5	9,295,735	594	0.0001	0.9999	100.00
3.5	9,243,684	22,016	0.0024	0.9976	99.99
4.5	8,269,300		0.0000	1.0000	99.76
5.5	8,222,840		0.0000	1.0000	99.76
6.5	6,912,541	103,607	0.0150	0.9850	99.76
7.5	6,542,590	5,912	0.0009	0.9991	98.26
8.5	6,357,253		0.0000	1.0000	98.17
9.5	6,204,466	10,936	0.0018	0.9982	98.17
10.5	5,915,233	80,230	0.0136	0.9864	98.00
11.5	5,335,747	48,454	0.0091	0.9909	96.67
12.5	5,132,854		0.0000	1.0000	95.79
13.5	5,132,854		0.0000	1.0000	95.79
14.5	4,995,519		0.0000	1.0000	95.79
15.5	4,800,749		0.0000	1.0000	95.79
16.5	4,291,763		0.0000	1.0000	95.79
17.5	2,188,049		0.0000	1.0000	95.79
18.5	2,128,049		0.0000	1.0000	95.79
19.5	2,128,049	76,650	0.0360	0.9640	95.79
20.5	2,051,399	17,099	0.0083	0.9917	92.34
21.5	1,880,410		0.0000	1.0000	91.57
22.5	1,845,914		0.0000	1.0000	91.57
23.5	1,845,914	68,640	0.0372	0.9628	91.57
24.5	1,249,121	133,569	0.1069	0.8931	88.17
25.5	1,115,553		0.0000	1.0000	78.74
26.5	1,115,553		0.0000	1.0000	78.74
27.5	1,115,553	925	0.0008	0.9992	78.74
28.5	1,114,628	27,899	0.0250	0.9750	78.67
29.5	868,674	3,799	0.0044	0.9956	76.70
30.5	864,875		0.0000	1.0000	76.37
31.5	731,051		0.0000	1.0000	76.37
32.5	724,440		0.0000	1.0000	76.37
33.5	669,176		0.0000	1.0000	76.37
34.5	171,852		0.0000	1.0000	76.37
35.5	171,852		0.0000	1.0000	76.37
36.5	171,852		0.0000	1.0000	76.37
37.5	171,852		0.0000	1.0000	76.37
38.5	171,852		0.0000	1.0000	76.37

MANITOBA HYDRO

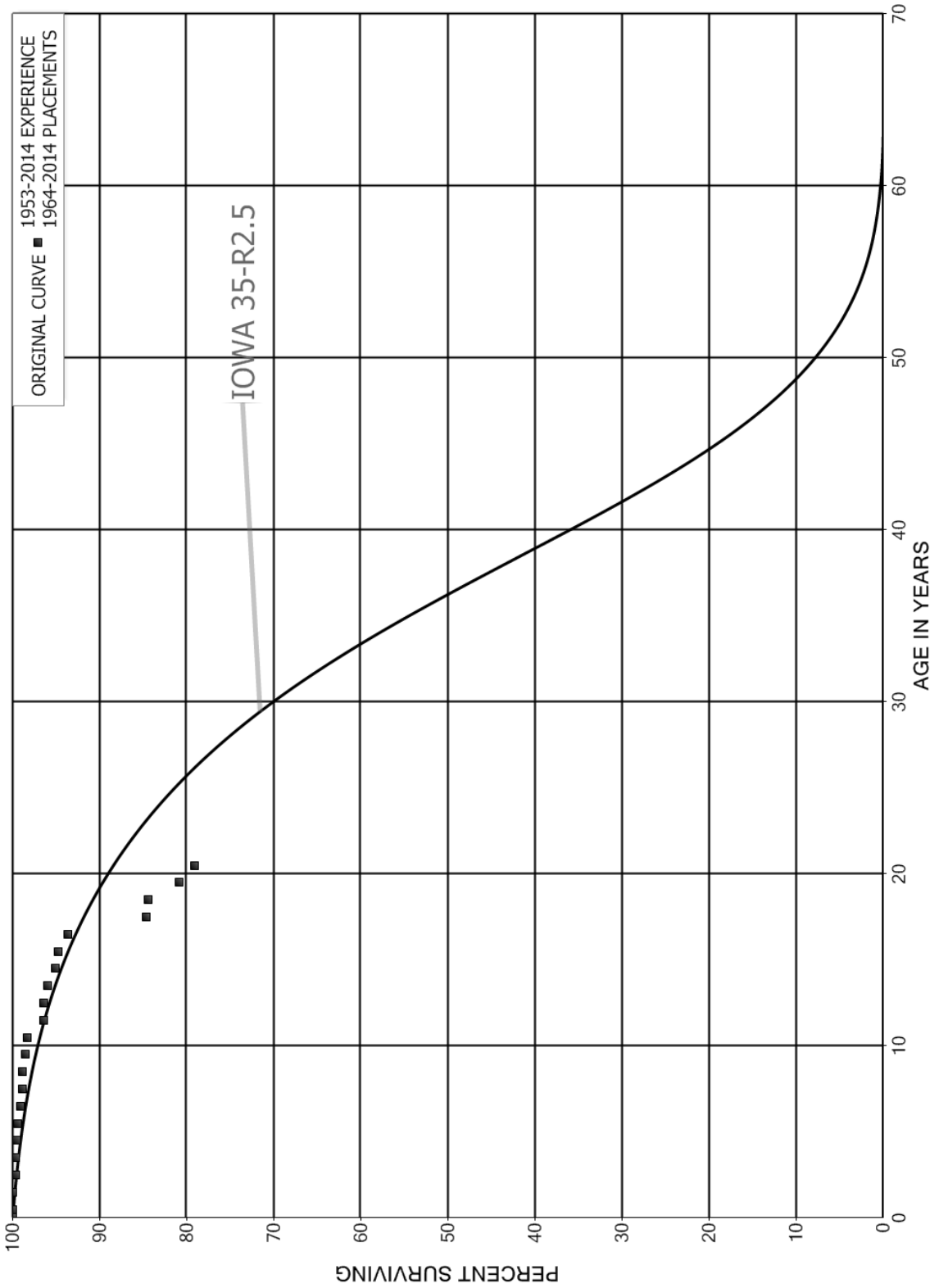
ACCOUNT 5000G - COMMUNICATION TOWERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1962-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	171,852		0.0000	1.0000	76.37
40.5	171,852		0.0000	1.0000	76.37
41.5	171,852		0.0000	1.0000	76.37
42.5	171,852		0.0000	1.0000	76.37
43.5	63,576		0.0000	1.0000	76.37
44.5	63,576		0.0000	1.0000	76.37
45.5	63,576	14,575	0.2292	0.7708	76.37
46.5	49,002		0.0000	1.0000	58.86
47.5	49,002	220	0.0045	0.9955	58.86
48.5	48,782		0.0000	1.0000	58.60
49.5	44,763		0.0000	1.0000	58.60
50.5					58.60

MANITOBA HYDRO
ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE

ORIGINAL LIFE TABLE

PLACEMENT BAND 1964-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	132,502,360		0.0000	1.0000	100.00
0.5	131,323,388		0.0000	1.0000	100.00
1.5	124,786,010	462,137	0.0037	0.9963	100.00
2.5	122,606,977	7,370	0.0001	0.9999	99.63
3.5	120,129,369	122,841	0.0010	0.9990	99.62
4.5	112,753,589	83,028	0.0007	0.9993	99.52
5.5	109,431,862	472,732	0.0043	0.9957	99.45
6.5	100,757,374	141,973	0.0014	0.9986	99.02
7.5	89,244,154	8,236	0.0001	0.9999	98.88
8.5	89,155,832	328,826	0.0037	0.9963	98.87
9.5	75,985,911	195,739	0.0026	0.9974	98.51
10.5	27,749,599	535,000	0.0193	0.9807	98.25
11.5	26,103,209		0.0000	1.0000	96.36
12.5	24,323,403	109,739	0.0045	0.9955	96.36
13.5	24,228,838	209,800	0.0087	0.9913	95.92
14.5	13,923,403	49,416	0.0035	0.9965	95.09
15.5	9,763,406	118,034	0.0121	0.9879	94.75
16.5	7,490,273	718,790	0.0960	0.9040	93.61
17.5	6,562,021	19,210	0.0029	0.9971	84.63
18.5	6,542,810	274,362	0.0419	0.9581	84.38
19.5	6,222,021	132,606	0.0213	0.9787	80.84
20.5	5,005,729	76,547	0.0153	0.9847	79.12
21.5	785,614		0.0000	1.0000	77.91
22.5	686,512		0.0000	1.0000	77.91
23.5	625,178		0.0000	1.0000	77.91
24.5	625,178		0.0000	1.0000	77.91
25.5	625,178		0.0000	1.0000	77.91
26.5	625,178	14,816	0.0237	0.9763	77.91
27.5	610,362	2,136	0.0035	0.9965	76.06
28.5	608,227	220,988	0.3633	0.6367	75.79
29.5	387,239	3,989	0.0103	0.9897	48.26
30.5	383,251		0.0000	1.0000	47.76
31.5	383,251	13,414	0.0350	0.9650	47.76
32.5	369,837		0.0000	1.0000	46.09
33.5	369,837	1,934	0.0052	0.9948	46.09
34.5	367,903		0.0000	1.0000	45.85
35.5	367,903		0.0000	1.0000	45.85
36.5	247,225		0.0000	1.0000	45.85
37.5	247,225		0.0000	1.0000	45.85
38.5	247,225	3,204	0.0130	0.9870	45.85

MANITOBA HYDRO

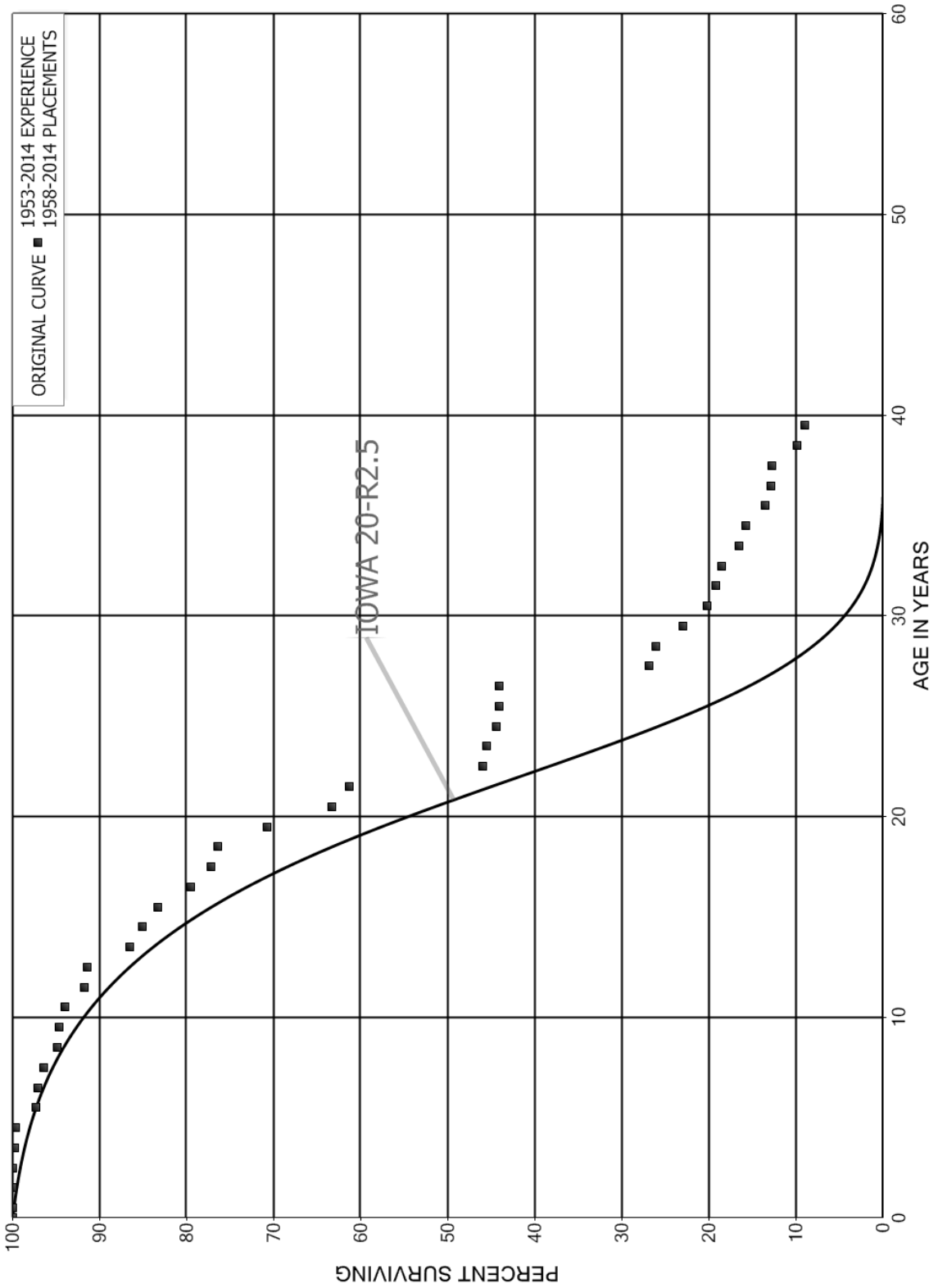
ACCOUNT 5000H - FIBRE OPTIC AND METALLIC CABLE

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1964-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	244,021	50,825	0.2083	0.7917	45.25
40.5	193,196		0.0000	1.0000	35.83
41.5	193,196	5,100	0.0264	0.9736	35.83
42.5	188,096		0.0000	1.0000	34.88
43.5	188,096		0.0000	1.0000	34.88
44.5	188,096		0.0000	1.0000	34.88
45.5	185,421	185,421	1.0000		34.88
46.5					

MANITOBA HYDRO
ACCOUNT 5000J - CARRIER EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000J - CARRIER EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	177,438,845	41,098	0.0002	0.9998	100.00
0.5	175,486,106	71,227	0.0004	0.9996	99.98
1.5	170,669,921	71,800	0.0004	0.9996	99.94
2.5	166,004,713	289,817	0.0017	0.9983	99.89
3.5	156,227,299	132,151	0.0008	0.9992	99.72
4.5	149,386,738	3,442,321	0.0230	0.9770	99.64
5.5	131,094,965	422,972	0.0032	0.9968	97.34
6.5	120,102,615	785,027	0.0065	0.9935	97.03
7.5	112,988,731	1,831,156	0.0162	0.9838	96.39
8.5	107,670,491	251,806	0.0023	0.9977	94.83
9.5	102,133,456	697,511	0.0068	0.9932	94.61
10.5	82,495,984	1,961,113	0.0238	0.9762	93.96
11.5	74,462,497	295,822	0.0040	0.9960	91.73
12.5	67,268,537	3,592,909	0.0534	0.9466	91.36
13.5	62,516,572	1,037,426	0.0166	0.9834	86.48
14.5	57,298,085	1,151,860	0.0201	0.9799	85.05
15.5	44,164,397	2,044,838	0.0463	0.9537	83.34
16.5	35,036,746	991,923	0.0283	0.9717	79.48
17.5	28,877,204	298,941	0.0104	0.9896	77.23
18.5	27,576,850	2,042,117	0.0741	0.9259	76.43
19.5	25,248,189	2,670,414	0.1058	0.8942	70.77
20.5	21,834,745	693,906	0.0318	0.9682	63.29
21.5	20,679,848	5,175,289	0.2503	0.7497	61.27
22.5	15,341,812	140,393	0.0092	0.9908	45.94
23.5	14,808,629	362,776	0.0245	0.9755	45.52
24.5	14,323,111	94,245	0.0066	0.9934	44.40
25.5	10,840,762	19,265	0.0018	0.9982	44.11
26.5	10,821,496	4,233,826	0.3912	0.6088	44.03
27.5	6,233,784	169,865	0.0272	0.9728	26.81
28.5	6,042,762	731,249	0.1210	0.8790	26.08
29.5	5,272,155	630,371	0.1196	0.8804	22.92
30.5	4,500,599	229,535	0.0510	0.9490	20.18
31.5	4,203,106	144,864	0.0345	0.9655	19.15
32.5	4,052,811	440,214	0.1086	0.8914	18.49
33.5	3,558,701	173,993	0.0489	0.9511	16.48
34.5	3,384,709	460,126	0.1359	0.8641	15.68
35.5	2,924,582	148,729	0.0509	0.9491	13.55
36.5	2,775,853	39,113	0.0141	0.9859	12.86
37.5	2,618,846	575,920	0.2199	0.7801	12.68
38.5	2,042,926	201,647	0.0987	0.9013	9.89

MANITOBA HYDRO

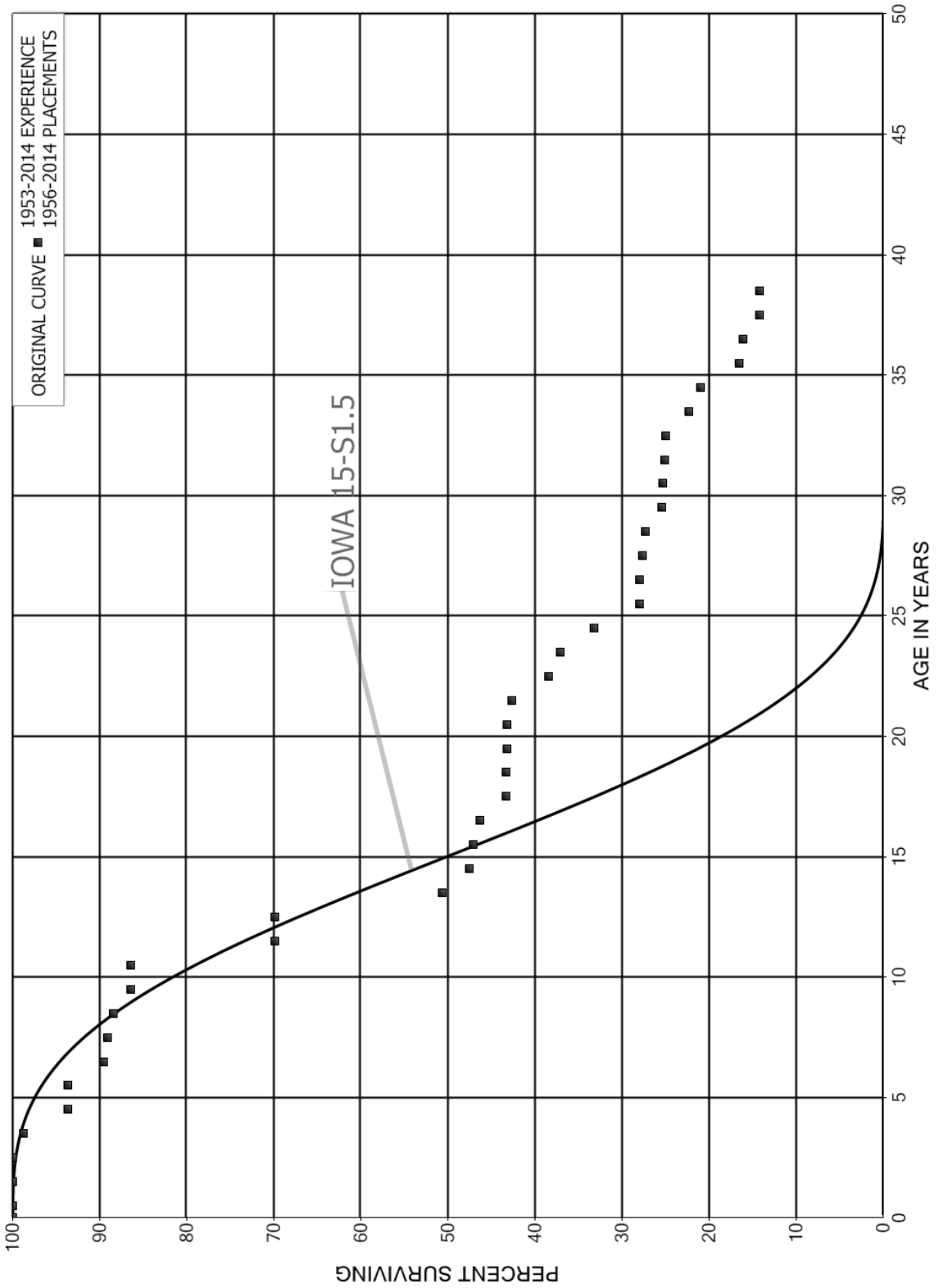
ACCOUNT 5000J - CARRIER EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1958-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,841,279	193,859	0.1053	0.8947	8.91
40.5	1,647,420	47,733	0.0290	0.9710	7.97
41.5	1,599,688	140,270	0.0877	0.9123	7.74
42.5	1,459,418	550,776	0.3774	0.6226	7.06
43.5	908,642	10,574	0.0116	0.9884	4.40
44.5	898,068	111,033	0.1236	0.8764	4.35
45.5	787,035	7,112	0.0090	0.9910	3.81
46.5	779,924	26,691	0.0342	0.9658	3.77
47.5	753,233	995	0.0013	0.9987	3.65
48.5	752,238	469,663	0.6244	0.3756	3.64
49.5	282,575	223,516	0.7910	0.2090	1.37
50.5	59,058	59,058	1.0000		0.29
51.5					

MANITOBA HYDRO
ACCOUNT 5000R - POWER SYSTEM CONTROL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 5000R - POWER SYSTEM CONTROL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1956-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	21,279,064	365	0.0000	1.0000	100.00
0.5	19,519,993		0.0000	1.0000	100.00
1.5	18,753,731		0.0000	1.0000	100.00
2.5	17,023,369	210,741	0.0124	0.9876	100.00
3.5	16,308,062	848,075	0.0520	0.9480	98.76
4.5	14,869,020		0.0000	1.0000	93.62
5.5	14,655,724	643,301	0.0439	0.9561	93.62
6.5	13,681,230	67,688	0.0049	0.9951	89.51
7.5	13,321,174	98,104	0.0074	0.9926	89.07
8.5	12,975,767	304,148	0.0234	0.9766	88.42
9.5	12,293,280		0.0000	1.0000	86.34
10.5	11,370,741	2,172,961	0.1911	0.8089	86.34
11.5	8,661,239		0.0000	1.0000	69.84
12.5	8,574,099	2,364,563	0.2758	0.7242	69.84
13.5	6,559,887	401,514	0.0612	0.9388	50.58
14.5	5,797,865	48,983	0.0084	0.9916	47.49
15.5	5,069,153	85,343	0.0168	0.9832	47.08
16.5	4,419,279	284,552	0.0644	0.9356	46.29
17.5	3,803,712		0.0000	1.0000	43.31
18.5	3,803,712	15,596	0.0041	0.9959	43.31
19.5	3,764,035		0.0000	1.0000	43.13
20.5	3,730,578	46,926	0.0126	0.9874	43.13
21.5	3,664,678	365,163	0.0996	0.9004	42.59
22.5	3,231,943	110,249	0.0341	0.9659	38.35
23.5	3,040,875	318,681	0.1048	0.8952	37.04
24.5	2,513,378	394,703	0.1570	0.8430	33.16
25.5	2,025,767		0.0000	1.0000	27.95
26.5	1,885,136	21,488	0.0114	0.9886	27.95
27.5	1,863,648	21,703	0.0116	0.9884	27.63
28.5	1,841,945	126,334	0.0686	0.9314	27.31
29.5	1,293,392	5,781	0.0045	0.9955	25.44
30.5	1,287,611	11,012	0.0086	0.9914	25.32
31.5	1,276,599	8,163	0.0064	0.9936	25.11
32.5	1,264,919	132,261	0.1046	0.8954	24.95
33.5	1,132,658	69,681	0.0615	0.9385	22.34
34.5	832,896	178,474	0.2143	0.7857	20.96
35.5	401,703	9,074	0.0226	0.9774	16.47
36.5	392,629	46,164	0.1176	0.8824	16.10
37.5	346,465		0.0000	1.0000	14.21
38.5	346,465	281,420	0.8123	0.1877	14.21

MANITOBA HYDRO

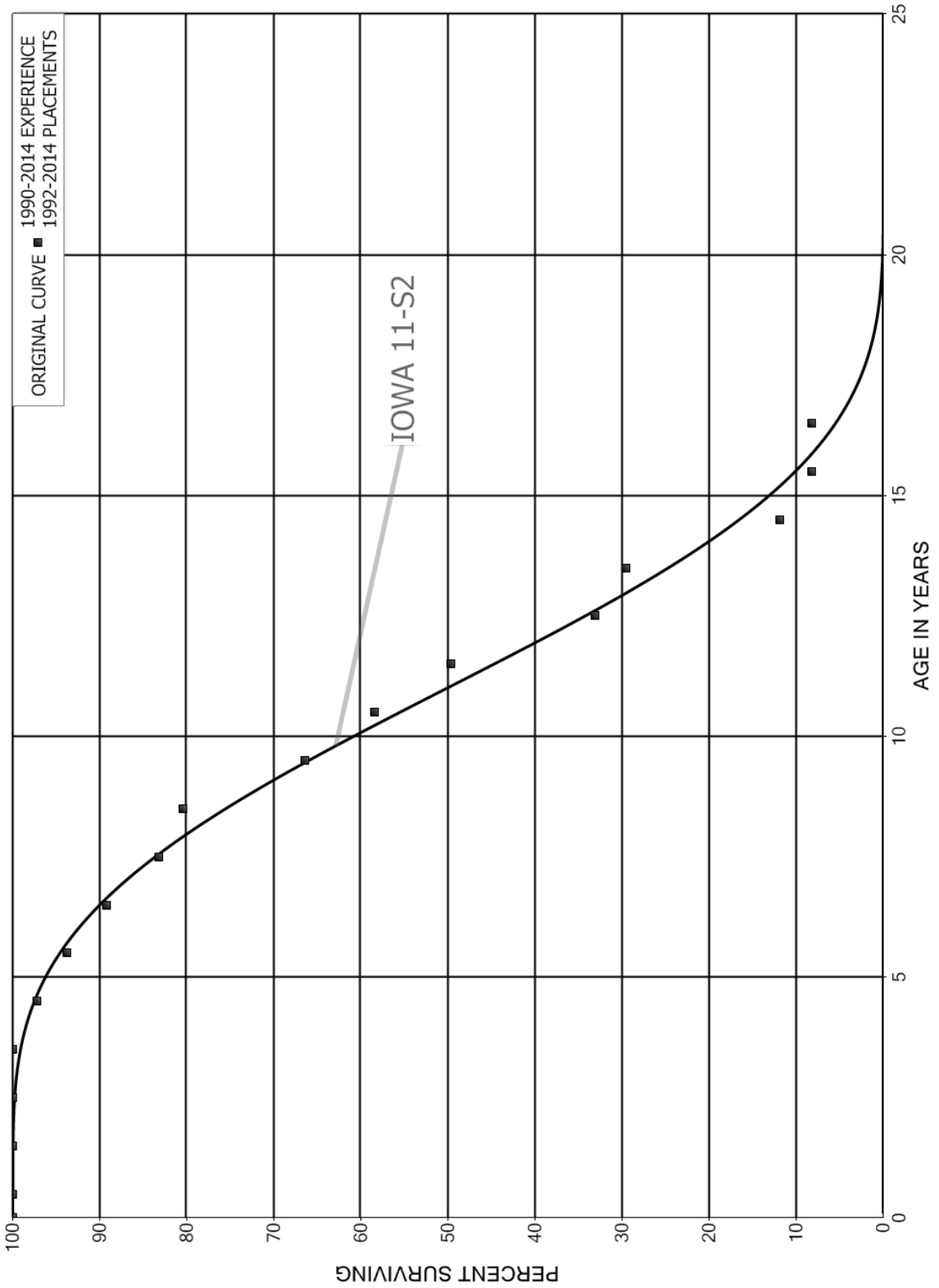
ACCOUNT 5000R - POWER SYSTEM CONTROL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1956-2014 EXPERIENCE BAND 1953-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	53,705	3,986	0.0742	0.9258	2.67
40.5	49,718	19,194	0.3861	0.6139	2.47
41.5	30,525	959	0.0314	0.9686	1.52
42.5	29,566	17,129	0.5794	0.4206	1.47
43.5					0.62

MANITOBA HYDRO
ACCOUNT 6000E - PASSENGER VEHICLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

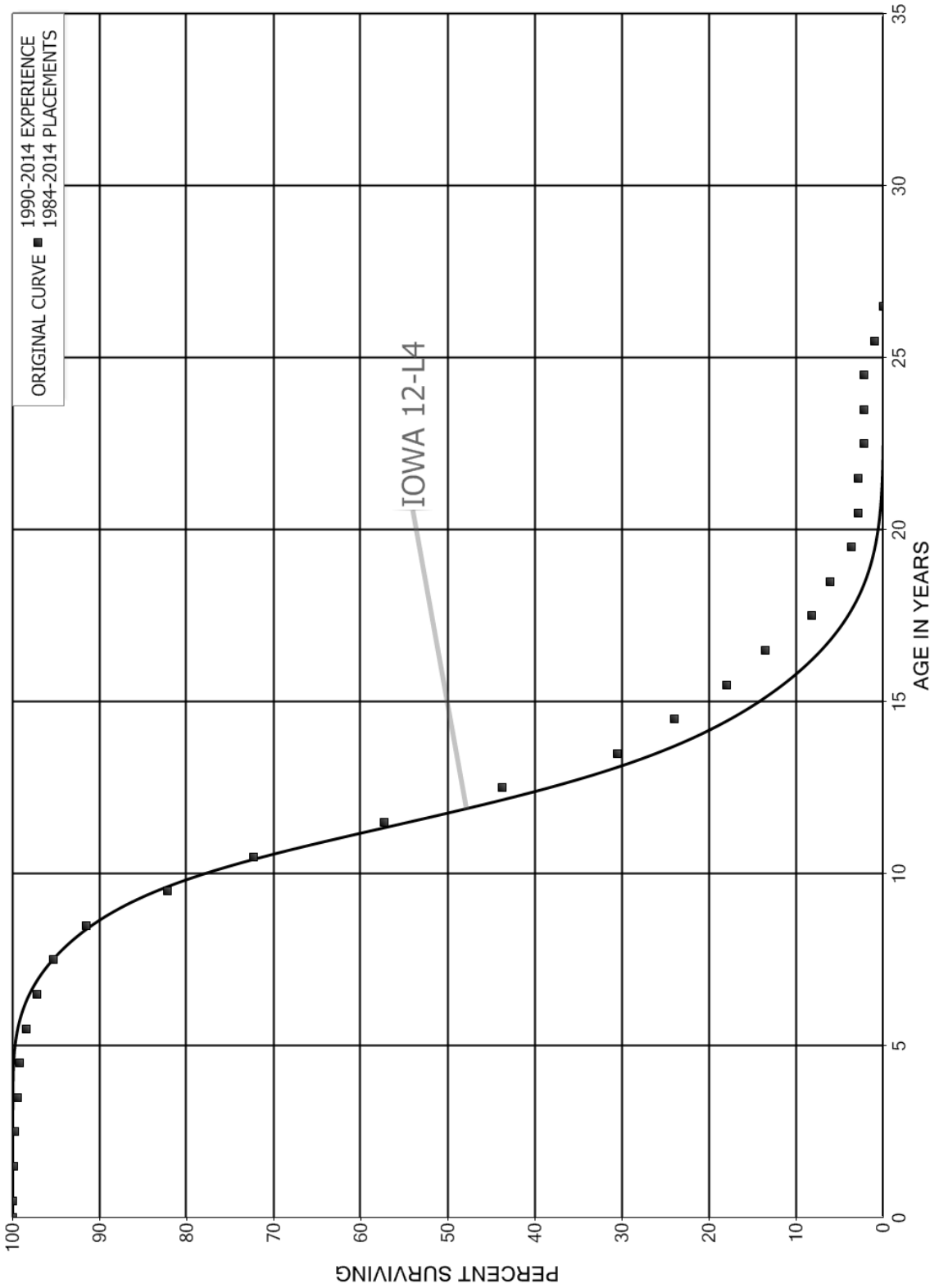
ACCOUNT 6000E - PASSENGER VEHICLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1992-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,015,322		0.0000	1.0000	100.00
0.5	1,863,020		0.0000	1.0000	100.00
1.5	1,829,850		0.0000	1.0000	100.00
2.5	1,829,850		0.0000	1.0000	100.00
3.5	1,829,850	51,672	0.0282	0.9718	100.00
4.5	1,778,178	62,309	0.0350	0.9650	97.18
5.5	1,445,522	70,257	0.0486	0.9514	93.77
6.5	1,150,653	78,234	0.0680	0.9320	89.21
7.5	987,130	32,829	0.0333	0.9667	83.15
8.5	852,867	148,414	0.1740	0.8260	80.38
9.5	704,453	84,830	0.1204	0.8796	66.39
10.5	559,431	83,872	0.1499	0.8501	58.40
11.5	364,327	121,469	0.3334	0.6666	49.64
12.5	180,905	19,392	0.1072	0.8928	33.09
13.5	161,513	96,918	0.6001	0.3999	29.54
14.5	64,595	19,796	0.3065	0.6935	11.82
15.5	23,130		0.0000	1.0000	8.20
16.5					8.20

MANITOBA HYDRO
ACCOUNT 6000F - LIGHT TRUCKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

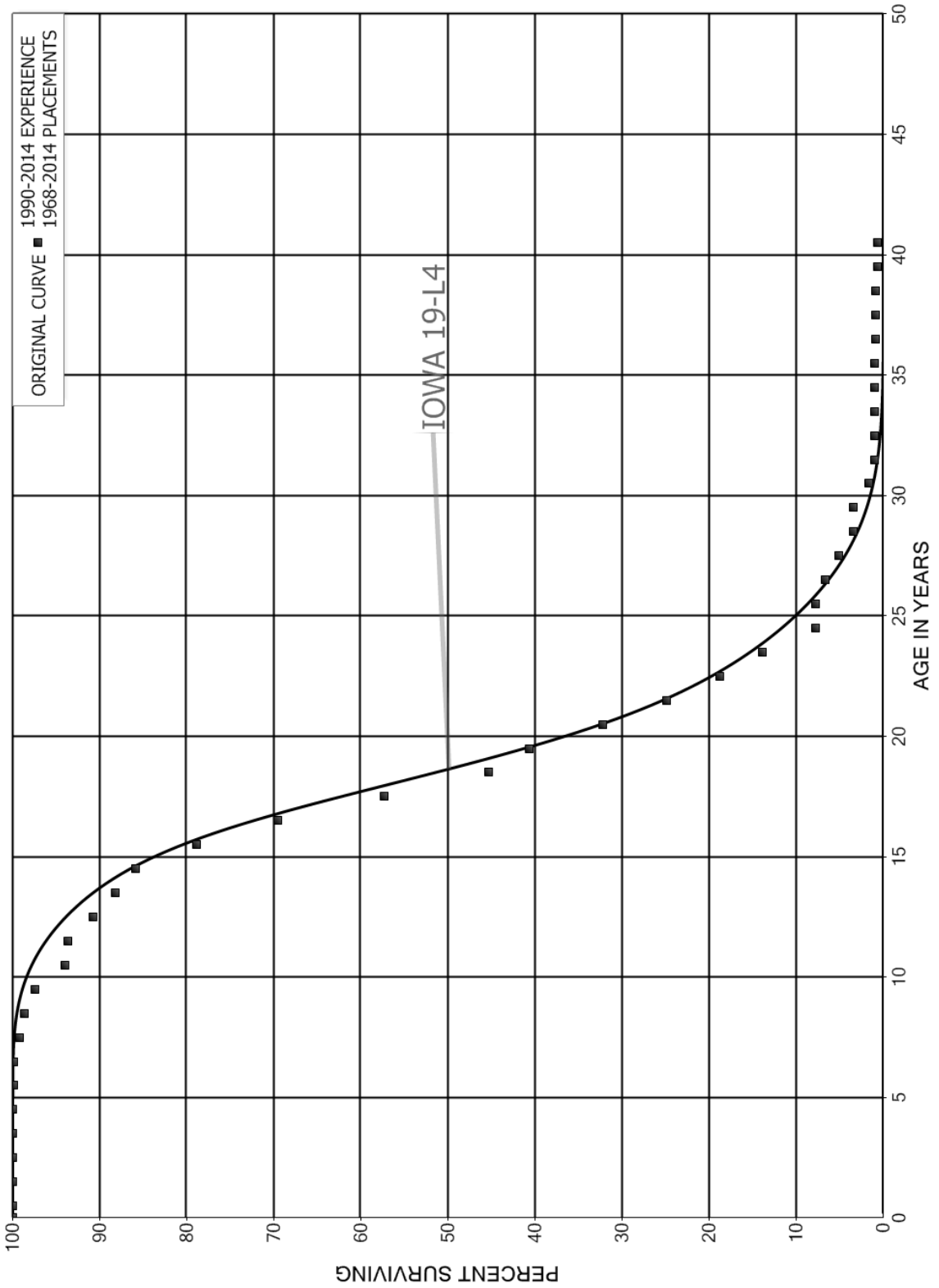
ACCOUNT 6000F - LIGHT TRUCKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1984-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	96,072,623	41,716	0.0004	0.9996	100.00
0.5	88,995,151	66,657	0.0007	0.9993	99.96
1.5	81,088,336	113,704	0.0014	0.9986	99.88
2.5	74,883,893	225,201	0.0030	0.9970	99.74
3.5	68,649,201	196,528	0.0029	0.9971	99.44
4.5	65,840,287	471,786	0.0072	0.9928	99.16
5.5	58,081,420	745,734	0.0128	0.9872	98.45
6.5	51,174,696	1,004,386	0.0196	0.9804	97.18
7.5	47,910,694	1,881,998	0.0393	0.9607	95.28
8.5	40,232,013	4,089,943	0.1017	0.8983	91.53
9.5	30,070,849	3,640,922	0.1211	0.8789	82.23
10.5	22,056,252	4,578,112	0.2076	0.7924	72.27
11.5	15,856,596	3,750,545	0.2365	0.7635	57.27
12.5	9,481,093	2,855,753	0.3012	0.6988	43.72
13.5	5,303,390	1,151,828	0.2172	0.7828	30.55
14.5	3,180,309	798,675	0.2511	0.7489	23.92
15.5	1,759,029	429,045	0.2439	0.7561	17.91
16.5	986,588	390,983	0.3963	0.6037	13.54
17.5	409,716	107,346	0.2620	0.7380	8.18
18.5	302,370	121,726	0.4026	0.5974	6.03
19.5	180,644	39,564	0.2190	0.7810	3.60
20.5	100,970		0.0000	1.0000	2.82
21.5	96,695	20,696	0.2140	0.7860	2.82
22.5	51,031		0.0000	1.0000	2.21
23.5	51,031		0.0000	1.0000	2.21
24.5	51,031	29,124	0.5707	0.4293	2.21
25.5	21,907	21,907	1.0000		0.95
26.5					

MANITOBA HYDRO
ACCOUNT 6000G - HEAVY TRUCKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

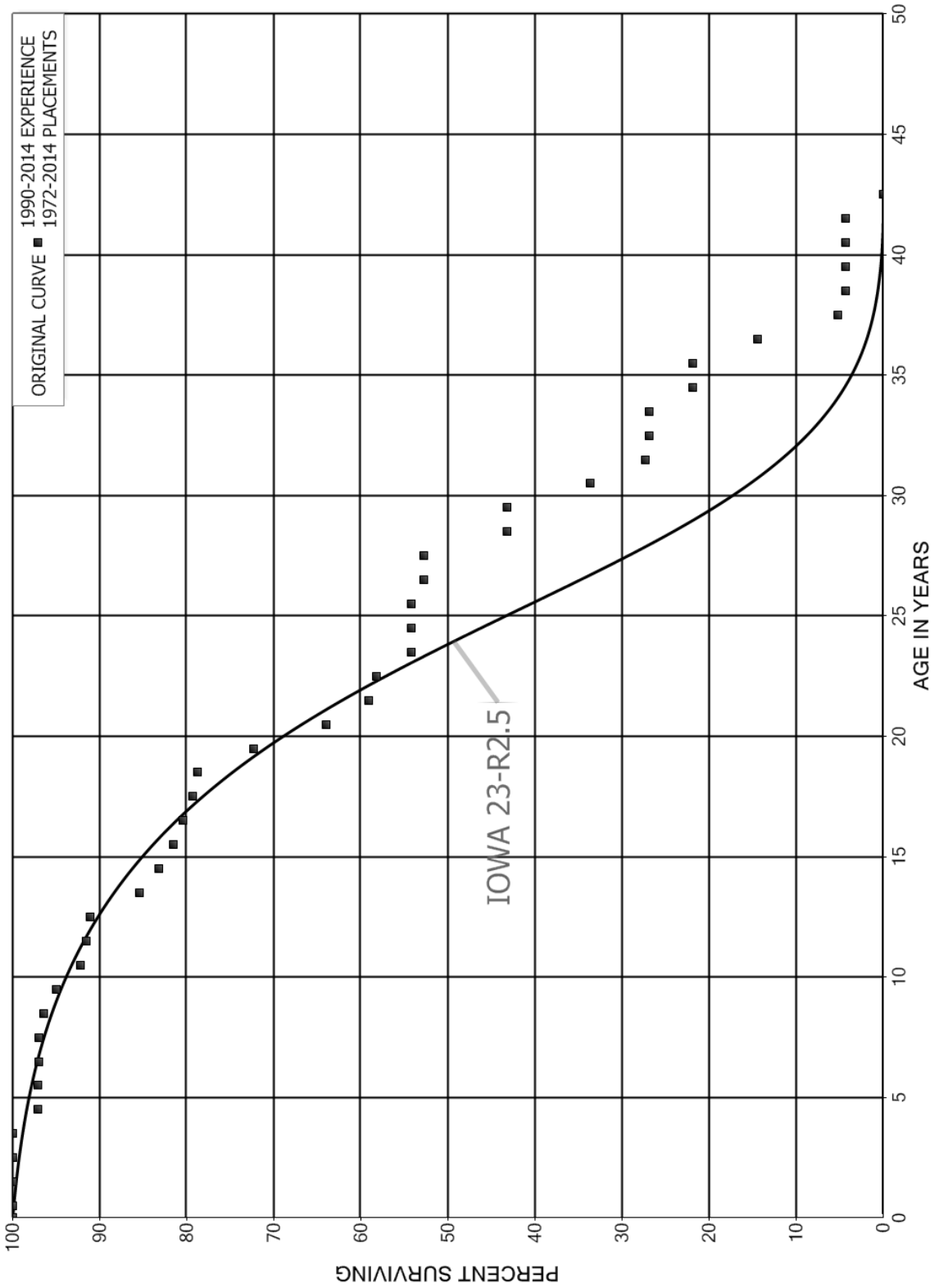
ACCOUNT 6000G - HEAVY TRUCKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1968-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	86,041,380	0	0.0000	1.0000	100.00
0.5	79,858,964		0.0000	1.0000	100.00
1.5	76,876,815		0.0000	1.0000	100.00
2.5	72,341,170		0.0000	1.0000	100.00
3.5	67,440,028	8,560	0.0001	0.9999	100.00
4.5	64,382,729	89,666	0.0014	0.9986	99.99
5.5	61,757,715	37,450	0.0006	0.9994	99.85
6.5	53,995,662	314,258	0.0058	0.9942	99.79
7.5	51,009,927	289,189	0.0057	0.9943	99.21
8.5	43,935,597	537,240	0.0122	0.9878	98.64
9.5	41,748,157	1,488,312	0.0356	0.9644	97.44
10.5	37,440,756	156,411	0.0042	0.9958	93.96
11.5	32,252,737	975,181	0.0302	0.9698	93.57
12.5	24,670,410	693,180	0.0281	0.9719	90.74
13.5	22,999,501	623,086	0.0271	0.9729	88.19
14.5	16,980,611	1,388,221	0.0818	0.9182	85.80
15.5	14,400,078	1,688,587	0.1173	0.8827	78.79
16.5	9,540,228	1,683,311	0.1764	0.8236	69.55
17.5	6,853,916	1,441,147	0.2103	0.7897	57.28
18.5	4,643,827	474,043	0.1021	0.8979	45.23
19.5	4,096,981	853,652	0.2084	0.7916	40.62
20.5	3,130,088	707,853	0.2261	0.7739	32.15
21.5	2,437,211	604,287	0.2479	0.7521	24.88
22.5	1,634,220	423,821	0.2593	0.7407	18.71
23.5	1,049,139	463,890	0.4422	0.5578	13.86
24.5	585,249		0.0000	1.0000	7.73
25.5	585,249	88,462	0.1512	0.8488	7.73
26.5	496,787	114,711	0.2309	0.7691	6.56
27.5	382,076	123,083	0.3221	0.6779	5.05
28.5	258,993		0.0000	1.0000	3.42
29.5	258,993	138,618	0.5352	0.4648	3.42
30.5	120,375	43,962	0.3652	0.6348	1.59
31.5	76,413		0.0000	1.0000	1.01
32.5	76,413		0.0000	1.0000	1.01
33.5	76,413		0.0000	1.0000	1.01
34.5	76,413		0.0000	1.0000	1.01
35.5	76,413	15,987	0.2092	0.7908	1.01
36.5	60,426		0.0000	1.0000	0.80
37.5	60,426		0.0000	1.0000	0.80
38.5	60,426	14,976	0.2478	0.7522	0.80
39.5	45,450		0.0000	1.0000	0.60
40.5					0.60

MANITOBA HYDRO
ACCOUNT 6000H - CONSTRUCTION EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 6000H - CONSTRUCTION EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1972-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	23,421,134		0.0000	1.0000	100.00
0.5	22,068,235	14,735	0.0007	0.9993	100.00
1.5	21,507,978		0.0000	1.0000	99.93
2.5	20,320,606		0.0000	1.0000	99.93
3.5	18,892,333	542,498	0.0287	0.9713	99.93
4.5	17,427,761		0.0000	1.0000	97.06
5.5	14,938,398	11,979	0.0008	0.9992	97.06
6.5	13,832,036		0.0000	1.0000	96.99
7.5	12,995,850	72,225	0.0056	0.9944	96.99
8.5	11,329,433	177,357	0.0157	0.9843	96.45
9.5	9,998,474	286,750	0.0287	0.9713	94.94
10.5	9,023,619	67,836	0.0075	0.9925	92.21
11.5	8,221,338	45,847	0.0056	0.9944	91.52
12.5	8,053,236	499,594	0.0620	0.9380	91.01
13.5	6,536,841	169,248	0.0259	0.9741	85.36
14.5	5,918,702	114,340	0.0193	0.9807	83.15
15.5	5,747,641	81,729	0.0142	0.9858	81.55
16.5	5,038,303	68,850	0.0137	0.9863	80.39
17.5	3,978,689	27,893	0.0070	0.9930	79.29
18.5	3,434,390	283,197	0.0825	0.9175	78.73
19.5	2,527,758	290,396	0.1149	0.8851	72.24
20.5	2,116,240	162,787	0.0769	0.9231	63.94
21.5	1,786,292	24,729	0.0138	0.9862	59.02
22.5	1,585,979	110,732	0.0698	0.9302	58.21
23.5	1,447,000		0.0000	1.0000	54.14
24.5	1,440,980		0.0000	1.0000	54.14
25.5	1,306,297	35,176	0.0269	0.9731	54.14
26.5	1,131,646		0.0000	1.0000	52.68
27.5	1,131,646	203,164	0.1795	0.8205	52.68
28.5	797,251		0.0000	1.0000	43.23
29.5	788,362	175,581	0.2227	0.7773	43.23
30.5	591,195	110,472	0.1869	0.8131	33.60
31.5	480,722	9,084	0.0189	0.9811	27.32
32.5	471,639		0.0000	1.0000	26.80
33.5	471,639	87,265	0.1850	0.8150	26.80
34.5	384,374		0.0000	1.0000	21.84
35.5	384,374	131,770	0.3428	0.6572	21.84
36.5	222,194	142,797	0.6427	0.3573	14.36
37.5	79,397	12,431	0.1566	0.8434	5.13
38.5	66,966	1	0.0000	1.0000	4.33

MANITOBA HYDRO

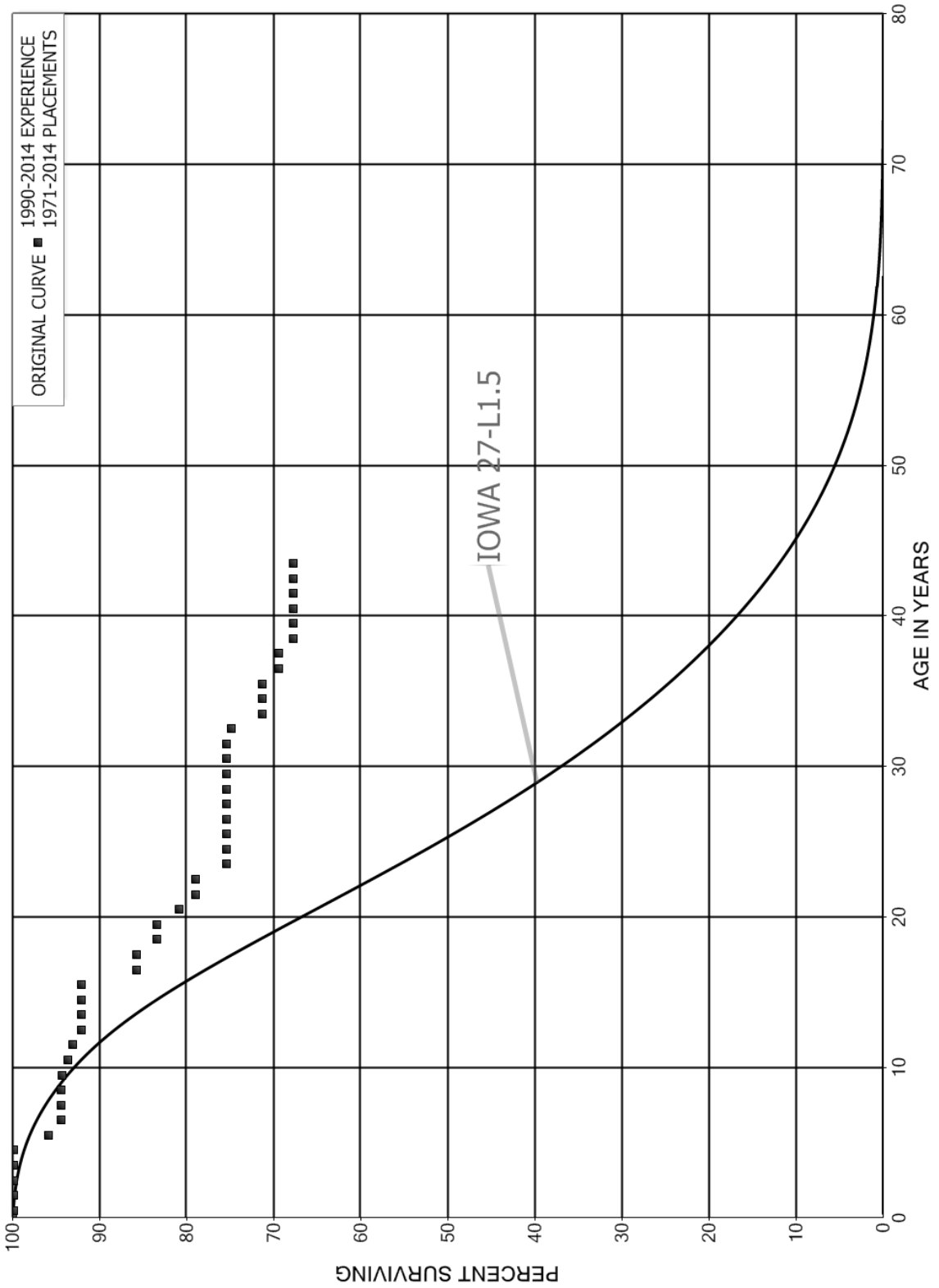
ACCOUNT 6000H - CONSTRUCTION EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1972-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	66,965		0.0000	1.0000	4.33
40.5	66,965		0.0000	1.0000	4.33
41.5	66,965	66,965	1.0000		4.33
42.5					

MANITOBA HYDRO
ACCOUNT 6000I - LARGE SOFT-TRACK EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 6000I - LARGE SOFT-TRACK EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	15,283,225	29,358	0.0019	0.9981	100.00
0.5	11,989,310		0.0000	1.0000	99.81
1.5	11,803,694		0.0000	1.0000	99.81
2.5	10,569,950		0.0000	1.0000	99.81
3.5	10,324,717	0	0.0000	1.0000	99.81
4.5	9,867,914	396,313	0.0402	0.9598	99.81
5.5	7,836,075	117,700	0.0150	0.9850	95.80
6.5	6,702,326		0.0000	1.0000	94.36
7.5	6,223,324		0.0000	1.0000	94.36
8.5	5,604,281	5,825	0.0010	0.9990	94.36
9.5	4,433,196	32,033	0.0072	0.9928	94.26
10.5	4,401,164	22,580	0.0051	0.9949	93.58
11.5	4,430,167	49,358	0.0111	0.9889	93.10
12.5	2,158,611	125	0.0001	0.9999	92.06
13.5	2,591,070		0.0000	1.0000	92.06
14.5	2,843,817	17	0.0000	1.0000	92.06
15.5	2,797,894	191,559	0.0685	0.9315	92.06
16.5	2,542,896		0.0000	1.0000	85.76
17.5	2,724,572	74,721	0.0274	0.9726	85.76
18.5	2,651,669		0.0000	1.0000	83.40
19.5	2,304,463	70,311	0.0305	0.9695	83.40
20.5	2,234,152	54,304	0.0243	0.9757	80.86
21.5	1,859,010		0.0000	1.0000	78.89
22.5	1,775,613	79,282	0.0447	0.9553	78.89
23.5	1,696,331		0.0000	1.0000	75.37
24.5	1,696,331		0.0000	1.0000	75.37
25.5	1,696,331		0.0000	1.0000	75.37
26.5	1,696,331		0.0000	1.0000	75.37
27.5	1,696,331		0.0000	1.0000	75.37
28.5	1,696,331		0.0000	1.0000	75.37
29.5	1,696,331		0.0000	1.0000	75.37
30.5	1,696,331		0.0000	1.0000	75.37
31.5	1,696,331	12,947	0.0076	0.9924	75.37
32.5	1,683,384	79,432	0.0472	0.9528	74.80
33.5	1,603,952		0.0000	1.0000	71.27
34.5	1,603,952		0.0000	1.0000	71.27
35.5	1,603,952	42,957	0.0268	0.9732	71.27
36.5	1,509,412		0.0000	1.0000	69.36
37.5	1,488,872	35,786	0.0240	0.9760	69.36
38.5	740,770		0.0000	1.0000	67.69

MANITOBA HYDRO

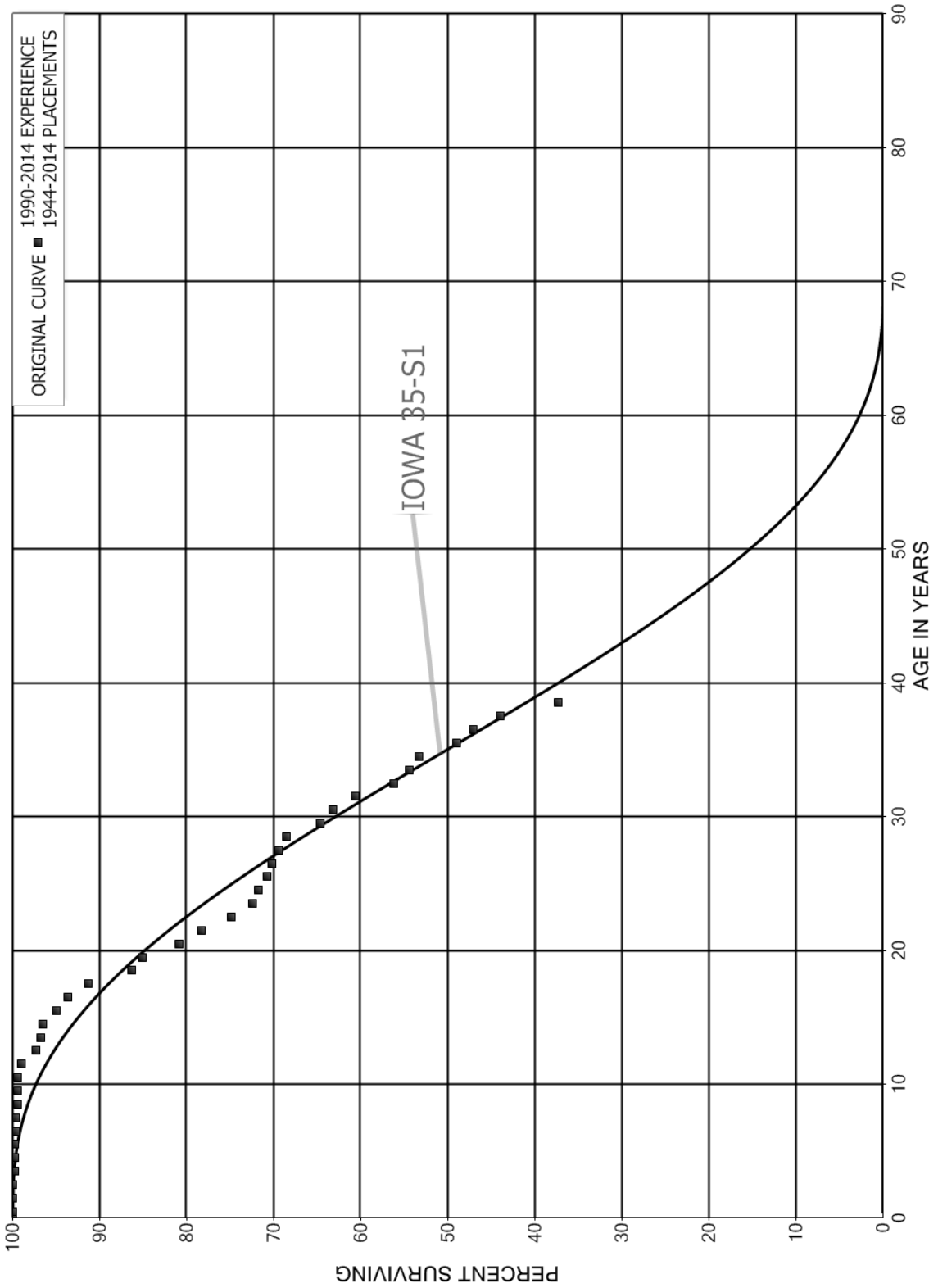
ACCOUNT 6000I - LARGE SOFT-TRACK EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1971-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	488,022		0.0000	1.0000	67.69
40.5	452,199		0.0000	1.0000	67.69
41.5	431,578		0.0000	1.0000	67.69
42.5	102,739		0.0000	1.0000	67.69
43.5					67.69

MANITOBA HYDRO
ACCOUNT 6000J - TRAILERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 6000J - TRAILERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1944-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	18,843,595		0.0000	1.0000	100.00
0.5	18,671,336		0.0000	1.0000	100.00
1.5	17,570,641	6,987	0.0004	0.9996	100.00
2.5	16,565,472	35,163	0.0021	0.9979	99.96
3.5	16,160,235	214	0.0000	1.0000	99.75
4.5	15,195,112	10,316	0.0007	0.9993	99.75
5.5	13,604,149	1,284	0.0001	0.9999	99.68
6.5	12,939,663	8,635	0.0007	0.9993	99.67
7.5	11,684,270	19,526	0.0017	0.9983	99.60
8.5	10,758,053	7,753	0.0007	0.9993	99.44
9.5	10,208,388		0.0000	1.0000	99.36
10.5	9,196,228	41,196	0.0045	0.9955	99.36
11.5	8,380,525	136,316	0.0163	0.9837	98.92
12.5	8,038,385	49,577	0.0062	0.9938	97.31
13.5	6,423,136	10,224	0.0016	0.9984	96.71
14.5	5,374,366	88,323	0.0164	0.9836	96.56
15.5	4,821,480	66,577	0.0138	0.9862	94.97
16.5	4,720,769	122,306	0.0259	0.9741	93.66
17.5	3,910,890	210,204	0.0537	0.9463	91.23
18.5	3,319,884	48,808	0.0147	0.9853	86.33
19.5	3,030,674	149,724	0.0494	0.9506	85.06
20.5	2,678,259	83,442	0.0312	0.9688	80.86
21.5	2,534,494	114,887	0.0453	0.9547	78.34
22.5	2,229,672	71,070	0.0319	0.9681	74.79
23.5	1,808,120	18,077	0.0100	0.9900	72.40
24.5	1,738,967	22,289	0.0128	0.9872	71.68
25.5	1,288,325	9,860	0.0077	0.9923	70.76
26.5	1,221,051	14,026	0.0115	0.9885	70.22
27.5	1,198,656	16,426	0.0137	0.9863	69.41
28.5	1,040,292	58,849	0.0566	0.9434	68.46
29.5	948,173	21,232	0.0224	0.9776	64.59
30.5	904,335	36,571	0.0404	0.9596	63.14
31.5	856,132	62,394	0.0729	0.9271	60.59
32.5	794,628	25,577	0.0322	0.9678	56.17
33.5	758,093	15,064	0.0199	0.9801	54.36
34.5	718,374	58,620	0.0816	0.9184	53.28
35.5	652,177	24,778	0.0380	0.9620	48.94
36.5	615,592	41,064	0.0667	0.9333	47.08
37.5	293,432	44,283	0.1509	0.8491	43.94
38.5	200,124	7,773	0.0388	0.9612	37.31

MANITOBA HYDRO

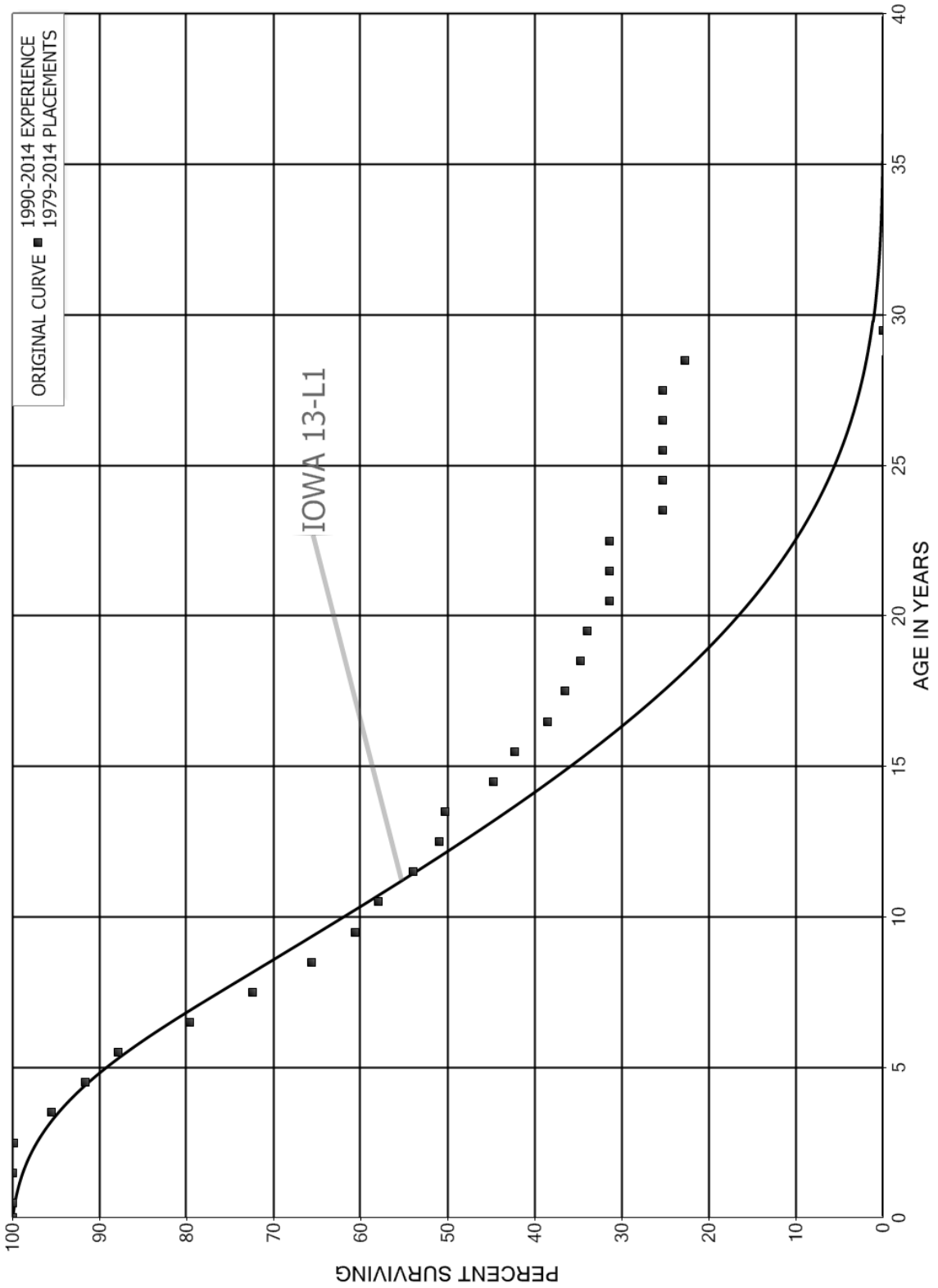
ACCOUNT 6000J - TRAILERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1944-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	137,032		0.0000	1.0000	35.86
40.5	110,341		0.0000	1.0000	35.86
41.5	104,664	8,710	0.0832	0.9168	35.86
42.5	89,059	26,321	0.2955	0.7045	32.87
43.5	45,102	7,605	0.1686	0.8314	23.16
44.5	37,821		0.0000	1.0000	19.25
45.5	34,636	2,034	0.0587	0.9413	19.25
46.5	28,887	1,457	0.0504	0.9496	18.12
47.5	21,000	1,415	0.0674	0.9326	17.21
48.5	19,585	4,166	0.2127	0.7873	16.05
49.5	15,419	6,327	0.4103	0.5897	12.64
50.5	3,673		0.0000	1.0000	7.45
51.5	3,673		0.0000	1.0000	7.45
52.5	3,342		0.0000	1.0000	7.45
53.5	3,342	165	0.0494	0.9506	7.45
54.5	3,177	165	0.0519	0.9481	7.08
55.5	3,012		0.0000	1.0000	6.72
56.5	3,012	317	0.1052	0.8948	6.72
57.5	2,695		0.0000	1.0000	6.01
58.5	2,695		0.0000	1.0000	6.01
59.5	2,695		0.0000	1.0000	6.01
60.5	2,695		0.0000	1.0000	6.01
61.5	2,695		0.0000	1.0000	6.01
62.5	2,695		0.0000	1.0000	6.01
63.5	2,695	150	0.0556	0.9444	6.01
64.5	2,545	778	0.3054	0.6946	5.67
65.5	1,768		0.0000	1.0000	3.94
66.5	1,768		0.0000	1.0000	3.94
67.5	810		0.0000	1.0000	3.94
68.5	486		0.0000	1.0000	3.94
69.5	162		0.0000	1.0000	3.94
70.5					3.94

MANITOBA HYDRO
ACCOUNT 6000K - MISCELLANEOUS VEHICLES
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

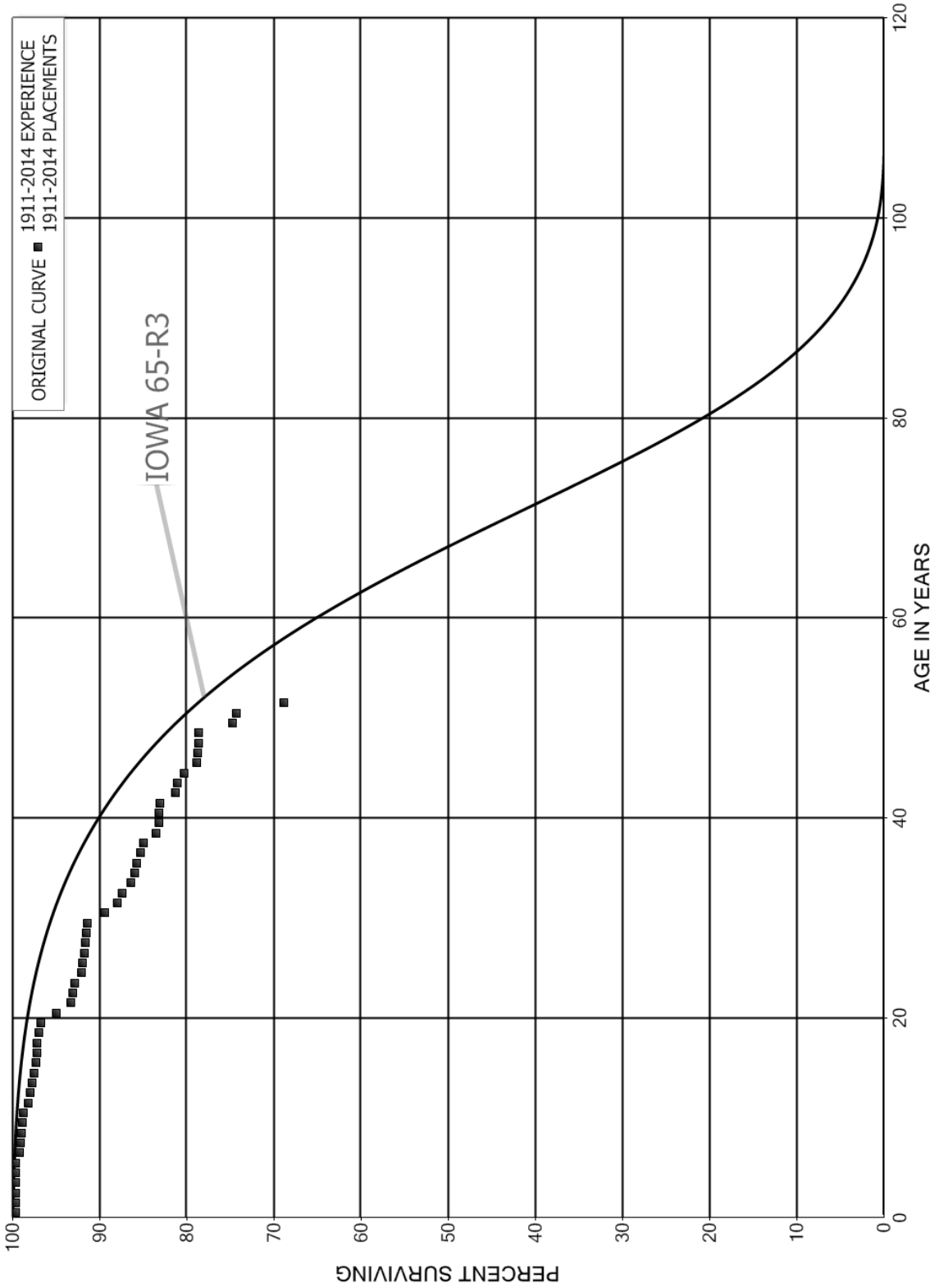
ACCOUNT 6000K - MISCELLANEOUS VEHICLES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1979-2014 EXPERIENCE BAND 1990-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,584,671		0.0000	1.0000	100.00
0.5	7,699,856		0.0000	1.0000	100.00
1.5	6,816,370	13,821	0.0020	0.9980	100.00
2.5	6,343,419	274,107	0.0432	0.9568	99.80
3.5	5,683,414	233,476	0.0411	0.9589	95.48
4.5	4,953,280	203,487	0.0411	0.9589	91.56
5.5	4,659,360	433,161	0.0930	0.9070	87.80
6.5	3,836,150	351,102	0.0915	0.9085	79.64
7.5	3,072,084	287,028	0.0934	0.9066	72.35
8.5	2,435,420	183,757	0.0755	0.9245	65.59
9.5	2,010,940	89,500	0.0445	0.9555	60.64
10.5	1,381,780	95,357	0.0690	0.9310	57.94
11.5	1,096,613	61,584	0.0562	0.9438	53.94
12.5	825,250	10,706	0.0130	0.9870	50.91
13.5	605,493	66,034	0.1091	0.8909	50.25
14.5	466,036	25,708	0.0552	0.9448	44.77
15.5	440,327	39,205	0.0890	0.9110	42.30
16.5	370,375	19,010	0.0513	0.9487	38.54
17.5	351,349	17,323	0.0493	0.9507	36.56
18.5	292,887	7,033	0.0240	0.9760	34.76
19.5	232,575	17,287	0.0743	0.9257	33.92
20.5	177,442		0.0000	1.0000	31.40
21.5	170,293		0.0000	1.0000	31.40
22.5	170,293	33,232	0.1951	0.8049	31.40
23.5	110,712		0.0000	1.0000	25.27
24.5	92,648		0.0000	1.0000	25.27
25.5	81,978		0.0000	1.0000	25.27
26.5	81,978		0.0000	1.0000	25.27
27.5	73,430	7,527	0.1025	0.8975	25.27
28.5	65,902	65,902	1.0000		22.68
29.5					

MANITOBA HYDRO
ACCOUNT 8000B - BUILDINGS - GENERAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1911-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	95,241,680	314,817	0.0033	0.9967	100.00
0.5	117,399,498	21,284	0.0002	0.9998	99.67
1.5	115,160,361	8,154	0.0001	0.9999	99.65
2.5	113,525,720	29,326	0.0003	0.9997	99.64
3.5	110,812,675	3,491	0.0000	1.0000	99.62
4.5	104,866,903	7,310	0.0001	0.9999	99.62
5.5	101,660,157	451,756	0.0044	0.9956	99.61
6.5	98,810,969	126,035	0.0013	0.9987	99.17
7.5	97,406,663	43,873	0.0005	0.9995	99.04
8.5	96,739,350	115,535	0.0012	0.9988	98.99
9.5	96,521,131	106,654	0.0011	0.9989	98.88
10.5	94,660,907	555,683	0.0059	0.9941	98.77
11.5	83,378,256	226,815	0.0027	0.9973	98.19
12.5	75,760,379	169,787	0.0022	0.9978	97.92
13.5	74,628,697	191,376	0.0026	0.9974	97.70
14.5	64,895,036	134,354	0.0021	0.9979	97.45
15.5	64,358,226	18,428	0.0003	0.9997	97.25
16.5	56,644,321	49,423	0.0009	0.9991	97.22
17.5	48,103,250	113,491	0.0024	0.9976	97.14
18.5	47,031,368	98,385	0.0021	0.9979	96.91
19.5	46,034,594	857,398	0.0186	0.9814	96.70
20.5	41,874,351	730,687	0.0174	0.9826	94.90
21.5	34,078,745	56,231	0.0017	0.9983	93.25
22.5	31,755,963	84,637	0.0027	0.9973	93.09
23.5	29,650,568	257,692	0.0087	0.9913	92.84
24.5	26,701,512	29,822	0.0011	0.9989	92.04
25.5	25,514,054	45,683	0.0018	0.9982	91.94
26.5	24,527,834	30,400	0.0012	0.9988	91.77
27.5	23,873,162	27,325	0.0011	0.9989	91.66
28.5	23,785,017	44,901	0.0019	0.9981	91.55
29.5	22,205,780	492,212	0.0222	0.9778	91.38
30.5	21,027,650	321,569	0.0153	0.9847	89.35
31.5	20,403,860	133,837	0.0066	0.9934	87.99
32.5	19,468,644	220,443	0.0113	0.9887	87.41
33.5	16,202,805	97,921	0.0060	0.9940	86.42
34.5	15,946,207	37,742	0.0024	0.9976	85.90
35.5	13,473,433	57,926	0.0043	0.9957	85.69
36.5	12,894,600	55,596	0.0043	0.9957	85.33
37.5	12,472,473	218,579	0.0175	0.9825	84.96
38.5	11,403,792	39,494	0.0035	0.9965	83.47

MANITOBA HYDRO

ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1911-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	11,712,372	2,519	0.0002	0.9998	83.18
40.5	11,439,605	14,121	0.0012	0.9988	83.16
41.5	9,372,126	199,620	0.0213	0.9787	83.06
42.5	7,732,448	22,299	0.0029	0.9971	81.29
43.5	7,617,443	73,578	0.0097	0.9903	81.06
44.5	7,123,446	125,794	0.0177	0.9823	80.27
45.5	5,632,322	7,255	0.0013	0.9987	78.86
46.5	5,515,647	8,300	0.0015	0.9985	78.75
47.5	5,480,932	843	0.0002	0.9998	78.64
48.5	5,244,455	258,180	0.0492	0.9508	78.62
49.5	2,478,710	16,100	0.0065	0.9935	74.75
50.5	2,248,281	165,949	0.0738	0.9262	74.27
51.5	2,082,332		0.0000	1.0000	68.79
52.5	1,984,133	20,168	0.0102	0.9898	68.79
53.5	1,949,798	69,780	0.0358	0.9642	68.09
54.5	1,653,610		0.0000	1.0000	65.65
55.5	1,643,038	106,903	0.0651	0.9349	65.65
56.5	117,444	13,200	0.1124	0.8876	61.38
57.5	65,012		0.0000	1.0000	54.48
58.5	65,012		0.0000	1.0000	54.48
59.5	65,012		0.0000	1.0000	54.48
60.5	65,012		0.0000	1.0000	54.48
61.5	65,012		0.0000	1.0000	54.48
62.5	65,012		0.0000	1.0000	54.48
63.5	65,012		0.0000	1.0000	54.48
64.5	65,012		0.0000	1.0000	54.48
65.5	65,012		0.0000	1.0000	54.48
66.5	65,012		0.0000	1.0000	54.48
67.5	65,012	9,099	0.1400	0.8600	54.48
68.5	55,913		0.0000	1.0000	46.86
69.5	55,913		0.0000	1.0000	46.86
70.5	55,913		0.0000	1.0000	46.86
71.5	55,913		0.0000	1.0000	46.86
72.5	55,913		0.0000	1.0000	46.86
73.5	55,913		0.0000	1.0000	46.86
74.5	55,913		0.0000	1.0000	46.86
75.5	55,913		0.0000	1.0000	46.86
76.5	55,913		0.0000	1.0000	46.86
77.5	55,913		0.0000	1.0000	46.86
78.5	55,913		0.0000	1.0000	46.86

MANITOBA HYDRO

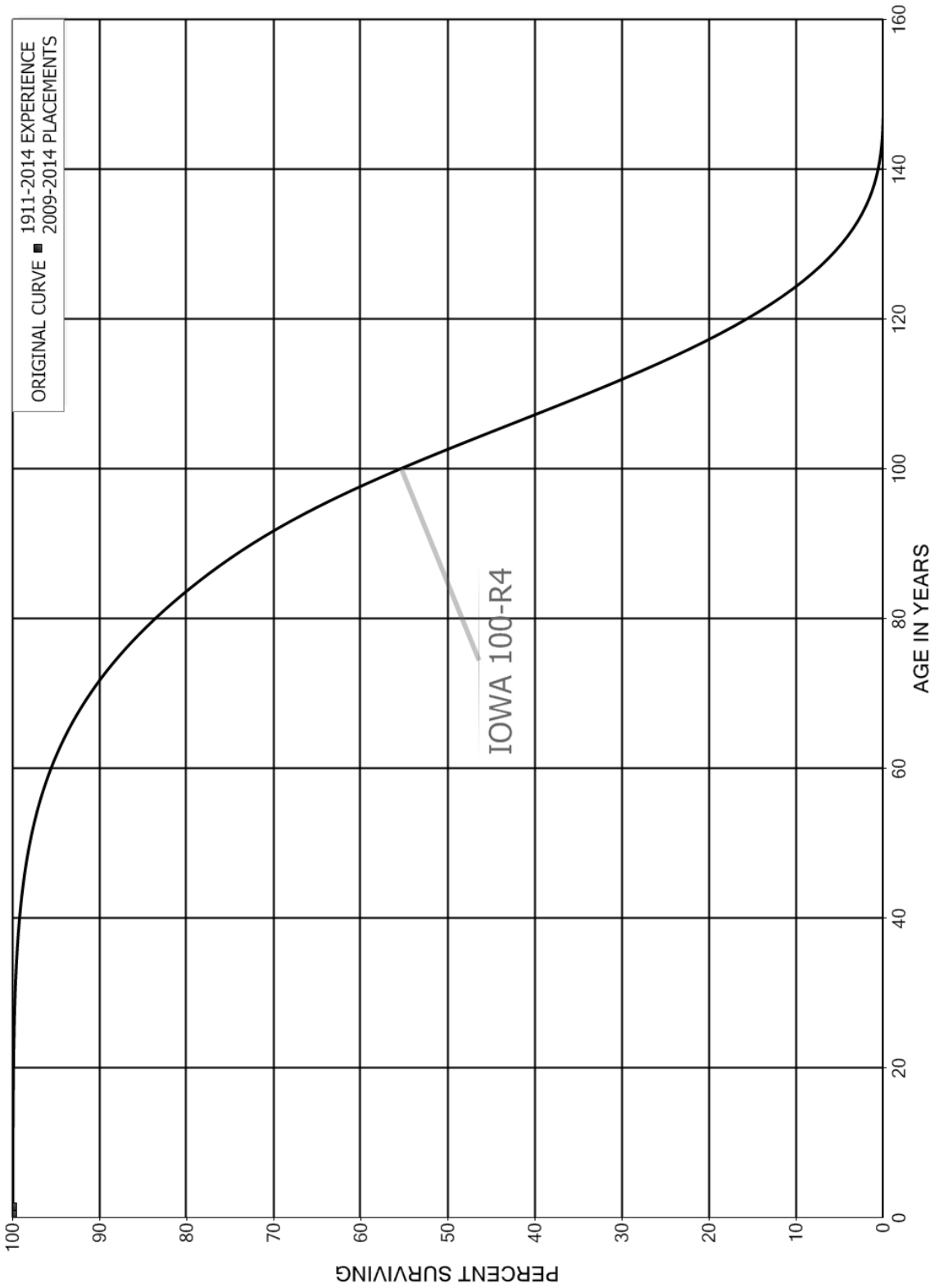
ACCOUNT 8000B - BUILDINGS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1911-2014 EXPERIENCE BAND 1911-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	55,913		0.0000	1.0000	46.86
80.5	55,913		0.0000	1.0000	46.86
81.5	55,913		0.0000	1.0000	46.86
82.5	55,913		0.0000	1.0000	46.86
83.5	55,913		0.0000	1.0000	46.86
84.5	55,913		0.0000	1.0000	46.86
85.5	55,913		0.0000	1.0000	46.86
86.5	55,913		0.0000	1.0000	46.86
87.5	55,913		0.0000	1.0000	46.86
88.5	55,913		0.0000	1.0000	46.86
89.5	55,913		0.0000	1.0000	46.86
90.5	55,913		0.0000	1.0000	46.86
91.5	55,913		0.0000	1.0000	46.86
92.5	55,913		0.0000	1.0000	46.86
93.5	55,913		0.0000	1.0000	46.86
94.5	55,913		0.0000	1.0000	46.86
95.5	55,913		0.0000	1.0000	46.86
96.5	55,913		0.0000	1.0000	46.86
97.5	55,913		0.0000	1.0000	46.86
98.5	55,913		0.0000	1.0000	46.86
99.5	55,913		0.0000	1.0000	46.86
100.5	55,913		0.0000	1.0000	46.86
101.5	55,913		0.0000	1.0000	46.86
102.5	55,913		0.0000	1.0000	46.86
103.5					46.86

MANITOBA HYDRO
ACCOUNT 8000D - BUILDING - 360 PORTAGE - CIVIL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

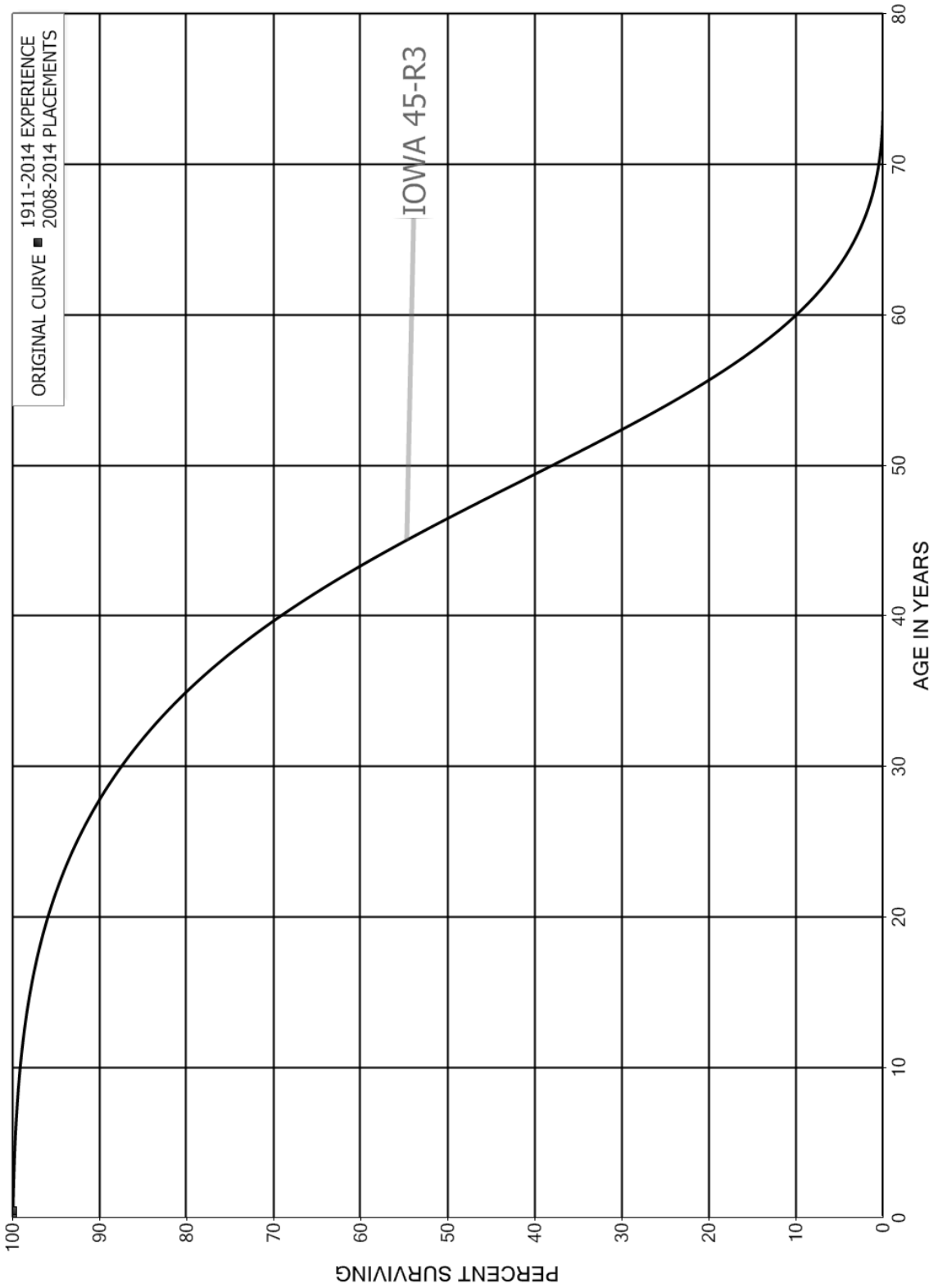
ACCOUNT 8000D - BUILDING - 360 PORTAGE - CIVIL

ORIGINAL LIFE TABLE

PLACEMENT BAND 2009-2014 EXPERIENCE BAND 1911-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	209,625,134		0.0000	1.0000	100.00
0.5	209,669,290		0.0000	1.0000	100.00
1.5	209,669,290		0.0000	1.0000	100.00
2.5	209,495,934		0.0000	1.0000	100.00
3.5	207,277,875		0.0000	1.0000	100.00
4.5	191,915,980	401,068	0.0021	0.9979	100.00
5.5					99.79

MANITOBA HYDRO
ACCOUNT 8000E - BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



MANITOBA HYDRO

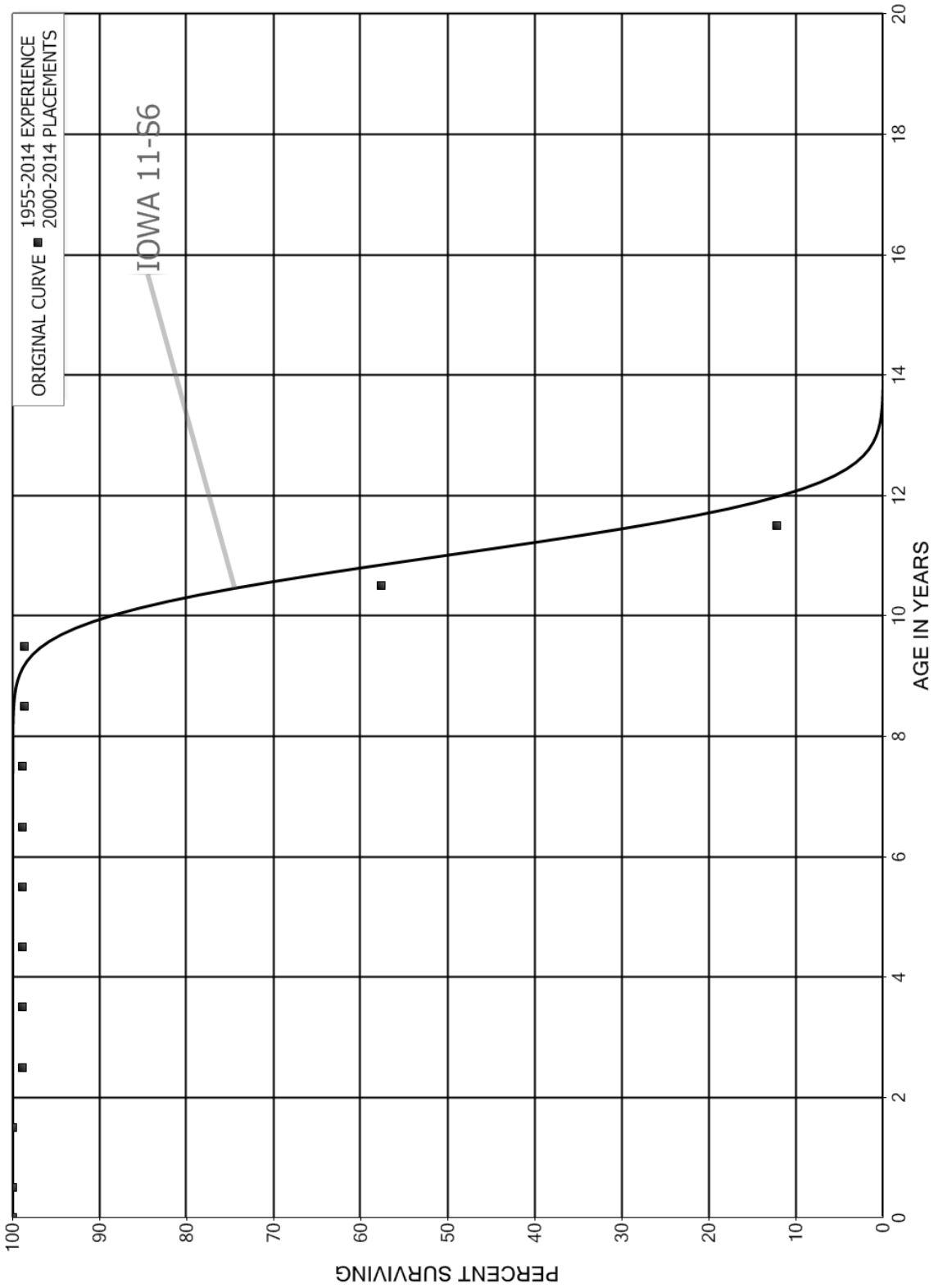
ACCOUNT 8000E - BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 2008-2014 EXPERIENCE BAND 1911-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	69,459,123		0.0000	1.0000	100.00
0.5	69,445,516		0.0000	1.0000	100.00
1.5	69,311,444		0.0000	1.0000	100.00
2.5	67,117,198		0.0000	1.0000	100.00
3.5	65,883,845		0.0000	1.0000	100.00
4.5	61,004,879		0.0000	1.0000	100.00
5.5					100.00

MANITOBA HYDRO
A200G - COMPUTER DEVELOPMENT - MAJOR SYSTEMS
ORIGINAL AND SMOOTH SURVIVOR CURVES



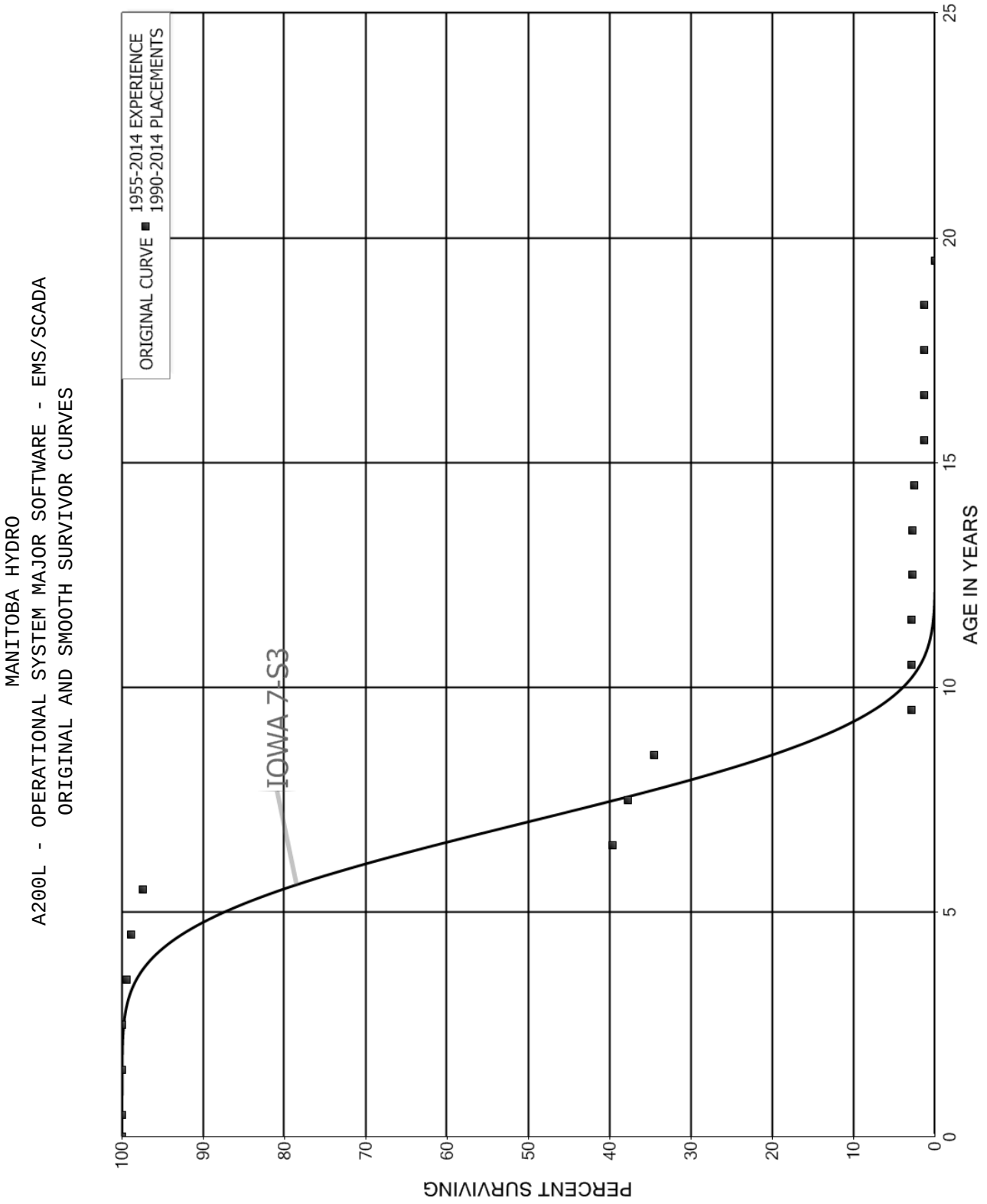
MANITOBA HYDRO

A200G - COMPUTER DEVELOPMENT - MAJOR SYSTEMS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2000-2014 EXPERIENCE BAND 1955-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	140,028,251		0.0000	1.0000	100.00
0.5	137,764,307		0.0000	1.0000	100.00
1.5	134,219,666	1,545,031	0.0115	0.9885	100.00
2.5	114,933,609	2,183	0.0000	1.0000	98.85
3.5	106,491,678		0.0000	1.0000	98.85
4.5	105,197,691		0.0000	1.0000	98.85
5.5	98,704,249		0.0000	1.0000	98.85
6.5	88,937,442		0.0000	1.0000	98.85
7.5	76,829,534	143,115	0.0019	0.9981	98.85
8.5	54,288,376		0.0000	1.0000	98.66
9.5	42,422,768	17,644,957	0.4159	0.5841	98.66
10.5	11,407,804	9,000,583	0.7890	0.2110	57.63
11.5					12.16


MANITOBA HYDRO
A200L - OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA
ORIGINAL AND SMOOTH SURVIVOR CURVES
ORIGINAL CURVE ■ 1955-2014 EXPERIENCE
1990-2014 PLACEMENTS
IOWA 7-S3
PERCENT SURVIVING
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
AGE IN YEARS

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A200L - OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA

ORIGINAL LIFE TABLE

PLACEMENT BAND 1990-2014 EXPERIENCE BAND 1955-2014

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	43,569,874		0.0000	1.0000	100.00
0.5	43,031,289		0.0000	1.0000	100.00
1.5	36,141,915		0.0000	1.0000	100.00
2.5	36,124,902	205,627	0.0057	0.9943	100.00
3.5	33,986,230	185,647	0.0055	0.9945	99.43
4.5	32,864,642	493,323	0.0150	0.9850	98.89
5.5	32,371,319	19,197,740	0.5930	0.4070	97.40
6.5	13,173,580	632,407	0.0480	0.9520	39.64
7.5	12,541,172	1,085,196	0.0865	0.9135	37.74
8.5	11,455,976	10,528,807	0.9191	0.0809	34.47
9.5	927,169		0.0000	1.0000	2.79
10.5	927,169		0.0000	1.0000	2.79
11.5	927,169	6,773	0.0073	0.9927	2.79
12.5	920,396		0.0000	1.0000	2.77
13.5	920,396	89,231	0.0969	0.9031	2.77
14.5	831,166	388,757	0.4677	0.5323	2.50
15.5	442,408		0.0000	1.0000	1.33
16.5	442,408		0.0000	1.0000	1.33
17.5	442,408		0.0000	1.0000	1.33
18.5	442,408	442,408	1.0000		1.33
19.5					

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Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Attachment 2 pages IV-21 & IV-23		
Subtopic:	Depreciation		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please confirm that under Hydro's proposed approach (including adoption of ELG and no asset retirement costs) Hydro's plant in service as at March 31, 2014 shows a negative depreciation variance of $602 million (i.e. is over-depreciated by $602 million).

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

The calculated accumulated depreciation balance for Manitoba Hydro at March 31, 2014 as determined by Gannett Fleming using the ELG procedure without provision for future retirement costs indicates a surplus of booked accumulated depreciation of $602.6 million.

Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Attachment 2 pages IV-21 & IV-23		
Subtopic:	Depreciation		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please confirm that under Hydro's proposed approach, the $602 million negative variance is amortized to the benefit of customers via a depreciation "true-up" equalling $16.4 million per year (a rate of approximately 2.7% of the variance amortized per year).

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

Under Manitoba Hydro's proposed approach, the $602.6 million surplus of booked accumulated depreciation is amortized to the benefit of customers over the remaining life of the specific depreciable asset accounts to which it pertains, by adjusting the depreciation rate for each account to include a "true-up" component.

All else being equal, if there were no additions to the asset base after March 31, 2014, and provided retirements adhered to those predicted by the assigned depreciable lives and IOWA curves, Manitoba Hydro would expect to amortize 10% of the variance within 4 years, 25% within 9 years, 50% within 17 years, 75% within 30 years, and 90% within 45 years, with full amortization by 119 years.

The actual annual amount and percentage of the depreciation variance amortized will change from year to year. In the short term, the amount to be amortized annually will vary from that

shown in the depreciation study as the asset base changes over time in response to ongoing addition and retirement activity. Over the longer term, depreciation rates will be adjusted through depreciation studies and interim depreciation rate reviews as the variance for each account becomes fully amortized.

Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Attachment 2 pages IV-21 & IV-23		
Subtopic:	Depreciation		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please confirm that under Hydro's proposed approach, the plant in service as at March 31, 2014 for WPLP shows a negative depreciation variance of $4.3 million and that the variance is amortized to the benefit of customers via a depreciation "true-up" equalling $0.075 million per year (a rate of approximately 1.75% of the variance amortized per year).

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

The calculated accumulated depreciation balance for WPLP at March 31, 2014 as determined by Gannett Fleming using the ELG procedure without provision for future retirement costs indicates a surplus of booked accumulated depreciation of $4.3 million.

Under Manitoba Hydro's proposed approach, the $4.3 million surplus of booked accumulated depreciation is amortized to the benefit of customers over the remaining life of the specific depreciable asset accounts to which it pertains, by adjusting the depreciation rate for each account to include a "true-up" component.

All else being equal, if there were no additions to the asset base after March 31, 2014, and provided retirements adhered to those predicted by the assigned depreciable lives and IOWA curves, Manitoba Hydro would expect to amortize 10% of the variance within 6 years, 25%

within 15 years, 50% within 32 years, 75% within 51 years, and 90% within 72 years, with full amortization by 119 years.

The actual annual amount and percentage of the depreciation variance amortized will change from year to year. In the short term, the amount to be amortized annually will vary from that shown in the depreciation study as the asset base changes over time in response to ongoing addition and retirement activity. Over the longer term, depreciation rates will be adjusted through depreciation studies and interim depreciation rate reviews as the variance for each account becomes fully amortized.

Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Asset Accounts Illustration		
Issue:			

PREAMBLE TO IR (IF ANY):

As requested in MIPUG/MH I-15q from the 2012/13 and 2013/14 General Rate Application MIPUG would like to compare the ASL and ELG approach, as well as the 2010 Depreciation Study to the 2014 Depreciation Study using the following illustrative example.

QUESTION:

Please provide the ELG approach to the calculations for annual and accrued depreciation and the composite remaining life for accounts 1175D – Spillway and 2000L – Overhead Conductor and Devices.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

The following response and tables were provided by Gannett Fleming.

Please refer to **Attachment 1** which provides the detailed Whole Life calculation incorporating the ELG procedure for Accounts **1175D – Spillway and 2000L – Overhead Conductor and Devices**. Please also refer to **Attachment 2** which provides for a Remaining Life Calculation incorporating the ELG Procedure for the same 2 accounts.

Please note that in the currently filed depreciation study the remaining life calculations used in the determination of the Accumulated Depreciation True-Up were calculated using the ASL procedure. The composite remaining life calculations produced by the ASL procedure are based on detailed calculation of the estimated remaining life of each vintage from the age

of the vintage to the maximum life of the Iowa curve. It is widely accepted[1] that this calculation provides the most appropriate composite remaining life estimate for the purposes of developing an accumulated depreciation true-up calculation, when the ELG procedure is used for the determination of the Calculated Accumulated Depreciation and Annual Accrual amounts (as is the process used in the current depreciation filing). However, to be responsive to this specific information request, the remaining life calculations incorporating the ELG procedure are provided as Attachment 2 to this response.

The following provides a brief description of the calculations included in each of the columns on the 2 Attachments:

Calculations related to the Whole Life Determinations of Annual and Accrued Depreciation - ELG Procedure (Attachment 1):

The values for each installation vintage as indicated in **column (3) Annual Accrual Rate** and **column (5) Accrued Depreciation Factor** are determined in accordance with the formula provided in "Depreciation of Group Properties – Engineering Research Institute Bulletin 155" by Robley Winfrey, Iowa State University, Engineering Research Institute, Ames, Iowa an excerpt of which is provided in MIPUG/MH-I-21(c) Attachment 1. Please note that the Equal Life Group procedure was originally known as the unit of summation procedure, as such the relevant discussion in the provided excerpt is a discussion related to the Unit Summation procedure.

The figures in **column (4)** A**nnual Accrual Amount** and in **column (6)** A**ccrued Depreciation Amount** for each installation vintage of the attached Whole Life Calculations are based on **Annual Depreciation Rates** and A**ccrued Depreciation Factors** as provided in **columns (3) and (5)**, multiplied by the **Original Cost** as provided in **column (2)**.

[1] As originally ordered by the Alberta Energy and Utilities Board in Decision E82131, dated June 21, 1982. This process has been upheld in a number of subsequent Alberta and other North American jurisdictions since 1982.

Calculations related to the Determination of Composite Remaining Life - ELG Procedure (Attachment 2):

The information used in the depreciation study from the detailed remaining life calculations as provided in Attachment 2 is the composite remaining life, as indicated in the line "**Composite Remaining Life and Annual Accrual Rate, Percent**". The following is a discussion of the remaining information.

Column (3) – Calculated Accrued Depreciation – is taken from the schedule of Calculated Annual and Accrued Depreciation (Attachment 1) **column (6) Accrued Depreciation Amount.**

Column (4) - Allocated Book Reserve - the total amount of allocated book reserve is determined from the company's actual financial sub-ledgers. The total amount by account (i.e. 1175D) is allocated to each vintage based on the calculated accrued depreciation amount for each vintage as a percentage of the total account calculated accrued depreciation. For example the Allocated Booked Reserve for the installation year of 1991 is determined as follows: ($25,512,545/$61,904,239)*$60,573,556. Where the $60,573,556 is based on a known amount from the company's accumulated depreciation sub-ledger.

Column (5) - Future Book Accruals - is determined by subtracting the **Allocated Book Reserve (column 4)** from the **Original Cost (column 2)**. For example the future book accruals for the 1991 installation year are determined as follows: $80,430,469 - $24,964,132.

Column (6) – Expected Remaining Life – The remaining life values for each installation vintage as indicated in column (6) is calculated as originally published in 1942 in the publication "Depreciation of Group Properties – Engineering Research Institute Bulletin 155" by Robley Winfrey, Iowa State University, Engineering Research Institute, Ames, Iowa an excerpt of which from Bulletin 155 is provided in MIPUG/MH - I-21(c) Attachment 1.

Column (7) - Annual Accrual – is calculated as **Future Book Accruals column (5)** / **Expected Remaining Life column (6)**.

Attachment 1(Page 1 of 3)

MANITOBA HYDRO
ACCOUNT 1175D - SPILLWAY
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	--ANNUAL RATE	ACCRUAL-- AMOUNT	--ACCRUED FACTOR	DEPREC.-- AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
INTERIM SURVIVOR CURVE.. IOWA 80-R3					
PROBABLE RETIREMENT YEAR.. 3-2131					
NET SALVAGE PERCENT. 0					
1991	80,430,469.28	1.35	1,085,811.34	0.3172	25,512,545
1992	80,430,469.28	1.36	1,093,854.38	0.3060	24,611,724
1993	40,215,234.64	1.36	546,927.19	0.2924	11,758,935
2007	68,329.54	1.42	970.28	0.1065	7,277
2008	94,022.89	1.42	1,335.13	0.0923	8,678
2010	2,246.89	1.43	32.13	0.0644	145
2012	110,825.32	1.45	1,606.97	0.0362	4,012
2013	30,591.49	1.46	446.64	0.0219	670
2014	34,191.02	1.49	509.45	0.0074	253
	201,416,380.35		2,731,493.51		61,904,239

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.36

Attachment 1 (Page 2 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR (1)	ORIGINAL COST (2)	--ANNUAL RATE (3)	ACCRUAL-- AMOUNT (4)	--ACCRUED FACTOR (5)	DEPREC.-- AMOUNT (6)
SURVIVOR CURVE.. IOWA 80-R4					
1911	123,750.00	0.93	1,150.88	0.9626	119,122
1923	49,408.75	1.01	499.03	0.9242	45,664
1926	62,927.80	1.04	654.45	0.9204	57,919
1927	314,857.21	1.04	3,274.51	0.9100	286,520
1928	39,363.53	1.05	413.32	0.9082	35,750
1930	522,063.55	1.07	5,586.08	0.9042	472,050
1931	1,500,000.00	1.07	16,050.00	0.8934	1,340,100
1939	446.20	1.13	5.04	0.8532	381
1946	1,053.27	1.17	12.32	0.8014	844
1948	596.21	1.18	7.04	0.7847	468
1949	418,369.50	1.18	4,936.76	0.7729	323,358
1950	512,241.27	1.19	6,095.67	0.7676	393,196
1951	411,102.89	1.19	4,892.12	0.7556	310,629
1952	623,756.54	1.20	7,485.08	0.7500	467,817
1953	181,384.93	1.20	2,176.62	0.7380	133,862
1955	214,207.13	1.21	2,591.91	0.7200	154,229
1956	1,017,464.20	1.22	12,413.06	0.7137	726,164
1957	244,145.73	1.22	2,978.58	0.7015	171,268
1958	11,557.33	1.23	142.16	0.6950	8,032
1959	45,931.38	1.23	564.96	0.6826	31,353
1960	9,105.00	1.24	112.90	0.6758	6,153
1961	1,267,042.44	1.24	15,711.33	0.6634	840,556
1962	2,202,708.81	1.24	27,313.59	0.6510	1,433,963
1963	110,859.67	1.25	1,385.75	0.6438	71,371
1964	76,762.00	1.25	959.52	0.6312	48,452
1965	1,325,873.24	1.26	16,706.00	0.6237	826,947
1966	577,503.19	1.26	7,276.54	0.6111	352,912
1967	10,483,558.18	1.26	132,092.83	0.5985	6,274,410
1968	749,644.48	1.27	9,520.48	0.5906	442,740
1969	1,855,561.71	1.27	23,565.63	0.5778	1,072,144
1970	1,174,482.85	1.27	14,915.93	0.5652	663,818
1971	54,721,422.77	1.28	700,434.21	0.5568	30,468,888
1972	3,539,695.96	1.28	45,308.11	0.5440	1,925,595
1973	1,861,760.33	1.28	23,830.53	0.5312	988,967
1974	3,183,230.44	1.29	41,063.67	0.5224	1,662,920
1975	3,554,160.95	1.29	45,848.68	0.5096	1,811,200
1976	3,033,727.44	1.29	39,135.08	0.4966	1,506,549
1977	5,239,870.90	1.29	67,594.33	0.4838	2,535,050
1978	2,634,319.79	1.30	34,246.16	0.4745	1,249,985
1979	545,339.94	1.30	7,089.42	0.4615	251,674
1980	6,789,595.83	1.30	88,264.75	0.4485	3,045,134
1981	436,619.15	1.30	5,676.05	0.4355	190,148
1982	4,360,183.93	1.30	56,682.39	0.4225	1,842,178
1983	84,846.80	1.31	1,111.49	0.4126	35,008
1984	362,239.79	1.31	4,745.34	0.3996	144,751
1985	22,101,743.98	1.31	289,532.85	0.3864	8,540,114

Attachment 1 (Page 3 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR (1)	ORIGINAL COST (2)	--ANNUAL RATE (3)	ACCRUAL-- AMOUNT (4)	--ACCRUED FACTOR (5)	DEPREC.-- AMOUNT (6)
SURVIVOR CURVE.. IOWA 80-R4					
1986	19,805.94	1.31	259.46	0.3734	7,396
1987	13,031.21	1.31	170.71	0.3602	4,694
1988	421,948.99	1.31	5,527.53	0.3472	146,501
1989	6,521,525.36	1.31	85,431.98	0.3340	2,178,189
1990	9,394,025.98	1.32	124,001.14	0.3234	3,038,028
1991	2,614,779.67	1.32	34,515.09	0.3102	811,105
1992	4,328,653.33	1.32	57,138.22	0.2970	1,285,610
1993	2,462,562.70	1.32	32,505.83	0.2838	698,875
1994	1,868,678.63	1.32	24,666.56	0.2706	505,664
1995	4,369,494.93	1.32	57,677.33	0.2574	1,124,708
1996	445,858.55	1.32	5,885.33	0.2442	108,879
1997	18,660,182.46	1.32	246,314.41	0.2310	4,310,502
1998	14,863,385.61	1.32	196,196.69	0.2178	3,237,245
1999	16,578,859.10	1.32	218,840.94	0.2046	3,392,035
2000	3,712,975.08	1.32	49,011.27	0.1914	710,663
2001	11,382,677.70	1.32	150,251.35	0.1782	2,028,393
2002	13,719,505.57	1.32	181,097.47	0.1650	2,263,718
2003	13,309,103.13	1.33	177,011.07	0.1530	2,036,293
2004	6,697,745.21	1.33	89,080.01	0.1396	935,005
2005	6,403,901.14	1.33	85,171.89	0.1264	809,453
2006	2,931,026.30	1.33	38,982.65	0.1130	331,206
2007	16,187,690.22	1.33	215,296.28	0.0998	1,615,531
2008	4,354,802.49	1.33	57,918.87	0.0864	376,255
2009	1,921,712.98	1.33	25,558.78	0.0732	140,669
2010	2,176,207.62	1.33	28,943.56	0.0598	130,137
2011	3,618,821.74	1.33	48,130.33	0.0466	168,637
2012	13,678,028.71	1.33	181,917.78	0.0332	454,111
2013	24,764,704.69	1.33	329,370.57	0.0200	495,294
2014	3,812,324.46	1.33	50,703.92	0.0066	25,161
	349,810,506.49		4,569,630.17		106,680,310

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.31

Attachment 2 (Page 1 of 3)

MANITOBA HYDRO
ACCOUNT 1175D - SPILLWAY
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. RESERVE	FUTURE ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
INTERIM SURVIVOR CURVE.. IOWA 80-R3						
PROBABLE RETIREMENT YEAR.. 3-2131						
1991	80,430,469.28	25,512,545	24,964,132	55,466,337	50.58	1,096,606
1992	80,430,469.28	24,611,724	24,082,675	56,347,794	51.03	1,104,209
1993	40,215,234.64	11,758,935	11,506,167	28,709,068	52.03	551,779
2007	68,329.54	7,277	7,120	61,210	62.92	973
2008	94,022.89	8,678	8,492	85,531	63.92	1,338
2010	2,246.89	145	142	2,105	65.43	32
2012	110,825.32	4,012	3,925	106,900	66.47	1,608
2013	30,591.49	670	656	29,935	66.99	447
2014	34,191.02	253	247	33,944	66.62	510
	201,416,380.35	61,904,239	60,573,556	140,842,824		2,757,502

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.1 1.37

Attachment 2 (Page 2 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 80-R4						
1911	123,750.00	119,122	123,750			
1923	49,408.75	45,664	49,409			
1926	62,927.80	57,919	62,928			
1927	314,857.21	286,520	314,857			
1928	39,363.53	35,750	39,364			
1930	522,063.55	472,050	522,064			
1931	1,500,000.00	1,340,100	1,500,000			
1939	446.20	381	446			
1946	1,053.27	844	1,053			
1948	596.21	468	596			
1949	418,369.50	323,358	418,370			
1950	512,241.27	393,196	512,241			
1951	411,102.89	310,629	411,103			
1952	623,756.54	467,817	623,757			
1953	181,384.93	133,862	181,385			
1955	214,207.13	154,229	214,207			
1956	1,017,464.20	726,164	1,017,464			
1957	244,145.73	171,268	244,146			
1958	11,557.33	8,032	11,470	87	24.80	4
1959	45,931.38	31,353	44,772	1,159	25.80	45
1960	9,105.00	6,153	8,787	318	26.15	12
1961	1,267,042.44	840,556	1,200,316	66,726	27.15	2,458
1962	2,202,708.81	1,433,963	2,047,703	155,006	28.15	5,506
1963	110,859.67	71,371	101,918	8,942	28.50	314
1964	76,762.00	48,452	69,190	7,572	29.50	257
1965	1,325,873.24	826,947	1,180,883	144,990	29.87	4,854
1966	577,503.19	352,912	503,959	73,544	30.87	2,382
1967	10,483,558.18	6,274,410	8,959,875	1,523,683	31.87	47,809
1968	749,644.48	442,740	632,234	117,410	32.24	3,642
1969	1,855,561.71	1,072,144	1,531,025	324,537	33.24	9,763
1970	1,174,482.85	663,818	947,934	226,549	34.24	6,617
1971	54,721,422.77	30,468,888	43,509,656	11,211,767	34.62	323,852
1972	3,539,695.96	1,925,595	2,749,755	789,941	35.62	22,177
1973	1,861,760.33	988,967	1,412,248	449,512	36.62	12,275
1974	3,183,230.44	1,662,920	2,374,654	808,576	37.02	21,842
1975	3,554,160.95	1,811,200	2,586,399	967,762	38.02	25,454
1976	3,033,727.44	1,506,549	2,151,356	882,371	39.02	22,613
1977	5,239,870.90	2,535,050	3,620,058	1,619,813	40.02	40,475
1978	2,634,319.79	1,249,985	1,784,982	849,338	40.42	21,013
1979	545,339.94	251,674	359,391	185,949	41.42	4,489
1980	6,789,595.83	3,045,134	4,348,460	2,441,136	42.42	57,547
1981	436,619.15	190,148	271,532	165,087	43.42	3,802
1982	4,360,183.93	1,842,178	2,630,635	1,729,549	44.42	38,936
1983	84,846.80	35,008	49,992	34,855	44.84	777
1984	362,239.79	144,751	206,705	155,535	45.83	3,394
1985	22,101,743.98	8,540,114	12,195,306	9,906,438	46.84	211,495

Attachment 2 (Page 3 of 3)

MANITOBA HYDRO

ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 80-R4						
1986	19,805.94	7,396	10,562	9,244	47.83	193
1987	13,031.21	4,694	6,703	6,328	48.84	130
1988	421,948.99	146,501	209,204	212,745	49.83	4,269
1989	6,521,525.36	2,178,189	3,110,460	3,411,065	50.84	67,094
1990	9,394,025.98	3,038,028	4,338,312	5,055,714	51.26	98,629
1991	2,614,779.67	811,105	1,158,260	1,456,520	52.26	27,871
1992	4,328,653.33	1,285,610	1,835,855	2,492,798	53.26	46,804
1993	2,462,562.70	698,875	997,995	1,464,568	54.26	26,992
1994	1,868,678.63	505,664	722,090	1,146,589	55.26	20,749
1995	4,369,494.93	1,124,708	1,606,086	2,763,409	56.26	49,119
1996	445,858.55	108,879	155,480	290,379	57.26	5,071
1997	18,660,182.46	4,310,502	6,155,409	12,504,773	58.26	214,637
1998	14,863,385.61	3,237,245	4,622,795	10,240,591	59.26	172,808
1999	16,578,859.10	3,392,035	4,843,835	11,735,024	60.26	194,740
2000	3,712,975.08	710,663	1,014,829	2,698,146	61.26	44,044
2001	11,382,677.70	2,028,393	2,896,551	8,486,127	62.26	136,301
2002	13,719,505.57	2,263,718	3,232,595	10,486,911	63.26	165,775
2003	13,309,103.13	2,036,293	2,907,832	10,401,271	63.68	163,337
2004	6,697,745.21	935,005	1,335,190	5,362,555	64.69	82,896
2005	6,403,901.14	809,453	1,155,901	5,248,000	65.68	79,903
2006	2,931,026.30	331,206	472,963	2,458,063	66.69	36,858
2007	16,187,690.22	1,615,531	2,306,982	13,880,708	67.68	205,093
2008	4,354,802.49	376,255	537,293	3,817,509	68.69	55,576
2009	1,921,712.98	140,669	200,876	1,720,837	69.68	24,696
2010	2,176,207.62	130,137	185,836	1,990,372	70.69	28,156
2011	3,618,821.74	168,637	240,814	3,378,008	71.68	47,126
2012	13,678,028.71	454,111	648,471	13,029,558	72.69	179,248
2013	24,764,704.69	495,294	707,281	24,057,424	73.68	326,512
2014	3,812,324.46	25,161	35,930	3,776,394	74.69	50,561
	349,810,506.49	106,680,310	151,380,725	198,429,781		3,448,992

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 57.5 0.99

Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Asset Accounts Illustration		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the same for the ASL approach (without any net salvage provision).

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

The following response and tables were provided by Gannett Fleming.

Please refer to **Attachment 1** which provides the detailed Whole Life calculation incorporating the ASL procedure for Accounts **1175D – Spillway and 2000L – Overhead Conductor and Devices**. Please also refer to **Attachment 2** which provides for a Remaining Life Calculation incorporating the ASL Procedure for the same 2 accounts.

The following provides a brief description of the calculations included in each of the columns on the 2 Attachments:

Calculations related to the Whole Life Determinations of Annual and Accrued Depreciation - ASL Procedure (Attachment 1):

Column (3) - Average Life - represents the average life expectancy for the respective installation year.

It should be noted that account 1175D is subject to an expected retirement year, and as such, the average service life in the attached excerpt has been modified to reflect the truncation of the Iowa curve as at the end of the year 2131.

Column (4) – Annual Accrual Rate - The figures in **column (4)** are calculated as (1/Average Service Life column 3).

Column (5) – Annual Accrual Amount – is calculated as **Original Cost (column 2)** multiplied by the **Annual Accrual rate (column 4).**

Column (6) - Expectancy (Remaining Life) for each installation vintage is based on the age of the installation vintage expressed as a percentage of the age to the average life estimate. The specific values for each age interval were originally published in 1935 in the publication "Statistical Analysis of Industrial Property Retirements - Engineering Research Institute Bulletin 125 by Robley Winfrey, Iowa State University, Engineering Research Institute, Ames, Iowa an excerpt of which from Bulletin 125 is provided in MIPUG/MH – I-21(c), Attachment 2.

It should be noted that account 1175D is subject to an expected retirement year, and as such, the formulae provided in the attached excerpt have been modified to reflect the truncation of the Iowa curve as at the end of the year 2131.

Column (7) – Accrued Depreciation Factor – for each vintage is determined in accordance with the formula provided in the 1935 publication, "Statistical Analysis of Industrial Property Retirements - Engineering Research Institute Bulletin 125 by Robley Winfrey, Iowa State University, Engineering Research Institute, Ames, Iowa an excerpt of which from Bulletin 125 is provided in MIPUG/MH – I-21(c), Attachment 2.

Column (8) – Accrued Depreciation Amount – is calculated as **Original Cost (column 2)** multiplied by the **Annual Depreciation Factor (column 7).**

Calculations related to the Determination of Composite Remaining Life - ASL Procedure (Attachment 2):

Column (3) – Calculated Accrued Depreciation – is taken from the schedule of Calculated Annual and Accrued Depreciation (Attachment 1) **column (8) Accrued Depreciation Amount.**

Column (4) - Allocated Book Reserve - the total amount of allocated book reserve is determined from the company's actual financial sub-ledgers. The total amount by account (i.e. 1175D) is allocated to each vintage based on the calculated accrued depreciation amount for each vintage as a percentage of the total account calculated accrued depreciation. For example the Allocated Booked Reserve for the installation year of 1991 is determined as follows: ($22,631,525/$54,741,751)*$60,573,556. Where the $60,573,556 is based on a known amount from the company's accumulated depreciation sub-ledger.

Column (5) - Future Book Accruals - is determined by subtracting the **Allocated Book Reserve (column 4)** from the **Original Cost (column 2)**. For example the future book accruals for the 1991 installation year are determined as follows: $80,430,469 - $25,042,530.

Column (6) – Expected Remaining Life - The remaining life for each installation vintage as indicated in column (6) is based on the age of the installation vintage expressed as a percentage of the age to the average life estimate. The specific values for each age interval were originally published in 1935 in the publication "Statistical Analysis of Industrial Property Retirements - Engineering Research Institute Bulletin 125 by Robley Winfrey, Iowa State University, Engineering Research Institute, Ames, Iowa an excerpt of which from Bulletin 125 is provided in MIPUG/MH – I-21(c), Attachment 2.

It should be noted that account 1175D is subject to an expected retirement year, and as such, the formulae provided in the attached excerpt have been modified to reflect the truncation of the Iowa curve as at the end of the year 2131.

Column (7) – Annual Accrual – is calculated as the **Future Book Accruals column (5)** / the **Remaining Life column (6)**.

Attachment 1(Page 1 of 3)

MANITOBA HYDRO
ACCOUNT 1175D - SPILLWAY
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	AVG. LIFE	--ANNUAL RATE	ACCRUAL-- AMOUNT	EXP.	--ACCRUED FACTOR	DEPREC.-- AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
INTERIM SURVIVOR CURVE.. IOWA 80-R3							
PROBABLE RETIREMENT YEAR.. 3-2131							
1991	80,430,469.28	80.00	1.25	1,005,380.87	57.49	0.2814	22,631,525
1992	80,430,469.28	80.00	1.25	1,005,380.87	58.41	0.2699	21,706,575
1993	40,215,234.64	80.00	1.25	502,690.43	59.34	0.2583	10,385,584
2007	68,329.54	79.98	1.25	854.12	72.64	0.0918	6,271
2008	94,022.89	79.98	1.25	1,175.29	73.61	0.0796	7,488
2010	2,246.89	79.96	1.25	28.09	75.54	0.0553	124
2012	110,825.32	79.93	1.25	1,385.32	77.47	0.0308	3,411
2013	30,591.49	79.90	1.25	382.39	78.43	0.0184	563
2014	34,191.02	79.88	1.25	427.39	79.39	0.0061	210
	201,416,380.35			2,517,704.77			54,741,751

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.25

Attachment 1(Page 2 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

	ORIGINAL	AVG.	--ANNUAL	ACCRUAL--		--ACCRUED	DEPREC.--
YEAR	COST	LIFE	RATE	AMOUNT	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR CURVE.. IOWA 80-R4							
1911	123,750.00	80.00	1.25	1,546.88	4.14	0.9483	117,346
1923	49,408.75	80.00	1.25	617.61	7.43	0.9071	44,820
1926	62,927.80	80.00	1.25	786.60	8.38	0.8953	56,336
1927	314,857.21	80.00	1.25	3,935.72	8.71	0.8911	280,576
1928	39,363.53	80.00	1.25	492.04	9.06	0.8868	34,906
1930	522,063.55	80.00	1.25	6,525.79	9.80	0.8775	458,111
1931	1,500,000.00	80.00	1.25	18,750.00	10.20	0.8725	1,308,750
1939	446.20	80.00	1.25	5.58	14.01	0.8249	368
1946	1,053.27	80.00	1.25	13.17	18.33	0.7709	812
1948	596.21	80.00	1.25	7.45	19.68	0.7540	450
1949	418,369.50	80.00	1.25	5,229.62	20.37	0.7454	311,844
1950	512,241.27	80.00	1.25	6,403.02	21.07	0.7366	377,327
1951	411,102.89	80.00	1.25	5,138.79	21.78	0.7278	299,180
1952	623,756.54	80.00	1.25	7,796.96	22.49	0.7189	448,406
1953	181,384.93	80.00	1.25	2,267.31	23.21	0.7099	128,762
1955	214,207.13	80.00	1.25	2,677.59	24.69	0.6914	148,099
1956	1,017,464.20	80.00	1.25	12,718.30	25.44	0.6820	693,911
1957	244,145.73	80.00	1.25	3,051.82	26.20	0.6725	164,188
1958	11,557.33	80.00	1.25	144.47	26.97	0.6629	7,661
1959	45,931.38	80.00	1.25	574.14	27.75	0.6531	29,999
1960	9,105.00	80.00	1.25	113.81	28.54	0.6433	5,857
1961	1,267,042.44	80.00	1.25	15,838.03	29.34	0.6333	802,355
1962	2,202,708.81	80.00	1.25	27,533.86	30.15	0.6231	1,372,552
1963	110,859.67	80.00	1.25	1,385.75	30.97	0.6129	67,944
1964	76,762.00	80.00	1.25	959.52	31.79	0.6026	46,258
1965	1,325,873.24	80.00	1.25	16,573.42	32.63	0.5921	785,076
1966	577,503.19	80.00	1.25	7,218.79	33.47	0.5816	335,887
1967	10,483,558.18	80.00	1.25	131,044.48	34.32	0.5710	5,986,112
1968	749,644.48	80.00	1.25	9,370.56	35.18	0.5603	419,988
1969	1,855,561.71	80.00	1.25	23,194.52	36.05	0.5494	1,019,408
1970	1,174,482.85	80.00	1.25	14,681.04	36.93	0.5384	632,318
1971	54,721,422.77	80.00	1.25	684,017.78	37.81	0.5274	28,858,984
1972	3,539,695.96	80.00	1.25	44,246.20	38.70	0.5163	1,827,368
1973	1,861,760.33	80.00	1.25	23,272.00	39.60	0.5050	940,189
1974	3,183,230.44	80.00	1.25	39,790.38	40.51	0.4936	1,571,306
1975	3,554,160.95	80.00	1.25	44,427.01	41.42	0.4823	1,713,994
1976	3,033,727.44	80.00	1.25	37,921.59	42.34	0.4708	1,428,127
1977	5,239,870.90	80.00	1.25	65,498.39	43.26	0.4593	2,406,411
1978	2,634,319.79	80.00	1.25	32,929.00	44.19	0.4476	1,179,174
1979	545,339.94	80.00	1.25	6,816.75	45.12	0.4360	237,768
1980	6,789,595.83	80.00	1.25	84,869.95	46.06	0.4243	2,880,486
1981	436,619.15	80.00	1.25	5,457.74	47.01	0.4124	180,053
1982	4,360,183.93	80.00	1.25	54,502.30	47.96	0.4005	1,746,254
1983	84,846.80	80.00	1.25	1,060.58	48.91	0.3886	32,973
1984	362,239.79	80.00	1.25	4,528.00	49.87	0.3766	136,427
1985	22,101,743.98	80.00	1.25	276,271.80	50.83	0.3646	8,058,738

Attachment 1(Page 3 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED ANNUAL AND ACCRUED DEPRECIATION
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	AVG. LIFE	--ANNUAL RATE	ACCRUAL-- AMOUNT	EXP.	--ACCRUED FACTOR	DEPREC.-- AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR CURVE.. IOWA 80-R4							
1986	19,805.94	80.00	1.25	247.57	51.79	0.3526	6,984
1987	13,031.21	80.00	1.25	162.89	52.76	0.3405	4,437
1988	421,948.99	80.00	1.25	5,274.36	53.73	0.3284	138,560
1989	6,521,525.36	80.00	1.25	81,519.07	54.70	0.3163	2,062,432
1990	9,394,025.98	80.00	1.25	117,425.32	55.68	0.3040	2,855,784
1991	2,614,779.67	80.00	1.25	32,684.75	56.66	0.2918	762,862
1992	4,328,653.33	80.00	1.25	54,108.17	57.64	0.2795	1,209,859
1993	2,462,562.70	80.00	1.25	30,782.03	58.62	0.2673	658,120
1994	1,868,678.63	80.00	1.25	23,358.48	59.61	0.2549	476,289
1995	4,369,494.93	80.00	1.25	54,618.69	60.59	0.2426	1,060,127
1996	445,858.55	80.00	1.25	5,573.23	61.58	0.2303	102,659
1997	18,660,182.46	80.00	1.25	233,252.28	62.57	0.2179	4,065,681
1998	14,863,385.61	80.00	1.25	185,792.32	63.56	0.2055	3,054,426
1999	16,578,859.10	80.00	1.25	207,235.74	64.55	0.1931	3,201,709
2000	3,712,975.08	80.00	1.25	46,412.19	65.54	0.1808	671,120
2001	11,382,677.70	80.00	1.25	142,283.47	66.54	0.1683	1,915,136
2002	13,719,505.57	80.00	1.25	171,493.82	67.53	0.1559	2,138,597
2003	13,309,103.13	80.00	1.25	166,363.79	68.53	0.1434	1,908,259
2004	6,697,745.21	80.00	1.25	83,721.82	69.52	0.1310	877,405
2005	6,403,901.14	80.00	1.25	80,048.76	70.52	0.1185	758,862
2006	2,931,026.30	80.00	1.25	36,637.83	71.51	0.1061	311,041
2007	16,187,690.22	80.00	1.25	202,346.13	72.51	0.0936	1,515,492
2008	4,354,802.49	80.00	1.25	54,435.03	73.51	0.0811	353,262
2009	1,921,712.98	80.00	1.25	24,021.41	74.51	0.0686	131,868
2010	2,176,207.62	80.00	1.25	27,202.60	75.51	0.0561	122,129
2011	3,618,821.74	80.00	1.25	45,235.27	76.50	0.0438	158,323
2012	13,678,028.71	80.00	1.25	170,975.36	77.50	0.0313	427,438
2013	24,764,704.69	80.00	1.25	309,558.81	78.50	0.0188	464,338
2014	3,812,324.46	80.00	1.25	47,654.06	79.50	0.0063	23,827
	349,810,506.49			4,372,631.36			101,020,885

COMPOSITE ANNUAL ACCRUAL RATE, PERCENT .. 1.25

Attachment 2(Page 1 of 3)

MANITOBA HYDRO
ACCOUNT 1175D - SPILLWAY
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
INTERIM						
PROBABLE RETIREMENT YEAR.. 3-2131						
1991	80,430,469.28	22,631,525	25,042,530	55,387,939	57.49	963,436
1992	80,430,469.28	21,706,575	24,019,043	56,411,426	58.41	965,784
1993	40,215,234.64	10,385,584	11,491,992	28,723,243	59.34	484,045
2007	68,329.54	6,271	6,939	61,391	72.64	845
2008	94,022.89	7,488	8,286	85,737	73.61	1,165
2010	2,246.89	124	137	2,110	75.54	28
2012	110,825.32	3,411	3,774	107,051	77.47	1,382
2013	30,591.49	563	623	29,968	78.43	382
2014	34,191.02	210	232	33,959	79.39	428
	201,416,380.35	54,741,751	60,573,556	140,842,824		2,417,495

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 58.3 1.20

Attachment 2(Page 2 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 80-R4						
1911	123,750.00	117,346	123,750			
1923	49,408.75	44,820	49,409			
1926	62,927.80	56,336	62,928			
1927	314,857.21	280,576	314,857			
1928	39,363.53	34,906	39,364			
1930	522,063.55	458,111	522,064			
1931	1,500,000.00	1,308,750	1,500,000			
1939	446.20	368	446			
1946	1,053.27	812	1,053			
1948	596.21	450	596			
1949	418,369.50	311,844	418,370			
1950	512,241.27	377,327	512,241			
1951	411,102.89	299,180	411,103			
1952	623,756.54	448,406	623,757			
1953	181,384.93	128,762	181,385			
1955	214,207.13	148,099	214,207			
1956	1,017,464.20	693,911	1,017,464			
1957	244,145.73	164,188	244,146			
1958	11,557.33	7,661	11,557			
1959	45,931.38	29,999	45,287	644	27.75	23
1960	9,105.00	5,857	8,842	263	28.54	9
1961	1,267,042.44	802,355	1,211,240	55,802	29.34	1,902
1962	2,202,708.81	1,372,552	2,072,012	130,697	30.15	4,335
1963	110,859.67	67,944	102,569	8,291	30.97	268
1964	76,762.00	46,258	69,831	6,931	31.79	218
1965	1,325,873.24	785,076	1,185,155	140,718	32.63	4,313
1966	577,503.19	335,887	507,057	70,446	33.47	2,105
1967	10,483,558.18	5,986,112	9,036,669	1,446,889	34.32	42,159
1968	749,644.48	419,988	634,016	115,628	35.18	3,287
1969	1,855,561.71	1,019,408	1,538,904	316,658	36.05	8,784
1970	1,174,482.85	632,318	954,551	219,932	36.93	5,955
1971	54,721,422.77	28,858,984	43,565,686	11,155,737	37.81	295,047
1972	3,539,695.96	1,827,368	2,758,605	781,091	38.70	20,183
1973	1,861,760.33	940,189	1,419,315	442,445	39.60	11,173
1974	3,183,230.44	1,571,306	2,372,052	811,178	40.51	20,024
1975	3,554,160.95	1,713,994	2,587,455	966,706	41.42	23,339
1976	3,033,727.44	1,428,127	2,155,909	877,818	42.34	20,733
1977	5,239,870.90	2,406,411	3,632,732	1,607,139	43.26	37,151
1978	2,634,319.79	1,179,174	1,780,088	854,232	44.19	19,331
1979	545,339.94	237,768	358,936	186,404	45.12	4,131
1980	6,789,595.83	2,880,486	4,348,398	2,441,198	46.06	53,000
1981	436,619.15	180,053	271,809	164,810	47.01	3,506
1982	4,360,183.93	1,746,254	2,636,155	1,724,029	47.96	35,947
1983	84,846.80	32,973	49,776	35,071	48.91	717
1984	362,239.79	136,427	205,951	156,289	49.87	3,134
1985	22,101,743.98	8,058,738	12,165,516	9,936,228	50.83	195,480

Attachment 2(Page3 of 3)

MANITOBA HYDRO
ACCOUNT 2000L - OVERHEAD CONDUCTOR AND DEVICES
CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF MARCH 31, 2014

YEAR	ORIGINAL COST	CALCULATED ACCRUED	ALLOC. BOOK RESERVE	FUTURE BOOK ACCRUALS	REM. LIFE	ANNUAL ACCRUAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)
SURVIVOR CURVE.. IOWA 80-R4						
1986	19,805.94	6,984	10,543	9,263	51.79	179
1987	13,031.21	4,437	6,698	6,333	52.76	120
1988	421,948.99	138,560	209,171	212,778	53.73	3,960
1989	6,521,525.36	2,062,432	3,113,459	3,408,066	54.70	62,305
1990	9,394,025.98	2,855,784	4,311,108	5,082,918	55.68	91,288
1991	2,614,779.67	762,862	1,151,621	1,463,159	56.66	25,823
1992	4,328,653.33	1,209,859	1,826,410	2,502,243	57.64	43,412
1993	2,462,562.70	658,120	993,502	1,469,061	58.62	25,061
1994	1,868,678.63	476,289	719,009	1,149,670	59.61	19,287
1995	4,369,494.93	1,060,127	1,600,374	2,769,121	60.59	45,703
1996	445,858.55	102,659	154,975	290,884	61.58	4,724
1997	18,660,182.46	4,065,681	6,137,575	12,522,607	62.57	200,138
1998	14,863,385.61	3,054,426	4,610,978	10,252,408	63.56	161,303
1999	16,578,859.10	3,201,709	4,833,318	11,745,541	64.55	181,960
2000	3,712,975.08	671,120	1,013,126	2,699,849	65.54	41,194
2001	11,382,677.70	1,915,136	2,891,100	8,491,578	66.54	127,616
2002	13,719,505.57	2,138,597	3,228,438	10,491,068	67.53	155,354
2003	13,309,103.13	1,908,259	2,880,719	10,428,384	68.53	152,173
2004	6,697,745.21	877,405	1,324,535	5,373,210	69.52	77,290
2005	6,403,901.14	758,862	1,145,582	5,258,319	70.52	74,565
2006	2,931,026.30	311,041	469,549	2,461,477	71.51	34,421
2007	16,187,690.22	1,515,492	2,287,796	13,899,894	72.51	191,696
2008	4,354,802.49	353,262	533,286	3,821,516	73.51	51,986
2009	1,921,712.98	131,868	199,069	1,722,644	74.51	23,120
2010	2,176,207.62	122,129	184,367	1,991,841	75.51	26,379
2011	3,618,821.74	158,323	239,005	3,379,817	76.50	44,181
2012	13,678,028.71	427,438	645,263	13,032,766	77.50	168,165
2013	24,764,704.69	464,338	700,967	24,063,738	78.50	306,544
2014	3,812,324.46	23,827	35,969	3,776,355	79.50	47,501
	349,810,506.49	101,020,885	151,380,725	198,429,781		3,203,702

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 61.9 0.92

Section:	Appendix 5.6 Depreciation Study	**Page No.:**	
Topic:	Depreciation		
Subtopic:	Asset Accounts Illustration		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide all calculations in support of the values in the tables provided.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

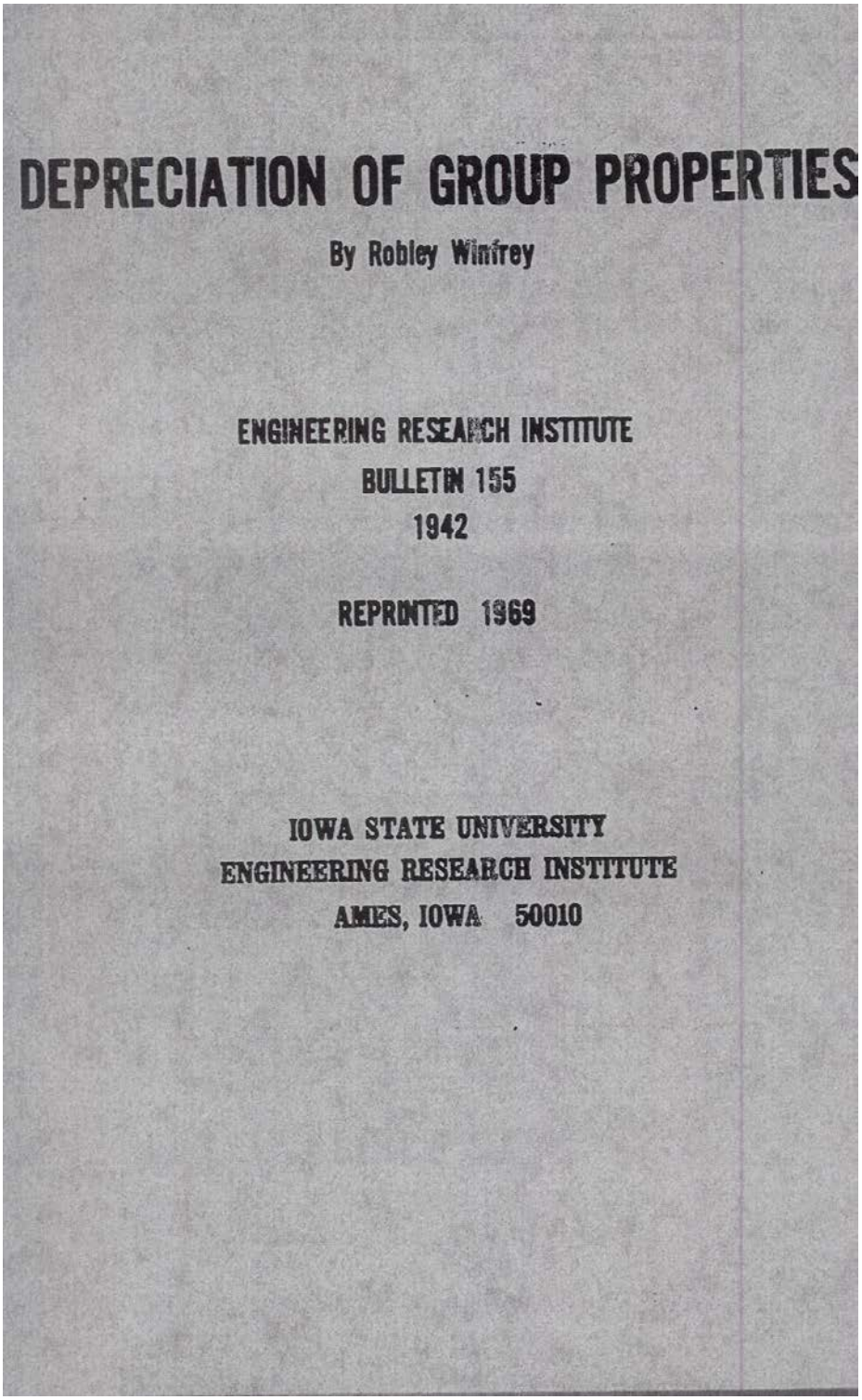
RESPONSE:

This following response was provided by Gannett Fleming and provides support for the underlying calculations in the tables provided in the responses to MIPUG/MH 21a and MIPUG/MH-I-29b.

Please refer to **Attachment 1** being an excerpt from Bulletin 155. It should be noted that account 1175D is subject to an expected retirement year, and as such, the formula provided in the attached excerpt have been modified to reflect the truncation of the Iowa curve as at the end of the year 2131.

Please refer to **Attachment 2** being an excerpt from Bulletin 125. It should be noted that account 1175D is subject to an expected retirement year, and as such, the formula provided in the attached excerpt have been modified to reflect the truncation of the Iowa curve as at the end of the year 2131.

Attachment 1 (Page 1 of 5)



DEPRECIATION OF GROUP PROPERTIES

By Robley Winfrey

ENGINEERING RESEARCH INSTITUTE
BULLETIN 155
1942

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ENGINEERING RESEARCH INSTITUTE
AMES, IOWA 50010

Attachment 1 (Page 2 of 5)

unit properties apply without question. Cases 2 and 3 introduce the problem of more than one life to be handled on a group basis. The derivation of the depreciation equations does not consider such cases.

Case 2 involves (1) an average life for the group of units which is constant for all ages throughout the life of the group, (2) an average life expectancy of the units surviving in the group which decreases as this common age increases (the expectancy equals average life at zero age and zero at the age of the last survivor), and (3) a decreasing number of units in service which varies from 100 percent at zero age to 0 percent at maximum age.

If case 3 is considered to be a continuous property composed of like units and operated always without increase or decrease in number of service units, renewals soon cause the units to be of different ages ranging from zero to maximum age. For purposes of analysis it is considered that renewal units maintain the constant average life and retirement law of the original group of units.

In analyzing these three cases the following fundamental relationships are used:

1. Age+expectancy=probable life.
2. Depreciated (or present) value+depreciation reserve account balance=value new of property surviving in service.
3. Depreciated value+depreciation reserve account balance+value new of retirements=value new of all original units installed.
4. Salvage value=zero (to simplify calculations).

Factors and Formulas for Measuring Depreciation

In setting up ratios expressing the present value or accrued depreciation for each of the three property classes, four service factors are available: (1) age, (2) expectancy, (3) probable life, and (4) average life. For one property unit there is no average life so only three factors can be considered. Of these, probable life is chosen as the service base since it measures total service. The only two possible ratios of service are:

$$A.\ \frac{\text{Age}}{\text{Probable life}}, \qquad \text{and } B.\ \frac{\text{Expectancy}}{\text{Probable life}}.$$

The first ratio is a measure of expired service and the second of remaining or future service. Since age+expectancy=probable life, the following expressions may be written:

$$\frac{\text{Remaining service}}{\text{Total life service}} = 1 - \frac{\text{Age}}{\text{Probable life}} = \frac{\text{Expectancy}}{\text{Probable life}}.$$

This ratio, multiplied by 100, may be regarded as the *service condition percent* of the property unit, that is, the condition percent of

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the unit based upon units of service rather than upon depreciable value as condition percent was previously defined. The service condition percent is identical with condition percent based upon depreciable value when the straight-line method is used. As shown by Eq. 24, when $r=0$,

$$\frac{(1+r)^n-(1+r)^x}{(1+r)^n-1}=\frac{n-x}{n}$$

This indicates that for *one unit of property* there is only one possible ratio of service factors that may be used to express present value.

The original group of case 2 offers more possibilities since average life must be considered in addition to the other three factors. The ratios of expired and remaining service may be written:

$$A.\ \frac{\text{Age}}{\text{Probable life}},\quad B.\ \frac{\text{Expectancy}}{\text{Probable life}},\quad \text{and } C.\ \frac{\text{Expectancy}}{\text{Average life}}.$$

A ratio of age to average life cannot be used because at ages above those equal to average life the ratio exceeds unity. As before, A and B are equal if A is subtracted from unity. The expression C, however, is another measure of remaining value unlike that obtained from A or B and is considered in later analyses.

The same fundamental ratios may be applied to continuous properties of case 3, when proper consideration is given to the differences in ages of the units.

For a given case the ratios A and B may each vary when applied to a group of units of like age, depending upon whether the probable life of the average survivor at a given age or the average of the probable lives of the survivors is used. In the first case the survivors are incorrectly considered as one unit, while in the latter case each surviving unit is correctly considered separately and each given its proper weight. The same is true of ratio C for the expectancy.

When considering groups of units instead of single units of property it is necessary to consider ratios B and C (ratio A may be reduced to ratio B) and two possible selections of the probable life (or expectancy). For a group of units of same age, three solutions exist:

1. The *average-life procedure* from ratio C, wherein the service base is chosen as the average life m of the group, and the variable factor which measures the remaining service is the average expectancy of the group.

2. The *probable-life procedure* from ratio B, wherein the probable life n is chosen as that for the average survivor of the group.

3. The *unit-summation procedure* from ratio B, wherein the probable life n is determined for each unit (or for the retirements of each age-interval), and the condition percent is then calculated for each retirement frequency group to find the weighted condition percent of the survivors.

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The average-life procedure (1) results in the condition percent of the survivors measured in terms of the average life of the original group, rather than the probable lives of the survivors. The probable-life procedure (2) results in the condition percent of the average survivor which really is equivalent to considering all survivors as one unit. The unit-summation procedure (3), the only mathematically correct procedure, results in the average of the condition percents of the survivors because it considers separately each surviving unit.

Equations for the condition percent of the survivors of an original group for these three procedures are:

Average-life procedure,

$$C_x = 100\,\frac{(1+r)^m - (1+r)^{m-e}}{(1+r)^m - 1} \qquad [54]$$

Probable-life procedure,

$$C_x = 100\,\frac{(1+r)^L - (1+r)^x}{(1+r)^L - 1} \qquad [55]$$

Unit-summation procedure,

$$C_x = \frac{\sum_x^M 100\,\frac{(1+r)^n - (1+r)^x}{(1+r)^n - 1}\,(f)}{\sum_x^M f = P} \qquad (56)$$

C_x = condition percent of survivors at age x.
r = rate of return, or rate of interest, expressed as a decimal.
m = average life of original group, years.
e = average expectancy of survivors at age x, years.
x = age of group (all survivors of same age), years.
L = average probable life of survivors (probable life of the average survivor) at age x, years.
n = probable life in years of a given unit at age x; each unit has its own probable life.
M = maximum life in years of group = age of last survivor.
f = frequency, or units retired during each 1-year-age interval.
P_x = survivors at age x.

The three equations above are special adaptations of the general quation,

$$C_p = 100\,\frac{(1+r)^n - (1+r)^x}{(1+r)^n - 1}, \qquad [22]$$

derived for a single unit, in which n and x can have only one interpretation. When units are considered in groups, Eqs. 54, 55, and 56 may be used, although correct results are obtained only with Eq. 56.

The analysis on pages 21-27 shows that the straight-line assumption, the sinking-fund assumption, and the present-worth principle

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result in the same calculated present value and accrued depreciation except for difference in interest rate. In their application, however, there generally is a difference in the arithmetical procedure of calculating depreciation. Annual depreciation by the straight-line method usually is found by multiplying the depreciation base by the depreciation rate. In the sinking-fund method the annual depreciation is found by multiplying the depreciation base by the annuity rate and adding the sinking-fund interest accrual for the year. Annual depreciation by the present-worth method usually is obtained as the difference in the present value of the property at the beginning and end of the year. This procedure also is applicable to the other two methods, especially when condition-percent tables are available.

Illustrations of Depreciation Calculations

The three types of properties (one property unit, original group, and continuous property group), the four methods of estimating depreciation (constant percentage of diminishing base, straight line, sinking fund, and present worth), and the three variations of age-life ratios (Eqs. 54, 55, and 56) are illustrated by tables, complete with calculations. These tables are divided into the following groups:

	Table No
1. One unit of property.	
a. Depreciation not a function of interest but a constant percentage of the depreciated value.	14
b. Depreciation not a function of interest but a constant percentage of the depreciable value new.	15
c. Depreciation a function of interest and based upon the sinking-fund assumption.	16, 17
d. Depreciation a function of interest and based upon age, probable life, and the present worth of the probable operation returns.	18
2. Original group of units decreasing to zero in service.	
a. Depreciation not a function of interest, but a constant percentage of the depreciated value.	19, 20
b. Depreciation not a function of interest, but a constant percentage of the depreciable value new of original group.	21, 22
bb. Depreciation not a function of interest, but a constant percentage of the depreciable value new of the average number of survivors.	23
c. Depreciation not a function of interest and based upon ratios of age, average life, and probable life.	24, 25, 26
d. Depreciation a function of interest and based upon the sinking-fund assumption.	27, 28
e. Depreciation a function of interest and based upon ratios of age, average life, and probable life.	29, 30, 31

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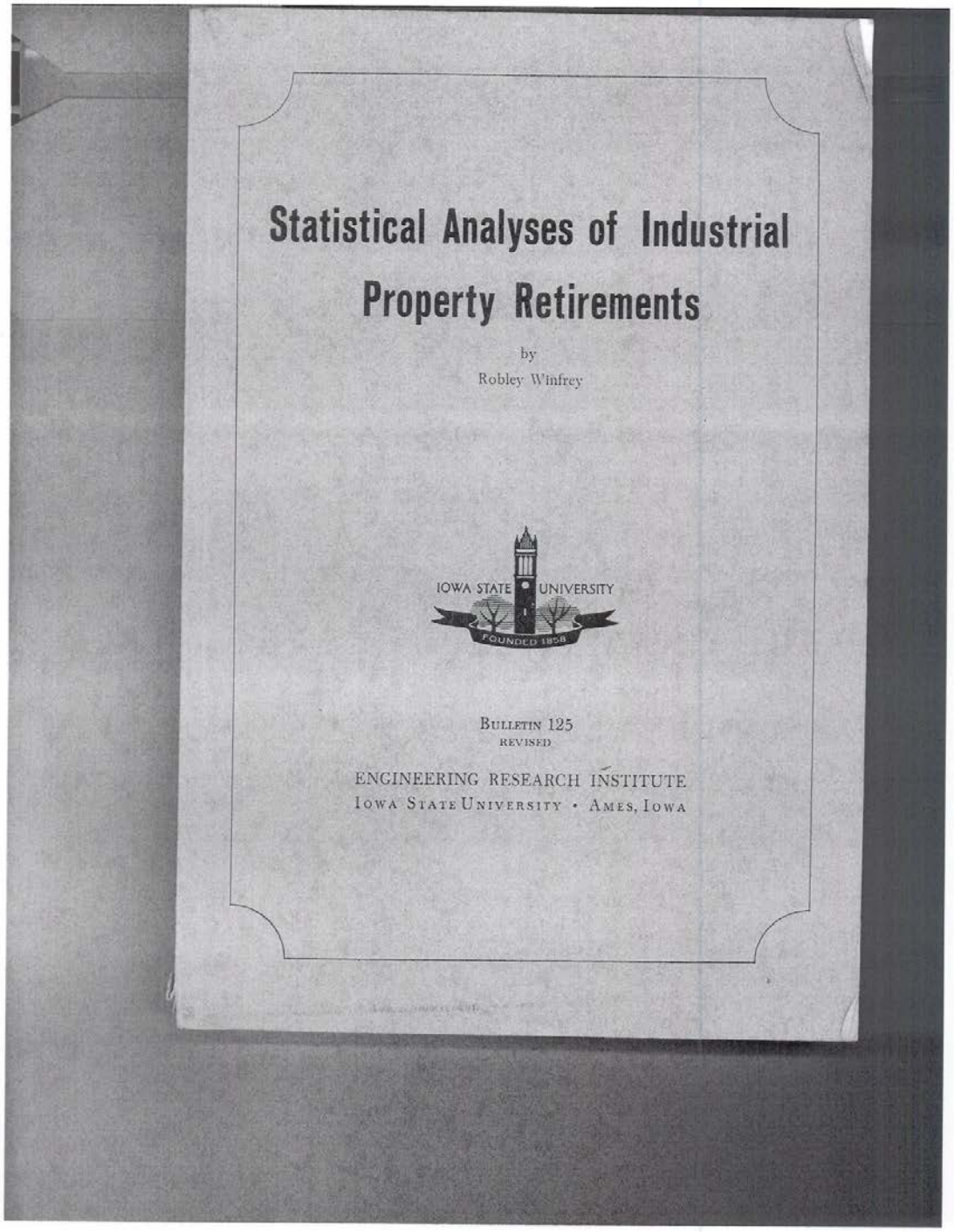

Statistical Analyses of Industrial Property Retirements

by

Robley Winfrey

IOWA STATE UNIVERSITY
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VI. APPENDIX A

EQUATIONS AND CALCULATIONS FOR THE 18 TYPE CURVES

The following section contains supplementary information on the 18 type curves—valuable either in theoretical analyses or in the calculation of the condition percent of industrial property groups. The final equations of the type frequency curves (page 99) give the numerical values of the coefficients and constants in the general equations below. In Table 21 (page 102) is tabulated the percent surviving and probable lives corresponding to the 18 type curves. Table 22 (page 107) gives the total renewals in percent for the type curves.

General Equations for the 18 Type Frequency Curves

LEFT-MODAL NOS. 0 AND 1

$$\left| \begin{array}{ll} y_x = y_o \left(1 - \frac{(x \pm d_m)^2}{a^2}\right)^m & \text{For } x \text{ values to left of mode} \\ y_x = y_o \left(1 - \frac{(x \pm D_m)^2}{A^2}\right)^M & \text{For } x \text{ values to right of mode} \end{array} \right.$$

LEFT-MODAL NOS. 2, 3, 4, AND 5 AND
RIGHT-MODAL NOS. 1, 2, 3, 4, AND 5

$$y_x = Y_o \left(1 + \frac{x \pm D_m}{A_1}\right)^{M_1} \left(1 - \frac{x \pm D_m}{A_2}\right)^{M_2} + y_o \left(1 + \frac{x \pm d_m}{a_1}\right)^{m_1} \left(1 - \frac{x \pm d_m}{a_2}\right)^{m_2}$$

SYMMETRICAL NOS. 0, 1, 2, 3, 4, 5, AND 6

$$y_x = y_o \left(1 - \frac{x^2}{a^2}\right)^m$$

in which y_x = ordinate to the frequency curve at age x (origin at the mean age).
y_o = ordinate to the frequency curve at its mode.
Y_o = ordinate to the major constituent curve at its mean.
y_o = ordinate to the minor constituent curve at its mean.
x = age (in units equal to 10 percent of average life), measured from the average-life ordinate.
D_m, d_m = x distance from the mean of the type curve to the mean of the constituent curve.
$A, A_1, A_2, a, a_1, a_2, M, M_1, M_2, m, m_1, m_2$ are parameters.

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Final Equations of the 18 Type Frequency Curves

In the following 18 equations, x is measured from the mean, or average life, negative values of x being to the left of 100 percent of average life and positive values to the right. An age-interval of 10 percent of average life is equal to x. Therefore, if $x = -2.5$ the equivalent age is 75 percent of average life and when $x = +4.2$ the equivalent is 142 percent of average life.

LEFT-MODAL NO. 0

$$y_x = 6.24256418\left(1 - \frac{(x+5.06)^2}{24.60758105}\right)^{0.4411811}$$ for x values to left of 49.4 percent of average life, and

$$y_x = 6.24256418\left(1 - \frac{(x+5.06)^2}{1569.183739}\right)^{7.75906308}$$ for x values to right of 49.4 percent of average life.

LEFT-MODAL NO. 1

$$y_x = 7.45095687\left(1 - \frac{(x+4)^2}{85.49500000}\right)^{4.77742941}$$ for x values to left of 60 percent of average life, and

$$y_x = 7.45095687\left(1 - \frac{(x+4)^2}{697.8983268}\right)^{4.74147112}$$ for x values to right of 60 percent of average life.

LEFT-MODAL NO. 2

$$y_x = 6.2\left(1 + \frac{x - 0.56632298}{10.56632298}\right)^{2.00691507}\left(1 - \frac{x - 0.56632298}{18.11962398}\right)^{4.15639835}$$
$$+4.03141046\left(1 + \frac{x + 1.98831766}{4.90258200}\right)^{2.73360830}\left(1 - \frac{x + 1.98831766}{12.07825433}\right)^{8.19831032}$$

LEFT-MODAL NO. 3

$$y_x = 6.12\left(1 + \frac{x - 0.69997304}{9.94997304}\right)^{2.51767682}\left(1 - \frac{x - 0.69997304}{13.35543784}\right)^{3.72163230}$$
$$+8.19722280\left(1 + \frac{x+1.22119072}{6.98766177}\right)^{10.15754029}\left(1 - \frac{x+1.22119072}{16.85048078}\right)^{25.90598437}$$

Section:	Appendix 5.6	**Page No.:**	Page 7 - 14
Topic:	Depreciation		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide pages 7 through 14 separately breaking out the net salvage component of the ASL rates from the asset life depreciation component.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

Please see the schedules below breaking out the net salvage component of the ASL rates from the asset life component.

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
HYDRAULIC GENERATION					
GREAT FALLS					
DAMS, DYKES AND WEIRS	125	1.28	1.32	1.11	1.12
POWERHOUSE	125	1.27	1.28	1.07	1.07
POWERHOUSE RENOVATIONS	40	4.40	2.67	2.41	2.41
SPILLWAY	80	1.59	1.50	1.26	1.35
WATER CONTROL SYSTEMS	65	2.07	1.52	1.28	1.35
ROADS AND SITE IMPROVEMENTS	50	2.33	2.42	2.18	2.42
TURBINES AND GENERATORS	60	1.82	2.25	1.99	2.03
GOVERNORS AND EXCITATION SYSTEM	50	2.11	2.25	1.99	2.06
LICENCE RENEWAL	50	2.00	2.04	2.04	2.04
A/C ELECTRICAL POWER SYSTEMS	55	2.10	1.84	1.55	1.67
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.43	3.86	3.20	3.79
AUXILIARY STATION PROCESSES	50	2.59	2.03	1.75	2.10
SUPPORT BUILDINGS	65	1.73	1.69	1.42	1.36
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
POINTE DU BOIS - Original					
DAMS, DYKES AND WEIRS	125	3.63	3.10	2.70	2.70
POWERHOUSE	125	4.39	2.94	2.55	2.55
POWERHOUSE RENOVATIONS	40	5.24	4.10	3.71	3.71
SPILLWAY	80	10.76	84.53	73.57	73.37
WATER CONTROL SYSTEMS	65	3.35	2.11	1.72	1.73
ROADS AND SITE IMPROVEMENTS	50	3.36	4.09	3.68	3.80
TURBINES AND GENERATORS	60	4.04	2.84	2.44	2.44
GOVERNORS AND EXCITATION SYSTEM	50	5.24	4.02	3.65	3.68
LICENCE RENEWAL	50	4.76	3.85	3.85	3.85
A/C ELECTRICAL POWER SYSTEMS	55	4.58	3.16	2.76	2.78
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	5.12	4.30	3.80	4.26
AUXILIARY STATION PROCESSES	50	4.03	3.71	3.29	3.59
SUPPORT BUILDINGS	65	2.93	2.99	2.59	2.59
SUPPORT BUILDING RENOVATIONS	20	5.50	4.47	3.84	3.84
POINTE DU BOIS - New					
DAMS, DYKES AND WEIRS	125	-	0.91	0.83	0.85
SPILLWAY	80	1.47	1.37	1.25	1.49
WATER CONTROL SYSTEMS	65	-	1.69	1.54	1.64
ROADS AND SITE IMPROVEMENTS	50	-	2.20	2.00	2.36
A/C ELECTRICAL POWER SYSTEMS	55	-	2.40	2.18	1.94
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	-	4.40	4.00	4.54
AUXILIARY STATION PROCESSES	50	-	2.20	2.00	3.01
SUPPORT BUILDINGS	65	-	1.69	1.54	1.65
SUPPORT BUILDING RENOVATIONS	20	-	5.50	5.00	5.00
SEVEN SISTERS					
DAMS, DYKES AND WEIRS	125	1.03	1.06	0.88	0.90
POWERHOUSE	125	0.90	0.91	0.73	0.74
POWERHOUSE RENOVATIONS	40	4.40	2.67	2.41	2.41
SPILLWAY	80	1.17	1.36	1.14	1.17
WATER CONTROL SYSTEMS	65	1.80	1.25	1.02	1.02
ROADS AND SITE IMPROVEMENTS	50	1.84	1.78	1.46	1.30
TURBINES AND GENERATORS	60	1.64	1.84	1.61	1.69
GOVERNORS AND EXCITATION SYSTEM	50	2.00	2.22	1.99	2.12
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	1.91	1.74	1.48	1.56
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	3.73	3.80	3.19	3.44
AUXILIARY STATION PROCESSES	50	2.13	1.91	1.65	2.03
SUPPORT BUILDINGS	65	1.74	1.65	1.44	1.52
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
SLAVE FALLS					
DAMS, DYKES AND WEIRS	125	1.69	1.71	1.54	1.54
POWERHOUSE	125	1.58	1.59	1.42	1.43
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.87	1.82	1.64	1.74
WATER CONTROL SYSTEMS	65	2.18	1.77	1.58	1.65
ROADS AND SITE IMPROVEMENTS	50	2.20	2.30	2.08	2.36
TURBINES AND GENERATORS	60	1.79	1.91	1.70	1.81
GOVERNORS AND EXCITATION SYSTEM	50	2.20	2.22	2.01	2.12
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.21	2.00	1.79	1.91
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.72	4.42	3.96	4.56
AUXILIARY STATION PROCESSES	50	2.73	2.34	2.11	2.70
SUPPORT BUILDINGS	65	1.81	2.01	1.81	1.89
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
PINE FALLS					
DAMS, DYKES AND WEIRS	125	1.17	1.23	1.10	1.12
POWERHOUSE	125	0.83	0.83	0.67	0.71
POWERHOUSE RENOVATIONS	40	4.40	2.67	2.41	2.41
SPILLWAY	80	1.60	1.50	1.35	1.49
WATER CONTROL SYSTEMS	65	1.95	1.28	1.03	1.06
ROADS AND SITE IMPROVEMENTS	50	1.81	1.68	2.00	1.61
TURBINES AND GENERATORS	60	1.47	1.62	1.33	1.37
GOVERNORS AND EXCITATION SYSTEM	50	2.20	2.20	2.00	2.13
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.06	1.83	1.56	1.58
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.25	4.17	3.61	4.04
AUXILIARY STATION PROCESSES	50	2.54	1.78	1.50	1.81
SUPPORT BUILDINGS	65	1.61	1.62	1.40	1.56
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
COMMUNITY DEVELOPMENT COSTS	78	1.17	1.28	1.28	1.28
MCARTHUR FALLS					
DAMS, DYKES AND WEIRS	125	0.91	1.12	0.98	1.00
POWERHOUSE	125	0.83	0.84	0.68	0.72
POWERHOUSE RENOVATIONS	40	4.40	2.67	2.41	2.41
SPILLWAY	80	1.19	1.19	0.86	0.97
WATER CONTROL SYSTEMS	65	2.06	1.37	1.15	1.25
ROADS AND SITE IMPROVEMENTS	50	1.99	1.94	1.59	1.71
TURBINES AND GENERATORS	60	1.06	1.35	0.97	0.94
GOVERNORS AND EXCITATION SYSTEM	50	2.10	2.08	1.78	1.94
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	1.90	1.72	1.37	1.32
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.29	3.62	2.88	2.74
AUXILIARY STATION PROCESSES	50	2.58	1.82	1.54	1.85
SUPPORT BUILDINGS	65	1.63	1.73	1.57	1.67
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
KELSEY					
DAMS, DYKES AND WEIRS	125	1.05	1.13	1.01	1.03
POWERHOUSE	125	0.89	1.18	1.06	1.08
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.34	1.71	1.47	1.58
WATER CONTROL SYSTEMS	65	2.09	1.70	1.52	1.61
ROADS AND SITE IMPROVEMENTS	50	2.05	2.44	2.13	2.30
TURBINES AND GENERATORS	60	1.68	1.90	1.72	1.85
GOVERNORS AND EXCITATION SYSTEM	50	2.14	2.25	2.04	2.17
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.03	2.11	1.91	2.03
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.58	4.67	4.14	4.62
AUXILIARY STATION PROCESSES	50	2.63	2.19	1.92	2.31
SUPPORT BUILDINGS	65	1.67	1.79	1.60	1.73
SUPPORT BUILDING RENOVATIONS	20	4.98	4.98	4.44	4.44
GRAND RAPIDS					
DAMS, DYKES AND WEIRS	125	0.98	1.01	0.87	0.90
POWERHOUSE	125	0.91	0.92	0.77	0.81
POWERHOUSE RENOVATIONS	40	4.40	2.55	2.28	2.28
SPILLWAY	80	1.30	1.28	1.01	1.15
WATER CONTROL SYSTEMS	65	1.79	1.10	0.95	0.99
ROADS AND SITE IMPROVEMENTS	50	1.68	1.63	1.23	1.21
TURBINES AND GENERATORS	60	1.64	1.82	1.59	1.74
GOVERNORS AND EXCITATION SYSTEM	50	2.13	2.21	2.00	2.13
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.07	1.84	1.57	1.66
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.08	3.90	2.99	2.49
AUXILIARY STATION PROCESSES	50	2.62	2.02	1.78	2.29
SUPPORT BUILDINGS	65	1.66	1.69	1.46	1.60
SUPPORT BUILDING RENOVATIONS	20	5.50	5.67	5.00	5.00
COMMUNITY DEVELOPMENT COSTS ***	79	1.16	1.21	1.21	1.21
KETTLE					
DAMS, DYKES AND WEIRS	125	0.86	0.86	0.73	0.78
POWERHOUSE	125	0.87	0.86	0.74	0.79
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.33	1.26	1.03	1.16
WATER CONTROL SYSTEMS	65	1.55	0.99	0.81	0.89
ROADS AND SITE IMPROVEMENTS	50	2.14	2.20	1.99	2.31
TURBINES AND GENERATORS	60	1.48	1.90	1.62	1.73
GOVERNORS AND EXCITATION SYSTEM	50	1.66	2.14	1.84	1.92
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.04	2.04	1.84	1.96
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.11	4.20	3.55	3.37
AUXILIARY STATION PROCESSES	50	2.44	1.82	1.57	1.86
SUPPORT BUILDINGS	65	1.46	1.75	1.58	1.70
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
LAURIE RIVER					
DAMS, DYKES AND WEIRS	125	3.47	3.20	2.70	2.70
POWERHOUSE	125	4.25	3.89	3.39	3.40
POWERHOUSE RENOVATIONS	40	5.00	5.24	4.76	4.76
SPILLWAY	80	3.88	3.44	2.94	2.96
WATER CONTROL SYSTEMS	65	3.84	3.52	3.02	3.03
ROADS AND SITE IMPROVEMENTS	50	4.01	3.69	3.15	3.23
TURBINES AND GENERATORS	60	4.49	4.11	3.62	3.62
GOVERNORS AND EXCITATION SYSTEM	50	4.70	4.29	3.79	3.81
LICENCE RENEWAL	50	4.55	4.76	4.76	4.76
A/C ELECTRICAL POWER SYSTEMS	55	4.08	3.63	3.12	3.15
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	7.23	6.28	4.87	5.15
AUXILIARY STATION PROCESSES	50	4.30	3.73	3.19	3.31
SUPPORT BUILDINGS	65	3.75	3.36	2.85	2.87
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
JENPEG					
DAMS, DYKES AND WEIRS	125	0.92	0.91	0.80	0.84
POWERHOUSE	125	0.89	0.90	0.78	0.83
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.48	2.48
SPILLWAY	80	1.42	1.35	1.14	1.28
WATER CONTROL SYSTEMS	65	2.02	1.24	0.95	1.07
ROADS AND SITE IMPROVEMENTS	50	2.12	2.07	1.68	1.87
TURBINES AND GENERATORS	60	1.63	1.89	1.59	1.74
GOVERNORS AND EXCITATION SYSTEM	50	2.20	2.20	2.00	2.13
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.05	1.81	1.42	1.53
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.53	4.15	3.17	3.39
AUXILIARY STATION PROCESSES	50	2.66	1.92	1.67	2.06
SUPPORT BUILDINGS	65	1.67	1.69	1.46	1.61
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
LAKE WINNIPEG REGULATION					
DAMS, DYKES AND WEIRS	125	0.82	0.82	0.71	0.77
LICENCE RENEWAL	50	2.00	2.02	2.02	2.02
COMMUNITY DEVELOPMENT COSTS	85	0.94	1.18	1.18	1.18
CHURCHILL RIVER DIVERSION					
DAMS, DYKES AND WEIRS	125	0.88	0.88	0.77	0.83
SPILLWAY	80	1.47	1.39	1.18	1.32
WATER CONTROL SYSTEMS	65	2.21	1.17	0.88	1.00
ROADS AND SITE IMPROVEMENTS	50	2.21	2.11	1.63	1.78
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.21	1.88	1.45	1.57
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.82	4.78	3.01	2.36
AUXILIARY STATION PROCESSES	50	2.75	1.97	1.70	2.11
SUPPORT BUILDINGS	65	1.69	1.71	1.54	1.66
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
COMMUNITY DEVELOPMENT COSTS	90	0.93	1.07	1.07	1.07

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
LONG SPRUCE					
DAMS, DYKES AND WEIRS	125	0.90	0.90	0.79	0.83
POWERHOUSE	125	0.90	0.90	0.79	0.83
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.43	1.36	1.15	1.30
WATER CONTROL SYSTEMS	65	2.04	0.99	0.66	0.78
ROADS AND SITE IMPROVEMENTS	50	2.10	2.07	1.69	1.87
TURBINES AND GENERATORS	60	1.63	1.88	1.50	1.69
GOVERNORS AND EXCITATION SYSTEM	50	2.19	2.18	1.93	2.08
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.09	1.79	1.37	1.51
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.37	4.37	3.81	3.87
AUXILIARY STATION PROCESSES	50	2.63	1.60	1.30	1.53
SUPPORT BUILDINGS	65	1.69	1.69	1.51	1.64
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	4.90	4.90
LIMESTONE					
DAMS, DYKES AND WEIRS	125	0.90	0.91	0.81	0.85
POWERHOUSE	125	0.91	0.91	0.81	0.85
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.45	1.37	1.20	1.37
WATER CONTROL SYSTEMS	65	2.17	1.39	1.16	1.28
ROADS AND SITE IMPROVEMENTS	50	2.17	2.14	1.80	2.03
TURBINES AND GENERATORS	60	1.68	1.90	1.63	1.81
GOVERNORS AND EXCITATION SYSTEM	50	2.17	2.15	1.80	1.96
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	2.17	1.89	1.59	1.73
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.67	4.16	3.16	3.48
AUXILIARY STATION PROCESSES	50	2.71	1.78	1.47	1.80
SUPPORT BUILDINGS	65	1.68	1.71	1.48	1.63
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	4.89	4.89
WUSKWATIM					
DAMS, DYKES AND WEIRS	125	0.88	0.91	0.82	0.87
POWERHOUSE	125	0.88	0.91	0.83	0.87
POWERHOUSE RENOVATIONS	40	4.40	2.75	2.50	2.50
SPILLWAY	80	1.47	1.36	1.24	1.46
WATER CONTROL SYSTEMS	65	2.20	1.68	1.52	1.62
ROADS AND SITE IMPROVEMENTS	50	2.20	2.19	1.99	2.32
TURBINES AND GENERATORS	60	1.69	1.83	1.66	1.78
GOVERNORS AND EXCITATION SYSTEM	50	2.20	2.19	1.98	2.12
A/C ELECTRICAL POWER SYSTEMS	55	2.20	1.99	1.81	1.92
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.78	4.24	3.83	4.39
AUXILIARY STATION PROCESSES	50	2.75	2.13	1.93	2.93
SUPPORT BUILDINGS	65	1.69	1.69	1.53	1.64
SUPPORT BUILDING RENOVATIONS	20	5.50	5.50	5.00	5.00
INFRASTRUCTURE SUPPORTING GENERATION					
PROVINCIAL ROADS	50	2.30	2.49	2.02	2.21
TOWN SITE BUILDING	55	1.71	2.12	1.93	2.03
TOWN SITE BUILDINGS RENOVATIONS	20	5.94	5.30	5.00	5.00
TOWN SITE OTHER INFRASTRUCTURE	45	2.49	3.11	2.77	2.93

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
THERMAL GENERATION					
BRANDON UNIT 5 (COAL)					
POWERHOUSE	75	3.87	4.52	4.52	4.50
POWERHOUSE RENOVATIONS	40	10.00	15.88	15.88	15.88
ROADS AND SITE IMPROVEMENTS	50	4.56	5.37	5.37	5.36
THERMAL TURBINES AND GENERATORS	60	5.03	5.73	5.73	5.72
GOVERNORS AND EXCITATION SYSTEM	50	5.07	5.51	5.51	5.52
STEAM GENERATOR AND AUXILIARIES	60	3.93	4.06	4.06	4.05
LICENCE RENEWAL	50	10.00	14.81	14.81	14.81
A/C ELECTRICAL POWER SYSTEMS	55	4.06	4.65	4.65	4.64
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	5.41	4.44	4.44	4.41
AUXILIARY STATION PROCESSES	50	4.67	5.36	5.36	5.37
SUPPORT BUILDINGS	65	4.25	5.97	5.97	5.97
SUPPORT BUILDING RENOVATIONS	20	10.00	16.67	16.67	16.67
BRANDON UNITS 6 AND 7					
POWERHOUSE	75	1.65	1.38	1.22	1.26
POWERHOUSE RENOVATIONS	40	4.40	2.72	2.46	2.46
THERMAL TURBINES AND GENERATORS	60	2.12	1.70	1.49	1.64
GOVERNORS AND EXCITATION SYSTEM	50	2.20	2.20	2.00	2.13
COMBUSTION TURBINE	25	4.05	3.87	3.18	3.66
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
COMBUSTION TURBINE OVERHAULS	15	11.00	7.33	6.67	6.67
A/C ELECTRICAL POWER SYSTEMS	55	2.12	1.88	1.65	1.78
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	4.58	4.52	4.00	4.63
AUXILIARY STATION PROCESSES	50	2.64	1.91	1.66	2.10
SELKIRK					
POWERHOUSE	75	0.93	0.76	0.76	0.79
POWERHOUSE RENOVATIONS	40	4.00	2.45	2.45	2.45
ROADS AND SITE IMPROVEMENTS	50	1.35	1.34	1.34	1.42
THERMAL TURBINES AND GENERATORS	60	1.46	1.09	1.09	1.18
GOVERNORS AND EXCITATION SYSTEM	50	2.00	1.13	1.13	1.30
STEAM GENERATOR AND AUXILIARIES	60	1.34	1.49	1.49	1.66
LICENCE RENEWAL	50	2.00	2.00	2.00	2.00
A/C ELECTRICAL POWER SYSTEMS	55	1.21	1.06	1.06	1.03
INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25	2.41	2.11	2.11	2.40
AUXILIARY STATION PROCESSES	50	1.64	1.19	1.19	1.44
SUPPORT BUILDINGS	65	1.06	1.06	1.06	1.13
SUPPORT BUILDING RENOVATIONS	20	5.00	5.00	5.00	5.00

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
DIESEL GENERATION					
BUILDINGS	25	2.57	3.15	2.78	3.17
BUILDING RENOVATIONS	15	5.14	6.67	6.67	6.67
ENGINES AND GENERATORS - OVERHAULS	4	20.00	25.00	25.00	25.00
ENGINES AND GENERATORS	22	1.88	2.24	2.24	2.73
ACCESSORY STATION EQUIPMENT	20	3.07	3.70	3.38	3.67
FUEL STORAGE AND HANDLING	25	2.28	2.37	2.09	2.60
TRANSMISSION					
ROADS, TRAILS AND BRIDGES	50	2.51	2.19	1.96	2.18
METAL TOWERS AND CONCRETE POLES	85	1.51	1.54	1.16	1.23
POLES AND FIXTURES	55	2.49	2.48	1.59	1.80
GROUND LINE TREATMENT	10	10.00	10.00	10.00	10.00
OVERHEAD CONDUCTOR AND DEVICES	80	1.62	1.27	1.02	1.10
UNDERGROUND CABLE AND DEVICES	45	2.23	1.96	1.63	1.81
COMMUNITY DEVELOPMENT COSTS ***	79	1.27	1.27	1.27	1.27
SUBSTATIONS					
BUILDINGS	65	1.49	1.47	1.37	1.46
BUILDING RENOVATIONS	20	5.00	5.00	5.00	5.00
ROADS, STEEL STRUCTURES AND CIVIL SITE WORK	50	2.10	1.95	1.67	1.76
POLES AND FIXTURES	45	3.25	3.01	1.99	2.39
POWER TRANSFORMERS	50	2.21	2.44	2.00	2.43
OTHER TRANSFORMERS	50	3.09	2.29	1.86	2.26
INTERRUPTING EQUIPMENT	50	2.41	2.52	2.05	2.31
OTHER STATION EQUIPMENT	45	2.54	2.47	1.98	2.20
ELECTRONIC EQUIPMENT AND BATTERIES	25	4.76	3.81	3.28	3.90
SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMER	65	1.68	1.80	1.40	1.52
SYNCHRONOUS CONDENSER OVERHAULS	15	7.43	7.15	5.58	5.58
HVDC CONVERTER EQUIPMENT	30	4.13	3.22	2.47	2.61
HVDC SERIALIZED EQUIPMENT	30	4.18	3.04	2.24	2.07
HVDC ACCESSORY STATION EQUIPMENT	36	2.85	2.98	2.40	2.67
HVDC ELECTRONIC EQUIPMENT AND BATTERIES	25	4.66	3.10	2.49	2.27
DISTRIBUTION					
CONCRETE DUCTLINE AND MANHOLES	75	2.29	2.23	2.09	2.25
CONCRETE DUCTLINE AND MANHOLE REFURBISHMENT	30	2.08	3.66	3.47	3.70
METAL TOWERS	60	1.99	2.10	1.62	1.87
POLES AND FIXTURES	65	2.10	1.96	1.19	1.58
GROUND LINE TREATMENT	12	9.58	7.39	7.39	7.39
OVERHEAD CONDUCTOR AND DEVICES	60	1.98	2.24	1.40	1.80
UNDERGROUND CABLE AND DEVICES - 66 KV	60	1.48	1.72	1.63	2.07
UNDERGROUND CABLE AND DEVICES - PRIMARY	60	1.69	1.70	1.60	1.83
UNDERGROUND CABLE AND DEVICES - SECONDARY	44	2.21	2.27	2.12	2.31
SERIALIZED EQUIPMENT - OVERHEAD	45	2.86	2.28	1.84	2.10
DSC - HIGH VOLTAGE TRANSFORMERS	50	2.19	2.34	2.02	2.34
SERIALIZED EQUIPMENT - UNDERGROUND	42	2.62	2.60	2.13	2.40
ELECTRONIC EQUIPMENT	10	10.00	10.53	10.53	10.53
SERVICES	35	4.38	2.92	1.50	1.89
STREET LIGHTING	45	3.04	2.56	2.02	2.20

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
METERS					
METERS - ELECTRONIC	15	6.10	9.61	9.61	10.52
METERS - ANALOG	26	13.54	3.84	3.84	4.21
METERING EXCHANGES	15	6.67	6.67	6.67	6.67
METERING TRANSFORMERS	50	2.20	1.80	1.80	2.12
COMMUNICATION					
BUILDINGS	65	1.67	1.41	1.30	1.48
BUILDING RENOVATIONS	20	5.67	4.95	4.58	4.58
BUILDING - SYSTEM CONTROL CENTRE	75	1.68	1.39	1.30	1.40
COMMUNICATION TOWERS	60	1.82	1.82	1.71	2.01
FIBRE OPTIC AND METALLIC CABLE	35	3.06	3.12	2.97	3.45
CARRIER EQUIPMENT	20	7.68	4.74	4.34	4.90
OPERATIONAL IT EQUIPMENT	5	22.97	21.00	20.00	20.00
MOBILE RADIO, TELEPHONE AND VIDEO CONFERENCIN(	8	10.24	18.56	16.64	16.64
OPERATIONAL DATA NETWORK	8	14.10	13.13	12.50	12.50
POWER SYSTEM CONTROL	15	11.16	5.63	5.14	5.50
MOTOR VEHICLES					
PASSENGER VEHICLES	11	11.09	7.03	7.03	7.59
LIGHT TRUCKS	12	7.85	7.16	7.16	7.54
HEAVY TRUCKS	19	5.83	4.68	4.68	5.01
CONSTRUCTION EQUIPMENT	23	5.27	2.77	2.77	3.23
LARGE SOFT-TRACK EQUIPMENT	27	4.28	2.96	2.96	3.79
TRAILERS	35	1.94	2.38	2.38	2.91
MISCELLANEOUS VEHICLES	13	5.93	4.90	4.90	6.60
BUILDINGS					
BUILDINGS - GENERAL	65	1.59	1.65	1.54	1.73
BUILDING RENOVATIONS	20	7.14	5.59	5.00	5.00
BUILDING - 360 PORTAGE - CIVIL	100	1.00	1.00	1.00	1.06
BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL	45	2.21	2.23	2.23	2.56
LEASEHOLD IMPROVEMENTS - SONY PLACE	10	10.00	10.00	10.00	10.00
GENERAL EQUIPMENT					
TOOLS, SHOP AND GARAGE EQUIPMENT	15	7.74	6.48	6.48	6.48
COMPUTER EQUIPMENT	5	28.48	20.00	20.00	20.00
OFFICE FURNITURE AND EQUIPMENT	20	4.81	5.00	5.00	5.00
HOT WATER TANKS	6	21.20	16.67	16.67	16.67
EASEMENTS					
EASEMENTS	75	1.28	1.33	1.33	1.33
COMPUTER SOFTWARE AND DEVELOPMENT					
COMPUTER DEVELOPMENT - MAJOR SYSTEMS	11	9.47	8.75	8.75	8.82
COMPUTER DEVELOPMENT - SMALL SYSTEMS	10	10.00	9.13	9.13	9.13
COMPUTER SOFTWARE - GENERAL	5	19.76	20.00	20.00	20.00
COMPUTER SOFTWARE - COMMUNICATION/OPERATION/	5	13.93	27.31	27.31	27.31
OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA	7	23.35	8.06	8.06	9.33

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous* ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
WUSKWATIM POWER LIMITED PARTNERSHIP (WPLP)					
HYDRAULIC GENERATION					
WPLP - DAMS, DYKES AND WEIRS	125		0.91	0.83	0.87
WPLP - POWERHOUSE	125		0.91	0.83	0.87
WPLP - POWERHOUSE RENOVATIONS	40		2.75	2.50	2.50
WPLP - SPILLWAY	80		1.37	1.24	1.46
WPLP - WATER CONTROL SYSTEMS	65		1.68	1.52	1.62
WPLP - ROADS AND SITE IMPROVEMENTS	50		2.19	1.99	2.32
WPLP - TURBINES AND GENERATORS	60		1.84	1.67	1.79
WPLP - GOVERNORS AND EXCITATION SYSTEM	50		2.20	1.99	2.12
WPLP - A/C ELECTRICAL POWER SYSTEMS	55		1.99	1.80	1.91
WPLP - INSTRUMENTATION, CONTROL AND D/C SYSTEM	25		4.36	3.93	4.51
WPLP - AUXILIARY STATION PROCESSES	50		2.17	1.97	2.75
WPLP - SUPPORT BUILDINGS	65		1.69	1.53	1.65
WPLP - SUPPORT BUILDING RENOVATIONS	20		5.50	5.00	5.00
WPLP - OPERATIONAL EMPLOYMENT FUND	95		0.97	0.97	0.97
SUBSTATIONS					
WPLP - BUILDINGS	65		1.62	1.54	1.64
WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WOI	50		2.20	1.99	2.13
WPLP - POWER TRANSFORMERS	50		2.28	1.98	3.11
WPLP - INTERRUPTING EQUIPMENT	50		2.29	1.98	2.54
WPLP - OTHER STATION EQUIPMENT	45		2.55	2.20	2.56
WPLP - ELECTRONIC EQUIPMENT AND BATTERIES	25		4.33	3.90	5.23
COMMUNICATION					
WPLP - FIBRE OPTIC AND METALLIC CABLE	35		2.95	2.83	3.57
WPLP - CARRIER EQUIPMENT	20		4.98	4.71	5.88
MOTOR VEHICLES					
WPLP - HEAVY TRUCKS	19		2.43	2.43	2.75
WPLP - CONSTRUCTION EQUIPMENT	23		3.61	3.61	4.44
WPLP - TRAILERS	35		2.45	2.45	3.12
WPLP - MISCELLANEOUS VEHICLES	13		6.38	6.38	9.42
GENERAL EQUIPMENT					
WPLP - COMPUTER EQUIPMENT	5		15.66	15.66	15.66

* Depreciation rates were not established in the 2010 Depreciation Study

Depreciation Rate Tables (Electric operations) with ASL without Net Salvage cont'd

DEPRECIABLE GROUP (Electric Operations)	Expected Service Life	2014-15 Previous* ASL Rate %	2014-15 Approved ASL Rate %	2014-15 ASL Rate % w/o Net Salvage	2015-16 Approved ELG Rate %
WPLP INTANGIBLE ASSETS					
TRANSMISSION					
WPLP - ROADS, TRAILS AND BRIDGES	50		2.18	1.98	2.20
WPLP - METAL TOWERS AND CONCRETE POLES	85		1.47	1.17	1.24
WPLP - POLES AND FIXTURES	55		2.45	1.80	2.10
WPLP - OVERHEAD CONDUCTOR AND DEVICES	80		1.43	1.24	1.32
WPLP - TRANSMISSION DEVELOPMENT FUND	79		1.26	1.26	1.26
SUBSTATIONS					
WPLP - BUILDINGS	65		1.62	1.54	1.64
WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WOI	50		2.20	1.99	2.13
WPLP - POWER TRANSFORMERS	50		2.28	1.98	3.12
WPLP - OTHER TRANSFORMERS	50		2.27	1.96	2.52
WPLP - INTERRUPTING EQUIPMENT	50		2.29	1.98	2.54
WPLP - OTHER STATION EQUIPMENT	45		2.55	2.20	2.57
WPLP - ELECTRONIC EQUIPMENT AND BATTERIES	25		4.33	3.90	5.23
DISTRIBUTION					
WPLP - POLES AND FIXTURES	65		2.12	1.52	2.20
WPLP - OVERHEAD CONDUCTOR AND DEVICES	60		2.30	1.65	2.65
WPLP - UNDERGROUND CABLE AND DEVICES - PRIMARY	60		1.75	1.67	1.94
WPLP - SERIALIZED EQUIPMENT - UNDERGROUND	42		2.73	2.36	2.75
COMMUNICATION					
WPLP - FIBRE OPTIC AND METALLIC CABLE	35		2.95	2.83	3.57
WPLP - CARRIER EQUIPMENT	20		4.98	4.71	5.88
WPLP - MOBILE RADIO, TELEPHONE AND CONFERENCIN	8		13.62	12.85	12.85
WPLP - OPERATIONAL DATA NETWORK	8		12.66	11.89	11.89
EASEMENTS	75		1.33	1.33	1.33

* Depreciation rates were not established in the 2010 Depreciation Study

Section:	Appendix 5.6	**Page No.:**	Page 7 - 14
Topic:	Depreciation		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the January 14, 2015 Gannett Fleming tables (ASL) separately breaking out the net salvage component from the asset life component.

RATIONALE FOR QUESTION:

To review the 2014 Depreciation Study and implications on rate payers.

RESPONSE:

Please see the attached for the ASL (no salvage) depreciation rates as determined in the 2014 depreciation study.

Gannett Fleming

Excellence Delivered ***As Promised***

March 5, 2015

Manitoba Hydro
360 Portage Avenue
Winnipeg, Manitoba
T3C 0G8

Attention: Mr. Darren Rainkie
Vice-President, Finance and Regulatory

Ladies and Gentlemen:

Pursuant to your request, we have calculated depreciation rates based on your original cost as of March 31, 2014 using the depreciation calculation procedures that were approved in your last depreciation study, namely the use of the Average Service Life (”ASL”) procedure without the incorporation of estimated net salvage percentages. The attached schedules provide a summary of the depreciation rates related to the electric generation, transmission, substation, distribution and general plant assets of Manitoba Hydro and the Wuskwatim Power Limited Partnership as of March 31, 2014.

The calculated annual depreciation accrual rates presented in the report are applicable to plant in service as of March 31, 2014. The depreciation rates are based on the average service life estimates and interim survivor curve determinations as recently completed in the full depreciation study report.

Gannett Fleming has calculated and is providing these requested schedules of depreciation rates in order to provide continuity from the last depreciation study, through the transition to the depreciation rates as provided in the recently completed Gannett Fleming Depreciation Study report.

Gannett Fleming Canada ULC

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As the attached schedules are a work product of Gannett Fleming, we ask that this cover letter be provided any time that the attached schedules are distributed. Gannett Fleming does, however, authorize the distribution of the electronic version of the attached schedules.

Respectfully submitted,

GANNETT FLEMING CANADA ULC

LARRY E. KENNEDY
Vice President

LEK:hac
Project: 058390:400

/Attachments - 4

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	GENERATION										
	HYDRAULIC GENERATION										
	GREAT FALLS										
1105A	DAMS, DYKES AND WEIRS	2063	125-R4	0	17,345,473	221,015	1.27	(28,793)	192,222	1.11	
1105B	POWERHOUSE	2063	125-R4	0	7,990,993	100,920	1.26	(15,802)	85,118	1.07	
1105C	POWERHOUSE RENOVATIONS	2063	40-SQ	0	47,039	1,176	2.50	(44)	1,132	2.41	
1105D	SPILLWAY	2063	80-R3	0	9,676,327	139,354	1.44	(17,184)	122,170	1.26	
1105E	WATER CONTROL SYSTEMS	2063	65-R4	0	24,245,253	406,943	1.68	(96,332)	310,611	1.28	
1105F	ROADS AND SITE IMPROVEMENTS	2063	50-R3	0	935,986	20,593	2.20	(173)	20,420	2.18	
1105G	TURBINES AND GENERATORS	2063	60-S3	0	33,818,312	643,102	1.90	29,679	672,781	1.99	
1105H	GOVERNORS AND EXCITATION SYSTEM	2063	50-R4	0	1,154,724	24,065	2.08	(1,042)	23,023	1.99	
1105L	LICENCE RENEWAL	2063	50-SQ	0						2.04	*
1105P	A/C ELECTRICAL POWER SYSTEMS	2063	55-R4	0	9,493,088	172,263	1.81	(25,003)	147,260	1.55	
1105Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2063	25-S2	0	19,506,209	760,754	3.90	(136,119)	624,635	3.20	
1105R	AUXILIARY STATION PROCESSES	2063	50-R2	0	10,221,178	218,574	2.14	(40,006)	178,568	1.75	
1105X	SUPPORT BUILDINGS	2063	65-S3	0	1,495,253	25,029	1.67	(3,809)	21,221	1.42	
1105W	SUPPORT BUILDING RENOVATIONS	2063	20-SQ	0	18,859	943	5.00	0	943	5.00	**
	TOTAL GREAT FALLS				**135,948,694**	**2,734,731**	**2.01**	**(334,627)**	**2,400,104**	**1.77**	
	POINTE DU BOIS										
1110A	DAMS, DYKES AND WEIRS	2040	125-R4	0	20,718,888	704,019	3.40	(144,334)	559,685	2.70	
1110B	POWERHOUSE	2040	125-R4	0	6,054,784	193,925	3.20	(39,795)	154,131	2.55	
1110C	POWERHOUSE RENOVATIONS	2040	40-SQ	0	1,897,782	72,083	3.80	(1,714)	70,370	3.71	
1110D	SPILLWAY - ORIGINAL	2015	80-R3	0	7,797,851	4,403,644	56.47	1,333,369	5,737,013	73.57	
1110E	WATER CONTROL SYSTEMS	2040	65-R4	0	4,466,812	132,806	2.97	(56,132)	76,674	1.72	
1110F	ROADS AND SITE IMPROVEMENTS	2040	50-R3	0	1,055,707	39,366	3.73	(465)	38,901	3.68	
1110G	TURBINES AND GENERATORS	2040	60-S3	0	31,899,060	1,036,603	3.25	(257,115)	779,488	2.44	
1110H	GOVERNORS AND EXCITATION SYSTEM	2040	50-R4	0						3.65	*
1110L	LICENCE RENEWAL	2040	50-SQ	0						3.85	*
1110P	A/C ELECTRICAL POWER SYSTEMS	2040	55-R4	0	7,759,986	263,009	3.39	(48,939)	214,070	2.76	
1110Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2040	25-S2	0	1,037,485	44,883	4.33	(5,428)	39,455	3.80	
1110R	AUXILIARY STATION PROCESSES	2040	50-R2	0	5,357,425	194,137	3.62	(17,981)	176,156	3.29	
1110X	SUPPORT BUILDINGS	2040	65-S3	0	882,202	28,085	3.18	(5,248)	22,837	2.59	
1110W	SUPPORT BUILDING RENOVATIONS	2040	20-SQ	0	347,164	17,358	5.00	(4,017)	13,341	3.84	
	TOTAL POINTE DU BOIS				**89,275,145**	**7,129,918**	**7.99**	**752,202**	**7,882,120**	**8.83**	
	POINTE DU BOIS - NEW										
1111A	DAMS, DYKES AND WEIRS		125-R4	0						0.83	*
1111D	SPILLWAY		80-R3	0						1.25	*
1111E	WATER CONTROL SYSTEMS		65-R4	0						1.54	*
1111F	ROADS AND SITE IMPROVEMENTS		50-R3	0						2.00	*
1111P	A/C ELECTRICAL POWER SYSTEMS		55-R4	0						2.18	*
1111Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS		25-S2	0						4.00	*
1111R	AUXILIARY STATION PROCESSES		50-R2	0						2.00	*
1111X	SUPPORT BUILDINGS		65-S3	0						1.54	*
1111W	SUPPORT BUILDING RENOVATIONS		20-SQ	0						5.00	*
	TOTAL POINTE DU BOIS - NEW				**0**	**0**		**0**	**0**		
11150	**SEVEN SISTERS**										
1115A	DAMS, DYKES AND WEIRS	2072	125-R4	0	31,926,879	361,899	1.13	(81,769)	280,130	0.88	
1115B	POWERHOUSE	2072	125-R4	0	13,653,945	144,949	1.06	(45,786)	99,163	0.73	
1115C	POWERHOUSE RENOVATIONS	2072	40-SQ	0	578,473	14,462	2.50	(543)	13,919	2.41	
1115D	SPILLWAY	2072	80-R3	0	2,940,065	40,277	1.37	(6,646)	33,631	1.14	
1115E	WATER CONTROL SYSTEMS	2072	65-R4	0	4,520,291	71,519	1.58	(25,592)	45,927	1.02	
1115F	ROADS AND SITE IMPROVEMENTS	2072	50-R3	0	205,641	4,139	2.01	(1,146)	2,993	1.46	
1115G	TURBINES AND GENERATORS	2072	60-S3	0	54,449,323	956,840	1.76	(79,890)	876,950	1.61	
1115H	GOVERNORS AND EXCITATION SYSTEM	2072	50-R4	0	290,552	5,868	2.02	(73)	5,795	1.99	
1115L	LICENCE RENEWAL	2072	50-SQ	0						2.00	*
1115P	A/C ELECTRICAL POWER SYSTEMS	2072	55-R4	0	11,924,230	218,786	1.83	(42,531)	176,255	1.48	
1115Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2072	25-S2	0	4,960,007	198,400	4.00	(39,983)	158,417	3.19	
1115R	AUXILIARY STATION PROCESSES	2072	50-R2	0	8,512,853	175,632	2.06	(35,364)	140,269	1.65	
1115X	SUPPORT BUILDINGS	2072	65-S3	0	608,294	10,119	1.66	(1,370)	8,749	1.44	
1115W	SUPPORT BUILDING RENOVATIONS	2072	20-SQ	0						5.00	*
	TOTAL SEVEN SISTERS				**134,570,553**	**2,202,890**	**1.64**	**(360,692)**	**1,842,198**	**1.37**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	SLAVE FALLS										
1120A	DAMS, DYKES AND WEIRS	2072	125-R4	0	954,684	14,948	1.57	(259)	14,689	1.54	
1120B	POWERHOUSE	2072	125-R4	0	45,692,194	668,262	1.46	(21,217)	647,045	1.42	
1120C	POWERHOUSE RENOVATIONS	2072	40-SQ	0						2.50	*
1120D	SPILLWAY	2072	80-R3	0	1,241,273	20,729	1.67	(384)	20,345	1.64	
1120E	WATER CONTROL SYSTEMS	2072	65-R4	0	318,933	5,344	1.68	(312)	5,032	1.58	
1120F	ROADS AND SITE IMPROVEMENTS	2072	50-R3	0	37,971,797	782,825	2.06	5,580	788,405	2.08	
1120G	TURBINES AND GENERATORS	2072	60-S3	0	12,246,529	213,787	1.75	(5,821)	207,966	1.70	
1120H	GOVERNORS AND EXCITATION SYSTEM	2072	50-R4	0	336,652	6,834	2.03	(84)	6,750	2.01	
1120L	LICENCE RENEWAL	2072	50-SQ	0						2.00	*
1120P	A/C ELECTRICAL POWER SYSTEMS	2072	55-R4	0	21,631,850	400,320	1.85	(13,694)	386,626	1.79	
1120Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2072	25-S2	0	4,446,295	177,852	4.00	(1,707)	176,145	3.96	
1120R	AUXILIARY STATION PROCESSES	2072	50-R2	0	5,288,154	111,967	2.12	(126)	111,841	2.11	
1120X	SUPPORT BUILDINGS	2072	65-S3	0	3,306,577	54,899	1.66	4,875	59,774	1.81	
1120W	SUPPORT BUILDING RENOVATIONS	2072	20-SQ	0						5.00	
	TOTAL SLAVE FALLS				**133,434,938**	**2,457,767**	**1.84**	**(33,149)**	**2,424,618**	**1.82**	
	PINE FALLS										
1125A	DAMS, DYKES AND WEIRS	2092	125-R4	0	18,301,512	209,153	1.14	(8,147)	201,006	1.10	
1125B	POWERHOUSE	2092	125-R4	0	10,060,843	86,902	0.86	(19,318)	67,584	0.67	
1125C	POWERHOUSE RENOVATIONS	2092	40-SQ	0	121,809	3,045	2.50	(113)	2,932	2.41	
1125D	SPILLWAY	2092	80-R3	0	93,376	1,284	1.38	(25)	1,259	1.35	
1125E	WATER CONTROL SYSTEMS	2092	65-R4	0	3,660,833	56,386	1.54	(18,600)	37,787	1.03	
1125F	ROADS AND SITE IMPROVEMENTS	2092	50-R3	0	1,180,058	23,601	2.00	0	23,601	2.00	***
1125G	TURBINES AND GENERATORS	2092	60-S3	0	9,318,154	155,613	1.67	(31,219)	124,394	1.33	
1125H	GOVERNORS AND EXCITATION SYSTEM	2092	50-R4	0						2.00	*
1125L	LICENCE RENEWAL	2092	50-SQ	0						2.00	*
1125P	A/C ELECTRICAL POWER SYSTEMS	2092	55-R4	0	5,096,978	92,765	1.82	(13,046)	79,719	1.56	
1125Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2092	25-S2	0	3,881,573	155,263	4.00	(15,120)	140,143	3.61	
1125R	AUXILIARY STATION PROCESSES	2092	50-R2	0	3,976,778	79,545	2.00	(20,003)	59,542	1.50	
1125X	SUPPORT BUILDINGS	2092	65-S3	0	336,412	5,181	1.54	(459)	4,722	1.40	
1125W	SUPPORT BUILDING RENOVATIONS	2092	20-SQ	0						5.00	*
1125Z	COMMUNITY DEVELOPMENT COSTS ***	2092	78-SQ	0	26,531,770	339,607	1.28	0	339,607	1.28	**
	TOTAL PINE FALLS				**82,560,097**	**1,208,345**	**1.46**	**(126,050)**	**1,082,295**	**1.31**	
	MCARTHUR FALLS										
1130A	DAMS, DYKES AND WEIRS	2095	125-R4	0	6,837,356	71,552	1.05	(4,433)	67,119	0.98	
1130B	POWERHOUSE	2095	125-R4	0	9,358,105	79,231	0.85	(15,654)	63,577	0.68	
1130C	POWERHOUSE RENOVATIONS	2095	40-SQ	0	405,461	10,137	2.50	(377)	9,760	2.41	
1130D	SPILLWAY	2095	80-R3	0	2,417,504	30,298	1.25	(9,604)	20,694	0.86	
1130E	WATER CONTROL SYSTEMS	2095	65-R4	0	11,703,203	180,229	1.54	(46,136)	134,093	1.15	
1130F	ROADS AND SITE IMPROVEMENTS	2095	50-R3	0	235,262	4,705	2.00	(968)	3,737	1.59	
1130G	TURBINES AND GENERATORS	2095	60-S3	0	5,379,618	89,857	1.67	(37,828)	52,029	0.97	
1130H	GOVERNORS AND EXCITATION SYSTEM	2095	50-R4	0	119,315	2,386	2.00	(259)	2,127	1.78	
1130L	LICENCE RENEWAL	2095	50-SQ	0						2.00	*
1130P	A/C ELECTRICAL POWER SYSTEMS	2095	55-R4	0	2,521,761	45,896	1.82	(11,228)	34,668	1.37	
1130Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2095	25-S2	0	1,275,876	47,533	3.73	(10,832)	36,701	2.88	
1130R	AUXILIARY STATION PROCESSES	2095	50-R2	0	3,616,031	72,321	2.00	(16,655)	55,666	1.54	
1130X	SUPPORT BUILDINGS	2095	65-S3	0						1.57	*
1130W	SUPPORT BUILDING RENOVATIONS	2095	20-SQ	0						5.00	*
	TOTAL MCARTHUR FALLS				**43,869,489**	**634,145**	**1.45**	**(153,974)**	**480,171**	**1.09**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	KELSEY										
1135A	DAMS, DYKES AND WEIRS	2101	125-R4	0	9,296,418	88,772	0.95	4,668	93,440	1.01	
1135B	POWERHOUSE	2101	125-R4	0	71,294,313	730,161	1.02	23,653	753,814	1.06	
1135C	POWERHOUSE RENOVATIONS	2101	40-SQ	0						2.50	*
1135D	SPILLWAY	2101	80-R3	0	7,196,926	91,267	1.27	14,420	105,687	1.47	
1135E	WATER CONTROL SYSTEMS	2101	65-R4	0	35,342,564	544,276	1.54	(6,204)	538,072	1.52	
1135F	ROADS AND SITE IMPROVEMENTS	2101	50-R3	0	12,310,412	246,208	2.00	15,904	262,112	2.13	
1135G	TURBINES AND GENERATORS	2101	60-S3	0	146,383,857	2,444,610	1.67	76,526	2,521,136	1.72	
1135H	GOVERNORS AND EXCITATION SYSTEM	2101	50-R4	0	6,948,606	138,972	2.00	2,642	141,614	2.04	
1135L	LICENCE RENEWAL	2101	50-SQ	0						2.00	*
1135P	A/C ELECTRICAL POWER SYSTEMS	2101	55-R4	0	40,494,515	737,000	1.82	38,036	775,036	1.91	
1135Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2101	25-S2	0	13,650,816	543,183	3.98	22,459	565,642	4.14	
1135R	AUXILIARY STATION PROCESSES	2101	50-R2	0	9,929,302	198,586	2.00	(8,303)	190,283	1.92	
1135X	SUPPORT BUILDINGS	2101	65-S3	0	13,448,502	207,714	1.54	7,532	215,246	1.60	
1135W	SUPPORT BUILDING RENOVATIONS	2101	20-SQ	0	1,598,817	79,941	5.00	(9,033)	70,908	4.44	
	TOTAL KELSEY				**367,895,048**	**6,050,690**	**1.64**	**182,299**	**6,232,989**	**1.69**	
	GRAND RAPIDS										
1140A	DAMS, DYKES AND WEIRS	2091	125-R4	0	56,613,946	546,279	0.96	(53,844)	492,435	0.87	
1140B	POWERHOUSE	2091	125-R4	0	24,506,522	219,039	0.89	(29,586)	189,453	0.77	
1140C	POWERHOUSE RENOVATIONS	2091	40-SQ	0	31,603	790	2.50	(68)	722	2.28	
1140D	SPILLWAY	2091	80-R3	0	5,451,760	68,420	1.26	(13,198)	55,222	1.01	
1140E	WATER CONTROL SYSTEMS	2091	65-R4	0	15,982,492	246,130	1.54	(93,810)	152,320	0.95	
1140F	ROADS AND SITE IMPROVEMENTS	2091	50-R3	0	2,581,475	51,630	2.00	(19,796)	31,835	1.23	
1140G	TURBINES AND GENERATORS	2091	60-S3	0	113,213,625	1,890,763	1.67	(88,167)	1,802,596	1.59	
1140H	GOVERNORS AND EXCITATION SYSTEM	2091	50-R4	0	1,922,915	38,458	2.00	16	38,474	2.00	
1140L	LICENCE RENEWAL	2091	50-SQ	0	83,122,204	1,662,444	2.00	0	1,662,444	2.00	**
1140P	A/C ELECTRICAL POWER SYSTEMS	2091	55-R4	0	8,240,545	149,978	1.82	(20,428)	129,550	1.57	
1140Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2091	25-S2	0	4,690,245	187,610	4.00	(47,250)	140,360	2.99	
1140R	AUXILIARY STATION PROCESSES	2091	50-R2	0	12,334,108	247,291	2.00	(27,527)	219,764	1.78	
1140X	SUPPORT BUILDINGS	2091	65-S3	0	8,700,819	134,124	1.54	(6,771)	127,353	1.46	
1140W	SUPPORT BUILDING RENOVATIONS	2091	20-SQ	0	6,828,234	341,412	5.00	0	341,412	5.00	**
1140Z	COMMUNITY DEVELOPMENT COSTS ***	2091	79-SQ	0	135,205,073	1,717,104	1.27	(86,566)	1,630,538	1.21	
	TOTAL GRAND RAPIDS				**479,425,566**	**7,501,472**	**1.56**	**(486,996)**	**7,014,476**	**1.46**	
	KETTLE										
1145A	DAMS, DYKES AND WEIRS	2111	125-R4	0	45,280,663	376,593	0.83	(43,801)	332,793	0.73	
1145B	POWERHOUSE	2111	125-R4	0	146,313,138	1,220,139	0.83	(140,076)	1,080,063	0.74	
1145C	POWERHOUSE RENOVATIONS	2111	40-SQ	0						2.50	*
1145D	SPILLWAY	2111	80-R3	0	25,406,960	317,587	1.25	(57,163)	260,424	1.03	
1145E	WATER CONTROL SYSTEMS	2111	65-R4	0	19,033,816	293,121	1.54	(139,515)	153,606	0.81	
1145F	ROADS AND SITE IMPROVEMENTS	2111	50-R3	0	556,723	11,134	2.00	(43)	11,091	1.99	
1145G	TURBINES AND GENERATORS	2111	60-S3	0	99,163,384	1,656,029	1.67	(51,477)	1,604,552	1.62	
1145H	GOVERNORS AND EXCITATION SYSTEM	2111	50-R4	0	6,930,643	138,613	2.00	(10,762)	127,851	1.84	
1145L	LICENCE RENEWAL	2111	50-SQ	0						2.00	*
1145P	A/C ELECTRICAL POWER SYSTEMS	2111	55-R4	0	38,779,613	705,789	1.82	8,925	714,714	1.84	
1145Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2111	25-S2	0	16,263,031	650,521	4.00	(73,514)	577,007	3.55	
1145R	AUXILIARY STATION PROCESSES	2111	50-R2	0	19,306,615	386,132	2.00	(82,622)	303,511	1.57	
1145X	SUPPORT BUILDINGS	2111	65-S3	0	2,456,258	37,826	1.54	1,100	38,926	1.58	
1145W	SUPPORT BUILDING RENOVATIONS	2111	20-SQ	0						5.00	*
	TOTAL KETTLE				**419,490,845**	**5,793,484**	**1.38**	**(588,947)**	**5,204,537**	**1.24**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	LAURIE RIVER										
1150A	DAMS, DYKES AND WEIRS	2035	125-R4	0	355,538	7,686	2.16	1,929	9,615	2.70	
1150B	POWERHOUSE	2035	125-R4	0	7,664,146	243,598	3.18	16,408	260,006	3.39	
1150C	POWERHOUSE RENOVATIONS	2035	40-SQ	0						4.76	*
1150D	SPILLWAY	2035	80-R3	0	870,000	22,272	2.56	3,308	25,580	2.94	
1150E	WATER CONTROL SYSTEMS	2035	65-R4	0	458,033	12,046	2.63	1,785	13,831	3.02	
1150F	ROADS AND SITE IMPROVEMENTS	2035	50-R3	0	1,441,914	39,410	2.73	6,029	45,439	3.15	
1150G	TURBINES AND GENERATORS	2035	60-S3	0	4,603,136	160,503	3.49	5,965	166,468	3.62	
1150H	GOVERNORS AND EXCITATION SYSTEM	2035	50-R4	0	882,653	33,043	3.74	418	33,461	3.79	
1150L	LICENCE RENEWAL	2035	50-SQ	0						4.76	*
1150P	A/C ELECTRICAL POWER SYSTEMS	2035	55-R4	0	1,441,945	40,282	2.79	4,724	45,006	3.12	
1150Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2035	25-S2	0	1,220,047	49,275	4.04	10,134	59,409	4.87	
1150R	AUXILIARY STATION PROCESSES	2035	50-R2	0	308,504	8,974	2.91	875	9,849	3.19	
1150X	SUPPORT BUILDINGS	2035	65-S3	0	355,919	8,613	2.42	1,538	10,151	2.85	
1150W	SUPPORT BUILDING RENOVATIONS	2035	20-SQ	0						5.00	*
	TOTAL LAURIE RIVER				**19,601,835**	**625,702**	**3.19**	**53,113**	**678,815**	**3.46**	
	JENPEG										
1155A	DAMS, DYKES AND WEIRS	2118	125-R4	0	16,438,690	142,773	0.87	(11,598)	131,175	0.80	
1155B	POWERHOUSE	2118	125-R4	0	76,905,294	640,563	0.83	(39,029)	601,534	0.78	
1155C	POWERHOUSE RENOVATIONS	2118	40-SQ	0	26,446	661	2.50	(5)	657	2.48	
1155D	SPILLWAY	2118	80-R3	0	14,942,733	186,788	1.25	(16,783)	170,005	1.14	
1155E	WATER CONTROL SYSTEMS	2118	65-R4	0	17,167,202	264,375	1.54	(100,960)	163,415	0.95	
1155F	ROADS AND SITE IMPROVEMENTS	2118	50-R3	0	1,563,205	31,264	2.00	(4,980)	26,284	1.68	
1155G	TURBINES AND GENERATORS	2118	60-S3	0	91,716,371	1,531,663	1.67	(74,058)	1,457,605	1.59	
1155H	GOVERNORS AND EXCITATION SYSTEM	2118	50-R4	0						2.00	*
1155L	LICENCE RENEWAL	2118	50-SQ	0						2.00	*
1155P	A/C ELECTRICAL POWER SYSTEMS	2118	55-R4	0	21,641,608	393,877	1.82	(87,323)	306,554	1.42	
1155Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2118	25-S2	0	3,606,713	144,269	4.00	(29,837)	114,432	3.17	
1155R	AUXILIARY STATION PROCESSES	2118	50-R2	0	13,685,752	273,715	2.00	(45,622)	228,093	1.67	
1155X	SUPPORT BUILDINGS	2118	65-S3	0	7,885,397	121,435	1.54	(6,379)	115,056	1.46	
1155W	SUPPORT BUILDING RENOVATIONS	2118	20-SQ	0						5.00	
	TOTAL JENPEG				**265,579,412**	**3,731,383**	**1.40**	**(416,574)**	**3,314,809**	**1.25**	
	LAKE WINNIPEG REGULATION										
1160A	DAMS, DYKES AND WEIRS		125-R4	0	110,416,014	883,328	0.80	(96,176)	787,152	0.71	
1160L	LICENCE RENEWAL		50-SQ	0	250,000	5,000	2.00	41	5,041	2.02	
1160Z	COMMUNITY DEVELOPMENT COSTS ***		85-SQ	0	436,787,857	5,154,097	1.18	0	5,154,097	1.18	**
	TOTAL LAKE WINNIPEG REGULATION				**547,453,871**	**6,042,425**	**1.10**	**(96,135)**	**5,946,290**	**1.09**	
	CHURCHILL RIVER DIVERSION										
1165A	DAMS, DYKES AND WEIRS		125-R4	0	120,816,679	966,533	0.80	(36,854)	929,680	0.77	
1165D	SPILLWAY		80-R3	0	59,622,870	745,286	1.25	(40,283)	705,003	1.18	
1165E	WATER CONTROL SYSTEMS		65-R4	0	18,858,667	290,423	1.54	(124,402)	166,021	0.88	
1165F	ROADS AND SITE IMPROVEMENTS		50-R3	0	7,284,036	145,681	2.00	(27,274)	118,407	1.63	
1165L	LICENCE RENEWAL		50-SQ	0						2.00	*
1165P	A/C ELECTRICAL POWER SYSTEMS		55-R4	0	1,710,889	31,138	1.82	(6,356)	24,782	1.45	
1165Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS		25-S2	0	1,541,737	61,669	4.00	(15,311)	46,358	3.01	
1165R	AUXILIARY STATION PROCESSES		50-R2	0	1,864,257	37,285	2.00	(5,514)	31,771	1.70	
1165X	SUPPORT BUILDINGS		65-S3	0	79,309	1,221	1.54	(1)	1,220	1.54	
1165W	SUPPORT BUILDING RENOVATIONS		20-SQ	0						5.00	*
1165Z	COMMUNITY DEVELOPMENT COSTS ***		90-SQ	0	351,065,147	3,896,823	1.11	(150,766)	3,746,057	1.07	
	TOTAL CHURCHILL RIVER DIVERSION				**562,843,590**	**6,176,059**	**1.10**	**(406,760)**	**5,769,299**	**1.03**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	LONG SPRUCE										
1170A	DAMS, DYKES AND WEIRS	2118	125-R4	0	65,392,344	545,492	0.83	(30,384)	515,108	0.79	
1170B	POWERHOUSE	2118	125-R4	0	143,800,935	1,197,894	0.83	(67,776)	1,130,118	0.79	
1170C	POWERHOUSE RENOVATIONS	2118	40-SQ	0						2.50	*
1170D	SPILLWAY	2118	80-R3	0	42,273,617	528,420	1.25	(43,240)	485,180	1.15	
1170E	WATER CONTROL SYSTEMS	2118	65-R4	0	57,946,281	892,373	1.54	(509,489)	382,884	0.66	
1170F	ROADS AND SITE IMPROVEMENTS	2118	50-R3	0	1,376,630	27,533	2.00	(4,227)	23,306	1.69	
1170G	TURBINES AND GENERATORS	2118	60-S3	0	143,328,643	2,393,588	1.67	(238,179)	2,155,409	1.50	
1170H	GOVERNORS AND EXCITATION SYSTEM	2118	50-R4	0	145,844	2,917	2.00	(107)	2,810	1.93	
1170L	LICENCE RENEWAL	2118	50-SQ	0						2.00	*
1170P	A/C ELECTRICAL POWER SYSTEMS	2118	55-R4	0	30,610,740	557,115	1.82	(137,607)	419,508	1.37	
1170Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2118	25-S2	0	13,111,957	524,478	4.00	(24,553)	499,925	3.81	
1170R	AUXILIARY STATION PROCESSES	2118	50-R2	0	12,385,777	247,716	2.00	(86,837)	160,879	1.30	
1170X	SUPPORT BUILDINGS	2118	65-S3	0	160,484	2,471	1.54	(56)	2,415	1.51	
1170W	SUPPORT BUILDING RENOVATIONS	2118	20-SQ	0	205,681	10,284	5.00	(201)	10,083	4.90	
	TOTAL LONG SPRUCE				**510,738,934**	**6,930,281**	**1.36**	**(1,142,656)**	**5,787,625**	**1.13**	
	LIMESTONE										
1175A	DAMS, DYKES AND WEIRS	2131	125-R4	0	33,287,049	276,329	0.83	(7,441)	268,888	0.81	
1175B	POWERHOUSE	2131	125-R4	0	461,590,745	3,833,370	0.83	(104,468)	3,728,902	0.81	
1175C	POWERHOUSE RENOVATIONS	2131	40-SQ	0						2.50	*
1175D	SPILLWAY	2131	80-R3	0	201,416,380	2,517,705	1.25	(100,031)	2,417,674	1.20	
1175E	WATER CONTROL SYSTEMS	2131	65-R4	0	116,325,934	1,791,419	1.54	(444,464)	1,346,955	1.16	
1175F	ROADS AND SITE IMPROVEMENTS	2131	50-R3	0	17,384,603	347,692	2.00	(35,479)	312,213	1.80	
1175G	TURBINES AND GENERATORS	2131	60-S3	0	404,329,629	6,752,305	1.67	(154,513)	6,597,792	1.63	
1175H	GOVERNORS AND EXCITATION SYSTEM	2131	50-R4	0	16,598,509	331,970	2.00	(33,823)	298,147	1.80	
1175L	LICENCE RENEWAL	2131	50-SQ	0						2.00	*
1175P	A/C ELECTRICAL POWER SYSTEMS	2131	55-R4	0	144,588,941	2,631,519	1.82	(338,095)	2,293,424	1.59	
1175Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2131	25-S2	0	8,782,898	351,316	4.00	(73,471)	277,845	3.16	
1175R	AUXILIARY STATION PROCESSES	2131	50-R2	0	36,388,654	727,773	2.00	(193,780)	533,993	1.47	
1175X	SUPPORT BUILDINGS	2131	65-S3	0	5,707,366	87,893	1.54	(3,514)	84,379	1.48	
1175W	SUPPORT BUILDING RENOVATIONS	2131	20-SQ	0	652,644	32,632	5.00	(709)	31,923	4.89	
	TOTAL LIMESTONE				**1,447,053,352**	**19,681,923**	**1.36**	**(1,489,787)**	**18,192,136**	**1.26**	
	WUSKWATIM										
1180A	DAMS, DYKES AND WEIRS	2152	125-R4	0	4,694,366	38,963	0.83	(245)	38,718	0.82	
1180B	POWERHOUSE	2152	125-R4	0	18,227,672	151,290	0.83	(816)	150,474	0.83	
1180C	POWERHOUSE RENOVATIONS	2152	40-SQ	0						2.50	*
1180D	SPILLWAY	2152	80-R3	0	2,875,828	35,948	1.25	(355)	35,593	1.24	
1180E	WATER CONTROL SYSTEMS	2152	65-R4	0	3,087,285	47,544	1.54	(676)	46,868	1.52	
1180F	ROADS AND SITE IMPROVEMENTS	2152	50-R3	0	2,495,203	49,904	2.00	(310)	49,594	1.99	
1180G	TURBINES AND GENERATORS	2152	60-S3	0	4,652,074	77,690	1.67	(689)	77,001	1.66	
1180H	GOVERNORS AND EXCITATION SYSTEM	2152	50-R4	0	169,166	3,383	2.00	(25)	3,358	1.98	
1180P	A/C ELECTRICAL POWER SYSTEMS	2152	55-R4	0	1,691,663	30,788	1.82	(247)	30,542	1.81	
1180Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2152	25-S2	0	1,141,873	45,675	4.00	(1,958)	43,717	3.83	
1180R	AUXILIARY STATION PROCESSES	2152	50-R2	0	2,029,996	40,600	2.00	(1,377)	39,223	1.93	
1180X	SUPPORT BUILDINGS	2152	65-S3	0	930,415	14,328	1.54	(84)	14,244	1.53	
1180W	SUPPORT BUILDING RENOVATIONS	2152	20-SQ	0						5.00	*
	TOTAL WUSKWATIM				**41,995,540**	**536,113**	**1.28**	**(6,782)**	**529,332**	**1.26**	
	INFRASTRUCTURE SUPPORTING GENERATION										
1199F	PROVINCIAL ROADS		50-R3	0	25,412,921	508,258	2.00	5,037	513,295	2.02	
1199V	TOWN SITE BUILDINGS		55-R4	0	82,260,635	1,497,144	1.82	87,328	1,584,472	1.93	
1199W	TOWN SITE BUILDING RENOVATIONS		20-SQ	0	27,027,620	1,351,381	5.00	0	1,351,381	5.00	**
1199Y	TOWN SITE OTHER INFRASTRUCTURE		45-R4	0	29,155,301	647,248	2.22	161,555	808,803	2.77	
	TOTAL INFRASTRUCTURE SUPPORTING GENERATION				**163,856,477**	**4,004,031**	**2.44**	**253,919**	**4,257,950**	**2.60**	
	TOTAL HYDRAULIC GENERATION				**5,445,593,386**	**83,441,359**	**1.53**	**(4,401,596)**	**79,039,763**	**1.45**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	THERMAL GENERATION										
	BRANDON UNIT 5 (COAL)										
1205B	POWERHOUSE	2020	75-R5	0	11,729,518	438,783	3.74	91,366	530,149	4.52	
1205C	POWERHOUSE RENOVATIONS	2020	40-SQ	0	396,538	58,727	14.81	4,236	62,963	15.88	
1205F	ROADS AND SITE IMPROVEMENTS	2020	50-R3	0	4,018,549	181,309	4.51	34,292	215,601	5.37	
1205G	TURBINES AND GENERATORS	2020	60-S3	0	19,611,168	984,510	5.02	139,027	1,123,537	5.73	
1205H	GOVERNORS AND EXCITATION SYSTEM	2020	50-R4	0	2,343,861	118,834	5.07	10,214	129,048	5.51	
1205J	STEAM GENERATOR AND AUXILIARIES	2020	60-S2.5	0	14,655,599	567,116	3.87	28,135	595,251	4.06	
1205L	LICENCE RENEWAL	2020	50-SQ	0	2,198,654	325,621	14.81	0	325,621	14.81	**
1205P	A/C ELECTRICAL POWER SYSTEMS	2020	55-R4	0	8,026,175	311,077	3.88	62,420	373,497	4.65	
1205Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2020	25-S2	0	25,758,061	1,215,485	4.72	(71,227)	1,144,258	4.44	
1205R	AUXILIARY STATION PROCESSES	2020	50-R2	0	47,355,066	2,150,146	4.54	385,726	2,535,872	5.36	
1205X	SUPPORT BUILDINGS	2020	65-S3	0	7,837,127	391,458	4.99	76,591	468,049	5.97	
1205W	SUPPORT BUILDING RENOVATIONS	2020	20-SQ	0						16.67	*
	TOTAL BRANDON UNIT 5 (COAL)				**143,930,317**	**6,743,066**	**4.68**	**760,780**	**7,503,846**	**5.21**	
	BRANDON UNITS 6 AND 7										
1210B	POWERHOUSE		75-R5	0	14,925,029	198,503	1.33	(16,348)	182,156	1.22	
1210C	POWERHOUSE RENOVATIONS		40-SQ	0	144,571	3,614	2.50	(61)	3,553	2.46	
1210G	TURBINES AND GENERATORS		60-S3	0	11,222,428	187,415	1.67	(19,881)	167,534	1.49	
1210H	GOVERNORS AND EXCITATION SYSTEM		50-R4	0				0		2.00	*
1210K	COMBUSTION TURBINE		25-R3	0	143,303,747	5,732,150	4.00	(1,168,511)	4,563,639	3.18	
1210L	LICENCE RENEWAL		50-SQ	0				0		2.00	*
1210M	COMBUSTION TURBINE OVERHAULS		15-SQ	0				0		6.67	*
1210P	A/C ELECTRICAL POWER SYSTEMS		55-R4	0	6,346,535	115,507	1.82	(10,752)	104,755	1.65	
1210Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS		25-S2	0	1,295,814	51,833	4.00	(8)	51,825	4.00	
1210R	AUXILIARY STATION PROCESSES		50-R2	0	10,639,560	212,791	2.00	(36,004)	176,787	1.66	
	TOTAL BRANDON UNITS 6 AND 7				**187,877,685**	**6,501,813**	**3.46**	**(1,251,565)**	**5,250,248**	**2.79**	
	SELKIRK										
1215B	POWERHOUSE		75-R5	0	6,808,812	90,557	1.33	(39,049)	51,508	0.76	
1215C	POWERHOUSE RENOVATIONS		40-SQ	0	451,038	11,276	2.50	(236)	11,040	2.45	
1215F	ROADS AND SITE IMPROVEMENTS		50-R3	0	1,630,443	32,609	2.00	(10,798)	21,812	1.34	
1215G	TURBINES AND GENERATORS		60-S3	0	22,750,003	379,925	1.67	(131,987)	247,938	1.09	
1215H	GOVERNORS AND EXCITATION SYSTEM		50-R4	0	17,307	346	2.00	(150)	196	1.13	
1215J	STEAM GENERATOR AND AUXILIARIES		60-S2.5	0	51,721,352	863,747	1.67	(90,587)	773,160	1.49	
1215L	LICENCE RENEWAL		50-SQ	0				0		2.00	*
1215P	A/C ELECTRICAL POWER SYSTEMS		55-R4	0	3,171,700	57,725	1.82	(24,117)	33,608	1.06	
1215Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS		25-S2	0	5,286,066	208,225	3.94	(96,641)	111,584	2.11	
1215R	AUXILIARY STATION PROCESSES		50-R2	0	14,897,376	297,948	2.00	(121,123)	176,825	1.19	
1215X	SUPPORT BUILDINGS		65-S3	0	1,033,229	15,912	1.54	(4,928)	10,984	1.06	
1215W	SUPPORT BUILDING RENOVATIONS		20-SQ	0						5.00	*
	TOTAL SELKIRK				**107,767,327**	**1,958,270**	**1.82**	**(519,616)**	**1,438,654**	**1.33**	
	TOTAL THERMAL GENERATION				**439,575,329**	**15,203,149**	**3.46**	**(1,010,401)**	**14,192,748**	**3.23**	
	TOTAL GENERATION				**5,885,168,715**	**98,644,508**	**1.68**	**(5,411,997)**	**93,232,511**	**1.58**	
	DIESEL GENERATION										
1300B	BUILDINGS		25-R3	0	8,263,526	330,541	4.00	(100,830)	229,711	2.78	
1300C	BUILDING RENOVATIONS		15-SQ	0	17,929	1,196	6.67	0	1,196	6.67	**
1300M	ENGINES AND GENERATORS - OVERHAULS		4-SQ	0	1,998,461	499,615	25.00	0	499,615	25.00	***
1300N	ENGINES AND GENERATORS		22-R2	0	16,774,955	763,260	4.55	(387,383)	375,877	2.24	
1300Q	ACCESSORY STATION EQUIPMENT		20-R3	0	15,892,750	794,637	5.00	(258,150)	536,487	3.38	
1300T	FUEL STORAGE AND HANDLING		25-R2	0	5,083,046	203,322	4.00	(97,135)	106,187	2.09	
	TOTAL DIESEL GENERATION				**48,030,666**	**2,592,571**	**5.40**	**(843,498)**	**1,749,073**	**3.64**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	TRANSMISSION										
2000F	ROADS, TRAILS AND BRIDGES		50-S2.5	0	10,686,118	213,722	2.00	(3,983)	209,739	1.96	
2000G	METAL TOWERS AND CONCRETE POLES		85-R4	0	481,955,524	5,687,075	1.18	(116,453)	5,570,622	1.16	
2000J	POLES AND FIXTURES		55-R3	0	117,066,069	2,130,602	1.82	(268,599)	1,862,003	1.59	
2000K	GROUND LINE TREATMENT		10-SQ	0	2,297,990	229,799	10.00	0	229,799	10.00	**
2000L	OVERHEAD CONDUCTOR AND DEVICES		80-R4	0	349,810,506	4,372,631	1.25	(813,568)	3,559,063	1.02	
2000M	UNDERGROUND CABLE AND DEVICES		45-R3	0	960,535	21,324	2.22	(5,712)	15,612	1.63	
2000Z	COMMUNITY DEVELOPMENT COSTS ***		79-SQ	0	17,625,510	223,844	1.27	(692)	223,152	1.27	
	TOTAL TRANSMISSION				**980,402,254**	**12,878,997**	**1.31**	**(1,209,006)**	**11,669,992**	**1.19**	
	SUBSTATIONS										
3000B	BUILDINGS		65-R4	0	167,465,733	2,578,972	1.54	(286,304)	2,292,668	1.37	
3000C	BUILDING RENOVATIONS		20-SQ	0	16,023,446	800,762	5.00	0	800,762	5.00	**
3000F	ROADS, STEEL STRUCTURES AND CIVIL SITE WORKS		50-R4	0	301,966,571	6,039,020	2.00	(988,630)	5,050,390	1.67	
3000J	POLES AND FIXTURES		45-R2.5	0	8,976,505	199,278	2.22	(20,245)	179,033	1.99	
3100R	POWER TRANSFORMERS		50-R1.5	0	346,530,004	6,930,600	2.00	13,653	6,944,253	2.00	
3100S	OTHER TRANSFORMERS		50-S1	0	112,490,470	2,249,809	2.00	(154,608)	2,095,201	1.86	
3100T	INTERRUPTING EQUIPMENT		50-R2.5	0	210,045,708	4,200,914	2.00	99,325	4,300,239	2.05	
3100U	OTHER STATION EQUIPMENT		45-R3	0	553,640,228	12,271,495	2.22	(1,293,022)	10,978,473	1.98	
3100V	ELECTRONIC EQUIPMENT AND BATTERIES		25-R2	0	222,763,291	8,896,028	3.99	(1,587,657)	7,308,371	3.28	
3200M	SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS		65-R4	0	122,026,806	1,879,213	1.54	(165,548)	1,713,665	1.40	
3200N	SYNCHRONOUS CONDENSER OVERHAULS		15-SQ	0	47,815,173	2,974,008	6.22	(305,321)	2,668,687	5.58	
3200P	HVDC CONVERTER EQUIPMENT		30-S4	0	434,607,924	14,472,444	3.33	(3,737,935)	10,734,509	2.47	
3200S	HVDC SERIALIZED EQUIPMENT		30-R5	0	213,665,609	6,766,772	3.17	(1,970,716)	4,796,056	2.24	
3200U	HVDC ACCESSORY STATION EQUIPMENT		36-R3	0	169,254,248	4,705,268	2.78	(640,632)	4,064,636	2.40	
3200V	HVDC ELECTRONIC EQUIPMENT AND BATTERIES		25-R2	0	47,913,305	1,916,532	4.00	(722,558)	1,193,974	2.49	
	TOTAL SUBSTATIONS				**2,975,185,020**	**76,881,115**	**2.58**	**(11,760,197)**	**65,120,918**	**2.19**	
	DISTRIBUTION										
4000A	CONCRETE DUCTLINE AND MANHOLES		75-R4	0	70,181,420	1,506,660	2.15	(43,020)	1,463,640	2.09	
4000C	CONCRETE DUCTLINE AND MANHOLE REFURBISHMENT		30-R4	0	7,368,727	245,379	3.33	10,201	255,580	3.47	
4000G	METAL TOWERS		60-R3	0	10,853,698	181,257	1.67	(4,977)	176,280	1.62	
4000J	POLES AND FIXTURES		65-S0.5	0	668,956,088	10,301,924	1.54	(2,313,156)	7,988,768	1.19	
4000K	GROUND LINE TREATMENT		12-SQ	0	34,478,470	2,872,057	8.33	(324,784)	2,547,273	7.39	
4000L	OVERHEAD CONDUCTOR AND DEVICES		60-R1.5	0	717,203,040	11,977,291	1.67	(1,944,006)	10,033,285	1.40	
4000M	UNDERGROUND CABLE AND DEVICES - 66 KV		60-S1	0	27,891,495	465,788	1.67	(11,720)	454,069	1.63	
4000N	UNDERGROUND CABLE AND DEVICES - PRIMARY		60-R3	0	374,567,850	6,255,283	1.67	(274,308)	5,980,975	1.60	
4000P	UNDERGROUND CABLE AND DEVICES - SECONDARY		44-S3	0	249,788,828	5,670,206	2.27	(383,135)	5,287,071	2.12	
4000Q	SERIALIZED EQUIPMENT - OVERHEAD		45-R3	0	218,784,786	4,856,751	2.22	(827,611)	4,029,141	1.84	
4000R	DSC - HIGH VOLTAGE TRANSFORMERS		50-R3	0	25,320,598	506,412	2.00	5,265	511,677	2.02	
4000S	SERIALIZED EQUIPMENT - UNDERGROUND		42-R3	0	213,763,677	5,087,576	2.38	(544,755)	4,542,821	2.13	
4000V	ELECTRONIC EQUIPMENT		10-SQ	0	739,972	73,997	10.00	3,902	77,899	10.53	
4000W	SERVICES		35-R1.5	0	73,127,688	2,091,452	2.86	(992,787)	1,098,665	1.50	
4000X	STREET LIGHTING		45-R3	0	182,346,807	4,046,153	2.22	(362,777)	3,683,376	2.02	
	TOTAL DISTRIBUTION				**2,875,373,143**	**56,138,186**	**1.95**	**(8,007,667)**	**48,130,519**	**1.67**	
	METERS										
4900V	METERS - ELECTRONIC		15-L3	0	18,913,638	1,261,540	6.67	556,699	1,818,239	9.61	
4900Y	METERS - ANALOG		26-L1.5	0	19,622,056	755,449	3.85	(1,931)	753,518	3.84	
4900W	METERING EXCHANGES		15-SQ	0	33,545,519	2,237,486	6.67	0	2,237,486	6.67	**
4900Z	METERING TRANSFORMERS		50-R2.5	0	11,244,938	224,899	2.00	(22,725)	202,175	1.80	
	TOTAL METERS				**83,326,152**	**4,479,374**	**5.38**	**532,043**	**5,011,417**	**6.01**	

MANITOBA HYDRO

TABLE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	COMMUNICATION										
5000B	BUILDINGS		65-R3	0	6,955,504	107,115	1.54	(16,666)	90,449	1.30	
5000C	BUILDING RENOVATIONS		20-SQ	0	3,486,352	174,093	4.99	(14,480)	159,613	4.58	
5000D	BUILDING - SYSTEM CONTROL CENTRE		75-R4	0	15,857,686	210,907	1.33	(4,407)	206,500	1.30	
5000G	COMMUNICATION TOWERS		60-R2	0	12,362,119	206,447	1.67	4,408	210,855	1.71	
5000H	FIBRE OPTIC AND METALLIC CABLE		35-R2.5	0	131,559,381	3,762,598	2.86	143,098	3,905,696	2.97	
5000J	CARRIER EQUIPMENT		20-R2.5	0	125,921,733	6,295,769	5.00	(832,455)	5,463,314	4.34	
5000K	OPERATIONAL IT EQUIPMENT		5-SQ	0	4,821,768	964,354	20.00	0	964,354	20.00	**
5000M	MOBILE RADIO, TELEPHONE AND VIDEO CONFERENCING		8-SQ	0	8,862,073	1,107,759	12.50	366,465	1,474,224	16.64	
5000N	OPERATIONAL DATA NETWORK		8-SQ	0	18,817,356	2,352,169	12.50	0	2,352,169	12.50	**
5000R	POWER SYSTEM CONTROL		15-S1.5	0	14,264,753	917,436	6.43	(183,870)	733,566	5.14	
	TOTAL COMMUNICATION				**342,908,725**	**16,098,647**	**4.69**	**(537,907)**	**15,560,740**	**4.54**	
	MOTOR VEHICLES										
6000E	PASSENGER VEHICLES		11-S2	20	1,145,330	83,288	7.27	(2,814)	80,474	7.03	
6000F	LIGHT TRUCKS		12-L4	10	69,461,644	5,207,539	7.50	(234,045)	4,973,494	7.16	
6000G	HEAVY TRUCKS		19-L4	7	73,416,587	3,591,393	4.89	(157,873)	3,433,520	4.68	
6000H	CONSTRUCTION EQUIPMENT		23-R2.5	20	21,130,532	735,343	3.48	(149,870)	585,473	2.77	
6000I	LARGE SOFT-TRACK EQUIPMENT		27-L1.5	15	15,620,474	491,264	3.15	(29,328)	461,936	2.96	
6000J	TRAILERS		35-S1	15	18,887,911	459,161	2.43	(9,004)	450,157	2.38	
6000K	MISCELLANEOUS VEHICLES		13-L1	15	6,114,461	399,672	6.54	(100,356)	299,317	4.90	
	TOTAL MOTOR VEHICLES				**205,776,939**	**10,967,660**	**5.33**	**(683,288)**	**10,284,372**	**5.00**	
	BUILDINGS										
8000B	BUILDINGS - GENERAL		65-R3	0	103,251,540	1,590,074	1.54	1,662	1,591,736	1.54	
8000C	BUILDING RENOVATIONS		20-SQ	0	37,401,024	1,870,051	5.00	0	1,870,051	5.00	**
8000D	BUILDING - 360 PORTAGE - CIVIL		100-R4	0	202,792,903	2,027,929	1.00	1,375	2,029,304	1.00	
8000E	BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL		45-R3	0	77,339,398	1,716,935	2.22	5,514	1,722,449	2.23	
8000F	LEASEHOLD IMPROVEMENTS - SONY PLACE		10-SQ	0	1,007,453	100,745	10.00	0	100,745	10.00	**
	TOTAL BUILDINGS				**421,792,317**	**7,305,734**	**1.73**	**8,550**	**7,314,284**	**1.73**	
	GENERAL EQUIPMENT										
9000H	TOOLS, SHOP AND GARAGE EQUIPMENT		15-SQ	0	87,537,592	5,676,211	6.48	0	5,676,211	6.48	**
9000K	COMPUTER EQUIPMENT		5-SQ	0	49,555,418	9,911,084	20.00	0	9,911,084	20.00	**
9000L	OFFICE FURNITURE AND EQUIPMENT		20-SQ	0	26,318,137	1,315,907	5.00	0	1,315,907	5.00	**
9000M	HOT WATER TANKS		6-SQ	0	881,848	147,004	16.67	0	147,004	16.67	**
	TOTAL GENERAL EQUIPMENT				**164,292,994**	**17,050,206**	**10.38**	**0**	**17,050,206**	**10.38**	
	EASEMENTS										
A100A	EASEMENTS		75-SQ	0	66,021,103	878,081	1.33	0	878,081	1.33	**
	TOTAL EASEMENTS				**66,021,103**	**878,081**	**1.33**	**0**	**878,081**	**1.33**	
	COMPUTER SOFTWARE AND DEVELOPMENT										
A200G	COMPUTER DEVELOPMENT - MAJOR SYSTEMS		11-S6	0	111,692,382	10,152,838	9.09	(375,315)	9,777,523	8.75	
A200H	COMPUTER DEVELOPMENT - SMALL SYSTEMS		10-SQ	0	48,787,249	4,878,725	10.00	(426,046)	4,452,679	9.13	
A200J	COMPUTER SOFTWARE - GENERAL		5-SQ	0	6,701,454	1,340,291	20.00	0	1,340,291	20.00	**
A200K	COMPUTER SOFTWARE - COMMUNICATION/OPERATIONAL		5-SQ	0	4,652,481	930,496	20.00	339,877	1,270,373	27.31	
A200L	OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA		7-S3	0	10,313,958	1,473,865	14.29	(642,555)	831,310	8.06	
	TOTAL COMPUTER SOFTWARE AND DEVELOPMENT				**182,147,524**	**18,776,215**	**10.31**	**(1,104,039)**	**17,672,176**	**9.70**	
	TOTAL MANITOBA HYDRO				**14,230,425,552**	**322,691,294**	**2.27**	**(29,017,007)**	**293,674,287**	**2.06**	

* The account has no balance as of March 31, 2014 and rate will be used on a go-forward basis for future additions.
** On amortized accounts any true-up of less than 10% is not considered significant.
*** True-up excluded as exisiting assets in account are fully depreciated.

MANITOBA HYDRO

TABLE 1A. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	WUSKWATIM POWER LIMITED PARTNERSHIP ("WPLP")										
	PROPERTY, PLANT AND EQUIPMENT										
	HYDRAULIC GENERATION										
1181A	WPLP - DAMS, DYKES AND WEIRS	2152	125-R4	0	148,498,470	1,232,537	0.83	(2,210)	1,230,327	0.83	
1181B	WPLP - POWERHOUSE	2152	125-R4	0	569,576,645	4,727,486	0.83	(8,569)	4,718,917	0.83	
1181C	WPLP - POWERHOUSE RENOVATIONS	2152	40-SQ	0	0	0	0.00	0	0	2.50	*
1181D	WPLP - SPILLWAY	2152	80-R3	0	90,639,257	1,132,991	1.25	(5,921)	1,127,070	1.24	
1181E	WPLP - WATER CONTROL SYSTEMS	2152	65-R4	0	98,584,694	1,518,204	1.54	(19,035)	1,499,169	1.52	
1181F	WPLP - ROADS AND SITE IMPROVEMENTS	2152	50-R3	0	79,988,348	1,599,767	2.00	(9,306)	1,590,461	1.99	
1181G	WPLP - TURBINES AND GENERATORS	2152	60-S3	0	149,857,582	2,502,622	1.67	(4,933)	2,497,689	1.67	
1181H	WPLP - GOVERNORS AND EXCITATION SYSTEM	2152	50-R4	0	5,167,019	103,340	2.00	(570)	102,770	1.99	
1181P	WPLP - A/C ELECTRICAL POWER SYSTEMS	2152	55-R4	0	49,908,667	908,338	1.82	(9,211)	899,127	1.80	
1181Q	WPLP - INSTRUMENTATION, CONTROL AND D/C SYSTEMS	2152	25-S2	0	37,311,999	1,492,480	4.00	(24,478)	1,468,002	3.93	
1181R	WPLP - AUXILIARY STATION PROCESSES	2152	50-R2	0	66,497,960	1,329,959	2.00	(22,096)	1,307,863	1.97	
1181X	WPLP - SUPPORT BUILDINGS	2152	65-S3	0	29,258,457	450,580	1.54	(1,874)	448,706	1.53	
1181W	WPLP - SUPPORT BUILDING RENOVATIONS	2152	20-SQ	0	0	0	0.00	0	0	5.00	*
1181Z	WPLP - OPERATIONAL EMPLOYMENT FUND	2152	95-SQ	0	389,662	4,091	1.05	(300)	3,791	0.97	
	TOTAL GENERATION				**1,325,678,762**	**17,002,395**	**1.28**	**(108,503)**	**16,893,892**	**1.27**	
	SUBSTATIONS										
3081B	WPLP - BUILDINGS		65-R4	0	326,268	5,025	1.54	(5)	5,020	1.54	
3081F	WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK		50-R4	0	1,761,913	35,238	2.00	(139)	35,099	1.99	
3181R	WPLP - POWER TRANSFORMERS		50-R1.5	0	4,482,057	89,641	2.00	(1,089)	88,552	1.98	
3181T	WPLP - INTERRUPTING EQUIPMENT		50-R2.5	0	839,984	16,800	2.00	(183)	16,617	1.98	
3181U	WPLP - OTHER STATION EQUIPMENT		45-R3	0	1,621,291	35,993	2.22	(307)	35,686	2.20	
3181V	WPLP - ELECTRONIC EQUIPMENT AND BATTERIES		25-R2	0	1,065,222	42,609	4.00	(1,022)	41,587	3.90	
	TOTAL SUBSTATIONS				**10,096,734**	**225,306**	**2.23**	**(2,745)**	**222,561**	**2.20**	
	COMMUNICATION										
5081H	WPLP - FIBRE OPTIC AND METALLIC CABLE		35-R2.5	0	150,000	4,290	2.86	(40)	4,250	2.83	
5081J	WPLP - CARRIER EQUIPMENT		20-R2.5	0	50,000	2,500	5.00	(143)	2,357	4.71	
	TOTAL COMMUNICATION				**200,000**	**6,790**	**3.40**	**(183)**	**6,607**	**3.30**	
	MOTOR VEHICLES										
6081G	WPLP - HEAVY TRUCKS		19-L4	7	46,325	2,266	4.89	(1,141)	1,125	2.43	
6081H	WPLP - CONSTRUCTION EQUIPMENT		23-R2.5	20	42,012	1,462	3.48	53	1,515	3.61	
6081J	WPLP - TRAILERS		35-S1	15	82,208	1,998	2.43	12	2,010	2.45	
6081K	WPLP - MISCELLANEOUS VEHICLES		13-L1	15	54,399	3,556	6.54	(85)	3,471	6.38	
	TOTAL MOTOR VEHICLES				**224,944**	**9,282**	**4.13**	**(1,161)**	**8,121**	**3.61**	
	GENERAL EQUIPMENT										
9081K	WPLP - COMPUTER EQUIPMENT		5-SQ	0	21,228	4,246	20.00	(921)	3,325	15.66	
	TOTAL GENERAL EQUIPMENT				**21,228**	**4,246**	**20.00**	**(921)**	**3,325**	**15.66**	
	TOTAL WPLP PROPERTY, PLANT AND EQUIPMENT				**1,336,221,667**	**17,248,019**	**1.29**	**(113,513)**	**17,134,506**	**1.28**	
	INTANGIBLE ASSETS										
	TRANSMISSION										
2080F	WPLP - ROADS, TRAILS AND BRIDGES		50-S2.5	0	1,439,812	28,796	2.00	(309)	28,487	1.98	
2080G	WPLP - METAL TOWERS AND CONCRETE POLES		85-R4	0	106,632,518	1,258,264	1.18	(8,754)	1,249,510	1.17	
2080J	WPLP - POLES AND FIXTURES		55-R3	0	430,084	7,828	1.82	(101)	7,727	1.80	
2080L	WPLP - OVERHEAD CONDUCTOR AND DEVICES		80-R4	0	29,011,058	362,638	1.25	(2,727)	359,911	1.24	
2080Z	WPLP - TRANSMISSION DEVELOPMENT FUND		79-SQ	0	1,909,456	24,250	1.27	(109)	24,141	1.26	
	TOTAL TRANSMISSION				**139,422,928**	**1,681,776**	**1.21**	**(12,000)**	**1,669,776**	**1.20**	
	SUBSTATIONS										
3080B	WPLP - BUILDINGS		65-R4	0	11,080,091	170,633	1.54	(162)	170,471	1.54	
3080F	WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK		50-R4	0	44,652,522	893,050	2.00	(3,558)	889,492	1.99	
3180R	WPLP - POWER TRANSFORMERS		50-R1.5	0	4,272,536	85,451	2.00	(970)	84,481	1.98	
3180S	WPLP - OTHER TRANSFORMERS		50-S1	0	31,309,273	626,185	2.00	(12,821)	613,364	1.96	
3180T	WPLP - INTERRUPTING EQUIPMENT		50-R2.5	0	25,624,773	512,495	2.00	(5,507)	506,988	1.98	
3180U	WPLP - OTHER STATION EQUIPMENT		45-R3	0	19,617,296	435,504	2.22	(3,703)	431,801	2.20	
3180V	WPLP - ELECTRONIC EQUIPMENT AND BATTERIES		25-R2	0	19,286,904	771,476	4.00	(18,408)	753,068	3.90	
	TOTAL SUBSTATIONS				**155,843,395**	**3,494,794**	**2.24**	**(45,129)**	**3,449,665**	**2.21**	

MANITOBA HYDRO

TABLE 1A. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DEPRECIABLE WORK	LIFE SPAN DATE	SURVIVOR CURVE	NET SALVAGE	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE (%)	ANNUAL PROVISION FOR TRUE-UP	TOTAL DEPRECIATION RELATED TO LIFE EXPENSE	TOTAL DEPRECIATION RELATED TO LIFE RATE (%)	
	(1)		(2)	(3)	(4)	(5)	(6)=(5)/(4)	(7)	(8)=(5)+(7)	(9)=(8)/(4)	
	DISTRIBUTION										
4080J	WPLP - POLES AND FIXTURES		65-S0.5	0	187,208	2,883	1.54	(29)	2,854	1.52	
4080L	WPLP - OVERHEAD CONDUCTOR AND DEVICES		60-R1.5	0	315,541	5,270	1.67	(59)	5,211	1.65	
4080N	WPLP - UNDERGROUND CABLE AND DEVICES - PRIMARY		60-R3	0	819,462	13,685	1.67	(36)	13,649	1.67	
4080S	WPLP - SERIALIZED EQUIPMENT - UNDERGROUND		42-R3	0	29,630	705	2.38	(5)	700	2.36	
	TOTAL DISTRIBUTION				**1,351,840**	**22,543**	**1.67**	**(129)**	**22,414**	**1.66**	
	COMMUNICATION										
5080H	WPLP - FIBRE OPTIC AND METALLIC CABLE		35-R2.5	0	4,463,440	127,654	2.86	(1,208)	126,446	2.83	
5080J	WPLP - CARRIER EQUIPMENT		20-R2.5	0	2,508,284	125,414	5.00	(7,235)	118,179	4.71	
5080M	WPLP - MOBILE RADIO, TELEPHONE AND CONFERENCING		8-SQ	0	212,713	26,589	12.50	740	27,329	12.85	
5080N	WPLP - OPERATIONAL DATA NETWORK		8-SQ	0	440,117	55,015	12.50	(2,678)	52,337	11.89	
	TOTAL COMMUNICATION				**7,624,554**	**334,672**	**4.39**	**(10,382)**	**324,290**	**4.25**	
	EASEMENTS										
A180A	EASEMENTS		75-SQ	0	796,640	10,595	1.33	0	10,595	1.33	**
	TOTAL EASEMENTS				**796,640**	**10,595**	**1.33**	**0**	**10,595**	**1.33**	
	TOTAL WPLP INTANGIBLE ASSETS				**305,039,358**	**5,544,380**	**1.82**	**(67,640)**	**5,476,740**	**1.80**	
	TOTAL WUSKWATIM POWER LIMITED PARTNERSHIP				**1,641,261,025**	**22,792,399**	**1.39**	**(181,153)**	**22,611,246**	**1.38**	

* The account has no balance as of March 31, 2014 and rate will be used on a go-forward basis for future additions.
** On amortized accounts any true-up of less than 10% is not considered significant.

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE AMOUNT	ACCUMULATED DEPRECIATION VARIANCE PERCENT	PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	GENERATION								
	HYDRAULIC GENERATION								
	GREAT FALLS								
1105A	DAMS, DYKES AND WEIRS	17,345,473	7,044,832	8,400,996	(1,356,164)	(19.25)	47.1	(28,793)	
1105B	POWERHOUSE	7,990,993	3,385,756	4,120,534	(734,778)	(21.70)	46.5	(15,802)	
1105C	POWERHOUSE RENOVATIONS	47,039	1,764	3,450	(1,686)	(95.56)	38.5	(44)	
1105D	SPILLWAY	9,676,327	3,816,956	4,538,669	(721,713)	(18.91)	42.0	(17,184)	
1105E	WATER CONTROL SYSTEMS	24,245,253	7,983,492	12,000,543	(4,017,051)	(50.32)	41.7	(96,332)	
1105F	ROADS AND SITE IMPROVEMENTS	935,986	74,582	81,796	(7,214)	(9.67)	41.8	(173)	
1105G	TURBINES AND GENERATORS	33,818,312	8,126,348	7,031,203	1,095,145	13.48	36.9	29,679	
1105H	GOVERNORS AND EXCITATION SYSTEM	1,154,724	239,034	282,594	(43,560)	(18.22)	41.8	(1,042)	
1105L	LICENCE RENEWAL								*
1105P	A/C ELECTRICAL POWER SYSTEMS	9,493,088	3,533,142	4,425,761	(892,619)	(25.26)	35.7	(25,003)	
1105Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	19,506,209	8,011,623	10,107,853	(2,096,230)	(26.16)	15.4	(136,119)	
1105R	AUXILIARY STATION PROCESSES	10,221,178	2,729,119	4,161,341	(1,432,222)	(52.48)	35.8	(40,006)	
1105X	SUPPORT BUILDINGS	1,495,253	684,949	844,526	(159,577)	(23.30)	41.9	(3,809)	
1105W	SUPPORT BUILDING RENOVATIONS	18,859	2,357	2,420	(63)	(2.68)	17.5		**
	TOTAL GREAT FALLS	**135,948,694**	**45,633,954**	**56,001,684**	**(10,367,730)**	**(22.72)**		**(334,627)**	
	POINTE DU BOIS								
1110A	DAMS, DYKES AND WEIRS	20,718,888	2,961,716	6,598,928	(3,637,212)	(122.81)	25.2	(144,334)	
1110B	POWERHOUSE	6,054,784	1,158,338	2,161,160	(1,002,822)	(86.57)	25.2	(39,795)	
1110C	POWERHOUSE RENOVATIONS	1,897,782	76,601	119,782	(43,181)	(56.37)	25.2	(1,714)	
1110D	SPILLWAY - ORIGINAL	7,797,851	4,142,953	2,809,584	1,333,369	32.18	1.0	1,333,369	
1110E	WATER CONTROL SYSTEMS	4,466,812	1,131,246	2,540,169	(1,408,923)	(124.55)	25.1	(56,132)	
1110F	ROADS AND SITE IMPROVEMENTS	1,055,707	82,786	94,281	(11,495)	(13.89)	24.7	(465)	
1110G	TURBINES AND GENERATORS	31,899,060	5,838,231	12,317,530	(6,479,299)	(110.98)	25.2	(257,115)	
1110H	GOVERNORS AND EXCITATION SYSTEM								*
1110L	LICENCE RENEWAL								*
1110P	A/C ELECTRICAL POWER SYSTEMS	7,759,986	1,162,100	2,390,470	(1,228,370)	(105.70)	25.1	(48,939)	
1110Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,037,485	142,401	252,040	(109,639)	(76.99)	20.2	(5,428)	
1110R	AUXILIARY STATION PROCESSES	5,357,425	739,885	1,169,630	(429,745)	(58.08)	23.9	(17,981)	
1110X	SUPPORT BUILDINGS	882,202	175,522	307,773	(132,251)	(75.35)	25.2	(5,248)	
1110W	SUPPORT BUILDING RENOVATIONS	347,164	78,612	143,680	(65,068)	(82.77)	16.2	(4,017)	
	TOTAL POINTE DU BOIS	**89,275,145**	**17,690,391**	**30,905,028**	**(13,214,637)**	**(74.70)**		**752,202**	
	POINTE DU BOIS - NEW								
1111A	DAMS, DYKES AND WEIRS								*
1111D	SPILLWAY								*
1111E	WATER CONTROL SYSTEMS								*
1111F	ROADS AND SITE IMPROVEMENTS								*
1111P	A/C ELECTRICAL POWER SYSTEMS								*
1111Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS								*
1111R	AUXILIARY STATION PROCESSES								*
1111X	SUPPORT BUILDINGS								*
1111W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL POINTE DU BOIS - NEW	**0**	**0**	**0**	**0**			**0**	
	SEVEN SISTERS								
1115A	DAMS, DYKES AND WEIRS	31,926,879	12,183,632	16,705,443	(4,521,811)	(37.11)	55.3	(81,769)	
1115B	POWERHOUSE	13,653,945	6,323,769	8,791,628	(2,467,859)	(39.03)	53.9	(45,786)	
1115C	POWERHOUSE RENOVATIONS	578,473	26,614	47,350	(20,736)	(77.92)	38.2	(543)	
1115D	SPILLWAY	2,940,065	1,408,606	1,738,916	(330,310)	(23.45)	49.7	(6,646)	
1115E	WATER CONTROL SYSTEMS	4,520,291	1,918,333	3,169,768	(1,251,435)	(65.24)	48.9	(25,592)	
1115F	ROADS AND SITE IMPROVEMENTS	205,641	109,726	157,505	(47,779)	(43.54)	41.7	(1,146)	
1115G	TURBINES AND GENERATORS	54,449,323	13,057,858	16,740,788	(3,682,930)	(28.20)	46.1	(79,890)	
1115H	GOVERNORS AND EXCITATION SYSTEM	290,552	25,941	29,305	(3,364)	(12.97)	45.8	(73)	
1115L	LICENCE RENEWAL								*
1115P	A/C ELECTRICAL POWER SYSTEMS	11,924,230	4,002,116	5,724,619	(1,722,503)	(43.04)	40.5	(42,531)	
1115Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	4,960,007	2,283,590	2,975,298	(691,708)	(30.29)	17.3	(39,983)	
1115R	AUXILIARY STATION PROCESSES	8,512,853	2,050,455	3,464,996	(1,414,541)	(68.99)	40.0	(35,364)	
1115X	SUPPORT BUILDINGS	608,294	138,352	204,918	(66,566)	(48.11)	48.6	(1,370)	
1115W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL SEVEN SISTERS	**134,570,553**	**43,528,992**	**59,750,533**	**(16,221,541)**	**(37.27)**		**(360,692)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE		PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
					AMOUNT	PERCENT			
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	SLAVE FALLS								
1120A	DAMS, DYKES AND WEIRS	954,684	104,633	119,419	(14,786)	(14.13)	57.0	(259)	
1120B	POWERHOUSE	45,692,194	7,616,832	8,824,065	(1,207,233)	(15.85)	56.9	(21,217)	
1120C	POWERHOUSE RENOVATIONS								*
1120D	SPILLWAY	1,241,273	125,597	146,272	(20,675)	(16.46)	53.8	(384)	
1120E	WATER CONTROL SYSTEMS	318,933	40,746	56,956	(16,210)	(39.78)	52.0	(312)	
1120F	ROADS AND SITE IMPROVEMENTS	37,971,797	2,572,815	2,320,038	252,777	9.82	45.3	5,580	
1120G	TURBINES AND GENERATORS	12,246,529	2,352,878	2,622,376	(269,498)	(11.45)	46.3	(5,821)	
1120H	GOVERNORS AND EXCITATION SYSTEM	336,652	17,051	20,980	(3,929)	(23.04)	46.9	(84)	
1120L	LICENCE RENEWAL								*
1120P	A/C ELECTRICAL POWER SYSTEMS	21,631,850	3,133,686	3,766,359	(632,673)	(20.19)	46.2	(13,694)	
1120Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	4,446,295	576,938	614,152	(37,214)	(6.45)	21.8	(1,707)	
1120R	AUXILIARY STATION PROCESSES	5,288,154	405,488	410,993	(5,505)	(1.36)	43.6	(126)	
1120X	SUPPORT BUILDINGS	3,306,577	629,575	391,664	237,911	37.79	48.8	4,875	
1120W	SUPPORT BUILDING RENOVATIONS								
	TOTAL SLAVE FALLS	**133,434,938**	**17,576,239**	**19,293,273**	**(1,717,034)**	**(9.77)**		**(33,149)**	
	PINE FALLS								
1125A	DAMS, DYKES AND WEIRS	18,301,512	2,765,770	3,373,554	(607,784)	(21.98)	74.6	(8,147)	
1125B	POWERHOUSE	10,060,843	4,688,152	5,899,390	(1,211,238)	(25.84)	62.7	(19,318)	
1125C	POWERHOUSE RENOVATIONS	121,809	4,568	8,933	(4,365)	(95.55)	38.5	(113)	
1125D	SPILLWAY	93,376	7,523	9,221	(1,698)	(22.57)	66.9	(25)	
1125E	WATER CONTROL SYSTEMS	3,660,833	1,761,414	2,674,651	(913,237)	(51.85)	49.1	(18,600)	
1125F	ROADS AND SITE IMPROVEMENTS	1,180,058	928,484	1,213,586	(285,102)	(30.71)	10.7	0	***
1125G	TURBINES AND GENERATORS	9,318,154	5,228,650	6,336,912	(1,108,262)	(21.20)	35.5	(31,219)	
1125H	GOVERNORS AND EXCITATION SYSTEM								*
1125L	LICENCE RENEWAL								*
1125P	A/C ELECTRICAL POWER SYSTEMS	5,096,978	1,987,780	2,569,620	(581,840)	(29.27)	44.6	(13,046)	
1125Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	3,881,573	1,208,205	1,486,418	(278,213)	(23.03)	18.4	(15,120)	
1125R	AUXILIARY STATION PROCESSES	3,976,778	1,298,046	2,058,171	(760,125)	(58.56)	38.0	(20,003)	
1125X	SUPPORT BUILDINGS	336,412	101,289	122,122	(20,833)	(20.57)	45.4	(459)	
1125W	SUPPORT BUILDING RENOVATIONS								*
1125Z	COMMUNITY DEVELOPMENT COSTS ***	26,531,770	1,467,298	1,457,155	10,143	0.69	73.7		**
	TOTAL PINE FALLS	**82,560,097**	**21,447,179**	**27,209,733**	**(5,762,554)**	**(26.87)**		**(126,050)**	
	MCARTHUR FALLS								
1130A	DAMS, DYKES AND WEIRS	6,837,356	1,550,621	1,881,776	(331,155)	(21.36)	74.7	(4,433)	
1130B	POWERHOUSE	9,358,105	4,316,438	5,321,399	(1,004,961)	(23.28)	64.2	(15,654)	
1130C	POWERHOUSE RENOVATIONS	405,461	15,205	29,734	(14,529)	(95.55)	38.5	(377)	
1130D	SPILLWAY	2,417,504	1,527,132	1,815,242	(288,110)	(18.87)	30.0	(9,604)	
1130E	WATER CONTROL SYSTEMS	11,703,203	3,839,738	5,994,290	(2,154,552)	(56.11)	46.7	(46,136)	
1130F	ROADS AND SITE IMPROVEMENTS	235,262	116,830	146,060	(29,230)	(25.02)	30.2	(968)	
1130G	TURBINES AND GENERATORS	5,379,618	4,066,862	4,887,739	(820,877)	(20.18)	21.7	(37,828)	
1130H	GOVERNORS AND EXCITATION SYSTEM	119,315	39,731	48,419	(8,688)	(21.87)	33.6	(259)	
1130L	LICENCE RENEWAL								*
1130P	A/C ELECTRICAL POWER SYSTEMS	2,521,761	1,579,060	1,995,628	(416,568)	(26.38)	37.1	(11,228)	
1130Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,275,876	777,558	948,698	(171,140)	(22.01)	15.8	(10,832)	
1130R	AUXILIARY STATION PROCESSES	3,616,031	1,164,334	1,807,227	(642,893)	(55.22)	38.6	(16,655)	
1130X	SUPPORT BUILDINGS								*
1130W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL MCARTHUR FALLS	**43,869,489**	**18,993,509**	**24,876,211**	**(5,882,702)**	**(30.97)**		**(153,974)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE		PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
					AMOUNT	PERCENT			
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	KELSEY								
1135A	DAMS, DYKES AND WEIRS	9,296,418	2,359,656	1,995,524	364,132	15.43	78.0	4,668	
1135B	POWERHOUSE	71,294,313	12,628,178	10,733,548	1,894,630	15.00	80.1	23,653	
1135C	POWERHOUSE RENOVATIONS								*
1135D	SPILLWAY	7,196,926	3,277,791	2,682,256	595,535	18.17	41.3	14,420	
1135E	WATER CONTROL SYSTEMS	35,342,564	4,913,149	5,265,558	(352,409)	(7.17)	56.8	(6,204)	
1135F	ROADS AND SITE IMPROVEMENTS	12,310,412	3,823,937	3,327,740	496,197	12.98	31.2	15,904	
1135G	TURBINES AND GENERATORS	146,383,857	11,267,255	7,088,935	4,178,320	37.08	54.6	76,526	
1135H	GOVERNORS AND EXCITATION SYSTEM	6,948,606	423,017	299,117	123,900	29.29	46.9	2,642	
1135L	LICENCE RENEWAL								*
1135P	A/C ELECTRICAL POWER SYSTEMS	40,494,515	3,562,213	1,709,859	1,852,354	52.00	48.7	38,036	
1135Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	13,650,816	3,112,163	2,694,420	417,743	13.42	18.6	22,459	
1135R	AUXILIARY STATION PROCESSES	9,929,302	2,638,185	2,947,898	(309,713)	(11.74)	37.3	(8,303)	
1135X	SUPPORT BUILDINGS	13,448,502	2,387,025	1,989,351	397,674	16.66	52.8	7,532	
1135W	SUPPORT BUILDING RENOVATIONS	1,598,817	138,067	303,374	(165,307)	(119.73)	18.3	(9,033)	
	TOTAL KELSEY	**367,895,048**	**50,530,636**	**41,037,582**	**9,493,054**	**18.79**		**182,299**	
	GRAND RAPIDS								
1140A	DAMS, DYKES AND WEIRS	56,613,946	18,523,568	22,287,282	(3,763,714)	(20.32)	69.9	(53,844)	
1140B	POWERHOUSE	24,506,522	9,668,911	11,674,816	(2,005,905)	(20.75)	67.8	(29,586)	
1140C	POWERHOUSE RENOVATIONS	31,603	2,245	4,823	(2,578)	(114.84)	37.7	(68)	
1140D	SPILLWAY	5,451,760	2,868,946	3,370,471	(501,525)	(17.48)	38.0	(13,198)	
1140E	WATER CONTROL SYSTEMS	15,982,492	9,093,160	13,943,141	(4,849,981)	(53.34)	51.7	(93,810)	
1140F	ROADS AND SITE IMPROVEMENTS	2,581,475	1,859,788	2,275,494	(415,706)	(22.35)	21.0	(19,796)	
1140G	TURBINES AND GENERATORS	113,213,625	32,177,991	36,013,270	(3,835,279)	(11.92)	43.5	(88,167)	
1140H	GOVERNORS AND EXCITATION SYSTEM	1,922,915	66,684	65,897	787	1.18	48.3	16	
1140L	LICENCE RENEWAL	83,122,204	4,106,639	4,023,652	82,987	2.02	47.5		**
1140P	A/C ELECTRICAL POWER SYSTEMS	8,240,545	3,216,926	4,032,021	(815,095)	(25.34)	39.9	(20,428)	
1140Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	4,690,245	3,376,647	4,000,352	(623,705)	(18.47)	13.2	(47,250)	
1140R	AUXILIARY STATION PROCESSES	12,334,108	2,107,346	3,299,269	(1,191,923)	(56.56)	43.3	(27,527)	
1140X	SUPPORT BUILDINGS	8,700,819	2,822,706	3,123,329	(300,623)	(10.65)	44.4	(6,771)	
1140W	SUPPORT BUILDING RENOVATIONS	6,828,234	1,130,282	1,052,948	77,334	6.84	16.5		**
1140Z	COMMUNITY DEVELOPMENT COSTS ***	135,205,073	17,970,822	23,917,914	(5,947,092)	(33.09)	68.7	(86,566)	
	TOTAL GRAND RAPIDS	**479,425,566**	**108,992,661**	**133,084,678**	**(24,092,017)**	**(22.10)**		**(486,996)**	
	KETTLE								
1145A	DAMS, DYKES AND WEIRS	45,280,663	15,326,102	18,812,620	(3,486,518)	(22.75)	79.6	(43,801)	
1145B	POWERHOUSE	146,313,138	49,043,758	60,221,797	(11,178,039)	(22.79)	79.8	(140,076)	
1145C	POWERHOUSE RENOVATIONS								*
1145D	SPILLWAY	25,406,960	12,131,823	14,521,245	(2,389,422)	(19.70)	41.8	(57,163)	
1145E	WATER CONTROL SYSTEMS	19,033,816	10,454,029	16,006,736	(5,552,707)	(53.12)	39.8	(139,515)	
1145F	ROADS AND SITE IMPROVEMENTS	556,723	31,187	33,226	(2,039)	(6.54)	47.2	(43)	
1145G	TURBINES AND GENERATORS	99,163,384	40,141,360	42,015,133	(1,873,773)	(4.67)	36.4	(51,477)	
1145H	GOVERNORS AND EXCITATION SYSTEM	6,930,643	2,532,763	2,924,493	(391,730)	(15.47)	36.4	(10,762)	
1145L	LICENCE RENEWAL								*
1145P	A/C ELECTRICAL POWER SYSTEMS	38,779,613	3,463,558	3,020,872	442,686	12.78	49.6	8,925	
1145Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	16,263,031	8,577,791	9,901,036	(1,323,245)	(15.43)	18.0	(73,514)	
1145R	AUXILIARY STATION PROCESSES	19,306,615	6,685,849	10,172,476	(3,486,627)	(52.15)	42.2	(82,622)	
1145X	SUPPORT BUILDINGS	2,456,258	108,766	41,873	66,893	61.50	60.8	1,100	
1145W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL KETTLE	**419,490,845**	**148,496,986**	**177,671,508**	**(29,174,522)**	**(19.65)**		**(588,947)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE		PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
					AMOUNT	PERCENT			
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	LAURIE RIVER								
1150A	DAMS, DYKES AND WEIRS	355,538	199,907	160,937	38,970	19.49	20.2	1,929	
1150B	POWERHOUSE	7,664,146	2,731,796	2,400,365	331,431	12.13	20.2	16,408	
1150C	POWERHOUSE RENOVATIONS								*
1150D	SPILLWAY	870,000	427,544	361,707	65,837	15.40	19.9	3,308	
1150E	WATER CONTROL SYSTEMS	458,033	217,335	181,641	35,694	16.42	20.0	1,785	
1150F	ROADS AND SITE IMPROVEMENTS	1,441,914	704,585	591,840	112,745	16.00	18.7	6,029	
1150G	TURBINES AND GENERATORS	4,603,136	1,370,721	1,250,829	119,892	8.75	20.1	5,965	
1150H	GOVERNORS AND EXCITATION SYSTEM	882,653	218,638	210,242	8,396	3.84	20.1	418	
1150L	LICENCE RENEWAL								*
1150P	A/C ELECTRICAL POWER SYSTEMS	1,441,945	642,178	548,644	93,534	14.57	19.8	4,724	
1150Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,220,047	800,210	723,194	77,016	9.62	7.6	10,134	
1150R	AUXILIARY STATION PROCESSES	308,504	141,990	125,709	16,281	11.47	18.6	875	
1150X	SUPPORT BUILDINGS	355,919	185,071	154,615	30,457	16.46	19.8	1,538	
1150W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL LAURIE RIVER	**19,601,835**	**7,639,975**	**6,709,722**	**930,253**	**12.18**		**53,113**	
	JENPEG								
1155A	DAMS, DYKES AND WEIRS	16,438,690	3,702,475	4,745,111	(1,042,636)	(28.16)	89.9	(11,598)	
1155B	POWERHOUSE	76,905,294	22,573,418	25,902,609	(3,329,191)	(14.75)	85.3	(39,029)	
1155C	POWERHOUSE RENOVATIONS	26,446	992	1,164	(172)	(17.30)	38.5	(5)	
1155D	SPILLWAY	14,942,733	6,314,994	7,090,366	(775,372)	(12.28)	46.2	(16,783)	
1155E	WATER CONTROL SYSTEMS	17,167,202	8,629,837	12,092,757	(3,462,920)	(40.13)	34.3	(100,960)	
1155F	ROADS AND SITE IMPROVEMENTS	1,563,205	768,626	899,601	(130,975)	(17.04)	26.3	(4,980)	
1155G	TURBINES AND GENERATORS	91,716,371	41,560,946	44,027,069	(2,466,123)	(5.93)	33.3	(74,058)	
1155H	GOVERNORS AND EXCITATION SYSTEM								*
1155L	LICENCE RENEWAL								*
1155P	A/C ELECTRICAL POWER SYSTEMS	21,641,608	12,063,440	14,316,375	(2,252,935)	(18.68)	25.8	(87,323)	
1155Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	3,606,713	2,227,060	2,537,369	(310,309)	(13.93)	10.4	(29,837)	
1155R	AUXILIARY STATION PROCESSES	13,685,752	3,733,735	5,581,430	(1,847,695)	(49.49)	40.5	(45,622)	
1155X	SUPPORT BUILDINGS	7,885,397	2,618,228	2,897,007	(278,779)	(10.65)	43.7	(6,379)	
1155W	SUPPORT BUILDING RENOVATIONS								
	TOTAL JENPEG	**265,579,412**	**104,193,751**	**120,090,857**	**(15,897,106)**	**(15.26)**		**(416,574)**	
	LAKE WINNIPEG REGULATION								
1160A	DAMS, DYKES AND WEIRS	110,416,014	28,193,027	37,195,119	(9,002,092)	(31.93)	93.6	(96,176)	
1160L	LICENCE RENEWAL	250,000	7,500	5,500	2,000	26.67	48.5	41	
1160Z	COMMUNITY DEVELOPMENT COSTS ***	436,787,857	83,190,304	89,681,066	(6,490,762)	(7.80)	69.0		**
	TOTAL LAKE WINNIPEG REGULATION	**547,453,871**	**111,390,831**	**126,881,685**	**(15,490,854)**	**(13.91)**		**(96,135)**	
	CHURCHILL RIVER DIVERSION								
1165A	DAMS, DYKES AND WEIRS	120,816,679	32,790,734	36,151,776	(3,361,042)	(10.25)	91.2	(36,854)	
1165D	SPILLWAY	59,622,870	24,089,613	26,015,124	(1,925,511)	(7.99)	47.8	(40,283)	
1165E	WATER CONTROL SYSTEMS	18,858,667	9,620,950	13,850,625	(4,229,675)	(43.96)	34.0	(124,402)	
1165F	ROADS AND SITE IMPROVEMENTS	7,284,036	4,328,765	4,896,073	(567,308)	(13.11)	20.8	(27,274)	
1165L	LICENCE RENEWAL								*
1165P	A/C ELECTRICAL POWER SYSTEMS	1,710,889	1,004,735	1,153,461	(148,726)	(14.80)	23.4	(6,356)	
1165Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,541,737	1,271,790	1,374,377	(102,587)	(8.07)	6.7	(15,311)	
1165R	AUXILIARY STATION PROCESSES	1,864,257	447,898	661,280	(213,382)	(47.64)	38.7	(5,514)	
1165X	SUPPORT BUILDINGS	79,309	8,981	9,018	(37)	(0.42)	57.6	(1)	
1165W	SUPPORT BUILDING RENOVATIONS								*
1165Z	COMMUNITY DEVELOPMENT COSTS ***	351,065,147	76,145,342	86,834,635	(10,689,293)	(14.04)	70.9	(150,766)	
	TOTAL CHURCHILL RIVER DIVERSION	**562,843,590**	**149,708,808**	**170,946,369**	**(21,237,561)**	**(14.19)**		**(406,760)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE AMOUNT	ACCUMULATED DEPRECIATION VARIANCE PERCENT	PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	LONG SPRUCE								
1170A	DAMS, DYKES AND WEIRS	65,392,344	18,536,660	21,155,780	(2,619,120)	(14.13)	86.2	(30,384)	
1170B	POWERHOUSE	143,800,935	41,166,815	46,995,513	(5,828,698)	(14.16)	86.0	(67,776)	
1170C	POWERHOUSE RENOVATIONS								*
1170D	SPILLWAY	42,273,617	17,453,266	19,485,540	(2,032,274)	(11.64)	47.0	(43,240)	
1170E	WATER CONTROL SYSTEMS	57,946,281	30,663,777	46,254,138	(15,590,361)	(50.84)	30.6	(509,489)	
1170F	ROADS AND SITE IMPROVEMENTS	1,376,630	677,511	790,381	(112,870)	(16.66)	26.7	(4,227)	
1170G	TURBINES AND GENERATORS	143,328,643	80,223,432	86,535,183	(6,311,751)	(7.87)	26.5	(238,179)	
1170H	GOVERNORS AND EXCITATION SYSTEM	145,844	30,510	34,739	(4,229)	(13.86)	39.5	(107)	
1170L	LICENCE RENEWAL								*
1170P	A/C ELECTRICAL POWER SYSTEMS	30,610,740	17,653,101	20,941,915	(3,288,814)	(18.63)	23.9	(137,607)	
1170Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	13,111,957	4,450,330	4,968,395	(518,065)	(11.64)	21.1	(24,553)	
1170R	AUXILIARY STATION PROCESSES	12,385,777	5,579,284	8,340,714	(2,761,430)	(49.49)	31.8	(86,837)	
1170X	SUPPORT BUILDINGS	160,484	26,527	29,547	(3,020)	(11.39)	54.3	(56)	
1170W	SUPPORT BUILDING RENOVATIONS	205,681	25,710	29,224	(3,514)	(13.67)	17.5	(201)	
	TOTAL LONG SPRUCE	**510,738,934**	**216,486,923**	**255,561,069**	**(39,074,146)**	**(18.05)**		**(1,142,656)**	
	LIMESTONE								
1175A	DAMS, DYKES AND WEIRS	33,287,049	6,217,511	6,948,969	(731,458)	(11.76)	98.3	(7,441)	
1175B	POWERHOUSE	461,590,745	85,890,023	96,169,680	(10,279,657)	(11.97)	98.4	(104,468)	
1175C	POWERHOUSE RENOVATIONS								*
1175D	SPILLWAY	201,416,380	54,741,751	60,573,556	(5,831,805)	(10.65)	58.3	(100,031)	
1175E	WATER CONTROL SYSTEMS	116,325,934	40,188,073	59,122,248	(18,934,175)	(47.11)	42.6	(444,464)	
1175F	ROADS AND SITE IMPROVEMENTS	17,384,603	7,272,202	8,304,641	(1,032,439)	(14.20)	29.1	(35,479)	
1175G	TURBINES AND GENERATORS	404,329,629	151,420,133	157,214,379	(5,794,246)	(3.83)	37.5	(154,513)	
1175H	GOVERNORS AND EXCITATION SYSTEM	16,598,509	7,343,445	8,287,095	(943,650)	(12.85)	27.9	(33,823)	
1175L	LICENCE RENEWAL								*
1175P	A/C ELECTRICAL POWER SYSTEMS	144,588,941	58,703,650	69,759,355	(11,055,705)	(18.83)	32.7	(338,095)	
1175Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	8,782,898	5,400,163	6,142,216	(742,053)	(13.74)	10.1	(73,471)	
1175R	AUXILIARY STATION PROCESSES	36,388,654	12,924,955	19,242,169	(6,317,214)	(48.88)	32.6	(193,780)	
1175X	SUPPORT BUILDINGS	5,707,366	1,840,461	1,995,437	(154,976)	(8.42)	44.1	(3,514)	
1175W	SUPPORT BUILDING RENOVATIONS	652,644	113,017	124,711	(11,694)	(10.35)	16.5	(709)	
	TOTAL LIMESTONE	**1,447,053,352**	**432,055,384**	**493,884,457**	**(61,829,073)**	**(14.31)**		**(1,489,787)**	
	WUSKWATIM								
1180A	DAMS, DYKES AND WEIRS	4,694,366	37,165	66,472	(29,307)	(78.86)	119.7	(245)	
1180B	POWERHOUSE	18,227,672	159,050	256,744	(97,694)	(61.42)	119.7	(816)	
1180C	POWERHOUSE RENOVATIONS								*
1180D	SPILLWAY	2,875,828	40,037	68,024	(27,987)	(69.90)	78.9	(355)	
1180E	WATER CONTROL SYSTEMS	3,087,285	66,836	109,857	(43,021)	(64.37)	63.6	(676)	
1180F	ROADS AND SITE IMPROVEMENTS	2,495,203	73,858	88,897	(15,039)	(20.36)	48.5	(310)	
1180G	TURBINES AND GENERATORS	4,652,074	86,803	127,378	(40,575)	(46.74)	58.9	(689)	
1180H	GOVERNORS AND EXCITATION SYSTEM	169,166	4,766	5,989	(1,223)	(25.65)	48.6	(25)	
1180P	A/C ELECTRICAL POWER SYSTEMS	1,691,663	46,132	59,318	(13,186)	(28.58)	53.5	(247)	
1180Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,141,873	41,866	89,058	(47,192)	(112.72)	24.1	(1,958)	
1180R	AUXILIARY STATION PROCESSES	2,029,996	22,379	90,536	(68,157)	(304.56)	49.5	(1,377)	
1180X	SUPPORT BUILDINGS	930,415	19,982	25,301	(5,319)	(26.62)	63.6	(84)	
1180W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL WUSKWATIM	**41,995,540**	**598,874**	**987,574**	**(388,700)**	**(64.91)**		**(6,782)**	
	INFRASTRUCTURE SUPPORTING GENERATION								
1199F	PROVINCIAL ROADS	25,412,921	14,506,219	14,398,428	107,791	0.74	21.4	5,037	
1199V	TOWN SITE BUILDINGS	82,260,635	25,954,361	22,775,639	3,178,722	12.25	36.4	87,328	
1199W	TOWN SITE BUILDING RENOVATIONS	27,027,620	7,664,403	7,474,145	190,258	2.48	14.2		*
1199Y	TOWN SITE OTHER INFRASTRUCTURE	29,155,301	9,313,797	4,725,638	4,588,159	49.26	28.4	161,555	
	TOTAL INFRASTRUCTURE SUPPORTING GENERATION	**163,856,477**	**57,438,780**	**49,373,849**	**8,064,931**	**14.04**		**253,919**	
	TOTAL HYDRAULIC GENERATION	**5,445,593,386**	**1,552,403,873**	**1,794,265,811**	**(241,861,938)**	**(15.58)**		**(4,401,596)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE AMOUNT	ACCUMULATED DEPRECIATION VARIANCE PERCENT	PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	THERMAL GENERATION								
	BRANDON UNIT 5 (COAL)								
1205B	POWERHOUSE	11,729,518	9,436,534	8,961,429	475,105	5.03	5.2	91,366	
1205C	POWERHOUSE RENOVATIONS	396,538	88,119	66,090	22,029	25.00	5.2	4,236	
1205F	ROADS AND SITE IMPROVEMENTS	4,018,549	3,080,059	2,901,743	178,316	5.79	5.2	34,292	
1205G	TURBINES AND GENERATORS	19,611,168	14,470,076	13,747,137	722,939	5.00	5.2	139,027	
1205H	GOVERNORS AND EXCITATION SYSTEM	2,343,861	1,721,050	1,667,938	53,112	3.09	5.2	10,214	
1205J	STEAM GENERATOR AND AUXILIARIES	14,655,599	11,729,865	11,583,564	146,301	1.25	5.2	28,135	
1205L	LICENCE RENEWAL	2,198,654	488,585	484,127	4,458	0.91	5.2		**
1205P	A/C ELECTRICAL POWER SYSTEMS	8,026,175	6,423,380	6,105,036	318,344	4.96	5.1	62,420	
1205Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	25,758,061	20,491,436	20,804,835	(313,399)	(1.53)	4.4	(71,227)	
1205R	AUXILIARY STATION PROCESSES	47,355,066	36,324,333	34,357,132	1,967,201	5.42	5.1	385,726	
1205X	SUPPORT BUILDINGS	7,837,127	5,784,694	5,386,420	398,274	6.88	5.2	76,591	
1205W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL BRANDON UNIT 5 (COAL)	**143,930,317**	**110,038,131**	**106,065,451**	**3,972,680**	**3.61**		**760,780**	
	BRANDON UNITS 6 AND 7								
1210B	POWERHOUSE	14,925,029	2,288,300	3,326,364	(1,038,064)	(45.36)	63.5	(16,348)	
1210C	POWERHOUSE RENOVATIONS	144,571	6,071	8,409	(2,338)	(38.52)	38.3	(61)	
1210G	TURBINES AND GENERATORS	11,222,428	1,963,447	2,949,523	(986,076)	(50.22)	49.6	(19,881)	
1210H	GOVERNORS AND EXCITATION SYSTEM								*
1210K	COMBUSTION TURBINE	143,303,747	59,924,696	76,984,957	(17,060,261)	(28.47)	14.6	(1,168,511)	
1210L	LICENCE RENEWAL								*
1210M	COMBUSTION TURBINE OVERHAULS								*
1210P	A/C ELECTRICAL POWER SYSTEMS	6,346,535	1,297,185	1,768,122	(470,937)	(36.30)	43.8	(10,752)	
1210Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	1,295,814	303,957	304,113	(156)	(0.05)	19.1	(8)	
1210R	AUXILIARY STATION PROCESSES	10,639,560	2,102,589	3,546,367	(1,443,778)	(68.67)	40.1	(36,004)	
	TOTAL BRANDON UNITS 6 AND 7	**187,877,685**	**67,886,245**	**88,887,855**	**(21,001,610)**	**(30.94)**		**(1,251,565)**	
	SELKIRK								
1215B	POWERHOUSE	6,808,812	3,992,068	6,717,712	(2,725,644)	(68.28)	69.8	(39,049)	
1215C	POWERHOUSE RENOVATIONS	451,038	16,132	25,253	(9,121)	(56.54)	38.6	(236)	
1215F	ROADS AND SITE IMPROVEMENTS	1,630,443	753,812	1,158,719	(404,907)	(53.71)	37.5	(10,798)	
1215G	TURBINES AND GENERATORS	22,750,003	8,291,011	14,850,769	(6,559,758)	(79.12)	49.7	(131,987)	
1215H	GOVERNORS AND EXCITATION SYSTEM	17,307	7,321	11,634	(4,313)	(58.91)	28.8	(150)	
1215J	STEAM GENERATOR AND AUXILIARIES	51,721,352	12,649,706	17,133,762	(4,484,056)	(35.45)	49.5	(90,587)	
1215L	LICENCE RENEWAL								*
1215P	A/C ELECTRICAL POWER SYSTEMS	3,171,700	1,961,181	3,164,610	(1,203,429)	(61.36)	49.9	(24,117)	
1215Q	INSTRUMENTATION, CONTROL AND D/C SYSTEMS	5,286,066	2,985,151	4,396,109	(1,410,958)	(47.27)	14.6	(96,641)	
1215R	AUXILIARY STATION PROCESSES	14,897,376	5,405,418	10,468,362	(5,062,944)	(93.66)	41.8	(121,123)	
1215X	SUPPORT BUILDINGS	1,033,229	480,033	737,298	(257,265)	(53.59)	52.2	(4,928)	
1215W	SUPPORT BUILDING RENOVATIONS								*
	TOTAL SELKIRK	**107,767,327**	**36,541,833**	**58,664,226**	**(22,122,393)**	**(60.54)**		**(519,616)**	
	TOTAL THERMAL GENERATION	**439,575,329**	**214,466,209**	**253,617,532**	**(39,151,323)**	**(18.26)**		**(1,010,401)**	
	TOTAL GENERATION	**5,885,168,715**	**1,766,870,082**	**2,047,883,343**	**(281,013,261)**	**(15.90)**		**(5,411,997)**	
	DIESEL GENERATION								
1300B	BUILDINGS	8,263,526	4,094,758	5,435,792	(1,341,034)	(32.75)	13.3	(100,830)	
1300C	BUILDING RENOVATIONS	17,929	9,505	9,086	419	4.41	7.0		**
1300M	ENGINES AND GENERATORS - OVERHAULS	1,998,461	1,192,879	2,092,372	(899,493)	(75.41)	1.6	0	**
1300N	ENGINES AND GENERATORS	16,774,955	7,386,263	13,042,057	(5,655,794)	(76.57)	14.6	(387,383)	
1300Q	ACCESSORY STATION EQUIPMENT	15,892,750	7,214,771	11,319,359	(4,104,588)	(56.89)	15.9	(258,150)	
1300T	FUEL STORAGE AND HANDLING	5,083,046	2,121,761	3,724,492	(1,602,731)	(75.54)	16.5	(97,135)	
	TOTAL DIESEL GENERATION	**48,030,666**	**22,019,937**	**35,623,157**	**(13,603,220)**	**(61.78)**		**(843,498)**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE		PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
					AMOUNT	PERCENT			
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	TRANSMISSION								
2000F	ROADS, TRAILS AND BRIDGES	10,686,118	1,383,976	1,558,816	(174,840)	(12.63)	43.9	(3,983)	
2000G	METAL TOWERS AND CONCRETE POLES	481,955,524	110,134,791	117,832,337	(7,697,546)	(6.99)	66.1	(116,453)	
2000J	POLES AND FIXTURES	117,066,069	34,742,269	45,781,675	(11,039,406)	(31.78)	41.1	(268,599)	
2000K	GROUND LINE TREATMENT	2,297,990	997,647	929,181	68,466	6.86	5.5		**
2000L	OVERHEAD CONDUCTOR AND DEVICES	349,810,506	101,020,885	151,380,725	(50,359,840)	(49.85)	61.9	(813,568)	
2000M	UNDERGROUND CABLE AND DEVICES	960,535	646,820	731,355	(84,535)	(13.07)	14.8	(5,712)	
2000Z	COMMUNITY DEVELOPMENT COSTS ***	17,625,510	365,319	418,852	(53,533)	(14.65)	77.4	(692)	
	TOTAL TRANSMISSION	**980,402,254**	**249,291,707**	**318,632,940**	**(69,341,233)**	**(27.82)**		**(1,209,006)**	
	SUBSTATIONS								
3000B	BUILDINGS	167,465,733	48,477,359	62,935,699	(14,458,340)	(29.82)	50.5	(286,304)	
3000C	BUILDING RENOVATIONS	16,023,446	2,702,989	2,768,723	(65,734)	(2.43)	16.6		**
3000F	ROADS, STEEL STRUCTURES AND CIVIL SITE WORKS	301,966,571	117,705,992	155,273,917	(37,567,925)	(31.92)	38.0	(988,630)	
3000J	POLES AND FIXTURES	8,976,505	2,155,532	2,862,084	(706,552)	(32.78)	34.9	(20,245)	
3100R	POWER TRANSFORMERS	346,530,004	104,816,160	104,341,044	475,116	0.45	34.8	13,653	
3100S	OTHER TRANSFORMERS	112,490,470	33,562,969	39,113,400	(5,550,431)	(16.54)	35.9	(154,608)	
3100T	INTERRUPTING EQUIPMENT	210,045,708	74,281,707	71,133,091	3,148,616	4.24	31.7	99,325	
3100U	OTHER STATION EQUIPMENT	553,640,228	191,895,709	233,531,016	(41,635,307)	(21.70)	32.2	(1,293,022)	
3100V	ELECTRONIC EQUIPMENT AND BATTERIES	222,763,291	71,386,244	104,250,748	(32,864,504)	(46.04)	20.7	(1,587,657)	
3200M	SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS	122,026,806	50,592,906	56,949,947	(6,357,041)	(12.57)	38.4	(165,548)	
3200N	SYNCHRONOUS CONDENSER OVERHAULS	47,815,173	18,720,329	21,926,203	(3,205,874)	(17.13)	10.5	(305,321)	
3200P	HVDC CONVERTER EQUIPMENT	434,607,924	174,676,406	252,425,453	(77,749,047)	(44.51)	20.8	(3,737,935)	
3200S	HVDC SERIALIZED EQUIPMENT	213,665,609	132,945,221	179,848,253	(46,903,032)	(35.28)	23.8	(1,970,716)	
3200U	HVDC ACCESSORY STATION EQUIPMENT	169,254,248	54,074,661	71,820,161	(17,745,500)	(32.82)	27.7	(640,632)	
3200V	HVDC ELECTRONIC EQUIPMENT AND BATTERIES	47,913,305	27,749,673	45,452,340	(17,702,667)	(63.79)	24.5	(722,558)	
	TOTAL SUBSTATIONS	**2,975,185,020**	**1,105,743,857**	**1,404,632,079**	**(298,888,222)**	**(27.03)**		**(11,760,197)**	
	DISTRIBUTION								
4000A	CONCRETE DUCTLINE AND MANHOLES	70,181,420	15,756,006	17,333,603	(1,577,597)	(10.01)	36.7	(43,020)	
4000C	CONCRETE DUCTLINE AND MANHOLE REFURBISHMENT	7,368,727	820,721	549,371	271,350	33.06	26.6	10,201	
4000G	METAL TOWERS	10,853,698	1,371,417	1,635,676	(264,259)	(19.27)	53.1	(4,977)	
4000J	POLES AND FIXTURES	668,956,088	170,409,014	291,618,371	(121,209,357)	(71.13)	52.4	(2,313,156)	
4000K	GROUND LINE TREATMENT	34,478,470	13,877,134	16,410,452	(2,533,318)	(18.26)	7.8	(324,784)	
4000L	OVERHEAD CONDUCTOR AND DEVICES	717,203,040	190,096,989	282,631,667	(92,534,678)	(48.68)	47.6	(1,944,006)	
4000M	UNDERGROUND CABLE AND DEVICES - 66 KV	27,891,495	3,530,151	4,145,427	(615,276)	(17.43)	52.5	(11,720)	
4000N	UNDERGROUND CABLE AND DEVICES - PRIMARY	374,567,850	64,644,518	78,442,229	(13,797,711)	(21.34)	50.3	(274,308)	
4000P	UNDERGROUND CABLE AND DEVICES - SECONDARY	249,788,828	67,913,170	80,594,930	(12,681,760)	(18.67)	33.1	(383,135)	
4000Q	SERIALIZED EQUIPMENT - OVERHEAD	218,784,786	58,471,162	88,347,900	(29,876,738)	(51.10)	36.1	(827,611)	
4000R	DSC - HIGH VOLTAGE TRANSFORMERS	25,320,598	1,658,985	1,413,120	245,865	14.82	46.7	5,265	
4000S	SERIALIZED EQUIPMENT - UNDERGROUND	213,763,677	59,313,491	77,018,038	(17,704,547)	(29.85)	32.5	(544,755)	
4000V	ELECTRONIC EQUIPMENT	739,972	152,768	121,945	30,823	20.18	7.9	3,902	
4000W	SERVICES	73,127,688	27,455,930	58,331,604	(30,875,674)	(112.46)	31.1	(992,787)	
4000X	STREET LIGHTING	182,346,807	73,825,763	84,563,957	(10,738,194)	(14.55)	29.6	(362,777)	
	TOTAL DISTRIBUTION	**2,875,373,143**	**749,297,219**	**1,083,158,289**	**(333,861,070)**	**(44.56)**		**(8,007,667)**	
	METERS								
4900V	METERS - ELECTRONIC	18,913,638	6,304,334	1,405,387	4,898,947	77.71	8.8	556,699	
4900Y	METERS - ANALOG	19,622,056	11,265,127	11,286,557	(21,430)	(0.19)	11.1	(1,931)	
4900W	METERING EXCHANGES	33,545,519	13,908,623	13,913,673	(5,050)	(0.04)	8.8		**
4900Z	METERING TRANSFORMERS	11,244,938	3,012,865	3,892,303	(879,438)	(29.19)	38.7	(22,725)	
	TOTAL METERS	**83,326,152**	**34,490,949**	**30,497,921**	**3,993,028**	**11.58**		**532,043**	

MANITOBA HYDRO

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE		PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
					AMOUNT	PERCENT			
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	COMMUNICATION								
5000B	BUILDINGS	6,955,504	2,165,736	2,947,372	(781,636)	(36.09)	46.9	(16,666)	
5000C	BUILDING RENOVATIONS	3,486,352	1,243,551	1,440,484	(196,933)	(15.84)	13.6	(14,480)	
5000D	BUILDING - SYSTEM CONTROL CENTRE	15,857,686	3,263,340	3,525,976	(262,636)	(8.05)	59.6	(4,407)	
5000G	COMMUNICATION TOWERS	12,362,119	3,538,441	3,350,680	187,761	5.31	42.6	4,408	
5000H	FIBRE OPTIC AND METALLIC CABLE	131,559,381	32,888,279	29,139,100	3,749,179	11.40	26.2	143,098	
5000J	CARRIER EQUIPMENT	125,921,733	51,244,346	61,816,520	(10,572,174)	(20.63)	12.7	(832,455)	
5000K	OPERATIONAL IT EQUIPMENT	4,821,768	2,484,791	2,691,962	(207,171)	(8.34)	2.7		**
5000M	MOBILE RADIO, TELEPHONE AND VIDEO CONFERENCING	8,862,073	5,464,791	4,438,690	1,026,101	18.78	2.8	366,465	
5000N	OPERATIONAL DATA NETWORK	18,817,356	7,986,904	8,136,535	(149,631)	(1.87)	4.7		**
5000R	POWER SYSTEM CONTROL	14,264,753	6,390,903	8,431,858	(2,040,955)	(31.94)	11.1	(183,870)	
	TOTAL COMMUNICATION	**342,908,725**	**116,671,082**	**125,919,176**	**(9,248,094)**	**(7.93)**		**(537,907)**	
	MOTOR VEHICLES								
6000E	PASSENGER VEHICLES	1,145,330	471,876	487,352	(15,476)	(3.28)	5.5	(2,814)	
6000F	LIGHT TRUCKS	69,461,644	28,139,845	29,754,753	(1,614,908)	(5.74)	6.9	(234,045)	
6000G	HEAVY TRUCKS	73,416,587	27,603,941	29,435,263	(1,831,322)	(6.63)	11.6	(157,873)	
6000H	CONSTRUCTION EQUIPMENT	21,130,532	5,649,098	8,256,831	(2,607,733)	(46.16)	17.4	(149,870)	
6000I	LARGE SOFT-TRACK EQUIPMENT	15,620,474	3,468,440	4,072,604	(604,164)	(17.42)	20.6	(29,328)	
6000J	TRAILERS	18,887,911	4,304,614	4,536,914	(232,300)	(5.40)	25.8	(9,004)	
6000K	MISCELLANEOUS VEHICLES	6,114,461	1,529,829	2,553,455	(1,023,626)	(66.91)	10.2	(100,356)	
	TOTAL MOTOR VEHICLES	**205,776,939**	**71,167,643**	**79,097,171**	**(7,929,528)**	**(11.14)**		**(683,288)**	
	BUILDINGS								
8000B	BUILDINGS - GENERAL	103,251,540	29,602,068	29,525,141	76,928	0.26	46.3	1,662	
8000C	BUILDING RENOVATIONS	37,401,024	12,021,426	10,936,091	1,085,335	9.03	13.3		**
8000D	BUILDING - 360 PORTAGE - CIVIL	202,792,903	10,946,359	10,816,316	130,043	1.19	94.6	1,375	
8000E	BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL	77,339,398	8,759,755	8,539,762	219,993	2.51	39.9	5,514	
8000F	LEASEHOLD IMPROVEMENTS - SONY PLACE	1,007,453	631,159	617,462	13,698	2.17	3.7		**
	TOTAL BUILDINGS	**421,792,317**	**61,960,767**	**60,434,771**	**1,525,996**	**2.46**		**8,550**	
	GENERAL EQUIPMENT								
9000H	TOOLS, SHOP AND GARAGE EQUIPMENT	87,537,592	42,845,748	39,778,073	3,067,676	7.16	7.3		**
9000K	COMPUTER EQUIPMENT	49,555,418	23,823,338	25,481,868	(1,658,530)	(6.96)	3.0		**
9000L	OFFICE FURNITURE AND EQUIPMENT	26,318,137	9,159,013	9,724,793	(565,780)	(6.18)	13.3		**
9000M	HOT WATER TANKS	881,848	643,731	636,218	7,513	1.17	1.9		**
	TOTAL GENERAL EQUIPMENT	**164,292,994**	**76,471,830**	**75,620,951**	**850,879**	**1.11**		**0**	
	EASEMENTS								
A100A	EASEMENTS	66,021,103	12,551,916	12,901,908	(349,992)	(2.79)	60.8		**
	TOTAL EASEMENTS	**66,021,103**	**12,551,916**	**12,901,908**	**(349,992)**	**(2.79)**		**0**	
	COMPUTER SOFTWARE AND DEVELOPMENT								
A200G	COMPUTER DEVELOPMENT - MAJOR SYSTEMS	111,692,382	67,182,098	68,946,077	(1,763,979)	(2.63)	4.7	(375,315)	
A200H	COMPUTER DEVELOPMENT - SMALL SYSTEMS	48,787,249	23,415,498	26,099,591	(2,684,093)	(11.46)	6.3	(426,046)	
A200J	COMPUTER SOFTWARE - GENERAL	6,701,454	3,603,877	3,490,469	113,409	3.15	2.5	0	**
A200K	COMPUTER SOFTWARE - COMMUNICATION/OPERATIONAL	4,652,481	2,407,134	1,659,404	747,730	31.06	2.2	339,877	
A200L	OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA	10,313,958	3,036,286	6,634,595	(3,598,309)	(118.51)	5.6	(642,555)	
	TOTAL COMPUTER SOFTWARE AND DEVELOPMENT	**182,147,524**	**99,644,893**	**106,830,136**	**(7,185,243)**	**(7.21)**		**(1,104,039)**	
	TOTAL MANITOBA HYDRO	**14,230,425,552**	**4,366,181,882**	**5,381,231,843**	**(1,015,049,961)**			**(29,017,007)**	

* The account has no balance as of March 31, 2014 and rate will be used on a go-forward basis for future additions.
** On amortized accounts any true-up of less than 10% is not considered significant.
*** True-up excluded as exisiting assets in account are fully depreciated.

MANITOBA HYDRO

TABLE 2A. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE AMOUNT	ACCUMULATED DEPRECIATION VARIANCE PERCENT	PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	WUSKWATIM POWER LIMITED PARTNERSHIP ("WPLP")								
	PROPERTY, PLANT AND EQUIPMENT								
	HYDRAULIC GENERATION								
1181A	WPLP - DAMS, DYKES AND WEIRS	148,498,470	1,830,986	2,094,830	(263,844)	(14.41)	119.4	(2,210)	
1181B	WPLP - POWERHOUSE	569,576,645	7,022,880	8,045,968	(1,023,088)	(14.57)	119.4	(8,569)	
1181C	WPLP - POWERHOUSE RENOVATIONS	0	0	0	0	0.00	0.0	0	*
1181D	WPLP - SPILLWAY	90,639,257	1,676,826	2,141,648	(464,822)	(27.72)	78.5	(5,921)	
1181E	WPLP - WATER CONTROL SYSTEMS	98,584,694	2,275,335	3,484,050	(1,208,715)	(53.12)	63.5	(19,035)	
1181F	WPLP - ROADS AND SITE IMPROVEMENTS	79,988,348	2,367,655	2,819,016	(451,361)	(19.06)	48.5	(9,306)	
1181G	WPLP - TURBINES AND GENERATORS	149,857,582	3,746,440	4,035,022	(288,582)	(7.70)	58.5	(4,933)	
1181H	WPLP - GOVERNORS AND EXCITATION SYSTEM	5,167,019	155,011	182,665	(27,654)	(17.84)	48.5	(570)	
1181P	WPLP - A/C ELECTRICAL POWER SYSTEMS	49,908,667	1,361,009	1,853,786	(492,777)	(36.21)	53.5	(9,211)	
1181Q	WPLP - INSTRUMENTATION, CONTROL AND D/C SYSTEMS	37,311,999	2,238,720	2,813,959	(575,239)	(25.69)	23.5	(24,478)	
1181R	WPLP - AUXILIARY STATION PROCESSES	66,497,960	1,795,445	2,869,313	(1,073,868)	(59.81)	48.6	(22,096)	
1181X	WPLP - SUPPORT BUILDINGS	29,258,457	675,285	794,301	(119,016)	(17.62)	63.5	(1,874)	
1181W	WPLP - SUPPORT BUILDING RENOVATIONS	0	0	0	0	0.00	0.0	0	*
1181Z	WPLP - OPERATIONAL EMPLOYMENT FUND	389,662	6,153	34,187	(28,034)	(455.62)	93.5	(300)	
	TOTAL GENERATION	**1,325,678,762**	**25,151,745**	**31,168,746**	**(6,017,001)**	**(23.92)**		**(108,503)**	
	SUBSTATIONS								
3081B	WPLP - BUILDINGS	326,268	7,530	7,829	(299)	(3.96)	63.5	(5)	
3081F	WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK	1,761,913	52,857	59,583	(6,726)	(12.72)	48.5	(139)	
3181R	WPLP - POWER TRANSFORMERS	4,482,057	110,259	163,394	(53,135)	(48.19)	48.8	(1,089)	
3181T	WPLP - INTERRUPTING EQUIPMENT	839,984	23,688	32,599	(8,911)	(37.62)	48.6	(183)	
3181U	WPLP - OTHER STATION EQUIPMENT	1,621,291	52,968	66,315	(13,347)	(25.20)	43.5	(307)	
3181V	WPLP - ELECTRONIC EQUIPMENT AND BATTERIES	1,065,222	57,522	81,652	(24,130)	(41.95)	23.6	(1,022)	
	TOTAL SUBSTATIONS	**10,096,734**	**304,824**	**411,371**	**(106,547)**	**(34.95)**		**(2,745)**	
	COMMUNICATION								
5081H	WPLP - FIBRE OPTIC AND METALLIC CABLE	150,000	6,044	7,392	(1,348)	(22.29)	33.6	(40)	
5081J	WPLP - CARRIER EQUIPMENT	50,000	3,525	6,184	(2,659)	(75.42)	18.6	(143)	
	TOTAL COMMUNICATION	**200,000**	**9,569**	**13,575**	**(4,006)**	**(41.87)**		**(183)**	
	MOTOR VEHICLES								
6081G	WPLP - HEAVY TRUCKS	46,325	3,401	23,363	(19,962)	(586.95)	17.5	(1,141)	
6081H	WPLP - CONSTRUCTION EQUIPMENT	42,012	2,060	923	1,138	55.22	21.6	53	
6081J	WPLP - TRAILERS	82,208	2,975	2,568	407	13.67	33.5	12	
6081K	WPLP - MISCELLANEOUS VEHICLES	54,399	4,838	5,825	(987)	(20.41)	11.6	(85)	
	TOTAL MOTOR VEHICLES	**224,944**	**13,274**	**32,679**	**(19,405)**	**(146.19)**		**(1,161)**	
	GENERAL EQUIPMENT								
9081K	WPLP - COMPUTER EQUIPMENT	21,228	6,368	9,591	(3,223)	(50.60)	3.5	(921)	
	TOTAL GENERAL EQUIPMENT	**21,228**	**6,368**	**9,591**	**(3,223)**	**(50.60)**		**(921)**	
	TOTAL WPLP PROPERTY, PLANT AND EQUIPMENT	**1,336,221,667**	**25,485,780**	**31,635,962**	**(6,150,182)**	**(24.13)**		**(113,513)**	
	INTANGIBLE ASSETS								
	TRANSMISSION								
2080F	WPLP - ROADS, TRAILS AND BRIDGES	1,439,812	43,194	58,197	(15,003)	(34.73)	48.5	(309)	
2080G	WPLP - METAL TOWERS AND CONCRETE POLES	106,632,518	1,882,064	2,613,013	(730,949)	(38.84)	83.5	(8,754)	
2080J	WPLP - POLES AND FIXTURES	430,084	11,574	16,997	(5,423)	(46.85)	53.5	(101)	
2080L	WPLP - OVERHEAD CONDUCTOR AND DEVICES	29,011,058	543,957	758,010	(214,053)	(39.35)	78.5	(2,727)	
2080Z	WPLP - TRANSMISSION DEVELOPMENT FUND	1,909,456	36,261	44,679	(8,418)	(23.22)	77.5	(109)	
	TOTAL TRANSMISSION	**139,422,928**	**2,517,050**	**3,490,895**	**(973,845)**	**(38.69)**		**(12,000)**	
	SUBSTATIONS								
3080B	WPLP - BUILDINGS	11,080,091	253,950	264,222	(10,272)	(4.04)	63.5	(162)	
3080F	WPLP - ROADS, STEEL STRUCTURES AND CIVIL SITE WORK	44,652,522	1,337,299	1,509,841	(172,542)	(12.90)	48.5	(3,558)	
3180R	WPLP - POWER TRANSFORMERS	4,272,536	104,154	151,476	(47,322)	(45.43)	48.8	(970)	
3180S	WPLP - OTHER TRANSFORMERS	31,309,273	934,244	1,556,083	(621,839)	(66.56)	48.5	(12,821)	
3180T	WPLP - INTERRUPTING EQUIPMENT	25,624,773	712,179	979,829	(267,650)	(37.58)	48.6	(5,507)	
3180U	WPLP - OTHER STATION EQUIPMENT	19,617,296	636,179	797,278	(161,099)	(25.32)	43.5	(3,703)	
3180V	WPLP - ELECTRONIC EQUIPMENT AND BATTERIES	19,286,904	1,031,844	1,468,111	(436,267)	(42.28)	23.7	(18,408)	
	TOTAL SUBSTATIONS	**155,843,395**	**5,009,849**	**6,726,839**	**(1,716,990)**	**(34.27)**		**(45,129)**	

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TABLE 2A. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP FOR THE TWELVE MONTHS ENDED MARCH 31, 2014

ACCOUNT	DESCRIPTION	SURVIVING ORIGINAL COST AS OF MARCH 31, 2014	CALCULATED ACCRUED DEPRECIATION	BOOK ACCUMULATED DEPRECIATION	ACCUMULATED DEPRECIATION VARIANCE AMOUNT	ACCUMULATED DEPRECIATION VARIANCE PERCENT	PROBABLE REMAINING LIFE	ANNUAL PROVISION FOR TRUE-UP	
	(1)	(2)	(3)	(4)	(5) = (3)-(4)	(6) = (5)/(3)	(7)	(8)=(5)/(7)	
	DISTRIBUTION								
4080J	WPLP - POLES AND FIXTURES	187,208	3,111	4,986	(1,875)	(60.28)	63.9	(29)	
4080L	WPLP - OVERHEAD CONDUCTOR AND DEVICES	315,541	6,403	9,882	(3,479)	(54.34)	58.8	(59)	
4080N	WPLP - UNDERGROUND CABLE AND DEVICES - PRIMARY	819,462	20,216	22,302	(2,086)	(10.32)	58.5	(36)	
4080S	WPLP - SERIALIZED EQUIPMENT - UNDERGROUND	29,630	1,037	1,239	(202)	(19.43)	40.6	(5)	
	TOTAL DISTRIBUTION	**1,351,840**	**30,767**	**38,409**	**(7,642)**	**(24.84)**		**(129)**	
	COMMUNICATION								
5080H	WPLP - FIBRE OPTIC AND METALLIC CABLE	4,463,440	179,832	220,436	(40,604)	(22.58)	33.6	(1,208)	
5080J	WPLP - CARRIER EQUIPMENT	2,508,284	176,708	311,283	(134,575)	(76.16)	18.6	(7,235)	
5080M	WPLP - MOBILE RADIO, TELEPHONE AND CONFERENCING	212,713	39,884	35,076	4,808	12.06	6.5	740	
5080N	WPLP - OPERATIONAL DATA NETWORK	440,117	82,522	99,932	(17,410)	(21.10)	6.5	(2,678)	
	TOTAL COMMUNICATION	**7,624,554**	**478,946**	**666,727**	**(187,781)**	**(39.21)**		**(10,382)**	
	EASEMENTS								
A180A	EASEMENTS	796,640	13,009	12,601	408	3.14	73.8	0	**
	TOTAL EASEMENTS	**796,640**	**13,009**	**12,601**	**408**	**3.14**		**0**	
	TOTAL WPLP INTANGIBLE ASSETS	**305,039,358**	**8,049,621**	**10,935,471**	**(2,885,850)**	**(35.85)**		**(67,640)**	
	TOTAL WUSKWATIM POWER LIMITED PARTNERSHIP	**1,641,261,025**	**33,535,401**	**42,571,433**	**(9,036,032)**	**(26.94)**		**(181,153)**	

* The account has no balance as of March 31, 2014 and rate will be used on a go-forward basis for future additions.
** On amortized accounts any true-up of less than 10% is not considered significant.

Section:	Appendix 7.1	**Page No.:**	14
Topic:	Load Forecast		
Subtopic:	GS – Top Consumers		
Issue:			

PREAMBLE TO IR (IF ANY):

The Potential Large Industrial Loads forecast was reduced from an average 100 GW.h per year to 91 GW.h per year.

QUESTION:

Please explain why the PLIL forecast was reduced, providing any calculations used to determine the 91 GW.h per year.

RATIONALE FOR QUESTION:

To investigate the GSL load forecast.

RESPONSE:

The methodology used for developing the PLIL forecast was changed to an econometric model based on both GDP and price. The equation is described in Appendix 7.1, page 65 of the application. Using the econometric methodology, the average PLIL growth is forecast at 91 GW.h per year, slightly lower than the 2013 forecast of 100 GW.h per year.

Please refer to Manitoba Hydro's response to COALITION/MH-I-65c for an example of the annual calculations.

Section:	Appendix 7.1	**Page No.:**	14
Topic:	Load Forecast		
Subtopic:	GS – Top Consumers		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide an update on the "pipeline load" that was forecast during the NFAT. What assumptions are included in the GS Top Consumers load forecast for the pipeline load and when is it expected to commence? Have there been any changes to this potential load that Hydro is aware of since the preparation of Appendix 7.1?

RATIONALE FOR QUESTION:

To investigate the GSL load forecast.

RESPONSE:

Please refer to Manitoba Hydro's response to PUB/MH-I-57b for a comparison of the NFAT 2013 scenario with "pipeline load" and the 2014 Load Forecast. At this time, Manitoba Hydro is not aware of any changes to this potential load from what is outlined in the 2014 Load Forecast (Appendix 7.1).

Section:	Appendix 7.1	**Page No.:**	14
Topic:	GS Top Consumers		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a schedule, similar to MIPUG/MH I-40a (i) and (ii) from the 2012/13 & 2013/14 GRA that compares for 2000 to 2014 load forecasts for each GSL<30kV, GSL 30-100kV and GSL>100kV:

i. Manitoba Hydro's forecast (GW.h) to GSL customers for each of the next 20 years (i.e. the 2000 load forecast should show sales forecasts for 2001 through 2020, etc.)
ii. Manitoba Hydro actual sales to GSL customers (separated by subclass) for 2000 to 2014.

RATIONALE FOR QUESTION:

To investigate the GSL load forecast.

RESPONSE:

The tables on the following pages provide forecast sales (GW.h) from the 2000 to 2014 Load Forecasts for fiscal years 2000/01 to 2033/34 inclusive for each General Service Large sub-class. The last table provides actual data for the period 2000 to 2014. Limited Use of Billing Demand (LUBD) sales are not included in these figures.

LARGE 750-30 kV (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2001	1,175														
2002	1,224	1,159													
2003	1,273	1,178	1,158												
2004	1,323	1,201	1,204	1,194											
2005	1,366	1,230	1,226	1,233	1,471										
2006	1,406	1,260	1,248	1,271	1,494	1,509									
2007	1,442	1,287	1,266	1,288	1,512	1,521	1,565								
2008	1,475	1,317	1,282	1,305	1,527	1,586	1,636	1,546							
2009	1,505	1,349	1,297	1,322	1,543	1,629	1,657	1,573	1,530						
2010	1,523	1,382	1,310	1,338	1,559	1,643	1,681	1,585	1,558	1,558					
2011	1,541	1,417	1,331	1,354	1,576	1,661	1,692	1,602	1,575	1,574	1,606				
2012	1,560	1,451	1,354	1,370	1,599	1,683	1,706	1,623	1,593	1,591	1,624	1,688			
2013	1,578	1,481	1,379	1,385	1,622	1,706	1,724	1,646	1,611	1,611	1,646	1,743	1,683		
2014	1,596	1,509	1,402	1,401	1,646	1,729	1,744	1,661	1,637	1,633	1,658	1,831	1,715	1,679	
2015	1,613	1,534	1,424	1,419	1,669	1,752	1,763	1,675	1,660	1,645	1,677	1,891	1,737	1,718	1,746
2016	1,630	1,557	1,445	1,439	1,692	1,772	1,782	1,690	1,681	1,665	1,689	1,951	1,770	1,744	1,798
2017	1,646	1,577	1,467	1,458	1,715	1,792	1,801	1,706	1,704	1,685	1,706	2,011	1,792	1,782	1,846
2018	1,661	1,595	1,489	1,477	1,737	1,813	1,820	1,722	1,724	1,706	1,725	2,066	1,825	1,808	1,896
2019	1,675	1,611	1,511	1,496	1,758	1,834	1,840	1,743	1,743	1,729	1,746	2,116	1,847	1,847	1,951
2020	1,688	1,626	1,533	1,516	1,780	1,857	1,860	1,765	1,763	1,750	1,764	2,166	1,880	1,867	1,987
2021	1,701	1,638	1,556	1,536	1,801	1,879	1,880	1,788	1,781	1,770	1,783	2,216	1,902	1,900	2,028
2022		1,649	1,579	1,555	1,822	1,902	1,900	1,811	1,800	1,790	1,802	2,265	1,935	1,919	2,059
2023			1,603	1,575	1,842	1,925	1,920	1,833	1,819	1,811	1,822	2,315	1,957	1,952	2,101
2024				1,596	1,861	1,948	1,940	1,856	1,837	1,831	1,841	2,365	1,984	1,985	2,131
2025					1,880	1,971	1,960	1,878	1,856	1,851	1,861	2,415	2,012	2,005	2,176
2026						1,994	1,980	1,902	1,874	1,873	1,881	2,460	2,028	2,038	2,210
2027							2,000	1,925	1,892	1,894	1,902	2,505	2,055	2,058	2,254

LARGE 750-30 kV (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2028								1,950	1,911	1,916	1,923	2,550	2,072	2,091	2,289
2029									1,929	1,938	1,944	2,590	2,102	2,113	2,336
2030										1,961	1,966	2,630	2,131	2,148	2,372
2031											1987	2669	2,149	2,169	2,422
2032													2,178	2,199	2,459
2033														2,228	2,510
2034															2,550

LARGE 30 - 100 kV (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2001	535														
2002	623	505													
2003	682	646	679												
2004	739	758	694	784											
2005	743	772	701	888	736										
2006	746	785	708	891	771	807									
2007	750	798	715	877	806	1,022	861								
2008	753	810	723	863	837	1,277	990	964							
2009	757	821	730	849	867	1,457	1,117	1,218	990						
2010	760	833	737	835	897	1,605	1,257	1,368	1,154	944					
2011	763	845	745	821	900	1,628	1,396	1,474	1,273	853	912				
2012	764	848	752	807	898	1,627	1,451	1,479	1,345	868	844	1,049			
2013	766	851	755	809	896	1,624	1,453	1,483	1,353	855	845	1,067	1,223		
2014	768	854	759	812	895	1,622	1,455	1,488	1,356	906	910	1,219	1,334	1,324	
2015	770	857	761	814	895	1,620	1,457	1,492	1,358	1,091	914	1,243	1,321	1,377	1,438
2016	772	860	763	816	896	1,622	1,458	1,496	1,361	1,095	968	1,292	1,409	1,425	1,634

LARGE 30 - 100 kV (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2017	774	863	766	819	897	1,624	1,460	1,499	1,362	1,099	1,045	1,366	1,437	1,459	1,804
2018	776	866	768	821	899	1,627	1,462	1,503	1,365	1,102	1,048	1,399	1,462	1,476	2,045
2019	777	869	770	824	901	1,629	1,463	1,505	1,369	1,103	1,050	1,366	1,557	1,493	2,115
2020	779	871	773	826	903	1,631	1,464	1,507	1,372	1,107	1,055	1,414	1,474	1,514	2,332
2021	781	874	775	829	905	1,632	1,465	1,509	1,375	1,111	1,059	1,470	1,510	1,523	2,332
2022		876	778	831	907	1,634	1,467	1,511	1,379	1,116	1,063	1,478	1,518	1,540	2,344
2023			780	834	911	1,636	1,468	1,513	1,382	1,120	1,067	1,485	1,538	1,561	2,344
2024				836	914	1,638	1,469	1,515	1,386	1,124	1,072	1,493	1,538	1,561	2,356
2025					917	1,640	1,470	1,517	1,389	1,128	1,076	1,501	1,538	1,574	2,356
2026						1,641	1,471	1,519	1,392	1,132	1,081	1,508	1,550	1,574	2,368
2027							1,472	1,522	1,396	1,136	1,085	1,516	1,550	1,587	2,368
2028								1,524	1,399	1,140	1,089	1,524	1,561	1,587	2,380
2029									1,403	1,144	1,094	1,531	1,561	1,600	2,380
2030										1,149	1,098	1,538	1,561	1,600	2,392
2031											1,103	1,545	1,573	1,613	2,392
2032													1,573	1,613	2,404
2033														1,613	2,404
2034															2,416

LARGE >100 (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2001	3,991														
2002	4,319	4,173													
2003	4,385	4,445	4,474												
2004	4,426	4,607	4,480	4,687											
2005	4,526	4,739	4,577	4,880	4,833										
2006	4,626	4,871	4,673	4,950	5,132	5,089									
2007	4,726	5,003	4,789	5,061	5,436	5,122	5,135								
2008	4,826	5,085	4,905	5,163	5,580	5,205	5,213	5,158							
2009	4,926	5,168	5,021	5,244	5,714	5,309	5,285	5,378	5,390						
2010	5,026	5,250	5,137	5,325	5,828	5,442	5,545	5,823	5,633	5,018					
2011	5,121	5,332	5,254	5,406	5,928	5,536	5,805	6,011	5,952	5,354	4,700				
2012	5,176	5,402	5,370	5,498	5,828	5,469	5,995	6,195	6,246	5,635	5,079	4,718			
2013	5,231	5,472	5,470	5,588	5,728	5,349	6,055	6,371	6,531	5,829	5,207	4,928	4,645		
2014	5,286	5,542	5,570	5,668	5,648	5,229	6,115	6,547	6,591	5,920	5,496	5,084	4,919	4,651	
2015	5,341	5,612	5,640	5,748	5,658	5,109	6,175	6,709	6,651	6,078	5,620	5,092	4,934	4,705	4,610
2016	5,396	5,682	5,710	5,828	5,668	5,184	6,235	6,871	6,711	6,178	5,738	4,882	4,866	4,740	4,554
2017	5,451	5,752	5,780	5,908	5,678	5,259	6,295	6,997	6,731	6,278	5,859	4,873	4,844	4,742	4,331
2018	5,506	5,822	5,850	5,988	5,738	5,334	6,355	7,123	6,831	6,338	5,919	4,934	4,934	4,733	4,449
2019	5,561	5,892	5,920	6,068	5,798	5,409	6,385	7,189	6,931	6,365	5,965	4,939	4,991	4,808	4,539
2020	5,616	5,962	5,990	6,148	5,858	5,459	6,415	7,255	7,031	6,465	6,065	5,049	5,044	4,890	4,603
2021	5,671	6,032	6,060	6,228	5,918	5,509	6,445	7,321	7,131	6,565	6,165	5,161	5,149	4,971	4,666
2022		6,102	6,130	6,308	5,978	5,559	6,475	7,387	7,231	6,665	6,265	5,261	5,251	5,072	4,750
2023			6,200	6,388	6,088	5,609	6,505	7,453	7,331	6,765	6,365	5,361	5,353	5,149	4,835
2024				6,468	6,198	5,659	6,535	7,519	7,431	6,865	6,465	5,461	5,453	5,249	4,921
2025					6,308	5,709	6,565	7,585	7,531	6,965	6,565	5,561	5,553	5,349	5,008
2026						5,759	6,595	7,651	7,631	7,065	6,665	5,661	5,653	5,449	5,097
2027							6,625	7,717	7,731	7,165	6,765	5,761	5,753	5,549	5,187

LARGE >100 (Forecast GW.h)

FIS YR	YEAR OF SYSTEM LOAD FORECAST														
ENDING	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
2028								7,783	7,831	7,265	6,865	5,861	5,853	5,649	5,278
2029									7,931	7,365	6,965	5,961	5,953	5,749	5,370
2030										7,465	7,065	6,061	6,053	5,849	5,463
2031											7,165	6,161	6,153	5,949	5,557
2032													6,253	6,049	5,652
2033														6,149	5,749
2034															5,847

ACTUALS (GW.h)

FISC YR ENDING	**LARGE 750-30**	**LARGE 30-100**	**LARGE >100**
2000	1,101	492	3,473
2001	1,132	474	3,975
2002	1,130	457	4,282
2003	1,180	620	4,574
2004	1,463	735	4,615
2005	1,487	782	4,871
2006	1,531	776	5,115
2007	1,545	856	5,094
2008	1,546	905	5,154
2009	1,534	936	5,140
2010	1,545	941	4,523
2011	1,630	972	4,401
2012	1,599	1,164	4,412
2013	1,643	1,222	4,397
2014	1,687	1,283	4,222

Section:	Appendix 7.1	**Page No.:**	14
Topic:	GS Top Consumers		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a table similar to MIPUG/MH I-40b from the 2012/13 & 2013/14 GRA that separates the 2014 Load Forecast for each GS class and subclass for all forecast years.

RATIONALE FOR QUESTION:

To investigate the GSL load forecast.

RESPONSE:

The following tables provide the breakdown of the General Service forecast sector into its sub-classes based on the 2014 Load Forecast.

	Total GS	Small Non-Dem Demand	Small Demand	Small LUBD	Med Demand	Med LUBD	SEP Med	SEP Large <30
2015	14,864.0	1,665.0	2,057.8	3.8	3,290.5	4.3	27.0	2.0
2016	15,186.2	1,699.2	2,096.7	3.8	3,347.6	4.3	27.0	2.0
2017	15,321.4	1,733.7	2,138.1	3.9	3,409.7	4.4	30.0	2.0
2018	15,868.3	1,767.7	2,170.9	3.9	3,478.6	4.4	31.0	2.0
2019	16,199.4	1,803.6	2,204.6	3.9	3,525.2	4.4	31.0	2.0
2020	16,613.5	1,835.3	2,277.3	4.0	3,518.8	4.4	31.0	2.0
2021	16,804.6	1,863.3	2,356.7	4.0	3,498.1	4.3	31.0	2.0
2022	17,013.3	1,886.2	2,417.8	4.0	3,496.4	4.3	31.0	2.0
2023	17,219.4	1,907.8	2,454.9	4.0	3,517.1	4.3	31.0	2.0
2024	17,424.9	1,928.1	2,489.0	4.1	3,540.2	4.3	31.0	2.0
2025	17,632.8	1,947.8	2,522.7	4.1	3,563.1	4.3	31.0	2.0
2026	17,843.3	1,966.5	2,555.8	4.1	3,586.7	4.4	31.0	2.0
2027	18,051.6	1,984.2	2,588.2	4.1	3,610.9	4.4	31.0	2.0
2028	18,263.0	2,001.6	2,620.5	4.2	3,634.3	4.4	31.0	2.0
2029	18,475.1	2,018.7	2,652.8	4.2	3,657.9	4.4	31.0	2.0
2030	18,689.0	2,026.1	2,674.2	4.2	3,702.6	4.4	31.0	2.0
2031	18,907.2	2,033.5	2,695.7	4.2	3,748.3	4.5	31.0	2.0
2032	19,128.2	2,040.7	2,717.2	4.2	3,795.7	4.6	31.0	2.0
2033	19,354.0	2,047.9	2,738.8	4.2	3,845.1	4.6	31.0	2.0
2034	19,584.5	2,054.8	2,760.5	4.3	3,897.0	4.7	31.0	2.0

	Large <30 kV	Large LUBD <30kV	Large 30-100	Large >100	Large LUBD >100	Seas.	FRWH	Diesel Fed Gov	Diesel Prov Gov	Diesel Non - Gov
2015	1,746.1	0.7	1,437.9	4,609.8	1.4	5.3	6.8	1.8	0.4	3.4
2016	1,798.3	0.7	1,633.9	4,553.8	1.4	5.3	6.4	1.8	0.4	3.5
2017	1,845.8	0.7	1,803.9	4,330.8	1.4	5.4	6.1	1.8	0.4	3.5
2018	1,896.2	0.7	2,045.5	4,449.1	1.4	5.4	5.8	1.8	0.4	3.5
2019	1,951.3	0.7	2,115.5	4,539.1	1.4	5.4	5.5	1.8	0.4	3.6
2020	1,986.7	0.7	2,332.4	4,603.1	1.4	5.4	5.2	1.8	0.4	3.6
2021	2,028.2	0.7	2,332.4	4,666.1	1.4	5.5	5.0	1.8	0.4	3.7
2022	2,058.9	0.7	2,344.3	4,750.1	1.4	5.5	4.7	1.8	0.4	3.8
2023	2,100.7	0.7	2,344.3	4,835.1	1.4	5.5	4.5	1.8	0.4	3.8
2024	2,130.8	0.7	2,356.3	4,921.1	1.4	5.6	4.3	1.8	0.4	3.8
2025	2,175.6	0.7	2,356.3	5,008.1	1.4	5.6	4.1	1.8	0.4	3.9
2026	2,209.7	0.7	2,368.2	5,097.1	1.4	5.6	3.9	1.8	0.4	3.9
2027	2,253.8	0.7	2,368.2	5,187.1	1.4	5.7	3.7	1.8	0.4	4.0
2028	2,289.3	0.7	2,380.1	5,278.1	1.4	5.7	3.5	1.8	0.4	4.0
2029	2,336.5	0.7	2,380.1	5,370.1	1.4	5.7	3.3	1.9	0.5	4.0
2030	2,371.9	0.7	2,392.1	5,463.1	1.4	5.8	3.2	1.9	0.5	4.1
2031	2,421.6	0.7	2,392.1	5,557.1	1.4	5.8	3.0	1.9	0.5	4.1
2032	2,459.5	0.7	2,404.0	5,652.1	1.4	5.8	2.8	1.9	0.5	4.2
2033	2,510.1	0.7	2,404.0	5,749.1	1.4	5.8	2.7	1.9	0.5	4.2
2034	2,550.1	0.7	2,415.9	5,847.1	1.4	5.9	2.6	1.9	0.5	4.3

Section:	Appendix 6.11	**Page No.:**	
Topic:	Curtailable Rate Program		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the Curtailable Rate Program Report for the period April 1, 2012 to March 31, 2013.

RATIONALE FOR QUESTION:

To compare the CRP actual results.

RESPONSE:

Please see the attachment to this response.

REPORT TO
THE PUBLIC UTILITIES BOARD

CURTAILABLE RATE PROGRAM

APRIL 1, 2012 – MARCH 31, 2013

AUGUST 2013

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REPORT TO PUBLIC UTILITIES BOARD
CURTAILABLE RATE PROGRAM
APRIL 1, 2012 – MARCH 31, 2013

SUMMARY

This Curtailable Rate Program (CRP) annual report covers the period from April 1, 2012 to March 31, 2013. During this period, three customers participated in the program. Six curtailments were successfully initiated, five of which were Option R curtailments and one was an Option A curtailment.

The Public Utilities Board (PUB) approved a Reference Discount of $3.21/kW of for the Curtailable Rate Program in Order 52/12 dated April 26, 2012. In the 2012/13 Fiscal Year, customers received monthly credits on their electrical bill for their participation in the program totaling $5,745,682 for the year.

On July 6, 2012, and as part of its 2012/13 & 2013/14 General Rate Application, Manitoba Hydro proposed revisions to the Terms and Conditions of the Curtailable Rate Program. These revisions included a reduction in the amount of Option A and Option R load available to customers, the elimination of curtailment Options C and CE; and a change to the hours defined as Peak and Off-Peak to correspond to a potential time-of-use rate offering.

While the PUB approved Manitoba Hydro's proposed changes to the Terms and Conditions on an interim basis in Order 43/13, dated April 26, 2013, these changes occurred after the end of the 2012/13 Fiscal Year and do not have an impact on the Curtailable Rate Program for this reporting period.

It is noted that Manitoba Hydro subsequently requested to defer implementation of the change in the defined hours for Peak and Off-Peak periods, and the elimination of Curtailment Options C and CE, which cannot be easily implemented on an interim basis. Manitoba Hydro also advised that it would implement the other changes to the CRP approved by Order 43/13, including reducing the global subscription cap on Option A, but only to the extent that Option C load can still be accommodated.

The PUB accepted Manitoba Hydro's approach in a letter dated June 25, 2013.

BACKGROUND

The CRP Terms and Conditions applicable during the reporting period from April 1, 2012 to March 31, 2013 took effect on April 1, 2005 in accordance with Order 28/05 dated February 17, 2005. A modification to the Terms and Conditions was approved in Order 90/08 dated June 30, 2008 which required customers to provide Manitoba Hydro with 48 hours of notice prior to any anticipated plant shut downs.

The Terms and Conditions allow Manitoba Hydro to reserve the right to limit the amount of total curtailable load used for maintaining operating and contingency reserves[1]. The limit for 2012/13 was 230 MW under Options A and C and 100 MW under Option R. There is no limit for Option E load. The caps have been beneficial to both Manitoba Hydro and curtailable customers by ensuring the value of curtailable load does not depreciate. A decreased value would result in lower discounts paid to customers making the program less attractive to them.

Manitoba Hydro uses curtailable load, among other measures, to maintain operating and contingency reserves as a means of minimizing disruption to firm customers in the event of loss of generation or transmission.

Curtailable load provides value to Manitoba Hydro all year round, as curtailments for system emergencies can occur at any time of the year. However, it has the greatest value during peak times as it is during the peak periods that Manitoba Hydro's capacity surplus is the most vulnerable. Additional Options A and C curtailable load in these hours increases the amount of capacity for sale in the firm export markets while additional Option R load can allow Manitoba Hydro to meet its contingency reserve obligations at a lower cost.

A significant risk mitigation benefit of curtailable load is not shedding firm load in the event that Manitoba Hydro or the Midwest Independent System Operator-Manitoba Hydro

[1] Per North American Electric Reliability Council (NERC) Glossary of Terms, Operating Reserves: The reserves needed to protect Manitoba Hydro and its obligations to the Midwest Independent System Operator power system against Contingencies or Disturbances. These events are typically a result of loss of supply caused by sudden generating or transmission outages. Operating Reserves consist of various types including Contingency Reserves. Contingency Reserves: a component of Operating Reserves which are sufficient in magnitude and response to meet NERC Disturbance Control Standards. Contingency Reserves are comprised of Operating Reserves-Spinning and Operating Reserves-Supplemental. Curtailable load (also referred to as Interruptible Load) can be a source of Operating Reserves-Supplemental.

Contingency Reserve Sharing Group (MISO-MBHydro CRSG)[2] would otherwise be in contravention of the standard(s) established by the North American Electric Reliability Council (NERC). Option R curtailable load allows Manitoba Hydro to meet reserve obligations thereby freeing up hydro generation for market transactions in the short-term opportunity energy market[3]. In this circumstance the benefits of having Option R available are dependent on Manitoba Hydro's water supply conditions as follows:

- High Water Supply - the generating capacity freed up for commercial use allows for increased hydraulic generation for export as idle generating units can be run to capture additional sales. Without Option R capacity in place energy would be spilled. With Option R load, the additional energy generated can be sold at on-peak prices.

- Average Water Supply - allows for additional hydraulic generation during on-peak hours that would otherwise be produced during off-peak hours (due to limited on-peak generating capability). In this case Manitoba Hydro captures the benefit of the price differential between on and off-peak periods.

- Low Water Supply - does not provide any significant benefits because Manitoba Hydro has sufficient shut down generating units that could be run temporarily for operating reserves purposes without relying on Option R load reductions.

Manitoba Hydro will not initiate load curtailments in order to facilitate an opportunity spot market sale[4].

[2] The MISO-MBHydro CRSG is a NERC registered Contingency Reserve Sharing Group that has operated since January 1, 2010. The CRSG was established under the terms of the Amended MISO-Manitoba Hydro Coordination Agreement and executed on October 9, 2009.

[3] Opportunity export sales are sales of capacity and/or energy that are not backed by dependable energy and are incremental exports that arise from time to time as a result of water conditions that are better than the lowest historic levels.

[4] Spot market sales are sales that occur on a day ahead or real time basis. They are not considered to be a firm export sale.

PERFORMANCE FOR 2012/13

Curtailment Options:

The Curtailable Rate Program consists of four base curtailment options and three combinations. Options vary dependent on: minimum notice to curtail, maximum duration per curtailment, maximum daily hours of curtailment, maximum number of curtailments per year, and maximum annual hours of curtailment.

The three customers that participated in the Curtailable Rate Program during the April 1, 2012 to March 31, 2013 period designated a total of 228 MW to Manitoba Hydro's reserves, allocated as 80 MW Option AE, 67 MW Option A, 31 MW Option C and 50 MW Option R. The amount each customer designated as curtailable load in relation to their total load varies, and therefore impacts their curtailable credit, as shown on the following table:

Summary of Curtailment Credit Data
April 1, 2012 to March 31, 2013

Customer	Option(s)	CRP Load as % of Total Load	Average On-Peak MW	Average On-Peak LF	Average Monthly Cr.
1	A & R & E	85%	198.8	92.3%	$429,320
2	A	94%	24.9	94.0%	$49,436
3	C	0%	30.9	67.7%	$50

Customer 1: 85% of total load represents 41% Option AE, 25% Option R and 19% Option A for 2012/13.

Customer 3: this customer was operating below or near their protected firm load resulting in little to no load available for curtailment in relationship to their total load.

Load designated under Option R must be nominated as a Guaranteed Curtailment, that is, the customer must agree to shed a specified number of MW in order to be compliant with the curtailment request. Under all the other curtailment options, customers can nominate curtailable load as Guaranteed Curtailment or Curtail to Protected Firm Load.

Dependent on the curtailment option selected, Manitoba Hydro will curtail customers to meet reliability obligations only. Options A, C and R curtailments assist in securing operating and contingency reserves whereas Option E curtailments are initiated to meet firm energy requirements in the event that Manitoba Hydro expects to be short of firm energy supplies.

Customers may nominate different quantities of curtailable or firm load for each month provided that a minimum of 5 MW of curtailable load is available in each month. Customers must specify the 12 months Guaranteed Load or 12 months Protected Firm Load prior to participation in the program and must provide 12 months' written notice to Manitoba Hydro should they wish to increase or decrease their load in any month. This may be subject to capacity limitations and will be at the discretion of Manitoba Hydro. To date no customers have elected to differentiate their monthly load.

Implementation and Size of Curtailments:

There were six curtailments during the April 1, 2012 to March 31, 2013 period: one Option A and five Option R curtailments. The Option A curtailment was initiated due to the loss of HVDC Bipole 2 and was used to meet our reliability obligations to MISO-MBHydro CRSG and NERC. The five Option R curtailments were initiated in response to a contingency or disturbance event requiring deployment of Manitoba Hydro's supplemental reserves. The following table summarizes the duration and load in MW of each curtailment.

April 2012 to March 2013	Option 'A'		Option 'R'	
	Hrs	MW	Hrs	MW
May 14, 2012			1.30	50
June 5, 2012			0.92	50
July 19, 2012	2.03	118		
July 20, 2012			0.75	50
July 30, 2012			1.40	50
February 26, 2013			0.33	50
Total	**2.03**	**118**	**4.70**	**250**
Average	**2.03**	**118**	**0.94**	**50**

All curtailments occurred during peak hours. The customer did not use an alternative power source to supply their load during the curtailments.

Manitoba Hydro continues to use telephone to communicate curtailment requirements to customers on the program. This procedure is manageable and provides the additional security that curtailment(s) will be initiated by confirmation from an agent of the customer. Manitoba Hydro experienced no difficulties in communicating the six curtailments during this reporting period.

Reference and Reserve Discounts:

The maximum discount available to a participating customer is called the "Reference Discount." The Reference Discount is related to the marginal value of capacity, expressed in Canadian dollars, and was set at $2.76 per kW/month as of April 1, 2006. This amount is adjusted on April 1 of each year by the inflation factor (the change in Manitoba Consumer Price Index as recorded for the most recent 12 months). Each year Manitoba Hydro submits an application for the adjusted Reference Discount to the PUB for interim *ex parte* approval.

The Reference Discount in effect for the reporting period April 1, 2012 to March 31, 2013 was $3.21 per kW/month, approved on April 26, 2012 via Board Order 52/12. Customers under Option AE receive 100% of the discount, while customers under Options A and R receive 70% of the discount or $2.25 per kW/month. Option C customers receive 40% of the discount or $1.28 per kW/month.

For curtailable load nominated as 'Protect to Firm Load' the Reference Discount is calculated and credited to customers' bill each month as (A - B) x C x D where:

A = On-Peak Period Demand (kW)
B = Protected Firm Load (kW)
C = On-Peak Period Load Factor
D = Discount Amount

For curtailable load designated as a 'Guaranteed Curtailment' the Reference Discount is calculated and credited to customers' bill each month as GC x D where,

GC = the customer's guaranteed curtailable load
D = Discount Amount

Customers selecting Curtailment Option R receive, in addition to the Reference Discount, a Reserve Discount for each curtailment initiated and successfully completed. The Reserve Discount represents the value of carrying contingency reserves and is calculated and credited to customers' bill for each successful curtailment as LR x Du x FD where,

LR = amount of load reduction (in kW) requested by Manitoba Hydro's System Control to the customer at the time of an Option R curtailment
Du = duration of the curtailment (in hours)

FD[5] = fixed discount amount, currently set at $0.04 per kWh

The table below illustrates the amount of the monthly Reference Discount Credit that each customer received from April 1, 2012 to March 31, 2013, as well as their monthly On-Peak Demand and On-Peak Load Factor.

Monthly Reference Discount Credit for 2012/2013									
2012 to 2013	Customer 1 Options AE, R, A			Customer 2 Option A			Customer 3 Option C		
	On Peak MW	LF %	Discount Paid $	On Peak MW	LF %	Discount Paid $	On Peak MW	LF %	Discount Paid $
Apr	197.5	95.5%	$439,397	25.2	86.3%	$45,987	31.2	61.2%	$0
May	186.6	91.7%	$426,458	24.5	91.4%	$47,288	28.2	70.7%	$0
June	187.8	94.0%	$434,159	25.3	91.4%	$48,949	28.6	71.4%	$0
Jul	187.1	94.1%	$434,467	24.8	99.2%	$51,999	26.0	76.9%	$0
Aug	187.1	82.9%	$396,369	24.9	95.5%	$50,384	32.1	57.2%	$0
Sep	204.8	77.1%	$376,550	25.5	96.5%	$52,009	32.9	55.9%	$0
Oct	205.7	98.6%	$449,974	25.0	85.1%	$44,986	30.8	59.3%	$0
Nov	206.9	97.0%	$444,394	24.5	98.7%	$51,096	29.3	64.6%	$0
Dec	207.7	96.1%	$441,519	24.6	91.8%	$47,675	32.7	77.2%	$0
Jan	208.2	97.7%	$446,893	24.8	98.7%	$51,617	33.0	75.2%	$15
Feb	197.3	88.0%	$413,621	24.9	97.6%	$51,261	32.8	74.8%	$0
Mar	209.0	95.3%	$438,643	24.8	95.4%	$49,981	33.7	68.1%	$589
Total	**2,385.6**	**92.3%**	**$5,142,444**	**298.6**	**94.0%**	**$593,233**	**371.3**	**67.7%**	**$605**

The discounts shown for Customer 1 do not include the $9,400 credited in respect of the Option R Reserve Discount.

Adequacy of Terms and Conditions:

The Terms and Conditions which have been in place since April 1, 2006 (with modifications in 2008 and 2013) have protected Manitoba Hydro's contingency reserves and provided operating reserves which satisfy the requirements of NERC and the MISO-MBHydro CRSG.

CONCLUSION

The Curtailable Rate Program facilitates fulfilling Manitoba Hydro's commitment of carrying, deploying, and re-establishing contingency reserves to meet its obligations with the

[5] The Fixed Discount amount is based on the value of carrying contingency reserves on Manitoba Hydro units.

MISO-MBHydro CRSG and to maintain compliance to NERC Standards. The program also assists in minimizing disruption to Manitoba Hydro's firm customers.

ATTACHMENT 1

ESTIMATE OF THE VALUE OF CURTAILABLE LOAD TO MANITOBA HYDRO

The value of curtailable load to Manitoba Hydro is related to an estimate of the marginal cost of firm, long-term capacity. Over the long term, a representative value for capacity can be developed by estimating the annual carrying cost (includes finance and depreciation costs but not operating/fuel costs) of the lowest cost resource required to provide capacity to Manitoba Hydro, which is a simple cycle combustion turbine (SCCT). In 2005 the annual carrying cost of a SCCT was estimated to be $78 per kW per year, or $6.50 per kW per month, evaluated at load. It was proposed that that this cost would escalate at the rate of inflation. This cost was reviewed in 2012 and was found to be appropriate going forward. This approach has the advantage of providing a clear transparent value, which is also stable over time and is consistent with the approach that is utilized to evaluate the benefits of other resource options such as DSM that may have a capacity component.

Curtailable load is less valuable than a generation resource such as a SCCT. The SCCT can provide more flexibility in dispatch and also has the capability to deliver for longer time periods during extended emergency situations. Once in place, a SCCT can be relied upon as a permanent, long-term resource, unlike curtailable load which can be terminated with a notice period of one year. Curtailable load normally has more value in the summer months, when it can assist in supporting seasonal capacity exports, and in the peak winter months, when it may add reliability to Manitoba Hydro's generation resource. Curtailable load will provide more winter reliability benefits in years in which there is little capacity surplus on the system. When there is a significant capacity surplus on the Manitoba Hydro system, curtailable load provides less winter value than it would, for example, in the period around the year 2020, when the requirement to add generation to serve domestic customers can be expected to occur with the current load growth forecast. The value of reliability benefits in a single year is not easily determined, which is why longer-term levelized values are used to infer the benefits of curtailable load.

As described above curtailable load is less valuable than a SCCT because it has limited dispatchability, is not sustainable in reducing load over longer periods, and is not guaranteed to exist in the long term. Therefore in order to reflect these factors, curtailable load is assigned a long-term levelized value that is 42% of the annual carrying cost of a SCCT. After consideration of inflation subsequent to the 2006 base year, this yields an estimate of benefits for the year beginning April 1, 2012 of $3.21 per kW/month, which is referred to as the "Reference Discount". This value would apply to the curtailable rate option that provides the

most value to Manitoba Hydro, that being Options AE and RE, for which the discount is set to return 100% of the estimated value of curtailable load to the customer. Other options provide less flexibility and are accordingly worth less to Manitoba Hydro. These have been priced to reflect their lesser value to Manitoba Hydro but still to return the full estimated value of that option to the customer.

Manitoba Hydro typically markets its summer surplus capacity in the preceding winter or late spring and will market curtailable load or other surpluses up to the point that there is still a low probability of breaching reserve obligations even in very warm weather conditions. Hence the summer weather does not impact on the value received for such sales. However, as noted earlier, year to year changes in conditions in the MISO market can lead to considerable volatility in the value of capacity in that market.

In general terms Manitoba Hydro's objective for marketing curtailable capacity and energy is to utilize any excess in a manner that provides the greatest profits. This may involve the sale of additional short-term 5×16 contracts (47% capacity factor sales) if there is sufficient surplus energy, or the sale of peaking capacity which requires the supply of less energy during the on-peak period (e.g. 20% capacity factor sales).

REPORT TO

THE PUBLIC UTILITIES BOARD

LIMITED USE OF BILLING DEMAND

2012/13

AUGUST 2013

Manitoba Hydro

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REPORT TO PUBLIC UTILITIES BOARD
ON THE
LIMITED USE OF BILLING DEMAND RATE OPTION

SUMMARY

This annual report on the Limited Use of Billing Demand (LUBD) rate option covers the period April 1, 2012 to March 31, 2013. During this period, there were 83 customers on the LUBD rate, of which 59 are classed as General Service Small, 18 are General Service Medium, and 6 are General Service Large.

The LUBD rate option, implemented on July 1, 2000, is an effective way for Manitoba Hydro to address the concerns of low load factor customers. This group of customers, if billed on regular firm General Service Demand rates, is affected by high demand charges in comparison to their relatively low energy use, resulting in a high cost of energy per kilowatt-hour. Customers on LUBD have a lower impact on the system peak compared to the overall General Service class, as is evident by their low winter coincidence factor of 37% as shown in Table 3 of this report.

Billing on LUBD rates as opposed to regular General Service Demand rates has saved LUBD customers, as a whole, $283,546 during the 2012/13 fiscal year. This represents annual savings of roughly $3,416 per LUBD customer or $285 per month per customer.

BACKGROUND

On January 27, 2000 Manitoba Hydro filed an Application with the Public Utilities Board (PUB) requesting interim *ex parte* approval for a new rate option, LUBD. The application was approved on June 30, 2000 in PUB Order 91/00 for a two year period ending June 30, 2002. The LUBD rate was implemented for billing on July 1, 2000. Since that time several Board Orders have been issued extending the rate offering with final approval granted in Board Order 116/08 dated July 29, 2008. Board Orders 116/08 and Board Order 150/08 dated November 7, 2008 directed Manitoba Hydro to file annual reports on LUBD. Prior to these orders Manitoba Hydro had filed two reports on the performance of the rate.

The LUBD rate was introduced to address the high unit energy costs faced by a relatively small number of customers with very low load factors. These customers, who set high demands relative to their overall energy use, were opposed to paying high demand charges when they used

little energy. Under the program, customers could opt for a lower demand charge in exchange for a higher energy charge. Demand charges are intended to recover at least a portion of the utility's costs which do not vary with a customer's consumption but which are incurred to meet the peak load. The LUBD rate option recognizes that low load factor customers, as a group, have a much lower ratio of coincidence with system peak periods than typical General Service customers, and therefore the cost associated with meeting the peak of low-load factor customers is lower.

DESCRIPTION

The LUBD rate was designed such that demand customers would be indifferent between this rate and the regular firm General Service rate for which they otherwise qualified at a billing load factor of approximately 18%. At billing load factors less than 18% customers could reduce their overall bills by paying a higher energy charge in exchange for a lower demand charge.

There is no change in the Basic Charge or determination of the Billing Demand when customers choose LUBD over standard rates.

ELIGIBILITY

All General Service Demand customers are eligible for the LUBD rate but only those customers with low energy use relative to their billing demand benefit. Customer savings depend on the manner of which the business operates and consumes energy. This means that two customers with the same average annual billing load factor may not see the same results, and a lower annual billing load factor doesn't necessarily mean more savings. For example, a GS Small Demand customer who only exceeds 50 kV.A in a few months of the year, may save little on Demand Charges if they are on LUBD (and pay for all energy at the higher LUBD Energy rate) compared to a customer with an identical billing load factor who exceeds 50 kV.A by a significant margin in most or all months of the year.

Customers on LUBD who choose to convert back to the General Service Firm Rate are not eligible again for the LUBD rate option for the next 12 months.

CUSTOMER PARTICIPATION

There were a total of 83 customers billing on the LUBD rate in the 2012/13 fiscal year, an overall decrease of 2 customers from the previous 2011/12 fiscal year.

The majority of customers on LUBD continue to be in the General Service Small Demand rate class.

Table 1:

Rate Class	No. of Customers
General Service Small Demand	59
General Service Medium	18
General Service Large (750 V to 30 kV)	3
General Service Large (> 100 kV)	3
Total	**83**

In the 2012/13 fiscal year the majority, or 92%, of LUBD customers had an annual billing load factor of 20% or less, as shown in Table 2. Customers with a load factor over 20% or customers not benefiting on LUBD are referred to their Manitoba Hydro Representative for review.

Table 2:

Billing Load Factor	No. of LUBD Customers
0% - 5%	15
6% - 10%	23
11% - 15%	20
16% - 20%	18
over 20%	7
Total	**83**

The billing load factors for LUBD customers are considerably lower than billing load factors associated with typical General Service customers. Based on 2012/13 billing data, the billing load factor for regular General Service customers was 45% for GS Small Demand, 53% for GS Medium, 58% for GS Large 750 V to 30 kV, and 78% for GS Large > 100 kV.

Load Research data indicates that the peak coincidence factor for the LUBD class is also lower than the class average peak coincidence factor, as shown in Table 3:

Table 3:

Rate Class	Summer Coincidence Factor %	Winter Coincidence Factor %
LUBD	41%	37%
GSS Demand	85%	85%
GSM	88%	88%
GSL 750 V - 30 kV	90%	90%
GSL > 100 kV	73%	84%

Customers participating in LUBD represent 29 different industry types as listed in Table 4. The majority of customers fall in the category of "Other Utility Industries" which typically represents water and waste pumping stations. Other major industry types include Amusement/Recreational Services, Agriculture, Wood, and Wholesale industries. These five industries represent 47% of the LUBD customers.

Table 4:

Industry Type	# of Customers
Accommodation	2
Agriculture	7
Amusement and Recreational Services	9
Auto. Vehicles, Parts, Sales & Service	1
Business Services	1
Chemical and Chemical Products	1
Education	3
Electrical and Electronic Products	1
Fabricated Metal Products	4
Furniture and Fixtures	1
Industrial and Heavy Construction	2
Local Government	1
Membership Organizations	2
Metals, Hardware, Plumb, Heat, Wholesale	2
Miscellaneous Government	2
Non-Metallic Mineral Products	1
Other Products, Wholesale	6
Other Service Industries	2
Other Utility Industries	10
Paper and Allied	1
Plastic Products	3

Industry Type	# of Customers
Primary Metals	1
Printing, Publishing & Allied	1
Real Estate Operators	2
Refined Petroleum and Coal Products	2
Storage and Warehousing	5
Transportation	1
Transportation Equipment	2
Wood	7
Grand Total	**83**

FINANCIAL IMPACTS

For 2012/13 the total savings to customers on the LUBD rate option, compared to the standard General Service rate, was $283,546 or approximately $3,416 annually per customer ($285 per customer month). Of the 83 customers, 64 benefited during the 12 month period, while 19 customers paid more in comparison to the regular General Service rate. Of the 19 paying more, eight of the General Service Small customers did not bill for demand charges as there demand was below the billable 50 kVA therefore LUBD would not benefit them. Seven other accounts are either water pumping stations or services used for irrigation. Due to the effects of weather on the nature of their operation, their usage continually fluctuates resulting in the LUBD rate being more advantageous in some years than in others. All accounts negatively impacted are forwarded to their Manitoba Hydro Representative for review. Some may choose to remain on the rate because the loss is minimal and they anticipate savings in the future.

Table 5 provides a comparison based on the 2012/13 fiscal year, of the revenue billed to LUBD customers versus what they would have been billed had they remained on the standard General Service rate. Table 6 provides a distribution of the customers as to the amount they saved (or lost) on an average monthly basis for the same fiscal year.

Table 5:

Rate Class	As Billed on LUBD	If Billed as Standard GS	Annual Difference
General Service Small	$380,671	$442,202	$61,532
General Service Medium	$417,536	$528,922	$111,385
General Service Large (750 V to 30 kV)	$64,460	$98,730	$34,270
General Service Large (> 100 kV)	$137,837	$214,195	$76,358
Total	**$1,000,504**	**$1,284,050**	**$283,546**

Table 6:

Average Monthly Savings (Loss)	No. of Customers	% of Customers
Over $1,501	3	3.6%
$1,001 - $1,500	3	3.6%
$501 - $1,000	10	12.0%
$201 - $500	16	19.3%
$101 - $200	10	12.0%
$0 - $100	22	26.5%
$(1) - $(50)	15	18.1%
$(51) - $(100)	1	1.2%
Over $(100)	3	3.6%
Total	**83**	**100.0%**

CONCLUSION

The LUBD rate was designed to provide relief to customers with low billing load factors and is performing as anticipated. The limited number of customers on this rate has minimal financial impact on Manitoba Hydro or other ratepayers which appears to be more than offset by the much lower coincidence peak of these customers to the system peak.

Since the inception of the program the majority of customers have been in the General Service Small Demand rate class. Many of these customers are water pumping stations that typically are not used in the winter season. Other customers are primarily summer users in the recreation industry such as golf courses or services used for farm irrigation.

Aside from the standard General Service rate and interruptible rate programs offered by Manitoba Hydro (which apply primarily to larger loads), the LUBD is the only other rate option available to small and medium commercial/industrial customers.

Section:	Appendix 6.10	**Page No.:**	
Topic:	Curtailable Rate Program Terms and Conditions		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Has Hydro made any changes to the Curtailable Rate Program proposed Terms and Conditions from the July 6, 2012 version? If so, please provide a black-lined version similar to MIPUG/MH I-44(e) from the 2012/13 & 2013/14 GRA.

RATIONALE FOR QUESTION:

To clarify and review the CRP proposed changes.

RESPONSE:

No new Terms and Conditions have been proposed for the CRP since the last revision was filed on July 6, 2012.

As indicated in its letter to the PUB on May 15, 2013 (filed as Appendix 6.9) Manitoba Hydro elected not to implement the following two major changes to the program as they were only approved by the PUB on an interim basis:

- A change in the defined hours of peak and off-peak periods; and
- Elimination of Curtailment Options “C” and “CE” effective one year from PUB approval (i.e. the sunset date).

All other proposed changes to the CRP have been implemented on an interim basis; however, a revised version of the Terms and Conditions is pending final approval of all changes.

Section:	Tab 6	**Page No.:**	Page 11
Topic:	Rate Changes		
Subtopic:	Demand Ratchet changes		
Issue:			

PREAMBLE TO IR (IF ANY):

In Board Order 18/15 the Board made the following comments with regards to scope of the GRA:

"The Board has determined that it will examine Manitoba Hydro's time-of-use rate proposal at the cost of service review to take place later this year, and not at this GRA. Accordingly, the Board will not entertain a review, by Interveners, of time-of-use rates in this proceeding."

QUESTION:

Based on Order 18/15 please confirm Hydro intends for that the proposed changes to the demand ratchet levels for customer classes GSL 30-100kV and GSL>100kV to be reviewed with the time-of-use rates at the cost of service review to take place later this year, and not at this GRA.

RATIONALE FOR QUESTION:

To clarify what rate changes should be reviewed in this GRA compared to what should be reviewed in the Cost of Service hearing.

RESPONSE:

Confirmed.

Section:	Tab 6	**Page No.:**	14
Topic:	Curtailable Rate Program (CRP)		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please confirm that the PUB report to the Minister on Hydro's NFAT proceeding concluded that the CRP "…has the potential to result in additional capacity savings. As such the program merits further review" (page 94 of the PUB Final Report on the NFAT). Please provide details of all further review conducted by Hydro of the CRP between June 2014 and the filing of the current GRA.

RATIONALE FOR QUESTION:

To examine the rationale for capping Options A and R and eliminating Option C of the CRP.

RESPONSE:

Manitoba Hydro confirms the NFAT report states on page 94: "The Curtailable Rate Program has the potential to result in additional capacity savings. As such, the program merits further review".

Manitoba Hydro has undertaken an internal review and has concluded additional curtailable load in the form presently available under the Curtailable Rate Program would only add to existing surplus capacity. As such, any additional capacity made available by increasing the amount of Option A, R or C would not expect to generate additional income or cost savings for Manitoba Hydro.

Manitoba Hydro recognizes customers require enrollment stability for operational planning purposes and as such, has grandfathered existing customer enrollments to ensure their long run participation, providing the opportunity for Option C customers to transfer their enrollment to Option A under the Curtailable Rate Program.

Section:	Tab 6	**Page No.:**	14
Topic:	Curtailable Rate Program (CRP)		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

In regard to the PUB Report and Recommendations to the Minister, please provide details and copies of any specific direction from the Government of Manitoba to Manitoba Hydro (including, for example, the letter from the Minister dated July 2, 2014) regarding advancement or expansion of the Curtailable Rate Program as a result of the PUB's NFAT Recommendations.

RATIONALE FOR QUESTION:

To examine the rationale for capping Options A and R and eliminating Option C of the CRP.

RESPONSE:

In Order 33/15, the PUB ruled that the Board would not require the disclosure of cabinet confidences. However, Manitoba Hydro is to file any documentation and provide details with respect to any discussions that are on the public record.

In MIPUG's response to Manitoba Hydro's rationale which was inserted on the Information Request form, MIPUG has indicated that it received a copy of the letter from a "public source". When Manitoba Hydro requested disclosure of this public source, MIPUG referenced a Winnipeg Free Press ("WFP") article entitled "Rate Shock" published July 3, 2014. The article indicates that the WFP obtained a copy of a memo from Minister Struthers to Manitoba Hydro's Board Chairman and President. Manitoba Hydro is not in a position to verify what information or documents the WFP is in possession of or the circumstances

under which they were received. No link or copy of the memo was provided within the article and Manitoba Hydro is not aware of such memo being available anywhere on the public record. There is no reference to the Curtailable Rate Program in the WFP article.

As no information on the Curtailable Rate Program is made on the public record, Manitoba Hydro is not in a position to disclose advice, opinions, or recommendations developed by the Minister for Manitoba Hydro.

Notwithstanding the foregoing, Manitoba Hydro can confirm that it is public knowledge that the Minister accepted all of the PUB's recommendations. Manitoba Hydro continues to evaluate the Curtailable Rate Program on an ongoing basis to review opportunities and benefits for this program and other related demand response initiatives.

Section:	Tab 6	**Page No.:**	14
Topic:	Curtailable Rate Program (CRP)		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide details on any review Hydro has plans to undertake regarding advancing or expanding the scope of the Curtailable Rate Program (including the potential for formalized demand response programs regarding economic/market driven curtailments).

RATIONALE FOR QUESTION:

To examine the rationale for capping Options A and R and eliminating Option C of the CRP.

RESPONSE:

Manitoba Hydro continues to review the value associated with the Curtailable Rate Program on an ongoing basis to ensure any changing parameters are including in the assessment.

Section:	Appendix 6.10	**Page No.:**	Page 11
Topic:	Curtailable Rate Program (CRP)		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please comment if Hydro's rationale for reducing the maximum amount of curtailable load under Option A and Option R remains the same as explained in CAC/MH I-84c) from the 2012/13 & 2013/14 GRA.

RATIONALE FOR QUESTION:

To examine the rationale for capping Options A and R and eliminating Option C of the CRP.

RESPONSE:

Confirmed. The current rationale for reducing the limits under Option A and R remains the same as explained in CAC/MH I-84 (c) from the 2012/13 & 2013/14 GRA. Please also refer to PUB/MH I-141(a) and PUB/MH II-99(a) from the 2012/13 & 2013/14 GRA.

Manitoba Hydro will continue to monitor conditions in the export market and look for opportunities to increase limits on CRP options; the evaluation of these limits will continue to be based on economic or reliability merits.

CAC/MH I-84

Subject: **Proposed Rates and Customer Impacts**
Reference: **Tab 10, pages 6 – 7**
Tab 10, Appendix 10.4

c) Why is Manitoba Hydro reducing the maximum amount of curtailable load under Option "A" and Option "R"?

ANSWER:

As of January 1, 2010 Manitoba Hydro entered into the MISO – MH Contingency Reserve Sharing Group Agreement which reduced Manitoba Hydro's need to carry contingency reserves. In addition, with the demise of the MAPP Generation Reserve Sharing Pool, there is no longer a short term summer capacity market into which Manitoba Hydro could sell its Option A load. As a result of these changes, the full amount of curtailable load required under Options A and R is no longer required.

At some time in the future there may be a requirement to increase the amount of curtailable load again. In order to avoid alienating the existing customers by reducing the credit and potentially losing them as subscribers, Manitoba Hydro chose instead to reduce the amount of curtailable load required.

PUB/MH I-141

Reference: Curtailable Rates Program (CRP)/2011/12 PRP

a) Program Limits

Please provide details on MH's CRP limit of 180MW including:

? ___MW spinning reserve
? ___MW non-spinning reserve
? ___MW planning reserve

ANSWER:

Manitoba Hydro currently relies on up to 50 MW of Option 'R' Curtailable Load to provide non-spinning reserve.

Option 'A' Load is relied upon to re-establish contingency reserves and to respond to emergencies. Manitoba Hydro is proposing a limit of 180 MW Option 'A' load, assuming Option 'C' Load converts to Option 'A'. If not, the proposed limit on Option 'A' load is 150 MW.

The Mid-Continent Area Power Pool Generation Reserve Sharing Pool retired on January 1, 2010. As a result, MH's Option 'A' load was no longer necessary to fulfill obligations to meeting after-the-fact reporting of capacity. However, MH anticipates that there will be a capacity market developing in the MISO Market. At that time, Option 'A' Load will be used to support term capacity sale obligations.

In fulfilling Manitoba Hydro planning reserves, Manitoba Hydro does not rely on any curtailable load in its long-term resource adequacy plans because CRP customers are not obligated to make long-term commitments. However, CRP load is considered available to protect firm load in the mid-term planning horizon.

Manitoba Hydro does not rely on curtailable load to provide spinning reserves; however the CRP does provide reliability and economic benefits to Manitoba Hydro.

Please also see Manitoba Hydro's response to CAC/MH I-84(e).

PUB/MH II-99

Reference: PUB/MH I-141 (a),(b),(c),& (d) Curtailable Rate Program

a) Please explain how the 180 MW of CRP (reduced from 230 MW) is reflected in the 2011/12 PRP incremental industrial DSM going forward; why not negative values?

ANSWER:

The capacity associated with the Curtailable Rates Program is not included as part of the Demand Side Management dependable capacity used in the power resource plan. From the planning perspective Manitoba Hydro does not count on curtailable loads to meet capacity requirements in the long term because there is no assurance that the Curtailable Rates Program will exist one or two decades into the future. An additional reason for not including curtailable capacity in long-term resource planning is that the limitations of CRP may result in it not being available when required during critical peak load demand periods.

Section:	Appendix 6.10	**Page No.:**	Page 11
Topic:	Curtailable Rate Program (CRP)		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Are Hydro's plans for the CRP still to reduce Option R from 100MW to 50MW and from 230 MW to 180MW for Option A and C loads (assuming Option C load coverts to Option A) for an indefinite period of time? Given the substantial increase in DSM initiatives following the NFAT, please provide the rationale for the reduction in each Option from the current levels.

RATIONALE FOR QUESTION:

To examine the rationale for capping Options A and R and eliminating Option C of the CRP.

RESPONSE:

Manitoba Hydro's current plan for the CRP is to reduce the Option R from 100MW to 50MW and from 230 MW to 180MW for Option A and C loads.

The rationale for reducing the subscription limits on the CRP Options has not changed since the reductions were proposed in 2012. In essence, taking on additional CRP load under the present terms and conditions of the program is not economic for Manitoba Hydro at this time as Manitoba Hydro has surplus capacity resources that can't be economically sold in the export market.

Section:	Tab 1	**Page No.:**	
Topic:	Letter of Application		
Subtopic:	Scope of Review for GRA		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide an updated Letter of Application showing only the currently requested approvals accepted for review in this hearing.

RATIONALE FOR QUESTION:

MIPUG would like clarity on the scope to be reviewed in this hearing.

RESPONSE:

As outlined in the response to COALITION/MH I-1, there are no changes that are required to the Letter of Application provided in Tab 1 of the GRA.

Section:	Tab 1 & Appendix 3.4	**Page No.:**	2-3
Topic:	BiPole III Deferral Account		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

PUB Order 43/13 approved a 3.5% across-the-board general rate increase effective May 1, 2013, and directed that the revenues from a 1.5% portion of the increase accrue to an account to be utilized to mitigate the anticipated rate impacts when Bipole III is placed into service.

On May 5, 2014, the PUB issued Order 49/14 approving, on an interim basis, a 2.75% across-the-board general rate increase effective May 1, 2014, and directed that the revenues from a 0.75% portion of the increase accrue to the Bipole III deferral account established in Order 43/13.

QUESTION:

Please indicate the amount of the proposed 2015/16 rate increase Hydro expects to set aside in the BiPole III deferral account.

RATIONALE FOR QUESTION:

To better understand the proposed revenue requirement.

RESPONSE:

Manitoba Hydro has not forecasted any further contributions to the Bipole III deferral account from the 2015/16 proposed rate increase.

Section:	Tab 1 & Appendix 3.4	**Page No.:**	2-3
Topic:	BiPole III Deferral Account		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

PUB Order 43/13 approved a 3.5% across-the-board general rate increase effective May 1, 2013, and directed that the revenues from a 1.5% portion of the increase accrue to an account to be utilized to mitigate the anticipated rate impacts when Bipole III is placed into service.

On May 5, 2014, the PUB issued Order 49/14 approving, on an interim basis, a 2.75% across-the-board general rate increase effective May 1, 2014, and directed that the revenues from a 0.75% portion of the increase accrue to the Bipole III deferral account established in Order 43/13.

QUESTION:

Please indicate within Appendix 3.4 where in the MH14 Operating Statements the drawdown of the Bipole III Reserve Account is included (i.e., as a revenue, as an offset to costs, in which category, and please show the amounts per year).

RATIONALE FOR QUESTION:

To better understand the proposed revenue requirement.

RESPONSE:

The drawdown of the Bipole III Reserve Account is recognized in MH14 as a reduction to Depreciation and Amortization expense. As outlined on page 2 of IFF14, Appendix 3.3, IFF14 assumes that the Bipole III Deferral Account will be drawn down over a three year period from 2019/20 to 2021/22 following the Bipole III in-service date.

Please see the attached table for the continuity schedule of the Bipole III Reserve Account.

For the year ended March 31	OPENING BALANCE	Transfers from GCR	Amortization of BPIII Reserve Account (Net to Depn Exp)	CLOSING BALANCE
2015	18.826	29.997	-	48.823
2016	48.823	32.360	-	81.182
2017	81.182	33.773	-	114.955
2018	114.955	35.645	-	150.600
2019	150.600	11.086	-	161.686
2020	161.686	-	(53.895)	107.791
2021	107.791	-	(53.895)	53.895
2022	53.895	-	(53.895)	-

Section:	Tab 2	**Page No.:**	22
Topic:	Retained Earnings		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states on page 22 of Tab 2: "Even with the proposed and indicative rate increases projected in MH14, retained 9 earnings from electric operations are projected to fall from $2.7 billion in 2014/15 to $2.0 10 billion by 2023/24. This amount is barely sufficient to absorb the impact of the 11 reoccurrence of a historic 5-year drought, and does not provide sufficient reserves to 12 mitigate the potential financial impacts of the considerable array of risks the Corporation 13 faces in fulfilling its mandate."

QUESTION:

Please provide a copy of a 20-year IFF Electric Operating Statement, Cash Flow and Balance Sheet showing water conditions for fiscal 2017 - 2024 at the average of the best 97 years of the 102 year history (i.e., non-drought conditions) followed by a 5 year repeat of the worst drought on record starting in 2024.

RATIONALE FOR QUESTION:

MIPUG to review retained earnings and risks to financial integrity.

RESPONSE:

Pursuant to PUB Order 33/15, no response is required to this Information Request.

Section:	Tab 2	**Page No.:**	Page 22
Topic:	Investments in Capital Assets		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a comparison of the 20 year sustaining capital expenditures from each CEF starting in 2005 (i.e., for CEF05, show the sustaining capital expenditure forecasts for each year 2006-2026, CEF06 from 2007-2027).

RATIONALE FOR QUESTION:

MIPUG would like to review capital expenditures as they relate to revenue requirement.

RESPONSE:

Please see the response to PUB/MH-I-18f.

Section:	Tab 2	**Page No.:**	Page 22
Topic:	Investments in Capital Assets		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the same comparison for projected DSM spending from each CEF starting in 2005 (i.e., for CEF05, show the sustaining capital expenditure forecasts for each year 2006-2026, CEF06 from 2007-2027).

RATIONALE FOR QUESTION:

MIPUG would like to review capital expenditures as they relate to revenue requirement.

RESPONSE:

Please see Manitoba Hydro's response to PUB/MH-I-18f.

Section:	Tab 2	**Page No.:**	Page 27
Topic:	Net Income		
Subtopic:	Actuals		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide actual revenues and expenses for 2010 to 2012 in the same format as Figure 2.25.

RATIONALE FOR QUESTION:

MIPUG would like to review recent actual electric operations.

RESPONSE:

Please see Appendix 11.8.

Section:	Tab 2	**Page No.:**	Page 31 - 32
Topic:	Capital Expenditure Forecast		
Subtopic:	Current Asset Replacement Rates		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please define "current asset replacement rates"? Does this include the asset replacement rates or the sustained capital requirements projected in CEF14?

RATIONALE FOR QUESTION:

MIPUG to review capital expenditures as it relates to sustaining capital and revenue requirement.

RESPONSE:

The asset replacement rate, expressed in assets replaced per year, is calculated by dividing the number of assets replaced per year (or number of years) by the number years considered. The word "current", in this context, varies by asset type, from about 1 to 10 years. Where some assets are replaced in great numbers each year, the annual replacement rates are based on one year. For smaller asset type populations such as generators, longer time periods are required to estimate the replacement rate.

Current asset replacement rates are used to estimate the turnover rate for each asset category, in order to illustrate the average number of years it would take to replace all assets within a particular asset category.

The current asset replacement rates are based on the average frequency of electric asset replacements that have transpired over the past 10 to 15 years, considering CEF13 funding levels.

As illustrated in Tab 4 Figure 4.18 Page 20, it is notable that the majority of critical assets are being replaced at levels substantially less than their anticipated lifespan.

Figure 4.19 of Tab 4 further illustrates that replacement rates must be accelerated beyond the current frequency for most asset categories or the condition of Manitoba Hydro's assets will deteriorate with each passing year.

For a schedule of Manitoba Hydro's current replacement rates for each asset category, please refer to COALITION/MH-I-88b.

Section:	Tab 2	**Page No.:**	43
Topic:	OM&A		
Subtopic:	Cost Controls and Budgeting		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a copy of all senior management (President or VP) budget guidance documents, memos, and/or guidelines provided to managers in preparing the budgets underlying IFF14.

RATIONALE FOR QUESTION:

MIPUG to review Hydro's approach to budgeting and cost control methods.

RESPONSE:

Please refer to the response in MIPUG/MH-I-38a.

Section:	Tab 2	**Page No.:**	43
Topic:	OM&A		
Subtopic:	Cost Controls and Budgeting		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please indicate if any alternative budget scenarios were prepared for IFF14, and provide a summary copy of the impacts. Please specifically indicate if any such budget scenarios included, for example, (a) no increases to the next 3 years including for inflation, (b) more aggressive potential staffing reductions, including downsizing.

RATIONALE FOR QUESTION:

MIPUG to review Hydro's approach to budgeting and cost control methods.

RESPONSE:

The response to MIPUG/MH-I-38a describes the process that Manitoba Hydro took to develop the OM&A targets.

Section:	Tab 2	**Page No.:**	43
Topic:	OM&A		
Subtopic:	Cost Controls		
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states on page 43 that: "Manitoba Hydro's most significant cost in providing service to customers is wages and benefits. Manitoba Hydro has undertaken an extensive review of its staff complement and is committed to reducing approximately 300 operational positions over the 3 year forecast period from 2014/15 to 2016/17."

QUESTION:

Please provide a copy of the extensive review undertaken by Hydro.

RATIONALE FOR QUESTION:

MIPUG to review Hydro's approach to budgeting and cost control methods.

RESPONSE:

Manitoba Hydro recognized that additional cost containment steps were required to manage OM&A expenditures below inflationary levels. As a result, the Executive Committee engaged in internal discussions as part of the IFF14 operating budget process to determine the actions required to achieve this level of cost reduction, despite significant cost pressures. The discussions focused on options to reduce staffing levels, increase revenue opportunities and control other operating expenses. The objective was to focus on cost containment measures in the near term (2014/15 to 2016/17).

It was recognized that significant reductions in staffing levels would be necessary, given that approximately 77% of OM&A costs incurred by the corporation are for salaries, overtime and benefits. As such, each member of the Executive Committee along with their respective senior management team evaluated the level of staff reductions that could be achieved over

the three year period with consideration to leveraging attrition opportunities. The evaluations included analysis of specific work functions, seeking opportunities to streamline processes through the use of technology and consolidation or elimination of work, while balancing the need to ensure staffing levels are adequate to provide safe and reliable service. The analysis took place over several weeks and included the identification of potential issues which would impact the Corporation's ability to reduce staffing levels in the near term (e.g. existing collective agreements).

In addition to staff reductions, each Business Unit evaluated other measures to control operating costs and increase revenue opportunities. Following this analysis, each Business Unit provided their recommendations to Executive Committee to ensure alignment with overall corporate objectives and to maximize efficiencies across the corporation.

The process resulted in a reduction of approximately 300 operational positions over the forecast period. The position reductions along with other recommendations to control costs have allowed the Corporation to maintain OM&A expenditures at an annual increase of 1% per year from 2014/15 to 2021/22 (excluding accounting changes and increases associated with new major generation and transmission projects coming into service). The implementation of the 1% inflationary cost constraint in 2014/15 is one year earlier compared to MH13.

Figure 5.5.3 (Appendix, 5.5, page 3) provides a summary of the committed position reductions by Business Unit which will result in savings of approximately $35 million each year once fully implemented as demonstrated in PUB/MH I-70b.

The Corporation is tracking progress on position reductions and the associated cost savings and continues to evaluate measures to meet the targeted 1% increase beyond 2016/17. While Manitoba Hydro recognizes that although the steps necessary to achieve this level of cost reduction will be challenging, the Corporation is committed to controlling its operating costs in order to maintain the 3.95% rate increases.

Section:	Tab 2	**Page No.:**	43
Topic:	OM&A		
Subtopic:	Cost Controls		
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states on page 43 that: "Manitoba Hydro's most significant cost in providing service to customers is wages and benefits. Manitoba Hydro has undertaken an extensive review of its staff complement and is committed to reducing approximately 300 operational positions over the 3 year forecast period from 2014/15 to 2016/17."

QUESTION:

Please also indicate the following:

i. The persons within Manitoba Hydro responsible for the review
ii. The services of any external consulting used to conduct the review (also please provide the terms of reference for their engagement)
iii. Any overriding principles guiding the review, including any direction from government regarding reductions in staffing levels. Please provide a copy of any correspondence imposing such constraints.
iv. Please provide Figure 5.5.8 from Appendix 5.5 with actuals since 2006/07.

RATIONALE FOR QUESTION:

MIPUG to review Hydro's approach to budgeting and cost control methods.

RESPONSE:

Please refer to MIPUG/MH-I-38a in response to parts i-iii.

In response to part iv), please see Appendix 11.23 for EFT information from 2007/08 through 2016/17. System changes have been implemented beginning in 2012/13 to align Manitoba

Hydro's capitalization practices with industry standards and support Manitoba Hydro's transition to IFRS. As a result of these changes the EFT data is only available in the new format beginning in the 2012/13 fiscal year.

Section:	Tab 2	**Page No.:**	48-49
Topic:	Enhanced Power Smart Program		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states that: "the Corporation has completed a more comprehensive assessment of the condition of its assets and the capital requirements associated with the renewal of its existing asset base, and is pursuing an enhanced Power Smart program with a significantly higher level of investment. As such, there is now more certainty with respect to Manitoba Hydro's investment requirements than there has been in the recent past."

QUESTION:

Is it Hydro's contention that an enhanced PowerSmart program is a rationale for increasing rates to consumers?

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

A portion of Manitoba Hydro's increasing total capital investment is related to increased DSM expenditures as noted in Figure 2.13 of Tab 2 of this application. This investment, along with the noted capital requirements for renewal of Manitoba Hydro's existing asset base and new infrastructure, all contribute to the Corporation's need to increase rates over the near term as outlined in Section 2.2.2 of this application.

The rate impact measure (RIM) for the overall DSM plan provides an indication of directional impact of the DSM investment analyzed over a thirty year period. For the current

Power Smart Plan, the RIM is 1.0 which indicates the DSM investment generally does not contribute to rate increase over the 30 year period.

Section:	Tab 2	**Page No.:**	48-49
Topic:	Enhanced Power Smart Program		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states that: "the Corporation has completed a more comprehensive assessment of the condition of its assets and the capital requirements associated with the renewal of its existing asset base, and is pursuing an enhanced Power Smart program with a significantly higher level of investment. As such, there is now more certainty with respect to Manitoba Hydro's investment requirements than there has been in the recent past."

QUESTION:

Please provide all data and calculations of the dollar value associated with the proposed rate increases for 2014/15, 2015/16 and 2016/17 being driven by increased PowerSmart investments within IFF14.

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

Please see Appendix 11.15 Financial Information MFR 9 for the revenue requirement calculations associated with the DSM expenditures included in MH14.

Section:	Tab 2	**Page No.:**	48-49
Topic:	Enhanced Power Smart Program		
Subtopic:			
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro states that: "the Corporation has completed a more comprehensive assessment of the condition of its assets and the capital requirements associated with the renewal of its existing asset base, and is pursuing an enhanced Power Smart program with a significantly higher level of investment. As such, there is now more certainty with respect to Manitoba Hydro's investment requirements than there has been in the recent past."

QUESTION:

Please provide a list of all PowerSmart programs proposed that have rate-negative impacts to customers at the existing level of rates.

RATIONALE FOR QUESTION:

MIPUG to review DSM programming generally regarding the rate impacts, especially to GSL customers where possible.

RESPONSE:

The electric RIM DSM metrics for 2014/15 – 2028/29 is provided on page 42 of Appendix 8.1.

Section:	Tab 2	**Page No.:**	46
Topic:	Accounting Policy		
Subtopic:	Reporting of Financial Information		
Issue:			

PREAMBLE TO IR (IF ANY):

Hydro indicates in the January 30 draft issue list in preparation for the GRA that items such as "Use of ELG" and "Net Negative Salvage" and "Asset Lives" and "Accounting Policy Selection" for financial reporting purposes are to be out of scope, but the methods for rate-setting purposes are in-scope.

However, at Tab 2 page 46 Hydro indicates that "it is unnecessary and undesirable to maintain two sets of financial records, one for financial reporting purposes and one for rate-setting purposes. To have two sets of financial records could cause confusion for Manitoba Hydro's various stakeholders, including the PUB as they would be using different sets of financial information to make important decisions with respect to the Corporation's operations and finances.

QUESTION:

If the PUB is to maintain control over Hydro's rate setting approaches for these items, how can Hydro's approach to financial reporting not be considered in-scope if said approach is driving the approach used for rate-setting purposes and Hydro's desire to avoid two sets of financial records?

RATIONALE FOR QUESTION:

MIPUG to review the appropriateness of Hydro's approach to depreciation for ratemaking and review depreciation for financial reporting purposes and requirement/ preference of consistency between the two approaches (and/or implications of maintaining differences).

RESPONSE:

As outlined in Manitoba Hydro's GRA Issues List of February 4, 2015, accounting policy selection for financial reporting purposes was listed as being "out of scope" given that Manitoba Hydro's financial reporting is not within the jurisdiction of the PUB.

The PUB has yet to render its decisions with respect to the appropriate accounting policy selection to be used for rate-setting purposes upon the adoption of IFRS in 2015/16. As such, Manitoba Hydro included this as being "in scope" for rate-setting purposes on its GRA Issues List.

Manitoba Hydro has provided extensive material in the Application and Information Requests outlining the reasons why it is adopting various accounting policies for financial reporting purposes. This information will allow the PUB to make its determinations on the treatment of these issues for rate-setting purposes.

Manitoba Hydro is of the view that since the projected overall impacts of accounting policy and estimate changes do not negatively impact forecast revenue requirements, these changes can be adopted by the PUB for rate-setting purposes without harming Manitoba Hydro's customers.

Section:	Appendix 3.3	**Page No.:**	
Topic:	Great Northern Transmission Line (GNTL)		
Subtopic:	Fuel and Purchased Power		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a full breakdown of the assumed Great Northern Transmission Line (GNTL) costs included in Fuel and Purchased Power within IFF14. Please indicate if any GNTL costs are capitalized or recorded as a long-term asset or liability in IFF14, if so provide amounts and the basis for calculation.

RATIONALE FOR QUESTION:

MIPUG to review capital expenditures as it relates to revenue requirement.

RESPONSE:

Please see the response to COALITION/MH-I-15c which provides a schedule of all GNTL related costs for IFF14 and IFF13.

Section:	Appendix 3.3	**Page No.:**	
Topic:	Great Northern Transmission Line (GNTL)		
Subtopic:	Fuel and Purchased Power		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide an update on the potential for sale of Hydro's interest in the GNTL and the effect any such sale would have on the values reported in this response.

RATIONALE FOR QUESTION:

MIPUG to review capital expenditures as it relates to revenue requirement.

RESPONSE:

Manitoba Hydro continues to explore the potential sale of its interest in the GNTL to a US utility. The financial impact of such a sale on Manitoba Hydro's IFF is not known.

Section:	Appendix 3.3	**Page No.:**	
Topic:	Fuel and Purchase Power		
Subtopic:	Keeyask Cree Nation costs		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a breakdown of the KCN costs included in the Fuel and Purchase Power component of long term forecasts.

RATIONALE FOR QUESTION:

MIPUG to review Hydro's electric financial forecast.

RESPONSE:

Fuel and Power Purchased includes KCN preferred investment adjustments totaling $13.9 million in 2021/22; $6.6 million is a credit to the KCN's capital account for preferred distributions between Keeyask first and final unit in-service and $7.3 million is a transfer of the KCN's portion of KHLP projected losses to 2021/22 from the KCN's capital account to Manitoba Hydro's capital account.

On July 9, 2014, the KCN subscribed to 17.5% of the common units in KHLP (with an option to activate a further 7.5% at later times). The KCN will continue to maintain a 17.5% common unit ownership until 180 days following the in-service of the final Keeyask generating station unit, currently projected to be May 2021. On this date, the KCN may elect to have their common units treated as preferential units and receive preferential distributions from that point forward rather than receive common unit distributions of residual earnings.

For IFF14 forecasting purposes, it is assumed that the KCN elect to receive preferential distributions. The KCN preferential distribution that would have accrued between the planned first unit in-service date in November 2019 to the preferential distribution election date in May 2021 is projected to be $6.6 million (classified in fuel and power purchased). This amount is credited to the KCN capital account to give the KCN a projected total investment of $35.6 million, including the $25 million of KCN's own cash investment required. Following the preferential distribution election date, net income and losses are allocated to the remaining common unit holders (assumed to be Manitoba Hydro in IFF14), and the KCN's 17.5% share of losses accrued from the planned first unit in-service date in November 2019 to the preferential distribution election date in May 2021, which is projected to be $7.3 million (classified in fuel and power purchased), is also allocated to Manitoba Hydro.

The preferential distributions projected to be paid to the KCN in IFF14 are included in water rentals as per the table below.

(Millions of Dollars)

	Fuel and Power Purchased		Water Rentals
Fiscal Year Ending	KCN Preferential Distribution Election Investment Credit	Allocation of KCN's 17.5% of KHLP Losses prior to Preferential Election to MH	KCN Preferrential Distributions
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	-	-	-
2021	-	-	-
2022	6.6	7.3	-
2023	-	-	4.7
2024	-	-	5.1
2025	-	-	5.3
2026	-	-	5.2
2027	-	-	5.4
2028	-	-	5.6
2029	-	-	5.7
2030	-	-	6.0
2031	-	-	6.3
2032	-	-	6.6
2033	-	-	7.0
2034	-	-	7.3

Section:	Appendix 3.3	**Page No.:**	
Topic:	Fuel and Purchase Power		
Subtopic:	Keeyask Cree Nation costs		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide the residual Fuel and purchased power costs broken out by Fuel (by fuel type) versus purchased power (by source).

RATIONALE FOR QUESTION:

MIPUG to review Hydro's electric financial forecast.

RESPONSE:

Please see the attached schedule that breaks out Fuel & Power Purchased costs by Thermal Costs, Purchased Energy, Transmission Charges, and Other Non-Energy Related Costs. The Other Non-Energy Related Costs category includes costs such as merchant purchases, environmental charges, FTR, hedging and financial transaction costs, diesel fuel purchases, water chemical supply and treatment costs, and KCN preferred investment adjustments as described in MIPUG/MH-I-42a.

(Millions of Dollars)

Fiscal Year Ending	Thermal Costs	Purchased Energy	Transmission Charges	Other Non-Energy Related Costs	Total
2015	6.2	70.9	43.0	14.1	134.2
2016	6.6	73.8	37.4	12.7	130.4
2017	19.9	114.3	48.0	8.8	190.9
2018	22.4	120.6	50.0	9.1	202.2
2019	23.6	123.1	51.0	9.5	207.2
2020	21.2	123.5	51.1	9.6	205.4
2021	12.9	141.0	67.6	12.1	233.5
2022	12.7	153.5	67.3	29.2	262.8
2023	13.7	159.4	68.0	16.3	257.4
2024	13.5	168.1	68.6	16.7	266.9
2025	14.6	176.7	69.3	17.2	277.9
2026	15.3	171.8	70.2	17.7	275.0
2027	16.7	177.0	70.9	18.2	282.8
2028	13.7	179.1	71.6	18.6	283.0
2029	13.9	185.3	72.4	19.0	290.6
2030	14.7	194.2	73.1	19.6	301.6
2031	13.9	194.2	78.4	20.1	306.7
2032	14.3	202.8	79.2	20.6	316.9
2033	14.8	204.1	80.1	21.2	320.1
2034	15.7	214.2	80.9	21.8	332.6

Section:	Appendix 3.3	**Page No.:**	Page 36
Topic:	Electric Operations		
Subtopic:	Government Charges		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please indicate the status of discussions, if any, with the Provincial government in regard to any potential relaxation of provincial government fees and charges associated with major new generation and transmission projects. If Hydro has not proposed such discussions, please indicate the rationale.

RATIONALE FOR QUESTION:

MIPUG plans to focus on completing "top down" review of justification of capital spending levels per year and the implications of these costs on revenue requirement.

RESPONSE:

RATIONALE FOR REFUSAL TO ANSWER THE QUESTION:

It is Manitoba Hydro's understanding that MIPUG has withdrawn this Information Request.

Section:	Appendix 3.3	**Page No.:**	Page 36
Topic:	Electric Operations		
Subtopic:	Government Charges		
Issue:			

PREAMBLE TO IR (IF ANY):

QUESTION:

Please provide a table outlining the total capital taxes, debt guarantee fee and water rental fees incurred each year for electric operations in IFF14 differentiating between the amounts expensed and capitalized for each year.

RATIONALE FOR QUESTION:

MIPUG plans to focus on completing "top down" review of justification of capital spending levels per year and the implications of these costs on revenue requirement.

RESPONSE:

The table found in Appendix 11.32 Payments to Government MFR 1 provides a schedule of payments to municipalities and the Province for 2010 through 2034.

All water rentals and capital taxes are charged directly against net income and are not capitalized.

The debt guarantee fee is included in the calculation of Manitoba Hydro's interest capitalization rate but is not tracked separately when it is applied to the cumulative work in progress on a project-by-project basis to determine interest during construction for a project. The following table provides an estimated amount of provincial guarantee fee capitalized (Column H) by reverse calculating the amount of guarantee fee (1%) in the interest capitalization rate and then applying to the average balance of construction work in progress.

(Millions of dollars)

	Interest During Construction (A)	Construction Work in Progress (B)	Average Construction Work in Progress (C)	Average Interest Capitalization Rate (D=A/C)	PGF (E)	Average Interest Capitalization Rate (excluding PGF) (F=D-E)	Interest During Construction (excluding PGF) (G=F*C)	Interest During Construction (PGF only) (H=E*C)	Interest During Construction (I=G+H=A)
2014		2,939							
2015	146	3,257	3,098	4.70%	1.00%	3.70%	115	31	146
2016	207	4,932	4,095	5.05%	1.00%	4.05%	166	41	207
2017	316	6,755	5,843	5.40%	1.00%	4.40%	257	58	316
2018	437	8,982	7,868	5.55%	1.00%	4.55%	358	79	437
2019	388	6,040	7,511	5.16%	1.00%	4.16%	313	75	388
2020	341	3,939	4,990	6.83%	1.00%	5.83%	291	50	341
2021	112	169	2,054	5.47%	1.00%	4.47%	92	21	112
2022	12	185	177	6.83%	1.00%	5.83%	10	2	12
2023	14	241	213	6.38%	1.00%	5.38%	11	2	14
2024	17	263	252	6.64%	1.00%	5.64%	14	3	17
2025	20	322	292	6.83%	1.00%	5.83%	17	3	20
2026	24	344	333	7.26%	1.00%	6.26%	21	3	24
2027	25	225	284	8.88%	1.00%	7.88%	22	3	25
2028	17	254	239	7.14%	1.00%	6.14%	15	2	17
2029	20	277	265	7.35%	1.00%	6.35%	17	3	20
2030	20	323	300	6.75%	1.00%	5.75%	17	3	20
2031	24	365	344	6.92%	1.00%	5.92%	20	3	24
2032	25	402	383	6.44%	1.00%	5.44%	21	4	25
2033	27	465	434	6.30%	1.00%	5.30%	23	4	27
2034	38	255	360	10.46%	1.00%	9.46%	34	4	38

Section:	Tab 4	**Page No.:**	Page 25-26
Topic:	Transmission		
Subtopic:	Capital Expenditures		
Issue:			

PREAMBLE TO IR (IF ANY):

On pages 25 – 26 Hydro states that "the transmission system is facing significant capacity issues" and details the rationale for significant investment in the transmission system moving forward.

QUESTION:

Please provide a definition of "transmission" as used in this discussion (e.g., voltage distinction between transmission and subtransmission).

RATIONALE FOR QUESTION:

MIPUG plans to focus on completing "top down" review of the justification for capital spending levels per year.

RESPONSE:

Transmission is defined as plant assets above 100 kV and Distribution is defined as plant assets below 100kV.

Section:	Tab 4	**Page No.:**	Page 25-26
Topic:	Transmission		
Subtopic:	Capital Expenditures		
Issue:			

PREAMBLE TO IR (IF ANY):

On pages 25 – 26 Hydro states that "the transmission system is facing significant capacity issues" and details the rationale for significant investment in the transmission system moving forward.

QUESTION:

Please provide a breakdown of each area of the province (by transmission substation) that experiences insufficient or excessively loaded transmission at peak times.

RATIONALE FOR QUESTION:

MIPUG plans to focus on completing "top down" review of the justification for capital spending levels per year.

RESPONSE:

Manitoba Hydro is at or near capacity for almost the entire region bounded by Dauphin and Ashern to the North, the US border to the South, the Saskatchewan border to the West, and the Ontario border to the East. In terms of stations that are experiencing excessive loading, the following stations and/or transmission facilities that are connected to them are at or near capacity. These capacity issues have already been identified as approved projects or are projects being proposed:

a) 230 kV Stations: Laverendrye, Rosser, St. Vital, Cornwallis, Portage South, Richer South, Letellier, Stanley, Souris East, Birtle South, Raven Lake Virden West, Ashern, Vermillion, and Mystery Lake.

b) 115 kV Stations: Brandon GS, Brandon Victoria, Portage Saskatchewan, Hanover, Pine Falls GS, Parkdale, Whiteshell, Morden Corner, Rosenfeld, and south west Winnipeg 115 kV transmission (associated with the following Winnipeg stations: Laverendrye, Harrow, Scotland, St. Vital, Mohawk, Wilkes, Madison, Sherbrook, and Inkster)