Tab 6
Index
January 23, 2015

MANITOBA HYDRO
2015/16 & 2016/17 GENERAL RATE APPLICATION

PROPOSED RATES AND CUSTOMER IMPACTS

INDEX

Appendices

MANITOBA HYDRO
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PROPOSED RATES AND CUSTOMER IMPACTS

6.0 OVERVIEW

Tab 6 provides the proposed rates and customer impacts for the proposed rate changes in this Application. Section 6.1 provides Manitoba Hydro's general rate making objectives; Section 6.2 provides details of the proposed rates by customer class and the customer bill impacts of the proposed rate changes; Section 6.3 describes the proposed implementation of Time-of-Use ("TOU") Rates effective April 1, 2016 for the General Service Large Customer Class served at greater than 30 kV; Section 6.4 outlines proposed changes and approvals requested with respect to the Surplus Energy Program ("SEP") and the Curtailable Rates Program ("CRP"). Section 6.5 discusses Manitoba Hydro's current review of its Cost of Service Study and the related Stakeholder Engagement process that has been undertaken. Section 6.6 provides a comparison of electricity rates across other jurisdictions and provides context to the rate pressures experienced in general in the Canadian electric utility industry.

The key observations of Tab 6 are:

1. Manitoba Hydro has applied the proposed 3.95% rate increases to all components of the rates (monthly basic charges, energy charges and demand charges) on an across-the-board basis for all customer classes, sufficient to generate additional revenue of $57.4 million for fiscal 2015/16, and $59.9 million for fiscal 2016/17.

2. Manitoba Hydro is requesting approval to implement TOU rates for customers in the General Service Large customer classes served at greater than 30 kV, effective April 1, 2016. The introduction of a TOU rate enables Manitoba Hydro to provide more appropriate price signals to large energy users that is more reflective of the value of energy in the on-peak period.

3. Manitoba Hydro is seeking confirmation that the PUB accepts the rates flowing from the changes to the terms and conditions of the SEP and CRP programs that were approved on an interim basis in Order 43/13.

4. Manitoba Hydro has undertaken a stakeholder engagement process to facilitate the sharing of views and alternatives to Cost of Service Study ("COSS") methodology to identify possible alternative treatments for the assumptions in the methodology. The Corporation will continue its examination of its COSS with a goal of advancing its next COSS for public review at an appropriate time that will be determined in conjunction with the PUB and stakeholders.

5. The issue of aging infrastructure is facing all utilities in North America and is resulting in considerably higher rate increases than are being projected in Manitoba. For this reason, even with the proposed and indicative rate increases in MH14, it is expected that Manitoba's domestic electricity customers will continue to have rates that are affordable and competitive with other utilities in North America.

6.1 RATE OBJECTIVES

Manitoba Hydro's general rate making objectives are set out as follows:

1. Manitoba Hydro's long-term target is to have all class Revenue Cost Coverage (RCC) ratios in the range of 95% to 105%, and further that all classes should be gradually moved toward RCC's of unity.

2. In conformity with the principles of gradualism and sensitivity to customer impacts, annual adjustments to revenues by customer class are less than two percentage points greater than the overall proposed increase.

3. Whenever possible, rates should be designed with a view to sending the appropriate price signal regarding the cost of energy to those parts of the rate design affecting the use which would be most sensitive to such a signal.

4. Maintain Manitoba Hydro's competitive position with respect to rates charged by other Canadian utilities for all rate classes.

5. The combined impact of proposed class average rate increases and adjustments to rate structure results in customer monthly impacts which fall within Manitoba Hydro's guidelines:

- For Residential customers, no customer will experience a bill increase which exceeds the greater of $3.00 per month or three percentage points more than the class average increase.

- For General Service customer, no customer will experience an increase in their average monthly bill over a year which exceeds the greater of $5.00 per month or five percentage points more than the class average increase.

6.2 PROPOSED RATE CHANGES & CUSTOMER IMPACTS BY CLASS

The following sections discuss the proposed rate schedules and customer impacts. A Proof of Revenue for each fiscal year (2015/16 and 2016/17) detailing the total revenue increase by customer class is provided in Appendices 6.1 and 6.2. Rate Schedules for proposed rates effective April 1, 2015 and April 1, 2016 are provided in Appendices 6.3 and 6.4, respectively. Appendices 6.5 and 6.6 provide Bill Comparisons between current May 1, 2014 rates, proposed April 1, 2015 rates and proposed April 1, 2016 rates.

On a class basis, the increase in revenues is shown in the following figure:

Figure 6.1 Recovery of Additional Revenues By Customer Sub-Class

Customer Class	2015/16 Additional $(millions)	2016/17 Additional $(millions)
Residential	$23.8	$25.2
GS Small*	$11.6	$12.3
GS Medium	$8.0	$8.5
GS Large	$13.8	$14.4
A&R Lighting	$0.9	$0.9
Misc. & DSM	($0.7)	($1.4)
Total GCR	$57.4	$59.9

*includes revenues from General Service customers in Diesel Communities

6.2.1 Residential

The proposed 3.95% increase applied to the current rates for the residential class would result in a monthly Basic Charge of $7.57 and an Energy Charge of $0.07672 per kWh

for rates effective April 1, 2015. For the following fiscal year, the proposed 3.95% increase would result in a Basic Charge of $7.87 and an Energy Charge of $0.07975 per kWh for rates effective April 1, 2016.

A residential customer, without electric space heat, with an average usage of 1,000 kWh per month would experience an increase in their monthly bill of $3.20 for 2015/16 and $3.33 for 2016/17. A residential customer with electric space heat, using an average of 2,000 kWh a month, would experience increases of $6.11 and $6.36 per month for April 1, 2015 and April 1, 2016, respectively.

6.2.2 General Service Small and Medium

Manitoba Hydro is proposing to apply the 3.95% rate increase across all rate components in the General Service Small and Medium rate sub-classes.

Prior to the 2012/13 & 2013/14 General Rate Application, Manitoba Hydro was gradually adjusting the application of rate increases to eventually achieve the consolidation of the General Service ("GS") Small and Medium rate classes. At the present time, the rates for these two classes vary only with respect to the monthly Basic Charge and Three Phase Charge. As the proposed rate increases are to be applied to all rate components, including Basic Charges and Three Phase Charges, no additional consolidation of these rate classes will result with this Application.

A 3.95% increase on April 1, 2015 would result in the Basic Charge increasing to $20.51 for the GS Small Single Phase and $28.92 for the GS Small Three Phase. It is proposed that on April 1, 2016 these charges will increase to $21.32 and $30.06 respectively. The Basic Charge for the GS Medium class is proposed to increase to $30.52 on April 1, 2015 and to $31.73 on April 1, 2016. All components of the Energy Charge are proposed to increase by 3.95% each of the fiscal years as shown below:

Figure 6.2 Energy Charges for General Service Small and Medium

	April 1, 2015	April 1, 2016
1st 11,000 kWh @	$0.08058 / kWh	$0.08376 / kWh
Next 8,500 kWh @	$0.05594	$0.05815
Balance of kWh	$0.03692	$0.03838

In keeping with the past application of these demand charges, the first 50 kV.A of Billing Demand each month will not be charged, but for demand in excess of 50 kV.A the rate is proposed to increase 3.95% to $9.45 on April 1, 2015 and to $9.82 on April 1, 2016.

6.2.3 General Service Diesel Rates

Manitoba Hydro is proposing to apply the 3.95% increases to both the grid portion of the rate structure (equal to that proposed for grid customers) and the non-grid portion of the rate applicable to general service and government customers in the four remote communities served by diesel generation (Shamattawa, Brochet, Lac Brochet and Tadoule Lake). For General Service non-government customers, the first 2,000 kWh per month will be the same as the grid-rate equivalent as the General Service Small and Medium customer class first block rate. Energy usage in excess of 2,000 kWh per month is proposed to increase by 3.95% in 2015 to $0.41232 per kWh, and increase an additional 3.95% in 2016 to $0.42861 per kWh. For General Service government customers, including First Nation Education accounts, all energy is proposed to be charged at the rate of $2.5095 for rates effective April 1, 2015 and $2.6086 for rates effective April 1, 2016.

6.2.4 General Service Large

This Application seeks a 3.95% increase to both the Energy Charge and Demand Charge for the General Service Large sub-classes to be effective on April 1, 2015.

The present standard rate design, comprised of a single Energy Charge and a single Demand Charge, is proposed for rates effective April 1, 2015 for all three sub-classes of the General Service Large class. In this Application, both the Energy Charge and Demand Charge for all three General Service Large sub-classes is proposed to increase by 3.95% on April 1, 2015:

- The Large 750V-30 kV sub-class would have an Energy Charge of $0.03472 per kWh and a Demand Charge of $8.02 per kV.A.
- The Large 30-100 kV sub-class would have an Energy Charge of $0.03228 per kWh and Demand Charge of $6.87 per kV.A.
- The Large >100 kV sub-class would have an Energy Charge of $0.03128 per kWh and Demand Charge of $6.11 per kV.A.

For rates effective April 1, 2016, rates for the General Service Large 750V-30 kV sub-class would increase an additional 3.95% resulting in an Energy Charge of $0.03609 and

a Demand Charge of $8.34 per kV.A. This would result in bill increases averaging 3.95% depending on load factor.

For customers in the GSL 30-100 kV and GSL > 100 kV sub-classes, Manitoba Hydro is proposing to introduce a Time-of-Use ("TOU") rate design effective April 1, 2016. Please see Section 6.3 on TOU rates for information on the derivation and level of rates for GSL 30 – 100 kV and GSL > 100 kV customer sub-classes.

The bill impacts provided in Appendix 6.6 for the GSL 30-100 and GSL > 100 sub-classes provide two sets of comparisons. The first compares the proposed April 1, 2015 rates to the proposed April 1, 2016 TOU rates. This comparison produces an aggregate view of the bill impacts which includes both the 3.95% general rate increase as well as the impact of the change from the current rate design to the TOU rate design. In order to isolate the bill impact of the rate design change alone, a second set of bill impacts is provided which compares the proxy rates under the current rate design for April 1, 2016 versus the proposed TOU rates. This comparison presents the impact of the introduction of the TOU rate design exclusive of the 3.95% rate increase.

The TOU rates proposed for April 1, 2016 also include a proposal to increase the demand ratchets for the Large >30 kV customers from 25% to 50% of contract demand or 50% of the highest recorded demand in the past 12 months. Please refer to Section 6.3 for a more detailed explanation of this proposed change to the demand ratchets.

6.2.5 Area and Roadway Lighting

Manitoba Hydro is proposing to apply the 3.95% rate increase to the Area and Roadway Lighting class for each of the two fiscal years. In addition, Manitoba Hydro is seeking approval of rates for street lighting using new Light Emitting Diode ("LED") technology. In addition to the LED rate categories approved on an interim basis in Order 79/14, Manitoba Hydro is proposing additional new LED rate categories to address the additional street lighting sizes and wattages, as found on page 21 of Appendix 6.3 and page 22 of Appendix 6.4. Please see Appendix 6.13 for Manitoba Hydro's letter of June 23, 2014, requesting PUB approval to implement LED Rates.

6.2.6 Limited Use of Billing Demand ("LUBD") Rate Option

The rates proposed for LUBD customers are derived from the rates proposed for General Service Small, Medium and Large customer classes. The monthly Basic Charge will increase to the same level as regular GS Small/Medium customers. The Demand Charge is set at approximately 25% of the Demand Charge of the corresponding regular General

Service class, with the energy charge calculated to provide revenue neutrality at a load factor of approximately 18%.

A copy of the latest LUBD report filed with the PUB, covering the period April 1, 2013 to March 31, 2014, is included as Appendix 6.12.

6.2.7 Flat Rate Water Heating ("FRWH")

Manitoba Hydro proposes to apply the 3.95% rate increase to the rate components for both Residential and General Service FRWH customers. There are approximately 3,600 Residential FRWH customers and approximately 370 General Service FRWH customers, and the number of customers on FRWH has been declining by approximately 5% per year.

6.3 TIME-OF-USE RATES FOR GENERAL SERVICE LARGE

Manitoba Hydro is requesting approval to implement TOU rates for customers served in the GSL 30-100 kV and GSL > 100 kV sub-classes, effective April 1, 2016. The proposed TOU rates shown in the April 1, 2016 rate schedules have been designed to recover the same level of revenue (revenue neutral) that would have been recovered through the present standard rate design.

The introduction of a TOU rate enables Manitoba Hydro to provide more appropriate price signals to large energy users and to provide a clear indication of the value of energy to Manitoba Hydro. It also provides industrial customers with a rate design that will incent customers to optimize their energy usage and facilitates opportunities for managing their energy bills. This rate design further assists Manitoba Hydro in addressing concerns about load growth by energy-intensive industries and the potential impact that such growth may have with regard to on-peak export sales.

6.3.1 Background to the TOU Proposal

The issue of industrial rate design was last examined in the public hearing process for Manitoba Hydro's Energy Intensive Industrial Rate ("EIIR") Application in December 2008. Concerns about specific aspects of that rate design lead to Manitoba Hydro advancing a revised EIIR proposal in February 2010. However, it became apparent to the Corporation that the EIIR concept still had shortcomings. In October 2010, Manitoba Hydro withdrew its request for implementation of the EIIR and embarked on an engagement process with the Manitoba Industrial Power Users Group ("MIPUG") to develop a more acceptable solution.

Manitoba Hydro consulted with members and representatives of MIPUG between 2010 and 2012 with an objective to develop a mutually acceptable form of rate design that would consider the needs of both Manitoba Hydro and the industrial customers. A TOU rate concept emerged from those discussions as being a reasonable and acceptable approach to rate design for large electrical consumers in Manitoba. The TOU rate design is uniformly applicable to all existing and expanding loads served at 30 kV and over, and is simpler and easier to administer by abandoning the use of complex and controversial baseline calculations and growth allowances.

In order to advance the TOU rate design proposal, in the spring and summer of 2012, Manitoba Hydro held several stakeholder information sessions. Three sessions were conducted, with Winnipeg and rural area large energy users and with registered intervenors, in order to share information on the proposal with interested and affected parties. In September, 2012, the MHEB approved the request to advance the TOU rate design proposal before the PUB in the 2012/13 & 2013/14 General Rate Application. Shortly thereafter, the PUB determined that it would be more appropriate to address the topic of TOU rate design at a later date and deferred its review of the proposal to a future public hearing process.

Manitoba Hydro is of the view that it is appropriate to advance a proposal for TOU rate design in this General Rate Application, and if approved, implement the proposal as of April 1, 2016. The Corporation notes the extensive discussion and engagement with MIPUG and affected GSL customers in the 2010-2012 time frame in the formulation and development of the TOU rate proposal. The features of that original TOU proposal are intact and have been brought forward in the current rate design proposal. The level of the various energy and demand charges have been re-calculated to reflect current revenue requirements and certain adjustments have been made to mitigate the level of billing impact on customers at the transition to the new rate design.

Manitoba Hydro intends to assist customers in transitioning to a new rate design by providing technical and analytical support to identify the resulting cost impacts and reductions available to customers under the proposed changes. Such support may include energy usage analysis and assistance in examining appropriate contract demand levels for optimal effectiveness and control of energy costs.

6.3.2 Features of the TOU Rate Design

The proposed TOU rate design features differentiated energy rates for on-peak and off-peak energy consumption and a single demand charge based upon the maximum demand set during the on-peak period. The resulting energy rates are higher during the on-peak periods (Monday to Friday from 6:00 a.m. to 10:00 p.m. excluding Statutory holidays) and lower during the off-peak periods (all other hours) in comparison to the single block energy charges that are characteristic of the present standard rate design. Energy rates for on-peak periods are further differentiated between winter (December to March inclusive) and all other or "non-winter" months.

In order to design an appropriate on-peak energy price signal while at the same time maintaining revenue neutrality for the rate class, the following issues were considered.

- The relationship to average MISO market pricing was considered in order to reflect marginal cost considerations in the establishment of the appropriate rate level.
- The level of on-peak energy rates was considered and set to be more reflective of on-peak export market pricing typical of firm sales arrangements than would otherwise be possible through the present standard rate design.
- The level of rate differentiation between on-peak and off-peak energy was considered in order to provide sufficient price differentiation to encourage customer response.
- The balance between recovery through energy charges and demand charges was considered primarily to address bill impacts and customer receptiveness to the introduction of a new rate design.

Each of these factors is taken into consideration in the determination of the level of the on-peak and off-peak energy price and the relative amount of revenue to be recovered between energy charges and demand charges.

The relationship of on-peak and off-peak pricing was examined with consideration for the long-term relationship of on and off peak prices in the day-ahead MISO market experienced at the MHEB node. An examination of the ten year average of MISO day-ahead prices indicates the ratio of on-peak to off-peak prices is approximately 1.8. In other words, on-peak prices, on average, were 1.8 times higher than the off-peak price over the ten year period.

This relationship was used to establish the differentiation between the on-peak (non-winter) price and the off-peak price. On-peak prices for the winter season were then set at a level approximately one cent per kWh higher than the non-winter seasonal rate, which is intended to recognize a higher value of capacity during the winter season, recognizing that Manitoba Hydro is a winter peaking utility and that capacity in the winter months has more value.

6.3.3 Calculation of the TOU rate proposed for April 1, 2016

In order to calculate TOU rates for April 1, 2016, a set of proxy 2016 rates were calculated that conform to the present standard rate design. The TOU rates (as shown in Appendix 6.4) are based on revenue neutrality to the present standard rate design. The proxy rates were created by applying the 3.95% rate increase for April 1, 2016 to the proposed April 1, 2015 rates. This results in the following proxy rates:

- Large >100 kV sub-class would have an Energy Charge of $0.03252 per kWh and Demand Charge of $6.35 per kV.A.
- Large 30-100 kV sub-class would have an Energy Charge of $0.03356 per kWh and Demand Charge of $7.14 per kV.A.

With consideration of the energy rate setting factors discussed in the above section, and based upon the level of revenues proposed to be recovered in fiscal year 2016, the energy and demand rates were calculated for GSL 30-100 kV and GSL > 100 kV subclasses. The resulting proposed on-peak and off-peak energy rates for those sub-classes are shown in the following table:

Figure 6.3 Proposed On-Peak and Off-Peak Energy Rates General Service Large Customers

	Large >100kV	Large 30-100kV
On-peak (winter)	$0.0570	$0.0590
On-peak (non-winter)	$0.0470	$0.0486
Off-peak (all)	$0.0260	$0.0270

In order for the TOU rates to be revenue-neutral compared to the present rate structure, the proposed demand charges have been reduced by 35% to 45% relative to the standard rate design demand charges. This adjustment in the recovery between demand and energy charges is also useful in mitigating the initial bill impact to customers transitioning to the TOU rate design.

Consequently, the TOU Demand Charge has been set at approximately 55% of the $6.35 shown above for the Large >100 kV class or $3.50; and 65% of the $7.14 for the Large 30-100 kV class or $4.64.

6.3.4 Proposed Changes to Demand Ratchet Levels

In addition to the proposed implementation of TOU rates, Manitoba Hydro proposes to change the level of the ratchet used to determine the GSL 30-100kV and GSL>100kV sub-class minimum billing demand. Manitoba Hydro is proposing to change the definition of billing demand for these sub-classes to be the greatest of (in kVA):

- The highest measured on-peak demand in the month; or
- 50% of the contract demand; or,
- 50% of the highest on-peak demand in the previous 12 months.

The intent of raising the ratchet levels is to encourage customers to make efficient use of the transmission and sub-transmission system that is built to serve them.

Manitoba Hydro is contractually obligated to provide power up to the level of each customer's contract demand. In some cases, a customer's contract demand level may be significantly more than the actual peak demand experienced by that customer. Historically, there has not been a significant cost for a customer to contract for more capacity than required, as the 25% contract demand ratchet is relatively low.

Manitoba Hydro is concerned that unused capacity, reserved by customers through their specified contract demand levels, may limit the Corporation's ability to serve new and/or expanding load with existing transmission infrastructure, resulting in potential costs for new infrastructure that would not be required if unused capacity was released. Manitoba Hydro's current General Service Large rate structure includes a minimum monthly billing demand charge that is defined as the highest of actual recorded demand, 25% of contract demand or 25% of the highest recorded demand in the past 12 months. The existing billing threshold provides minimal incentive for most large customers to reduce their contracted demand levels if significant contracted capacity remains unused.

6.3.5 Changes to GSL>30kV Rate Design and Bill Impacts

While the TOU rate is designed to be revenue neutral from a customer class perspective, it is recognized that the introduction of a new rate design will result in a range of customer impacts within the GSL 30-100 kV and GSL > 100 kV sub-classes, due to the

difference in hourly energy consumption patterns between customers in the same sub-class. Within each sub-class, some customers that will experience lower annual bills and others will experience higher annual bills compared to the present rate design, which is directly related to each individual customer's energy usage pattern. Manitoba Hydro has taken measures to address the billing impacts of transitioning to a new rate design, as set out below.

The proposed change to the demand ratchet level will have a billing impact on a small number of customers that are currently operating at demand levels that are significantly lower than their contracted demand. Manitoba Hydro is addressing those impacts by offering to re-contract those customers at lower demand levels that are more aligned with their current operating characteristics.

The TOU rate proposal filed with the 2012/13 & 2013/14 General Rate Application resulted in higher bill impacts to a small number of customers in the GSL 30-100 sub-class, due to the pattern of their energy usage. Those impacts have been mitigated in this TOU rate proposal, by rebalancing the revenue recovery between demand and energy charges. This was accomplished by lessening the amount of revenue forecast to be recovered through the energy charge and increasing the amount of revenues to be recovered through the demand component of the rate design for the sub-class.

The bill impacts arising from the introduction of the TOU rate design and the 50% demand ratchet are shown in the figure below. Customers experiencing bill impacts of greater than 5% are those with existing contract demand levels significantly exceeding their current operating demand levels, and will have ample opportunity to realign their contract demand levels to mitigate the severity of those bill impacts.

Figure 6.4 Customer Bill Impact Related to Rate Design and Demand Ratchet Change

Customer Bill Impact Related to Rate Design Change
2016 Proxy Rates vs 2016 Proposed TOU Rates
(Including 50% Contract Demand)

	Number of Customers	
	Large 30 - 100 kV	Large >100 kV
Decrease >5%	1	4
Decrease 3% - 5%	1	1
Decrease 1% - 3%	12	3
Increase or Decrease <1%	8	3
Increase 1% -3%	5	1
Increase 3% - 5%	3	0
Increase >5%	8	2
Total Customers	**38**	**14**

6.4 PROPOSED CHANGES TO RATE PROGRAMS

6.4.1 Surplus Energy Program ("SEP")

Manitoba Hydro is seeking confirmation of the rate approval process given proposed change to the Terms and Conditions for Option 1 of the SEP which was proposed in the last GRA, and approved on an interim basis in Order 43/13. This change would allow customers to have a different Reference Demand for each of the three pricing periods. The highest designated Reference Demand would be used in determining the customer's monthly billed demand.

The change would allow eligible General Service Medium and Large customers to nominate different levels of Surplus Energy Program energy purchases in peak periods (5x8 weekdays – day time), off-peak periods (7x8 weekdays – night time), and shoulder periods (other weekday or weekend periods). These changes would allow customers to tailor their Option 1 purchases to minimize costs and/or maximize purchase effectiveness.

The PUB, in Order 43/13 approved the change on an interim basis, to be reviewed at a future hearing. Manitoba Hydro is requesting it be reviewed in this Application and approved as final. While there are currently no customers on Option 1, this change would open the possibility for customers to consider this Option in the future.

A copy of the amended SEP Terms and Conditions are included in Appendix 6.7.

Each year Manitoba Hydro files an annual report with the PUB on the status of the SEP. The current report covering the period November 1, 2013 to October 31, 2014 is included in Appendix 6.8.

6.4.2 Curtailable Rate Program ("CRP")

Manitoba Hydro is seeking confirmation of the rate approval process given proposed changes to the CRP that were approved on an interim basis in Order 43/13.

The following changes were implemented effective May 1, 2013, on an interim basis, pending final approval.

- Cap limitations for CRP load has been reduced to 50 MW for Option R load (from the previous 100 MW) and 180 MW for Option A and C loads (previously 230 MW), assuming that the Option C load will convert to Option A. Should Option C load revert to firm service, then the cap for Option A will be reduced to 150 MW.
- Customer's ability to designate varying monthly curtailable load amounts is no longer available. This feature had never been utilized.
- The previous Terms and Conditions did not allow customers to go back onto the CRP if they have switched their curtailable load to firm service. The interim amended Terms and Conditions allow customers back onto the program provided one year has passed since they went off the program and provided that there is curtailable load available under the cap constraints.
- The "Failure to Curtail" clause has been revised from "*Manitoba Hydro may exclude customers from the Curtailable Rate Program if cumulative additional charges during any contract period equal or exceed cumulative discounts"* to *"Manitoba Hydro may exclude customers from the Curtailable Rate Program if a second or subsequent failure to curtail occurs in any twelve month period."*

The following two changes have not yet been implemented:

- A change in the defined hours for peak and off-peak periods to correspond to the hours being defined for a potential TOU rate offering.
- Curtailment Options "C" and "CE" will no longer be made available. The one customer under Option C (there are no customers on Option CE) will be allowed to remain on this Option for one year from the date of confirmation of the rate approval process associated with the amendments of the CRP Terms and Conditions by the

PUB (the sunset date). The customer will have the ability to switch their curtailable load to Option A provided they do so prior to the sunset date, otherwise their curtailable load will convert to firm service.

On May 15, 2013, Manitoba Hydro advised the PUB that these two changes could not be implemented on an interim basis as they could not be easily reversed. Manitoba Hydro proposed to defer these two changes until such time as the PUB could grant final approval. By letter dated June 25, 2013, the PUB confirmed Manitoba Hydro's approach. Copies of both letters have been provided in Appendix 6.9 to this Tab for reference.

A copy of the CRP Terms and Conditions are included as Appendix 6.10.

Each year Manitoba Hydro files an annual report with the PUB on the status of the CRP. The current report which was filed with the PUB on September 10, 2014 covers the period April 1, 2013 to March 31, 2014 and is included for reference in Appendix 6.11.

Manitoba Hydro is seeking confirmation that the PUB accepts the rates flowing from the changes to the terms and conditions of the SEP and CRP programs that were approved on an interim basis in Order 43/13.

6.5 COST OF SERVICE STUDY AND STAKEHOLDER ENGAGEMENT

Manitoba Hydro last filed a COSS with the PUB in the course of the 2012/13 & 2013/14 General Rate Application, to support its application for the differentiation of rates by customer class to be effective April 1, 2013. Shortly thereafter, the PUB determined that matters associated with the COSS would be heard at a separate regulatory proceeding to be scheduled at a later date. Order 43/13, flowing from the 2012/13 & 2013/14 GRA, approved the increase in rates to be applied on an "across the board" basis to all rate components for all rate classes, effective May 1, 2013.

In 2014, after the conclusion of the "Needs For and Alternatives To" Review of Manitoba Hydro's Preferred Development Plan, the Corporation determined that in light of the significant Generation and Transmission expansion plans and the resulting Recommendations to Government that there was a need to re-examine certain elements of the COSS given this changing environment.

This examination involved internal staff and an external expert, Christensen Associates ("CA") of Madison, Wisconsin undertaking to re-visit certain aspects of the COSS. This initiative also incorporated the use of a stakeholder engagement process to solicit input and alternatives from stakeholders in advance of finalizing its corporate position on these matters.

The purpose of the stakeholder engagement process was to facilitate the sharing of views of COSS methodology in an informal, non-adversarial environment, and to identify possible alternative treatments. This process was also necessitated by the lapse of time since the COSS was last reviewed in a public forum in 2008, and the significant differences in perspectives between Manitoba Hydro and its stakeholders on various COSS assumptions, flowing from Order 116/08.

Manitoba Hydro began planning discussions with stakeholder representatives in August, 2014, which led to the formulation of two workshop sessions that were conducted on October 30, 2014 and December 12, 2014. The workshops were attended by stakeholder representatives and their expert COSS consultants and PUB staff and its engineering technical advisor.

The main topics of discussion in the workshop sessions were:

- Allocation of costs to the export class;
- Treatment of net export revenues;
- Allocation of Demand Side Managements costs;
- Functionalization, classification and allocation of Generation system costs; and,
- Functionalization, classification and allocation of AC Transmission system costs.

The workshops served to provide stakeholders and PUB staff and advisors with a common understanding of Cost of Service matters and presented the parties with the current state of Manitoba Hydro's COSS (PCOSS14). Through the course of each workshop, Manitoba Hydro was able to obtain comments and perspectives from stakeholders on various COSS assumptions and alternative treatments to be considered in future cost of service studies.

Manitoba Hydro intends to assess the input and commentary provided during the workshop sessions and is of the view that this information will be useful in its examination of its COSS. The Corporation will continue its examination of its COSS

with a goal of advancing its next COSS for public review at an appropriate time that will be determined in conjunction with the PUB and stakeholders.

6.6 COMPARISON OF ELECTRICITY RATES ACROSS JURISDICTIONS

Figure 6.5 below provides a comparison of the rate increases approved and proposed by other Canadian electric utilities since 2007.

Figure 6.5 Utility Rate Changes

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Cumulative	Current Rate Index*
Manitoba Hydro	2.25%	5.00%	2.90%	2.80%	2.00%	4.40%	3.50%	2.75%	3.95% Proposed	33.7%	100
Hydro Quebec	1.90%	2.90%	1.20%	0.35%	-0.40%	-0.50%	2.41%	4.30%	3.90% Proposed	17.1%	104
BC Hydro	2.10%	0.83%	9.28%	7.29%	7.77%	7.07%	1.44%	9.00%	6.00%	63.2%	134
SaskPower	4.20%	0.00%	8.50%	4.50%	0.00%	0.00%	4.90%	5.50%	3.00%	34.7%	149
NB Power	5.90%	3.00%	3.00%	3.00%	0.00%	0.00%	2.00%	2.00%	2.00% Proposed	20.4%	159
NS Power	3.80%	0.00%	9.30%	0.00%	6.05%	8.70%	3.00%	3.00%	N/A	38.7%	194

* This index is based on the Edison Electric Institute's Survey and compares the average price per kWh (in Canadian $) for the various utilities. Manitoba Hydro's average price is $0.0627/kWh. The Survey is based on 12 months data ending June 2014.

Manitoba Hydro uses its annual "Survey of Canadian Electricity Bills" (which can be found in Appendix 6.14) to compare bills paid by Manitoba customers with those of other major Canadian utilities. As demonstrated in Figure 6.6 below, based on the 2014 Survey of Canadian Electricity Bills, electricity rates in Manitoba are at or near the low end of rates in comparison to other large Canadian cities.

Figure 6.6 2014 Survey of Canadian Electricity Bills Rate Comparison (Price per kWh)

	Residential		GS – Small		GS - Medium		GS - Large	
	1,000 kWh	2,000 kWh	1,000 kWh	5,000 kWh	120 MWh	200 MWh	5.5 GWh	12 GWh
Vancouver BC	9.71	10.77	11.31	10.76	7.62	7.66	6.95	5.47
Edmonton AB	13.14	12.08	13.53	12.46	n/a	n/a	n/a	n/a
Calgary AB	15.66	14.60	17.90	14.65	11.19	11.01	10.35	n/a
Regina SK	13.95	12.94	14.08	11.88	10.15	10.16	7.76	6.31
Winnipeg MB	**8.11**	**7.75**	**9.73**	**8.15**	**6.24**	**6.18**	**4.90**	**3.99**
Toronto ON	15.58	14.64	17.53	15.89	13.23	13.21	12.07	11.80
Montreal PQ	7.06	7.66	10.61	9.63	8.23	8.23	5.06	4.81
Halifax NS	16.03	15.49	16.33	15.38	12.83	12.83	9.13	8.83
Moncton NB	12.06	11.05	14.45	12.74	11.20	11.19	7.24	7.04
St. John's NL	12.33	11.55	12.92	11.81	10.13	9.83	8.56	8.29

n/a - did not respond to Manitoba Hydro's survey
Reflects rates in effect May 1, 2014

To measure performance in the overall North American context, Manitoba Hydro uses the results of both the Edison Electric Institute ("EEI") survey as well as monthly statistics obtained from the United States Department of Energy ("DOE"). Unlike the EEI data that provides investor-owned utility comparisons, the DOE data provides comparisons by State which includes numerous utilities within that state. The table below provides the Total Retail Average Rate compared to other low-cost jurisdictions and neighbouring utilities, including primary MISO states, based on the June 2014 DOE data and July 1, 2014 EEI data, using an exchange rate of 1 US $ =1.1423 Canadian as of December 5, 2014.

The Average Retail Rate provided in Figure 6.7 was determined by dividing the combined total revenue billed by the combined total kilowatt hours billed for the 12-month period ending June 30, 2014 for all customer classes (residential, commercial and industrial), whereas the price per kilowatt hour in Figure 6.6, based on Manitoba Hydro's Survey of Canadian Electricity Bills, are provided for each customer class based on specific levels of consumption.

Figure 6.7 Total Retail Average Rate (Canadian $)

State / Province	Cents per kWh
Manitoba	6.27
Quebec	6.51
Washington	7.78
British Columbia	8.39
West Virginia	8.74
Wyoming	8.94
Saskatchewan	9.33
Idaho	9.38
Arkansas	9.39
Kentucky	9.60
South Dakota	10.78
North Dakota	10.84
Minnesota	11.58
Wisconsin	12.70

Electric utilities across Canada are facing similar cost pressures as Manitoba Hydro which are driving higher than inflationary rate increases. A summary of the reasons for proposed rate increases of comparable Canadian utilities is provided below.

In its 10 year plan for BC Hydro, the British Columbia government established electricity rate increases for BC Hydro of 9.0% in 2014 and 6.0% in 2015. The rate increases for 2016, 2017 and 2018 have been capped by the BC government at 4%, 3.5% and 3.0% respectively. The actual rate increases for 2016-2018 will be established by the British Columbia Utilities Commission. The main driver behind these rate increases is the need to fund investments in aging and new infrastructure to meet growing demand. BC Hydro is forecasting a significant increase in electricity demand over the next 20 years, driven by population increases and broad economic expansion, including increased demand associated with Liquefied Natural Gas industry development. Over the next 10 years, BC Hydro forecasts that capital expenditures will amount to approximately $1.7 billion per year. This level of capital investment will be required to refurbish, upgrade, and expand the electricity generation, transmission and distribution system.

The Saskatchewan Rates Review Panel, approved a rate increase for SaskPower of 5.5% effective January 1, 2014. A further rate increase of 3% was implemented effective January 1, 2015. The rate increases are required primarily to support load growth over the next decade, and to support investments in aging generation, transmission and distribution infrastructure. SaskPower is investing an estimated $1 billion per year over the long term to renew and modernize its electricity system. The majority of the increase in SaskPower's expenses in 2014 and 2015 (depreciation & amortization expense, finance expense and capital taxes) are being driven by increased capital investment. Other drivers include increased fuel and power purchase costs associated with changes in SaskPower's generation mix.

Nova Scotia Power's rates increased by 3% in each of 2013 and 2014. The rate increases were set as part of a rate stabilization plan whereby a portion of the revenue requirement not recovered through current rates is being deferred for recovery in future years. In absence of a rate stabilization plan, the rate increases would have been 7.2% in 2013 and 2.8% in 2014. The main drivers of the rate increases were reduced load, infrastructure additions and upgrades, and increases in fuel costs. Nova Scotia Power's two largest customers (both in the pulp and paper industry) shut down in 2012. Moreover, total sales to other customers have also declined. Throughout 2013 and 2014, Nova Scotia Power made investments in renewable energy projects including a biomass plant, and wind farms. In addition, increased capital investments in the distribution and transmission systems were required to improve reliability and prepare the system to receive intermittent renewable energy.

The Regie de l'energie approved an average rate increase of 4.3% for Hydro-Quebec effective April 1, 2014, applicable to all customer classes except the large industrial customer class. The rate increase authorized for the large industrial customer class was 3.5%. The key drivers of rate increases for Hydro-Quebec are the purchasing costs of wind energy, and the costs associated with upgrading the distribution and transmission networks. On August 1 2014, Hydro-Quebec submitted its 2015-2016 distribution rate application. The total requested rate increase is 3.9% for all customer classes, except for the large industrial customer class for which the requested rate increase is 3.5%.

In November 2013, the Ontario government released its 2013 Long Term Energy Plan (the "Plan"), which outlines Ontario's plans for encouraging conservation and providing for a clean, reliable and affordable energy future. The Plan provides residential electricity bill forecasts over the period 2013-2032. Although these are not based on underlying

proposed rate increases by a particular entity, they do indicate that Ontario residential and industrial customers could see their bills increase over the 2014 to 2018 time period. For residential customers, electricity bills are estimated to increase by approximately 9.6% in 2014, 5.8% in 2015,15% in 2016,1.8% in 2017, and 4.7% in 2018. Furthermore, Ontario industrial customers could see their electricity bills increase by approximately 10% in 2014, 5.7% in 2015, 4.3% in 2016, 4.2% in 2017, and 5.0% in 2018.

The issue of aging infrastructure is facing all utilities in North America and is resulting in considerably higher rate increases than are being projected in Manitoba. For this reason, even with the rate increases being projected in IFF14, it is expected that Manitoba's domestic electricity customers will continue to have rates that are affordable and competitive with other utilities in North America.

Despite having competitive rates, Manitoba Hydro acknowledges that bill increases have an impact on customers. As discussed in Tab 8, Manitoba Hydro, as part of its Power Smart suite, offers programs to assist customers in managing their energy consumption through the implementation of energy efficiency opportunities in their homes and businesses. These opportunities not only result in energy bill savings in the short and long term, but also result in a more comfortable environment for customers. Moreover, to assist low-income customers, Manitoba Hydro continues to provide targeted and enhanced support through its Affordable Energy Program, to improve the energy efficiency of their homes resulting in lower energy bills and increased comfort.