

**CENTRA GAS MANITOBA INC.
2019/20 GENERAL RATE APPLICATION**

RATE BASE & RATE OF RETURN

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18

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22

23 Note: All numbers are in thousands unless otherwise stated.

1 **CENTRA GAS MANITOBA INC.**
2 **2019/20 GENERAL RATE APPLICATION**

3
4 **RATE BASE & RATE OF RETURN**

5
6 **6.0 OVERVIEW**
7

8 This Tab describes each of the components of revenue requirement using the
9 rate base/rate of return methodology for the 2019/20 Test Year.

10
11 Under the rate base/rate of return methodology, total revenue requirement is
12 comprised of the sum of cost of gas, furnace replacement program, operating &
13 administrative expense, other expenses, depreciation & amortization expense,
14 capital & other taxes, and return on rate base, minus other income.

15
16 To calculate return on rate base, it is necessary to first calculate rate base. Rate
17 base is the total investment that Centra has in plant, intangible assets, and
18 regulatory deferral accounts (net of accumulated depreciation/amortization)
19 plus an allowance for working capital as necessary to operate the business (less
20 contributions in aid of construction). The overall rate of return is the cost of
21 capital (debt and equity) expressed as a percentage. Return on rate base is
22 calculated as rate base multiplied by the overall rate of return.

23
24 Total revenue requirement using the rate base/rate of return methodology is
25 \$311,126 for the 2019/20 Test Year as outlined on Schedule 6.0.0.

26
27 Schedule 6.0.0 presents the income statement line items for fiscal years 2011/12
28 to 2019/20 adjusted for the functionalization of net movement relating to
29 operating & administrative expense, other expenses, depreciation &
30 amortization and capital & other taxes into its associated line items as shown in
31 Tab 5, Appendix 5.12, Figures 2 and 3. A detailed discussion on net movement
32 can be found in Tab 5, Section 5.2.10.

1 The following sections provide the calculations of rate base and the overall rate
2 of return for the years 2011/12 to 2019/20. The details of the other revenue
3 requirement line items are provided in Tab 5 of the Application.

4

5 **6.1 RATE BASE**

6

7 Schedule 6.0.0 provides the components that comprise the calculation of rate
8 base for actual results from 2011/12 through to 2017/18, the 2018/19 forecast
9 and the 2019/20 Test Year. The rate base for the 2019/20 Test Year has been
10 calculated at \$653,886.

11

12 The following components are included in the calculation of rate base (using 13-
13 month average balances):

- 14 • Gas plant in service;
- 15 • Accumulated depreciation;
- 16 • Intangible Assets, excluding assets under development, net of
17 accumulated amortization;
- 18 • Net regulatory deferral debit and credit balances; and
- 19 • Contributions in aid of construction.

20

21 Also included in rate base is the working capital allowance which consists of a
22 cash working capital requirement plus gas storage inventory, investment in DSM,
23 regulatory and site restoration costs, less customer security deposits.

24

25 Figure 6.1 below provides rate base as calculated for the years 2011/12 through
26 2019/20 (as shown in Schedule 6.0.0):

1 **Figure 6.1: Rate Base**

Year	Rate Base
2011/12 Actual	\$ 464 864
2012/13 Actual	\$ 477 906
2013/14 Actual	\$ 486 677
2014/15 Actual	\$ 509 823
2015/16 Actual	\$ 529 035
2016/17 Actual	\$ 559 303
2017/18 Actual	\$ 601 750
2018/19 Forecast	\$ 626 692
2019/20 Test Year	\$ 653 886

2
3

4 **6.2 GAS PLANT IN SERVICE**

5 Gas plant in service is the largest balance included in the determination of rate
6 base and consists primarily of Centra's natural gas transmission and distribution
7 system assets. The gas plant in service balance used for determining rate base is
8 based on a 13-month average of the gross cost of in-service plant assets. General
9 plant assets, such as computer hardware and tools required to operate the
10 utility, are also included in gas plant in service. These types of assets are
11 acquired and owned by Centra's parent, Manitoba Hydro. The cost and related
12 finance and depreciation expense are charged to Centra through the integrated
13 cost allocation methodology.

14

15 Schedules 6.1.0 through 6.1.8 provide the year-end plant asset balances by
16 account for 2011/12 through to 2019/20. The continuity schedules list the
17 annual plant asset in-service additions, as well as the annual retirements and
18 adjustments. Also included in the schedules, beginning with Schedule 6.1.3, is
19 the net book value adjustment which was applied by Centra for financial
20 reporting purposes upon its 2015/16 transition to International Financial
21 Reporting Standards ("IFRS"). The Net Book Value ("NBV")
22 Adjustment/Drawdown is discussed below.

23

24 **6.2.1 Net Book Value ("NBV") Adjustment /Drawdown**

25 On transition to IFRS, Centra adopted the NBV of its Property Plant & Equipment
26 ("PP&E") and intangible assets as its opening asset balance, effectively carrying

1 forward the rate regulated unamortized balance of these assets for financial
 2 reporting purposes. Rate regulated entities are provided an exemption under
 3 IFRS, which allows for the adoption of NBV instead of either revaluation of assets
 4 to fair market value or retrospective application of any IFRS changes impacting
 5 capitalized cost or accumulated depreciation (eg. life to date removal of general
 6 and administrative overhead and historical application of changes to
 7 depreciation calculations). Centra recorded a high level adjustment of
 8 approximately \$246 million to reduce the April 1, 2014 gross cost of its PP&E and
 9 intangible assets by the respective April 1, 2014 accumulated depreciation
 10 balances. This effectively maintained the NBV of its plant and intangible assets as
 11 the opening cost value for financial reporting under IFRS. Going forward, the
 12 original April 1, 2014 NBV adjustment amount is drawn down annually, for
 13 financial reporting purposes, by the April 1, 2014 accumulated depreciation
 14 balance of assets retired during the year. Centra continues to use the original
 15 gross cost and accumulated depreciation of its assets for determining
 16 depreciation, and for determining gross cost values for regulatory cost of service
 17 allocations.

18
 19 The following table provides the year end plant asset balances, gross of the NBV
 20 adjustments for each year end from 2011/12 through to the 2019/20.

21
 22

Figure 6.2: Utility Plant Balances

Schedule	Year	Year End Balance
6.1.0	2011/12 Actual	\$ 637 333
6.1.1	2012/13 Actual	\$ 660 570
6.1.2	2013/14 Actual	\$ 683 808
6.1.3	2014/15 Actual	\$ 709 343
6.1.4	2015/16 Actual	\$ 736 653
6.1.5	2016/17 Actual	\$ 791 825
6.1.6	2017/18 Actual	\$ 822 140
6.1.7	2018/19 Forecast	\$ 852 336
6.1.8	2019/20 Test Year	\$ 886 401

23

1 **6.2.2 Plant & Intangible Asset Additions**

2 Appendix 6.1 provides information on annual plant and intangible asset
3 additions, including a detailed discussion of the various gas capital programs and
4 projects completed or planned by Centra for 2011/12 through to the 2019/20
5 Test Year.

6
7 The following table summarizes the annual plant and intangible asset additions
8 for Centra for 2011/12 through to 2019/20.

9
10 **Figure 6.3: Plant & Intangible Asset Additions**

Year	Plant	Intangible	Total
2011/12 Actual	\$ 25 620	\$ 130	\$ 25 750
2012/13 Actual	\$ 29 338	\$ 122	\$ 29 460
2013/14 Actual	\$ 29 504	\$ 3 528	\$ 33 032
2014/15 Actual	\$ 29 365	\$ 374	\$ 29 739
2015/16 Actual	\$ 34 970	\$ 757	\$ 35 727
2016/17 Actual	\$ 61 377	\$ 941	\$ 62 318
2017/18 Actual	\$ 35 679	\$ 888	\$ 36 567
2018/19 Forecast	\$ 35 456	\$ 2 310	\$ 37 766
2019/20 Test Year	\$ 40 097	\$ 266	\$ 40 363

11
12
13 **6.2.3 Plant & Intangible Asset Retirements**

14 Plant and intangible asset retirements are the removal of assets from service
15 which results in a reduction to the gas plant in service and intangible asset
16 balances. Depending on the circumstances, retired assets may be replaced or
17 permanently removed from service (i.e. terminally retired).

18
19 Schedules 6.1.0 through 6.1.8 provide the annual retirements by plant account
20 for 2011/12 through to 2019/20. Schedules 6.4.0 through 6.4.8 provide the
21 annual retirements by plant account for 2011/12 through to 2019/20 for
22 intangible assets.

23
24 The following table provides the total plant and intangible asset retirements,
25 gross of the NBV drawdown for each year from 2011/12 through to 2019/20:

1 **Figure 6.4: Plant & Intangible Asset Retirements**

Schedule	Year	Plant Assets	Intangible Assets	Total
6.1.0	2011/12 Actual	\$ 5 430	\$ 4 601	\$ 10 030
6.1.1	2012/13 Actual	\$ 6 106	\$ -	\$ 6 106
6.1.2	2013/14 Actual	\$ 6 266	\$ -	\$ 6 266
6.1.3	2014/15 Actual	\$ 3 829	\$ -	\$ 3 829
6.1.4	2015/16 Actual	\$ 6 340	\$ 5 304	\$ 11 644
6.1.5	2016/17 Actual	\$ 6 205	\$ -	\$ 6 205
6.1.6	2017/18 Actual	\$ 5 364	\$ -	\$ 5 364
6.1.7	2018/19 Forecast	\$ 5 260	\$ -	\$ 5 260
6.1.8	2019/20 Test Year	\$ 6 031	\$ -	\$ 6 031

2
3

4 **6.3 CONSTRUCTION WORK IN PROGRESS**

5 Construction Work in Progress (“CWIP”) represents the cumulative expenditure
6 balances for capital projects that are not completed by the end of the fiscal year.
7 CWIP balances are excluded from rate base calculations.

8

9 Schedule 6.2.0 provides the year-end CWIP balances by project for 2011/12
10 through to the 2019/20 test year.

11

12 The following table provides the total year-end balances for CWIP for 2011/12
13 through to 2019/20 (as shown in Schedule 6.2.0):

14

15 **Figure 6.5: Construction Work in Progress**

Year	CWIP
2011/12 Actual	\$ 3 802
2012/13 Actual	\$ 4 365
2013/14 Actual	\$ 3 872
2014/15 Actual	\$ 5 723
2015/16 Actual	\$ 12 242
2016/17 Actual	\$ 7 860
2017/18 Actual	\$ 5 868
2018/19 Forecast	\$ 6 358
2019/20 Test Year	\$ 8 850

16

1 **6.4 ACCUMULATED DEPRECIATION**

2

3 Accumulated depreciation represents the cumulative depreciation balance
4 calculated on plant in service net of plant retirements and salvage costs.
5 Accumulated depreciation is a reduction to the annual rate base calculation.
6 Depreciation expense, as well as the annual year over year change in
7 depreciation expense, is discussed in Tab 5, Section 5.2.6.

8

9 The retirement of PP&E and intangible assets acts to reduce the associated
10 accumulated depreciation balance for the retired asset and also acts to reduce
11 the NBV adjustment balance.

12

13 Schedules 6.3.0 through 6.3.8 provide the year-end accumulated depreciation
14 balances by plant account for 2011/12 through to 2019/20. The annual draw
15 down of the NBV adjustment balance, as discussed in Section 6.2.1 above, is also
16 reflected in the schedules.

17

18 The following table provides the total year-end accumulated depreciation
19 balance, gross of the NBV adjustment for 2011/12 through to 2019/20:

20

21 **Figure 6.6: Accumulated Depreciation**

Schedule	Year	Year End Balance
6.3.0	2011/12 Actual	\$ 224 725
6.3.1	2012/13 Actual	\$ 231 883
6.3.2	2013/14 Actual	\$ 239 910
6.3.3	2014/15 Actual	\$ 249 525
6.3.4	2015/16 Actual	\$ 260 636
6.3.5	2016/17 Actual	\$ 271 313
6.3.6	2017/18 Actual	\$ 283 201
6.3.7	2018/19 Forecast	\$ 295 067
6.3.8	2019/20 Test Year	\$ 307 475

22

1 **6.5 INTANGIBLE ASSETS**

2
3 Centra's intangible assets are comprised mainly of computer application
4 development costs and land easements.

5
6 Schedules 6.4.0 through 6.4.8 provide the year-end cost and accumulated
7 amortization balances by intangible asset account for 2011/12 through to
8 2019/20. The annual draw down of the NBV adjustment balance is also reflected
9 in the schedules.

10
11 The following table provides the total year-end gross intangible assets balance
12 and accumulated depreciation balance, gross of the NBV drawdown, for 2011/12
13 through to 2019/20:

14
15 **Figure 6.7: Intangible Assets**

Schedule	Year	Gross Cost Balance	Accumulated Depreciation Balance	Net Intangible Balance
6.4.0	2011/12 Actual	\$ 9 925	\$ 4 046	\$ 5 879
6.4.1	2012/13 Actual	\$ 10 044	\$ 4 638	\$ 5 406
6.4.2	2013/14 Actual	\$ 13 572	\$ 5 628	\$ 7 944
6.4.3	2014/15 Actual	\$ 13 946	\$ 6 632	\$ 7 313
6.4.4	2015/16 Actual	\$ 9 365	\$ 2 315	\$ 7 051
6.4.5	2016/17 Actual	\$ 10 307	\$ 2 816	\$ 7 490
6.4.6	2017/18 Actual	\$ 11 195	\$ 3 336	\$ 7 858
6.4.7	2018/19 Forecast	\$ 13 504	\$ 3 971	\$ 9 533
6.4.8	2019/20 Test Year	\$ 13 770	\$ 4 655	\$ 9 115

16
17
18 **6.6 REGULATORY DEFERRAL BALANCES**

19
20 As a rate-regulated entity, Centra records regulatory deferred debit and credit
21 balances in its financial statements as permitted by international accounting
22 standard IFRS 14 *Regulatory Deferral Accounts*. Such balances represent timing
23 differences between when expenditures are recognized for financial reporting
24 and when expenditures are recognized for rate setting purposes (as endorsed by
25 the PUB). For more detail on Centra's regulatory deferral balances please see

1 Appendix 3.4. The following regulatory deferral accounts are included in the
2 calculation of rate base:

3
4 **6.6.1 DSM, Site Restoration, and Regulatory Costs in Working Capital**
5 **Allowance**

6 As illustrated in Schedule 6.5.8, Centra is projected to have unamortized
7 expenditures of approximately \$55 million in DSM, \$1.5 million in site
8 restoration and \$3.0 million in regulatory hearing costs as of March 31, 2020.

9
10 Consistent with the PUB's direction in Order 128/09, Centra has included its
11 investment in DSM as a component of its working capital allowance.

12
13 Centra has also included unamortized balances for site restoration and
14 regulatory hearing costs in the working capital allowance for inclusion in rate
15 base. Similar to annual DSM spending, these deferral accounts represent
16 ongoing expenditures that will be recovered from customer rates in future
17 periods (e.g. amortization of site restoration costs over 15 years).

18
19 **6.6.2 Other Regulatory Deferrals in Rate Base**

20 In addition to the deferral accounts included in the determination of the working
21 capital allowance, Centra has also included in rate base, the cost and
22 accumulated amortization for the following regulatory deferral account
23 balances:

- 24 a) Ineligible Overhead;
25 b) Impact of 2014 Depreciation Study;
26 c) Change in depreciation rate – gas meters (from 25 to 20 year service life);
27 d) Change in depreciation method (difference between ELG and CGAAP
28 ASL);
29 e) Losses on disposal of assets (asset removal and asset retirement gains
30 and losses); and,
31 f) DSM deferral account from Directive 1d Order 85/13 (the balance in the
32 debit and credit account equally offset each other such that there is a nil
33 effect on rate base).

1 The deferral accounts are proposed for inclusion in rate base in order to adjust
2 the IFRS based financial statement values for plant and intangible assets to the
3 PUB endorsed values for rate setting purposes. For example, plant and intangible
4 asset development costs reported under IFRS are lower than they would have
5 been under CGAAP as ineligible overhead amounts are no longer capitalized
6 under IFRS. To comply with the direction provided to Centra by the PUB in Order
7 85/13 (page 17) that Centra make no further accounting changes for ineligible
8 overhead until a further review can be performed, Centra defers \$0.7 million
9 annually of overhead not eligible for inclusion in the cost of capital assets. Under
10 CGAAP, the \$0.7 million of ineligible overhead would have been included in the
11 cost of capital assets included in the rate base. If the ineligible overhead deferral
12 account balance is not included in rate base, the capital asset cost value as
13 endorsed by the PUB for rate setting purposes would be understated.

14

15 With respect to the changes in depreciation rates and depreciation accounts
16 from the 2014 Depreciation Study, and the increase in the depreciation rate for
17 gas meters, Centra has included the deferral account balances for these items in
18 the calculation of rate base so as to eliminate the impact of the depreciation rate
19 changes on the accumulated depreciation balance used for determining rate
20 base.

21

22 Similar to the treatment of the ineligible overhead, Centra has included in rate
23 base the regulatory deferral account that captures the difference between the
24 IFRS ELG depreciation method used for financial reporting purposes and CGAAP
25 ASL method used for rate-setting purposes and the losses on the disposal of
26 assets. Centra is proposing to include these deferral account balances in rate
27 base for rate setting purposes to ensure the accumulated depreciation balance
28 used for determining rate base is determined using methods endorsed by the
29 PUB for rate setting purposes.

30

31 Schedules 6.5.0 through 6.5.8 provide the total deferred debit and credit
32 balances for each regulatory deferral account for each year for 2011/12 through
33 to 2019/20.

1 The following figure provides the total year-end net debit and credit balances for
2 the regulatory deferral accounts for each year for 2011/12 through to 2019/20:
3

4 **Figure 6.8: Regulatory Deferral Balances**

Schedule	Year	Net Included in Working Capital Allowance ¹	Net Included Directly in Rate Base ²	Other Net Regulatory Deferrals ³	Net Deferral Year End Balance
6.5.0	2011/12 Actual	\$ 46 735	\$ -	\$ 309	\$ 47 044
6.5.1	2012/13 Actual	\$ 49 252	\$ -	\$ 4 383	\$ 53 635
6.5.2	2013/14 Actual	\$ 51 847	\$ -	\$ 66 304	\$ 118 151
6.5.3	2014/15 Actual	\$ 54 070	\$ -	\$ 56 991	\$ 111 061
6.5.4	2015/16 Actual	\$ 55 456	\$ 9 944	\$ 22 207	\$ 87 606
6.5.5	2016/17 Actual	\$ 56 875	\$ 15 133	\$ 4 167	\$ 76 175
6.5.6	2017/18 Actual	\$ 58 329	\$ 20 154	\$ 4 817	\$ 83 300
6.5.7	2018/19 Forecast	\$ 58 889	\$ 24 384	\$ 10 795	\$ 94 069
6.5.8	2019/20 Test Year	\$ 59 732	\$ 28 830	\$ 16 238	\$ 104 800

Notes:

1. Includes deferrals for DSM, Site restoration and Regulatory Costs
2. Includes net deferrals for Ineligible Overhead, Impact of 2014 Depreciation Study, Change in Depreciation Rate - Gas Meters, Change in Depreciation Method (Difference between ELG and ASL), Losses on Disposal of Assets, and the DSM Deferral Account
3. Includes net deferrals for Deferred Taxes and the PGVA

5
6

7 **6.7 CONTRIBUTIONS IN AID OF CONSTRUCTION**

8

9 Contributions in aid of construction are collected from customers, municipalities
10 and other governments to offset construction and operating costs of facilities to
11 ensure the feasibility of a particular project. Construction contributions, net of
12 amortization, are a reduction in the calculation of rate base and are amortized as
13 a reduction in depreciation expense up to fiscal 2014/15. Beginning in 2014/15,
14 under IFRS, contributions are amortized and included in Other Revenue at the
15 same rate as the facilities to which they relate.

16

17 Schedules 6.6.0 through 6.6.8 provide the total gross contributions in aid of
18 construction and total amortized balance by plant account for 2011/12 through
19 to 2019/20.

1 The following figure provides the total net year-end balance of the contributions
2 in aid of construction (gross contributions net of amortization) for 2011/12
3 through to 2019/20:

4
5 **Figure 6.9: Contributions in Aid of Construction**

Schedule	Year	Year End Balance
6.6.0	2011/12 Actual	\$ 51 253
6.6.1	2012/13 Actual	\$ 53 223
6.6.2	2013/14 Actual	\$ 54 272
6.6.3	2014/15 Actual	\$ 56 180
6.6.4	2015/16 Actual	\$ 56 970
6.6.5	2016/17 Actual	\$ 59 303
6.6.6	2017/18 Actual	\$ 59 378
6.6.7	2018/19 Forecast	\$ 60 819
6.6.8	2019/20 Test Year	\$ 62 281

6
7

8 **6.8 WORKING CAPITAL ALLOWANCE**

9

10 In addition to the utility plant that Centra finances, it also has an investment in
11 working capital. Working capital allowance consists of a cash working capital
12 requirement, plus the gas storage inventory, investment in DSM, regulatory and
13 site restoration costs, less customer security deposits. To the extent that Centra
14 has an investment in working capital, it must recover the financing costs of
15 carrying the working capital. As such, for regulatory purposes, the total rate base
16 of Centra includes an allowance for working capital.

17

18 Schedules 6.7.0 through 6.7.8 provide the year-end working capital allowance
19 balances by item for 2011/12 through to 2019/20.

1 The following table provides the working capital allowance calculations for
2 2011/12 to 2019/20:

3
4

Figure 6.10: Working Capital Allowance

Schedule	Year	Working Capital Allowance
6.7.0	2011/12 Actual	\$ 104 247
6.7.1	2012/13 Actual	\$ 104 174
6.7.2	2013/14 Actual	\$ 98 800
6.7.3	2014/15 Actual	\$ 105 763
6.7.4	2015/16 Actual	\$ 106 068
6.7.5	2016/17 Actual	\$ 108 811
6.7.6	2017/18 Actual	\$ 108 589
6.7.7	2018/19 Forecast	\$ 108 505
6.7.8	2019/20 Test Year	\$ 112 427

5
6

7 **6.8.1 Cash Working Capital Requirement**

8 The conceptual basis of the cash working capital requirement can be explained
9 by considering the manner in which Centra collects its revenue requirement
10 from its customers and the way it pays for the goods and services that it
11 receives.

12

13 Centra provides service to its customers at rates that are approved by the PUB.
14 The customer is billed by Centra at the end of the period of service, and pays the
15 bill at a later date according to payment terms established by Centra. The period
16 of time from which Centra renders the service to the date when customers pay
17 for it is referred to as the revenue lag. Centra must supply the capital necessary
18 to finance the accounts receivable during this lag period.

19

20 At the same time, Centra receives goods and services and incurs obligations on a
21 daily basis from numerous parties including suppliers and taxing authorities.
22 Centra pays these expenditures according to the established payment terms.
23 Centra has use of the funds from the date that suppliers and others render
24 service to the date that Centra pays for the service (referred to as the payment

1 lead). The payment lead reduces the capital that is required to finance the
2 accounts receivable.

3
4 The cash working capital requirement is the difference between the capital that
5 is required to finance the revenue lag and the various payment leads, including
6 purchased gas, operating expenses, payroll, capital and other taxes, other
7 expenses, finance expense and non-cost of service tax collections.

8
9 The cash working capital requirement for 2011/12 through 2019/20 is provided
10 in Schedules 6.7.0 to 6.7.8. The basis for calculating the requested cash working
11 capital requirement is the lead-lag analysis as discussed in Appendix 6.2 to this
12 Tab.

13 14 **6.8.2 Gas Storage Inventory**

15 The gas storage inventory amount included in rate base is \$40,386 for the
16 2019/20 Test Year, based on a 13-month average, as per Schedule 6.7.8.

17 18 **6.8.3 Security Deposits**

19 Security deposits are obtained from customers where necessary to ensure
20 payment will be secured for gas supplied. Security deposits are a reduction to
21 rate base because they reduce the investment required by Centra to conduct
22 business. The security deposits balance for 2019/20 is \$900 as shown on
23 Schedule 6.7.8.

24 25 **6.8.4 Investment in DSM, Regulatory & Site Restoration Costs**

26 The investment in DSM, Regulatory Costs, and Site Restoration amounts included
27 in rate base are \$54,888, \$2,968, and \$1,608 respectively for the 2019/20 Test
28 Year, based on a 13-month average, as per schedule 6.7.8.

29 30 **6.9 OVERALL RATE OF RETURN**

31
32 Centra is financed, or capitalized, by a combination of long-term debt, short-
33 term debt, and equity. The overall rate of return is calculated by multiplying the
34 cost of the various types of capital with their corresponding capital structure

1 weighting and summing the results of the individual calculations. As such, the
2 overall rate of return includes both the cost of debt financing and the required
3 return on equity (“ROE”).
4

5 The overall rate of return calculations for 2011/12 through 2019/20 can be
6 found on Schedules 6.8.0 to 6.8.8.
7

8 Centra’s calculation of the overall rate of return for the 2019/20 Test Year is
9 based on the following:

- 10 • A capital structure for rate setting purposes of 61.2% long-term debt, 8.2%
11 short-term debt, and 30.6% equity for 2019/20.
- 12 • A cost of long-term debt of 5.01% for 2019/20 based on a 13-month average
13 embedded cost of debt calculation and a cost of short-term debt of 3.15% for
14 2019/20.
- 15 • A cost of equity financing or ROE of 8.30%, which is within the appropriate
16 ROE range for Centra as determined by independent expert Drazen
17 Consulting Group Inc. (“DCGI”)
18

19 The following table provides the overall rate of return for 2011/12 through
20 2019/20:
21

22 **Figure 6.11: Overall Rate of Return**

Schedule	Year	Overall Rate of Return
6.8.0	2011/12 Actual	6.62%
6.8.1	2012/13 Actual	6.35%
6.8.2	2013/14 Actual	6.07%
6.8.3	2014/15 Actual	5.87%
6.8.4	2015/16 Actual	5.90%
6.8.5	2016/17 Actual	5.89%
6.8.6	2017/18 Actual	5.84%
6.8.7	2018/19 Forecast	5.81%
6.8.8	2019/20 Test Year	5.86%

23

1 **6.10 COST OF CAPITAL**

2

3 This section describes the calculation of the cost of various types of capital for
4 2019/20.

5

6 **6.10.1 Cost of Equity**

7 In past proceedings, Centra's ROE was calculated based on a return on equity
8 formula approved by the PUB in Order 49/95 as follows:

9

10 ROE = Benchmark long Canada bond rate
11 + change in long Canada bond rate from Benchmark rate
12 + implied spread between long Canada bond rate and ROE

13

14 In the 2013/14 Gas GRA, Centra's evidence concluded that this return on equity
15 formula no longer provided appropriate results in the current economic
16 environment, and that formulas tied to a single variable (long-term government
17 of Canada bonds) were no longer appropriate and resulted in returns on equity
18 which were below a fair return. The PUB agreed with Centra on this matter and
19 in Directive 8 of Order 85/13 directed Centra to propose an update to the return
20 on equity that is reflective of an appropriate return on equity to be used in the
21 feasibility test and for the return on rate base determination.

22

23 Following the GRA, Centra requested approval to continue to use the 2010/11
24 approved overall Rate of Return of 6.08%, which included an ROE of 8.36%, until
25 such time as Centra proposed and the PUB approved an alternative ROE. On
26 September 25, 2013, the PUB accepted Centra's proposal. Accordingly, Centra
27 has used an ROE of 8.36% in its Rate of Return calculations for 2011/12 to
28 2017/18.

29

30 To assist Centra in determining an appropriate ROE for the Forecast and Test
31 Years, Centra retained DCGI who concluded that an appropriate ROE for Centra
32 was between 8.30% and 8.70%. For this application, the cost of equity has been
33 assumed at 8.30% for the 2019/20 Test Year. As documented in Tab 3, Centra
34 chose to use the low end of the range of 8.30% for this application in the interest

1 of maintaining a 0.0% increase while still aligning with the 30% equity ratio. In
2 doing so, Centra is foregoing a 1.20% rate increase that would have been
3 required if rates were set to target an 8.30% ROE. See Appendix 3.5 for DCGI's
4 evidence pertaining to the appropriate ROE for Centra.

6 **6.10.2 Cost of Long-Term Debt**

7 The cost of long-term debt calculation includes all of Centra's stand-alone debt
8 issues.

9
10 The cost of long-term debt for 2011/12 through 2019/20 is provided in
11 Schedules 6.9.0 to 6.9.8.

12
13 The following table provides the embedded cost of long-term debt for 2011/12
14 through to 2019/20:

15
16 **Figure 6.12: Embedded Cost of Long-Term Debt**

Schedule	Year	Embedded Cost of Long-Term Debt
6.9.0	2011/12 Actual	5.94%
6.9.1	2012/13 Actual	5.60%
6.9.2	2013/14 Actual	5.20%
6.9.3	2014/15 Actual	5.21%
6.9.4	2015/16 Actual	5.10%
6.9.5	2016/17 Actual	5.02%
6.9.6	2017/18 Actual	4.99%
6.9.7	2018/19 Forecast	4.98%
6.9.8	2019/20 Test Year	5.01%

17 18 19 **Interest on Long-Term Debt**

20 Interest rates for the long term advances to Centra are based on the associated
21 cost of financing that was incurred by Manitoba Hydro at the time of the
22 advance. The following table lists the specific long term advances between
23 Manitoba Hydro and Centra:

1 **Figure 6.13: Specific Long-Term Advances**

Principal (in millions)	Coupon Rate %	Maturity Date	Reason For Issue
\$50	4.505	Mar. 5, 2037	To refinance the November 2006 maturity of a \$48.5 million advance
\$30	6.300	Oct. 29, 2032	An extension of an October 2007 maturity
\$30	5.175	Mar. 5, 2040	For capital requirements
\$30	4.726	Feb. 22, 2030	To refinance a portion of a \$75 million February 2010 maturity
\$10	4.638	Aug. 22, 2037	To refinance a portion of a \$75 million February 2010 maturity
\$20	4.638	Sept. 30, 2037	To partially refinance a \$36.2 million March 2010 maturity
\$30	4.629	Mar. 31, 2035	For capital requirements
\$20	3.178	Sept. 18, 2022	To refinance a portion of a \$62.7 million September 2012 maturity
\$20	3.281	Sept. 18, 2033	To refinance a portion of a \$62.7 million September 2012 maturity
\$20	3.413	Sept. 18, 2042	To refinance a portion of a \$62.7 million September 2012 maturity
\$10	3.398	June 2, 2023	For capital requirements
\$35	2.902	Sept. 5, 2046	To refinance a \$35 million February 22, 2015 maturity
\$35	2.549	June 2, 2025	For capital requirements
\$20	3 mths Bankers acceptance rate + 0.1301227%	Nov. 21, 2019	For capital requirements
\$9.903	3 mths Bankers acceptance rate + 0.2958%	Oct. 17, 2027	For capital requirements

2

3 In addition to the coupon rates, a Provincial Guarantee Fee ("PGF") of 1% is
4 charged on all outstanding debt at each yearend.

5

6 Projected new debt issues in fiscal year 2018/19 totaling \$40 million forecast to
7 be issued March 2019 include a \$20 million CAD fixed rate debt at a projected
8 rate of 3.500%, and a \$20 million CAD floating rate debt at a projected floating

1 rate of 3 month Banker's Acceptance Rate plus 0.570%. A 1% PGF fee will be
2 charged at year-end as well.

3
4 Projected new debt issues in fiscal year 2019/20 totaling \$50 million forecast to
5 be issued March 2020 include \$30 million CAD fixed rate debt at a projected rate
6 of 3.900%, and a \$20 million CAD floating rate debt at a projected floating rate of
7 3 month Banker's Acceptance Rate plus 0.570%. A 1% PGF fee will be charged at
8 year-end as well.

9
10 **6.10.3 Cost of Short-Term Debt**

11 The following table provides the embedded cost of short-term debt for 2011/12
12 through to 2019/20:

13
14 **Figure 6.14: Embedded Cost of Short-Term Debt**

Schedule	Year	Embedded Cost of Short-Term Debt
6.9.0	2011/12 Actual	1.90%
6.9.1	2012/13 Actual	1.40%
6.9.2	2013/14 Actual	1.63%
6.9.3	2014/15 Actual	1.17%
6.9.4	2015/16 Actual	2.14%
6.9.5	2016/17 Actual	1.79%
6.9.6	2017/18 Actual	1.58%
6.9.7	2018/19 Forecast	2.50%
6.9.8	2019/20 Test Year	3.15%

15
16
17 The cost of short-term debt is forecast to be 3.15% for the 2019/20 Test Year as
18 shown on Schedule 5.9.8. This rate is based on a short-term interest rate
19 forecast of 2.15% plus the PGF of 1.00%. The 3.15% short-term debt forecast
20 assumed a differential of 1.75% between short-term and long-term interest rates
21 for 2019/20. Long-term bond rates were forecasted at 4.90% (including PGF) for
22 that period.

1 **Operating Line of Credit**

2 Centra's operating credit is obtained through short-term advances from
3 Manitoba Hydro. Short-term advances are charged an interest rate equal to the
4 3 month Canadian T-Bill rate, given that the 3 month Canadian T-Bill rate is a
5 readily available measure for short-term interest rates. Centra performs a true-
6 up adjustment on a quarterly basis to ensure there has been no over- or under-
7 recovery of short-term finance costs charged to Centra from Manitoba Hydro.

8

9 **6.11 CAPITAL STRUCTURE**

10

11 This section discusses the capital structure for Centra and outlines the
12 capitalization calculation for the 2019/20 Test Year.

13

14 **6.11.1 Capital Structure**

15 In Order 8/94, the PUB approved an equity ratio not to exceed 40% (i.e.
16 approximately 40% equity and 60% debt) as the approved capital structure for
17 Centra. In Order 99/07, the PUB found that given Centra's borrowings are
18 guaranteed by the Province, with the PGF allowed in costs for rate setting, a
19 70:30 debt-equity ratio is adequate, rather than the 60:40 that would be
20 acceptable if there were no PGF.

21

22 The following table provides the equity ratio for 2011/12 through to 2019/20:

23

24 **Figure 6.15: Equity Ratio**

Schedule	Year	Equity Ratio
6.10.0	2011/12 Actual	33.5%
6.10.1	2012/13 Actual	33.5%
6.10.2	2013/14 Actual	34.4%
6.10.3	2014/15 Actual	34.2%
6.10.4	2015/16 Actual	32.7%
6.10.5	2016/17 Actual	32.7%
6.10.6	2017/18 Actual	32.4%
6.10.7	2018/19 Forecast	31.7%
6.10.8	2019/20 Test Year	30.6%

25

1 **6.11.2 Capitalization Calculation for the 2019/20 Test Year**

2 In Schedules 6.8.0 to 6.8.8, Centra has calculated the capital structure weighting
3 for the years 2011/12 through 2019/20 using the PUB approved methodology as
4 follows:

- 5
- 6 1. The total capitalization is calculated by averaging the forecast year-end
7 balances of the various types of capital.
 - 8 2. The amount of equity is calculated based on the average of the forecast
9 year-end equity balances. The equity balance includes retained earnings
10 and share capital.
 - 11 3. The amount of long-term debt is calculated based on the 13-month
12 average of Centra's debt issues.
 - 13 4. Short-term debt is calculated by subtracting the amount of equity and
14 long-term debt from total capitalization (as determined in 1, 2 and 3
15 above).

16

17 The capital structure that results from the above noted calculations for the
18 2019/20 Test Year is 61.2% long-term debt, 8.2% short-term debt and 30.6%
19 equity as per Schedule 6.8.8.

20

21 **6.12 RETURN ON RATE BASE**

22

23 The total return on rate base of \$39,674 for the 2019/20 Test Year, as per
24 Schedule 6.10.8, is made up of the return on rate base of \$38,328, as discussed
25 in Section 6.12.1, plus financing adjustments of \$1,346, as discussed in Section
26 6.12.2.

27

28 **6.12.1 Return on Rate Base**

29 Schedules 6.10.1 through 6.10.8 provide a calculation of the return on rate base
30 for the years 2011/12 through 2019/20. Return on rate base for the 2019/20
31 Test Year is calculated by multiplying the overall rate of return of 5.86%
32 (Schedule 6.8.8) by the total rate base amount of \$653,886 (Schedule 6.0.0), plus
33 financing adjustments of \$1,346, as discussed in Section 6.12.2.

1 The return on rate base (including financing adjustments) for the years 2011/12
2 through 2019/20 are provided in the figure below:

3

4 **Figure 6.16: Return on Rate Base**

Schedule	Year	Return on Rate Base
6.10.0	2011/12 Actual	\$ 33 559
6.10.1	2012/13 Actual	\$ 33 336
6.10.2	2013/14 Actual	\$ 31 679
6.10.3	2014/15 Actual	\$ 32 048
6.10.4	2015/16 Actual	\$ 33 157
6.10.5	2016/17 Actual	\$ 34 515
6.10.6	2017/18 Actual	\$ 36 951
6.10.7	2018/19 Forecast	\$ 38 025
6.10.8	2019/20 Test Year	\$ 39 674

5

6

7 **6.12.2 Financing Adjustments**

8 In addition to the cost of financing rate base items, revenue requirement also
9 includes the cost of financing common assets and inventoried materials as
10 discussed in Tab 5, Section 5.2.5. Figure 5.12 provides the components of the
11 financing adjustments for the years 2011/12 through to 2019/20. The total
12 adjustment for the 2019/20 Test Year is an increase to the return on rate base of
13 \$1,346.