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CENTRA GAS MANITOBA INC. 2019/20 GENERAL RATE APPLICATION

COST ALLOCATION & RATE DESIGN

10.0 OVERVIEW

This Tab provides an explanation of the purpose of a Cost Allocation Study, the process used to allocate costs to customers, and the results of the 2019/20 Cost Allocation Study.

The Cost Allocation Study describes how the costs of serving various customer classes are identified so rates can be designed that correspond to the nature of the costs incurred. Centra has not made substantial changes to its Cost Allocation approach since the 2013/14 GRA. Section 10.1 and 10.2 describe the purpose and process of a Cost Allocation Study. Section 10.3 provides a discussion of the results of the Study, and Section 10.4 addresses rate design matters.

Appendix 10.1 discusses the treatment of rate base with respect to the amounts recorded in several new regulatory deferral accounts established with Centra's transition to IFRS. This was undertaken to achieve consistency, to the extent possible, with the prior regulatory treatment of rate base amounts.

10.1 PURPOSE OF A COST ALLOCATION STUDY

 The principal goal of the rate setting process is to establish rates for various customer classes that are fair, equitable, and not unduly discriminatory. Rates may be considered to be fair and equitable when they reasonably reflect the costs incurred to provide the service. The concept that rates should not be unduly discriminatory suggests that rates can be different for the various groups of customers provided there is a reasonable and rational basis for the difference. This difference may be the result of the nature of the service being provided or the recognition that different costs may be incurred to provide a service to different

groups of customers. A Cost Allocation Study estimates the cost to provide a specific service to a class of customers.

Centra defines "cost" as the embedded or accounting cost incurred in operating the utility. Some costs may be readily identified as the responsibility of a specific customer class or service. The majority of costs dealt with in this Application are shared by various customer classes and services. Accordingly, there is a need to establish some basis to distribute these shared costs to the appropriate customer classes and services.

The Cost Allocation Study provides information on the total cost to serve specific customers or customer groups and also provides information on the nature of the costs, whether those costs are fixed or variable, and the factors that affect the variability of the costs. This information is beneficial in terms of determining an appropriate rate design and provides the basic data upon which rates are based.

10.2 PROCESS OF A COST ALLOCATION STUDY

The cost allocation process is a three step sequential process consisting of functionalizing, classifying, and allocating costs.

10.2.1 Functionalize Costs

The first step in the process is to "functionalize" costs into broadly defined groups ("functions") which describe the purpose or function of the costs. In the case of Centra, there are six such functions, namely Production, Pipeline, Storage, Transmission, Distribution, and Onsite. The first three functions break down the expenses into costs that are incurred upstream of (or prior to) Centra's Transmission and Distribution system, and the next three functions breakdown costs that are incurred downstream or within Centra's Transmission and Distribution system. A brief description of each of these functions follows.

Upstream Functions:

Production

Production costs include the commodity costs of gas supply purchased and flowed directly to the market, including Canadian sourced supply from Alberta plus fuel costs to transport the gas to the Manitoba receipt points, and gas supply purchased from U.S. sources. Production costs also include the cost of gas withdrawn from storage to supply the Manitoba load.

Pipeline

Pipeline costs include fixed and variable costs of transporting gas on the TransCanada Pipelines Limited ("TCPL") system from Empress, Alberta to Centra's Transmission and Distribution System (Centra's Manitoba receipt gates).

Storage

Storage costs include fixed and variable costs of storage services, but do not include the cost of the commodity itself withdrawn from storage to supply the Manitoba load. All U.S. pipeline charges, both fixed and variable, including U.S. fuel costs, are included in this function.

Downstream Functions:

Transmission

Transmission costs include the capital and operating costs of Centra's high-pressure Transmission system, plus the cost of Unaccounted for Gas ("UFG") that occurs on Centra's Transmission and Distribution system. UFG costs are functionalized as Transmission in order to ensure that all customer classes are allocated their appropriate share of the UFG costs regardless of whether they are served from Centra's Transmission or Distribution system.

Distribution

Distribution costs include the capital and operating costs of Centra's high and medium Distribution systems.

1	Onsite
2	Onsite costs include capital and operating costs of Centra's investment in service
3	lines, meters, and other equipment installed on customers' premises, plus the costs
4	of customer accounting and customer service.
5	
6	10.2.2 Classifying Costs
7	The second step in the process is to "classify" the costs that have been
8	functionalized. The classification process amounts to identifying the basis of the
9	variability of the costs. For a gas utility, the variability of costs is usually classified
10	according to the following three factors:
11	
12	 The volume of gas purchased (Commodity Related);
13	2. The number of customers on the system (Customer Related); or
14	3. The capacity requirements needed for a specific day or other time period
15	(Capacity Related).
16	
17	A brief description of each of the classification factors follows.
18	
19	Commodity Related (also referred to as Energy Related)
20	These are costs that are directly affected (they either increase or decrease) by the
21	volume of gas purchased.
22	
23	Customer Related
24	These are costs that are directly affected by the number of customers attached to
25	the system. Examples of these costs would include meters, service lines, and billing.
26	
27	Capacity Related (also referred to as Demand Related)
28	These are costs that are directly affected by the need to meet daily peak
29	requirements or peak requirements of other time periods resulting in contracted
30	daily deliverability commitments on TCPL or other supply options, as well as the
31	capacities of Centra's own Transmission and Distribution system.

10.2.3 Allocate Costs

The third and final step in the cost allocation process is to "allocate" to the various customer classes the costs that have been functionalized and classified. The classification of costs into "Commodity Related", "Customer Related", and "Capacity Related" provides broad guidelines as to how these costs should be allocated to the customer classes. Thus, if costs are classified as customer related it would be reasonable to allocate costs to the various customer classes on the basis of some form of customer numbers, such as a pure number or weighted number of customers. The same logic is applied to commodity related costs.

To allocate capacity related costs, Centra uses a "Peak and Average" allocator that recognizes the peak day, but also gives weight to the average use of the system so that all customer classes pay some portion of the capacity costs.

10.3 RESULTS OF THE 2019/20 COST ALLOCATION STUDY

Centra is not proposing any substantial changes in its approach to cost allocation in this Application. Centra has included several summary schedules from its Study attached to this Tab and discussed below. Base rates and rate impacts that flow from the Cost Allocation Study will be discussed in Tab 11.

10.3.1 Total Functionalization and Classification by Customer Class

Schedule 10.1.3 provides a summary of the results of the functionalization process (as discussed in Section 10.2.1) and the classification of each function into commodity related, customer related, and capacity related (as discussed in Section 10.2.2).

10.3.2 Allocation Results of Rate Base

Rate Base is used to allocate certain components of Centra's Revenue Requirement to each customer class. Centra functionalizes, classifies and allocates each of the components of Rate Base to each customer class. While Rate Base does not ultimately form part of the rates to be paid by customers, the results of the allocation of Rate Base are used to drive the allocation of certain cost of service

Tab 10 Page 6 of 14 November 30, 2018

components. For example, finance expense is functionalized, classified and allocated to each customer class consistent with Rate Base. In addition, Corporate Allocation and Net Income have been functionalized, classified and allocated on the basis of Rate Base.

The allocation of Rate Base for 2019/20 is consistent with cost allocation from past GRAs. Appendix 10.1 to the Application provides a reconciliation of March 2019 & March 2020 Rate Base presented in Tab 6 of the Application with the Rate Base used for cost allocation purposes.

Schedule 10.1.4 provides the summary of the allocation of each component of Rate Base to each customer class.

10.3.3 Allocation Results of Revenue Requirement

Centra has allocated a total Revenue Requirement (referred to as Total Cost of Service on Schedule 10.1.0) of \$326.3 million to the various rate classes. Figure 10.1 below reconciles the 2019/20 Cost of Service components, included in the Appendix 5.12 (Figure 2), to the Cost of Service components included in the 2019/20 Cost Allocation Study, as outlined in Schedule 10.1.0 of this Tab.

	2019/20	2019/20
	Test Year	Test Year
	Cost of Service	Cost Allocation
Cost of Gas	158,414	177,265
Other Income*	(2,342)	(1,028)
Operating & Administrative	60,550	60,550
Depreciation & Amortization *	33,502	32,371
Capital & Other Taxes	20,600	20,600
Finance Expense	22,229	22,229
Other Expenses**	183	•
Corporate Allocation	12,000	12,000
Furnace Replacement Program	545	
Net Income (Loss)	2,318	2,318
Total Cost of Service	307,999	326,305
		A
2019/20 Total Cost of Service (Appendix 5.12)	307,999	
Less 2019/20 Fiscal Year Cost of Gas (Appendix 5.12)	(158,414)	
Add 2019/20 Gas Year Cost of Gas (Schedule 8.9.4)	177,265	
Furnace Replacement Program (Appendix 5.12)	(545)	
2019/20 Costs Allocation (Sch. 10.1.0)	326,305	

^{*}In Centra's Cost Allocation Study the Amortization of Customer Contributions in the amount of \$1,130 is grouped with Depreciation and Amortization. For financial statements purposes the Amortization of Customer Contribution is included in Other Income.

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An explanation of the differences between the components of Cost of Service as reflected in Appendix 5.12 of this Application and the Cost of Service used in the Cost Allocation Study are provided below:

• The Cost of Gas of \$177.3 million included in the Cost Allocation Study reflects the updated strip date of May 15, 2018 as discussed in Tab 8 as compared with that reflected in CGM18 (which is based on a strip date of January 12, 2018). While the cost of Primary Gas has been included in the Study, it is only used to drive allocations and is not used for rate setting purposes. Centra's current Primary Gas billed rate of \$0.0832/m³ was last approved in Order 143/18. Centra will file revised Primary Gas rates in

conjunction with its next quarterly Application for February 1, 2019.

 As discussed in Tab 3, page 4 & 5, Centra is proposing to discontinue funding the Furnace Replacement Program ("FRP") effective August 1, 2019, and to remove the associated cost from rates for the Small General Service Class.
 As such, 2019/20 assumes \$545 thousand is collected from SGS customers

15 16 17

^{**}For Centra's Cost Allocation Study the Other Expenses have been netted with Other Income.

le

for the Furnace Replacement Program Fund over the period April 1 to July 31, 2019. As Centra is proposing to implement new rates effective August 1, 2019 these costs have not been included in the Cost Allocation Study.

Schedule 10.1.5 provides the summary of the allocation of each component of Cost of Service to the various customer classes.

10.3.4 Summary of Allocated Costs by Customer Class

Schedule 10.1.0 provides a summary of the total Cost of Service for 2019/20 allocated by customer class, detailed by cost of service element (Cost of Gas, Other Income etc.) and classification (Demand, Energy and Customer). Figure 10.2 below provides a summary of the allocation of the total Cost of Service for 2019/20 of \$326.3 million to the various rate classes compared to the total Cost of Service based upon non-gas costs approved as part of Centra's 2013/14 GRA and gas costs approved as part of Centra's 2015/16 Cost of Gas Costs.

Figure 10.2: Cost of Service Allocation by Customer Class (\$000s)

For August 1, 2019 to Mar 31, 2020	2013/14 GRA (Non-Gas)	2019/20 Increase/
	<u>& 2015/16 COG</u>	Proposed (Decrease)
SGS	142,051	135,565 (6,485)
LGS	52,500	56,859 4,359
High Volume Firm	11,874	13,882 2,008
Со-ор	20	20 0
Mainline	2,123	2.225 102
Special Contract	1,475	
Power Stations	381	
Interruptible	3,050	1,728 (1,322)
Primary Gas*	131,365	
Supplemental Firm	16,588	
Supplemental Interruptible	1,044	
Fixed Rate Primary Gas	242	78 (211)
Total Cost of Service	362,713	326,305 (36,408)

*Reflects the 2015/16 Primary Gas Costs and is simply a placeholder for purposes of the table recognizing that Primary Gas rates (and total costs) change quarterly.

Centra's 2019/20 Cost of Service has decreased overall compared to the total nongas costs approved in the 2013/14 GRA and the gas costs approved in the 2015/16 COG. In this GRA, the total revenue requirement of \$326.3 million is comprised of \$177.3 million of forecast gas costs and \$149.0 million of non-gas costs compared to

1 \$211.2 million in gas costs from the 2015/16 COG and \$151.5 million in non-gas costs from the 2013/14 GRA respectively. 2 3 4 **10.3.5** Unit Cost Component Summary – All Costs 5 Schedule 10.1.1 provides a summary of the cost allocation results which includes 6 both gas and non-gas costs. 7 8 The upper portion of the Schedule separates the allocated revenue requirement by 9 customer class and in terms of upstream and downstream costs: · Upstream costs are those that are incurred upstream of Centra's receipt 10 gates. These costs apply to all Sales Service and Western Transportation 11 12 Service ("WTS") (excluding Primary Gas) customers but do not apply to the 13 Transportation Service ("T-Service") customers. The T-Service customers 14 independently arrange for transportation of their supply to the Centra receipt gates and therefore are not responsible for the upstream costs 15 16 incurred by Centra. 17 Downstream costs are those incurred downstream of the Centra receipt gates and are the responsibility of all of Centra's customers. 18 19 20 Lines 16 to 22 of Schedule 10.1.1 set out the Monthly Billing Determinants for each rate class for the period April 1, 2019 to March 31, 2020. The Billing Determinants 21 are either demand billing units, (peak use per day in 10³m³/day), commodity units or 22 annual consumption (in 10³m³), or annual customer numbers. 23 24 The upstream billing determinants for a particular rate class apply to all 25 customers except T-Service customers in that rate class. In the case of Primary Gas, both WTS and T-Service customer volumes are excluded 26 27 because they do not use Primary Gas. The downstream billing determinants include annual billing demand, volume 28 29 and customer numbers for all customers in each class regardless of the 30 service provided. 31

> Lines 27 to 33 show the resulting unit charges by rate class to be embedded in the new base rates. Again, the upstream charges for a particular rate class apply to all

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customers, excluding the T-Service customers in that rate class. The downstream charges for a particular rate class apply to all customers including T-Service customers in that rate class. The charges are either demand charges (\$/10³m³/day), commodity charges (\$/10³m³), or customer charges (\$/customer/month). Note that none of the upstream costs are customer related, i.e. costs that vary directly with the number of customers billed, and therefore no upstream costs have been allocated to the customer classification category.

Line 24 of Schedule 10.1.1 indicates a Percent in Demand Charge. This refers to the accepted rate design methodology whereby for certain rate classes, some (or all) demand related costs are not recovered in the demand charge but are instead recovered as part of the commodity charge. For example for the SGS and LGS rate classes, all of the demand related costs are transferred to the commodity category and recovered in their respective commodity charges. For the HVF and Interruptible rate classes, 35% of the demand related costs are transferred to the commodity category and recovered in their respective commodity charges. The remaining 65% of demand costs are recovered in the respective demand charges. Finally, for the Coop, Mainline, and Power Stations customer classes, 100% of the demand related costs are recovered in the demand charge and no costs are transferred to the commodity category.

10.3.6 Unit Cost Component Summary – Non-Gas Costs vs. Gas Costs

Each of the upstream and downstream costs described in the prior section and identified in Schedule 10.1.1 contain both gas and non-gas costs. Centra has provided Schedule 10.1.2, which breaks out the upstream and downstream costs on the basis of gas versus non-gas costs.

Figure 10.3 below compares the 2019/20 Proposed Non-Gas Costs to the 2013/14 Approved Non-Gas Costs allocated by customer class. Primary Gas and Supplemental Gas are treated as discrete customer classes in order to determine the Primary Gas and Supplemental Gas overhead rates as discussed below (page 12).

Figure 10.3: Comparison of Non-Gas Costs by Customer Class (\$000s)

	2013/14	2019/20	Increase/
	GRA	Proposed	(Decrease)
SGS	110,336	103,098	(7,238)
LGS	29,073	32,357	3,284
High Volume Firm	5,184	6,919	1,736
Со-ор	8	8	0
Mainline	1,816	2,000	184
Special Contract	1,385	2,282	897
Power Stations	256	167	(89)
Interruptible	2,090	810	(1,280)
Primary Gas	956	1,195	239
Supplemental Firm	160	162	2
Supplemental Interruptible	14	10	(4)
Fixed Rate Primary Gas (Non-Gas Component only)	242	32	(211)
Total Non-Gas Cost of Service	151,520	149,040	(2,480)

As reflected in Figure 10.3 above, the SGS, Interruptible and Power Stations classes experience a decrease in their allocated portion of non-gas costs compared to the 2013/14 approved non-gas costs, while the LGS, HVF, Special Contract and Mainline classes experience an increase in their allocated portion of non-gas costs compared to 2013/14.

The decrease in non-gas costs in the 2019/20 Test Year allocated to SGS customers is primarily a result of Centra's proposal to discontinue funding the Furnace Replacement Program (FRP) and remove the associated costs from rates, and a decrease in O&A.

Non-gas costs allocated to the Power Stations decline in the 2019/20 Test Year, compared to 2013/14, as a result of a reduction in forecast demand levels relative to other customer classes.

The non-gas costs allocated to the Interruptible class in the 2019/20 Test Year are lower compared to 2013/14 due to a decline in the forecasted volumes and the number of customers in this class as a result of the migration of Interruptible customers to the HVF Class. This migration has resulted in a shifting of non-gas costs allocated from the Interruptible Class to other customer classes, including the HVF Class.

The increase in non-gas costs allocated to the LGS customer class in the 2019/20 compared to 2013/14 is the result of an increase in forecast demand levels relative to other classes. This is driven by a forecasted increase in usage on the peak day. Additionally, the increase in the allocated portion of non-gas costs to LGS and HVF is also a result of their expected greater participation in DSM programs and therefore a greater allocation of DSM costs.

The Special Contract class' share of non-gas costs has increased significantly since the last GRA, driven by a change in the relative proportion of rate base that is transmission-related versus distribution-related as a result of significant transmission investments since Centra's last GRA, as discussed in Appendix 6.1. All customers utilize Centra's transmission system and the investment required for maintaining reliability and addressing plant obsolescence is borne by all customers, by virtue of the postage stamp approach to ratemaking. However, Special Contract, Mainline and Power Stations are transmission system customers and therefore, do not utilize the distribution system. As such, these classes pay costs related to transmission and on-site facilities but have no cost responsibility for distribution facilities.

As the results of Rate Base are used to drive the allocation of finance expense, capital taxes, corporate allocation, net income and certain elements of O&A costs, the increase in transmission related assets resulted in more costs being allocated to transmission served customers such as the Special Contract customer class. Additionally, the major transmission investments are causing finance expense and capital taxes to increase compared to 2013/14 GRA.

For the purposes of the preparation of the Cost Allocation Study, Primary Gas and Supplemental Gas are treated as discrete customer classes in order to allocate nongas related costs associated with procuring and managing those gas supplies. Those non-gas related costs are recovered in the Primary Gas and Supplemental Gas overhead rates. Centra is requesting approval of a new Primary Gas Overhead Rate (non-gas cost component) of \$0.94/10³m³ (Schedule 10.1.2, line 49) compared to the 2013/14 GRA approved Overhead Rate of \$0.87/10³m³ as part of this

application. The Overhead Rate currently embedded in the Primary Gas rate is \$1.64/10³m³, which reflects the reversion of non-gas rate components implemented on August 1, 2017.

Centra's approach to the allocation of the overhead component of the Primary Gas rate has not changed. Consistent with past practice, Centra will embed the new Primary Gas Overhead Rate as part of its August 2019 Quarterly Primary Gas Application.

Centra has also updated its Fixed Rate Primary Gas Service ("FRPGS") Program Cost Rate ("PCR"). The FRPGS program has been incorporated into Centra's Cost Allocation Study and is treated as a separate service class in the same fashion as Primary and Supplemental Gas. The revised PCR is \$55.12/10³m³ (Schedule 10.1.2, line 49), which is higher than the \$31.37/10³m³ currently approved by the PUB. The increase results primarily from lower forecasted volumes experienced for this service, which is partially offset by a reduction in program administration costs.

Non-gas costs allocated to the Supplemental Firm class have slightly increased in the 2019/20 Test Year and the expected volumes decreased causing the non-gas component in supplemental firm rate to increase compared to the 2013/14 GRA.

Non-gas costs allocated to the Supplemental Interruptible class have declined compared to the 2013/14 GRA but this decrease is more than offset by the expected volumes decreased resulting in the increase to the non-gas component of Supplemental Interruptible rate. Figure 10.4 provides the calculation of overhead rates for Supplemental Gas.

Figure 10.4: Calculation of Supplemental Gas Overhead Rate

	2013/14	2019/20	
	Approved	Proposed	
Firm Supplemental OH rate			
Non-gas allocated (\$)	160,017	161,539	
Volumes (10 ³ m ³)	131,746		1000
Rate/10 ³ m ³	1.21		1d
rate/m³	0.0012		
INT Supplemental OH rate			
Non-gas allocated (\$)	14,336	10,397	
Volumes (10 ³ m ³)	11,078		45507
Rate/10 ³ m ³	1.29		1d
rate/m³	0.0013		

As the cost of Supplemental Gas has decreased compared to the costs embedded in current rates (approved as part of the 2015/16 Cost of Gas Application), the Supplemental Gas unit rates (Schedule 10.1.1, line 28) have decreased compared to current approved rates.

10.4 RATE DESIGN

Centra is not proposing changes to its rate design for its customer classes in this Application. A description of Centra's rate design by customer class is provided below.

 SGS customers and LGS customers pay a two-part rate consisting of a Basic Monthly Charge ("BMC") and Volumetric Charges. The BMC is proposed to remain at \$14 per month for SGS customers and \$77 per month for LGS customers. The BMC does not recover all of the customer related costs for the SGS or LGS classes. All customer costs in excess of those collected in the BMC, plus all capacity and commodity related costs are recovered in the Volumetric Charges for the both SGS and LGS classes.

The HVF, Co-op, Mainline, Power Stations and Interruptible classes are billed using a three-part rate design. This rate design includes a BMC, Monthly Demand Charge components and Volumetric (commodity) Charge components. The BMC for these classes recovers 100% of the customer related costs determined for each respective

class in the Cost Allocation Study. The Monthly Demand Charge for the HVF and Interruptible classes recovers 65% of the capacity or demand-related costs determined in the Cost Allocation Study. The remaining 35% of capacity costs are added to the commodity costs and recovered through the Volumetric Charges. The Co-op, Mainline and Power Stations class include a Monthly Demand Charge that recovers 100% of the capacity or demand-related costs and Volumetric Charges equal to 100% of commodity related costs.

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The Special Contract class pays a two-part rate, with 100% of the customer related and capacity related costs recovered through the Basic Monthly Charge. The Volumetric Charge recovers 100% of the commodity-related costs allocated to the class which is predominantly the cost of Unaccounted For Gas.