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VIA EMAIL, RESS and COURIER

November 27, 2019

Ms. Christine Long
Board Secretary and registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Long:

**Re: EB-2019-0194 Enbridge Gas Inc. ("Enbridge Gas")
2020 Rates – Application and Evidence (Cost Allocation Study)**

In Enbridge Gas's 2020 Rates Application filed on October 8, 2019, the Company indicated that it will file a cost allocation study (as required by the MAADs Decision) for the Union rate zones that takes into account four projects (Panhandle Reinforcement, Dawn-Parkway expansion including Parkway West, Brantford-Kirkwall/Parkway D and the Hagar Liquefaction Plant) and that includes a proposal for addressing TransCanada's C1 Dawn to Dawn TCPL service. Please find attached the cost allocation study for the Union rate zones, filed as Exhibit B, Tab 1, Appendix C. An Excel format of the cost allocation study is filed as Exhibit B, Tab 1, Appendix C1.

Also, in the October 8, 2019 cover letter, the Company indicated that it will file a proposal for the standard rate adjustment process it will follow for 2021, 2022 and 2023 at the same time as the remaining evidence is filed in this case. The proposal for the rate adjustment process is filed as Exhibit A, Tab 3, Schedule 1. Enbridge Gas will be happy to respond to questions and suggestions from the Board, Board Staff and stakeholders about the proposed future rate adjustment process so that an updated approach supported by all parties can be implemented beginning with 2021 Rates.

Please contact the undersigned if you have any questions.

Yours truly,

(Original Signed)

Rakesh Torul
Technical Manager,
Regulatory Applications

cc: David Stevens, Aird and Berlis LLP
EB-2019-0194 Intervenor

EXHIBIT LIST

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ENBRIDGE GAS PROPOSAL FOR RATE APPLICATION PROCESS FOR YEARS
THREE TO FIVE OF DEFERRED REBASING TERM

1. On August 30, 2018, in the MAADs Decision (EB-2017-0306/0307), the Board approved a rate setting mechanism (Price Cap IR) for Enbridge Gas, which sets out a multi-year incentive rate-setting mechanism ("IRM") for the calendar year term of 2019 to 2023 (the "deferred rebasing term"). The MAADs Decision confirmed that during the deferred rebasing term, distribution rates will be set separately for the Enbridge Gas Distribution ("EGD") and Union Gas ("Union") rate zones.
2. The MAADs Decision also approved the specific treatment of various elements in the IRM including the availability of an Incremental Capital Module ("ICM") during the deferred rebasing term. Additionally, the MAADs Decision set out certain items that Enbridge Gas is required to file over the course of the deferred rebasing term.
3. As a result of the 2019 Rates proceeding (EB-2018-0305) concluding in September 2019, Enbridge Gas indicated that it would make a proposal to get its rate adjustment process "back on track" in future years, so that rates can be implemented on January 1st of each year without having to resort to extraordinary processes.
4. For this 2020 Rates proceeding, the Board has agreed to a "bifurcated process", where distribution rates relating to the IRM adjustments are processed and adjudicated first, in order to allow updated interim rates to be in place on January 1, 2020. Matters related to the ICM funding and other items (in this case, a cost allocation study and e-billing) will be addressed in Phase 2 of the proceeding.
5. Enbridge Gas proposes that it is appropriate to continue with a bifurcated approach (Phase 1 and Phase 2) in future years of the deferred rebasing term (2021, 2022

and 2023), to allow mechanistic IRM adjustments to be adjudicated and implemented quickly and separately from other aspects of the Application.

6. In future years, Enbridge Gas will file its Application on an earlier date to provide time to consider the mechanistic IRM adjustments through more conventional Board processes as compared to the expedited process used for this 2020 Rates proceeding. To that end, Enbridge Gas proposes to file its Application promptly once the key determinants of the mechanistic IRM adjustments are known. These items (such as the prior year GDP IPI (inflation factor), demand forecast information and capital pass-through cost information) will be available by early June each year. This will allow Enbridge Gas to file its Application and Phase 1 evidence by the end of June for the following year's rate changes.
7. By June of each year, Enbridge Gas will also have a high-level indication about what ICM projects and other items may be included in the Application for the following year. Importantly, however, the detailed information about such items (including the updates to the Asset Management Plan) will not be known until around September of each year. With that in mind, Enbridge proposes to include a high-level description of any Phase 2 items in its Application, but then wait until October each year to file the Phase 2 supporting evidence.
8. The following is Enbridge Gas's proposed timeline and process steps for its 2021 to 2023 Rates Applications.

Phase 1		
Item	Description	Timing (approx.)
Application	To include high-level information about Phase 1 and Phase 2	June 30
Phase 1 Evidence	Filed along with Application	June 30
Notice and Procedural Order	Notice to cover both Phase 1 and Phase 2, but Procedural Order to relate to Phase 1 only	August 1
Phase 1 Interrogatories		August 15
Phase 1 Interrogatory Responses		August 30
Phase 1 ADR	2 Days	September 15
Board Approval of Settlement Proposal		October 1
(if necessary) Written Submissions on Unsettled Items	Assuming that one or more items is not resolved in ADR, these could be determined through a written process	October 1 (Argument in Chief) October 8 (Intervenor Argument) October 15 (Reply Argument)
OEB Decision on Unsettled Items		November 15
Board approval of Rate Order	Enbridge Gas would file a draft Rate Order at least a week in advance of the Board approval date	October 30 (assuming full Phase 1 settlement) November 30 (assuming one or more Phase 1 items determined by the Board)
Rate Implementation	Updated rates for the Test Year to be implemented on an interim basis, pending determination of Phase 2 items	Interim rates implemented in conjunction with January 1 st QRAM Application

Phase 2		
Item	Description	Timing (approx.)
Application	To include high-level information about Phase 1 and Phase 2	June 30
Notice	Board's Notice to address relief sought in Phases 1 and 2	August 1
Phase 2 Evidence	To address any non-IRM rate adjustment requests, as well as items noted in other Board decisions that are required to be filed in Enbridge Gas's rate application	October 15
Phase 2 Procedural Order		November 7
Phase 2 Discovery Process	Written Interrogatories and/or Technical Conference	November/ December
Phase 2 ADR	If appropriate	January
Board Approval of Phase 2 Settlement Proposal	If applicable	January
Written or Oral Hearing on any unresolved Phase 2 items	Form of hearing will depend on nature of unresolved Phase 2 items	TBD
OEB Decision on Unsettled Items		TBD
Rate Implementation	Final rates for the Test Year, inclusive of the full-year impact of any Phase 2 items, to be implemented in conjunction with the next QRAM Application	Implemented in conjunction with April or July 1 st QRAM Application

ENBRIDGE GAS INC. 2020 RATE APPLICATION
UNION RATE ZONES
COST ALLOCATION STUDY DIRECTIVE

1. In the MAADs Decision, the Board ordered Enbridge Gas (or “the Company”) to file a cost allocation study in 2019 for consideration in the 2020 Rates proceeding for the legacy Union Gas (“Union”) service area to take into account certain major capital projects.¹ The Board specifically noted that the cost allocation take into account the following projects: Panhandle Reinforcement, Dawn-Parkway expansion including Parkway West, Brantford-Kirkwall/Parkway D and the Hagar Liquefaction Plant. The Board also directed Enbridge Gas to include a proposal for addressing TC Energy’s (previously TransCanada) Rate C1 Dawn to Dawn-TCPL service. The Board further noted that it accepts the proposal will not be perfect but is intended to address the cost allocation implications of certain large projects undertaken by Union that have come into service during Union’s 2014-2018 Incentive Regulation Mechanism (IRM) term.
2. In accordance with the directive, Enbridge Gas has prepared a cost allocation study based on a 2019 test year. The cost allocation study is not intended to be a precise measurement of the actual cost to serve a particular rate class, much less a

¹ EB-2017-0306/EB-2017-0307 Decision and Order, August 30, 2018, p. 41.

particular customer, but rather to provide a reasonable indication of cost responsibility by rate class at a specific point in time.

3. To account for certain major capital projects, Enbridge Gas is seeking Board approval of cost allocation methodology changes to the Panhandle System and St. Clair System, Parkway Station and Dawn Station. Enbridge Gas is proposing to implement the cost allocation methodology changes as part of its next rebasing proceeding.
4. To provide relativity of the cost allocation results, Enbridge Gas has prepared revenue to cost ratios that compare the Company's revenue based on approved 2019 rates compared to the allocation of the 2019 revenue requirement derived from the cost allocation study. The revenue to cost ratios do not include any rate design adjustments that may otherwise have been applied as part of a cost of service proceeding. The derivation of the revenue to cost ratios and any applied assumptions are further described in Section 4.
5. In accordance with the directive, Enbridge Gas has also addressed the cost allocation of the Hagar Liquefaction Plant and the Rate C1 Dawn to Dawn-TCPL service.

6. Enbridge Gas is not recommending changes to the pre-filed rates for 2020² as a result of the cost allocation study directive. The 2020 pre-filed rates have been derived through the rate setting mechanism approved by the Board for Enbridge Gas's deferred rebasing period in the MAADs Decision. As noted, Enbridge Gas believes that it is appropriate that the proposed cost allocation changes described in this evidence should be approved in this proceeding, and then implemented along with all other rate changes in its next rebasing application. Should the Board direct cost allocation changes be implemented in rates prior to rebasing, Enbridge Gas proposes to implement those changes as part of its 2021 Rates Application.
7. In part, Enbridge Gas is not recommending changes to rates as part of this proceeding because Enbridge Gas anticipates there will be additional changes at rebasing in 2024 when Enbridge Gas introduces rate harmonization, integration of the cost allocation studies for the combined utility and the pass-through of synergy cost savings into rates. The cost allocation study results, on their own, do not represent the final rate adjustment that may occur as part of a cost of service proceeding. The final rate adjustment of a cost of service proceeding would include rate design and other adjustments that may be required to manage revenue to cost ratios, maintain rate class continuity and address bill impacts. Implementation of cost allocation changes by rate class without consideration of rate design factors may

² IRM rate adjustment filed on October 8, 2019 and ICM funding request filed on October 25, 2019.

result in unintended impacts that cannot be predicted without a complete rate design review similar to what is completed as part of a cost of service proceeding.

8. Enbridge Gas also recognizes that cost allocation is a zero-sum exercise. Should the Board direct any cost allocation changes result from this cost allocation study directive, implementation of the changes will need to maintain revenue neutrality for Enbridge Gas to ensure the Company will continue to earn revenue consistent with the approved rate setting mechanism. Any adjustments will therefore result in cost increases for certain rate classes and equal and offsetting cost decreases for other rate classes.
9. This section of evidence is organized as follows:
 1. Summary of Results
 2. Revenue Requirement
 3. Cost Allocation
 - 3.1 Panhandle System and St. Clair System
 - 3.2 Parkway Station
 - 3.3 Dawn Station
 - 3.4 Hagar Liquefaction Plant
 4. Revenue to Cost Ratios
 - 4.1 S&T Transaction Margin Adjustment
 5. Rate C1 Dawn to Dawn-TCPL Service
 6. Recommendation

1. SUMMARY OF RESULTS

10. Table 1 provides a summary of the results of the 2019 cost allocation study directive using Board-Approved cost allocation methodologies and the proposed cost allocation methodologies provided in response to the Board's directive and as described in this evidence.

Table 1
Summary of 2019 Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Current Approved Revenue	Board-Approved Methodology		Impact of Cost Study Proposals	Proposed Methodology	
			Revenue Requirement	Revenue (Deficiency)/ Sufficiency		Revenue Requirement	Revenue (Deficiency)/ Sufficiency
		(a)	(b)	(c) = (a-b)	(d)	(e) = (b+d)	(f) = (a-e)
<u>Union North</u>							
1	Rate 01	197,961	199,893	(1,932)	1,064	200,957	(2,996)
2	Rate 10	27,412	31,809	(4,396)	331	32,140	(4,727)
3	Rate 20	27,521	27,410	111	170	27,581	(60)
4	Rate 100	2,450	4,081	(1,631)	5	4,085	(1,635)
5	Rate 25	10,089	11,244	(1,156)	4	11,248	(1,160)
<u>Union South</u>							
6	Rate M1	455,310	458,618	(3,308)	451	459,069	(3,760)
7	Rate M2	67,068	70,841	(3,773)	154	70,995	(3,927)
8	Rate M4	28,675	34,166	(5,491)	3,414	37,580	(8,905)
9	Rate M5	2,486	2,623	(136)	17	2,639	(153)
10	Rate M7	12,450	15,366	(2,916)	933	16,299	(3,849)
11	Rate M9	1,158	1,231	(74)	(85)	1,146	11
12	Rate M10	20	18	2	(1)	17	3
13	Rate T1	11,829	12,236	(407)	418	12,654	(825)
14	Rate T2	67,147	64,891	2,255	(6,381)	58,511	8,636
15	Rate T3	6,728	6,494	234	(487)	6,007	720
<u>Ex-Franchise</u>							
16	Rate M12/C1 - Dawn-Parkway	252,682	228,089	24,593	7,677	235,767	16,916
17	Rate M13	328	426	(98)	(0)	426	(98)
18	Rate M16	920	1,664	(744)	(738)	927	(6)
19	Rate C1 - Other	30,793	33,020	(2,228)	(6,948)	26,072	4,720
20	Commodity / Admin	8,928	6,956	1,971	-	6,956	1,971
21	Gas Supply and Transportation	593,230	593,230	-	-	593,230	-
22	Total	1,805,184	1,804,307	880	-	1,804,307	880

11. The revenue deficiency/sufficiency in Table 1 does not reflect the final rate adjustment that may occur as part of a cost of service proceeding. The final rate adjustment of a cost of service proceeding would include rate design and other adjustments that may be required to manage revenue to cost ratios, maintain rate class continuity and address bill impacts.

2. REVENUE REQUIREMENT

12. Enbridge Gas has prepared the cost allocation study based on a 2019 test year.

Enbridge Gas has based the revenue requirement on the 2019 forecast costs of the Union rate zones, which have been set to equal the forecast of 2019 revenue. The financial summary used for the cost allocation exercise is provided in Working Papers, Schedule 1.

13. The 2019 forecast was used as there was insufficient time between the finalization of the 2020 forecast and the filing timeline to complete the cost allocation work using a 2020 forecast. The 2019 forecast also represents a reasonable forecast of the stand-alone legacy Union service area prior to amalgamation. Enbridge Gas does not expect that using a 2020 test year forecast would have yielded materially different results.

3. COST ALLOCATION

14. The objective of the cost allocation process is to allocate the utility test year revenue requirement to customer rate classes. As part of a typical cost of service proceeding, the primary use of a cost allocation study is to support the rate design process. In response to the Board's directive, the fully distributed cost allocation study is being used to provide an indication of cost responsibility for each rate class based on the 2019 test year.

15. To prepare the cost allocation study a three-step approach is followed. The steps are:

Functionalization: The first step of the cost allocation process is to associate asset and operating costs with the various utility service functions. There are four functions generally accepted as necessary to obtain and move gas to market: purchase and production of gas, storage, transmission, and distribution.

Classification: The second step of the cost allocation process categorizes functionalized asset and operating costs into classifications according to cost incurrence. The three main classifications are demand-related, commodity-related, and customer-related. Demand-related costs, also known as capacity-related costs, are costs that vary with peak day usage of the system. Commodity-related costs are costs that are typically variable in nature and vary with the level of gas consumed. Customer-related costs are costs that are incurred by virtue of

a customer taking service and do not vary with either peak day demand or consumption.

Allocation: The final step in the cost allocation process attributes the three types of costs classified above to rate classes. Allocation factors that reflect the underlying cause of cost incurrence are used in the allocation process. For example, demand-related costs are allocated using the peak day demands of each rate class. Commodity-related costs are allocated based on rate class consumption. Customer-related costs are allocated based on the number of customers in a rate class.

16. In conducting its analysis and preparing this evidence, Enbridge Gas has used the Board's previously approved cost allocation methodologies, subject to the proposed cost allocation methodologies outlined in the following sections:

3.1 Panhandle System and St. Clair System

3.2 Parkway Station

3.3 Dawn Station

17. The impact of the proposed cost allocation methodologies by rate class is summarized in Table 2 below.

Table 2
Impact of Proposed Cost Allocation Methodologies

Line No.	Particulars (\$000's)	Panhandle/ St. Clair (a)	Parkway Station (b)	Dawn Station (c)	Total (d) = (a+b+c)
<u>Union North</u>					
1	Rate 01	-	817	247	1,064
2	Rate 10	-	254	77	331
3	Rate 20	-	131	40	170
4	Rate 100	-	3	1	4
5	Rate 25	-	3	1	5
<u>Union South</u>					
6	Rate M1	5,121	(4,535)	(135)	451
7	Rate M2	1,742	(1,543)	(46)	154
8	Rate M4	3,829	(403)	(12)	3,414
9	Rate M5	18	(2)	(0)	17
10	Rate M7	1,216	(274)	(8)	933
11	Rate M9	-	(82)	(2)	(85)
12	Rate M10	-	(1)	(0)	(1)
13	Rate T1	644	(220)	(7)	418
14	Rate T2	(4,886)	(1,452)	(43)	(6,381)
15	Rate T3	-	(473)	(14)	(487)
<u>Ex-franchise</u>					
16	Excess Utility Storage	-	-	(0)	(0)
17	Rate M12	-	7,669	(127)	7,543
18	Rate M13	-	-	(0)	(0)
19	Rate M16	(738)	-	(0)	(738)
20	Rate C1	(6,948)	106	29	(6,813)
21	Total	-	-	-	-

18. The cost allocation study results by function, functional classification and by rate class are provided at Schedule 2. The impact by rate class of the proposed cost allocation methodologies is provided at Schedule 3.

3.1 PANHANDLE SYSTEM AND ST. CLAIR SYSTEM

19. In response to the MAADs Decision, Enbridge Gas is proposing a change to the cost allocation methodology for the Panhandle System and St. Clair System demand costs that differs from the cost allocation methodology last approved by the Board in EB-2011-0210 (Union's 2013 Cost of Service). Union had previously proposed an interim change to the cost allocation methodology of the Panhandle System and St. Clair System as part of the Panhandle Reinforcement Project (EB-2016-0186), at which time the Board deferred consideration of the revised cost allocation methodology until the next cost of service or custom IR application. Subsequently, the Board required Enbridge Gas to address the cost allocation concerns of the Panhandle System and St. Clair System as part of the cost allocation study directive.
20. Enbridge Gas provides westerly transportation service on the Panhandle System to meet Union South in-franchise demands west of Dawn. Both the Panhandle System and St. Clair System provide ex-franchise Rate C1 transportation between Dawn and Ojibway, St. Clair and Bluewater. The Panhandle System also provides Rate M16 transportation to and from storage pools that are located west of Dawn. Rate C1 transportation includes Union South and Union North sales service customers that transport volumes on the Panhandle and St. Clair System to Dawn. These customers are charged the firm Rate C1 transportation demand charge for transportation between Dawn and Ojibway, St. Clair and Bluewater to ensure there

is no cross subsidy between sales service customers and other customers for the use of these assets. The use of the Rate C1 firm transportation demand rate to charge sales service customers for transportation to Dawn was introduced as part of Union's Pre-Approval of the Cost Consequences of NEXUS Long Term Contract proceeding (EB-2015-0166).

Board-Approved Cost Allocation Methodology

21. Union's 2013 Board-approved cost allocation study classified the demand-related costs for the combined Panhandle System and St. Clair System as Ojibway/St. Clair Demand.
22. The Board-approved cost allocation methodology of Ojibway/St. Clair demand costs is based on the maximum design capacity of the combined system which is determined as the Panhandle System capacity from Dawn to Ojibway (Dawn send out) plus the maximum firm import capacity at the St. Clair Pipeline and Bluewater Pipeline river crossings. The allocation of the maximum design capacity to ex-franchise Rate C1 and Rate M16 is based on firm contracted demands. The remaining capacity is allocated to Union South in-franchise rate classes in proportion to the combined Panhandle System and St. Clair System firm design day demands.
23. Prior to the addition of the Panhandle Reinforcement Project, combining the Panhandle System and the St. Clair System was reasonable because the systems

had similar costs per unit of demand. With the inclusion of significant costs to the Panhandle System only as a result of the Panhandle Reinforcement Project, the use of the Ojibway/St. Clair demand allocation methodology no longer reflects the costs to serve customers on each of the respective systems.

Proposed Cost Allocation Methodology

24. Enbridge Gas is proposing a change to the cost allocation methodology of the Panhandle System and St. Clair System to address the change in the Panhandle System costs relative to the St. Clair System costs and the limitation of the current Board-approved methodology. In order to address the difference in the costs and design day demands of the Panhandle System and St. Clair System, Enbridge Gas has separated the Ojibway/St. Clair Demand functional classification into Panhandle Demand and St. Clair Demand in the 2019 cost allocation study. The proposed cost allocation methodology for each demand classification is further described below.

Panhandle System Demand Costs

25. The Panhandle Demand functional classification includes the demand-related costs of the Panhandle System. The demand-related costs include the plant assets and O&M expenses related to the Sandwich transmission compressor station, the Ojibway measurement station, the Panhandle System transmission mains, and Dawn yard assets which move gas into the Panhandle System.

26. The allocation of the Panhandle demand costs to rate classes is based on the use of each asset on the Panhandle System. First, Enbridge Gas has direct assigned the costs of the assets used solely to serve ex-franchise Rate C1. The direct assignment also includes an allocation of transmission mains and Dawn yard assets to Rate C1 and Rate M16, which is described in more detail below. Second, Enbridge Gas has allocated the remaining Panhandle transmission mains and Dawn yard asset costs to Union South rate classes in proportion to the forecast Panhandle System design day demands.

27. The direct assignment to Rate C1 includes the costs associated with the Sandwich transmission compressor station and Ojibway measurement station. The Sandwich transmission compressor and Ojibway measurement station are only used to transport gas easterly from the Ojibway river crossing to Dawn and are solely used by ex-franchise Rate C1.

28. The direct assignment to Rate C1 and Rate M16 also includes a proportionate share of the Panhandle System transmission mains and Dawn yard assets which move gas into the Panhandle System. The Panhandle System is a westerly peaking system on design day used to serve Union South in-franchise demands. To the extent ex-franchise Rate C1 and Rate M16 use their contracted capacity on design day, the demands would flow easterly to Dawn (counter flow). To determine the proportionate allocation of the Panhandle System transmission mains and Dawn

yard assets to Rate C1 and Rate M16, Enbridge Gas has applied 214 days use (from April 1 to October 31) of contracted capacity to the total design day demands on the Panhandle System. The 214 days of the summer period represents the number of days per year the Company expects the gas will be transported from Ojibway to Dawn and not consumed within the local market. This methodology represents a reasonable allocation of Panhandle System costs used to provide the Rate C1 and Rate M16 transportation services.

29. The costs of the Panhandle System transmission mains and Dawn yard assets not direct assigned to Rate C1 and Rate M16 are allocated to Union South rate classes in proportion to forecast Panhandle System design day demands. This methodology ensures the costs of these assets are allocated to rate classes in proportion to the design day demand on the Panhandle System only.

St. Clair System Demand Costs

30. The St. Clair Demand functional classification includes the demand-related costs of the St. Clair System. These costs include the plant assets and O&M expenses related to the St. Clair System transmission mains, the St. Clair line station and valve site, and the Great Lakes Courtright station. The demand costs also include Enbridge Gas's contracted transportation capacity on the St. Clair Pipelines L.P system, which consists of the St. Clair Pipeline and Bluewater Pipeline river crossings. The St. Clair System assets are currently used to transport NEXUS

supply for Union North and Union South sales service customers. These customers are currently charged for this transportation service under Rate C1. Accordingly, Enbridge Gas has direct assigned the St. Clair System demand costs to Rate C1.

Impact of the Proposed Panhandle System and St. Clair System Cost Allocation Methodologies

31. The proposed cost allocation methodology of the Panhandle System and St. Clair System, when compared to the current Board-approved methodology, better represents the principles of cost causation by allocating the costs based on each rate class's use of the Panhandle System and St. Clair System. Please see Schedule 3 for the rate class impact of the proposed Panhandle System and St. Clair System cost allocation methodologies.

3.2 PARKWAY STATION

32. In response to the MAADs Decision, Enbridge Gas is proposing a change to the cost allocation methodology for the Parkway Station costs that differs from the cost allocation methodology last approved by the Board in EB-2011-0210 (Union's 2013 Cost of Service). In the MAADs Decision, the Board directed Enbridge Gas to take into account the Dawn-Parkway expansion projects that were introduced during Union's 2014-2018 IRM term, including the Parkway West and Brantford-Kirkwall/Parkway D Projects.

33. Enbridge Gas is also proposing this methodology change to provide consistency with the Board's Decision on the cost allocation of the Kirkwall metering station costs in Union's 2014 Rates proceeding (EB-2013-0365). As part of that proceeding, the Board ordered Union to adjust its cost allocation methodology to take into account all volumes flowing through the Kirkwall metering station and allocate these costs based only on demand.³

34. Parkway Station is located at the eastern terminus of Enbridge Gas's Dawn-Parkway transmission system and includes a bi-directional interconnection with TC Energy as well as custody transfer meters with the EGD rate zone (Parkway Consumers, EGT and Lisgar). The Parkway Station also includes four compressors, two of which were implemented as part of the capital pass-through projects approved during Union's 2014-2018 IRM term. Specifically, the Parkway West project involved the construction of a new compressor that provides loss of critical unit protection at Parkway, and the Brantford to Kirkwall/Parkway D project involved the construction of a new compressor which provides additional compression at Parkway.

³ EB-2013-0365, Decision and Order, August 21, 2014, p. 9.

Board-Approved Cost Allocation Methodology

35. In Union's 2013 Board-approved cost allocation study, Parkway Station costs are included as part of the Dawn-Parkway Easterly Demand functional classification. Dawn-Parkway demand costs are allocated to in-franchise and ex-franchise rate classes in proportion to easterly peaking distance-weighted design day demands (also referred to as "commodity-kilometres") on the Dawn-Parkway transmission system.

36. Parkway Station provides compression on design day for gas volumes moving east of Parkway for Union North in-franchise and ex-franchise Rate M12/C1 customers. Parkway Station also provides a benefit to Union South in-franchise customers through obligated deliveries at Parkway on design day, which reduces the size of the Dawn-Parkway facilities required to transport gas on the Dawn-Parkway System for Union South customers. Without the Parkway obligated deliveries, the Dawn-Parkway facilities would need to be larger and as a result, the Union South in-franchise rates would be higher.

Proposed Cost Allocation Methodology

37. Enbridge Gas is proposing a change to the cost allocation methodology of the Parkway Station costs in response to the Board's directive. In order to accommodate the proposed allocation methodology, Enbridge Gas separately classified the Parkway Station demand costs into a new Parkway Station Demand functional

classification in the 2019 cost allocation study. These demand costs include the plant assets and O&M expenses related to the measuring and regulating costs and compression costs at Parkway.

38. Enbridge Gas has allocated the measuring and regulating costs at Parkway in proportion to the bi-directional design day demands of the Parkway Station. This allocation methodology recognizes that measuring and regulating assets are used on design day to measure the volumes flowing through the Parkway Station. The demands include ex-franchise Rate M12/C1 and Union South and Union North in-franchise rate classes. The Union North transportation-related design day demands at Parkway are allocated in proportion to firm transportation demand for the Union North East rate zone only, while the storage-related design day demands at Parkway are allocated to Union North West and North East rate zones in proportion to the excess of peak day demands over average day demands. The Union South in-franchise design day demands at Parkway are allocated to rate classes in proportion to Union South Dawn-Parkway design day demands.

39. Enbridge Gas has allocated the compressor costs at Parkway in proportion to the easterly design day demands requiring compression at Parkway. This allocation methodology recognizes compressor equipment is used on design day to move volumes to markets east of Parkway and includes ex-franchise Rate M12/C1 and Union North in-franchise rate classes. The Union North transportation-related design

day demands at Parkway are allocated based on firm transportation demands for the Union North East rate zone only, while the storage-related design day demands at Parkway are allocated to Union North West and North East rate zones in proportion to the excess of peak day demands over average day demands. There is no allocation to Union South rate classes as Parkway Station is not used to provide compression for Union South in-franchise customers on design day.

40. Enbridge Gas has allocated all other costs at Parkway in proportion to the Parkway Station measuring and regulating and compressor net plant. This allocation methodology recognizes that the remaining costs, such as land, structures, and general plant, are used to support both the measuring and regulating and compression at Parkway.

Impact of the Proposed Parkway Station Cost Allocation Methodology

41. The proposed cost allocation methodology of the Parkway Station better reflects the cost causality of the Parkway Station and is consistent with the Board's Decision regarding the treatment of the Kirkwall Station, which directed that the measuring and regulating assets be allocated based on design day demands. Please see Schedule 3 for the rate class impact of the proposed Parkway Station cost allocation methodology.

3.3 DAWN STATION

42. Enbridge Gas is proposing a cost allocation methodology for certain transmission costs at Dawn that differs from the cost allocation methodology last approved by the Board in EB-2011-0210 (Union's 2013 Cost of Service). Enbridge Gas is proposing this change to align the cost allocation methodology at Dawn Station with the proposed methodology for Parkway Station described in Section 3.2 and the approved cost allocation methodology for Kirkwall Station.

Board-Approved Cost Allocation Methodology

43. The Board-approved cost allocation methodology for Dawn-Parkway transmission demand costs at Dawn functionalizes the costs as either Dawn Station or Dawn-Parkway Easterly. Transmission-related Dawn compression costs are categorized as Dawn Station and allocated to rate classes in proportion to design day demands that require Dawn compression. The measuring and regulating transmission costs at Dawn are categorized as Dawn-Parkway Easterly and allocated to rate classes in proportion to distance-weighted design day demands on the Dawn-Parkway system.

Proposed Cost Allocation Methodology

44. Enbridge Gas has included a proposed cost allocation methodology for compression and measuring and regulating transmission costs at Dawn to provide consistency in

the allocation of Dawn-Parkway measuring and regulating costs and compression costs.

45. Enbridge Gas classified compressor plant and O&M costs to Dawn-Parkway

Easterly Demand. This cost allocation methodology better aligns cost causality by ensuring that similar transmission compression costs on the Dawn-Parkway System (Dawn, Lobo and Bright) are allocated based on a distance weighted methodology. A distance weighted allocation is appropriate for compression costs at Dawn, as additional compression is required the further gas is required to travel on the Dawn-Parkway system.

46. Enbridge Gas classified measuring and regulating plant and O&M costs to Dawn

Station Demand and allocated the costs to rate classes based on design day demands requiring Dawn compression without a distance weighting. The cost allocation methodology recognizes that measuring and regulating costs are not affected by the distance gas is transported, and therefore the use of a distance weighted methodology does not best represent cost causality. This cost allocation methodology also ensures that similar transmission measuring and regulating costs on the Dawn-Parkway System (Dawn, Kirkwall and Parkway) are allocated based on design day demands without a distance weighting.

Impact of the Proposed Dawn Station Cost Allocation Methodology

47. The proposed cost allocation methodology of the Dawn Station compression and measuring and regulating costs provides a consistent allocation methodology with similar Dawn-Parkway transmission assets. Please see Schedule 3 for the rate class impact of the proposed cost allocation methodology for transmission compression and measuring and regulating costs at Dawn.

3.4 HAGAR LIQUEFACTION SERVICE

48. Enbridge Gas has not updated the current approved cost allocation methodology for the Hagar Liquefied Natural Gas facility (“Hagar”) as there are no customers that have contracted for the interruptible liquefaction service at Hagar. Without a forecast of customers, the facility continues to be used solely to meet the system integrity requirements of the Union North rate zone.
49. In Union’s Hagar Liquefaction Service Rate proceeding (EB-2014-0012), the Board approved a non-utility cross charge of \$1.59/GJ. The charge was based on the forecast of customers at the time of the application. As there are no customers contracted for the liquefaction service, Enbridge Gas is not able to update the cost allocation study or cross charge amount as part of this proceeding. Should a customer elect to contract for this service prior to rebasing in 2024, the utility cross charge would be paid by the unregulated service to the utility for their use of

regulated assets and Enbridge Gas would incorporate the interruptible liquefaction service into its cost allocation study as part of its next rebasing proceeding.

4. REVENUE TO COST RATIOS

50. Enbridge Gas has provided revenue to cost ratios that compare the Company's revenue based on approved 2019 rates to the 2019 revenue requirement by rate class. The revenue to cost ratios illustrate the variance between revenue, calculated at current approved rates, and the fully allocated cost allocation study. Enbridge Gas has provided revenue to cost ratios including and excluding the proposed cost allocation methodologies at Table 3 below. The supporting calculations of the revenue to cost ratios are provided at Schedule 4.

Table 3
Summary of Revenue to Cost Ratios by Rate Class

Line No.	Particulars	<u>Cost Allocation Methodology</u>		<u>Difference</u> (c)
		<u>Board-Approved</u> (a)	<u>Proposed</u> (b)	
	<u>Union North</u>			
1	Rate 01	0.990	0.985	(0.005)
2	Rate 10	0.862	0.853	(0.009)
3	Rate 20	1.004	0.998	(0.006)
4	Rate 100	0.600	0.600	(0.000)
5	Rate 25	0.897	0.897	(0.000)
	<u>Union South</u>			
6	Rate M1	0.993	0.992	(0.001)
7	Rate M2	0.947	0.945	(0.002)
8	Rate M4	0.839	0.763	(0.076)
9	Rate M5	0.948	0.942	(0.006)
10	Rate M7	0.810	0.764	(0.046)
11	Rate M9	0.940	1.010	0.070
12	Rate M10	1.120	1.170	0.050
13	Rate T1	0.967	0.935	(0.032)
14	Rate T2	1.035	1.148	0.113
15	Rate T3	1.036	1.120	0.084
	<u>Union Ex-Franchise</u>			
16	Rate M12/C1 - Dawn-Parkway	1.108	1.072	(0.036)
17	Rate M13	0.770	0.770	0.000
18	Rate M16	0.553	0.993	0.440
19	Rate C1 - Other	0.933	1.181	0.249

51. The revenue to cost ratios do not indicate the final rate adjustment that may occur as part of a cost of service proceeding as the ratios do not include any adjustments for rate design and other adjustments that may be required to maintain rate class continuity and address bill impacts.

52. To derive the 2019 revenue to cost ratios, Enbridge Gas has separated the revenue and costs associated with gas supply commodity and upstream transportation from the in-franchise storage, transportation and delivery and ex-franchise services. The

gas supply commodity and upstream transportation costs and revenues also includes the gas supply optimization margin credit that is currently included in approved rates. These gas costs have been removed from the revenue to cost ratio calculations, as they are subject to deferral account treatment and do not contribute to a true variance between current approved revenue and costs. The detailed gas supply costs and revenues are provided at Schedule 5, pp.1-3.

53. Enbridge Gas has also excluded the federal carbon charges and ICM unit rates from the 2019 revenue. Consistent with the gas supply and upstream transportation costs, the federal carbon charges are subject to deferral account treatment and do not contribute to a true variance between current approved revenue and costs.

54. The ICM unit rates were excluded because the calculation of 2019 ICM funding at the approved unit rates does not match the 2019 revenue requirement of the projects. The 2019 approved ICM unit rates were calculated based on an average revenue requirement for the deferred rebasing period, as opposed to the one-year 2019 revenue requirement of the ICM projects included in the 2019 cost allocation study. In addition, the approved ICM projects have a negative revenue requirement of \$3.4 million in 2019, which will not materially impact the revenue to cost ratios.

55. The detailed calculation of in-franchise and ex-franchise revenue by rate class is provided at Schedule 5, pp. 4-14 and 15-17, respectively.

4.1 S&T TRANSACTIONAL SERVICE MARGIN

56. Consistent with Board-approved rate design, Enbridge Gas adjusted the 2019 revenue requirement to recognize the impact of the ex-franchise S&T transactional service margin on revenue to cost ratios. As part of the legacy Union rate design, the revenue for certain ex-franchise services exceeds the allocated costs, as not all ex-franchise services are directly allocated costs in the cost allocation study. The rates for these services are designed to provide a contribution towards the recovery of costs. The revenue generated from these services is credited to in-franchise rate classes using approved cost allocation methodologies. Based on the 2019 forecast, Enbridge Gas estimates that the S&T transactional service margin is approximately \$13.9 million. A summary of the services that provide margin and the detailed calculations to support the S&T margin calculation are provided at Schedule 6.

5. RATE C1 DAWN TO DAWN-TCPL SERVICE

57. In the MAADs Decision, Enbridge Gas was directed to include a proposal to address TC Energy's Rate C1 Dawn to Dawn-TCPL service. Consistent with the approved rate setting mechanism which escalates rates by the price cap formula ("PCI"), Enbridge Gas has not updated the Rate C1 Dawn to Dawn-TCPL firm demand rate to reflect updated costs from the 2019 cost allocation study.

58. The Rate C1 Dawn to Dawn-TCPL rate design was approved by the Board in 2010 as part of Union's Dawn to Dawn-TCPL Firm Rate proceeding (EB-2010-0201). The rate design includes a firm monthly transportation demand charge to provide a contribution towards the recovery of existing Dawn compression costs and to recover the costs associated with the new facilities that were built to provide the firm transportation service. The rate design also includes seasonal fuel ratios to recover incremental Dawn compressor fuel and UFG associated with providing the service.

59. As part of Union's Board-approved 2013 cost allocation study, the revenue requirement of \$0.5 million related to the Dawn to Dawn-TCPL facilities was included in setting the Rate C1 Dawn to Dawn-TCPL firm demand rate, which represented the third year of the five-year depreciation period. During Union's 2014-2018 IRM term, there was no further adjustment made to the revenue requirement for the service even though the assets had fully depreciated in 2015.⁴ Consistent with the approved rate setting mechanism, the rate for 2020 has been escalated by PCI and continues to be decoupled from costs. Please see Schedule 7 for a comparison of the current approved rate and the rate based on the 2019 cost allocation study.

60. As part of the MAADs proceeding, TC Energy submitted that the revenue requirement of the Rate C1 Dawn to Dawn-TCPL could be reduced without any cost

⁴ The depreciation term was aligned with the original 5-year contract term, as Union had no assurance at the time from TC Energy that the contract would be renewed beyond that time period.

consequences to other shippers and without a change to cost allocation.⁵ Enbridge Gas does not agree with this submission. A reduction to the Rate C1 Dawn to Dawn-TCPL demand rate would impact other shippers, as any rate adjustment made during the deferred rebasing period should be made on a revenue neutral basis for the utility. For example, if Enbridge Gas reduced the Rate C1 Dawn to Dawn-TCPL demand revenue by \$0.5 million, Enbridge Gas would make an equal and offsetting revenue increase to another service or rate class in order to maintain the level of revenue consistent with the approved rate setting mechanism.

61. Even though the Dawn to Dawn-TCPL facilities are depreciated, rates are decoupled from costs during the deferred rebasing period. Given the potential impact to other rate classes, it is difficult to recommend changes based on one service or cost item. As described further in Section 6, Enbridge Gas is not recommending changes in cost allocation during the deferred rebasing period.

⁵ EB-2017-0306/EB-2017-0307, Decision and Order, p.39.

6. RECOMMENDATION

62. Enbridge Gas is proposing to implement the cost allocation methodology changes approved as a result of the cost allocation study directive with its next rebasing proceeding. Enbridge Gas is not recommending changes to the pre-filed rates for 2020⁶ as a result of the 2019 cost allocation study directive at this time. The 2020 pre-filed rates have been derived through the rate setting mechanism approved by the Board in the MAADs Decision.

63. The Board-approved rate setting mechanism provides reliable and predictable rates during the deferred rebasing period, while any proposed changes would result in additional rate volatility for customers. Should rates be adjusted based on the 2019 cost allocation study in 2021 and again in 2024 at rebasing, customers would be subjected to unpredictable rate changes within a short 3-year time period, with some rate classes experiencing a rate increase and others experiencing a rate decrease. Enbridge Gas will be reviewing the services and rate classes of both the Union and EGD rate zones for a rate harmonization proposal to be filed with its 2024 rebasing application. There will also be additional rate impacts as a result of synergy cost savings of the combined utility and proposed changes to cost allocation and rate design in the 2024 rebasing proceeding.

⁶ IRM rate adjustment filed on October 8, 2019 and ICM funding request filed on October 25, 2019.

64. Any cost allocation changes would need to maintain revenue neutrality for Enbridge Gas, so that the Company would continue to earn revenue consistent with the approved rate setting mechanism. These adjustments would therefore result in rate increases for certain rate classes and equal and offsetting decreases for other rate classes.

65. Accordingly, Enbridge Gas has prepared the cost allocation study for review as part of the 2020 Rates proceeding to respond to the Board's directive and has included proposed changes to cost allocation methodologies for Board approval to implement with the next rebasing proceeding. The cost allocation study is filed in Excel format as Exhibit B, Tab 1, Appendix C1.

66. In the event that the Board determines that Enbridge Gas's cost allocation proposals should be implemented prior to its next rebasing application, then Enbridge Gas proposes that this should be done as part of the 2021 Rate Application. That will allow time for all appropriate adjustments to be calculated and explained and approved.

UNION RATE ZONES
Overview of Working Papers
Cost Allocation Study Directive

- Schedule 1 Financial Schedules** – This schedule provides a summary of the operating revenue and expense detail and revenue deficiency/sufficiency used for the cost allocation exercise.
- Schedule 2 Cost Allocation Study Schedules** – This schedule provides the cost allocation study results by function, functional classification and by rate class.
- Schedule 3 Impact of Proposed Cost Allocation Methodologies** – This schedule provides the impact of the proposed cost allocation methodologies by functional classification and rate class.
- Schedule 4 Summary of Revenue to Cost Ratios** – This schedule provides the revenue to cost ratios by rate class including and excluding the proposed cost allocation methodologies.
- Schedule 5 Detailed Revenue and Revenue Requirement by Rate Class** – This schedule provides the detailed calculation of current approved revenue and revenue deficiency/sufficiency by rate class.
- Schedule 6 Derivation of S&T Transactional Margin** – This schedule provides a summary of the services that provide margin and the detailed calculations to support the S&T margin calculation.
- Schedule 7 Derivation of Dawn to Dawn-TCPL Rate** – This schedule provides a comparison of the current approved Rate C1 Dawn to Dawn-TCPL rate and the rate based on the 2019 cost allocation study.

UNION RATE ZONES
Calculation of 2019 Utility Income and Revenue Sufficiency/(Deficiency)
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	2019 Cost Study (a)
	Operating revenues:	
1	Gas sales	1,520,463
2	Transportation	277,399
3	Storage	7,324
4	Other	17,906
5	Total operating revenues	<u>1,823,092</u>
	Operating expenses:	
6	Cost of gas	640,028
7	Operating and maintenance expenses	417,716
8	Depreciation	295,932
9	Other financing	3,368
10	Property taxes	78,521
11	Total operating expenses	<u>1,435,566</u>
12	Operating income (line 5 - line 11)	387,526
13	Income taxes (1)	15,740
14	Utility income	<u>371,786</u>
15	Requested return (2)	<u>371,140</u>
16	Revenue sufficiency/(deficiency) after tax (line 14 - line 15)	647
17	Provision for income taxes on sufficiency/(deficiency) (3)	<u>233</u>
18	Total revenue sufficiency/(deficiency) (line 16 + line 17)	880
19	Shareholder portion of net short-term storage activity (4)	380
20	Shareholder portion of optimization activity (5)	<u>500</u>
21	Adjusted revenue sufficiency/(deficiency)	<u>-</u>
22	Total revenue requirement (line 11 + line 13 + line 15 - line 17) (6)	<u><u>1,822,212</u></u>

Notes:

- (1) Working Papers, Schedule 1, p.3, line 11.
- (2) Working Papers, Schedule 1, p.2, line 5.
- (3) Income taxes on deficiency/sufficiency calculated at tax rate of 26.5%.
- (4) Working Papers, Schedule 6, p.1, line 14, column (d).
- (5) Working Papers, Schedule 6, p.1, line 16, column (d).
- (6) Working Papers, Schedule 2, p.1, line 20, column (m).

UNION RATE ZONES
Summary of 2019 Cost of Capital
Cost Allocation Study Directive

		2019 Forecast			
Line		Utility Capital Structure		Cost Rate	Requested
No.	Particulars	(\$000's)	(%)	(%)	Return
		(a)	(b)	(c)	(d)
1	Long-term debt	3,949,243	63.12%	4.24%	167,594
2	Unfunded short-term debt	55,215	0.88%	2.30%	1,270
3	Total debt	4,004,458	64.00%		168,864
4	Common equity	2,252,508	36.00%	8.98%	202,275
5	Total rate base	6,256,966	100.00%		371,140

UNION RATE ZONES
Calculation of 2019 Utility Income Taxes
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	2019 Forecast (a)
	<u>Determination of Taxable Income</u>	
1	Utility income before interest and income taxes (1)	387,526
	Adjustments required to arrive at taxable utility income:	
2	Interest expense (2)	(168,864)
3	Utility permanent differences	<u>1,336</u>
4	Taxable utility income	<u>219,997</u>
	Utility timing differences	
5	Capital Cost Allowance	(403,086)
6	Depreciation	295,932
7	Depreciation through clearing	2,971
8	Other	<u>(56,420)</u>
9	Total utility timing differences	<u>(160,603)</u>
10	Taxable income (line 4 + line 9)	<u><u>59,394</u></u>
	<u>Calculation of Utility Income Taxes</u>	
11	Income taxes (line 10 * line 14)	<u><u>15,740</u></u>
	<u>Tax Rates</u>	
12	Federal tax	15.00%
13	Provincial tax	<u>11.50%</u>
14	Total tax rate	<u><u>26.50%</u></u>

Notes:

- (1) Working Papers, Schedule 1, p.1, line 12.
- (2) Working Papers, Schedule 1, p.2, line 3, column (d).

UNION RATE ZONES
Revenue Requirement by Function
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Purchase Production (a)	Storage		Transmission								Distribution (l)	Total (m) = sum (a to l)
			Dehydrator (b)	Excluding Dehydrator (c)	Dawn Station (d)	Parkway Station (e)	Kirkwall Station (f)	Dawn-Parkway Easterly (g)	Dawn-Parkway Westerly (h)	Other Transmission (i)	St. Clair (j)	Panhandle (k)		
Revenue Requirement Summary														
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	(9,992)	2,102	365,353	33,378	381,476	8,939	1,699,509	-	451,778	3,209	332,332	2,988,882	6,256,964
3	Return on Rate Base	(593)	125	21,671	1,980	22,628	530	100,808	-	26,798	190	19,713	177,289	371,140
Operating Expenses														
4	Total Cost of Gas	580,569	-	32,537	3,352	-	-	20,953	213	-	1,287	1,117	-	640,028
5	Local Storage	-	-	3,083	-	-	-	-	-	-	-	-	-	3,083
6	Underground Storage	-	191	6,812	419	-	-	2,465	-	-	-	841	-	10,728
7	Transmission	-	-	-	-	5,854	39	6,599	-	3,523	122	843	-	16,979
8	Distribution (Southern Ontario)	-	-	-	-	-	-	-	-	-	-	-	46,622	46,622
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-	-	-	-	-	22,836	22,836
10	General Operating and Engineering	3,090	39	1,572	87	2,649	18	4,204	-	1,682	109	586	25,527	39,563
11	Sales Promotion and Merchandise	1,324	-	-	-	-	-	-	-	-	-	-	74,678	76,002
12	Distribution Customer Accounting	2,034	-	17	-	-	-	114	-	3	-	2	45,388	47,558
13	Administrative and General	8,111	180	7,816	395	6,498	43	10,166	-	3,596	141	1,705	119,061	157,713
14	Total Operating Expenses	595,128	410	51,839	4,253	15,001	100	44,501	213	8,805	1,659	5,094	334,112	1,061,113
15	Depreciation Expense	835	180	11,007	2,061	15,119	457	65,865	-	16,983	280	9,185	173,961	295,932
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxes														
17	Property Tax	15	24	1,434	14	524	19	20,367	-	7,347	113	3,380	45,285	78,521
18	Income Tax	(25)	5	905	83	945	22	4,212	-	1,120	8	824	7,407	15,506
19	Total Taxes	(10)	29	2,339	97	1,469	41	24,579	-	8,467	121	4,203	52,692	94,027
20	Total Revenue Requirement	595,359	744	86,856	8,390	54,217	1,128	235,752	213	61,053	2,250	38,195	738,054	1,822,212
21	Other Revenue	2,300	-	-	-	-	-	-	-	-	-	-	15,606	17,906
22	Total Revenue Requirement less Other Revenue	593,060	744	86,856	8,390	54,217	1,128	235,752	213	61,053	2,250	38,195	722,448	1,804,306

UNION RATE ZONES
Revenue Requirement by Functional Classification
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Purchase Production			Storage Dehydrator		Storage Excluding Dehydrator				Dawn Station	
		System Supply	Other Supply	Demand	Demand	Commodity	Deliverability	Commodity	Space	System Integrity	Demand	Commodity
		Commodity	Commodity									
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
Revenue Requirement Summary												
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	2,798	(12,885)	95	2,010	92	122,830	350	197,730	44,443	33,378	-
3	Return on Rate Base	166	(764)	6	119	5	7,286	21	11,729	2,636	1,980	-
Operating Expenses												
4	Total Cost of Gas	524,878	11,232	44,459	-	-	26,623	5,656	258	-	-	3,352
5	Local Storage	-	-	-	-	-	-	-	-	3,083	-	-
6	Underground Storage	-	-	-	-	191	3,647	792	2,151	223	419	-
7	Transmission	-	-	-	-	-	-	-	-	-	-	-
8	Distribution (Southern Ontario)	-	-	-	-	-	-	-	-	-	-	-
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-	-	-	-	-
10	General Operating and Engineering	1,226	1,863	-	1	39	966	-	550	57	87	-
11	Sales Promotion and Merchandise	-	1,324	-	-	-	-	-	-	-	-	-
12	Distribution Customer Accounting	1,608	426	-	-	-	17	-	-	-	-	-
13	Administrative and General	3,575	4,536	-	1	179	3,124	576	1,710	2,406	395	-
14	Total Operating Expenses	531,287	19,381	44,459	2	409	34,377	7,024	4,668	5,770	901	3,352
15	Depreciation Expense	367	467	-	165	15	6,887	59	2,486	1,575	2,061	-
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-	-	-	-	-
Taxes												
17	Property Tax	6	8	-	23	0	1,040	1	273	119	14	-
18	Income Tax	7	(32)	0	5	0	304	1	490	110	83	-
19	Total Taxes	13	(24)	0	28	0	1,345	2	763	229	97	-
20	Total Revenue Requirement	531,834	19,060	44,465	315	429	49,894	7,105	19,646	10,211	5,038	3,352
21	Other Revenue	-	2,300	-	-	-	-	-	-	-	-	-
22	Total Revenue Requirement less Other Revenue	531,834	16,761	44,465	315	429	49,894	7,105	19,646	10,211	5,038	3,352

UNION RATE ZONES
Revenue Requirement by Functional Classification
Cost Study Allocation Directive

		Parkway Station	Kirkwall Station	Dawn-Parkway Easterly		Dawn-Pkwy Westerly	Other Transmission	St. Clair	Panhandle		Distribution		
Line No.	Particulars (\$000's)	Demand (l)	Demand (m)	Demand (n)	Commodity (o)	Commodity (p)	Demand (q)	Demand (r)	Demand (s)	Commodity (t)	Demand (u)	Customer (v)	Total (w) = sum (a to v)
Revenue Requirement Summary													
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	381,476	8,939	1,699,509	-	-	451,778	3,209	331,359	974	1,046,339	1,942,543	6,256,964
3	Return on Rate Base	22,628	530	100,808	-	-	26,798	190	19,655	58	62,065	115,224	371,140
Operating Expenses													
4	Total Cost of Gas	-	-	9,930	11,023	213	-	1,287	-	1,117	-	-	640,028
5	Local Storage	-	-	-	-	-	-	-	-	-	-	-	3,083
6	Underground Storage	-	-	2,465	-	-	-	-	492	349	-	-	10,728
7	Transmission	5,854	39	6,599	-	-	3,523	122	698	145	-	-	16,979
8	Distribution (Southern Ontario)	-	-	-	-	-	-	-	-	-	12,062	34,560	46,622
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-	-	-	8,865	13,971	22,836
10	General Operating and Engineering	2,649	18	4,204	-	-	1,682	109	415	171	7,691	17,836	39,563
11	Sales Promotion and Merchandise	-	-	-	-	-	-	-	-	-	63,269	11,409	76,002
12	Distribution Customer Accounting	-	-	114	-	-	3	-	2	-	-	45,388	47,558
13	Administrative and General	6,498	43	10,166	-	-	3,596	141	1,212	493	30,702	88,359	157,713
14	Total Operating Expenses	15,001	100	33,478	11,023	213	8,805	1,659	2,819	2,275	122,589	211,522	1,061,113
15	Depreciation Expense	15,119	457	65,865	-	-	16,983	280	8,986	199	60,634	113,327	295,932
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-	-	-	-	-	-
Taxes													
17	Property Tax	524	19	20,367	-	-	7,347	113	3,365	15	23,578	21,707	78,521
18	Income Tax	945	22	4,212	-	-	1,120	8	821	2	2,593	4,814	15,506
19	Total Taxes	1,469	41	24,579	-	-	8,467	121	4,187	17	26,171	26,521	94,027
20	Total Revenue Requirement	54,217	1,128	224,730	11,023	213	61,053	2,250	35,646	2,549	271,459	466,596	1,822,212
21	Other Revenue	-	-	-	-	-	-	-	-	-	522	15,085	17,906
22	Total Revenue Requirement less Other Revenue	54,217	1,128	224,730	11,023	213	61,053	2,250	35,646	2,549	270,937	451,511	1,804,306

UNION RATE ZONES
Revenue Requirement by Rate Class
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Union South							
		General Service Small Volume	General Service Large Volume	Contract Firm	Contract Interruptible	Contract Firm	Contract Interruptible	Special Large Volume Contract Firm	Special Large Volume Contract Interruptible
		M1	M2	M4	M4	M5	M5	M7	M7
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Revenue Requirement Summary									
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	2,114,966	333,828	190,422	403	1,219	4,606	75,792	9,736
3	Return on Rate Base	125,452	19,801	11,295	24	72	273	4,496	577
<u>Operating Expenses</u>									
4	Total Cost of Gas	331,239	69,742	6,167	6	32	504	2,909	517
5	Local Storage	-	-	-	-	-	-	-	-
6	Underground Storage	3,228	1,012	525	0	3	6	231	19
7	Transmission	2,117	720	439	-	2	-	194	-
8	Distribution (Southern Ontario)	39,582	3,064	1,294	9	10	89	466	171
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-	-
10	General Operating and Engineering	16,514	1,886	1,128	4	26	93	370	85
11	Sales Promotion and Merchandise	31,095	12,977	6,128	15	218	584	2,076	282
12	Distribution Customer Accounting	34,725	836	202	0	10	52	30	8
13	Administrative and General	76,443	9,237	4,902	16	159	506	1,424	305
14	Total Operating Expenses	534,942	99,474	20,785	51	460	1,833	7,700	1,387
15	Depreciation Expense	107,454	14,500	7,657	22	59	275	2,994	490
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-	-
<u>Taxes</u>									
17	Property Tax	28,772	4,997	2,865	10	15	94	1,110	182
18	Income Tax	5,241	827	472	1	3	11	188	24
19	Total Taxes	34,013	5,824	3,337	11	18	105	1,298	206
20	Total Revenue Requirement	801,861	139,600	43,073	108	609	2,486	16,487	2,660
21	Other Revenue	13,206	149	2	0	0	0	0	0
22	Total Revenue Requirement less Other Revenue	788,656	139,451	43,071	108	609	2,486	16,487	2,660

UNION RATE ZONES
Revenue Requirement by Rate Class
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Union South							Total Union South (p) = sum (a to o)
		Large Wholesale Service M9	Small Wholesale Service M10	Storage & Transportation Service Firm T1	Storage & Transportation Service Interruptible T1	Storage & Transportation Service Firm T2	Storage & Transportation Service Interruptible T2	Wholesale Storage & Transportation Service T3	
		(i)	(j)	(k)	(l)	(m)	(n)	(o)	
Revenue Requirement Summary									
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	7,011	75	60,820	2,016	324,851	17,195	37,414	3,180,354
3	Return on Rate Base	416	4	3,608	120	19,269	1,020	2,219	188,647
Operating Expenses									
4	Total Cost of Gas	2,951	33	656	22	4,638	65	877	420,357
5	Local Storage	-	-	-	-	-	-	-	-
6	Underground Storage	35	0	152	0	865	0	232	6,308
7	Transmission	30	0	151	-	1,332	-	168	5,153
8	Distribution (Southern Ontario)	2	0	478	40	1,070	337	10	46,622
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-	-
10	General Operating and Engineering	38	0	367	20	1,496	147	161	22,334
11	Sales Promotion and Merchandise	22	2	1,729	68	5,294	222	34	60,745
12	Distribution Customer Accounting	11	2	58	4	35	2	2	35,976
13	Administrative and General	114	4	1,403	70	4,932	449	442	100,408
14	Total Operating Expenses	3,203	41	4,994	224	19,662	1,222	1,926	697,902
15	Depreciation Expense	263	3	2,642	112	12,788	954	1,538	151,752
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-	-
Taxes									
17	Property Tax	79	1	956	42	4,538	319	462	44,441
18	Income Tax	17	0	151	5	805	43	93	7,882
19	Total Taxes	97	1	1,107	47	5,343	361	554	52,323
20	Total Revenue Requirement	3,979	50	12,350	503	57,061	3,558	6,237	1,090,624
21	Other Revenue	0	0	0	0	0	0	0	13,358
22	Total Revenue Requirement less Other Revenue	3,979	50	12,350	503	57,061	3,558	6,237	1,077,265

UNION RATE ZONES
Revenue Requirement by Rate Class
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Ex-Franchise						Total Union Ex-Franchise (w) = sum (q to v)
		Excess Utility Storage Space	Firm Transportation Service C1	Interruptible Transportation Service & Exchanges C1	Dawn-Parkway Transport Service M12	Local Production Transportation Service M13	Storage Transportation Service M16	
		(q)	(r)	(s)	(t)	(u)	(v)	
Revenue Requirement Summary								
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	14,554	47,335	1,196	1,684,901	502	2,830	1,751,317
3	Return on Rate Base	863	2,808	71	99,942	30	168	103,882
Operating Expenses								
4	Total Cost of Gas	826	3,729	1,160	13,770	26	206	19,716
5	Local Storage	-	-	-	-	-	-	-
6	Underground Storage	487	63	351	2,256	0	5	3,162
7	Transmission	-	250	145	10,404	66	64	10,931
8	Distribution (Southern Ontario)	-	-	-	-	-	-	-
9	Distribution (Northern Ontario)	-	-	-	-	-	-	-
10	General Operating and Engineering	109	181	171	5,833	0	4	6,297
11	Sales Promotion and Merchandise	-	-	-	-	-	-	-
12	Distribution Customer Accounting	17	4	68	42	3	2	136
13	Administrative and General	396	339	495	14,057	0	11	15,299
14	Total Operating Expenses	1,834	4,567	2,391	46,362	96	291	55,541
15	Depreciation Expense	626	1,715	202	66,153	20	75	68,790
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-
Taxes								
17	Property Tax	82	501	15	16,081	1	29	16,708
18	Income Tax	36	117	3	4,176	1	7	4,340
19	Total Taxes	118	619	18	20,256	2	36	21,049
20	Total Revenue Requirement	3,442	9,708	2,682	232,713	148	569	249,261
21	Other Revenue	-	-	-	-	-	-	-
22	Total Revenue Requirement less Other Revenue	3,442	9,708	2,682	232,713	148	569	249,261

UNION RATE ZONES
Revenue Requirement by Rate Class
Cost Study Allocation Directive

Line No.	Particulars (\$000's)	Union North					Total Union North (ac) = sum (x to ab)	Total Union Rate Zones (ad) = (p + w + ac)
		Small Volume General Firm Service R01	Large Volume General Firm Service R10	Medium Volume Firm Service R20	Large Volume High Load Factor Firm Service R100	Large Volume Interruptible Service R25		
		(x)	(y)	(z)	(aa)	(ab)		
Revenue Requirement Summary								
1	Rate of Return on Rate Base	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%	5.93%
2	Rate Base	956,583	161,699	139,886	48,699	18,425	1,325,292	6,256,964
3	Return on Rate Base	56,741	9,591	8,297	2,889	1,093	78,611	371,140
Operating Expenses								
4	Total Cost of Gas	148,464	34,746	8,779	119	7,847	199,955	640,028
5	Local Storage	2,140	605	328	10	-	3,083	3,083
6	Underground Storage	877	247	128	5	0	1,257	10,728
7	Transmission	606	188	97	2	3	896	16,979
8	Distribution (Southern Ontario)	-	-	-	-	-	-	46,622
9	Distribution (Northern Ontario)	18,147	1,611	1,927	940	211	22,836	22,836
10	General Operating and Engineering	8,126	1,101	1,095	392	219	10,933	39,563
11	Sales Promotion and Merchandise	7,717	3,627	2,040	1,544	329	15,257	76,002
12	Distribution Customer Accounting	10,979	283	65	14	105	11,446	47,558
13	Administrative and General	32,318	3,989	3,373	1,567	759	42,007	157,713
14	Total Operating Expenses	229,374	46,398	17,831	4,593	9,473	307,670	1,061,113
15	Depreciation Expense	54,459	8,575	8,172	3,042	1,143	75,391	295,932
16	Accumulated Deferred Tax Drawdown	-	-	-	-	-	-	-
Taxes								
17	Property Tax	12,465	2,175	1,775	726	230	17,372	78,521
18	Income Tax	2,371	401	347	121	46	3,284	15,506
19	Total Taxes	14,836	2,576	2,121	847	276	20,656	94,027
20	Total Revenue Requirement	355,410	67,140	36,422	11,371	11,985	482,328	1,822,212
21	Other Revenue	4,505	41	1	0	1	4,547	17,906
22	Total Revenue Requirement less Other Revenue	350,905	67,099	36,421	11,370	11,984	477,780	1,804,306

UNION RATE ZONES
Rate Class Impact of Proposed Cost Allocation Methodologies
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Panhandle St. Clair (1) (a)	Parkway Station (2) (b)	Dawn Station (3) (c)	Impact of Proposed Methodologies (d) = (a+b+c)
<u>Union South</u>					
1	M1	5,121	(4,535)	(135)	451
2	M2	1,742	(1,543)	(46)	154
3	M4 - Firm	3,829	(403)	(12)	3,414
4	M4 - Interruptible	-	-	(0)	(0)
5	M5 - Firm	18	(2)	(0)	17
6	M5 - Interruptible	-	-	(0)	(0)
7	M7 - Firm	1,216	(274)	(8)	933
8	M7 - Interruptible	-	-	(0)	(0)
9	M9	-	(82)	(2)	(85)
10	M10	-	(1)	(0)	(1)
11	T1 - Firm	644	(220)	(7)	418
12	T1 - Interruptible	-	-	-	-
13	T2 - Firm	(4,886)	(1,452)	(43)	(6,381)
14	T2 - Interruptible	-	-	-	-
15	T3	-	(473)	(14)	(487)
16	Total Union South	<u>7,686</u>	<u>(8,984)</u>	<u>(268)</u>	<u>(1,566)</u>
<u>Ex-Franchise</u>					
17	Ex. Util. Space	-	-	(0)	(0)
18	C1 - Firm	(6,948)	106	29	(6,813)
19	C1 - Int	0	-	(0)	(0)
20	M12	-	7,669	(127)	7,543
21	M13	-	-	(0)	(0)
22	M16	(738)	-	(0)	(738)
23	Total Ex-Franchise	<u>(7,686)</u>	<u>7,775</u>	<u>(98)</u>	<u>(8)</u>
<u>Union North</u>					
24	R01	-	817	247	1,064
25	R10	-	254	77	331
26	R20	-	131	40	170
27	R100	-	3	1	4
28	R25	-	3	1	5
29	Total Union North	<u>-</u>	<u>1,208</u>	<u>366</u>	<u>1,574</u>
30	Total Union Rate Zones	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

Notes:

- (1) Working Papers, Schedule 3, p. 2, col. (d).
- (2) Working Papers, Schedule 3, p. 3, col. (d).
- (3) Working Papers, Schedule 3, p. 4, col. (e).

UNION RATE ZONES
Rate Class Impact of Panhandle System and St. Clair System Proposed Cost Allocation Methodology
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Board-Approved	Proposed		Impact of
		Ojibway/St. Clair Demand	Panhandle Demand (1)	St. Clair Demand (2)	Proposed Methodology
		(a)	(b)	(c)	(d) = [(b+c)-a]
	<u>Union South</u>				
1	M1	5,294	10,415	-	5,121
2	M2	1,801	3,544	-	1,742
3	M4 - Firm	2,962	6,791	-	3,829
4	M4 - Interruptible	-	-	-	-
5	M5 - Firm	14	32	-	18
6	M5 - Interruptible	-	-	-	-
7	M7 - Firm	974	2,189	-	1,216
8	M7 - Interruptible	-	-	-	-
9	M9	-	-	-	-
10	M10	-	-	-	-
11	T1 - Firm	800	1,445	-	644
12	T1 - Interruptible	-	-	-	-
13	T2 - Firm	12,380	7,495	-	(4,886)
14	T2 - Interruptible	-	-	-	-
15	T3	-	-	-	-
16	Total Union South	24,225	31,910	-	7,686
	<u>Ex-Franchise</u>				
17	Ex. Util. Space	-	-	-	-
18	C1 - Firm	12,634	3,436	2,250	(6,948)
19	C1 - Int	-	-	-	-
20	M12	-	-	-	-
21	M13	-	-	-	-
22	M16	1,038	300	-	(738)
23	Total Ex-Franchise	13,672	3,736	2,250	(7,686)
	<u>Union North</u>				
24	R01	-	-	-	-
25	R10	-	-	-	-
26	R20	-	-	-	-
27	R100	-	-	-	-
28	R25	-	-	-	-
29	Total Union North	-	-	-	-
30	Total Union Rate Zones	37,896	35,646	2,250	-

Notes:

- (1) Working Papers, Schedule 2, p. 3, col. (s).
(2) Working Papers, Schedule 2, p. 3, col. (r).

UNION RATE ZONES
Rate Class Impact of Parkway Station Proposed Cost Allocation Methodology
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Board-approved	Proposed		Impact of
		Dawn-Parkway Easterly Demand	Parkway Station Demand (1)	Dawn-Parkway Easterly Demand (2)	Proposed Methodology
		(a)	(b)	(c)	(d) = [(b+c)-a]
	<u>Union South</u>				
1	M1	28,153	143	23,476	(4,535)
2	M2	9,579	49	7,987	(1,543)
3	M4 - Firm	2,499	13	2,084	(403)
4	M4 - Interruptible	-	-	-	-
5	M5 - Firm	10	0	8	(2)
6	M5 - Interruptible	-	-	-	-
7	M7 - Firm	1,704	9	1,421	(274)
8	M7 - Interruptible	-	-	-	-
9	M9	512	3	427	(82)
10	M10	5	0	4	(1)
11	T1 - Firm	1,366	7	1,139	(220)
12	T1 - Interruptible	-	-	-	-
13	T2 - Firm	9,012	46	7,515	(1,452)
14	T2 - Interruptible	-	-	-	-
15	T3	2,934	15	2,446	(473)
16	Total Union South	55,772	282	46,506	(8,984)
	<u>Ex-Franchise</u>				
17	Ex. Util. Space	-	-	-	-
18	C1 - Firm	1,334	375	1,065	106
19	C1 - Int	68	-	68	-
20	M12	205,764	49,116	164,318	7,669
21	M13	-	-	-	-
22	M16	-	-	-	-
23	Total Ex-Franchise	207,167	49,490	165,451	7,775
	<u>Union North</u>				
24	R01	10,821	3,004	8,634	817
25	R10	3,365	934	2,685	254
26	R20	1,732	481	1,382	131
27	R100	44	12	35	3
28	R25	46	13	37	3
29	Total Union North	16,008	4,444	12,772	1,208
30	Total Union Rate Zones	278,947	54,217	224,730	-

Notes:

- (1) Working Papers, Schedule 2, p. 3, col. (l).
(2) Working Papers, Schedule 2, p. 3, col. (n).

UNION RATE ZONES
Rate Class Impact of Dawn Station Proposed Cost Allocation Methodology
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Board-approved		Proposed		Impact of Proposed Methodology (e) = [(c+d)-(a+b)]
		Dawn Station Demand	Dawn-Parkway Easterly Demand	Dawn Station Demand (1)	Dawn-Parkway Easterly Demand (2)	
		(a)	(b)	(c)	(d)	
	<u>Union South</u>					
1	M1	2,712	21,361	462	23,476	(135)
2	M2	923	7,268	157	7,987	(46)
3	M4 - Firm	241	1,896	41	2,084	(12)
4	M4 - Interruptible	-	-	-	-	-
5	M5 - Firm	1	8	0	8	(0)
6	M5 - Interruptible	-	-	-	-	-
7	M7 - Firm	164	1,293	28	1,421	(8)
8	M7 - Interruptible	-	-	-	-	-
9	M9	49	388	8	427	(2)
10	M10	0	4	0	4	(0)
11	T1 - Firm	132	1,036	22	1,139	(7)
12	T1 - Interruptible	-	-	-	-	-
13	T2 - Firm	868	6,838	148	7,515	(43)
14	T2 - Interruptible	-	-	-	-	-
15	T3	283	2,226	48	2,446	(14)
16	Total Union South	5,373	42,317	916	46,506	(268)
	<u>Ex-Franchise</u>					
17	Ex. Util. Space	-	-	-	-	-
18	C1 - Firm	111	944	19	1,065	29
19	C1 - Int	-	68	-	68	-
20	M12	22,742	145,580	3,877	164,318	(127)
21	M13	-	-	-	-	-
22	M16	-	-	-	-	-
23	Total Ex-Franchise	22,854	146,592	3,896	165,451	(98)
	<u>Union North</u>					
24	R01	894	7,645	152	8,634	247
25	R10	278	2,377	47	2,685	77
26	R20	143	1,223	24	1,382	40
27	R100	4	31	1	35	1
28	R25	4	33	1	37	1
29	Total Union North	1,323	11,309	226	12,772	366
30	Total Union Rate Zones	29,550	200,218	5,038	224,730	-

Notes:

- (1) Working Papers, Schedule 2, p. 2, col. (j).
(2) Working Papers, Schedule 2, p. 3, col. (n).

UNION RATE ZONES
Summary of Revenue to Cost Ratios by Rate Class
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Current Approved Revenue (a)	Board-Approved Methodology (1)			Impact of Cost Study Proposals (2) (e)	Proposed Methodology (3)		
			Revenue Requirement (b)	Revenue to Cost Ratio (c) = (a / b)	Revenue (Deficiency) / Sufficiency (d) = (a - b)		Revenue Requirement (f) = (b+e)	Revenue to Cost Ratio (g) = (a / f)	Revenue (Deficiency) / Sufficiency (h) = (a - f)
	<u>Union North In-Franchise</u>								
1	Rate 01	197,961	199,893	0.990	(1,932)	1,064	200,957	0.985	(2,996)
2	Rate 10	27,412	31,809	0.862	(4,396)	331	32,140	0.853	(4,727)
3	Rate 20	27,521	27,410	1.004	111	170	27,581	0.998	(60)
4	Rate 100	2,450	4,081	0.600	(1,631)	5	4,085	0.600	(1,635)
5	Rate 25	10,089	11,244	0.897	(1,156)	4	11,248	0.897	(1,160)
	<u>Union South In-Franchise</u>								
6	Rate M1	455,310	458,618	0.993	(3,308)	451	459,069	0.992	(3,760)
7	Rate M2	67,068	70,841	0.947	(3,773)	154	70,995	0.945	(3,927)
8	Rate M4	28,675	34,166	0.839	(5,491)	3,414	37,580	0.763	(8,905)
9	Rate M5	2,486	2,623	0.948	(136)	17	2,639	0.942	(153)
10	Rate M7	12,450	15,366	0.810	(2,916)	933	16,299	0.764	(3,849)
11	Rate M9	1,158	1,231	0.940	(74)	(85)	1,146	1.010	11
12	Rate M10	20	18	1.120	2	(1)	17	1.170	3
13	Rate T1	11,829	12,236	0.967	(407)	418	12,654	0.935	(825)
14	Rate T2	67,147	64,891	1.035	2,255	(6,381)	58,511	1.148	8,636
15	Rate T3	6,728	6,494	1.036	234	(487)	6,007	1.120	720
	<u>Ex-Franchise</u>								
16	Rate M12/C1 - Dawn-Parkway	252,682	228,089	1.108	24,593	7,677	235,767	1.072	16,916
17	Rate M13	328	426	0.770	(98)	(0)	426	0.770	(98)
18	Rate M16	920	1,664	0.553	(744)	(738)	927	0.993	(6)
19	Rate C1 - Other	30,793	33,020	0.933	(2,228)	(6,948)	26,072	1.181	4,720
20	Commodity / Admin	8,928	6,956	1.283	1,971	(0)	6,956	1.283	1,971
21	Gas Supply and Transportation	593,230	593,230	1.000	(0)	0	593,230	1.000	0
22	Total	1,805,184	1,804,307	1.000	880	(0)	1,804,307	1.000	880

Notes:

- (1) Working Papers, Schedule 4, p.2.
- (2) Working Papers, Schedule 3, p.1, column (d).
- (3) Working Papers, Schedule 4, p.3.

UNION RATE ZONES
2019 Revenue to Cost Ratios - Excluding Cost Allocation Proposals
Cost Allocation Study Directive

Line No.	Particulars	Current Approved Revenue (1) (\$000's) (a)	Revenue Requirement (2) (\$000's) (b)	Margin Adjustment (\$000's) (c)	Revenue Requirement Including Margin (\$000's) (d) = (b + c)	Revenue (Deficiency) / Sufficiency (\$000's) (e) = (a - d)	Revenue to Cost Ratios (f) = (a / d)
<u>Union North Delivery, Transportation & Storage</u>							
1	R01	197,961	201,476	(1,583)	199,893	(1,932)	0.990
2	R10	27,412	32,257	(448)	31,809	(4,396)	0.862
3	R20	27,521	27,653	(242)	27,410	111	1.004
4	R25	2,450	4,081	-	4,081	(1,631)	0.600
5	R100	10,089	11,252	(7)	11,244	(1,155)	0.897
6	Total Union North Delivery, Transportation & Storage	265,433	276,717	(2,281)	274,437	(9,004)	0.967
<u>Union South Delivery & Storage</u>							
7	M1	455,310	461,448	(2,830)	458,618	(3,308)	0.993
8	M2	67,068	71,804	(963)	70,841	(3,773)	0.947
9	M4	28,675	34,698	(532)	34,166	(5,491)	0.839
10	M5	2,486	2,625	(2)	2,623	(136)	0.948
11	M7	12,450	15,610	(244)	15,366	(2,916)	0.810
12	M9	1,158	1,272	(41)	1,231	(74)	0.940
13	M10	20	19	(0)	18	2	1.120
14	T1	11,829	12,435	(199)	12,236	(407)	0.967
15	T2	67,147	67,000	(2,108)	64,891	2,255	1.035
16	T3	6,728	6,724	(230)	6,494	234	1.036
17	Total Union South Delivery & Storage	652,871	673,634	(7,150)	666,484	(13,613)	0.980
18	Total In-Franchise Delivery, Transportation and Storage (line 6 + line 17)	918,304	950,351	(9,431)	940,921	(22,617)	0.976
<u>Ex-Franchise</u>							
19	M12 / C1 - Dawn-Parkway	252,682	228,089	-	228,089	24,593	1.108
20	M13	328	148	278	426	(98)	0.770
21	M16	920	1,307	357	1,664	(744)	0.553
22	Other C1	30,793	19,725	13,295	33,020	(2,228)	0.933
23	Total Ex-Franchise	284,723	249,269	13,931	263,200	21,523	1.082
24	Total Delivery, Transportation & Storage (line 18 + line 23)	1,203,027	1,199,620	4,500	1,204,120	(1,093)	0.999
25	Total In-Franchise Commodity / Admin	8,928	6,956	-	6,956	1,971	1.283
26	Total In-Franchise Gas Supply and Transportation	593,230	597,730	(4,500)	593,230	-	1.000
27	Total Union Rate Zones (line 24 + line 25 + line 26)	1,805,184	1,804,307	-	1,804,307	880 (3)	1.000

Notes:

- (1) Working Papers, Schedule 1, p.1, total operating revenues of \$1,823.092 million (line 5) net of other revenue of \$17.906 million (line 4).
- (2) Working Papers, Schedule 1, p.1, total revenue requirement of \$1,822.212 million (line 12) net of other revenue of \$17.906 million (line 4).
- (3) Working Papers, Schedule 1, p.1, line 18.

UNION RATE ZONES
2019 Revenue to Cost Ratios - Including Cost Allocation Proposals
Cost Allocation Study Directive

Line No.	Particulars	Current Approved Revenue (1) (\$000's) (a)	Revenue Requirement (2) (\$000's) (b)	Margin Adjustment (3) (\$000's) (c)	Revenue Requirement Including Margin (\$000's) (d) = (b + c)	Revenue (Deficiency) / Sufficiency (\$000's) (e) = (a - d)	Revenue to Cost Ratios (f) = (a / d)
<u>Union North Delivery, Transportation & Storage (4)</u>							
1	R01	197,961	202,540	(1,583)	200,957	(2,996)	0.985
2	R10	27,412	32,587	(448)	32,140	(4,727)	0.853
3	R20	27,521	27,823	(242)	27,581	(60)	0.998
4	R25	2,450	4,085	-	4,085	(1,635)	0.600
5	R100	10,089	11,256	(7)	11,248	(1,160)	0.897
6	Total Union North Delivery, Transportation & Storage	265,433	278,291	(2,281)	276,011	(10,578)	0.962
<u>Union South Delivery & Storage (4)</u>							
7	M1	455,310	461,900	(2,830)	459,069	(3,760)	0.992
8	M2	67,068	71,958	(963)	70,995	(3,927)	0.945
9	M4	28,675	38,112	(532)	37,580	(8,905)	0.763
10	M5	2,486	2,641	(2)	2,639	(153)	0.942
11	M7	12,450	16,543	(244)	16,299	(3,849)	0.764
12	M9	1,158	1,187	(41)	1,146	11	1.010
13	M10	20	18	(0)	17	3	1.170
14	T1	11,829	12,853	(199)	12,654	(825)	0.935
15	T2	67,147	60,619	(2,108)	58,511	8,636	1.148
16	T3	6,728	6,237	(230)	6,007	720	1.120
17	Total Union South Delivery & Storage	652,871	672,068	(7,150)	664,918	(12,047)	0.982
18	Total In-Franchise Delivery, Transportation and Storage (line 6 + line 17)	918,304	950,359	(9,431)	940,929	(22,625)	0.976
<u>Ex-Franchise (4)</u>							
19	M12 / C1 - Dawn-Parkway	252,682	235,767	-	235,767	16,916	1.072
20	M13	328	148	278	426	(98)	0.770
21	M16	920	569	357	927	(6)	0.993
22	Other C1	30,793	12,777	13,295	26,072	4,720	1.181
23	Total Ex-Franchise	284,723	249,261	13,931	263,192	21,531	1.082
24	Total Delivery, Transportation & Storage (line 18 + line 23)	1,203,027	1,199,620	4,500	1,204,120	(1,094)	0.999
25	Total In-Franchise Commodity / Admin (5)	8,928	6,956	-	6,956	1,971	1.283
26	Total In-Franchise Gas Supply and Transportation (6)	593,230	597,730	(4,500)	593,230	-	1.000
27	Total Union Rate Zones (line 24 + line 25 + line 26)	1,805,184	1,804,307	-	1,804,307	880 (7)	1.000

Notes:

- (1) Working Papers, Schedule 1, p.1, total operating revenues of \$1,823.092 million (line 5) net of other revenue of \$17.906 million (line 4).
- (2) Working Papers, Schedule 1, p.1, total revenue requirement of \$1,822.212 million (line 12) net of other revenue of \$17.906 million (line 4).
- (3) Working Papers, Schedule 6, p.3, column (e) and column (g).
- (4) Working Papers, Schedule 5, pp. 4-17.
- (5) Working Papers, Schedule 5, p.14, line 16.
- (6) Working Papers, Schedule 5, p.3, line 23.
- (7) Working Papers, Schedule 1, p.1, line 18.

UNION RATE ZONES											
2019 Gas Supply Unit Rates and Revenue											
Cost Allocation Study Directive											
Line No.	Particulars	Billing Units	Current Approved Rates (1) (cents / m³) (a)	Approved Upstream Transportation Unit Rates			Approved Rates Excl. Upstream Transportation (cents / m³) (e) = (a - d)	Gas Supply Revenue and Deficiency/Sufficiency			
				Base Rates Forecast Usage (2) (b)	Upstream Transportation Cost (3) (\$000s) (c)	Upstream Transportation Unit Rates (cents / m³) (d) = (c/b*100)		2019 Forecast Usage (f)	Revenue Upstream Transportation (\$000s) (g) = (d*f/100)	Gas Supply Revenue Requirement (4) (\$000s) (h)	Gas Supply (Deficiency)/ Sufficiency (\$000s) (i) = (g - h)
UNION NORTH UPSTREAM TRANSPORTATION											
Rate 01 General Service											
Monthly Delivery Charge - All Zones											
1	First 100 m³	10³m³	9.4044	269,091	578	0.2149	9.1895	307,954	662	606	56
2	Next 200 m³	10³m³	9.1622	305,546	621	0.2033	8.9589	335,578	682	643	39
3	Next 200 m³	10³m³	8.7792	133,292	260	0.1950	8.5842	128,567	251	236	15
4	Next 500 m³	10³m³	8.4275	91,039	171	0.1873	8.2402	85,787	161	151	10
5	Over 1,000 m³	10³m³	8.1369	113,601	206	0.1810	7.9559	117,553	213	200	13
6	Delivery Commodity charge - 01			912,568	1,836			975,438	1,968	1,836	133
Gas Transportation											
7	North West	10³m³	5.9084	267,830	15,780	5.8917	0.0167	281,973	16,613	21,506	(4,893)
8	North East	10³m³	2.5022	659,134	14,628	2.2192	0.2830	693,465	15,390	10,864	4,525
9	Transportation - 01			926,963	30,407			975,438	32,002	32,370	(368)
Storage											
10	North West	10³m³	2.0231	263,671	797	0.3024	1.7207	281,973	853	866	(13)
11	North East	10³m³	5.0482	648,898	17,464	2.6913	2.3569	693,465	18,663	15,487	3,177
12	Storage - 01			912,568	18,261			975,438	19,516	16,352	3,164
Rate 10 General Service											
Monthly Delivery Charge - All Zones											
13	First 1,000 m³	10³m³	8.3869	24,721	49	0.1967	8.1902	21,557	42	43	(1)
14	Next 9,000 m³	10³m³	6.7990	133,464	214	0.1603	6.6387	123,534	198	201	(3)
15	Next 20,000 m³	10³m³	5.9715	84,894	118	0.1395	5.8320	84,904	118	121	(3)
16	Next 70,000 m³	10³m³	5.3848	64,369	81	0.1262	5.2586	64,345	81	83	(2)
17	Over 100,000 m³	10³m³	3.1615	29,607	22	0.0758	3.0857	48,461	37	37	0
18	Delivery Commodity Charge - 10			337,055	485	0.1438		342,801	477	485	(8)
Gas Transportation											
19	North West	10³m³	5.1917	82,150	4,262	5.1885	0.0032	83,676	4,342	5,888	(1,547)
20	North East	10³m³	2.2899	261,380	5,348	2.0461	0.2438	254,630	5,210	3,893	1,317
21	Transportation - 10			343,530	9,610	2.7976		338,306	9,552	9,781	(229)
Storage											
22	North West	10³m³	1.5184	80,602	187	0.2321	1.2863	83,676	194	222	(28)
23	North East	10³m³	3.5922	256,453	4,860	1.8952	1.6970	254,630	4,826	4,664	162
24	Storage - 10			337,055	5,047	1.4975		338,306	5,020	4,886	134

Notes:

(1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding the gas supply optimization credit, which is shown separately on p.3, lines 14-18.

(2) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (q).

(3) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (l).

(4) As per 2019 cost allocation study filed at Appendix C1.

UNION RATE ZONES											
Gas Supply Unit Rates and Revenue											
Cost Allocation Study Directive											
Line No.	Particulars	Billing Units	Current Approved Rates (1) (cents / m³) (a)	Approved Upstream Transportation Unit Rates			Rates Excl. Upstream Transportation (cents / m³) (e) = (a - d)	Gas Supply Revenue and Deficiency/Sufficiency			
				Base Rates Forecast Usage (2) (b)	Upstream Transportation Cost (3) (\$000s) (c)	Upstream Transportation Unit Rates (cents / m³) (d) = (c/b*100)		2019 Forecast Usage (f)	Revenue Upstream Transportation (\$000s) (g) = (d*f/100)	Gas Supply Revenue Requirement (4) (\$000s) (h)	Gas Supply (Deficiency)/ Sufficiency (\$000s) (i) = (g - h)
<u>Rate 20 Medium Volume Firm Service</u>											
Monthly Commodity Charge											
1	First 852,000 m³	10³m³	0.6942	318,332	80	0.0250	0.6692	300,681	75	54	22
2	All over 852,000 m³	10³m³	0.4918	287,006	52	0.0181	0.4737	618,545	112	78	34
3	Delivery (Commodity/Demand)			605,338	132	0.0218		919,226	187	132	56
Gas Supply Demand Charge											
4	North West	10³m³/d	49.9494	2,962	1,251	42.2322	7.7172	1,788	755	1,029	(274)
5	North East	10³m³/d	41.7724	3,911	1,337	34.1771	7.5953	6,323	2,161	1,737	424
Commodity Transportation 1											
6	North West	10³m³	3.1791	28,383	815	2.8710	0.3081	18,346	527	686	(160)
7	North East	10³m³	1.5551	45,073	588	1.3042	0.2509	50,366	657	1,158	(501)
Commodity Transportation 2											
8	North West	10³m³	-	14,503	-	-	-	11,643	-	-	-
9	North East	10³m³	-	33,976	-	-	-	32,687	-	-	-
10	Gas Supply Transportation - 20			121,935	3,990	3.2724		113,042	1,184	4,610	(3,427)
Storage (GJ's)											
11	Demand	GJ/d	16.360	99,288	845	8.506	7.854	141,504	1,204	1,681	(477)
12	Commodity	GJ	0.207	639,477	10	0.015	0.192	1,033,187	16	38	(23)
13	Total Storage Rate - 20			639,477	854	1.3357		1,033,187	1,219	1,719	(500)
<u>Rate 25 Large Volume Interruptible Service</u>											
14	Gas Supply Transportation - 25	10³m³	1.3190	42,913	550	1.2820	0.0370	34,910	448	566	(119)
<u>Rate 100 Large Volume Firm Service</u>											
15	Commodity - Delivery	10³m³	0.2660	1,818,042	9	0.0005	0.2655	878,440	4	9	(5)
Storage (GJ's)											
16	Demand	GJ/d	16.360	15,600	133	8.506	7.8538	14,400	122	105	17
17	Commodity	GJ	0.207	100,000	2	0.015	0.1920	100,000	2	0	1
18	Total Storage Rate - 100			100,000	134	1.3420		114,400	124	106	18
19	Total Union North Upstream Transportation				71,316				71,701	72,852	(1,151)

Notes:

(1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding the gas supply optimization credit, which is shown separately on p.3, lines 14-18.

(2) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (q).

(3) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (l).

(4) As per 2019 cost allocation study filed at Appendix C1.

UNION RATE ZONES
Gas Supply Unit Rates and Revenue
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved Rates (1) (cents / m³)	Gas Commodity and Optimization Margin			Rates Excl. Commodity & Optimization (cents / m³)	Gas Supply Revenue and Deficiency/Sufficiency			
				Base Rates Forecast Usage (2)	Commodity & Optimization Cost (3) (\$000s)	Commodity & Optimization Unit Rates (cents / m³)		2019 Forecast Usage	Commodity & Optimization Revenue (\$000s)	Gas Supply Revenue Requirement (4) (\$000s)	Gas Supply (Deficiency)/ Sufficiency (\$000s)
				(a)	(b)	(c)		(d) = (a)	(e) = (a - d)	(f)	(g) = (d*f/100)
<u>UNION NORTH COMMODITY</u>											
	North West										
1	Rate 01		9.1252	-	-	9.1252	-	264,679	24,153	24,153	-
2	Rate 10		9.1252	-	-	9.1252	-	44,482	4,059	4,059	-
3	Rate 20		8.8700	-	-	8.8700	-	6,391	567	567	-
4	Rate 25		21.8201	-	-	21.8201	-	16,928	3,694	3,694	-
5	Total Union North West								32,472	32,472	-
	North East										
6	Rate 01		11.3900	-	-	11.3900	-	634,823	72,306	72,306	-
7	Rate 10		11.3900	-	-	11.3900	-	132,020	15,037	15,037	-
8	Rate 20		11.0715	-	-	11.0715	-	13,905	1,540	1,540	-
9	Rate 25		19.9460	-	-	19.9460	-	17,982	3,587	3,587	-
10	Total Union North East								92,470	92,469	-
11	Total Union North Commodity							1,131,212	124,942	124,942	-
<u>UNION SOUTH COMMODITY</u>											
12	Gas Supply Commodity	10³m³	11.3900	-	-	11.3900	-	3,511,304	399,936	399,936	-
13	Total Union South Commodity								399,936	399,936	-
<u>GAS SUPPLY OPTIMIZATION MARGIN (5) (6)</u>											
	Union North										
14	Rate 01		(0.4229)	926,963	(3,920)	(0.4229)	-	975,438	(4,125)	(2,123)	(2,002)
15	Rate 10		(0.3906)	343,530	(1,342)	(0.3906)	-	338,306	(1,321)	(741)	(581)
16	Rate 20 - Demand		(4.1642)	6,873	(286)	(4.1642)	-	8,111	(338)	(153)	(185)
17	Rate 20 - Commodity		(0.2597)	73,456	(191)	(0.2597)	-	68,712	(178)	(102)	(76)
18	Rate 25		(0.2720)	42,913	(117)	(0.2720)	-	34,910	(95)	(31)	(64)
19	Union South		(0.2824)	2,680,616	(7,571)	(0.2824)	-	3,511,304	(9,916)	(1,350)	(8,566)
20	Total Gas Supply Optimization Margin				(13,426)				(15,974)	(4,500)	(11,474)
21	Total Gas Supply								580,605	593,230	(12,624)
22	Gas Supply Deferral Impact (7)								12,624	-	12,624
23	Total Upstream Transportation and Commodity								593,230	593,230	-

Notes:
(1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding the gas supply optimization credit, which is shown separately on p.3, lines 14-18.
(2) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (q).
(3) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 5, column (l).
(4) As per 2019 cost allocation study filed at Appendix C1.
(5) Gas supply optimization margin unit rates as per EB-2017-0087, Rate Order, Working Papers, Schedule 14.
(6) Allocation of 2019 gas supply optimization margin of \$4.5 million provided at Working Papers, Schedule 6, p.7.
(7) Total gas supply deficiency assumed to be recovered through gas supply and transportation optimization deferral accounts.

UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			2019 Revenue to Cost Ratios	
			2019 Forecast Usage	Rates (1) (cents / m³)	Revenue (\$000s)	Revenue Requirement (2) (\$000s)	Margin Adjustment (3) (\$000s)	Adjusted Revenue Requirement (\$000s)		Revenue (Deficiency)/ Sufficiency (\$000s)
			(a)	(b)	(c)	(d)	(e)	(f) = (d + e)		(g) = (c - f)
	Rate 01 General Service									
1	Monthly Charge	bills	4,191,053	\$21.22	88,934	122,852	(806)	122,046	(33,112)	
	Monthly Delivery Charge - All Zones									
2	First 100 m³	10³m³	307,954	9.1895	28,299	19,570	(256)	19,314	8,985	
3	Next 200 m³	10³m³	335,578	8.9589	30,064	20,777	(272)	20,504	9,560	
4	Next 200 m³	10³m³	128,567	8.5842	11,037	7,627	(100)	7,527	3,509	
5	Next 500 m³	10³m³	85,787	8.2402	7,069	4,885	(64)	4,821	2,248	
6	Over 1,000 m³	10³m³	117,553	7.9559	9,352	6,464	(85)	6,379	2,973	
7	Delivery Commodity charge - 01		975,438	8.7982	85,821	59,323	(777)	58,546	27,275	
8	Total Delivery - 01		975,438	17.9156	174,755	182,175	(1,583)	180,593	(5,837)	
	Gas Transportation									
9	North West	10³m³	281,973	0.0167	47	3	-	3	44	
10	North East	10³m³	693,465	0.2830	1,962	3,670	-	3,670	(1,708)	
11	Transportation - 01		975,438	0.2060	2,010	3,673	-	3,673	(1,664)	
	Storage									
12	North West	10³m³	281,973	1.7207	4,852	2,847	-	2,847	2,005	
13	North East	10³m³	693,465	2.3569	16,344	13,845	-	13,845	2,500	
14	Storage - 01		975,438	2.1730	21,196	16,691	-	16,691	4,505	
15	Total Gas Transportatic	10³m³	975,438	2.3790	23,206	20,365	-	20,365	2,841	
16	Total Rate 01		975,438		197,961	202,540	(1,583)	200,957	(2,996)	0.985

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding ICM unit rates and upstream transportation, per Schedule 5, pp.1-3.
- (2) 2019 cost allocation study filed at Appendix C1, excluding gas supply revenue requirement per Schedule 5, pp. 1-3.
- (3) Working Papers, Schedule 6, p.3, column (e).

UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved		2019 Forecast			Adjusted Revenue Requirement (\$000s) (f) = (d + e)	Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)	2019 Revenue to Cost Ratios (h) = (f / b)
			2019 Forecast Usage (a)	Rates (1) (cents / m³) (b)	Revenue (\$000s) (c)	Revenue Requirement (2) (\$000s) (d)	Margin Adjustment (3) (\$000s) (e)			
<u>Rate 10 General Service</u>										
1	Monthly Charge	bills	22,534	\$70.75	1,594	6,429	(33)	6,395	(4,801)	
Monthly Delivery Charge - All Zones										
2	First	1,000 m³	10³m³	21,557	8.1902	1,766	1,795	(37)	1,758	7
3	Next	9,000 m³	10³m³	123,534	6.6387	8,201	8,339	(172)	8,167	34
4	Next	20,000 m³	10³m³	84,904	5.8320	4,952	5,035	(104)	4,931	20
5	Next	70,000 m³	10³m³	64,345	5.2586	3,384	3,441	(71)	3,370	14
6	Over	100,000 m³	10³m³	48,461	3.0857	1,495	1,520	(31)	1,489	6
7	Delivery Commodity Charge - 10		342,801	5.7751	19,797	20,130	(414)	19,716	82	
8	Total Delivery - 10		342,801	6.2402	21,392	26,558	(448)	26,111	(4,719)	
Gas Transportation										
9	North West	10³m³	83,676	0.0032	3	1	-	1	2	
10	North East	10³m³	254,630	0.2438	621	1,315	-	1,315	(694)	
11	Transportation - 10		338,306	0.1843	623	1,316	-	1,316	(692)	
Storage										
12	North West	10³m³	83,676	1.2863	1,076	693	-	693	383	
13	North East	10³m³	254,630	1.6970	4,321	4,020	-	4,020	301	
14	Storage - 10		338,306	1.5954	5,397	4,713	-	4,713	684	
15	Total Gas Transportation, Storage and G		338,306	1.7797	6,021	6,029	-	6,029	(8)	
16	Total Rate 10		342,801	-	27,412	32,587	(448)	32,140	(4,727)	0.853

Notes:

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved		2019 Forecast				2019 Revenue to Cost Ratios (h) = (f / b)	
			2019 Forecast Usage	Rates (1)	Revenue	Revenue Requirement (2)	Margin Adjustment (3)	Adjusted Revenue Requirement		Revenue (Deficiency)/ Sufficiency
			(a)	(cents / m³) (b)	(\$000s) (c)	(\$000s) (d)	(\$000s) (e)	(\$000s) (f) = (d + e)		(\$000s) (g) = (c - f)
Rate 20 Medium Volume Firm Service										
1	Monthly Charge	bills	678	\$958.77	650	2,375	(23)	2,352	(1,702)	
Monthly Demand Charge										
2	First	70,000 m³ 10³m³/d	22,165	32.2947	7,158	8,164	(80)	8,085	(927)	
3	All over	70,000 m³ 10³m³/d	66,148	18.9909	12,562	14,328	(140)	14,189	(1,626)	
4	Total Demand - 20		88,312	22.3299	19,720	22,493	(219)	22,273	(2,553)	
Monthly Commodity Charge										
5	First	852,000 m³ 10³m³	300,681	0.6692	2,012	-	-	-	2,012	
6	All over	852,000 m³ 10³m³	618,545	0.4737	2,930	-	-	-	2,930	
7	Delivery (Commodity/Demand)		919,226	0.5376	4,942	-	-	-	4,942	
8	Transportation Account Charge		428	\$229.19	98					
9	Total Delivery - 20		919,226	2.7643	25,410	24,868	(242)	24,625	785	
Gas Supply Demand Charge										
10	North West	10³m³/d	1,788	7.7172	138	100	-	100	38	
11	North East	10³m³/d	6,323	7.5953	480	1,583	-	1,583	(1,103)	
Commodity Transportation 1										
12	North West	10³m³	18,346	0.3081	57	67	-	67	(10)	
13	North East	10³m³	50,366	0.2509	126	1,055	-	1,055	(929)	
Commodity Transportation 2										
14	North West	10³m³	11,643	-	-	-	-	-	-	
15	North East	10³m³	32,687	-	-	-	-	-	-	
16	Gas Supply Transportation - 20		113,042	0.7087	801	2,806	-	2,806	(2,004)	
Storage (GJ's)										
17	Demand	GJ/d	141,504	7.854	1,111	33	-	33	1,078	
18	Commodity	GJ	1,033,187	0.192	198	117	-	117	81	
19	Total Storage Rate - 20		1,174,691	0.1115	1,310	150	-	150	1,160	
20	Total Rate 20		919,226	-	27,521	27,823	(242)	27,581	(60)	
									0.998	

Notes:

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	2019 Forecast Usage (a)	Current Approved		2019 Forecast				2019 Revenue to Cost Ratios (h) = (f / b)
				Rates (1) (cents / m³) (b)	Revenue (\$000s) (c)	Revenue Requirement (2) (\$000s) (d)	Margin Adjustment (3) (\$000s) (e)	Adjusted Revenue Requirement (\$000s) (f) = (d + e)	Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)	
<u>Rate 25 Large Volume Interruptible Service</u>										
1	Monthly Charge	bills	756	\$316.83	240	1,419	-	1,419	(1,180)	0.600
2	Monthly Delivery Charg	10³m³	67,098	3.2269	2,165	2,615	-	2,615	(450)	
3	Transportation Account Charge		141	\$229.19	32	-	-	-	32	
4	Total Delivery - 25		67,098	3.6321	2,437	4,035	-	4,035	(1,598)	
5	Gas Supply Transporta	10³m³	34,910	0.0370	13	51	-	51	(38)	
6	Total Rate 25		67,098	-	2,450	4,085	-	4,085	(1,635)	
<u>Rate 100 Large Volume Firm Service</u>										
7	Monthly Charge	bills	156	\$1,448.19	226	1,230	(1)	1,229	(1,003)	0.897
8	Demand	10³m³/d	39,647	18.5612	7,359	9,938	(7)	9,931	(2,572)	
9	Commodity	10³m³	878,440	0.2655	2,336	(9)	0	(9)	2,345	
10	Delivery (Commodity/Demand)		878,440	1.1294	9,921	11,159	(7)	11,152	(1,230)	
11	Transportation Account Charge		153	\$229.19	35					
12	Total Delivery - 100		878,440	1.1334	9,956	11,159	(7)	11,152	(1,195)	
Storage (GJ's)										
13	Demand	GJ/d	14,400	7.8538	113	93	-	93	20	
14	Commodity	GJ	100,000	0.1920	19	4	-	4	16	
15	Total Storage Rate - 100		114,400	0.1156	132	97	-	97	35	
16	Total Rate 100		878,440	1.1485	10,089	11,256	(7)	11,248	(1,160)	

Notes:

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			2019 Revenue to Cost Ratios (h) = (f / b)	
			2019 Forecast Usage (a)	Rates (1) (cents / m³) (b)	Revenue (\$000s) (c)	Revenue Requirement (2) (\$000s) (d)	Margin Adjustment (3) (\$000s) (e)	Adjusted Revenue Requirement (\$000s) (f) = (d + e)		Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)
<u>M1</u>										
1	Monthly Charge	bills	13,523,532	\$21.22	286,969	289,242	(1,857)	287,385	(416)	
Monthly Delivery Commodity Charge										
2	First	100 m³ 10³m³	1,001,501	5.2119	52,197	54,534	(350)	54,184	(1,987)	
3	Next	150 m 10³m³	860,574	4.9384	42,499	44,401	(285)	44,116	(1,617)	
4	All over	250 m³ 10³m³	1,189,227	4.2316	50,323	52,576	(338)	52,239	(1,915)	
5	Delivery Commodity Charge - M1		3,051,302	4.7527	145,019	151,511	(973)	150,538	(5,519)	
6	Total Delivery - M1		3,051,302	14.1575	431,989	440,754	(2,830)	437,923	(5,935)	
7	Storage - M1	10³m³	3,051,302	0.7643	23,321	21,146	-	21,146	2,175	
8	Total Rate M1		3,051,302	-	455,310	461,900	(2,830)	459,069	(3,760)	0.992
<u>M2</u>										
9	Monthly Charge	bills	84,262	\$70.75	5,962	11,921	(175)	11,746	(5,784)	
Monthly Delivery Commodity Charge										
10	First	1,000 m³ 10³m³	79,260	4.8471	3,842	3,880	(57)	3,823	18	
11	Next	6,000 10³m³	344,741	4.7545	16,391	16,555	(243)	16,312	79	
12	Next	13,000 10³m³	328,477	4.5150	14,831	14,979	(220)	14,760	71	
13	All over	20,000 m³ 10³m³	432,256	4.1804	18,070	18,251	(268)	17,983	87	
14	Delivery Commodity Charge - M2		1,184,733	4.4848	53,133	53,666	(788)	52,878	255	
15	Total Delivery - M2		1,184,733	4.9880	59,095	65,587	(963)	64,624	(5,529)	
16	Storage - M2	10³m³	1,184,733	0.6730	7,973	6,371	-	6,371	1,603	
17	Total Rate M2		1,184,733	-	67,068	71,958	(963)	70,995	(3,927)	0.945

Notes:

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast				2019 Revenue to Cost Ratios (h) = (f / b)
			2019 Forecast Usage (a)	Rates (1) (cents / m³) (b)	Revenue (\$000s) (c)	Revenue Requirement (2) (\$000s) (d)	Margin Adjustment (3) (\$000s) (e)	Adjusted Revenue Requirement (\$000s) (f) = (d + e)	Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)	
<u>M4 Firm Commercial/Industrial Contract Rate</u>										
Monthly Demand Charge										
1	First	8,450 m³ 10³m³/d	20,206	60.7957	12,285	23,527	(329)	23,198	(10,913)	
2	Next	19,700 m³ 10³m³/d	15,556	27.2593	4,240	8,121	(114)	8,007	(3,767)	
3	All over	28,150 m³ 10³m³/d	9,419	22.9015	2,157	4,131	(58)	4,073	(1,916)	
			45,181	41.3495	18,682	35,779	(501)	35,278	(16,596)	
Monthly Delivery Commodity Charge										
4	First Block	10³m³	696,659	1.4141	9,851	2,228	(31)	2,197	7,655	
5	All remaining use	10³m³	1,007	0.5085	5	1	(0)	1	4	
6	Delivery Commodity Charge		697,667	1.4128	9,857	2,229	(31)	2,198	7,659	
7	Total Delivery - Firm M4		697,667	4.0906	28,539	38,008	(532)	37,476	(8,938)	
Interruptible contracts										
8	Monthly Charge	bills	60	\$680.71	41	8	-	8	33	
9	Delivery Commodity	10³m³	3,606	2.6557	96	96	-	96	0	
10	Total Delivery - Interruptible M4		3,606	3.7883	137	104	-	104	33	
11	Total Delivery - M4		701,273	4.0890	28,675	38,112	(532)	37,580	(8,905)	
12	Total Rate M4		701,273	-	28,675	38,112	(532)	37,580	(8,905)	0.763

Notes:

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			2019 Revenue to Cost Ratios	
			2019 Forecast Usage	Rates (1)	Revenue	Revenue Requirement (2)	Margin Adjustment (3)	Adjusted Revenue Requirement		Revenue (Deficiency)/ Sufficiency
			(a)	(cents / m³) (b)	(\$000s) (c)	(\$000s) (d)	(\$000s) (e)	(\$000s) (f) = (d + e)		(\$000s) (g) = (c - f)
<u>M5A Interruptible Commercial/Industrial Contract Rate</u>										
Firm contracts										
1	Monthly Demand CI 10³m³/d		529	35.2342	186	491	(2)	489	(302)	
2	Monthly Delivery Cc 10³m³		9,183	2.3081	212	97	(0)	97	115	
3	Total Delivery - Firm M5		9,183	4.3363	398	588	(2)	586	(187)	
Interruptible contracts										
4	Monthly Charge bills		528	\$680.71	359	691	(332)	359	-	
5	Delivery Commodity 10³m³		65,670	2.6324	1,729	1,362	332	1,694	35	
6	Total Delivery -Interruptible M5		65,670	3.1797	2,088	2,053	-	2,053	35	
7	Total Delivery - M5		74,853	3.3216	2,486	2,641	(2)	2,639	(153)	
8	Total Rate M5A		74,853	-	2,486	2,641	(2)	2,639	(153)	
									0.942	

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UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			2019 Revenue to Cost Ratios	
			2019 Forecast Usage	Rates (1)	Revenue	Revenue Requirement (2)	Margin Adjustment (3)	Adjusted Revenue Requirement		Revenue (Deficiency)/ Sufficiency
			(a)	(cents / m³) (b)	(\$000s) (c)	(\$000s) (d)	(\$000s) (e)	(\$000s) (f) = (d + e)		(\$000s) (g) = (c - f)
<u>M7 Special Large Volume Contract Rate</u>										
Firm Contracts										
1	Monthly Demand CI 10³m³/d		27,657	34.1595	9,448	13,585	(232)	13,353	(3,906)	
2	Monthly Delivery Cc 10³m³		413,352	0.2577	1,065	714	(12)	702	364	
3	Total Delivery - Firm M7		413,352	2.5433	10,513	14,299	(244)	14,055	(3,542)	
Interruptible / Seasonal Contracts										
4	Monthly Delivery Corr 10³m³		89,687	2.1602	1,937	2,244	-	2,244	(307)	
5	Total Delivery Excluding Customer-Related		503,039	2.4750	12,450	16,543	(244)	16,299	(3,849)	
6	Total Rate M7		503,039	2.4750	12,450	16,543	(244)	16,299	(3,849)	
0.764										
<u>M9 Large Wholesale Service</u>										
7	Monthly Demand CI 10³m³/d		4,410	23.8851	1,053	1,046	(36)	1,010	43	
8	Monthly Delivery Cc 10³m³		81,243	0.1284	104	141	(5)	136	(32)	
9	Total Delivery - M9		81,243	1.4250	1,158	1,187	(41)	1,146	11	
10	Total Rate M9		81,243	1.4250	1,158	1,187	(41)	1,146	11	
1.010										
<u>M10 Small Wholesale Service</u>										
11	Total Delivery - M10 10³m³		277	7.3481	20	18	(0)	17	3	
12	Total Rate M10		277	7.3481	20	18	(0)	17	3	
1.170										

Notes:

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UNION RATE ZONES
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Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			2019 Revenue to Cost Ratios (h) = (f / b)	
			2019 Forecast Usage	Rates (1) (cents / m³)	Revenue (\$000s)	Revenue Requirement (2) (\$000s)	Margin Adjustment (3) (\$000s)	Adjusted Revenue Requirement (\$000s)		Revenue (Deficiency)/ Sufficiency (\$000s)
			(a)	(b)	(c)	(d)	(e)	(f) = (d + e)		(g) = (c - f)
<u>T1 Storage and Transportation</u>										
Storage (\$/GJ's)										
Demand:										
Firm injection / withdrawal										
1	Union provides de GJ/d.mo.		601,860	1.551	933	414	(6)	408	525	
2	Customer provide GJ/d.mo.		-	1.327	-	-	-	-	-	
3	Incremental firm ir GJ/d.mo.		-	1.327	-	-	-	-	-	
4	Interruptible GJ/d.mo.		-	1.327	-	-	-	-	-	
5	Space GJ/d.mo.		16,456,404	0.011	181	162	(3)	160	21	
Commodity:										
6	Commodity (Cust: GJ		4,957,892	0.012	59	42	(1)	42	18	
7	Commodity (Unioi GJ		-	0.024	-	-	-	-	-	
8	Customer supplie: GJ		20,129	-	59	101	(2)	99	(41)	
9	Total Storage - T1		449,463	0.2743	1,233	720	(11)	709	524	
Transportation (cents/ m3)										
Demand										
10	First 28,151 10³m³/d.mo.		13,727	40.2300	5,522	6,362	(98)	6,264	(741)	
11	Next 112,721 10³m³/d.mo.		10,475	27.7944	2,912	3,354	(52)	3,302	(391)	
Commodity										
12	Firm Volumes 10³m³		422,293	0.1035	437	433	(7)	426	11	
13	Interruptible Volun 10³m³		27,170	1.7879	486	401	(6)	394	91	
14	Monthly Charges Meter/mo.		552	\$1,963	1,084	\$ 1,380	(21)	1,358	(275)	
15	Customer supplied fuel GJ		53,258	-	156	204	(3)	200	(45)	
16	Total Transportation - T1		449,463	2.3575	10,596	12,133	(188)	11,945	(1,349)	
17	Total Delivery - T1 10³m³		449,463	2.6318	11,829	12,853	(199)	12,654	(825)	
									0.935	

Notes:

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UNION RATE ZONES
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Cost Allocation Study Directive

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				Rates (1) (cents / m³) (b)	Revenue (\$000s) (c)	Revenue Requirement (2) (\$000s) (d)	Margin Adjustment (3) (\$000s) (e)	Adjusted Revenue Requirement (\$000s) (f) = (d + e)	Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)	
<u>T2 Storage and Transportation</u>										
Storage (\$/GJ's)										
Demand:										
Firm injection / withdrawal										
1	Union provides de GJ/d/mo.		1,722,864	1.551	2,672	1,366	(47)	1,318	1,354	
2	Customer provide GJ/d/mo.		843,000	1.327	1,119	668	(23)	645	474	
3	Incremental firm ir GJ/d/mo.		-	1.327	-	-	-	-	-	
4	Interruptible GJ/d/mo.		415,704	1.327	552	-	-	-	552	
5	Space GJ/d/mo.		105,150,000	0.011	1,157	1,035	(36)	999	157	
Commodity:										
6	Commodity (Cust: GJ		35,065,549	0.012	421	283	(10)	273	147	
7	Commodity (Unio: GJ		-	0.024	-	-	-	-	-	
8	Customer supplie: GJ		142,366	-	416	714	(25)	689	(273)	
9	Total Storage - T2		4,592,825	0.1380	6,336	4,067	(141)	3,925	2,410	
Transportation (cents/ m3)										
Demand										
10	First 140,8' 10³m³/d/mo.		56,526	31.0430	17,547	14,502	(504)	13,998	3,549	
11	All Over 140,8' 10³m³/d/mo.		215,266	16.4202	35,347	29,213	(1,016)	28,197	7,150	
Commodity										
12	Firm Volumes 10³m³		4,407,552	0.0200	882	1,039	(36)	1,003	(121)	
13	Interruptible 10³m³		185,273	1.6167	2,995	2,054	(71)	1,983	1,012	
14	Monthly Charges Meter/mo.		462	\$5,975	2,761	\$ 7,940	(276)	7,664	(4,903)	
15	Customer supplied fuel GJ		437,794	-	1,279	1,804	(63)	1,741	(462)	
16	Total Transportation - T2		4,592,825	1.3240	60,811	56,552	(1,967)	54,585	6,226	
17	Total Delivery - T2 10³m³		4,592,825	1.4620	67,147	60,619	(2,108)	58,511	8,636	1.148

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding ICM unit rates and upstream transportation, per Schedule 5, pp.1-3.
- (2) 2019 cost allocation study filed at Appendix C1, excluding gas supply revenue requirement per Schedule 5, pp. 1-3.
- (3) Working Papers, Schedule 6, p.3, column (e).

UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast			Revenue (Deficiency)/ Sufficiency (\$000s) (g) = (c - f)	2019 Revenue to Cost Ratios (h) = (f / b)
			2019 Forecast Usage	Rates (1) (cents / m³)	Revenue (\$000s)	Revenue Requirement (2) (\$000s)	Margin Adjustment (3) (\$000s)	Adjusted Revenue Requirement (\$000s)		
			(a)	(b)	(c)	(d)	(e)	(f) = (d + e)		
<u>T3 Storage and Transportation</u>										
Storage (\$/GJ's)										
Demand:										
Firm injection / withdrawal										
1	Union provides de GJ/d.mo.		-	1.551	-	-	-	-	-	
2	Customer provide GJ/d.mo.		679,320	1.327	901	718	(26)	692	210	
3	Incremental firm ir GJ/d.mo.		-	1.327	-	-	-	-	-	
4	Interruptible GJ/d.mo.		-	1.327	-	-	-	-	-	
5	Space GJ/d.mo.		36,614,256	0.011	403	361	(13)	347	55	
Commodity:										
6	Commodity (Cust: GJ		4,867,885	0.012	58	44	(2)	42	16	
7	Commodity (Unio: GJ		-	0.024	-	-	-	-	-	
8	Customer supplier GJ		19,764	-	58	99	(4)	95	(38)	
9	Total Storage - T3		280,802	0.5058	1,420	1,222	(45)	1,177	244	
Transportation (cents/ m3)										
10	Demand 10³m³/d.mo.		28,200	16.983	4,789	4,490	(166)	4,324	465	
11	Commodity 10³m³		280,802	0.053	149	148	(5)	143	6	
12	Monthly Charges Meter/mo.		12	\$20,622	247	\$ 246	(9)	237	11	
13	Customer supplied i 10³m³		41,562	-	121	131	(5)	127	(5)	
14	Total Transportation - T3		280,802	1.8900	5,307	5,015	(185)	4,830	477	
15	Total Delivery - T3 10³m³		280,802	2.3959	6,728	6,237	(230)	6,007	720	1.120
16	Total In-Franchise Commodity / Admin		4,642,516	0.1923	8,928	6,956	-	6,956	1,971	1.283
17	Total In-franchise				927,231	957,316	(9,431)	947,885	(20,654)	

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A, excluding ICM unit rates and upstream transportation, per Schedule 5, pp.1-3.
- (2) 2019 cost allocation study filed at Appendix C1, excluding gas supply revenue requirement per Schedule 5, pp. 1-3.
- (3) Working Papers, Schedule 6, p.3, column (e).

UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	2019 Forecast Usage	Current Approved		2019 Forecast				2019 Revenue to Cost Ratios
				Rates (1) (\$/GJ)	Revenue (\$000's)	Revenue Requirement (2) (\$000's)	Margin Adjustment (3) (\$000's)	Adjusted Revenue Requirement (\$000's)	Revenue (Deficiency) / Sufficiency (\$000's)	
			(a)	(b)	(c)	(d)	(e)	(f) = (d + e)	(g) = (c - f)	(h) = (f / b)
<u>M12/C1 Dawn-Parkway Transportation Service</u>										
M12 Demand:										
Dawn to Kirkwall										
1	- 12 months	GJ/d/mo	117,429	\$3.058	4,309	4,238	-	4,238	71	
2	- F24-T - 12 months	GJ/d/mo	49,500	\$0.071	42	34	-	34	8	
Dawn to Parkway										
3	- 12 months	GJ/d/mo	4,432,027	\$3.602	191,570	193,340	-	193,340	(1,770)	
4	- 2 months	GJ/d/mo	75,000	\$3.602	540	545	-	545	(5)	
5	- F24-T - 12 months	GJ/d/mo	498,775	\$0.071	425	339	-	339	85	
M12-X Easterly (between Dawn, Kirkwall and Parkway)										
6	- 12 months	GJ/d/mo	396,011	\$3.602	17,118	17,275	-	17,275	(157)	
M12-X Westerly (between Dawn, Kirkwall and Parkway)										
7	- 12 months	GJ/d/mo	396,011	\$0.848	4,032	-	-	-	4,032	
Kirkwall to Parkway										
8	- 12 months	GJ/d/mo	421,155	\$0.545	2,754 (6)	3,174	-	3,174	(419)	
C1 Demand:										
Parkway to Dawn/Kirkwall										
9	- 12 months	GJ/mo	569,774	\$0.848	5,798	-	-	-	5,798	
10	- 3 months	GJ/mo	336,586	\$0.848	856	-	-	-	856	
Kirkwall to Dawn										
11	- 12 months	GJ/mo	488,341	\$1.496	8,767	-	-	-	8,767	
Dawn to Parkway										
12	- 12 months	GJ/mo	33,385	\$3.602	1,443	1,456	-	1,456	(13)	
13	Kirkwall to Parkway	GJ/mo	-	\$0.545	- (6)	-	-	-	-	
M12 Commodity:										
14	Easterly - Providing Own Fuel	GJ	580,294,841		13,193	13,193	-	13,193	-	
15	Westerly - Providing Own Fuel	GJ	78,058,932		576	576	-	576	-	
C1 Commodity:										
16	Easterly - Providing Own Fuel		7,813,977		188	175	-	175	13	
17	Westerly - Providing Own Fuel		187,991,296		1,070	1,420	-	1,420	(351)	
18	Total Rate M12/C1 Dawn-Parkway Transportation		<u>854,159,046</u>		<u>252,682</u>	<u>235,767</u>	<u>-</u>	<u>235,767</u>	<u>16,916</u>	1.072

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A.
- (2) 2019 cost allocation study filed at Appendix C1.
- (3) Working Papers, Schedule 6, p.1.

UNION RATE ZONES
 2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	2019 Forecast Usage (a)	Current Approved		2019 Forecast				2019 Revenue to Cost Ratios (h) = (f / b)
				Rates (1) (\$/GJ) (b)	Revenue (\$000's) (c)	Revenue Requirement (2) (\$000's) (d)	Margin Adjustment (3) (\$000's) (e)	Adjusted Revenue Requirement (\$000's) (f) = (d + e)	Revenue (Deficiency) / Sufficiency (\$000's) (g) = (c - f)	
<u>M13 Transportation of Locally Produced Gas</u>										
1	Monthly Fixed Charge	monthly	15	\$967.82	174	122		122	52	
2	Transmission Commodity Charge	GJ	3,851,861	\$0.035	135		278	278	(144)	
3	Commodity - Providing Own Fuel	GJ	3,851,861	\$0.005	19	26		26	(7)	
4	Total Rate M13		<u>3,851,861</u>		<u>328</u>	<u>148</u>	<u>278</u>	<u>426</u>	<u>(98)</u>	0.770
<u>M16 Transportation Service</u>										
5	Monthly Fixed Charge	monthly	3	\$1,539.70	55	59		59	(4)	
6	Transmission Commodity Charge	GJ	4,941,226	\$0.035	173		357	357	(184)	
Charges West of Dawn:										
7	Firm Demand Charge	GJ/d	17,846	\$2.791	598	305		305	293	
8	Fuel & UFG to Dawn	GJ	4,941,226	\$0.005	25	33		33	(9)	
9	Fuel & UFG to Pool	GJ	5,334,279	\$0.013	69	172		172	(103)	
Charges East of Dawn:										
10	Firm Demand Charge	GJ/d		\$0.782	-			-	-	
11	Fuel & UFG to Dawn	GJ		\$0.005	-	-	-	-	-	
12	Fuel & UFG to Pool	GJ		\$0.005	-	-	-	-	-	
13	Total Rate M16		<u>10,275,506</u>		<u>920</u>	<u>569</u>	<u>357</u>	<u>927</u>	<u>(6)</u>	0.993

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A.
- (2) 2019 cost allocation study filed at Appendix C1.
- (3) Working Papers, Schedule 6, p.1.

UNION RATE ZONES
2019 Revenue to Cost Ratio Detail by Rate Class
Cost Allocation Study Directive

Line No.	Particulars	Billing Units	Current Approved			2019 Forecast					2019 Revenue to Cost Ratios (h) = (f / b)
			2019 Forecast Usage	Rates (1) (\$/GJ)	Revenue (\$000's)	Revenue Requirement (2) (\$000's)	Margin Adjustment (3) (\$000's)	Adjusted Revenue Requirement (\$000's)	Revenue (Deficiency) / Sufficiency (\$000's)		
			(a)	(b)	(c)	(d)	(e)	(f) = (d + e)	(g) = (c - f)		
<u>C1 Cross Franchise Transportation Service</u>											
Storage Service:											
1	Peak Storage(Short-term)		16,689,328		5,612	3,442	1,880	5,322	290		
2	Off Peak Storage/ Balancing /Loans		21,448,053		1,712	-	1,541	1,541	171		
Transportation Service:											
Demand:											
St.Clair & Dawn, Ojibway & Dawn											
3	Ojibway - 12 months	GJ/mo	21,016	\$2.791	704	423		423	281		
4	Bluewater - 5 months	GJ/mo	123,000	\$2.791	1,716	1,031		1,031	685		
Dawn to Dawn Vector											
5	- 12 months	GJ/mo	92,845	\$0.030	33	-	35	35	(1)		
Dawn to Dawn TCPL											
6	- 12 months	GJ/mo	500,000	\$0.140	840	-	282	282	558		
Firm Commodity											
Easterly											
Union Providing Fuel											
7	Dawn to Parkway (TCPL)	GJ	0		-	-		-	-		
Providing Own Fuel											
8	Dawn to Dawn TCPL	GJ	22,537,403		132	338		338	(206)		
9	Dawn to Dawn Vector	GJ	13,193,987		96	202		202	(106)		
10	Ojibway to Dawn	GJ	5,590,992		64	248		248	(184)		
11	Bluewater to Dawn	GJ	8,820,746		70	59		59	10		
12	Short-term Transportation	GJ	42,820,000		6,566	2,682	3,885	6,566	-		
13	Exchanges				5,000	-	4,500	4,500	500		
14	Other Transactional				824	-	824	824	-		
Gas Supply Margin											
15	St. Clair to Dawn	GJ/mo	158,258	\$2.791	5,300	3,185		3,185	2,115		
16	Ojibway to Dawn	GJ/mo	58,028	\$2.791	1,943	1,168		1,168	776		
17	Heritage & HTLP Pools Cross Charge				180	-	349	349	(170)		
18	Total Rate C1		<u>93,179,415</u>		<u>30,793</u>	<u>12,777</u>	<u>13,295</u>	<u>26,072</u>	<u>4,720</u>	1.181	
19	Total Ex-Franchise				<u>284,723</u>	<u>249,261</u>	<u>13,931</u>	<u>263,192</u>	<u>21,531</u>		

Notes:

- (1) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Appendix A.
- (2) 2019 cost allocation study filed at Appendix C1.
- (3) Working Papers, Schedule 6, p.1.

UNION RATE ZONES
2019 S&T Transactional Margin and Gas Supply Optimization Margin Adjustment
Cost Allocation Study Directive

Line No.	Particulars (\$ 000's)	Total Revenue (a)	Allocated Cost (1) (b)	Total Margin (c) = (a - b)	Shareholder Portion of Margin (2) (d)	Margin Adjustment (e) = (c - d)
Long-Term Transportation (3)						
1	Rate C1 - Dawn-Dawn Vector		-	35		35
2	Rate C1 - Dawn-Dawn TCPL		-	282		282
3	Rate M13 - Transmission Commodity		-	278	-	278
4	Rate M16 - Transmission Commodity Charge		-	357	-	357
5	Heritage Pool M16 Transmission Charge		-	147	-	147
6	HTLP Pool M16 Transmission Charge		-	203	-	203
7	Total Long-Term Transportation	-	-	1,301	-	1,301
Short-Term Transportation						
8	Short-term Transportation	6,566	2,682	3,885	-	3,885
9	Other Transactional	824	-	824	-	824
10	Total Short-Term Transportation	7,390	2,682	4,708	-	4,708
Short-Term Storage and Other Balancing Services Acct. 179-70						
11	Short Term Peak Storage Services	5,612	3,442	2,170	217	1,953
12	Non-utility System Integrity Costs (4)	(300)	(219)	(81)	(8)	(73)
13	Off Peak Storage/Balancing/Loans Services	1,712	-	1,712	171	1,541
14	Total Short-term Storage and Other Balancing Services	7,024	3,223	3,801	380	3,421
15	Total S&T Transactional Margin Included in 2019 Rates	14,414	5,904	9,811	380	9,431
Gas Supply Optimization Margin						
16	Base Exchanges	5,000	-	5,000	500	4,500
17	Total S&T Transactional Including Exchanges and Gas Supply Margin	19,414	5,904	14,811	880	13,931

Notes:

- (1) Working Papers, Appendix C, Schedule 5, pp. 15-17.
(2) Shareholder portion of margin for storage services and base exchanges calculated as column (c) x 10%.
(3) Working Papers, Appendix C, Schedule 6, p.2, including proposed cost allocation methodologies.
(4) Excludes the non-utility portion of system integrity costs.

UNION RATE ZONES
Derivation of Long-Term Transportation Margin Adjustment
Cost Allocation Study Directive

Line No.	Particulars		Margin Adjustment (\$000's)
<u>Dawn to Dawn-Vector - Monthly Firm Demand Rate</u>			
1	Dawn Compression Revenue Requirement (\$000's) (1)	1,843	
2	Maximum Day Demand (GJ)	806,551	
3	Monthly Demand per Unit (\$/GJ/d/month) ((line 1 * 1000) / (line 2 * 12))	0.190	
4	Adjusted Monthly Demand per Unit - 60 day service (\$/GJ/d/month) (line 3 * (60/365))	0.031	
5	Billing Units (GJ/d/month)	92,845	
6	Dawn to Dawn Vector S&T Transactional Revenue (\$000's) (line 4 * line 5 * 12 / 1000)		35
<u>Dawn to Dawn-TCPL - Monthly Firm Demand Rate</u>			
7	Dawn Compression Revenue Requirement (\$000's) (1)	1,843	
8	Maximum Day Demand (GJ)	806,551	
9	Monthly Demand per Unit (\$/GJ/d/month) ((line 1 * 1000) / (line 2 * 12))	0.190	
10	Adjusted Monthly Firm Demand Rate - 90 day service (\$/GJ/d/month) (line 8 * (90/365))	0.047	
11	Billing Units (GJ/d/month)	500,000	
12	Dawn to Dawn Vector S&T Transactional Revenue (\$000's) (line 4 * line 5 * 12 / 1000)		282
<u>Rate M13/M16 - Transmission Commodity Charge</u>			
13	Union South In-franchise Dawn-Parkway Revenue Requirement	59,278	
14	In-franchise Design Day Demand (GJ/day) (2)	2,247,086	
15	Cost per unit of Demand (\$/GJ) ((line 10*1000) / (line 11 * 12))	2.198	
16	Transmission Commodity Charge (\$/GJ) (line 15 * 12 / 365)	0.072	
17	M13 Billing Units (GJ/d)	3,851,861	
18	M13 S&T Transactional Margin		278
19	M16 Billing Units (GJ/d)	4,941,226	
20	M16 S&T Transactional Margin		357
<u>Heritage Pool Cross Charge</u>			
21	Transmission Commodity Charge (\$/GJ) (line 16)	0.072	
<u>UFG & Fuel to Dawn</u>			
22	Storage and Transportation Volumes Handled	42,287,076	
23	UFG Volumes	97,827	
24	UFG Fuel Rate (\$/GJ)	0.007	
<u>UFG & Fuel to Pool</u>			
25	Panhandle Market Volumes (Summer)	678,854	
26	Panhandle Fuel Volumes (Summer)	5,977	
27	Fuel Rate (\$/GJ)	0.032	
28	Billing Units (GJ/d)	1,314,482	
29	Heritage S&T Transactional Margin		147
<u>HTLP Cross Charge</u>			
30	Transmission Commodity Charge (\$/GJ) (line 16)	0.072	
31	UFG & Fuel to Dawn (\$/GJ) (line 24)	0.007	
32	UFG & Fuel to Pool (\$/GJ) (line 24)	0.007	
33	Billing Units (GJ/d)	2,360,623	
34	HTLP S&T Transactional Margin		203
35	Total S&T Transactional Margin		1,301

Notes:

- (1) Dawn transmission compression-related costs related to the Panhandle and St.Clair transmission system.
(2) 2019 cost allocation study filed at Appendix C1.

UNION RATE ZONES
Total 2019 S&T Margin by Rate Class including Rate Design
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Total Storage Related S&T Margin (1) (a)	Total Transmission Related S&T Margin (2) (b)	Total S&T Margin (c) = (a + b)	Total Gas Supply Optimization Margin (3) (d)	Total Margin Including Rates (e) = (c + d)
	Union North In-franchise					
1	Rate 01	(464)	(1,119)	(1,583)	(2,123)	(3,706)
2	Rate 10	(131)	(316)	(448)	(741)	(1,188)
3	Rate 20	(71)	(171)	(242)	(255)	(497)
4	Rate 100	(2)	(5)	(7)	-	(7)
5	Rate 25	-	-	-	(31)	(31)
6	Total Union North In-franchise	(669)	(1,612)	(2,281)	(3,150)	(5,431)
	Union South In-franchise					
7	Rate M1	(1,090)	(1,741)	(2,830)	(1,096)	(3,927)
8	Rate M2	(371)	(592)	(963)	(226)	(1,189)
9	Rate M4 (F)	(205)	(327)	(532)	(17)	(549)
10	Rate M4 (I)	-	-	-	(0)	(0)
11	Rate M5 (F)	(1)	(1)	(2)	(0)	(2)
12	Rate M5 (I)	-	-	-	(1)	(1)
13	Rate M7 (F)	(94)	(150)	(244)	(7)	(251)
14	Rate M7 (I)	-	-	-	(1)	(1)
15	Rate M9	(16)	(25)	(41)	-	(41)
16	Rate M10	(0)	(0)	(0)	(0)	(0)
17	Rate T1 (F)	(77)	(122)	(199)	-	(199)
18	Rate T2 (F)	(812)	(1,297)	(2,108)	-	(2,108)
19	Rate T3	(89)	(142)	(230)	-	(230)
20	Total Union South In-franchise	(2,752)	(4,398)	(7,150)	(1,350)	(8,500)
21	Total Union In-franchise	(3,421)	(6,010)	(9,431)	(4,500)	(13,931)
22	Rate M12	-	-	-	-	-
23	Rate C1 Bundled Storage	-	-	-	-	-
24	Rate C1 Firm Transport	-	-	-	-	-
25	Rate C1 Interruptible Transport	-	-	-	-	-
26	Rate M13	-	-	-	-	-
27	Rate M16	-	-	-	-	-
28	Total Ex-Franchise	-	-	-	-	-
29	Total (4)	(3,421)	(6,010)	(9,431)	(4,500)	(13,931)

Notes:

- (1) Working Papers, Schedule 6, p.4, column (f).
- (2) Working Papers, Schedule 6, p.5, column (e).
- (3) Working Papers, Schedule 6, p.7, column (e).
- (4) Working Papers, Schedule 6, p.1, column (e).

UNION RATE ZONES
Allocation of 2019 Storage-Related S&T Transactional Margin to In-Franchise Rate Classes
Cost Allocation Study Directive

Line No.	Particulars	2019 Allocators			Off Peak Storage (4) (\$000's)	S-T Peak Storage, Loans & Hub Balancing (4) (\$000's)	Total Storage Related S&T Margin (\$000's) (f) = (d+e)
		Storage Space (1)	Union North Allocator (2)	Union South Allocator (3)			
		(10 ³ m ³)	(10 ³ m ³)	(10 ³ m ³)			
		(a)	(b)	(c)			
	Union North In-franchise						
1	Rate 01	315,312	6,503	-	(209)	(255)	(464)
2	Rate 10	74,585	1,840	-	(59)	(72)	(131)
3	Rate 20	35,629	996	-	(32)	(39)	(71)
4	Rate 100	2,567	31	-	(1)	(1)	(2)
5	Rate 25	-	-	-	-	-	-
6	Total Union North In-franchise	428,094	9,370	-	(301)	(367)	(669)
	Union South In-franchise						
7	Rate M1	1,017,446	-	30,730	(491)	(599)	(1,090)
8	Rate M2	268,692	-	10,455	(167)	(204)	(371)
9	Rate M4 (F)	74,191	-	5,774	(92)	(113)	(205)
10	Rate M4 (I)	3	-	-	-	-	-
11	Rate M5 (F)	919	-	26	(0)	(0)	(1)
12	Rate M5 (I)	46	-	-	-	-	-
13	Rate M7 (F)	43,076	-	2,650	(42)	(52)	(94)
14	Rate M7 (I)	11,060	-	-	-	-	-
15	Rate M9	8,406	-	444	(7)	(9)	(16)
16	Rate M10	105	-	4	(0)	(0)	(0)
17	Rate T1 (F)	35,208	-	2,160	(34)	(42)	(77)
18	Rate T1 (I)	-	-	-	-	-	-
19	Rate T2 (F)	224,968	-	22,890	(366)	(446)	(812)
20	Rate T2 (I)	-	-	-	-	-	-
21	Rate T3	78,336	-	2,498	(40)	(49)	(89)
22	Total Union South In-franchise	1,762,457	-	77,631	(1,240)	(1,513)	(2,752)
23	Total In-franchise (5)	2,190,550	9,370	77,631	(1,541)	(1,880)	(3,421)

Notes:

- (1) 2019 cost allocation study filed at Appendix C1, STORAGEEXCESS allocation factor, excluding excess utility storage space.
- (2) 2019 cost allocation study filed at Appendix C1, XSPK&AVG allocation factor.
- (3) 2019 cost allocation study filed at Appendix C1, OTHERTRANS allocation factor.
- (4) Split of S&T Margin between Union North and Union South using column (a). Allocated to Union North rate classes using column (b) and Union South rate classes using column (c).
- (5) Total per Working Papers, Schedule 6, p.1, line 14.

UNION RATE ZONES
Allocation of 2019 Transportation-Related S&T Transactional and Gas Supply Margin to In-Franchise Rate Classes
Cost Allocation Study Directive

		2019 Allocators				
Line		Union North	Union South	Union North	Union South	Total Margin
No.	Rate Class	Allocator (1)	Allocator (2)	Margin (3)	Margin (4)	
		(10 ³ m ³ /day)	(10 ³ m ³ /day)	(\$000's)	(\$000's)	(\$000's)
		(a)	(b)	(c)	(d)	(e) = (c + d)
	Union North In-franchise					
1	Rate 01	6,503	-	(1,119)	-	(1,119)
2	Rate 10	1,840	-	(316)	-	(316)
3	Rate 20	996	-	(171)	-	(171)
4	Rate 100	31	-	(5)	-	(5)
5	Rate 25	-	-	-	-	-
6	Total Union North In-franchise	9,370	-	(1,612)	-	(1,612)
	Union South In-franchise					
7	Rate M1	-	30,730	-	(1,741)	(1,741)
8	Rate M2	-	10,455	-	(592)	(592)
9	Rate M4	-	5,774	-	(327)	(327)
10	Rate M5	-	26	-	(1)	(1)
11	Rate M7	-	2,650	-	(150)	(150)
12	Rate M9	-	444	-	(25)	(25)
13	Rate M10	-	4	-	(0)	(0)
14	Rate T1	-	2,160	-	(122)	(122)
15	Rate T2	-	22,890	-	(1,297)	(1,297)
16	Rate T3	-	2,498	-	(142)	(142)
17	Total Union South In-franchise	-	77,631	-	(4,398)	(4,398)
18	Total Long-term and Short-term Transportation Revenue (5)					(6,010)

Notes:

- (1) 2019 cost allocation study filed at Appendix C1, XSPK&AVG allocation factor.
- (2) 2019 cost allocation study filed at Appendix C1, OTHERTRANS allocation factor.
- (3) Total per Working Papers, Schedule 6, p.6, column (f). Allocated in proportion to column (a).
- (4) Total per Working Papers, Schedule 6, p.6, column (f). Allocated in proportion to column (b).
- (5) Working Papers, Schedule 6, p.1, line 7 + line 10.

UNION GAS LIMITED
Allocation of 2019 Long-term and Short-term Transportation-related S&T Margin to Union North and Union South
Cost Allocation Study Directive

Line No.	Particulars (\$000's)	Design Day Demand (10 ³ m ³ /d) (1) (a)	In-franchise Volume (10 ³ m ³ /d) (2) (b)	Available Capacity (10 ³ m ³ /d) (c) = (a - b) (c)	Distance (km) (d)	Available Capacity - Distance (10 ³ m ³ /d x km) (e) = (c x d) (e)	Allocated Proportion (%) (g)	Allocated Proportion (\$000's) (f)
	<u>Union North</u>							
1	Dawn-Parkway	10,170	2,326	7,843	228.94	1,795,677	27%	(1,612)
	<u>Union South</u>							
2	Dawn-Parkway	47,488	20,693	26,795	140.43	3,762,846	56%	(3,378)
3	Ojibway	16,973	7,396	9,577	118.58	1,135,630	17%	(1,020)
4	Total Union South	64,461	28,089	36,372		4,898,476	73%	(4,398)
5	Total Union North and Union South	74,630	30,415	44,215		6,694,153	100%	(6,010) (3)

Notes:

- (1) 2019 cost allocation study filed at Appendix C1, DP
- (2) Annual volumes on Dawn to Parkway for Union North and Union South are 829,031 10³m³ and 10,252,590 10³m³ respectively divided by 365.
- (3) Working Papers, Schedule 6, p.1, line 7 + line 10.

UNION RATE ZONES
Gas Supply Optimization Margin - Allocation of Rate Payer Portion and Calculation of Unit Rates
Cost Allocation Study Directive

Line No.	Rate Class	2019 Allocators		Union North Margin (3) (\$000's) (b)	Union South Margin (3) (\$000's) (d)	Total Margin (\$000's) (e) = (b + d)
		Union North Allocator (1) (\$000's) (a)	Union South Allocator (2) (10 ³ m ³) (c)			
	Union North West In-franchise					
1	Rate 01	20,955	-	(230)	-	(230)
2	Rate 10	5,725	-	(63)	-	(63)
3	Rate 20	1,657	-	(18)	-	(18) (4)
4	Rate 100	-	-	-	-	-
5	Rate 25	382	-	(4)	-	(4) (5)
6	Total Union North West In-franchise	28,719	-	(315)	-	(315)
	Union North East In-franchise					
7	Rate 01	10,513	-	(1,893)	-	(1,893)
8	Rate 10	3,764	-	(678)	-	(678)
9	Rate 20	1,315	-	(237)	-	(237) (4)
10	Rate 100	-	-	-	-	-
11	Rate 25	149	-	(27)	-	(27) (5)
12	Total Union North East In-franchise	15,740	-	(2,835)	-	(2,835)
13	Total Union North In-franchise	44,459	-	(3,150)	-	(3,150)
	Union South In-franchise					
14	Rate M1	-	2,831,556	-	(1,096)	(1,096)
15	Rate M2	-	584,873	-	(226)	(226)
16	Rate M4 - Firm	-	43,874	-	(17)	(17)
17	Rate M4 - Interruptible	-	32	-	(0)	(0)
18	Rate M5 - Firm	-	183	-	(0)	(0)
19	Rate M5 - Interruptible	-	3,749	-	(1)	(1)
20	Rate M7 - Firm	-	18,963	-	(7)	(7)
21	Rate M7 - Interruptible	-	3,604	-	(1)	(1)
22	Rate M10	-	277	-	(0)	(0)
23	Total Union South In-franchise	-	3,487,112	-	(1,350)	(1,350)
24	Total Exchanges Revenue					(4,500)

Notes:

- (1) 2019 cost allocation study filed at Appendix C1, Union North TRANSALLO allocation factor.
- (2) Union North and Union South margin allocated in proportion to upstream transportation assets for each zone respectively.
- (3) 2019 cost allocation study filed at Appendix C1, Union South Supply Volumes allocation factor.
- (4) Rate 20 gas supply optimization margin is refunded 60% in the Gas Supply Demand Charge and 40% in the Commodity Transportation 1 Charge.
- (5) Rate 25 gas supply optimization margin is refunded in the Gas Supply Transportation charge.

UNION RATE ZONES
Derivation Rate C1 Dawn to Dawn-TCPL Firm Transportation Monthly Demand Rate
Cost Allocation Study Directive

Line No.	Particulars	2020 Proposed (1) (a)	2019 Cost Study (2) (b)
<u>Dawn to Dawn-TCPL Monthly Firm Demand Rate</u>			
1	Dawn Compression Revenue Requirement (\$000's) (3)	1,198	1,843
2	Maximum Day Demand (GJ)	573,357	806,551
3	Monthly Demand per Unit (\$/GJ/d/month) ((line 1 * 1000) / (line 2 * 12))	0.174	0.190
4	Adjusted Monthly Demand per Unit (\$/GJ/d/month) (line 3 * (90/365))	0.043	0.047
5	Dawn Station Demand Revenue Requirement	548	- (4)
6	Maximum Day Demand (GJ)	500,000	500,000
7	Monthly Demand per Unit (\$/GJ/d/month) ((line 5 * 1000) / (line 6 * 12))	0.091	-
8	Monthly Firm Demand Rate - 90 day service (\$/GJ/d/month) (line 4 + line 7)	0.134	0.047
9	2014-2020 PCI Adjustments (\$/GJ/d/month) (5)	0.008	-
10	2020 Monthly Firm Demand Rate (\$/GJ/d/month) (line 8 + line 9)	0.142	0.049

Notes:

- (1) Dawn Compression and Dawn Station revenue requirement from 2013 approved cost allocation study (EB-2011-0210). Rate calculation consistent with EB-2011-0210, Rate Order, Working Papers, Schedule 37, updated per EB-2019-0194, Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 5, p. 25-26, line 11.
- (2) Updated rate calculation based on 2019 Cost Allocation Study.
- (3) Dawn transmission compression-related costs related to the Ojibway (Panhandle) and St.Clair transmission system.
- (4) Dawn Station demand revenue requirement updated to reflect the fully depreciated Dawn to Dawn-TCPL facilities.
- (5) Applied 2014 to 2020 PCI adjustments.