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October 4, 2022

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, B.C.
V6Z 2N3

Attention: Ms. Sara Hardgrave, Acting Commission Secretary

Dear Ms. Hardgrave:

Re: FortisBC Energy Inc. (FEI)

Transportation Service Report (Report) ~ Project No. 1599346

Response to the British Columbia Utilities Commission (BCUC) Information Request (IR) No. 1

On June 15, 2022, FEI filed the Report referenced above. In accordance with the amended regulatory timetable established in BCUC Order G-262-22 for the review of the Report, FEI respectfully submits the attached response to BCUC IR No. 1.

For convenience and efficiency, FEI has occasionally provided an internet address for referenced reports instead of attaching lengthy documents to its IR responses. FEI intends for the referenced documents to form part of its IR responses and the evidentiary record in this proceeding.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

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A. IMPACT OF THE NEW BALANCING RULES

1.0 Reference: TRANSPORTATION IMBALANCES

Exhibit B-1, Section 5.1, pp. 18, 20

Impact of the New Balancing Rules on Core Resources and Costs

On page 18 of FortisBC Energy Inc.'s (FEI) Transportation Service Report filing dated June 15, 2022 (Exhibit B-1, or Filing), FEI states: "for the three winters following the implementation of the New Rules, where exclusively daily balancing and a reduced tolerance of 10 percent was in effect, 97 percent of the time imbalances tightened to -20 TJ to +40 TJ."

1.1 Please confirm, or explain otherwise, that following the implementation of the new balancing rules approved by British Columbia Utilities Commission (BCUC) Decision and Order G-135-18 (New Rules), on average the over-supply volumes exceeded the under-supply volumes.

1.1.1 If confirmed, please explain why this is the case.

Response:

Confirmed. The fundamental obligation of shipper agents is to nominate and deliver sufficient supply to meet their customers' demand on a daily basis and, in meeting this obligation, shipper agents generally tend to over-supply to avoid penalty.

Prior to the implementation of the New Rules, the monthly balancing provisions combined with no tolerance or associated charges for under-deliveries allowed shipper agents with monthly

balanced customers to under-supply without penalty. As shown in Figure 5-1 of the Transportation Service Report, with the daily and monthly balancing provisions and charges in effect prior to November 1, 2018, the volume of under-deliveries was as high as 60 TJ. The move to exclusive daily balancing combined with increased balancing tolerance of 10 percent and associated charges, which applies to under-supply circumstances, creates the incentive for shipper agents to over-supply to avoid penalty. As there are no charges or tolerance for over-deliveries, shipper agents on average have tended to over-supply rather than under-supply.

As shown in Figures 5-1 and 5-2 in the Transportation Service Report, imbalances have tightened in both the Lower Mainland and Interior as a result of the New Rules. In terms of volumes of over-supply, for the three winters following the implementation of the New Rules, in the Lower Mainland, 97 percent of the time over-supply volumes decreased to 40 TJ, and nearly 65 percent of the time, imbalances fell within the 0 TJ to 20 TJ range. In the Interior, 81 percent of the time imbalances also improved and decreased to the 0 TJ to 10 TJ range. To put these volumes into perspective, these over-supplied volumes represent less than 5 percent of the total system throughput from core sales customers at both locations. As these volumes are relatively insignificant, FEI has found these over-supplied volumes reasonable to manage and FEI may have incurred less or no variable costs to manage balancing of such small volumes since the implementation of the New Rules. FEI will continue to work with shipper agents to ensure inventory levels are maintained at reasonable levels.

On page 20 of the Filing, FEI states, “the implementation of the New Rules has had a positive impact in decreasing under-supplied volumes since implementation.”

1.2 Please discuss the impact of the New Rules on over-supplied volumes since implementation.

Response:

Please refer to the response to BCUC IR1 1.1. As demonstrated by the decrease in over-supply volumes, FEI believes that the New Rules are operating as intended by incenting shipper agents to manage system imbalances more tightly.

1.3 Please discuss the impacts of over-supplied volumes on FEI and its core resources and on shipper agents.

Response:

The potential impact of over-supplied volumes from shipper agents to FEI and its core customers is that FEI may need to incur additional variable costs to balance the system.

FEI secures resources under the Annual Contracting Plan (ACP) on behalf of core customers which are paid for by core customers (Rate Schedules 1 to 7 and 46). FEI designs its ACP to have an appropriate amount of gas supply resources (commodity, storage, and transportation) to meet the forecast normal, design, and peak day demand requirements of its core customers. It would not be a prudent decision from a security of supply standpoint for FEI's gas supply portfolio to have any reliance on over-supplied volumes from shipper agents.

In order to fulfill FEI's responsibility for managing its Operational Balancing Agreements (OBAs) at each interconnect,[1] FEI uses various methods, depending on operational conditions at the time, to avoid incurring additional variable charges, such as increasing linepack, reducing deliveries for sales customers, or directly requesting that specific shipper agents who are over-supplying reduce their deliveries at a specific location. However, if shipper agents over-supply volumes on a given day, depending on operating conditions, FEI may have to use additional midstream resources to balance, which could result in additional variable costs, such as for moving gas to and from storage facilities and/or market transaction costs. The additional variable midstream costs are paid for by core customers through the Storage and Transport Charge, even though the costs are being caused by shipper agents seeking to avoid balancing charges. As a result, shipper agents are benefiting at the expense of FEI's core customers.

The impact of over-supplied volumes on shipper agents is that they have made a business decision to pay for and deliver to the interconnect more physical volume than necessary to meet their customer demand. Shipper agents may make a business decision that it is less costly for them to over supply the system rather than more closely managing their customer demand and supply balance to avoid incurring balancing charges. In cases of over-supplied volumes delivered by shipper agents to the interconnects to FEI's system, FEI tracks those excess volumes in the shipper agent's system inventory account, which can be accessed in the future to assist with balancing through the interruptible imbalance return service, when available. However, it is important for shipper agents to recognize that their inventory should not be relied on as a firm source of supply.

Also on page 20 of the Filing, FEI states:

[1] FEI holds an OBA with Westcoast at the following interconnects: Interior Division (806), Lower Mainland (806) and Kingsvale (3443) interconnect locations. FEI also holds an OBA at the interconnect with TC Energy FoothillsBC system at Cranbrook, East Kootenay, Galloway, Sparwood, Yahk, Elko and Fernie. And, FEI holds an OBA at the interconnect at SIPI with Williams Northwest Pipeline; however, shipper agents are not active at this location.

Since the implementation of the New Rules, midstream resources have not had to change for the purpose of providing balancing services to the Transportation model. Therefore, FEI has not had to incur any additional fixed (contracted) midstream resources for this purpose.

1.4 Please confirm, or explain otherwise, that there have been no changes in midstream resources being contracted since the New Rules were implemented.

Response:

There have been no changes in midstream resources being contracted since the implementation of the New Rules for the purposes of supporting or balancing the Transportation Service Model.

However, unrelated to the New Rules, as part of the normal course development of its ACP, FEI has adjusted its midstream resources as required on an annual basis in order to meet the needs of core customers in response to changing market conditions in each region.

1.4.1 Please discuss whether the implementation of the New Rules has resulted in any savings for FEI and/or its core customers. Please provide a quantitative estimate of any savings, if possible.

Response:

The implementation of the New Rules with tighter balancing tolerances and balancing charges has resulted in imbalance volumes from Transportation Service customers that are less volatile and at lower levels, which is more manageable for FEI. Therefore, all else equal, FEI is incurring less incremental midstream charges to balance the system from imbalances caused by shipper agents than it did before implementation of the New Rules. However, as FEI balances the system as a whole, it is not possible to provide a qualitative or quantitative estimate of potential savings from implementation of the New Rules. For instance, within the context of the daily system balancing process, no specific cost may actually be incurred or avoided due to a shipper agent adhering to or ignoring a daily imbalance threshold set by FEI. While FEI may not be able to quantify any savings due to the less volatile and lower levels of imbalance volumes, any midstream savings from implementation of the New Rules would be captured in the midstream costs and flowed back to core customers through the Storage and Transport charge.

In addition, the revenue from the balancing charges paid by shipper agents when they do not balance within the required tolerances offsets the midstream costs and serves to reduce the Storage and Transport charge to core customers (both for midstream resources contracted in the ACP and any incremental midstream costs that may be incurred). As shown in Table 5-5 in the Report, since the New Rules were implemented, FEI has recovered costs for balancing service within the 10 to 20 percent range in the amount of $128,611, which flow back to core customers through the Storage and Transport charge.

B. EFFECTIVENESS OF IMBALANCE RETURN

2.0 Reference: EFFECTIVENESS OF IMBALANCE RETURN
Exhibit B-1, Section 5.2, p. 24
Total Volume of Imbalance Return

On page 24 of the Filing, FEI states:

> FEI recognizes that having access to their allocated banked supply through the imbalance return service is a valuable tool for shipper agents to assist them in meeting their daily load and balancing requirements. FEI also recognizes that access to additional volumes of imbalance return would make daily balancing easier for shipper agents. However, because FEI manages the needs of the system as a whole, it requires the operational flexibility to restrict or interrupt the imbalance return service when conditions necessitate (typically during colder weather or supply restrictions/disruptions, i.e. the Enbridge Incident), FEI does not recommend increasing the volumes available under the interruptible imbalance return service. Additionally, FEI wants to avoid the potential for shipper agents to increasingly rely on this interruptible imbalance return service as a source of supply for balancing purposes.

2.1 Please discuss why FEI does not recommend increasing the volumes available under the interruptible imbalance return service given FEI can restrict or interrupt the allocation based on operational conditions.

Response:

FEI does not recommend increasing the volumes available under the interruptible imbalance return service for the following four reasons.

First, the currently allocated volumes[2] have allowed FEI to effectively manage and balance the system under various operating conditions for many years while meeting the obligations under the OBAs at the interconnects.

Second, increasing the allocated volumes could result in additional costs for FEI's core customers as FEI would need additional personnel and to secure additional midstream resources in order to manage balancing of the system given shipper agents would draft higher volumes. At certain times in the past, FEI has allowed greater volumes of imbalance return in order to reduce volumes to meet its obligations under the OBAs at the interconnects. The imbalance return volumes currently allocated allow FEI to manage balancing of the system and to effectively control system drafting by shipper agents. The imbalance return volumes available on a normal daily basis represents the upper limit for shipper agents to draft and access their banked supply which FEI can operationally manage using current personnel and resources.

[2] The current allocated volumes are an approximate percentage of the average daily winter transportation service load at each region, and are as follows: Lower Mainland -20 percent, Interior - 45 percent, Columbia - 40 percent.

Third, increasing the allocated volumes would act as a disincentive for shipper agents to actively manage their obligation to meet their Transportation Service customers' demand with adequate physical supply on a daily basis. The imbalance return service and any associated inventory a shipper agent accumulates for future use is a tool which can assist shipper agents in managing and balancing their customer demand and supply fluctuations on a given day; however, it is not intended to be relied upon as a firm source of supply.

Fourth, the allocated volumes of imbalance return for each region on average are rarely fully used by shipper agents on a daily basis. The fact that the allocated volumes are rarely fully used confirms an increase to the allocated volumes is not necessary. Please refer to the response to BCUC IR1 2.4, which provides further details regarding imbalance return and its usage.

2.2 Please further explain why FEI wants to avoid the potential for shipper agents to increasingly rely on the interruptible imbalance return service as a source of supply for balancing purposes.

Response:

As indicated in the response to BCUC IR1 2.1, imbalance return is meant as a tool to manage and balance customer daily demand fluctuations with appropriate supply, as well as assist with tolerance penalties (balancing charges); it is not meant to act as or represent a source of supply, because it is not firm and cannot be relied upon.

Shipper agents have the ability to draft from their inventory above their imbalance return allocation and may incur penalties to do so, but the fundamental intent of their role and responsibility as shipper agents is to nominate the physical gas supply required to meet the demand of their customers on a daily basis and meet the balancing requirements of their customers as outlined in the Transportation Service rate schedules.

If shipper agents develop nominating practices where they excessively pack on some days, and conversely excessively draft on subsequent days, this would indicate they are not making best efforts to match supply and demand on a daily basis contrary to their obligations in the tariff. Such behaviour may cause operational issues for FEI and may result in incremental midstream costs which core customers would have to pay for.

Also on page 24 of the Filing, FEI states:

Given that the total amounts of imbalance return allocated by region are rarely fully utilized or relied upon by shipper agents on a daily basis, the current volume of imbalance return allocated by region appears to be sufficient.

2.3 Please discuss whether FEI has considered reducing the total quantities of imbalance return available in any region.

2.3.1 If yes, please explain why FEI does not propose to reduce the imbalance return allocated in any region.

2.3.2 If not, please explain why not.

Response:

FEI has not considered reducing the total quantities of imbalance return available in any region under normal operating conditions.

Under normal operating conditions, the total quantities of imbalance return in each region represent an appropriate amount which FEI is able to manage as it balances the system as a whole.

Imbalance return is a method by which shipper agents can access their banked inventory that was left on the system on previous days and use it to offset shortfalls in supply to facilitate balancing. The volume of imbalance return also assists with preventing or reducing possible balancing charges. In order to meet their total demand obligations on a given day under normal operating conditions, shipper agents can use a combination of physical supply delivery and their allocation of imbalance return quantity to match supply and demand.

2.4 Please provide details of the average and peak imbalance return for each region by year since the New Rules were implemented.

Response:

The tables below provide the average and peak utilization of imbalance return for the past four winter periods since the New Rules were implemented. The analysis was based on the winter balancing activities as imbalances and system balancing during winter is more critical and summer imbalances were insignificant compared to the winter periods. As shown across all service areas, based on average daily usage, shipper agents typically under-utilize the volumes

of imbalance return authorized by FEI. In terms of peak utilization, the data shows that imbalance return volumes have not been fully utilized over the past four winters.[3]

Lower Mainland Daily Usage

(GJ/Day)	Authorized	Average	Peak
2018/19 Winter	40,000	7,716	34,123
2019/20 Winter	20,000	5,990	18,156
2020/21 Winter	20,000	5,473	18,346
2021/22 Winter	20,000	5,689	18,474

Interior Daily Usage

(GJ/Day)	Authorized	Average	Peak
2018/19 Winter	40,000	7,424	31,007
2019/20 Winter	40,000	7,393	42,579
2020/21 Winter	40,000	7,126	35,365
2021/22 Winter	40,000	7,469	29,969

Columbia Daily Usage

(GJ/Day)	Authorized	Average	Peak
2018/19 Winter	N/A	N/A	N/A
2019/20 Winter	9,500	1,658	7,898
2020/21 Winter	9,500	1,725	8,454
2021/22 Winter	9,500	1,371	8,298

East Kootenay Daily Usage

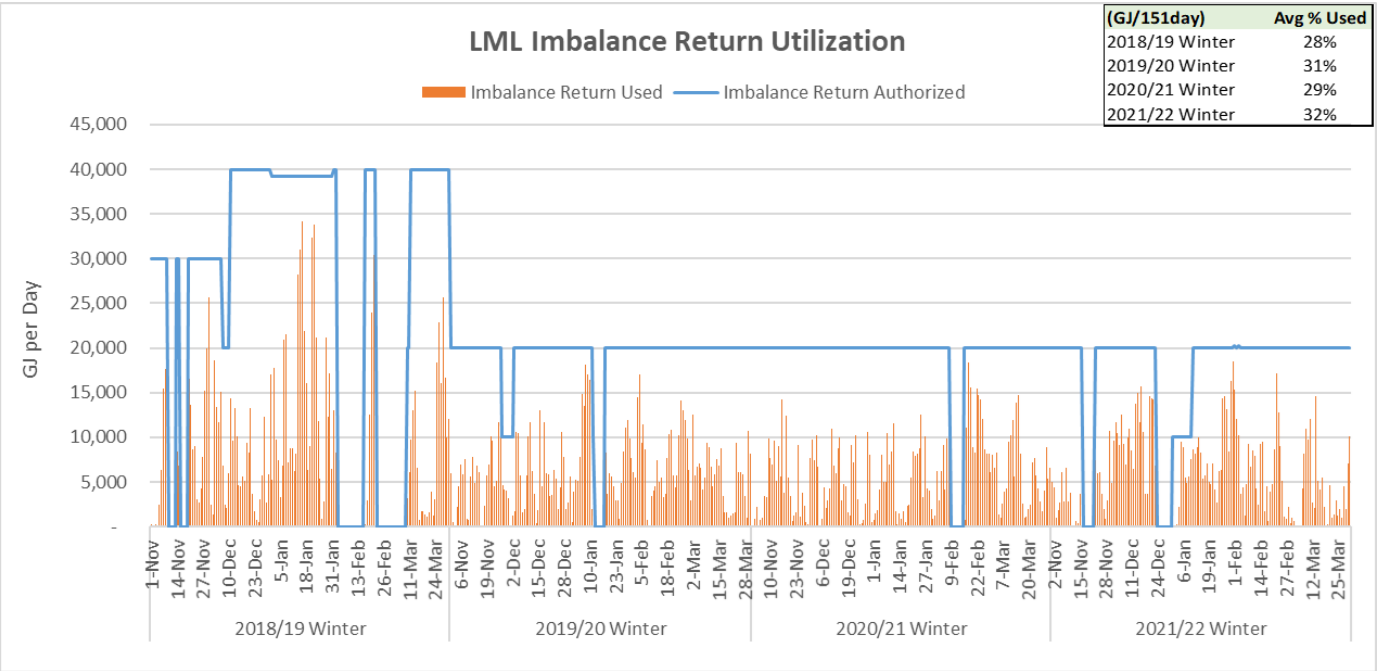
(GJ/Day)	Authorized	Average	Peak
2018/19 Winter	N/A	N/A	N/A
2019/20 Winter	500	101	337
2020/21 Winter	500	70	281
2021/22 Winter	500	70	250

The imbalance return utilization charts below plot the daily usage (orange columns) by all shipper agents by service area and the total imbalance return authorized (blue line) for the day. Based on the analysis, the average usage of the imbalance return was between 0 to 30 percent across all regions. This confirms that the volume of authorized imbalance return is under-utilized. However, the service provides a buffer to daily fluctuations between the demand and supply and assists shipper agents that would otherwise have incurred balancing charges within the 10 percent tolerance.

As the imbalance return utilization charts below show, there was no single day that shipper agents fully utilized or exceeded the authorized imbalance return in the past four winters. The fact that the average daily usage was well below the amounts allocated to shipper agents indicates FEI's authorized imbalance return volume is sufficient.

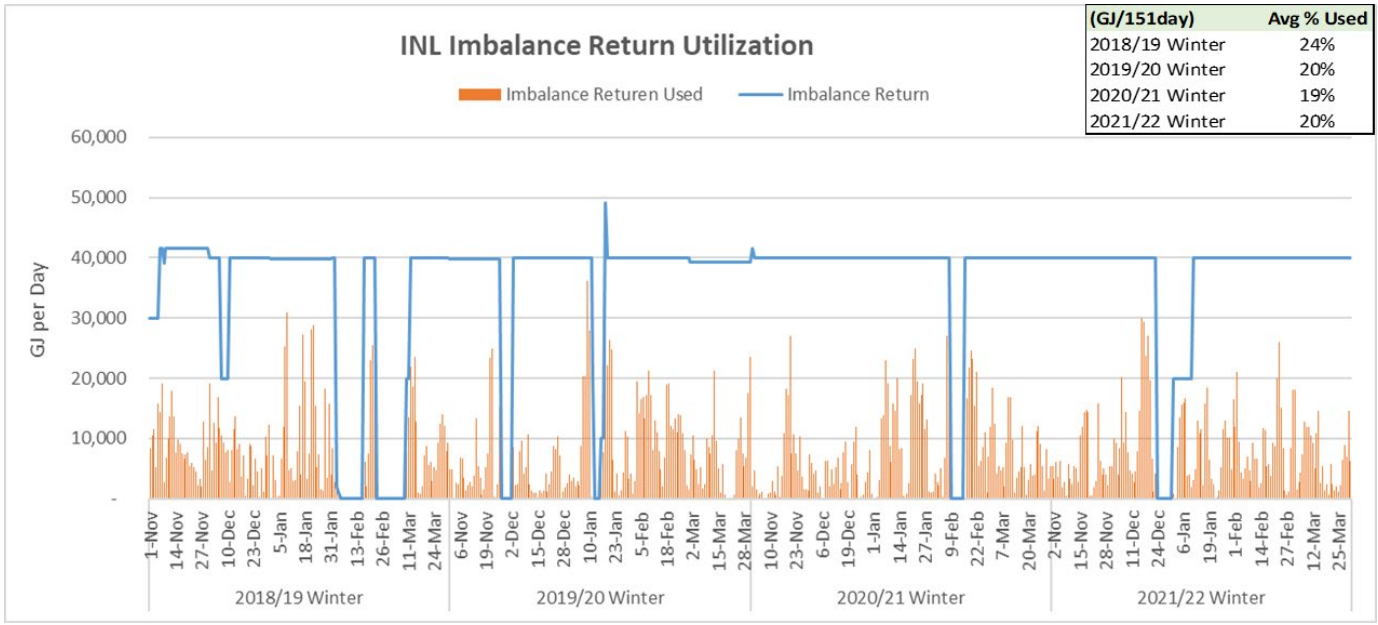
[3] Imbalance return was made available to the Columbia and East Kootenay regions beginning in November 2019 at the same time that daily balancing was implemented under the New Rules. For the 2019/20 winter, FEI increased the authorized imbalance return in the Interior for one day on January 18, 2020 to 50,000 GJ per day in order to manage the OBA. The highest usage of imbalance return for the Interior over the entire winter occurred on this day at 42,579 GJ per day, as shown in the table.

1

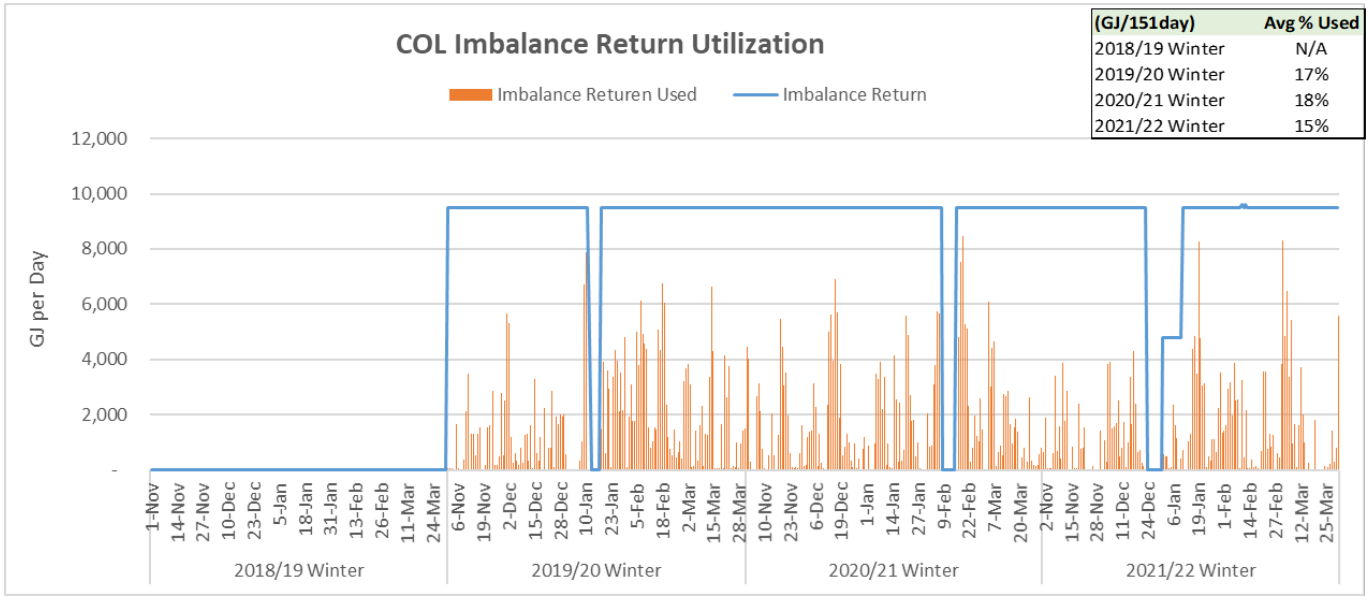


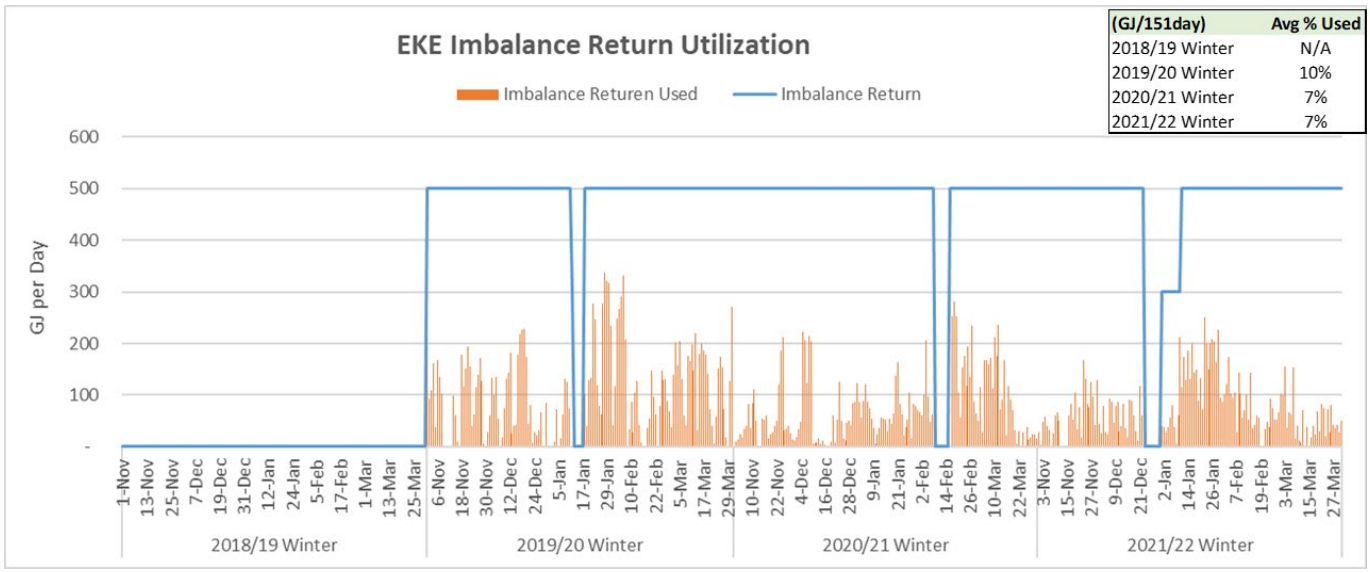
(GJ/151day)	Avg % Used
2018/19 Winter	28%
2019/20 Winter	31%
2020/21 Winter	29%
2021/22 Winter	32%

2



(GJ/151day)	Avg % Used
2018/19 Winter	24%
2019/20 Winter	20%
2020/21 Winter	19%
2021/22 Winter	20%





2.5 Please provide more details regarding how often, if at all, the volume of imbalance return available is fully utilized by shipper agents during the year, by region.

Response:

Based on the data provided in the response to BCUC IR1 2.4, the overall volume of imbalance return available has never been fully utilized by shipper agents for the winter periods across all service areas. Although individual shipper agents might have fully utilized the amount allocated to them on a particular day, the overall average used by all shipper agents is much less than the total amount that was available.

3.0 Reference: EFFECTIVENESS OF IMBALANCE RETURN

Exhibit B-1, Section 5.2, p. 25

Greater Imbalance Return Volumes to Specific Shipper Agents by Request

On page 25 of the Filing, FEI states:

> FEI believes allowing greater volumes of imbalance return to specific shipper agents by request would present challenges from a fairness and equitable perspective.

3.1 Please discuss options for addressing the fairness and equity challenges that would be posed by allowing greater volumes of imbalance return to specific shipper agents.

Response:

FEI considers that the allocation of imbalance as it exists today is fairly and equitably distributed based on demand and provides shipper agents proportionately equal flexibility to draft their account without incurring charges. As noted in the preamble, FEI believes allowing greater volumes of imbalance return to specific shipper agents by request would present challenges from a fairness and equitable perspective.

Charging a fee for the provision of greater volumes of imbalance return to specific shipper agents may limit the fairness and equity issues. However, a rate design process would need to be undertaken to establish an appropriate rate.

Another possible option which may address the fairness and equity issues could be if shipper agents negotiated and traded their allocated imbalance return volumes among themselves to arrive at agreements between shipper agents. This option, however, is not supported by the current nomination system. FEI has not evaluated the changes that would be required to WINS to implement such a process, and as such does not know the scope of the required development work, or the costs or timing of the changes required.

As discussed in the response to BCUC IR1 2.4, the average usage of imbalance return across all service areas is between 0 to 30 percent. This indicates that greater volumes of imbalance return are not needed for specific shipper agents or all shipper agents as a whole and, as such, changes to the imbalance return service are not required.

3.2 Please discuss whether charging a fee for the provision of greater volumes of imbalance return to specific shipper agents would limit fairness and equity concerns.

3.2.1 If yes, please discuss what an appropriate fee for providing greater imbalance return volumes to specific shipper agents by request may consist of.

Response:

Please refer to the response to BCUC IR1 3.1.

Also on page 25 of the Filing, FEI states that "developing the tools to manage such reallocations would require a substantial system change to the WINS [Web Information & Nomination System] system."

3.3 Please discuss the changes to the WINS system that would be required to manage reallocations of imbalance return volumes, including the timing of such changes and development and/or other costs associated.

Response:

Please refer to the response to BCUC IR1 3.1.

4.0 Reference: EFFECTIVENESS OF IMBALANCE RETURN

Exhibit B-1, Section 5.2, p. 25

Reallocation of Available Imbalance Return to Other Shipper Agents

On page 25 of the Filing, FEI states:

> Currently, if a shipper agent does not use their full imbalance return allocation, the unused volume is not reallocated to another shipper agent… A reallocation of available volumes under the imbalance return service could cause shipper agents to increasingly rely on this interruptible imbalance return service as a source of supply for balancing purposes, which is not a desired outcome.

4.1 Please discuss why under the New Rules, FEI decided that shipper agents would not be able to reallocate unused imbalance return to other shipper agents.

Response:

This question appears to be based on a misunderstanding. The New Rules had no impact on the imbalance return service and FEI did not decide that shipper agents would not be able to reallocate unused imbalance return under the New Rules. Prior to the implementation of the New Rules, shipper agents were also not able to allocate unused imbalance return volumes to other shipper agents.

As described in Section 5.2 of the Report, based on consensus by shipper agents in a stakeholder session in 2018, the allocation methodology was revised to be based on historical demand and was implemented in 2018. However, that did not change the nature of the imbalance return service.

4.2 Aside from increasing reliance on imbalance return service, please discuss the advantages and disadvantages to (i) FEI and its core customers, and (ii) shipper agents, of allowing reallocation of unused imbalance return volumes among shipper agents.

Response:

For FEI and its core customers, there are no advantages of allowing reallocation of unused imbalance return. There are, however, three primary disadvantages in allowing reallocation of unused imbalance return volumes among shipper agents.

First, in order to effectively manage a system of reallocation of unused imbalance return volumes after the fact among shipper agents, a daily reallocation routine or process would need to be developed and maintained. This would involve time, resources, and system changes to WINS to design a system that would fairly reallocate, create business rules and processes to ensure

fairness and to avoid unintended consequences or causing additional costs to be borne by core customers.

Second, allowing reallocation of unused imbalance return volumes among shipper agents more regularly would be a departure from industry standard practice. The gas day cycles and operational practices of other pipelines have final scheduled volumes which are typically not revised past the synchronization cycle. It is only on an exception basis that changes to final scheduled volumes are revised past the synchronization cycle.

Third, allowing a reallocation of unused imbalance return would, to a degree, act as a disincentive for shipper agents from performing their primary obligation of appropriately nominating and balancing for their customer group under the Transportation Service Model.

With respect to shipper agents, there are advantages and disadvantages of allowing reallocation of unused imbalance return volumes. In terms of advantages, allowing the reallocation of unused imbalance return volume would benefit shipper agents because it would help those who under-supply the total supply needed to meet their customer demand (total supply is physical supply delivered to the interconnect plus their portion of allocated imbalance return) and thereby potentially avoid or reduce balancing charges that would otherwise apply if they were outside the balancing tolerance. In terms of disadvantages, if a shipper agent required a measurement revision due to a faulty or under/over-reporting meter, if the reallocation resulted in a decrease to that shipper agent's imbalance return allocation, they may incur some or more balancing charges.

4.3 Please elaborate on why it is not a desired outcome to have shipper agents rely on imbalance return service as a source of supply for balancing purposes.

Response:

Please refer to the responses to BCUC IR1 2.1 and 2.2.

4.4 Please discuss the disadvantages, if any, of allowing shipper agents to transfer additional imbalance return or purchase additional imbalance return capacity if imbalance return is already an interruptible return service.

Response:

Please refer to the response to BCUC IR1 4.2 as the disadvantages of allowing shipper agents to transfer additional imbalance return or purchase additional imbalance return are the same. Additionally, if the notion of the ability to purchase additional imbalance return was to be

considered, a rate design process would need to be conducted to determine the appropriate rate for such a service and any other implications to the structure of the Transportation Service Model.

4.5 Please provide details of the additional costs that would be required to implement tools for managing reallocations of imbalance return to other shipper agents within the WINS system.

Response:

FEI is not currently in a position to provide details of the additional costs that would be required to implement tools for managing reallocations within the WINS system. In order to arrive at cost estimates and work involved, initial work must be done to identify the scope of the project, develop business rules and processes, and then determine the system requirements and changes that would be necessary to implement such a system.

4.6 Please discuss whether FEI has considered the possibility for shipper agents to pay for the additional costs to reallocate unused imbalance return volumes.

Response:

FEI has considered that the costs for changes to imbalance return or the costs for any of the other requests could be recovered through participating shipper agents. However, there has not been consensus from shipper agents to move forward with this change nor unified acceptance from shipper agents to pay the additional costs. During the stakeholder sessions, some shipper agents indicated they were unwilling to take on additional costs, as they were operating well under the New Rules with their existing business processes and operational practices.

5.0 Reference: EFFECTIVENESS OF IMBALANCE RETURN

Exhibit B-1, Section 5.2, p. 25

Minimum Allocation of Imbalance Return to Shipper Agent Groups with Smaller Demand

On page 25 of the Filing, FEI states:

> Shipper agents with smaller customer groups have expressed that the smaller allocation of imbalance return causes them to be at an increased risk of incurring balancing charges. After reviewing this request and based on the minimal system changes required to implement this request, FEI believes it is fair, reasonable and feasible to implement this change by allocating a baseline volume of imbalance return to groups under a minimum volume of average daily demand.

5.1 Please provide details on the cost for FEI to implement the proposed changes to minimum imbalance return and discuss the benefits to smaller volume shipper agents.

Response:

The amendment to the existing allocation routine to allocate a baseline volume of imbalance return of 100 GJ per day to groups whose demand that is less than 100 GJ per day is in progress and expected to be completed and implemented in the last quarter of 2022. The cost to complete this scope of work is $8,000. FEI views this as a minor enhancement to the Transportation Service Model and has already proceeded with the work on this amendment which is expected to be completed and implemented later this year.

While all shipper agents at various points in time may benefit from this amendment, at this time there are 7 shipper agents (of the 12 shipper agents participating in the Transportation Service Model) managing groups with smaller demand across the four service areas. The provision of a baseline volume will provide benefit to shipper agents managing groups with smaller demand by helping them with daily nominations and planning and will assist with accessing their supply imbalances/inventory to reduce their risk of incurring charges for managing within the 10 percent tolerance.

5.2 Please discuss the potential impacts of FEI's proposal to FEI's core customers and to imbalance return volumes available to other shipper agents.

Response:

As discussed in the response to BCUC IR1 2.4, on average imbalance return is under-utilized. As such, the minimum allocation to shipper agents with smaller demand will help those shipper

agents, while other shipper agents with higher demand will see a very slight reduction to the imbalance return volumes available which will have no material impact.

The minimum volume allocation change will have no impact to FEI's core customers.

5.3 Please discuss why the proposed treatment for smaller shipper agents is or is not unduly preferential.

Response:

FEI believes the proposed treatment is not unduly preferential as it establishes a minimum allocation of imbalance return service which will be beneficial to any shipper agent that from time to time may serve smaller customer groups. This minimum allocation will ensure that those shipper agents serving smaller groups have a reasonable opportunity to avail themselves of the imbalance return service. It can also be implemented with minimal cost, without detriment to other shipper agents, and without administrative burden.

First, the proposed treatment will establish a baseline or minimum allocation of imbalance return that will be available to shipper agents. Any shipper agent that from time to time may serve smaller groups will benefit from this minimum allocation.

Second, the minimum allocation of 100 GJ to be made available corresponds to the minimum amount of natural gas that can be traded at market hubs and is the metric used for volumes in the balancing service charges. As 100 GJ is the minimum volume that can be transacted on the ICE[4] natural gas trading platform, the balancing service charges in FEI's Tables of Charges in the Transportation Service tariffs use 100 GJ as the basis for calculating the 20 percent plus balancing range as well as the 10 to 20 percent balancing tolerance in the New Rules. Thus, balancing service charges are calculated on shipper quantities of gas supplied as the greater of 100 GJ or in excess of 10 or 20 percent of the authorized quantity. Given that balancing service charges are based on 100 GJ and shipper agents cannot procure natural gas at a lower volume increment, using the 100 GJ for a minimum allocation of imbalance return provides shipper agents serving smaller groups with a reasonable opportunity to avail themselves of the imbalance return service.

Third, as noted in the response to BCUC IR1 5.2, there is no material impact to shipper agents as a result of the minimum allocation of imbalance return to shipper agents representing smaller groups. The minimum allocation can be accommodated within the imbalance return structure with minimal cost and system changes, is not detrimental to other shipper agents, and is not administratively burdensome. As concluded by Atrium Economics on page 3 of its report (Appendix A), "it is not unreasonable for FEI to provide the described concession in its IR service for shipper/agents serving customer groups with small daily demands if it can be accommodated

[4] InterContinental Exchange Inc., operates global exchange systems for financial and commodity markets, and is the system used for natural gas and commodity trading at multiple hubs.

within the IR structure, is not detrimental to other Marketers, and is not administratively burdensome."

5.4 Please confirm, or explain otherwise, that BCUC acceptance of the proposed change to minimum imbalance return allocations is required.

5.4.1 If confirmed, please explain why FEI has not applied for BCUC acceptance of the proposed change to minimum imbalance return allocations.

Response:

BCUC approval or acceptance of the change to minimum imbalance return allocations is not required because there are no changes required to the Transportation Service Model tariffs. The imbalance return service is managed by business rules that support the Transportation Service Model and, as such, BCUC acceptance or approval of changes to the business rules is not required.

C. FURTHER INCREASE TO UNDER-SUPPLY TOLERANCE

6.0 Reference: FURTHER INCREASE TO UNDER-SUPPLY TOLERANCE
Exhibit B-1, Section 5.3, pp. 28–29
Tolerances for Under-Supply

On page 28 of the Filing, FEI states:

> For the purposes of the preparation of this Report, Atrium Economics has updated its industry research (filed in Appendix 10-1 to the 2016 RDA Application), which is discussed in Section 3 of the Atrium Economics Report confirming that industry thresholds continue to range from zero percent to 15 percent, with 5 percent remaining the most common threshold.

On page 29 of the Filing, FEI states, "When the 10 percent tolerance is in effect, there are no charges for under-supply imbalances up to the 10 percent threshold; therefore, customers do not pay for balancing within a 10 percent tolerance."

6.1 Please elaborate on why balancing costs are not passed to shipper agents for balancing under the 10 percent tolerance and why FEI prefers to continue this practice.

Response:

The practice of a threshold for balancing before charges are imposed has been part of the FEI Transportation Service Model since inception. In addition, a jurisdictional review of balancing provisions across North America was conducted for FEI's 2016 RDA and updated by Atrium Economics in the Report.[5] For the jurisdictional review, Atrium Economics conducted a benchmarking survey to examine the balancing provisions for LDCs across North America.[6] Atrium Economics found that it is industry practice for LDCs to impose a threshold or dead band before balancing charges are incurred and that 5 percent was the most common dead band.[7]

Generally, LDCs are held to balancing provisions dictated by the upstream pipeline; however, it is the LDC's discretion within the rules of their tariff to apply a threshold to the shipper agents on its system. With the implementation of the New Rules, FEI's balancing tolerance or dead band was reduced from 20 percent to 10 percent to more closely align with industry standard. FEI recognizes that shipper agents can never be perfectly balanced (i.e., supply equals demand) due to factors such as weather, customer volatility and capacity restrictions; therefore, FEI's dead band of 10 percent is in recognition that balancing is not exact. Based on the minimal level of balancing charges incurred by shipper agents outside of the 10 percent threshold (as shown in Table 5.4 and 5.5 of the Atrium Economics Report), one can conclude that shippers agents appear to be sufficiently incented to balance their customer demand more tightly than prior to the

[5] Atrium Economics Report, Appendix A.
[6] Section 3.1.2 of Atrium Economics Report (Appendix A).
[7] Ibid.

implementation of the New Rules. As a result, FEI believes the New Rules are operating as intended, with the incremental balancing charges compensating core customers for the use of midstream resources for system balancing when balancing tolerances are exceeded. Consequently, at this time, FEI does not believe additional balancing costs under the 10 percent tolerance are necessary.

6.2 Please discuss the advantages and disadvantages of reducing the 10 percent tolerance and reducing the balancing charge by a corresponding amount to be revenue neutral.

Response:

The balancing charges are not designed to be revenue neutral. Rather, they are designed at levels which would act as a deterrent if shipper agents were not performing within the required tolerances. As such, the balancing charges are designed to incent shipper agents to nominate and deliver appropriately to meet their customers' demand/supply balance within the specified ranges.

Any advantages or disadvantages of reducing the tolerance threshold would be experienced by the shipper agents themselves or core sales customers. For example, if the tolerance threshold was reduced from 10 percent to 5 percent, all shipper agents that previously had imbalance levels between 5 to 10 percent would experience balancing charges while those shipper agents that had imbalances above 10 percent would also incur balancing charges. Shipper agents would also have to change their business practices to manage under new tolerance levels.

Under this hypothetically revenue neutral scenario, balancing charges per GJ would likely be less; however, all else equal, more shipper agents and more supply volumes would likely attract balancing charges than they do today. FEI has observed a change in behaviour under the New Rules whereby shipper agents have tightened imbalances on FEI's system and incurred minimal charges in doing so. If the tolerance was reduced from 10 percent to 5 percent, FEI would expect the behaviour to change to operate under the tighter tolerance; however, what might actually occur if the balancing tolerance was reduced is unknown and hard to predict. Ultimately, if the balancing tolerance and balancing charges are not incenting the correct behaviour from shipper agents, core sales customers will pay the price through the need for incremental midstream resources to balance the system and potentially less revenue recovery from lower balancing charges to offset those incremental costs.

6.3 Please discuss the advantages and disadvantages of increasing the 10 percent tolerance and increasing the balancing charge by a corresponding amount to be revenue neutral.

Response:

Similar to the response to BCUC IR1 6.2, any advantages or disadvantages of increasing the tolerance threshold would be experienced by the shipper agents themselves or core sales customers. For example, if the tolerance threshold were increased from 10 percent to 20 percent, shipper agents that balance below 20 percent would experience no imbalance charges, and those shipper agents that had imbalance levels above 20 percent would experience higher imbalance charges under the hypothetical revenue neutral scenario. In this hypothetical scenario, there would be advantages to shipper agents, all else equal, as shipper agents would have an increased range (balancing tolerance) within which to operate before incurring balancing charges, although those balancing charges would be at higher levels per GJ. The disadvantages of this hypothetical scenario include the following:

- it is a movement away from an industry standard imbalance threshold;
- it creates a disincentive for shipper agents to balance their customers demand/supply below the 20 percent threshold, and
- it is likely to increase imbalance levels up to 20 percent, which may cause an increase in the costs for midstream resources needed (both contracted in the ACP and incremental) paid for by core customers (but caused by shipper agents) to facilitate FEI balancing the system with greater tolerance ranges.

7.0 Reference: FURTHER INCREASE TO UNDER-SUPPLY TOLERANCE

Exhibit B-1, Section 5.3, pp. 32–33

Implementing an Over-Supply Tolerance

On page 32 of the Filing, FEI states:

> Section 7.2 allows FEI to adjust the shipper agent's Requested Quantity, which means that FEI has the ability to change their nomination in WINS. If a shipper agent is deliberately packing the system, FEI can amend the nomination to limit the supply delivered to FEI's system in order to limit the build-up of inventory.
>
> Section 8.4 allows FEI the ability to remove the excess inventory from a shipper agent's account and return it to the shipper agent at a later date. This is a tool that FEI could use to manage shipper agents who are not cooperative in maintaining reasonable levels of inventory on FEI's system.

7.1 Please discuss whether FEI has used its abilities to adjust shipper agents' requested quantity or to remove excess inventory since the New Rules have been in place.

Response:

It has not been necessary for FEI to exercise the tools within the tariff as outlined in Sections 7.2 and 8.4 since the New Rules have been in place. FEI has and continues to work with shipper agents to encourage them to nominate appropriately and manage system imbalances within the requested 2 to 3 day range. Shipper agents have been managing and adjusting their operations as necessary, which is supported by the reasonableness of inventory levels on FEI's system since the New Rules were implemented.[8] Consequently FEI has not been required to change nominations or remove inventory, which FEI views as measures of last resort.

7.2 Please discuss whether the criteria for when FEI would adjust shipper agents requested quantity or remove excess inventory are clearly laid out in the tariff or elsewhere.

Response:

The existing language in the tariffs for Sections 7.2 and 8.4 is clear as it specifies that if in FEI's reasonable opinion and at its discretion, in consultation with the shipper agent, FEI may adjust the shipper agent's requested quantity or may limit gas quantities maintained in the shipper agent's inventory account. This language provides the necessary ability for FEI to exercise these

[8] Atrium Economics Report, Section 2.4, Figure 10.

options if the need arises, allowing FEI to enforce the obligation of shipper agents to provide accurate nominations and maintain and maintain requested inventory levels.

On pages 32 to 33 of the Filing, FEI states:

> While the tariff allows FEI to adjust a shipper's nomination and inventory (a paper rather than a physical transaction) and given that under-supply is not currently problematic, FEI does not believe that a tolerance for over-supply is necessary at this time. FEI will continue to monitor inventory levels should circumstances suggest that consideration of tolerances and associated charges for over-supply may be needed in future.

7.3 Please discuss whether over-supply of inventory by shipper agents results in use of midstream resources or potentially increased costs to FEI. If yes, please identify the costs.

Response:

Over-supply of inventory by shipper agents may result in the use of midstream resources and the potential for incremental midstream costs, such as transportation variable costs, storage variable costs and market transaction costs. Please refer to the response to BCUC IR1 1.4.1 for why FEI cannot quantify such costs.

7.4 Please discuss whether implementing an over-supply tolerance with balancing charges has the potential to limit over-supply in a more transparent manner than FEI using its powers to adjust requested quantities or excess inventories under sections 7.2 and 8.4 of the transportation rate schedules.

Response:

While the implementation of an over-supply tolerance and associated balancing charges may achieve a more clearly defined and transparent limitation of over-supply, the introduction of a rigid over-supply tolerance or mechanism would represent a fundamental change to the Transportation Service Model. The Transportation Service Model has worked well over time and has been largely unchanged since inception. The intent of the New Rules was to update the Transportation Service Model and existing business rules to more closely align with industry standard. The model has continued to work well under the New Rules and inventory levels have been maintained within reasonable levels based on FEI's requested 2 to 3 day levels. FEI had not been required to take

1 action under Sections 7.2 and 8.4, therefore, implementing an over-supply tolerance and
2 balancing charges is not necessary at this time.

3

D. BALANCING CHARGES – COST RECOVERY AND INCENTIVE

8.0 Reference: BALANCING CHARGES – COST RECOVERY AND INCENTIVE
Exhibit B-1, Section 5.5, pp. 33–38
Cost and Revenues Collected for Balancing Charges

On page 34 of the Filing, FEI submits the following Table 5-3 – Incremental Variable Costs for System Balancing:

Table 5-3: Incremental Variable Costs for System Balancing

	Sumas Price (CAD$/GJ)	NWP Commodity Charge	NWP Fuel	Storage Fuel	Incremental Variable Costs (CAD$/GJ)
2018/19	$15.05	$0.01	$0.42	$0.20	**$0.63**
2019/20	$3.25	$0.01	$0.07	$0.04	**$0.12**
2020/21	$4.11	$0.01	$0.07	$0.06	**$0.14**
2021/22	$5.76	$0.01	$0.10	$0.08	**$0.19**
Winter Average (CAD$/GJ)					**$0.27**

8.1 Please confirm, or explain otherwise, that FEI only incurs variable costs for system balancing when a net imbalance is caused by shipper agents; but when shipper agents imbalances offset FEI may collect balancing charges without incurring incremental costs in a corresponding amount.

Response:

Not confirmed. FEI may incur variable costs to balance the system as a whole, whether or not an imbalance is caused by shipper agents. When shipper agents over or under supply, they may cause FEI to incur increased variable costs to balance the system. If the individual imbalances of shipper agents exceed the balancing threshold they will incur balancing charges. It is possible that FEI may collect balancing charges from individual shipper agents without incurring incremental variable costs to balance the system. Please refer to the response to BCUC IR1 6.2 regarding how the balancing charges are designed to incent shipper to balance their supply, not to be cost neutral.

8.2 Please confirm, or explain otherwise, that variable costs for system balancing accrue to FEI for any net imbalance caused by shipper agents, while the balancing charge only applies to volumes underdelivered beyond the 10 percent tolerance range.

Response:

FEI may incur incremental variable costs due to system imbalances caused by shipper agents whether or not they are below the 10 percent tolerance threshold, although FEI may not incur any related variable costs due to such imbalances. As indicated in the response to BCUC IR1 1.3, FEI manages the OBAs at the interconnects with WEI and TC Energy. Along with useable linepack on FEI's system, the OBAs help to balances the system as a whole to accommodate for imbalances caused by either core customers or shipper agents. Thus, based on a variety of factors (such as size of imbalance, status of interconnected systems and FEI system, offsetting imbalances by core customers or another shipper agent), it is possible that FEI may not have to make any nomination changes to access resources to balance the system despite an individual shipper agent delivering more supply than needed on that particular day.

FEI confirms that the balancing charge introduced in the New Rules of $0.25 per GJ, supported by the calculations in Table 5-3, is only applied when a shipper agent's under-deliveries fall between the 10 to 20 percent range. The reduced tolerance to 10 percent and incremental charge was intended to incent better performance by shipper agents in balancing supply and demand for their customers. Any balancing charges paid by shipper agents for volumes underdelivered beyond the 10 percent tolerance range offset the variable costs if they occur.

8.3 Please provide a breakdown of total cost impacts, including fixed costs, of the New Rules to (i) FEI, and (ii) shipper agents.

Response:

The New Rules may have reduced FEI's incremental variable midstream costs resulting from daily system balancing; however, it is not possible to provide a hindsight comparison of cost impacts had the New Rules not been in place. The objective of the New Rules was to incent shipper agents to manage their customers demand/supply balance daily within a lower tolerance range, which has occurred. Please also refer to the response to BCUC IR1 1.4.

8.3.1 Please discuss how the relationship between FEI's balancing service costs and revenues collected from balancing charges has changed since the New Rules were implemented.

Response:

As further discussed in the response to BCUC IR1 1.4.1, some of FEI's incremental balancing costs are offset by the revenue collected from balancing charges, given that imbalances beyond

the allowed tolerances often result in incremental costs, such as for moving gas to and from storage facilities.

8.4 Please identify what FEI's incremental balancing costs are in the event of an oversupply from shipper agents.

Response:

Please refer to the responses to BCUC IR1 1.1, 1.4.1 and 8.1.

8.5 Please discuss if balancing costs increase as natural gas prices increase.

Response:

Balancing costs increase as the price of natural gas increases because the cost of fuel is a variable cost calculated as a percentage of the cost of the commodity.

The following calculations show the changes in fuel cost as the cost of the commodity increases, when moving volumes of gas from Station2 to Sumas/Huntingdon:

- Station2 Daily Price = $1.00 CAD/GJ
- T-South Fuel = 3.00%
- Fuel Cost = $1.00 CAD/GJ x 3.00% = $0.03 CAD/GJ
- Station2 Daily Price = $5.00 CAD/GJ
- T-South Fuel = 3.00%
- Fuel Cost = $5.00 CAD/GJ x 3.00% = $0.15 CAD/GJ

8.5.1 Please discuss whether linking balancing charges to FEI's natural gas cost would be an effective way to maintain an appropriate balancing charge.

Response:

FEI does not believe that linking balancing charges to FEI's natural gas cost would be an effective way to maintain an appropriate balancing charge.

Balancing charges are appropriately based on the Sumas daily price, given it is market based and the Sumas daily price is the most appropriate market in FEI's service area and the Pacific Northwest on which to base these charges. Given the Sumas market location at the southern terminus of the Westcoast T-South system and the northern terminus of the Northwest Pipeline system, it represents the full cost of delivering gas from the supply centres of Station 2 and/or AECO, including variable costs.

In contrast, FEI's natural gas cost is a result of and dependent upon FEI's contracting strategy through the ACP and does not necessarily represent a market-based rate. The Sumas daily price available in Platt's Gas Daily is an industry standard publication and is a better representative price point to calculate FEI's variable costs to balance the whole system. For example, in the winter, in most cases the physical assets that are used to balance the system are storage assets at Mist (located in Oregon) or Jackson Prairie (located in Washington) which use Sumas prices to determine the variable costs to flow to and from these facilities, which are both located on the Northwest Pipeline system.

On page 38 of the Filing, FEI states: "FEI will monitor midstream costs and periodically perform the cost-based calculation and, if necessary, bring forward a request for a revised charge in a future process."

8.6 Please provide more details of what cost-based calculation should be used to determine the appropriate balancing charge and under what circumstances a request for revisions to the balancing charge should be made.

Response:

FEI will continue to use the variable cost-based calculation as provided for on page 34 of the Report, Table 5-3. As discussed in the response to BCUC IR1 8.5, as natural gas prices increase, so do the variable costs related to balancing due to transportation and storage fuel costs, with fuel being a variable cost expressed as a percentage of the cost of commodity. FEI will continue to monitor commodity prices and perform the cost-based calculation and if, in future, Sumas prices deviate significantly from the price assumptions used to calculate the $0.25 per GJ charge for under-deliveries within the 10 to 20 percent balancing threshold, FEI will bring forward an application for approval of a revised balancing charge in future, if or when necessary.

E. ADEQUACY OF DATA

9.0 Reference: ADEQUACY OF DATA

Exhibit B-1, Section 5.6, pp. 38–40

Nature, Timing, and Adequacy of Information Provided to Shipper Agents to Manage Gas Supply Resources

On pages 38 to 39 of the Filing, FEI states:

> Some shipper agents in the individual conference calls felt that the data available to them from WINS and SCADA [Supervisory Control and Data Acquisition] was sufficient whereas others indicated the data caused challenges for their demand forecast. Those that expressed challenges made the following requests.
>
> 1. FEI to investigate better measurement technology available in the industry (Request 10, Table 4-2);
> 2. FEI to 1 provide an intra-day estimate in WINS (Request 11, Table 4-2);
> 3. FEI to improve data quality of the previous day estimate in WINS (Request 12, Table 4-2);
> 4. FEI to provide a daily delivery requirement during normal and/or HTA/supply restriction periods (Request 13, Table 4-2);
> 5. Include read time SCADA information prior to the intra-day cycles (Request 24, Table 4-2); and
> 6. Create marketer dashboards to provide collected data snapshots of marketer group information (Request 25, Table 4-2).

9.1 For each request 1–6 above, please discuss (i) whether FEI has the data requested readily available, and (ii) the cost and feasibility of implementing the request.

Response:

The following discussion addresses whether the data is readily available and the cost and feasibility of implementing the request based on the information FEI has at this time.

1. FEI to investigate better measurement technology available in the industry (Request 10, Table 4-2);

Data Availability:

Atrium Economics reviewed the customer usage data that is available to third party shipper agents or marketers in other LDCs[9] (i.e., intraday estimate, day after estimate/metered quantity or data

[9] Section 3 of the Atrium Economics Report (Transportation Service Report - Appendix A).

provided at month end, etc.), However they did not survey the measurement technology to deliver the measurement data itself. FEI is using industry standard equipment and therefore FEI does not view it as a measurement technology availability issue. Rather, it is more related to the frequency of data transmission, processing time of measurement systems, and the ability to make this information available. FEI currently has an application for a Certificate of Public Convenience and Necessity for advanced metering infrastructure (AMI) in progress with the BCUC. For large commercial and industrial customers, AMI could lead to more frequent polling from metering devices. However, the potential for more frequent availability of measurement data does not change the fact that marketers will need to continue to estimate their customers' future gas usage when procuring supply for their customers, as the natural gas market trades one day in advance and shipper agents need to make assumptions related to upcoming weather conditions and impacts to their customer's demand on the system. When the previous gas day finishes, shipper agents have or are currently trading and purchasing supply for the following gas day, which measurement technology is not able to address.

Cost/Feasibility:

As discussed above, FEI is using industry standard measurement devices and views the potential issue as more related to data transmission frequency, for which AMI, if approved, could potentially provide more frequent metering information.

2. FEI to 1 provide an intra-day estimate in WINS (Request 11, Table 4-2); and

3. FEI to improve data quality of the previous day estimate in WINS (Request 12, Table 4-2);

Data Availability:

FEI believes it has the ability to provide an intra-day estimate as well as improve the previous day estimate in WINS. FEI proposed these changes at the May 10, 2022 meeting; however, shipper agents did not provide feedback on FEI's proposal.

Cost/Feasibility:

FEI has not done in-depth analysis to evaluate the possibility of enabling both the intra-day and previous day estimate in WINS as no feedback from the shipper agents regarding these requests was received. FEI believes the change may be feasible but would require further analysis. Conceptually, lowest cost and least complex approach to implementing these requests would possibly involve amending the timing of the cellular devices calling into FEI and the processing of meter measurement data in downstream systems. The processing of the measurement data has generally occurred outside business hours, so prior to confirming whether this option is feasible, FEI would also need to confirm any potential impacts to processing of measurement data during business hours. This would have no impact on the fact that when the previous gas day finishes, shipper agents have or are trading and purchasing supply for the following gas day and, therefore, these requests, if implemented, may not be of significant value as shipper agents will still need to

estimate the daily consumption requirements of their customers - no measurement solution is able to change this.

4. FEI to provide a daily delivery requirement during normal and/or HTA/supply restriction periods (Request 13, Table 4-2);

Data Availability:

FEI has the daily historical demand data for Transportation Service customers, which is currently made available to shipper agents in WINS. However, requesting that FEI provide a delivery requirement is a fundamental change to the Transportation Service Model because currently, it is the responsibility of shipper agents to determine their delivery requirements to meet the needs of their own customer group. If FEI were required to provide a daily delivery requirement to shipper agents, that would, in effect, require FEI to treat Transportation Service customers as core customers and account for their supply requirements as firm load through the ACP. If that were the case, then a rate design process would need to be undertaken as that would represent a significant departure from responsibilities and obligations of shipper agents under the current Transportation Service Model and associated tariffs.

Cost/Feasibility:

FEI is unable to provide any discussion on feasibility or cost for this request, as a redesign of the Transportation Service Model would be required due to this fundamental change.

5. Include read time SCADA information prior to the intra-day cycles (Request 24, Table 4-2);

Data Availability:

Of the 12 shipper agents participating in the Transportation Service Model at the present time, 9 have access to FEI's Gas Control SCADA system, and thus the requested information is currently already available and provided in SCADA prior to the intra-day cycles. FEI's Gas Control SCADA system is connected to and monitors all large volume customers on FEI's system and provides real-time hourly flow information. If a large volume customer is a Transportation Service customer, FEI shares that customer's SCADA information with their shipper agent[10] which assists the shipper agent in managing the demand/supply balance for those large volume customers. This SCADA information is available and updated hourly throughout the entire gas day for all five cycles including Timely, Evening, Intra-day 1, Intra-day 2 and Intra-day 3.

[10] Of the 12 shipper agents actively participating in the Transportation Service Model, 9 shipper agents have access to SCADA represent 39 large volume customers and, therefore, have access to SCADA.

Cost/Feasibility:

The costs associated with connecting customers to FEI's SCADA system are significant and, therefore, it is not feasible, reasonable or economic to connect smaller volume customers to the system.

6. Create marketer dashboards to provide collected data snapshots of marketer group information (Request 25, Table 4-2).

Data Availability:

Regarding the development of dashboards or bulletin boards, no information was presented to FEI describing the requirements behind this request, what information would be presented, and the format it should be presented in. FEI has data available by shipper agent in WINS which could be made public through a dashboard/bulletin board format; however, initially, permission to display the data would be required from all shipper agents before proceeding with assessing the scope of work.

Cost/Feasibility:

FEI cannot comment on the cost or feasibility of implementing this request.

On page 40 of the Filing, FEI states:

> With respect to FEI providing a daily delivery requirement, this is not industry standard. Under the structure of the Transportation Service Model, it is the role and responsibility of shipper agents to forecast and manage their supply requirements on behalf of their customers…
>
> With respect to SCADA information… The nature of these requests would require time, information systems changes, and related costs to assess, develop and potentially build such dashboards or bulletin boards. FEI does not believe that an investment of time and resources in the potential creation of dashboards or bulletin boards is required because shipper agents are capable of exchanging information with each other if it is beneficial for them to do so.

9.2 Please discuss FEI's view on providing the requested information if shipper agents were to cover the costs incurred, either as a lump sum, a service fee, or another manner.

Response:

FEI continues to believe that providing a daily delivery requirement, dashboards or bulletin boards (additional tools) is not required, even if shipper agents were to cover all the related costs. In the

2016 RDA Decision, the Panel found that the industry has evolved sufficiently and the necessary tools are now available to shipper agents to facilitate the estimation of the daily consumption requirements of their customers. The fact that shipper agents are managing under the New Rules while incurring only minimal balancing service charges supports the conclusion that the data and tools available to shipper agents from WINS and SCADA are sufficient for them to manage the gas supply requirements of their customers.

Shipper agents who choose to operate under the Transportation Service Model are responsible for forecasting transportation customer load requirements in the same manner that FEI is responsible for forecasting load requirements for core customers. Therefore, FEI considers that requiring it to develop, implement and maintain additional tools to aid shipper agents in forecasting their customer load is contrary to the spirit and intent of the Transportation Service Model. However, if development and implementation of additional tools were deemed necessary, then FEI believes that all the costs associated with scoping requirements, preparing a business case and cost estimate for developing and implementing such additional tools should be paid for by shipper agents as a lump sum. The ongoing costs associated with maintenance of these additional tools could be structured as a service fee or annual fee.

9.2.1 Please discuss whether FEI and shipper agents have explored such an approach in stakeholder review sessions.

Response:

The discussion of costs and payment for dashboards and bulletin boards was discussed with the shipper agents who raised these requests in the individual conference calls. Those shipper agents indicated they would be in favor of having the costs for these additional tools be allocated across all rate classes including Transportation Service and core customers. As well, one shipper agent expressed that if costs were recovered only from Transportation Service customers, then those customers (through their shipper agents) need to have a high degree of input and control over the information system.

There was some discussion around cost for additional services and the question of who pays in the May 2021 group stakeholder session. Two shipper agents provided comments, including that if Transportation Service customers were paying for services, they would need to know the exact costs before making a decision because if the cost was a few pennies, there might be interest. Conversely, another shipper agent opposed to any costs being added to Transportation Service rates. Consequently, it may be difficult to reach consensus or agreement among shipper agents on the benefits and costs of investing in additional tools.

F. ADMINISTRATION OF INTER-CUSTOMER GROUP BALANCING

10.0 Reference: ADMINISTRATION OF INTER-CUSTOMER GROUP BALANCING

Exhibit B-1, Section 5.7, p. 41

Administration of Inter-Customer Group Balancing and Transparency of Inter-Customer Group Balancing Rules

On page 41 of the Filing, FEI states:

> FEI has allowed retroactive inter-customer group balancing among shipper agents in the past to assist in mitigating Unauthorized Over-Run (UOR) charges in the over 5 percent category. FEI has permitted the practice of inter-customer group balancing, on a case-by-case basis, provided that shipper agents as a whole met the overall customer supply requirements at the interconnection location where the trade was being requested. If the overall supply obligations were met, and there was no detrimental impact to other customers, FEI has provided the flexibility of moving gas supply retroactively to help mitigate balancing charges which one or more shipper agents would have incurred.
>
> …
>
> Automating the practice of inter-customer group balancing through a new formal process or bulletin board format would involve costs and system changes. FEI's position is that while inter-customer group balancing may be of benefit in certain circumstances, the formalization of FEI's business practice through automation or some form of bulletin board may distort the Transportation Service Model in such a way that it may dis-incent shipper agents from delivering the appropriate supply requirements to their customers. Consistent with its reply submission in the BCGMC Complaint, FEI continues to believe that it:
>
> a) would be of little benefit to the majority of Shipper Agents who do forecast accurately and do not incur significant balancing charges and potentially act as a disincentive for some Shipper Agents to nominate accurately; and
>
> b) may be detrimental to the interests of FEI's sales customers.

10.1 Please discuss what policies and checks are in-place to ensure that informal inter-customer group balancing opportunities are applied equally to all shipper agents in similar circumstances.

Response:

FEI only permits inter-customer group balancing between shipper agents during supply restriction/HTA periods provided certain conditions are met. Restriction periods do not occur often, and the number of trades in these circumstances that FEI typically facilitates are very few.

As shipper agents are unable to insert new nominations or amend existing nominations in hindsight for previous days, FEI over-sees and facilitates inter-customer group balancing to assist in mitigating UOR charges in the over 5 percent category. It is FEI's policy and process to check that shipper agents, as a group, have met the overall customer supply requirements at the interconnection location to ensure there is no detriment to core sales customers before enabling inter-customer group balancing. If shipper agents, as a group, have not met customer demand during the UOR period, then FEI will not allow any inter-group balancing changes for any shipper agents.

Provided overall supply requirements are met for shipper agents as a group, the opportunity to trade imbalances in hindsight is available to all shipper agents. The onus, however, is on the shipper agents who have incurred UOR in the over 5 percent category to reach out to other shipper agents and negotiate sales of trade volumes. Once the shipper agents have reached an agreement and provided an email confirming the volumes and dates of the trade sale, FEI takes steps to make the appropriate changes.

10.2 Please discuss whether the current informal inter-customer group balancing process dis-incents shipper agents from delivering the appropriate supply requirements to their customers and explain how this would differ for an automated or bulletin board system.

Response:

FEI does not believe the current informal inter-customer group balancing process acts as a disincentive to shipper agents from delivering appropriate supply requirements as there have been very few requests to amend nominations over the last few winters.[11] Depending on the circumstances during a given winter, FEI expects that approximately five to ten requests of this nature would be expected from shipper agents. This volume of requests requires very little time and no additional resources for FEI to facilitate.

As such, FEI believes that an automated system for so few transactions is not warranted and having one may create a greater dependency by shipper agents to rely on inter-group balancing as a method to avoid UOR charges than exists today. An automated system may act as a disincentive to shipper agents for meeting customer demand, which is critical to FEI's obligations to balance the entire system, particularly when under supply restriction/HTA periods. Further, as noted in the Report, the development of an automated system may be of little or no benefit to specific shipper agents who are able to forecast accurately and do not incur significant balancing charges. Given the few requests that FEI facilitates, the investment in time, resources, and costs

[11] Report, p. 42.

to develop an automated system and the related business rules and processes would likely be disproportional to the benefits.

10.3 Please discuss to what extent, if any, the current informal inter-customer group balancing process is detrimental to the interests of FEI's sales customers.

Response:

The informal inter-customer group balancing process is not detrimental to the interests of FEI's core sales customers because FEI only allows it when shipper agents as a whole have provided sufficient supply. Therefore, core customers are indifferent to this informal process as midstream resources held for and paid for by core customers would not need to be used to balance the system because there would be no deficit given shipper agents as a whole have provided sufficient supply for their Transportation Service customers.

10.3.1 Please explain how impacts to the interests of FEI's sales customers would differ with the implementation of an automated or bulletin board system.

Response:

As discussed in the response to BCUC IR1 10.2, FEI believes an automated system may create a greater dependency than exists today and may introduce a disincentive for shipper agents to meet their customer demand if they assume other shipper agents may make up a shortfall they have and they can trade in hindsight. As also noted in the response to BCUC IR1 10.2, this potential dependency / disincentive would be extremely problematic under supply restriction/HTA periods. If shipper agents rely on the ability to trade in hindsight to make up for shortfalls, which is effectively a "second chance", this may cause shipper agents to be less diligent in nominating accurately and may result in additional costs for core customers for firm or incremental ACP resources required to balance the system.

10.3.2 Please discuss any impacts to the interests of FEI's sales customers that would result for FEI ceasing to offer informal inter-customer group balancing.

Response:

There are no impacts to the interests of FEI's core sales customers from FEI offering this informal inter-customer group balancing. However, there may be a very small financial benefit to FEI's core customers if FEI ceased to offer this informal service. If FEI ceased to offer this service, then revenue from UOR charges would be higher, all else being equal, even if overall supply requirements were met by shipper agents as a whole. Thus, core sales customers would benefit from the higher UOR revenue reducing the overall midstream costs and thus resulting in a lower Storage and Transport charge even though FEI would not have had to incur additional costs to balance the system as a result of Transportation Service customers since overall supply requirements were met by shipper agents as a whole.

As discussed in the response to BCUC IR 10.1, the policies and checks that are in place ensure the interests of core sales customers are protected when FEI facilitates this service. For this reason, FEI does not allow this service when overall supply requirements by shipper agents are not met because the UOR charges would then offset incremental midstream costs that would be incurred for FEI to balance the system.

10.4 Please quantify the difference between balancing charges collected by FEI with informal inter-customer group balancing in place and those that would have been collected without inter-customer group balancing.

Response:

In December 2021, FEI issued a supply restriction for eight days from December 24 to 31 inclusive. During that period, prior to the facilitation of inter-customer group balancing, total UOR in the over 5 percent category was 6,188 GJ, which equates to $123,750 (6,188 GJ times $20 GJ equals $123,750). Following the changes approved by FEI for inter-customer group balancing, total UOR in the over 5 percent category was reduced to 2,052 GJ, which equates to $41,042 (2,052 GJ times $20 GJ equals $41,042). Therefore, the amount of UOR collected would have been $82,708 more without the inter-customer group balancing. However, it is important to note that given shipper agents as a group met their supply requirements (as FEI would otherwise not have authorized the inter-customer group balancing), no additional incremental balancing costs were incurred by FEI on behalf of core customers which the UOR revenue is intended to offset.

10.4.1 Please discuss the impacts that this difference has on FEI and its ratepayers and explain why FEI prefers to continue providing informal inter-customer group balancing.

Response:

As discussed in the response to BCUC IR1 10.4, the revenue recovered for core sales customers for UOR charges is reduced when inter-customer group balancing is allowed. However, from a cost-causation perspective, if shipper agents as a group have met their total overall supply obligations then no additional or incremental costs for balancing the system have occurred. FEI does not believe it is fair for shipper agents nor their customers to pay UOR charges if in total they have met their supply obligations, which is why FEI developed this process. Consequently, FEI believes it is fair and appropriate to continue providing the informal inter-customer group balancing to assist shipper agents in avoiding UOR charges when shipper agents, as a group, have met their overall supply obligations.

10.5 Please discuss whether FEI has explored, or would be willing to explore, automated inter-customer group balancing provided on the basis that shipper agents reimburse FEI for the costs incurred.

Response:

FEI has not explored an automated inter-customer group balancing mechanism for the reasons discussed in the responses to the BCUC IR1 10 series of questions. Regardless of how costs are recovered, FEI does not find the current process cumbersome or burdensome, and as such, any investment of time, resources and costs to explore automation of inter-customer group balancing would be unnecessary, irrespective of whether shipper agents were to reimburse FEI for the costs incurred.

11.0 Reference: ADMINISTRATION OF INTER-CUSTOMER GROUP BALANCING

Exhibit B-1, Section 5.7, p. 42

Proposed Super-Group Netting Exercise

On page 42 of the Filing, FEI states:

> If a super-netting provision was introduced, it may act as an incentive for some shipper agents to no longer nominate accurately. FEI would be concerned that super-netting could result in fairness and equity concerns among shipper agents and may result in additional risks and costs to sales customers. This type of request is a fundamental restructuring of the Transportation Service Model which would result in significant costs to redesign WINS the nomination system. FEI considers that this request would reduce or limit risk to the shipper agents at the expense of sales customers.

11.1 Please discuss whether any shipper agents have raised concerns regarding the fairness or equity of introducing a super-netting provision.

Response:

Shipper agents have not raised any concerns directly to FEI regarding fairness and equity issues of introducing a super-netting provision. This request was not discussed nor explored during the group stakeholder sessions because it was not ranked highly by all shipper agents.

11.2 Please discuss whether introducing a super-netting provision would increase risk and/or costs to FEI's sales customers and, if so, how.

Response:

FEI is opposed to introducing a super-netting provision because it would increase the risk of system imbalances, especially during critical supply restrictions/HTA situations, as shipper agents would be more likely to rely on over-supply from other shipper agents to offset their shortfalls and therefore not manage their demand/supply balances as closely. This would result in higher costs for FEI's core sales customers, as FEI would likely have to secure more firm midstream resources through the ACP as well as incur more incremental variable costs to manage larger system imbalances. While some shipper agents would benefit from a super-netting provision, as it would reduce their risk of incurring UOR charges, other shipper agents who effectively manage their demand/supply balances would not benefit.

Given FEI does not have a super-netting provision in place in the tariff, FEI is unable to speculate if balancing charges accrued under this provision more accurately reflect actual costs or otherwise.

A super-netting provision would be a fundamental restructuring of the Transportation Service Model because it would undermine the objective of the balancing provisions, especially during critical times, and is not an industry standard provision.

11.3 Please discuss the pros and cons of introducing a super-netting provision, including whether balancing charges under super-netting may be more accurately correlated to actual costs of balancing incurred by FEI under the New Rules.

Response:

Please refer to the response to BCUC IR1 11.2.

G. DAILY BALANCING CHARGES – INTERIOR

12.0 Reference: DAILY BALANCING CHARGES - INTERIOR

Exhibit B-1, Section 6.1, p. 46

Request 19: Amend RS 22A Daily Balancing Gas Charge to a Station 2 Price

On page 46 of the Filing, FEI states:

> The RS 22A is the transportation service rate for customers in the Interior service area. The daily balancing gas charge as listed in the Table of Charges within RS 22A is a Sumas Gas Daily price. As gas delivered to the Interior region is generally sourced from Station 2, shipper agents requested a change in the price as follows.

Amend RS 22A Daily Balancing Gas Charge to a Station 2 Price (Request 19, Table 4-2).

> …
>
> The rationale behind this price point is that Sumas is a more liquid market hub and is a more appropriate benchmark for the market price for natural gas. The price of gas at Station 2 is not reflective of the market and additional costs such as pipeline tolls on Enbridge's WEI T-South system that are required to move the gas to the end user, whether to the Inland or Lower Mainland regions.

In footnote 45 on page 46 of the Filing, FEI states:

> With the exception of RS 25 for the Fort Nelson Service Area where the balancing charges are based on the Station 2 Daily price. Currently there are no customers under this rate schedule.

12.1 Please discuss whether, in addition to the Fort Nelson service area, it would be appropriate for the balancing charges applied in other service areas in the interior to be based on the Station 2 daily price. Please explain why or why not.

Response:

With the exception of Fort Nelson, which is located on the northern most end of the Westcoast T-North system, FEI believes that Sumas is the most appropriate market benchmark for balancing charges for the Interior service areas.

Sumas is located on the Westcoast T-South system, as is the delivery point for the Interior. Therefore, the Sumas price is reflective of the cost of gas on the T-South system when FEI needs to balance the system as a whole.

Using a Station 2 price as the market benchmark for balancing charges does not take into account the cost to transport gas on the Westcoast T-South system and, therefore, it is not an appropriate market benchmark for the Interior.

12.2 In light of FEI's Application for Common Rates and 2022 Revenue Requirements for the Fort Nelson Service Area, please discuss whether FEI will implement any changes to balancing charges for the Fort Nelson service area. Please explain why or why not.

Response:

A decision on FEI's Application for Common Rates for Fort Nelson has not yet been issued by the BCUC. At this time, there are no customers taking Transportation Service under Fort Nelson Rate Schedule 25. If Common Rates is approved, then the separate tariff for the Fort Nelson Service Area would be closed and FEI's tariff, including its General Terms & Conditions and applicable Rate Schedules would apply to the Fort Nelson Service Area on a specified date determined by the BCUC in its decision. As such, any new customers in the Fort Nelson Service Area wishing to take Transportation Service would be subject to the same Rate Schedule 25 terms and conditions and the same Table of Charges as all other FEI customers in Rate Schedule 25, including the Daily Balancing Gas Charge set at the Sumas Gas Daily price.

H. HOLD TO AUTHORIZE AND SUPPLY RESTRICTIONS

13.0 Reference: DAILY BALANCING CHARGES - INTERIOR

Exhibit B-1, Section 6.3, pp. 50–51

Hold to Authorize Criteria and Over-Supplied Inventory

On pages 50 to 51 of the Filing, FEI states:

> For any restrictions regarding imbalance return, interruptible customer curtailment and supply restrictions/HTA are implemented only when necessary. Historically, as a courtesy, FEI has provided notice of changes to imbalance return availability or HTA restrictions in advance of the timely cycle in order for shipper agents to arrange for the appropriate amount of gas with these restrictions in place.

13.1 Please clarify whether market prices of natural gas are a factor in FEI's evaluation of whether implementation of restrictions to imbalance return, interruptible customer curtailment and supply restrictions or Hold to Authorize (HTA) are necessary.

Response:

Market prices of natural gas are not a factor in FEI's evaluation of whether implementation of restrictions to Imbalance Return, Interruptible Customer Curtailment or Hold to Authorize are necessary.

13.2 Please discuss whether FEI has criteria for determining under what conditions HTA is necessary.

13.2.1 If yes, please provide the criteria.

13.2.2 If not, please explain why not.

Response:

FEI considers a number of factors and criteria when determining whether HTA or other restrictions are necessary. The following includes the primary considerations; however, depending on the situation, other considerations may also be a factor:

- Actual and forecasted weather and temperatures in a given service area;
- Duration of forecasted weather and temperatures in a given service area;
- Location of upstream and/or downstream supply disruptions;
- Duration of upstream and/or downstream supply disruptions;

- Unplanned capacity constraints on upstream and/or downstream pipelines;
- Time of year;
- Health and operational conditions of upstream and/or downstream pipelines;
- Inventory levels of FEI's on-system and regional storage accounts, and
- Health, operational conditions and inventory levels of regional storage facilities.

13.3 Please discuss the pros and cons of communicating changes to imbalance return availability or HTA restrictions "as a courtesy" versus a more formal documented process.

Response:

FEI always communicates changes to imbalance return availability and HTA restrictions to the shipper agent community in a formal documented and consistent process via email and through the Transportation Service portal on FEI's website. There has never been a circumstance where FEI has invoked operational changes without informing all shipper agents in advance of the change.

When possible, FEI provides notice to the shipper agent community of changes to imbalance return availability or HTA restrictions prior to the timely cycle of the gas day that any restrictions would come in effect. This is to provide the shipper agent community with the opportunity to make the necessary plans to successfully meet their supply/demand obligations.

However, if required, and as a last resort, FEI can implement changes to imbalance return availability and HTA restrictions during intra-day gas cycles.

On page 51 of the Filing, FEI states:

> The issue of the return of shipper agent HTA gas inventory and any premium value of that inventory was canvassed in the BCGMC Complaint. However, there was no evidence to support this assertion. FEI acknowledges that shipper agents tend to over deliver during HTA periods to avoid UOR penalties; however, historically it has been only a few shipper agents responsible for excessive over-supply.
>
> …
>
> FEI believes that consideration of any mechanism and the associated costs for system changes to address managing over-supplied inventory during HTA is not

necessary. Further, such a mechanism may, in fact, be a disincentive for shipper agents to properly manage their supply and demand.

13.4 Please discuss whether shipper agent over-delivery during HTA periods generally benefits FEI and its ratepayers.

Response:

FEI does not believe that over-deliveries by shipper agents during HTA periods generally benefit FEI and its ratepayers because there is no certainty as to the daily volumes that shipper agent may or may not deliver to the interconnect locations and, therefore, FEI must manage core customer load with its own resources and cannot rely on shipper agent over-delivery volume availability.

FEI believes that shipper agents should manage their supply/demand obligations to the benefit of their own customers. Some shipper agents perform better and are more active than other shipper agents at managing their supply/demand balance on a daily basis. When HTA restrictions are imposed, the tighter tolerance and associated charges are put in place to deter the shipper agents from drafting the FEI system (i.e., shipper agents should deliver the volume of gas that matches their load). FEI contracts for firm resources under the ACP and does not rely on interruptible resources from shipper agents as a source of supply in order to meet core customer load.

FEI cannot say with certainty why some shipper agents are able to manage their supply/demand imbalance during HTA periods better than others nor can past performance by shipper agents be relied upon.

13.5 Please discuss whether implementing a mechanism to address over-supplied inventory would be expected to increase or decrease shipper agent over-deliveries during HTA periods.

Response:

FEI does not know whether or not the implementation of a mechanism to address over-supplied inventory during HTA periods would increase or decrease over-deliveries. There could potentially be a range of outcomes given the many variables which could factor into the design of such a mechanism. Further, FEI does not know what impact such a mechanism would have on how shipper agents would conduct their individual business and operating practices to best serve their own interests and those of their Transportation Service customers under various market conditions.

FEI notes that the cost of gas itself, which is often elevated during cold weather or HTA periods, provides shipper agents with a deterrent from over-delivering, given they would be incurring costs for purchasing excessive supply they do not need to meet their customer group demand.

Please also refer to the response to BCUC IR1 7.4 and 13.4.

13.6 Please discuss whether a mechanism to address over-delivery during HTA periods could be designed to be mutually beneficial to FEI and shipper agents.

Response:

FEI does not believe that a mechanism to address over-delivery during HTA periods is required. FEI already provides an option to move over-deliveries between shipper agents to help mitigate UOR, which FEI believes is mutually beneficial between shipper agents and neutral to FEI's core customers. FEI secures its own resources and supply to meet the needs of core customers during normal and HTA or peak periods and has no need for additional supplies from shipper agents during HTA periods.