bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

July 23, 2018

Letter L-19-18

Ms. Diane Roy
Vice President, Regulatory Affairs
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8
gas.regulatory.affairs@fortisbc.com

Re: FortisBC Energy Inc. - 2018/2019 Annual Contracting Plan for the period November 1, 2018 to October 31, 2019

Dear Ms. Roy:

On May 1, 2018, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC), on a confidential basis, its 2018/19 Annual Contracting Plan (ACP) for the gas year starting November 1, 2018 and ending October 31, 2019 (2018/19 ACP). The BCUC accepts the FEI 2018/19 ACP and items as set out on pages 10 to 12 of the ACP. The major portfolio recommendations included in the FEI 2018/2019 ACP are as follows:

1. Forecast Design Peak Day Demand: FEI recommends a peak day value for 2018/19 of 1,341 terajoules per day (TJ/d), an increase of 16 TJ/d from the amount accepted in the 2017/18 ACP for the period November 1, 2017 to October 31, 2018.
2. Annual Normal Demand: Annual normal demand for 2018/19 is projected at approximately 137 petajoules (PJ) resulting in an average daily normal load of 374 TJ/d. This represents a 35 TJ/day increase from the previous 2017/18 ACP load forecast and a 6 TJ/d increase from the load forecast for the 2018 Annual Review.
3. Commodity Portfolio: Station 2 baseload supply increases by 26 TJ/d and AECO/NIT baseload supply increases by 9 TJ/d.
4. Commodity Portfolio: Commodity Providers' fuel requirements for gas delivery on November 1, 2018 will be evaluated and communicated before October 2018. For the period November 1, 2017 to October 31, 2018 the fuel percentages are 5.3% at Station 2 and 1.1% at AECO/NIT.
5. Commodity Portfolio: FEI recommends continuing with a balanced mix of daily and monthly priced supply to provide operating flexibility and to mitigate adverse price movements.
6. Commodity Portfolio: FEI recommends consideration of longer term supply contracts with BC gas producers, up to ten years in length based off different pricing structures, in the interest of pricing diversity and supply security at the Station 2 market hub.
7. Commodity Portfolio: FEI recommends consideration of potential longer term supply commitments (10 or more years) with potentially different arrangements with gas producers in the region, in the interest of portfolio diversity, and security of supply at the Station 2 market hub.
8. Commodity and Midstream Portfolio: FEI recommends term purchases at Station 2 out to the 2021/22 gas year in the interest of pricing diversity and supply security at Station 2.

9. Midstream Portfolio: Maintain existing physical resources for the 2018/19 gas year, which includes storage, and transportation capacity on Westcoast's T-South and T-North, TransCanada's NGTL and FoothillsBC system, and Northwest Pipeline's system.
10. Midstream Portfolio: FEI recommends continuing to hold more T-South Huntingdon Delivery pipeline capacity than Core customers require for the 2018/19 gas year, and release a portion of this capacity to customers currently under the Transportation service model for the 2018/19 gas year.

The BCUC requests FEI to file its 2019/20 ACP by May 1, 2019. In addition, the BCUC requests FEI to include the following information in the 2019/20 ACP:

- An update to the Northeastern BC market study with the scope and detail of the update to be determined by FEI.
- An update on the efforts to establish key relationships with producers who plan to develop supply in the Horn River, Montney and other producing regions of British Columbia over the long term.
- A review and analysis of the operational experience with Mt. Hayes and Tilbury liquefied natural gas (LNG) peaking resources for the 2018/19 contract year, including an analysis of the potential impact of LNG service under Rate Schedule 46 service on the availability of these peaking resources for the core natural gas customers for 2019/20 and future years.
- A load forecast for Rate Schedule 46 customers, the supply arrangements for meeting these customer's load requirements and FEI's plan for integrating this demand into the overall supply portfolio.
- A review of the storage and transport requirements and alternatives for 2019/20 and future contract years, including an analysis to optimize the amounts of transportation and storage to be contracted in future years taking into account the regional infrastructure and market developments currently in place and anticipated to be in place in the future.
- An assessment of FEI's contracted T-South capacity in the short-term and long-term time horizons. The assessment should include an analysis of the optimal T-South portfolio giving regard to market conditions at the time of filing, updated demand forecasts, and comparisons against alternative resource options.
- For any contracted T-South capacity in excess of demand forecast requirements, a detailed analysis of the mitigation options and FEI's recommended strategy.

FEI is requested to file, for information purposes, a report summarizing the process and the outcome of its plans to release a portion of its T-South pipeline capacity to transportation service customers for the 2018/19 gas year within 30 days of completing the release.

Pursuant to section 71 of the Utilities Commission Act (UCA) and in accordance with the BCUC Rules for Natural Gas Energy Supply Contracts, FEI is requested to submit applications for all energy supply and storage contracts along with any information it considers necessary for the BCUC to determine whether the contract is in the public interest. The BCUC expects that where an application is concerning a longer term supply commitment (10 or more years), FEI will thoroughly address the associated benefits and risks. Each application will be reviewed based on the considerations outlined in section 71(2.1) of the UCA and the prevailing market conditions at that time.

Exclusive of the non-confidential Executive Summary, the BCUC will hold the 2018/19 ACP confidential as it contains commercially sensitive information. A copy of FEI's non-confidential Executive Summary of the FEI 2018/19 ACP is attached and is available for public review.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

AK/dg
Enclosure

EXECUTIVE SUMMARY

1 INTRODUCTION

The Annual Contracting Plan (ACP) is a gas supply planning document filed with the British Columbia Utilities Commission (the Commission) in the spring of each year. The ACP sets out the forecast requirements for all of FortisBC Energy Inc. (FEI) natural gas service areas[1] and the proposed contracting of resources that are planned to meet these requirements for the upcoming gas contract year. The ACP also includes a review of regional marketplace developments that provides context for the overall portfolio strategy. This review is essential because it helps to plan the ACP beyond just the immediate gas year to look out over a three to five year time frame. Longer-term planning is important because the resources available for inclusion in the ACP are limited and may require long lead times to adjust into the portfolio, and are subject to changing market dynamics.

This ACP includes content that is consistent with previous years' filings, including topics of special interest as directed by the Commission in the acceptance letter of the 2017/18 ACP.[2] This ACP applies to the next gas year that commences on November 1, 2018 and ends on October 31, 2019.

1.1 Objectives of the FEI 2018/19 ACP

The objectives for the 2018/19 ACP remain consistent with past recent Annual Contracting Plans that were accepted by the Commission and are as follows:

1. To contract for resources that ensure a balance of security, diversity and reliability of gas supply in order to meet the core customer design peak day and annual requirements, while minimizing the overall cost of the portfolio.

2. To develop a mix of resources in the portfolio that provides flexibility in the contracting of resources based on short term and long term planning considerations, and evolving market dynamics.

2 THE 2018/19 ACP

This section provides an overview of significant topics that are discussed in detail in the 2018/19 ACP, including the forecast design peak day and annual normal loads, changes in contracting for resources from the previous year, operational, and long term planning considerations. The portfolio of resources included in the ACP is grouped into two components. The first is the baseload supply that is required for the full gas year, and which is included in the Commodity portfolio. The second component includes seasonal supply, storage, and LNG that is required during the winter period and transportation capacity that is required year-round, and is included in the Midstream portfolio. FEI gas supply manages these two components on an integrated

[1] Service areas include Mainland, Fort Nelson, Whistler, and Vancouver Island.
[2] Commission Letter L-15-17 dated June 28, 2017.

basis, however for the purpose of this ACP the two are identified separately as FEI Commodity and FEI Midstream.

Forecast Design Peak Day Demand for 2018/19

- Forecast of 1,341 terajoules per day (TJ/day)[3] for 2018/19, which represents a 16 TJ/day increase from 2017/18.

Forecast Annual Normal Demand for 2018/19

- Forecast of 137 petajoule (PJ)[4] for 2018/19, resulting in an average daily normal load of 374 TJ/day. This represents a 35 TJ/day increase from the previous 2017/18 ACP load forecast, and a 6 TJ/day increase from the load forecast for the 2018 Annual Review.

Forecast Annual Normal Demand for Rate Schedule 46 for 2018/19

- Forecast of 3.4 PJ of Rate Schedule 46 (RS 46) customer demand and a forecast of 2 PJ for RS 46 operational demand.[5]

Biomethane Supply and Demand Customer Forecast

- While the Province of British Columbia's issuance of an Order in Council No. 161 (OIC 161) impacts the Biomethane Program, it is still in the early stages and will not have a significant impact on the 2018/19 ACP.
- FEI will continue to develop and monitor a long term plan with respect to biomethane supply and its impact on future ACPs.

Gas Procurement and Pricing Strategy

- FEI recommends continuing with a balanced mix of daily and monthly priced commodity supply in the portfolio to provide operation flexibility and to help mitigate adverse price movements.
- FEI will continue to pursue contracting term purchases based on securing the basis when favorable between Station 2 and AECO/NIT monthly index beyond the current gas year of 2018/19 (up to 3 years out).
- FEI will continue to assess possibilities of pursuing long term supply contracts, up to ten years in length, with BC gas producers and other counterparties based off different pricing structures at Station 2. This will continue to support supply security at the Station 2 market hub.
- FEI is exploring other long term arrangements (10 years or more) with gas producers in the region which may include cost-based gas supply arrangements based on a fixed pricing structure.

[3] One TJ is equivalent to 1,000 gigajoules (GJ).
[4] 1 PJ is the equivalent to 1,000 TJ.
[5] Operational demand refers to the Tilbury 1A required liquefaction rate of 30-35 TJ/d.

Commodity Portfolio

- Baseload supply receipt point allocation to remain at the same levels as last year which is 75% at Station 2 and 25% at AECO/NIT.

Midstream Portfolio

- FEI will continue to retain the current level of storage capacity and hold more T-South Huntingdon Delivery capacity than the Core customers require within the 2018/19 ACP, until some of the market uncertainties are better known and have time to play out. The market conditions are discussed in greater detail in Section 2.2 of this Executive Summary.
- Allocate excess T-South Huntingdon Delivery capacity to Marketers on behalf of the transportation service customers after September 1, 2018.[6] FEI needs to determine if current transportation service customers returned back to the bundled service (effective November 1, 2018), and also will have an updated liquefaction schedule for Tilbury 1A. Both these factors will determine how much T-South Huntingdon Delivery capacity FEI can allocate to the Marketers on behalf of transportation service customers. FEI will continue providing the Commission a report summarizing the process and outcomes after the capacity release.

2.1 Resource Contracting in the 2018/19 ACP

FEI must be prepared to meet a peak day as well as winter design and normal load forecasts for the year commencing November 1, 2018 and ending October 31, 2019. Moreover, FEI contracts for diverse and flexible resources in order to manage load swings during spells of colder or warmer than normal weather and to mitigate interruptions in delivery capacity related to both transportation and storage in the winter months. FEI strives to procure and deliver natural gas in the most reliable manner possible. This responsibility includes the need to identify, monitor, and mitigate potential operational and market-related risks. In addition, the minimization of costs related to the annual portfolio, while ensuring the delivery of gas each day, is an important key objective. Balancing the need for cost minimization while meeting reliability, diversity, and flexibility objectives will not necessarily always result in the selection of the least cost alternative for inclusion in the portfolio.

The recommended portfolio is based on a balance of resources that meets the objectives of the ACP. In planning the recommended portfolio, FEI takes into account market information available at that time. However, it must be recognised that due to the many factors influencing natural gas supply and demand, the market for natural gas is always changing. Not only are there absolute price changes, but also changes in market factors (premiums or discounts) for securing physical supply. These changes are driven by the relationship between pricing points and the availability of resources that impact the different market hubs where FEI secures gas supply.

[6] 'Transportation service customers' are RS 22, 23, 25 and 27.

The contracting strategy for FEI's Commodity and Midstream portfolios includes a combination of monthly and daily priced supply for price diversification, in addition to contracting at multiple storage facilities and associated transportation resources. Daily priced supply can be resold in the market at the same price as it is bought, therefore removing any price exposure of surplus resources when compared to monthly priced supply. This strategy helps FEI to remain cost neutral when reselling gas on the day. Monthly priced supply helps reduce exposure to market price volatility during the winter months.

FEI takes a longer term outlook when contracting for some resources, like transportation and storage assets, and may be restricted to some degree in changing these resources in the portfolio in a particular year. However, customers realize any benefit associated with these resources because they provide security of supply and increased portfolio diversity. Gas from various storage facilities in the winter provides the portfolio with diversity and intraday flexibility, as well as lower cost summer-priced supply.

2.2 Regional Dynamics Impacting Portfolio Development for Future ACPs

FEI continues to evaluate its portfolio beyond just the immediate gas year, to look out over a five year time frame. This approach is appropriate as regional dynamics can change the value and availability of existing resources, as well as create opportunities for FEI to optimize the portfolio in the interests of meeting the objectives of the ACP. This is also important given certain market conditions in the region may unfold that could impact future resources available to FEI. At a high level, the six market factors that FEI continues to monitor include:

1. Large-scale industrial projects that would not rely on their own pipeline connections to gas supply resources potentially in-service no earlier than 2020 have already secured firm transportation capacity on existing regional pipelines for a portion, if not all, of their supply requirements. Once these projects come online, the regional flow dynamics and price for all customers may be impacted.
2. Increasing demand forecasted within FEI's natural gas service areas[7] and within regional local distributions utilities in the Pacific Northwest (PNW).[8]
3. Potential for transportation service customers to return to the bundled service because of the lower cost associated to FEI's rate.
4. Risk of FEI's shorter duration market storage assets, specifically Mist, being recalled by approximately 2023/24.
5. The next major pipeline expansion in the region could face lengthy delays, given a greater amount of uncertainties now tied to large-scale pipeline expansions (i.e. new customers underwriting the expansion and environmental/regulatory challenges).

[7] Service areas include Mainland, Fort Nelson, Whistler, and Vancouver Island.

[8] Northwest Natural Gas Company's 2016 Integrated Resource Plan indicates future load growth with its service region (Oregon and Washington)

6. The significant supply potential in northeast BC, specifically in the Montney region, has prompted the development of competing infrastructure initiatives to provide greater access to existing and new markets. These developments could impact FEI's future access to secure reliable natural gas supply at a fair market price in BC.

FEI has held excess resources in the ACP portfolio since contracting additional T-South to Huntingdon Delivery capacity in October 2014, when the first market condition discussed above became apparent. Since then, FEI observed the other market conditions discussed above, which placed even more value on existing resources in the region. Therefore, FEI must continue to hold more resource than the Core customers require within the ACP for 2018/19. If FEI decreased a portion of resources to match the current 2018/19 load profile, it would be difficult or even impossible to get them back in the future when they are forecasted to be needed (for example in three to five years), given the current value of these resources. Furthermore, this approach is also reasonable because the costs and ability to manage contract renewals within the ACP's portfolio of resources have less risks to Core customers than the alternative option of trying to contract for resources if needed, after the market factors unfold. FEI will continue to focus on evaluating the resource options in the region to ensure Core customer's gas supply requirements will be in place for not only the short term but long term as well.

2.3 Design Seasonal and Peak Day Forecasts

Table ES-1 sets out the forecasted design loads during the winter and summer season projected for the next five years. This forecast excludes RS 46, and Biomethane demand.[9]

[9] Biomethane demand to date has displaced conventional natural gas demand. Therefore, from a supply perspective, it would not add to peak day load. However, FEI may see demand for biomethane that is incremental to natural gas demand in the future.

Table ES-1: Design Load Forecast by Region

Contract Year	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
	(TJ/d)	*(TJ/d)*	*(TJ/d)*	*(TJ/d)*	*(TJ/d)*	*(TJ/d)*
Columbia	27	27	27	27	27	28
Lower Mainland	887	896	903	910	916	923
Ft. Nelson	5	5	5	5	5	5
Inland	298	303	306	309	312	315
Whistler	7	7	7	7	7	7
Vancouver Island	102	104	107	111	114	117
Total Peak Day Load	**1,325**	**1,341**	**1,355**	**1,369**	**1,382**	**1,395**
Yr/Yr Change	n/a	16	14	14	13	13
Winter Design Load	664	674	681	686	695	701
Summer Design Load	240	244	246	249	251	254
Average Daily Design Load	**415**	**422**	**426**	**431**	**435**	**439**
Yr/Yr Change	n/a	6	4	4	4	4

The combined forecast design peak day demand for FEI natural gas services areas is 1,341 TJ/day for the 2018/19 contract year, which represents a 16 TJ/day increase from the 2017/18 contract year. As Table ES-1 shows the peak day and design winter load requirements are forecasted to grow, which confirms the need for FEI to maintain access to its existing resources and evaluate future resource options should they become available.

2.4 Normal Demand Forecast

Table ES3-2 sets out the forecasted annual and seasonal normal load requirements for the next five years. Consistent with Table ES-1, this forecast also excludes RS 46, and Biomethane demand.

Table ES-2: Normal Load Forecast by Region

Contract Year	2017/18 ACP Load Forecast	2018 PBR Annual Review Load Forecast	2018/19	2019/20	2020/21	2021/22	2022/23
	(TJ/day)	*(TJ/day)*	*(TJ/day)*	*(TJ/day)*	*(TJ/day)*	*(TJ/day)*	*(TJ/day)*
Winter Normal Load	539	586	600	612	623	634	632
Summer Normal Load	198	211	216	221	225	229	228
Average Daily Normal Load	**339**	**368**	**374**	**382**	**390**	**397**	**395**
Yr/Yr Change	n/a	29	6	8	7	7	-1
	(PJ/yr)	*(PJ/yr)*	*(PJ/yr)*	*(PJ/yr)*	*(PJ/yr)*	*(PJ/yr)*	*(PJ/yr)*
Annual Normal Load	**124**	**134**	**137**	**140**	**142**	**145**	**144**

Notes:

All numbers in terajoules per day except Annual Normal Load, which is in petajoules per year

For the 2018/19 contract year, the combined annual normal load is forecasted to increase to 137 PJ compared to 134 PJ in the 2018 Annual Review load forecast. This results in an average daily normal load of 374 TJ/day, which will now be the new daily baseload supply that will be received by FEI Midstream on behalf of the Commodity Providers in accordance with the requirements of the Essential Services Model (ESM).

2.5 RS 46 Customer Demand and Biomethane Supply and Demand

Table ES-1 and ES-2 do not include a forecast of future additional demand from customers seeking LNG for transportation (RS 46) or Biomethane purposes. At this time RS 46 customer demand and Biomethane demand is not material enough to warrant FEI purchasing baseload supply for the 2018/19 contract year. This is mainly because the expected RS 46 customer demand is a small volume relative to the total liquefaction capacity and buffer storage available for the 2018/19 gas year, which gives FEI the flexibility to limit production runs in the winter period and/or suspend liquefaction on a peak day to meet requirements on the rest of the system. As such, for planning purposes for the 2018/19 gas year, FEI has not included a requirement to meet RS 46 load on a design day. Consistent with previous ACPs, FEI will continue to evaluate RS 46 to determine when the demand (customer and operational) is high enough to incorporate into the Commodity portfolio.

On March 21, 2017, the Province of British Columbia issued OIC 161 which will directly impact the Biomethane Program. Specifically, OIC 161 resulted in an update to the Greenhouse Gas Reduction Regulation and it states that FEI may acquire an amount of biomethane up to 5% of its 2015 non-bypass load at a price up to $30.00 Cdn/GJ. This regulation increases the total maximum annual amount of biomethane that FEI may purchase to approximately 8.9 PJ or about 24 TJ/d. At this time, FEI is still evaluating the potential long term impact of this regulation on the ACP.

2.1 The 2018/19 Portfolio

Table ES-3 sets out a summary of the portfolio planned for the 2018/19 gas year. FEI performed a review of the supply options available for the upcoming winter period, taking into account key market developments that have affected regional pricing and supply sourcing dynamics in the PNW. After evaluation of the new peak, design and normal day load forecasts, current portfolio mix, and market developments, FEI recommends the following resource portfolio for 2018/19:

Table ES-3: Planned Peak Day Portfolio for 2018/19 vs. 2017/18 Portfolio

Peak Day Portfolio	2018/19 Portfolio-Planned (TJ/day)	2017/18 Portfolio (TJ/day)
Fort Nelson Division	**5**	**5**
Alberta Baseload Supply (CCRA gas & Mktrs)	94	85
Station 2 Baseload Supply (CCRA gas & Mktrs)	280	254
Total Commodity Supply	**374**	**339**
Seasonal Supply	151	172
Seasonal Storage	199	199
Market Area Storage	210	210
Peaking Supply	-	-
Spot Supply	48	48
Mt. Hayes LNG	163	163
Tilbury LNG	163	163
Industrial Curtailment	28	28
Total Midstream Supply	**962**	**981**
Total Resources (TJ/d)	**1,341**	**1,325**
Peak Day Demand (TJ/d)	**1,341**	**1,325**

2.1.1 COMMODITY PORTFOLIO OVERVIEW: 2018/19

Under the ESM, Commodity Providers supply the daily baseload volume that is equivalent to the normalized annual demand, which is derived from the Core Market normal load forecast. Commodity Providers must provide the daily normalized load requirement of 374 TJ, plus fuel, effective November 1, 2018. Baseload supply for the 2018/19 gas year is based on the current receipt point allocation percentages that are in effect, specifically 75% at Station 2 and 25% at AECO/NIT.

Natural gas marketers participating in the Customer Choice Program (Gas Marketers) are responsible for ensuring a portion of the baseload supply is delivered to FEI at each of the receipt points. For 2018/19 the average daily volume that needs to be provided by Gas Marketers is approximately 10 TJ/day while 364 TJ/day will be provided by FEI Commodity. The daily volume provided by Gas Marketers decreased by 2 TJ/day compared to the 2017/18 gas year, because of a decline in enrolments for the Customer Choice Program over the past several years. Table ES-4 shows the estimated future Customer Choice marketer volumes and enrolments for 2018/19 compared to the estimates provided for the 2017/18 ACP.

Table ES-4: Year-over-Year Change in the Estimated Customer Choice Marketer Volume and Enrolments[10]

Contract Year	2018/19	2017/18
	(TJ/day)	(TJ/day)
Rate 1	6.1	6.8
Rate 2	2.7	3.1
Rate 3	1.2	1.9
Average Daily Volume	**10.0**	**11.8**
Customer Enrolments	**27,000**	**33,000**

FEI Commodity will be required to provide the following amounts at the specified delivery points starting November 1, 2018:

Station 2: (374 TJ/day – 10 TJ/day) x 75% plus 5.3% fuel = 287 TJ/d

AECO/NIT: (374 TJ/day – 10 TJ/day) x 25% plus 1.1% fuel = 91 TJ/d

The methodology used to calculate the fuel gas percentages that are used above is consistent with the previous year's approach and is described in FEI's letter to the Commission dated February 7, 2008. On September 1, 2017, the Commission approved FEI's application to increase the fuel gas percentage at Station 2 from 4.6% to 5.3%, and to maintain the fuel gas percentage of 1.1% for deliveries at AECO/NIT. FEI will continue to monitor the Fuel Gas account and will report the results of its review of the Fuel Gas Percentages to the Commission by the end of the 2018 summer, including a request to modify the fuel rates if necessary.

2.1.2 FEI MIDSTREAM PORTFOLIO OVERVIEW: 2018/19

FEI is responsible for managing gas supply so that it meets the variability in daily customer demand, including requirements on a peak day. It does this by using seasonal and peaking commodity, storage services, and third party pipeline transportation capacity to meet swings in demand. To determine the appropriate portfolio for 2018/19, including the replacement of any expiring resources and/or meet future growth requirements, FEI assessed several alternatives for 2018/19 including:

- Station 2 supply and associated T-South transportation capacity;
- Seasonal storage (Aitken Creek Storage, Alberta Storage);
- Market area storage (Jackson Prairie Storage (JPS) and Mist);
- Huntingdon and Kingsgate seasonal, spot, and peaking supply; and
- Alberta and Stanfield supply with associated firm transportation capacity.

[10] This estimate is based on actual and forecast enrolments in the Customer Choice Program taken in March 2017 (for the 2017/18 forecast) and April 2018 (for the 2018/19 forecast).

FEI also has on-system gas supply from resources such as the Tilbury and Mt. Hayes LNG storage facilities. These facilities can provide high volume supply on short demand during periods of cold and extreme winter weather or during emergency situations.

3 REGIONAL DEVELOPMENTS

Significant changes are occurring in the natural gas marketplace in western Canada, driven by two main developments that will impact traditional supply and demand dynamics, regional gas flows, and regional market price relationships. These developments are the significant supply potential in northeast BC, and the prospect for incremental demand in the Lower Mainland and the US PNW. This includes gas demand for PNW methanol projects, power generation, and LNG export projects such as Woodfibre. These developments have resulted in strong value for shippers that have contracted capacity on T-South. However, the developments have also prompted significant changes by Enbridge's Westcoast Energy Inc. (Westcoast)[11] over the past few years. Historically, Westcoast has offered up to 1,700 million cubic feet per day (MMcf/day) of contractible firm 365-day T-South Huntingdon Delivery capacity, based on the winter design capacity of its system. Based on potential incremental demand in the region, Westcoast reduced contractible firm service to 1,450 MMcf/day in October 2014.[12] This development prompted FEI to file an Amendment to the 2014/15 ACP to secure an additional 75 TJ/day of T-South Huntingdon Delivery capacity for future load growth. As of November 2015, this firm 365-day capacity became fully contracted, with FEI successfully securing an additional 75 TJ/day of this capacity.

In November 2016, Westcoast offered a Winter Firm Service which allowed interested parties to bid for 160 MMcf/day of the remaining 250 MMcf/day for each November to March winter period. Again, FEI filed an Amendment to the 2016/17 ACP to bid for up to 100 TJ/day (90 MMcf/day) for this Winter Firm Service, as it would help better match FEI's load profile. However, FEI was unsuccessful in its bids for Winter Firm Service, as Northwest Innovations Works, who are proposing to construct methanol production plants in Washington and Oregon State, were awarded a majority of this capacity, while Painted Pony, a major producer in Northeast BC received a minor portion. The weighted average term of the agreements was 44.5 years

In April 2017, Westcoast offered another open season for interested parties to contract for 190 MMcf/day of firm 365-day Huntingdon Delivery capacity. It is yet to be determined whether this 190 MMcf/day is a full expansion, but the capacity is planned to be in-service by November 1, 2020. In the 2017/18 ACP, FEI requested to bid up to 40 TJ/day on the Westcoast open season as a portfolio strategy to meet future Core market load growth. In July 2017, Westcoast confirmed that the open season was fully subscribed and FEI was again unsuccessful in its bids. Westcoast doesn't publicly disclose the shippers that were awarded the capacity until closer to the flow date (estimated November 2020), but the weighted average term is

[11] WestCoast operates the T-South pipeline system that is the main transportation system for moving natural gas from northeast BC to markets in BC and the US PNW and on which FEI is heavily dependent.

[12] The 1,450 MMcf/day was the expected system capacity during the summer months.

approximately 60 years. The weighted average terms for both the Winter Only Service (44.5 years) and the most recent 365-day open season (approximately 60 years) makes it clear to FEI that shippers in the region are now assessing T-South capacity as being more valuable.

Although FEI was unsuccessful in the last two open seasons, FEI still has enough T-South capacity to meet the load requirements for the 2018/19 ACP. However, there is a significant volume of physical gas supply serving Lower Mainland customers on the transportation service model that may be at risk in the near future. A fully contracted T-South pipeline risks leaving these customers without adequate gas supply or they will need to pay significantly higher commodity prices at Huntingdon. This risk will likely persist if this incremental new demand arrives before any additional infrastructure is completed. FEI may then face the potential that these customers will seek to return to bundled service. These potential changes require FEI to assess its resource requirements and the ability of customers currently on the transportation service model to continue to receive future supply from a different perspective.

Another regional development relates to the significant supply potential of northeast BC. Improvements in production technologies that have unlocked the potential of shale and tight gas resources have over the past decade transformed the North American natural gas supply picture. In a recent joint study conducted by the NEB and the Alberta Geological Survey a branch of the Alberta Energy Regulator, reported the estimated total potential of marketable gas (discovered and undiscovered) in the Western Canadian Sedimentary Basin (WCSB) is now 1,128 trillion cubic feet (Tcf).[13] Taking into consideration that the NEB estimated natural gas demand in Canada was approximately 3.5 Tcf in 2015, the WCSB resource represents the equivalent of approximately 320 years of supply at that consumption level.[14] The Montney formation in BC alone represents 271 Tcf of potential marketable natural gas.[15] Moreover, there are still additional resources located in in other areas of northeast BC that have still yet to be developed (Horn River and Liard basin, and Cordova Embayment). As a result of the size of this resource and producer interest in developing it, production of natural gas from basins located in northeast BC have increased and is expected to continue increasing in the coming years. This supply will be able to support existing markets in BC, as well as support potentially new markets (LNG and Methanol exports) and meet growing industrial demand in Alberta, specifically from oil sands developments.

The prospect of new markets for production has not developed as quickly as many producers active in northeast BC had hoped. Environmental and regulatory review and approval requirements have slowed the development of new markets for this gas. Also, the crash in commodity prices in 2014 had eroded the economic attractiveness of much of the LNG export development considered for northeast BC. Another significant challenge facing the development of additional new supply in northeast BC is its remote location relative to traditional

[13] National Energy Board et al (September 2017). "Duvernay Resource Assessment: Energy Briefing Note."

[14] National Energy Board (June 2016). "Short-term Canadian Natural Gas Deliverability 2016-2018 – Energy Market Assessment.

[15] National Energy Board et al (September 2017). "Duvernay Resource Assessment: Energy Briefing Note." Note: The Montney formation geographically straddles the border between BC and Alberta. The total ultimate potential for the full Montney formation is 449 Tcf.

and growing markets. Traditional eastern Canadian and US markets for natural gas produced in the WCSB has been steadily displaced by other more competitive basins. This decline is driven primarily by the development of shale gas basins, in particular the Marcellus shale gas play, that are located much closer to key consuming markets in eastern North America. Producers in the region have been able to manage through these challenges by focusing on further production efficiencies, which has also acted to significantly reduce commodity prices. However, continued production efficiency improvement is increasingly difficult to realize, and significant new markets are required in order to develop the potential of the WCSB, including the new supply basins located in northeast BC.

Given that the potential new markets have been slow to develop in the region, producers have started to focus on becoming better connected to the integrated North American energy market through existing pipelines and expansions by Westcoast and TransCanada Nova Gas Transmission Ltd (NGTL). These developments and expansions will have an impact on gas flows and pricing dynamics in the region. For instance, the Westcoast T-South expansion and NGTL's expansion at the Alberta/BC export delivery point could help alleviate supply constraints in the Lower Mainland and the US Pacific Northwest regions. Meanwhile, additional expansions such as the Groundbirch Mainline and Towerbirch lateral pipelines on NGTL's system now provide BC producers with the option to flow increased supply directly to the AECO/NIT marketplace, bypassing the Westcoast T-North system. Future facilities additions in northeast BC contemplated by TransCanada for its NGTL system will accelerate this trend. Gas production from smaller plants in the Montney region have displaced traditional supply from the Ft Nelson and Pine River Plants. A number of the future NGTL expansions are in the Montney region, and could shift the proportion of gas flowing through Station 2, given the attractiveness to producers of direct access to the AECO/NIT marketplace. This development could have an impact on the regional market, especially the pricing for Station 2 and AECO/NIT supply.

FEI will continue to proactively monitor developments and foster relationships with key producers and other counterparties in order to help ensure that accessible supply and competitive pricing are available at Station 2 over the long term. By continuing to monitor and actively participate in issues and developments affecting the BC and regional gas marketplace, FEI should be in a position to identify if and when it needs to adjust its gas portfolio strategy. This would include for instance, adjusting the use and mix of counterparties or fundamentally altering FEI's physical resources. These activities are critical to helping ensure that FEI remains effective in providing gas supply to customers and so that it is able to continue to meet the security of supply, resource diversity, and cost minimization objectives of the gas portfolio. However, at this time the options to adjust FEI's physical resources are limited given the region's resource constrained environment.

4 CONCLUSION

The portfolio for 2018/19 has been developed to meet the objectives of the ACP. The key objectives of the ACP are for FEI to contract for resources that provide supply security, diversity, and flexibility while minimizing overall portfolio costs. In order to meet these objectives, the portfolio needs to be planned over a multi-year period given the limited resources available, the length of the contractual terms many resources in the portfolio are subject to, and changing market dynamics.

This ACP combines the forecast load requirements for all of FEI natural gas service areas including operational demand for RS 46 customers. These requirements are used to determine the optimal mix of commodity, storage, and transportation resources required to meet this forecast demand. The ACP takes into consideration changes in the forecast customer load requirements as well as relevant market developments.

Key developments in the region continue to take place in terms of supply and demand, which has created uncertainty in the marketplace. While none of these developments have a significant impact on FEI's portfolio for 2018/19, they could affect the planning horizon for 2020 and beyond. Over the longer term, incremental demand in the region will drive the need for a pipeline expansion. The challenge this creates is the need to match the timing of when the new demand materializes with the construction of new pipeline capacity. A potential mismatch of these developments has caused existing resources to have more value, especially T-South capacity to Huntingdon. Given the risk and the value of these regional assets, FEI continues to pursue the strategy to hold more resources in its portfolio than the Core customer require for 2018/19. Consistent with the objectives of the ACP, this approach provides supply security, optionality and flexibility for FEI if certain market conditions unfold. The alternative option of trying to contract for resources if needed after market conditions unfold puts FEI's customers at higher risk and potential costs than the approach outlined in this ACP.