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June 19, 2014

Via Email
Original via Mail

Canadian Office and Professional Employees Union Local 378
c/o Jim Quail, Barrister & Solicitor
2nd Floor, 4595 Canada Way
Burnaby, B.C. V5G 1J9

Attention: Mr. Jim Quail

Dear Mr. Quail

Re: FortisBC Energy Utilities[1] (FEU)

2014 Long Term Resource Plan (the Application)

Response to the Canadian Office and Professional Employees Union Local 378 (COPE) Information Request (IR) No. 1

On March 25, 2014, the FEU filed the Application as referenced above. In accordance with the British Columbia Utilities Commission Order G-56-14 setting out the Regulatory Timetable for review of the Application, the FEU respectfully submit the attached response to COPE IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

on behalf of the FORTISBC ENERGY UTILITIES

Original signed:

Diane Roy

Attachments

cc: Commission Secretary
Registered Parties (e-mail only)

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[1] comprised of FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc.

1.0 Reference: Exhibit B-1 page 16:

"Over the medium to long term, gas demand will be driven by further fuel switching or retiring coal-fired power generation facilities in favour of gas-fired power generators, new industrial demand, U.S. export to Mexico, development of an LNG export sector, and to a lesser degree, development of the NGT sector due to high diesel and gasoline prices coupled with regulations to reduce GHG emissions."

Request:

1.1 At what point, and to what extent, would the growth of intercontinental trade in LNG tend to equalize natural gas prices between Asia and North America?

Response:

Presently, there is significant uncertainty regarding the extent and timing of a convergence or any "equalization" of natural gas prices between Asia and North America. The uncertainties include the question of what pricing index will be used for the LNG exports, when the projects will proceed, how much will be exported, and how producers may respond to development of this new market.

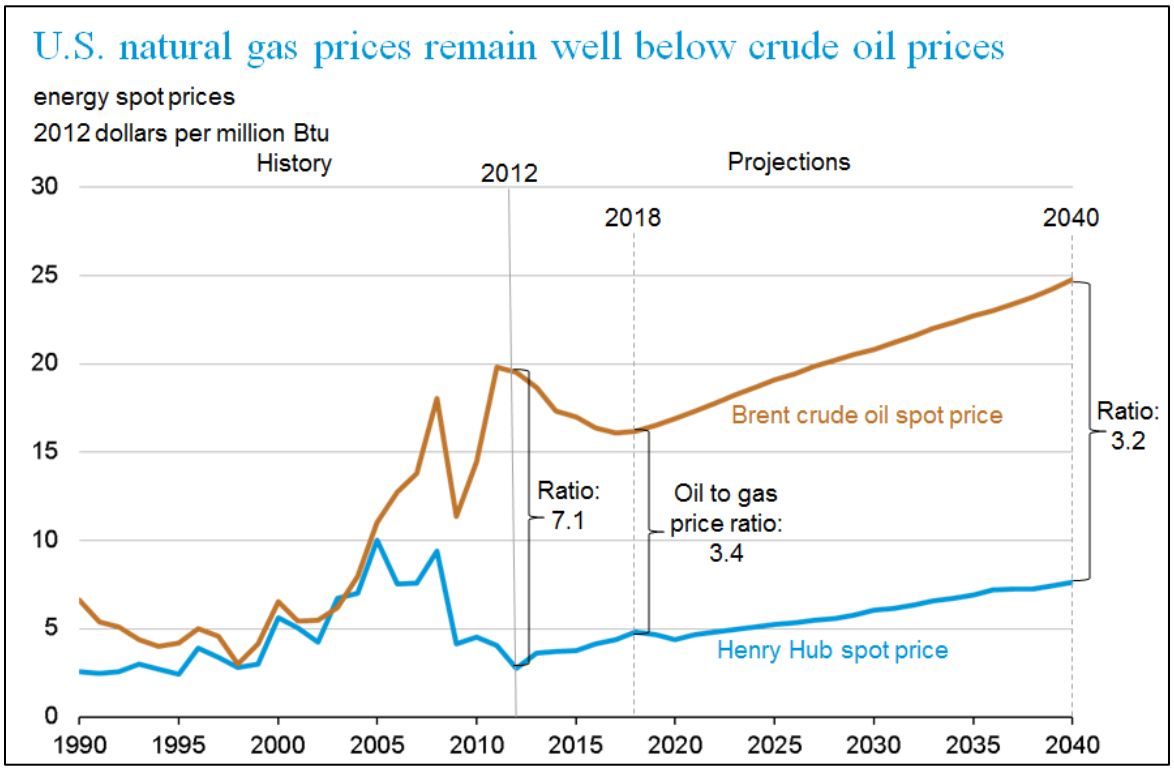
Given the abundance of natural gas supply in North America, the impacts of exporting LNG from North America to Asia are not expected to have significant effects on gas prices in North America. The United States Department of Energy (DOE) commissioned a study in 2012 on LNG exports which included the impact of LNG exports on North American natural gas prices. The report concluded that if LNG exports reach 6 Bcf/day by 2015 then gas prices, currently sitting at around $4.70 US/Mcf[1], could rise by $0.33 US/Mcf. Eventually, if 12 Bcf/d are exported annually, gas prices are estimated to rise by $1.11 US/Mcf. The DOE concluded that the net economic benefits to the U.S. would increase as LNG exports increase, however the probability that all proposed projects would be approved remained low.

Traditionally, Asian LNG import prices have been linked to oil prices. Currently, Asia's oil-linked spot LNG prices have been around $16-$17/MMbtu which is well above the North American Henry Hub price of $4.50/MMbtu. This significant disparity has made many Asian buyers seek Henry Hub-related pricing for their LNG imports from North America, which has the potential to drive some price convergence between gas prices in Asia (i.e. by by putting downward pressure on global LNG prices) and North America. At this time however, it does not appear that significant price convergence will occur.

The U.S. Energy Information Administration (EIA) provided a graph in its recent Annual Energy Outlook showing the price ratio of crude oil to natural gas (see below). The EIA projects the

[1] Based on June 17, 2014 Henry Hub daily spot price.

price ratio to remain around 3.2 to 3.4 out to 2040.[2] This projection includes the potential for LNG exports from North America to Asia.



1.2 To what extent would the development of LNG exports from British Columbia exert upward pressure on domestic natural gas commodity prices?

Response:

With an abundant supply available in British Columbia and the increasing potential of additional undeveloped shale gas deposits in northeast B.C., export demands are not expected to exert a significant upward pressure on domestic gas prices. The B.C. government has stated that the province's natural gas supply is estimated at over 2,933 trillion cubic feet, which is over a 150 years' worth of natural gas supply.[3] The abundance of natural gas provides the province with a significant opportunity to be a global player in the newly emerging LNG market. As the B.C.

[2] EIA – Annual Energy Outlook 2014 - http://www.eia.gov/forecasts/aeo/
[3] LNG in BC- http://engage.gov.bc.ca/lnginbc/b-c-s-lng-story/#british-columbias-natural-gas-supply

Minister of Energy, Rich Coleman, stated, this market will provide the province with unprecedented economic growth as well as increasing jobs in B.C.[4]

Furthermore, as stated in response to COPE IR 1.1.1, LNG exports from North America are not expected to significantly increase North American, including domestic, prices.

However, it is important to note that the development of pipeline infrastructure that will support the B.C. LNG export projects will play a role in domestic gas prices. The degree of connectivity with existing pipelines and how they are tolled could impact domestic gas prices to some degree. This is why the FEU are actively involved in monitoring and participating in the review of new pipeline projects in B.C. to help ensure that customers in BC will continue to have access to gas supply at fair market prices.

1.3 What impact (directionally and, to the extent possible, quantitatively) will the recently-announced Russia-China natural gas agreement have upon natural gas demand and prices for Canadian gas producers?

Response:

It is still too early to speculate what type of impact the Russia-China natural gas agreement will have on the LNG export projects announced for British Columbia or on natural gas demand and prices for Canadian gas producers. The agreement will see Russia provide 38 billion cubic meters of gas annually over 30 years to China and could improve China's bargaining power for future LNG contracts from North America. However, the deal only represents about a quarter of China's current natural gas demand of 150 billion cubic meters, which is set to increase significantly as China moves increasingly away from the use of coal. Furthermore, China is only one of many countries that are looking to increase LNG imports. Other countries include South Korea and Japan.

1.4 To what extent are natural gas price forecasts for FEU sensitive to the extent of development of LNG processing and export facilities

[4] LNG – British Columbia's Liquefied Natural Gas Strategy One Year Update http://www.gov.bc.ca/com/attachments/LNGreport_update2013_web130207.pdf

(a) using natural gas as the liquefaction fuel, or

Response:

There are essentially only two options for meeting the energy requirements for the liquefaction fuel at the proposed LNG facilities; gas turbine-driven compressors or electric drive. Direct-drive natural gas turbines are typically used for LNG export facilities because of the cheaper costs relative to the electric drive option. If an LNG project chooses to use electric drive, the fuel requirements will depend on the source of electricity. These projects need electrical power available at all times so to meet their firm requirements; they may require natural gas generation to be installed as well. However, in either case, the consumption of natural gas to meet the liquefaction requirements for the facilities will be small relative to the overall natural gas supply that will be converted to by the facilities to LNG for export, and therefore in itself is unlikely to have any incremental impact on natural gas prices.

(b) using other energy resources.

Response:

Please refer to the response to COPE IR 1.1.4a.

2.0 Reference: Exhibit B-1 page 19:

"In the past, low electricity rates have contributed to a competitive challenge for natural gas in B.C. but the decline in gas commodity cost and increases to electricity rates in B.C. in recent years has helped to improve the competitiveness of natural gas. Figure 2-5 provides a historical comparison of natural gas bills (based on consumption of 95 GJ/year and 95% efficiency) with comparable electricity bills (assuming 100% efficiency) for an FEI residential customer in the Lower Mainland."

Request:

2.1 Assuming that BC Hydro's current deferral account balances are amortized over the next decade, what impact will this have upon the extent of the price advantage of natural gas over electricity in British Columbia?

Response:

With respect to Exhibit B-1, page 19 referenced above, please refer to the response to CEC IR 1.15.1 for the correction in the reference in efficiency from 95% to 90%.

The FEU are aware of the approved BC Hydro rate increase for Fiscal Year 2016 effective April 1, 2015 as outlined in the Province of British Columbia Order of the Lieutenant Governor in Council (LGIC) Order in Council No. 096, Special Direction No.5 to the BCUC, approved and ordered March 5, 2014, Appendix B, of 6%, and the annual increases for BC Hydro outlined in LGIC Order No. 097, Special Direction No. 7 to the BCUC, approved and ordered March 5, 2014, section 9(1) and (2), for Fiscal Years 2017, 2018 and 2019 of 4%, 3.5% and 3% respectively. However, the FEU do not know what BC Hydro's implicit assumptions are with respect to deferral account amortization or specific cost increases in other areas of their company. In addition, BC Hydro is embarking on a rate design process, which may lead to rate structure and/or rate rebalancing changes. Therefore, the FEU are not able to confirm what impact would arise from the amortization of deferral accounts over the next decade on the extent of the price advantage of natural gas over electricity.

2.2 What degree of impact would this have upon FEU's load forecasts for that period?

Response:

All else being equal, amortizing BC Hydro's current deferral account balances over the next decade would put upward pressure on electricity rates in B.C. and would therefore improve the

price competitiveness of natural gas over electricity in B.C. The FEU expect that this would have an upward effect on the FEU's load over that period. The FEU are not able to speculate on the degree of impact on FEU's load forecasts since this would depend on customer behaviour and decisions to install and use natural gas during that timeframe.

3.0 Reference: Exhibit B-1 page 63:

"Determining peak day demand for the various regions is arrived at through a separate process than for annual demand. The peak day demand forecast is based upon two key inputs:

- The peak day temperature; and
- The relationship between consumption and weather.

The peak day temperature represents the coldest daily temperature that would be expected to occur once every twenty years. The relationship between consumption and weather is determined through regression analysis of historical daily consumption and historical daily temperature experienced over the past three years. Once this relationship is determined, the peak day temperature is applied to it with the resulting design day demand per customer grossed up to reflect current customer counts."

Request:

3.1 What is the probable directional impact of changing weather patterns caused by climate change upon residential peak day demand?

Response:

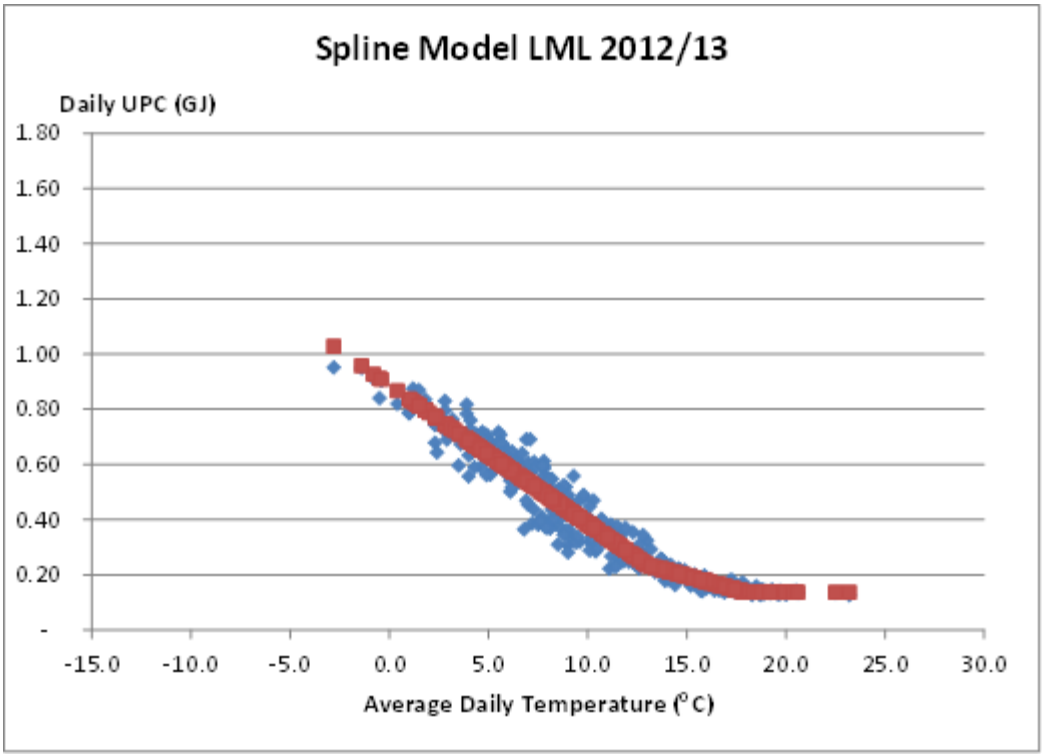
In general, and regardless of the cause of weather changes, residential customers consume more gas when the weather is colder and less gas when the weather is warmer.

3.2 To what extent are you able to quantify the probable impact this will have on residential peak day demand?

Response:

The following chart is prepared as part of the annual contracting plan and is updated annually. This chart is a plot of daily volumes for Rate Schedules 1 to 6 vs. temperature for FEI – Coastal. The core volume for any average daily temperature can be read from the chart.

In a colder year the cluster of blue readings will shift to the left. In a warmer year the points will shift to the right. The shape of the plot is consistent year over year (sloping down to the right). This indicates that at lower temperatures (peak or otherwise) that core customers consume more energy than at warmer temperatures.


Spline Model LML 2012/13
Daily UPC (GJ)
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
-
-15.0
-10.0
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Average Daily Temperature (°C)

1

2

4.0 Reference Exhibit B-1 p. 147:

"The FEU's Statement of Aboriginal Principles (see Appendix F) ensures the Companies' business operations are conducted with respect for social, economic and cultural interests. One of these principles declares the Companies' commitment to dialogue through clear and open communication with Aboriginal communities on an ongoing and timely basis for the mutual interest and benefit of both parties.

"To meet this objective, the FEU aim to establish an open dialogue with First Nations at the earliest planning stages to ensure that First Nations consultation and accommodation requirements are met."

Request:

4.1 What measures does FEU take to ensure that First Nations have sufficient capacity to participate effectively in this dialogue process?

Response:

Where the rights or title of First Nations may potentially be impacted due to the FEU's operations such as capital projects, the FEU provide capacity funding to impacted First Nations to support their participation in regulatory proceedings and communications with the FEU.

To ensure that First Nations have sufficient capacity to participate specifically in the resource planning process, the FEU have a policy to reimburse the expenses incurred by First Nations representatives to attend Resource Planning Advisory Group (RPAG) meetings, which are typically held in the Lower Mainland. The FEU also pay a per diem to representatives of the First Nation Energy and Mining Council for attending RPAG meetings as the meetings are generally held over the course of a full day. In addition, by holding community consultation workshops across a wide geographical area throughout the FEU's service area, the FEU aim to provide access for all First Nations representatives who choose to engage in the resource planning process.