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September 6, 2024

Air Products
720 Petroleum Wy
Edmonton, Alberta
T6S 1H5

Attention: Miles Heller

Dear Miles Heller:

Re: FortisBC Energy Inc. (FEI) and FortisBC Inc. (FBC) (collectively FortisBC)

Application for Approval of a Rate Setting Framework for 2025 through 2027 (Application)

Response to Air Products Information Request (IR) No. 1

On April 8, 2024, FortisBC filed the Application referenced above. In accordance with the regulatory timetable established in BCUC Order G-165-24 for the review of the Application, FortisBC respectfully submits the attached response to Air Products IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

on behalf of FORTISBC

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Interveners

PROPOSED RATE SETTING FRAMEWORK

1.0 Reference: ADJUSTMENTS FOR REQUIRED 2024 SPENDING

Application, Section 2.2.3, pp. C-29-32

On page C-30 of the Application, FEI states:

> There are four items, totaling to $3.232 million, that will commence in 2024 and are not reflected in 2023 Actual expenditures. These are: .. (3) incremental costs to support the Long-Term Gas Resource Plan (LTGRP) of $0.382 million; and (4) incremental costs for decarbonization and sustainability of $0.800 million.

On page C-31 of the Application, FEI states:

> In consideration of the recent decision on FEI's 2022 LTGRP, the increasing complexity of resource planning for both gas and electric utilities, and the need to continue to advance the integration of gas and electric resource plans, the Companies have identified an immediate need for three additional positions in 2024 to support their long-term resource planning activities. The new roles will provide analysis and research and manage internal and external stakeholder engagement.

Information Request:

1.1 Please explain in detail what the scope, title, and duties are for each of the three additional positions FEI seeks to fill for the LTGRP.

1.1.1 Please describe how FEI plans to integrate renewable gases, specifically hydrogen, into its supply portfolio via these positions.

Response:

The titles and descriptions of the three new positions FEI requires in 2024 in its Long Term Resource Planning department are provided below. As explained in the response to BCUC IR1 11.5, the positions are shared with FBC, and two of the three positions have been filled.

1. **Integrated Resource Planning (IRP) Special Projects Manager:** Leads complex energy analysis and planning projects and initiatives needed to inform the Long-Term Electric and Gas Resource Plans and participates in studies and initiatives by other internal and external groups that will impact the Long-Term Resource Plans (LTRPs). Collaborates on and participates in LTRP activities as necessary in support of integrated gas and electric planning in BC.
2. **IRP Policy and Engagement Specialist:** Supports the development, preparation, and submission of Long-Term Gas and Electric Resource Plans through planning, implementing and documenting Indigenous and stakeholder engagement activities on energy planning and undertaking related analyses. Ensures effective communications and

relationships with Indigenous communities and stakeholders. Utilizes various tools and methods to gather insights, assess stakeholder needs, and identify opportunities for engagement and relationship-building.

3. **IRP Data Analyst:** Conducts energy analysis and planning activities needed to inform the Long-Term Gas and Electric Resource Plans and participates in studies and initiatives by other internal and external groups that will impact the LTRPs. Utilizes long-term utility planning optimization software such as Plexos to provide insightful data analysis, forecasting activities, and modelling to support and inform resource plans. Uses advanced statistical, modeling, and analytical capabilities to leverage company data and processes to support the resource plans.

None of these new positions (nor any of the existing activities or positions within FEI's Long Term Resource Planning department) are directly involved in the integration of renewable gases (including hydrogen) in the supply portfolio. Rather, these positions will help fulfill the Long Term Resource Planning department's responsibility to coordinate with other departments, stakeholders and utilities (such as BC Hydro) in the development of the LTERP and LTGRP regulatory applications to ensure that the analyses and activities needed to plan for future renewable and low carbon gases over the long-term are included in the Companies' Long Term Resource Plans.

On page C-32 of the Application, FEI states:

> To support these reporting and compliance requirements [for decarbonization and sustainability], FEI requires $0.800 million starting in 2024 for two new positions, as well as costs related to membership dues, external audit fees and consulting costs.

Information Request:

1.2 Please confirm whether the additional funding FEI seeks for decarbonization and sustainability will include hydrogen reporting requirements to the British Columbia Energy Regulator (BCER), in addition to methane reporting requirements.

Response:

FEI is not seeking expanded funding specifically to meet existing hydrogen reporting requirements of the BCER. However, the scope and breadth of reporting for decarbonization and sustainability has expanded significantly since the Current MRP, and FEI's funding request reflects this. Specifically, some of the additional funding requested for the Decarbonization and Sustainability department is to adequately resource expanded reporting requirements from policies such as the Clean Fuel Regulations, Output-Based Pricing System, and the *Greenhouse Gas Reduction (Clean Energy) Regulation* (GGRR). Additionally, incremental resourcing is required due to the

expanded reporting of GHG emissions, and the credits generated from an expanding portfolio of GHG abatement activities undertaken by FEI which could include renewable gases, carbon offsets, methane reduction and other Scope 1 GHG emission reduction activities.

1.3 Please explain in detail what the scope, title and duties are for each of the two additional positions FEI seeks to fill for decarbonization and sustainability.

Response:

The titles and descriptions of the two new positions FEI requires in 2024 in its Decarbonization and Sustainability department are provided below. As explained in the response to BCUC IR1 11.5, both positions have been filled.

1. **Director, Decarbonization & Sustainability:** Responsible for leading and advancing sustainability strategy, targets, implementation, compliance, and reporting. This person is also responsible to lead internal cross-departmental teams to drive decarbonization and other sustainability areas of focus to meet regulatory requirements, corporate targets and other business priorities.
2. **Senior Manager, Carbon Management:** This role leads a team to undertake the quantification and measurement of GHG emissions and other carbon-related issues for regulatory and other mandatory or voluntary carbon-related disclosures. This role is responsible for compliance with regulatory and policy frameworks for carbon emissions, including the federal Clean Fuel Regulation, BC Low-Carbon Fuel Standard and BC Output-Based Pricing System. The role leads the development of internal tools and analysis to advance decarbonization opportunities and align business practices with carbon compliance requirements.

1.4 Please confirm whether FEI seeks to acquire a consultant specifically for hydrogen-related reporting and compliance requirements.

1.4.1 If so, please explain their anticipated duties.

Response:

No, FEI is not seeking to acquire a consultant specifically for hydrogen-related reporting and compliance requirements at this time.

2.0 Reference: Decision and Orders G-165-20 and G-166-20 for FEI's and FBC Application for Approval of a Multi-Year Rate Plan for the Years 2020 through 2024, dated June 22, 2020 (Decision)

Application, Section 5.2.3, p. C-163 to C-164

On page 148 of the Decision, , the hearing panel noted that FEI:

> Point[ed] to an independent evaluation commissioned by Ofgem, which found that the Low Carbon Networks Fund (a ratepayer funded innovation program) "encouraged [utilities] to include innovation as core business" with "current benefits estimated to be approximately one third of the total funding cost" and "the future net benefit…is significant and is estimated to range from 4.5 to 6.5 times the cost of funding the scheme."

On page 149 of the Decision, the hearing panel noted that FEI contends that:

> [U]tility customer funding is most appropriate where the benefits largely accrue to the utility customers and where they are in a unique position to test new technologies and business models.

On page 165 of the Decision, the hearing panel approved FEI's CGIF, identifying that the proposed spending was justified because: :

> Greater innovation efforts are needed within FEI if natural gas is to remain a viable fuel in the long term in light of those climate objectives… it is reasonable and in the public interest for FEI's ratepayers to bear the costs of FEI's Innovation Fund. This is because the benefits of the fund will accrue to ratepayers by ensuring cost-effective, safe and reliable gas solutions both in the short term and long term.

On page C-163 of the current Application, FEI now highlights which activities it has undertaken in the upstream hydrogen space under the CGIF totaling $2.5 million. FEI states:

> To date, the 2020 CGIF has approved grant funds to multiple renewable hydrogen production projects. One example is the Vancouver-based start-up company Ekona which makes a novel non-catalytic pulse methane pyrolysis system for low-cost, clean, hydrogen production using natural gas as a feedstock, and with a solid carbon by-product. Funding from the 2020 CGIF (along with other funding) allowed the company to build a proof-of- concept reactor in 2021 and to complete the commissioning of a brassboard system reflecting the final operational product system in 2023. Developments thus far have resulted in Ekona receiving $79 million in equity investments from a diverse set of investors, further accelerating the commercialization of this low-carbon hydrogen production system.

Information Request:

2.1 Please confirm that FEI's CGIF upstream hydrogen spending described in the Application does not support FEI innovating as a core business.

Response:

To date, grants provided under the CGIF have supported the development and commercialization of third-party technologies that benefit FEI's customers. While FEI does not own the technology, the advancement of these technologies supports the evolution of FEI's core business in alignment with provincial decarbonization goals.

2.2 Please confirm that FEI's CGIF funding of private companies in the upstream hydrogen space to date have not created benefits that largely accrue to utility customers.

Response:

Not confirmed. FEI's CGIF funding has provided benefits to FEI's customers by supporting the development and commercialization of innovative technologies, including in the area of hydrogen production, in alignment with provincial decarbonization goals. Please refer to Sections C5.2.3.1 and C5.2.4 of the Application for further discussion regarding how the CGIF has helped to advance hydrogen production and the energy transition.

2.3 Please confirm that FEI's request for new CGIF funding in the Application does not provide any incremental explanation about how continued subsidies to private upstream hydrogen producers will:

2.3.1 Support FEI innovating as a core business.

2.3.2 Create benefits that largely accrue to utility customers.

Response:

Not confirmed. Section C5.2.4 of the Application provides an explanation of the benefits of the CGIF to FEI customers, as well as how the CGIF is helping to support the energy transition and provincial decarbonization goals.

Please also refer to the responses to Air Products IR1 2.1 and 2.2.

3.0 Reference: ENHANCEMENTS TO THE CLEAN GROWTH INNOVATION FUND - PRODUCTION Application, Section 5.3.1.1, p. C-171

On page C-171 of the Application, FEI states:

> It is important for FEI to continue to invest in novel technologies and processes for creating and storing lowest-cost, low-carbon gases, to ensure the long-term viability of the gas utility and support the energy transition in British Columbia.

Information Request:

3.1 Please explain if, and if so the extent to which, FEI's low-carbon gas investments into storage are expected to be for hydrogen production and hydrogen storage.

Response:

FEI cannot provide specifics of the particular types of investments that the CGIF may support if approved for the Rate Framework term because the funding requests have not yet been received. However, as noted in the preamble, the 2025 CGIF allows investments in novel technologies and processes for creating and storing lowest-cost, low-carbon gases. These investments could include biomethane and hydrogen storage, which will likely be produced in a distributed manner, with production facilities connected directly to the distribution systems or customers. Distributed energy resources such as these have the potential to improve both gas and electric system resilience where appropriate monitoring, control and storage systems are in place. The 2025 CGIF will allow investments for the development of these technological solutions, subject to the CGIF governance procedures, as discussed in Sections C5.2.1 and C5.3.1 of the Application.

3.2 Please identify (i) any hydrogen storage technologies FEI plans to invest in, (ii) those that are necessarily utility scale and those that are not, and (iii) those that otherwise reflect natural monopoly characteristics (e.g. barriers to entry, large linear infrastructure, etc.).

Response:

Please refer to the response to Air Products IR1 3.1.

4.0 Reference: ENHANCEMENTS TO THE CLEAN GROWTH INNOVATION FUND - RESILIENCE Application, Section 5.3.1.4, p. C-173

On page C-173 of the Application, FEI states:

> The distributed nature of hydrogen production, in particular, is likely to require distribution- scale storage systems to allow for production disruptions and large fluctuations in demand. Customers that are reliant on hydrogen will not initially have access to the large-scale production, transmission and distribution networks that can backstop smaller distribution electric and biomethane production facilities. FEI is looking at a variety of solutions in this space including one from Calgary-based Ayrton Energy, which is developing liquid organic hydrogen carrier storage systems.

Information Request:

4.1 Are "distribution-scale storage systems" for hydrogen intended to support mixing hydrogen with natural gas in FEI's distribution system, or support individual customers that purchase hydrogen by truck from FEI?

Response:

FEI expects that distribution-scale storage systems will likely be required to allow for production disruptions and fluctuations in demand associated with the distribution of hydrogen.

4.2 Where would FEI expect to locate distribution-scale storage systems for hydrogen?

Response:

Distribution-scale hydrogen storage systems could be located wherever necessary to allow for production disruptions and large fluctuations in demand. For example, natural gas storage is located in different places as necessary throughout the natural gas distribution network.

4.3 Please explain in detail which other providers and technologies FEI is considering for implementing a distribution-scale storage system of hydrogen, in addition to Ayrton Energy.

Response:

Please refer to the response to Air Products IR1 3.1.