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British Columbia Utilities Commission
6th floor, 900 Howe Street
Vancouver, BC V6Z 2N3

Attention: Erica Hamilton
Commission Secretary

Dear Sirs/Mesdames:

Re: FortisBC Energy Inc. (formerly Terasen Gas Inc.)
An Application for Approval of a Service Agreement for Compressed
Natural Gas Service and Approval of General Terms and Conditions for
Compressed Natural Gas and Liquefied Natural Gas Service

We enclose for filing in the above proceeding the electronic version of the Final Submissions on behalf of FortisBC Energy Inc.

Twenty hard copies of the Submissions will follow by courier.

Yours truly,

FASKEN MARTINEAU DuMOULIN LLP

[original signed by Matthew Ghikas]

Matthew Ghikas

MTG/fxm
Enc

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BRITISH COLUMBIA UTILITIES COMMISSION

**IN THE MATTER OF the *Utilities Commission Act*,
R.S.B.C. 1996, Chapter 473**

and

An Application by FortisBC Energy Inc. (formerly Terasen Gas Inc.)

**For Approval of a Service Agreement
For Compressed Natural Gas Service**

and

**For Approval of General Terms and Conditions
for Compressed Natural Gas and Liquefied Natural Gas Service**

**FINAL SUBMISSIONS OF
FORTISBC ENERGY INC. (FORMERLY TERASEN GAS INC.)**

MARCH 28, 2011

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PART ONE: INTRODUCTION

A. INTRODUCTION

1. FortisBC Energy Inc.¹ (“FEI” or “the Company”) brings this Application to the British Columbia Utilities Commission (the “Commission”) seeking the following approvals²:

- public interest approval under section 44.2 of the *Utilities Commission Act* (the “UCA” or the “Act”) for expenditures required to provide Compressed Natural Gas (“CNG”) service to Waste Management of Canada Corporation (“WM”);
- permanent approval of the executed long-term “take-or-pay” CNG Service agreement between the Company and WM (the “WM Agreement”) as a Tariff Supplement, pursuant to sections 59 to 61 of the UCA³; and
- approval of General Terms & Conditions (“GT&Cs”) for CNG and Liquefied Natural Gas (“LNG”) Services⁴ that will be used as the framework for future Natural Gas Vehicle (“NGV”) customers, also pursuant to sections 59 to 61 of the UCA.

FEI submits that the orders sought in this Application are important for existing customers of FEI, WM and other potential NGV customers, and the public generally.

B. OVERVIEW

2. The public interest assessment of FEI’s investment in fuelling facilities to serve WM involves an examination of the investment from the perspectives of existing customers, potential NGV customers, and the public generally. These interests are all aligned in this case, and the same will be true in the case of future investments.

¹ Terasen Gas Inc. is now, as of March 1, 2011, known as FortisBC Energy Inc.

² The specific approvals sought, which include other related orders, are set out in the draft Order included as Appendix G to the Application.

³ The Commission approved the WM Agreement on an interim basis in Order No. G-6-11, subject to conditions. The conditions have now been satisfied with the re-filing of the WM Agreement as Exhibit B-10-1.

⁴ The nature of the proposed service offerings is discussed in the Application at pp. 14-18, and the terms “CNG Service”, “LNG Service”, and “CNG/LNG Service” will be used as a convenient shorthand for those offerings. CNG/LNG Service is distinct from bringing the natural gas to the fuelling facility, which is a service provided under other existing rate schedules.

3. FEI is in the business of delivering energy to customers in a usable form; that is, natural gas is delivered at the pressure required by customers to use in whatever application they see fit. FEI already delivers natural gas under a variety of pressures to suit the needs of particular customers; many large industrials, for instance, take service at a high pressure while residential customers require service at a low pressure. All pressures require an investment from the Company, and FEI has rate mechanisms in place to ensure that costs are recovered from the appropriate customer(s). Natural gas at the low pressure associated with the Company's distribution system is unsuitable for use in NGVs, and must be compressed or liquefied. The compression required to deliver CNG is very similar to the compression that TGI uses throughout its system. FEI also has experience in LNG production, dispensing and transportation. The provision of natural gas to NGV customers is a natural extension of FEI's gas business.⁵

4. FEI's investment in facilities that permit delivery of natural gas in a usable form for NGVs has direct financial benefits for existing customers. Throughput on FEI's distribution system has been declining in recent years for a variety of reasons, including declining use per customer rates. The level of throughput on FEI's distribution system has a direct impact on delivery rates for all non-bypass customers. Declining use rates alone, if left unchecked, are expected to drive delivery rates for all non-bypass customers up by over 7% by 2030. NGV customers like WM represent one of the best opportunities for FEI to combat declining throughput. Each new NGV customer attachment enabled by FEI's contractually-backed investment in fuelling station infrastructure increases natural gas throughput on the FEI system, driving lower delivery rates for existing non-bypass customers (all else equal). At the same time, FEI can deliver benefits to return-to-base fleet owners like WM by facilitating access to CNG/LNG. In addition to these traditional customer-driven justifications for adding cost-effective load, FEI's investment in CNG and LNG fuelling station projects also advances "British Columbia's energy objectives".⁶ These legislated objectives emphasize the role of public utilities in reducing Greenhouse Gas ("GHG") emissions through higher-to-lower carbon fuel

⁵ Application, pp.19-20.

⁶ Clean Energy Act, S.B.C. 2010, c. 22, s. 1.

switching, and in promoting energy efficiency and innovative clean technology. Taken together, the benefits from FEI's investment to provide CNG/LNG Service to WM are significant relative to the size of required investment and the modest risk it represents. FEI thus submits that its investment in the fuelling facilities to serve WM's fleet of heavy duty vehicles is in the public interest and should be approved.

5. The WM Agreement and GT&Cs, which are proposed rates, must be assessed from the perspective of both existing customers and potential NGV customers in determining whether the terms and conditions of service are "just and reasonable". The cost of service-based rates employed in the rate design flow all delivery rate benefits to existing non-bypass customers, leaving sufficient financial incentive for the potential NGV customer to make CNG/LNG a viable and competitive alternative to diesel. In terms of risk allocation, the WM Agreement and GT&Cs require the NGV customer to "take-or-pay"⁷ for CNG/LNG Service at cost of service-based rates, and include other contractual obligations that help to ensure full cost recovery in addition to providing delivery rate benefits. The result is a mutually beneficial service agreement that protects existing customers to an even greater extent than in the case of other customer additions under the Main Extension ("MX") Test. Under the proposed rate design, the risk to existing customers of doing nothing to combat declining throughput far outweighs the risk of FEI making contractually-backed investments in NGV fuelling facilities to mitigate those declines. The terms and conditions of service in the WM Agreement and GT&Cs allocate costs properly and strike an appropriate balance of risk and reward. FEI submits that these "just and reasonable" rates and should be approved.

⁷ In other words, the agreement specifies a minimum contract demand, such that the NGV customer must pay for the specified volume even if its volume requirements turn out to be less.

PART TWO: APPLICABLE LEGAL FRAMEWORK

6. In this Part, FEI addresses the legal framework governing this Application. FEI makes three points:

- First, CNG/LNG Service, including all of its constituent elements outlined in the Application, is recognized under the UCA as a regulated service offered by public utilities.
- Second, FEI's investment is evaluated according to the public interest, which includes the interest of existing and new customers, and "British Columbia's energy objectives".
- Third, a "just and reasonable" rate design appropriately allocates the costs, risk and benefits associated with the investment.

These legal principles are applied to FEI's proposals in Parts Three and Four below.

A. CNG/LNG AS A REGULATED PUBLIC UTILITY SERVICE

7. The provision of CNG/LNG Services by public utilities as a regulated service is explicitly sanctioned by the UCA. The scope of regulated services is defined with reference to the definition of "public utility" in the UCA. CNG and LNG involves the "production, generation, storage, transmission, sale, delivery or provision of ... natural gas..." to the public for compensation. The definition of "public utility" only excludes the "petroleum industry" (defined as including CNG and LNG) from regulation to the extent that the "petroleum industry" entity providing the service is "not otherwise a public utility". Thus FEI, as a regulated public utility, can only offer a *regulated* CNG or LNG service.⁸

8. FEI offered a regulated CNG service between 1988 and 2000 when the Company's fuelling assets were sold.⁹ The rate design employed at that time differed significantly from the proposed rate design in that investments were not backstopped by

⁸ UCA, s. 1, "public utility". BCUC 2.28.1 sets out the legal analysis in greater detail as to why the CNG/LNG Service is a public utility offering under the UCA.

⁹ Order No. G-143-99, January 6, 2000 approved the sale and ordered the rate schedules to be amended to remove reference to the discontinued services.

contractual commitments, but the service was still offered under a tariff that was approved and overseen by the Commission.

9. The proposed LNG service involves transportation by tanker, but the same “public utility” analysis applies. There is no requirement under the UCA for the energy delivered to the public to be transported by pipe all the way from the source to the end user.¹⁰ By analogy, a diesel-fired electricity generator in a remote community is still providing public utility services to the community even though the diesel fuel used to produce the electricity is trucked to the generator. The same is true for the Revelstoke propane utility, and formerly FortisBC Energy (Whistler) Inc., which receives propane by truck and train.

B. PUBLIC INTEREST APPROVAL OF INVESTMENT IN FACILITIES

10. FEI seeks as part of this NGV Application public interest approval under section 44.2 for expenditures required to provide WM with CNG Service under the WM Agreement. Section 44.2 is permissive;¹¹ it allows public utilities to apply for approval of an expenditure schedule for “capital expenditures the public utility has made or anticipates making during the period addressed by the schedule”. In this case, FEI has made the expenditure on the facilities and the final cost is known.

11. Section 44.2 sets out factors that the Commission must consider in assessing FEI’s application. Section 44.2(5) provides in part:

(5) In considering whether to accept an expenditure schedule filed by a public utility other than the authority, the commission must consider

(a) the applicable of British Columbia’s energy objectives,

(b) the most recent long-term resource plan filed by the public utility under section 44.1, if any,

...

¹⁰ BCUC 2.28.1.

¹¹ The language of section 44.2(1), i.e. “A public utility may file...”, is permissive. FEI’s obvious alternative to seeking Section 44.2 approval would have been to address these expenditures after the fact in the context of the next revenue requirements application.

(e) the interests of persons in British Columbia who receive or may receive service from the public utility.

12. “British Columbia’s energy objectives” are defined in s. 2 of the *Clean Energy Act* (“CEA”) and apply to FEI as a public utility. The applicability of “British Columbia’s energy objectives” to applications for approval of expenditure schedules under section 44.2 of the UCA, among other sections,¹² speaks to Government’s intention to use cost-effective investments by public utilities to help achieve targeted reductions of GHG emissions, greater energy efficiency, and other public policy goals.

13. Each of (a), (b) and (e) above is relevant in the context of FEI’s investment in facilities to serve WM. In particular:

- First, FEI’s most recent Resource Plan, the 2010 Terasen Utilities Long-Term Resource Plan (“LTRP”), reiterated the Company’s concern about declining throughput, attributable in part to declining use per customer rates, which increases upward pressure on delivery rates and also represents a long-term stranding risk for the distribution system assets as a whole.¹³ As discussed in Part Three, Section A, NGVs represent one of the best opportunities to mitigate the adverse delivery rate impact on existing customers flowing from this declining throughput.
- Second, section 44.2(5)(e) requires the Commission to assess the public interest from the perspective of both existing customers and potential customers of FEI.¹⁴ As discussed in Part Three, Section B, in addition to benefits to existing non-bypass customers, FEI’s investment in NGV fuelling facilities also benefits the potential NGV customer.
- Third, “British Columbia’s energy objectives” support the introduction of CNG/LNG Service because, for instance, NGVs reduce GHG emissions through high-to-low carbon fuel switching. This is discussed in Part Three, Section C.

¹² “British Columbia’s energy objectives” apply only to applications brought under sections 44.1, 44.2, 46, and 71 of the UCA. Unlike section 44.2 and other sections of the UCA, the “public interest” is not referenced in the rate setting provisions of the UCA.

¹³ An excerpt from the 2010 LTRP dealing with declining use rates is attached to the response to CEC 3.4.1 (Attachment 4.1), and is further discussed in BCOAPO 3.4.1.

¹⁴ In fact, potential NGV customers are also likely to be existing customers of FEI in many instances for other end use applications.

14. The Commission's consideration of whether a utility investment is in the public interest is a distinct issue under the UCA from the question of what customer(s) should bear the cost and risk or receive the benefit of a utility investment. The latter consideration is a rate design issue, and must be addressed under the legal framework set out below.

C. "JUST AND REASONABLE" RATES

15. FEI is seeking approval under sections 59-61 of the UCA for the proposed CNG/LNG Service rate design. The applicable legal test under sections 59-61 is whether the WM Agreement, i.e. the specified terms and conditions of service applicable to WM,¹⁵ and GT&Cs represent "just and reasonable" rates. In this Section, FEI addresses the considerations that go into determining "just and reasonable" rates. FEI submits that the WM Agreement and GT&Cs are "just and reasonable" because, for the reasons set out in Part Four of this Submission, they provide for an appropriate allocation of costs, risks and benefits consistent with the statutory requirements.

16. Section 60(1) of the UCA states that in setting a rate, the Commission "must consider all matters that it considers proper and relevant affecting the rate", and must have due regard to the setting of a rate that is "not unjust or unreasonable within the meaning of section 59". In order to be "just and reasonable" a rate must therefore meet the criteria set out in section 59(5) of the UCA, which provides:

(5) In this section, a rate is "unjust" or "unreasonable" if the rate is

(a) more than a fair and reasonable charge for service of the nature and quality provided by the utility,

(b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or

(c) unjust and unreasonable for any other reason.

¹⁵ The UCA defines "rate" to include contracts for service. Rate "includes ... (b) a rule, practice, measurement, classification, or **contract** of a public utility or corporation **relating to a rate**, and (c) a schedule or tariff respecting a rate." [Emphasis added.]

17. In the Commission's December 16, 2009, decision in the Terasen Utilities' ROE and Capital Structure Application, the Commission described the above framework as follows:

The Commission's mandate is to ensure that ratepayers receive safe, reliable and non-discriminatory energy services at fair rates from the public utilities it regulates, and that shareholders of those public utilities are afforded a reasonable opportunity to earn a fair return on their invested capital. The process to establish a fair return and just and reasonable rates is enshrined in the UCA where "the commission must consider all matters that it considers proper and relevant affecting the rate" and in doing so it must have due regard to the setting of a rate that "is not unjust or unreasonable" within the meaning of section 59 (of the Act). [UCA, ss. 60(1)(a) and (b)(i)]¹⁶

18. The CNG/LNG Service rate design is concerned with allocating costs, balancing the risk, and allocating the rewards, associated with investments in fuelling assets. FEI submits that the proposed rate design results in CNG/LNG customers paying a "fair and reasonable charge" for service when assessed from the perspective of the NGV customer, existing customers and the shareholder. The rates specified in the WM Agreement, and the rates to be charged under the framework established by the GT&Cs, accord with basic cost of service ratemaking principles.¹⁷ The rate design leaves significant benefits for existing customers, while insulating existing customers from investment risks to a considerable degree. Although the rate design requires more of potential NGV customers than is required of other types of new customers, it is not so onerous on NGV customers so as to preclude take-up of the service. The assessment of the proposed rate design must be more nuanced than simply seeking to maximize the protection afforded to existing customers, as the terms and conditions of service cannot represent more than a "fair and reasonable charge" for the service. The evidentiary basis for approving the WM Agreement and the GT&Cs applicable to future service agreements is addressed in Part Four below.

¹⁶ *In the Matter of Terasen Gas Inc. et al Application to Determine the Appropriate Return on Equity and Capital Structure and to Review and Revise the Automatic Adjustment Mechanism*, Decision, March 2, 2006, p. 7. See also the Commission's decision in BC Hydro's 2007 Rate Design Application – Phase 1, p.1.

¹⁷ Rates that recover the utility's cost of service, including the regulated return on equity invested, have been approved by the Commission as being "just and reasonable" in numerous past decisions. For instance, in BC Hydro's 2007 Rate Design Application – Phase 1 the Commission applied cost of service analysis, determining that customer rate classes should move towards a revenue-to-cost ratio of unity on a forecast basis, within a narrow zone of reasonableness: see Phase 1 Decision, p.70.

PART THREE: INVESTMENT IN FUELLING FACILITIES TO SERVE WM IS IN THE PUBLIC INTEREST

19. Natural gas must be converted to CNG or LNG for use in NGVs (as the pressure on FEI's distribution system is too low)¹⁸ and dispensed from a purpose-built fuelling facility. FEI's approximately \$700,000 investment in CNG facilities and infrastructure was thus required to provide CNG Service to WM under the WM Agreement.¹⁹ In this Part, FEI identifies the four key reasons why investing to make natural gas available to WM in a usable form is in the public interest:

- First, WM's natural gas load provides an immediate and lasting benefit to existing gas customers through lower delivery rates, all else equal;
- Second, WM obtains the benefits of lower fuel costs relative to diesel, relative fuel price stability during the contract term, and a reduced carbon footprint;
- Third, enabling WM's adoption of NGV supports government policy, including "British Columbia's energy objectives" applicable to the regulation of public utilities; and
- Fourth, FEI's investment provides an immediate "kick-start" to BC's long-stagnant NGV market.

These reasons track the considerations enumerated in section 44.2(5), as described in Part Two above, as they account for the interests of both existing and potential NGV customers, key aspects of the 2010 LTRP, and "British Columbia's energy objectives." FEI submits that, based on the submissions below, the Company's investment in the fuelling facilities required to serve WM should be accepted pursuant to section 44.2 of the Act.

A. BENEFIT TO EXISTING CUSTOMERS THROUGH LOWER DELIVERY RATES

20. The effect on existing customers of FEI's investment in NGV fuelling facilities is an important aspect of the Commission's public interest assessment under section 44.2 of the UCA. In this Section "A", FEI describes the benefits to existing customers. WM's additional

¹⁸ Application, pp.19-20.

¹⁹ Application, pp. 46 and 50.

natural gas load, which was made possible by FEI's investment, brings immediate and lasting delivery rate benefits to existing customers. Future investments in similar CNG/LNG fuelling facilities can similarly be expected to yield delivery rate benefits.

(a) Changes in Natural Gas Throughput Affects Existing Customers

21. The addition of cost-effective NGV load on the FEI distribution system favourably affects customer delivery rates in two ways:

- First, delivery costs are shared over more GJs of natural gas, thus reducing the delivery charge per GJ; and
- Second, adding NGV load is one of a few means available to FEI to combat declining throughput that, left unchecked, will continue to contribute to a higher cost of capital over time.

22. The first benefit to existing customers identified above flows from the way in which natural gas delivery rates are calculated. Natural gas delivery rates are determined by taking the forecast delivery costs and dividing them by forecast throughput, meaning that delivery rate changes over time include changes in demand as well as changes in the cost of service. The effect of determining delivery rates in this manner is that delivery rates increase, all else equal, when throughput on the FEI distribution system decreases and the system costs must be recovered over fewer GJs. Conversely, delivery rates decrease, all else equal, when throughput increases. Hence, it is beneficial to existing customers in a direct financial sense when FEI can add cost-effective natural gas load, regardless of the end use.²⁰ Load is cost-effective from the perspective of utility customers, by definition, where the delivery rate benefit of adding more GJs of load over which costs can be spread offsets the increase in delivery rates associated with investing to add the load.

23. In recent years, FEI has experienced declining throughput due to, among other things, declining natural gas use per customer rates for traditional heating applications. Use per customer is one of a number of factors that affects the number of GJs of load over which system costs can be recovered. Declining use rates, which lead to declining throughput, have

²⁰ Application, Section 3.1.

an unfavourable effect on delivery rates (all else equal). There are a variety of factors which appear to be contributing to declining use per customer rates, significant among which is the greater penetration of high efficiency appliances and the use of other energy forms.²¹ FEI has every expectation that this downward trend in use rates among core customers will continue, and that existing customers will continue to face greater upward pressure on delivery rates.²² FEI's 2010 Long-Term Resource Plan forecasted average Residential use rate declines of approximately 1% per year for 2012 to 2030.²³ An annual 1% decline in Residential use rates results in a forecast delivery rate increase of \$39 million, or 7.2%, in 2030.²⁴

24. Another way in which declining throughput adversely affects delivery rates over time is through the cost of capital. The upward pressure on delivery rates associated with declining use rates represents a long-term business risk²⁵ to the Company. Increased delivery rates (all else equal) affect the competitiveness of natural gas as an energy choice relative to other energy alternatives. As customers leave the natural gas system in favour of other energy alternatives, the upward pressure on delivery rates increases, and ultimately there is a risk that the system assets as a whole may become stranded. In relative terms, the potential for an unchecked "utility death spiral" is a much more significant risk than the risk of stranding of a small portion of the investment in NGV fuelling infrastructure that cannot be re-deployed.²⁶ As the overall risk profile of the Company becomes less favourable, debt and equity investors will

²¹ CEC 2.4.2.

²² BCOAPO 3.4.1; CEC 3.4.1, Attachment 4.1; BCUC 2.35.1.

²³ BCOAPO 3.4.1.

²⁴ BCOAPO 3.4.1 and CEC 2.11.1. Another good illustration of the impact that declining throughput has on delivery rates is the comparison provided in BCUC 2.7.3 between the approved delivery rate increases year-over-year since 2004, with what they would have been during the same period excluding the impact of declines in use rates. See also BCUC 2.7.3.1.

²⁵ In the recent ROE Decision, at p. 18 (quoting from the March 2, 2006 ROE decision, at p. 17) the Commission defined "investment risk", which is the risk for which investors in securities are compensated, as consisting of "the sum of business risk, financial risk and regulatory risk". The Commission stated: "Business risk is the risk that the utility will not be able to earn a return on its capital or [of particular relevance to declining throughput] *of its capital.*" [Emphasis added.] It accepted the evidence that business risk stems from the uncertainty in the demand for a company's product. TGI had identified use per customer as a business risk (see ROE Decision, p.20). *In the Matter of Terasen Gas Inc. et al Return on Equity and Capital Structure*, Decision, December 16, 2009.

²⁶ CEC 3.4.2.

command a higher return on their investment in the utility business. The higher cost of capital must be recovered through delivery rates as part of the Company's natural gas revenue requirement.²⁷

25. The financial impacts on existing customers from declining throughput thus make it imperative that the Company find ways to add cost-effective load, regardless of the end use.

(b) NGVs Present Opportunity to Add Cost Effective Load

26. Government policy regarding GHG emissions and public perception of natural gas as less "green" than electricity for heating applications, among other factors, make it more difficult now than in the past to combat declining use rates by adding load from traditional end uses. NGV represents one of the few opportunities available to FEI to add cost-effective natural gas load and mitigate declining use per customer rates among core customers.²⁸ As discussed in Part Four, the contractual model that underlies the proposed rate design ensures that system additions to serve NGV remain tied with committed demand.

27. The "take-or-pay" volume under the WM Agreement is approximately 19,000 GJ per year, and the forecast load is 21,000 GJ of load per year.²⁹ This represents additional throughput on FEI's distribution system each year for at least the 10 year initial contract term. To put the WM load in context, 21,000 GJ per year is the equivalent of FEI adding 221 average Lower Mainland residential customers.³⁰ In 2009, FEI added just over 8,000 residential customers representing approximately 760,000 GJs. The annual load under the WM Agreement alone will thus represent 3% of the residential load added in 2009. FEI would need only 36 NGV

²⁷ In the 2006 ROE decision, the Commission held: "In coming to a conclusion on a fair return, the Commission does not consider the rate impacts of the revenue required to yield the fair return. Once the decision is made as to what is a fair return, the Commission has a duty to approve rates that will provide a reasonable opportunity to earn a fair return on invested capital." *Terasen Gas Inc. et al Application to Determine the Appropriate Return on Equity and Capital Structure and to Review and Revise the Automatic Adjustment Mechanism*, Decision, March 2, 2006, p. 8.

²⁸ BCOAPO 2.2.1.

²⁹ BCUC 1.9.1.

³⁰ Assuming 95 GJ/year, which is based on the average Lower Mainland residential customer: BCUC 3.10.1.

stations with the same “take-or-pay” demand as the WM Agreement to add, on an annual basis, the equivalent residential load added in all of 2009.³¹

28. The forecast incremental delivery margin from an additional 21,000 GJs throughput on the FEI delivery system associated with the WM Agreement is approximately \$40,000 per year. On a present value basis, this amounts to \$337,000.³² The NPV of the WM investment will improve further if actual volumes are greater than forecast (i.e. more kilometres are driven and/or additional trucks are added to the fuelling station).³³ WM has a target of 100 NGVs operating from its site.³⁴ Since the NGV customer pays a contractual cost of service-based rate that recovers the cost of service occurring during the contract term on a present value basis,³⁵ the full value of these benefits accrues to existing customers.

29. FEI anticipates that the load associated with future fuelling facilities will also be appreciable. Projects that FEI is evaluating at present range from 6,000 GJ/year to 140,000 GJ/year, which is comparable to large commercial or industrial customers.³⁶ The Vedder Transport project, which is currently underway, is expected to involve 50 LNG vehicles (138,000 GJ/year) and will provide a net delivery rate benefit (after accounting for incremental O&M) of \$258,000 per year.³⁷ Delivery rate benefits are likely to extend beyond the initial contract term in many instances as the fleet owner will likely continue to see benefits with operating NGVs,

³¹ Application, p. 23.

³² Schedule 12 of the financial analysis contains an NPV analysis that showed a very modest negative NPV of negative \$5,000 over 20 years. The small negative NPV is a function of FEI’s overheads capitalized policy that has been endorsed by the Commission: BCUC Confidential 2.4.2. However, that analysis excluded the forecast incremental delivery margin of approximately \$40,000 per year from WM’s additional throughput on the FEI delivery system. The incremental delivery margin was excluded from Schedule 12 because the cost of service model was designed to show the impacts of the fuelling station and compression revenue on a stand-alone basis. FEI submits that projects should be evaluated accounting for the beneficial rate impacts.

³³ BCUC Confidential 1.7.1 and 2.4.2.

³⁴ BCSEA 3.29.3.

³⁵ BCUC Confidential 1.15.1, 1.15.2 and BCUC Confidential 2.5.1. The rate design is discussed further in Part Four of these Submissions.

³⁶ CEC 2.1.2.

³⁷ BCUC 2.25.2, 2.26.1.

and there are also practical impediments to converting NGVs purchased during the contract term to conventional fuel.³⁸

30. Over the long-term, the heavy duty transportation sector in BC represents a large potential opportunity to increase natural gas throughput on the FEI system and offset some of the effect of declining use rates.³⁹ As indicated above, the forecasted 1% decline in Residential use rates between 2012 and 2030 results in a forecast delivery rate increase of \$39 million, or 7.2%, in 2030.⁴⁰ The delivery rate benefit of NGV load, based on the forecasts in Appendix A-1 of the Application and net of Demand Side Management (“DSM”)/Energy Efficiency and Conservation (“EEC”) costs, is a forecast reduction to delivery rates of \$82.5 million, or 15.2% in 2030. The expected load thus more than offsets the delivery rate pressure of a 1% decline in Residential use rates and results in a net delivery rate decrease (all else equal) of \$42.4 million, or 8.0%, in 2030.⁴¹ While forecasts are inherently uncertain, this data clearly identifies the significant potential upside of pursuing NGV load. The Application does not turn on any particular market forecast materializing, however, because the proposed rate design permits FEI to invest only where contracted “take-or-pay” demand exists. The rate constructs ensure that investments in NGV fueling facilities will only be made where they are expected to deliver net benefits from the perspective of existing customers.⁴²

31. Unlike heating load additions, the load profile for NGVs does not present peak supply challenges.⁴³ NGV load tends to be flat and predicable (i.e. high load factor), which can improve system efficiencies.⁴⁴ The Company expects that there is adequate system capacity to serve many incremental NGV customers, with impacts on system capacity being localized. Each

³⁸ BCOAPO 3.2.1.

³⁹ BCUC 2.35.1.

⁴⁰ BCOAPO 3.4.1 and CEC 2.11.1. Another good illustration of the impact that declining throughput has on delivery rates is the comparison provided in BCUC 2.7.3 between the approved delivery rate increases year-over-year since 2004, with what they would have been during the same period excluding the impacts of declines in use rates. See also BCUC 2.7.3.1.

⁴¹ Application, p. 24.

⁴² BCUC 2.34.1.

⁴³ CEC 2.1.2.

⁴⁴ BCUC 2.35.1.

NGV customer will be subject to the MX Test in the normal course to ensure that any required system upgrades to bring natural gas to the CNG/LNG fuelling facility are economic for the system or are recovered from the NGV customer through a Contribution in Aid of Construction (“CIAC”).⁴⁵

32. There is available capacity in the Tilbury facility, as indicated by the fact that over the past 40 years it has never been fully depleted to service send-out demand. The 1040 GJ/day limit on LNG use under Rate Schedule 16 will likely not be reached until 2015.⁴⁶ Future additions to Tilbury to expand its capacity to serve NGV customers would require a strong business case to proceed, and any investments would be the subject of a future Commission process.

(c) Summary of Benefits to Existing Customers

33. There is a cost and risk associated with adding any new load, regardless of the end use; however, the CNG/LNG Service rate constructs discussed in Part Four below mitigate the risk to existing customers to a considerable extent. There is a high likelihood of existing customers being better off as a direct result of FEI’s investment in the WM facilities and other similar investments backed by similar long-term contracts.

B. FEI’S INVESTMENT FACILITATES DELIVERY OF VALUABLE SERVICE TO WM CUSTOMERS

34. The Commission’s assessment under section 44.2 of the UCA requires consideration of the interests of potential customers - in this case, WM - and not just existing customers.⁴⁷ In this Section, FEI addresses the benefits to WM, including:

- operating cost savings due to favourable natural gas costs relative to diesel and gasoline;
- reduced fuel cost volatility as compared to diesel and gasoline; and
- reduced GHG emissions for WM’s fleet.

⁴⁵ BCSEA 2.26.1.

⁴⁶ BCUC 3.19.2, 3.21.1.

⁴⁷ Section 44.2(5)(e) of the UCA, discussed in Part Two.

Similar benefits can be expected to flow to future return-to-base NGV fleet owners. FEI submits that these benefits support a finding that it is in the public interest for FEI to make the necessary investments to provide access to natural gas in a usable form.

(b) Operating Cost Savings for Fleet Owners

35. Fleet owners like WM can save on operating costs over time by adopting NGVs and taking CNG/LNG Service facilitated by FEI's contractually-backed investment in fuelling facilities. The savings flow from the difference in price between natural gas and diesel. Natural gas has held a price advantage over diesel over the past 10 years, with the gap widening since 2005.⁴⁸ Market indications, as reflected in the forward market prices, show that natural gas is likely to retain its price advantage over incumbent fuels for the foreseeable future.⁴⁹ Once any vehicle conversion costs have been recovered, the natural gas-diesel pricing differential represents cost savings for the fleet owner. The typical payback of conversion costs for a return-to-base heavy-duty fleet operator (FEI's target market) switching from diesel to CNG is approximately four to six years.⁵⁰

36. The fact that take-up of NGVs have been slow despite a relatively short payback period suggests that other barriers are present. FEI has the capacity to address at least two of these barriers through cost-effective investments. DSM incentives along with other grants can address the barrier of incremental up-front capital costs associated with NGVs where it is cost-effective to do so, as measured against the established tests for assessing DSM incentives.⁵¹ FEI's proposed CNG/LNG Service will address the fact that natural gas is not widely available in

⁴⁸ Application, p. 28.

⁴⁹ Application, p. 31.

⁵⁰ Application, pp. 29-30.

⁵¹ DSM, or EEC, incentive funding is distinct from the CNG/LNG Service cost of service, and is not predicated on the fleet owner having to obtain CNG/LNG Service from FEI. The cost-effectiveness of DSM incentive funding is evaluated using approved evaluation mechanisms, significant among which is the total resource cost (TRC) test. In the case of BC utilities, incentive funding is not recovered from the recipient, and instead forms part of the utility's overall revenue requirement; to do otherwise largely defeats the purpose of providing the incentive. In Order No. G-6-11, the Commission confirmed that the appropriateness of DSM incentive funding for NGVs will be addressed in a separate process.

a useable form for NGVs, without requiring a fleet owner to incur the up-front capital cost of fuelling facilities that might preclude take-up.

37. The potential to save on fuel costs will represent a significant impetus for fleets to adopt NGV, thus reinforcing the importance of having a rate design (discussed in Part Four) that allows those benefits to remain with the NGV customer rather than being transferred to existing customers. For the purposes of the public interest assessment under section 44.2 of the UCA, however, the fact that there is a fuel cost advantage is the relevant consideration.

(c) Relative Price Stability

38. The second way in which fleet owners like WM benefit from FEI investing in facilities required to make natural gas available in a usable form is that natural gas as a vehicle fuel will tend to be subject to less price volatility than diesel or gasoline. This relates primarily to the fact that the delivery rate component of natural gas service represents a significant component of the total fuel cost paid by the NGV customer, and it is set annually. FEI has mechanisms to reduce volatility of the commodity cost. The NGV customer also has the option of purchasing the commodity under rates where the commodity price is set on a quarterly basis. Diesel and gasoline, by contrast, are priced according to constant fluctuation more akin to a spot market, and the cost of delivery (tanker) represents a smaller component of the delivered cost of diesel or gasoline.⁵² The value of the reduced volatility to fleet owners will depend on the fleet owner's specific circumstances and the price elasticity of the markets in which they compete (e.g. can the fleet owner pass on the cost variances to its own customers).⁵³

39. As with the fuel cost savings, the allocation of the benefit associated with relative rate stability was raised as an issue in IRs. The allocation of benefits as between existing customers and potential CNG/LNG Service customers is the subject of rate design (which is addressed in the next Part of these Submissions) and the issue only arises because

⁵² Application, p. 33; BCUC 2.31.1; BCSEA 2.24.1, 2.24.3.

⁵³ BCUC 2.31.2.

FEI's investment has made the benefits available. The existence of the benefits speaks to the public interest.

(d) Reduced Carbon Emissions

40. The third way in which FEI's investment can benefit fleet owners like WM is by enabling fleet owners to access a lower carbon fuel relative to diesel or gasoline, and thus reduce their GHG emissions. There will be businesses that wish to employ measures to reduce their carbon footprint as a matter of principle. The reduced carbon output associated with CNG and LNG relative to diesel may also create competitive advantages for the fleet owner that complement the fuel cost savings. An increasing number of municipalities have introduced procurement policies which favour clean air standards for garbage trucks. WM, as a fleet operator running NGVs, may hold an advantage in winning competitive bid contracts due to the GHG savings associated with NGVs. Public service organizations or municipalities that have made commitments to be carbon neutral will also see benefits from NGVs.⁵⁴

41. The allocation of any carbon credits that might flow from GHG reductions as between the existing customers and the potential NGV customer will affect the benefit that fleet owners will see from GHG reductions, and can thus affect the attractiveness of NGV relative to conventional fuels. It might well be desirable to secure these benefits for existing customers if commercial considerations permit, but it is necessary to weigh this potential benefit against the potential that demanding a right to carbon credits could preclude adding the load at all. The importance of preserving flexibility over the allocation of this GHG benefit is addressed in Part Four, in the context of discussing the proposed rate design. For the purposes of the public interest assessment under section 44.2 of the UCA, however, the fact that the GHG benefits exist and are available to be allocated is the relevant consideration.

⁵⁴ Application, p. 33.

(e) Future CNG/LNG Service Customers

42. Negotiations are underway with other potential NGV customers.⁵⁵ FEI included in the Application 18 letters of support, including 11 potential customers, 5 potential project partners, and one industry association.⁵⁶ The support from potential customers demonstrates the growing recognition among fleet owners that NGV may present a good option for them.

C. CNG/LNG INVESTMENT ADVANCES “BRITISH COLUMBIA’S ENERGY OBJECTIVES”

43. The CEA and consequent amendments to the UCA place public utilities front and centre in the Province’s initiatives to combat climate change. The Commission must now consider “British Columbia’s energy objectives” in applications for public interest approval of utility investments, among other things. In this Section, FEI identifies the relevant policies and legislated energy objectives, and explains how FEI’s investment in the WM fuelling facilities advances those objectives by promoting the adoption of energy efficient technology, and by facilitating a reduction in GHG emissions. Government policy thus provides an additional justification for NGV load building that will be beneficial to existing and potential natural gas customers in any event.

(b) Advancement of Policy Objectives

44. The 2007 Energy Plan forms the cornerstone of provincial energy policy, and it provides unequivocal support for NGVs. For instance, the 2007 Energy Plan states: “The government is committed to reducing greenhouse gas emissions from the transportation sector and has committed to adopting California’s tailpipe emission standards from greenhouse gas emissions and champion the national adoption of these standards.” It identified natural gas as a cleaner option in this sector: “Natural gas burns cleaner than either gasoline or propane, resulting in less air pollution.”⁵⁷ Government policy thus generally places a new focus on NGVs, laying the groundwork for increased utilization of this technology in British Columbia. The

⁵⁵ FEI discusses the Kelowna School District project currently in the works in BCUC 2.14.1 and 2.24.2. The Vedder Transport project is discussed in BCUC 2.25.1.

⁵⁶ Application, Appendix F.

⁵⁷ Application, p. 36.

Provincial Government has given effect to policies set out in the 2007 Energy Plan in legislation, key among which is the CEA and the accompanying amendments to the UCA.⁵⁸ “British Columbia’s energy objectives” apply to CPCN applications under section 45 of the UCA and applications brought under section 44.2 (among other sections), both of which relate to utility capital investments. This link between public utility capital investments and “British Columbia’s energy objectives” is explicit recognition that Government intends public utilities to be investing in cost-effective initiatives and facilities that advance the legislated objectives.

45. FEI’s cost-effective investment in facilities to serve WM’s NGV fleet advances “British Columbia’s energy objectives” in two important ways:⁵⁹

- First, objective (d) is “to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources”. WM is using BC-developed engine technology to permit the efficient use of natural gas in substitution for higher emitting diesel fuel.⁶⁰
- Second, objective (g) is “to reduce greenhouse gas emissions ...” and objective (h) is “to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia.” WM’s conversion from diesel to natural gas, which required FEI’s investment in NGV fuelling facilities, will reduce GHGs by approximately 214 tonnes annually.⁶¹ The GHG savings associated with the WM Agreement is the equivalent of taking 41 cars off the road, or removing the emissions impact of 221 typical residential customers.⁶² A fleet expansion will be accompanied by additional GHG reductions.⁶³

The proposed investment is not detrimental to any of the other “British Columbia’s energy objectives”.

⁵⁸ Application, pp. 34-40 provides further detail about the policy framework that supports the development of facilities that permit the adoption of NGVs.

⁵⁹ Application, p. 45.

⁶⁰ BCUC 1.7.3.

⁶¹ BCSEA 1.3.1 explains the derivation of this number using NRCan’s GHGenius model.

⁶² Application, pp. 47, 51. Table 3-6 in the Application summarizes how FEI’s investment in the WM facilities, backed by a “take-or-pay” contract with cost of service based rates, supports British Columbia’s energy objectives.

⁶³ WM has identified a target of 100 NGVs operating from its site: BCSEA 3.29.3.

46. The Province endorsed FEI's plan to pursue NGV initiatives in the most recent RRA, stating: "The Ministry supports the expanded use of natural gas for vehicles (NGV) and biogas (sic), and is encouraged that FEI intends to apply to the Commission for appropriate rates."⁶⁴

(c) Policy Issues Should Not Hold Up Benefits to Customers

47. In the 2010 Resource Plan Decision, the Commission referenced FEI's NGV initiative, along with the approved Biomethane and integrated energy systems rate structures, in the context of expressing its concern about how the Commission "can oversee the evolution of a traditional utility in the new *Clean Energy Act* environment from the regulatory standpoint".⁶⁵ FEI understands that the evolution of public utilities to integrated energy providers is an important issue that the Commission has indicated it may wish to consider in a comprehensive manner going forward. However, the investment contemplated in this Application, while it advances Provincial policy, is fundamentally an investment in FEI's natural gas business for the benefit of existing and potential natural gas customers.

48. Leaving aside any consideration of whether FEI's investments advance public policy, an appropriate response of any gas utility facing declining throughput is to take cost-effective measures to increase throughput. Declining throughput was an issue well before the 2007 Energy Plan and "British Columbia's energy objectives" placed public utilities at the forefront of advancing Provincial policy. The core of FEI's natural gas business has always been space and water heating customers and industrial load for processing, but NGVs have long been regarded as a potential means of adding throughput. FEI had a regulated compression and dispensing (CNG) service offering between 1988 and 2000.⁶⁶ Although the initial attempt to build NGV load by offering CNG service ultimately did not gain lasting traction and the assets were sold for less than book value in 2000, the CNG service had by that time provided material

⁶⁴ BCUC 2.30.1, Attachment 30.1. Also, Exhibit E-1 in this proceeding is a letter of support from Barry Penner, MLA.

⁶⁵ *In the Matter of Terasen Utilities 2010 Long Term Resource Plan*, Decision, February 1, 2011, p. 27.

⁶⁶ Order No. G-143-99, January 6, 2000, approved the sale of the related assets and ordered FEI to amend the rate schedules to indicate that the Company no longer provided a regulated compression and dispensing service.

additional throughput and associated delivery rate benefits.⁶⁷ FEI has maintained an open rate schedule (Rate Schedule (“RS”)-6) that permits FEI to offer natural gas for NGVs (but which requires compression to make it usable) dating back to that original offering, and it continued to have customers after FEI sold the CNG fuelling station assets.⁶⁸ During the period from 1988 to 2009, the Company delivered 10.9 million GJs under RS-6.⁶⁹ A new CNG/LNG Service rate offering that allows FEI to deliver the RS-6 natural gas in a usable form to NGV customers will augment traditional load and benefit all customers. The concerns of stakeholders regarding the past sale of fuelling station assets for less than net book value has been addressed in this Application through a more conservative rate design approach.

(d) Summary Regarding Advancement of Public Policy

49. The fact that FEI’s investment in facilities that are required to permit WM to adopt NGVs aligns with “British Columbia’s energy objectives” and government policy supports FEI’s position that the investment is in the public interest. Any future cost-effective investment in fuelling stations for NGV “return to base” fleet customers can similarly be expected to support “British Columbia’s energy objectives”. FEI acknowledges the Commission’s interest in understanding the full implications of the new policy framework for public utility regulation in the context of new service offerings; however, it would be contrary to the public interest were the Commission to hold up a beneficial offering for that reason. FEI submits that the Company’s investment in the WM fuelling facilities should be approved at this time as being in the public interest as the investment is beneficial and appropriate, even from the narrow perspective of a “traditional” natural gas utility.

⁶⁷ BCOAPO 3.1.1.

⁶⁸ Rate Schedule 6 is for delivery to a fuelling station; the natural gas requires further compression to be used which is where the proposed offering comes in to play. More recently, FEI obtained approval for a pilot Rate Schedule 16 to offer LNG for NGVs at the Tilbury LNG Facility. Both Schedules are included in Appendix C of the Application.

⁶⁹ BCOAPO 3.1.1.

D. OTHER PUBLIC INTEREST CONSIDERATIONS: FEI'S ROLE IN THE NGV MARKET

50. The complexities of owning and operating fuelling station assets are beyond the typical capabilities of most fleet managers, who do not have experience owning and operating assets for the delivery of high pressure gas or cryogenic fuel.⁷⁰ In most cases, some entity with expertise in the CNG/LNG business must be involved in order to secure NGV load. FEI is proposing to be a source of investment in these facilities and to provide CNG/LNG Service, without precluding any other party from providing a similar service. In this Section FEI explains why it is appropriate for the Company to invest in facilities as regulated assets. FEI submits that:

- FEI's investment is "kick-starting" the market; and
- Mandating that assets be held in a Non-Regulated Business ("NRB") would be inappropriate and counterproductive.

The WM Agreement is evidence that there is demand for FEI's proposed regulated CNG/LNG Service. TGI should be proceeding presently to meet that demand and thus capture the benefits described above.

(a) "Kick-Starting" the Market

51. The FEI is not aware of other businesses with the expertise and technical capability that have committed to developing the BC fuelling station market.⁷¹ Although other non-regulated options have been available in this market for quite some time (exercised by such firms as Clean Energy and BC Transit) the market has failed to develop in such a way that would ensure our existing customers benefit from the increased throughput.⁷² The number of stations in BC has declined from 52 in 2002 to 16 today.⁷³ WM, which is currently taking service under the WM Agreement on an interim basis, is the first new heavy duty commercial NGV fleet in BC in recent years. The market, simply put, had stagnated prior to FEI's involvement in

⁷⁰ BCUC 2.30.1.

⁷¹ BCUC 2.37.1.

⁷² BCUC 1.2.2.

⁷³ Application, Appendix A-2, p.12.

promoting CNG/LNG Service as a regulated service.⁷⁴ It is reasonable to conclude that, if FEI does not provide the service, the potential to build NGV load on FEI's system and deliver the attendant benefits will be delayed.

52. In the recent 2010 LTRP Decision⁷⁵ the Commission raised the issue of whether there is a "risk of unfair advantage enjoyed by the utility which could undermine creation of new competitive enterprises." However, the Commission had previously considered the issue of competition, and concluded that its jurisdiction to consider competitive issues is limited to considering the impact of competition on customers (because competition generally is a Federal, not Provincial, head of power under the Canadian Constitution).⁷⁶ Both existing customers and potential NGV customers benefit from the immediate involvement of FEI, which has proven expertise and knowledge, a reputation as a safe and reliable integrated energy provider, and a singular BC focus.⁷⁷ In addition, to the extent customers have an interest in other providers of CNG/LNG services becoming engaged in BC:

- First, there are currently no other providers of CNG and LNG fueling service vying for market share, making this issue largely academic in the present context. The WM project is the first NGV project in BC in almost ten years.⁷⁸
- Second, FEI's proposal leaves other operators involved in the business of providing CNG and LNG services free to pursue projects.
- Third, FEI is targeting only one market segment, i.e. heavy-duty return-to-base fleets.

FEI submits that, considering the issue from the perspective of customers of FEI and owners of fleets considering NGV, it is in the public interest to proceed now with a beneficial service and not to insulate other potential providers of CNG/LNG Services from competition from a respected provider of natural gas services like FEI.

⁷⁴ Appendix A-2, Fig. 2-1 and 2-2 shows the decline of the NGV market in BC in the period where only the non-regulated option existed. The decline was caused by a number of factors explained in the Appendix.

⁷⁵ *In the Matter of Terasen Utilities 2010 Long Term Resource Plan*, Decision, February 1, 2011, p. 27.

⁷⁶ In the RMDM Guidelines, April 1997, the Commission adopted the legal opinion of Commission Counsel, Mr. Fulton to this effect. See p. 8.

⁷⁷ BCUC 2.37.3. FEI is precluded from marking up the cost of the commodity.

⁷⁸ Application, Appendix A-2, p.12.

(b) Relegating CNG/LNG Assets to an NRB

53. BCUC 1.2.1 characterized NGV as an opportunity for FEI to expand its business and earning opportunities, and asked whether, for this reason, the fuelling station assets should be held by an NRB. FEI submits that mandating that assets be held in a NRB as a means of harnessing delivery rate benefits for existing customers with the risk borne entirely by shareholder would be inappropriate and counterproductive. FEI submits that it is equitable and consistent with the regulatory compact for the regulated utility to make investments intended to combat declining throughput and ensure the long-term viability of the utility for the benefit of both customers and the shareholder. The customers' interest in adding cost effective load is in reduced delivery rates (all else equal), while the shareholder is seeking to ensure that its investment in the total distribution system assets can be recovered in the long-term. These interests are aligned. In this respect, the proposed investment is no different from other utility investments associated with adding customers and throughput. For this reason, FortisBC Holdings Ltd. (formerly Terasen Inc.) is interested in owning and operating NGV fuelling stations only through its regulated utility subsidiaries, so that the risks associated with the investment, albeit modest, are properly borne by all beneficiaries of the investment under the regulatory compact.⁷⁹

54. The notion that the CNG/LNG Service should be held by an NRB appears to be driven in part by a misconception about the applicability of the Residential Markets Downstream of the Utility Meter ("RMDM") Guidelines to CNG/LNG Service.⁸⁰ The RMDM principles are inapplicable, as the following three points demonstrate:

- First, the RMDM Guidelines were established in the context of FEI expanding in to the area of selling and servicing domestic furnaces to residential customers. In other words, they were developed to apply (as the name suggests) to the *residential* market. FEI's previous regulated offering of CNG service coexisted with the 1997 RMDM Guidelines until 2000 when the fuelling assets were sold.⁸¹

⁷⁹ BCUC 2.29.1.

⁸⁰ BCUC 3.29.1.

⁸¹ Order G-143-99, January 6, 2000 approved the sale of the related assets and ordered FEI to amend the rate schedules to indicate that the Company no longer provided a regulated compression and dispensing service.

FEI has an approved pilot for LNG service. FEI submits that what really differentiates this proposed offering from the past NGV initiatives is the proposed rate design (i.e. “take-or-pay”, cost of service rate etc.), not FEI’s decision to offer CNG and LNG.

- Second, assuming for the sake of argument that the RMDM Guidelines were to be applied to the non-residential NGV context, these services are not really the type of services that were contemplated by the term “downstream of the meter”. The term “downstream of the meter” is convenient shorthand for services that relate to something other than (per the definition of “public utility” in the UCA) the “production, generation, storage, transmission, sale, delivery or provision of ... natural gas...” to the end user. For example, selling and servicing domestic furnaces to residential customers were services related to and directed at the appliances that use natural gas, rather than (per the definition of “public utility”) the “production, generation, storage, transmission, sale, delivery or provision of...natural gas...” to the end user. The analogy in the current circumstances would be if FEI was proposing to sell and service garbage trucks, which FEI is not proposing to do. FEI’s CNG/LNG Service involves the “delivery” or “provision” of natural gas in a usable form. CNG facilities, for instance, change the pressure to make it useable by customers, which FEI already does in other areas on its system.⁸² Electric utilities must similarly match the voltage on their systems to the end use customer’s requirements. The RMDM Guidelines, properly applied, should not be reduced to an exercise of determining where the meter is physically located – a point emphasized by the fact that CNG/LNG metering equipment could just as easily, from an operational perspective, be installed either upstream or at the downstream final dispensing point of a CNG/LNG fuelling facility without changing the nature of the service.
- Third, unlike the circumstances where FEI was entering the business of selling and servicing residential furnaces, there is explicit recognition in the UCA for a regulated entity providing CNG and LNG services as *regulated* public utility services.⁸³ The consideration of whether FEI has a natural monopoly over a service (a principle alluded to in the RMDM Guidelines) is a backdrop to the justification for regulation of public utilities, but the Commission’s jurisdiction must first and foremost be defined by reference to the express wording of the UCA. In light of the definition of “public utility”, the mere potential for competition from other providers of CNG/LNG cannot be a legitimate basis to preclude FEI from offering CNG/LNG Service.

55. The Commission’s ability to preclude a utility offering is limited even if the CNG/LNG Service offering is mischaracterized as being “downstream of the utility meter”. The

⁸² Application, PP.19-20.

⁸³ See the discussion on this point in Part Two, Section A of these Submissions.

Commission stated in the RMDM Guidelines that “the Commission has jurisdiction to prohibit a public utility from participating in RMDM if prohibition is the only reasonable and effective means by which the Commission can mitigate or alleviate any negative effects on ratepayers.”⁸⁴ Regardless of how the CNG/LNG Service is characterized (upstream vs. downstream), the service is directly beneficial to existing customers and the proposed rate design sufficiently protects existing ratepayers from risk.

(c) Summary

56. FEI’s offering provides the ability to “kick-start” the market by providing cost effective service to fleet owners that want to operate NGVs, without impairing the ability of other potential service providers from participating in the market. Thus, FEI submits that having the utility invest in projects to obtain the associated benefit makes sense from the customers’ perspective. It is equitable for the shareholder to have an opportunity to earn a return on investments made in NGV fuelling assets to obtain that benefit, and for customers to bear some risk, as is the case for any investment to add cost-effective load. The regulated utility, and not an affiliated NRB, should be driving the initiative to combat declining throughput and add utility load.

E. CONCLUSION REGARDING FEI’S INVESTMENT IN FUELLING FACILITIES TO SERVE WM

57. The public interest assessment under section 44.2 of the UCA involves consideration of how utility investments affect existing and potential customers of FEI and the public generally, and whether the investments advance provincial energy policy. As described above, FEI’s investment in the WM fuelling station provides delivery rate benefits for all non-bypass natural gas customers, provides WM with access to a beneficial fuel alternative, and delivers GHG reductions that advance Provincial policy and benefit British Columbians generally. The nature of the benefits described above will remain consistent for all future investments in CNG and LNG infrastructure, with only the magnitude of the benefits differing in each case. Each cost-effective fuelling project stands on its own in terms of being in the public

⁸⁴ RMDM Guidelines, April 1997, p. 8.

interest, making it unnecessary at this time to determine how large the NGV market might become in the long-term. As the benefits are clear on the evidence, the focus of this inquiry should be on ensuring that the costs, risks and rewards associated with FEI's investment in the WM facility are allocated in a "just and reasonable" manner. This is the subject matter of rate design and is addressed in the next Part of these Submissions.

PART FOUR: RATE DESIGN IS “JUST AND REASONABLE”

58. As set out in Part Two above, the UCA mandates that public utility rates be “just and reasonable”. In the present context, this requirement for “just and reasonable” rates means that the Commission must consider the proposed CNG/LNG Service rate design, i.e. the WM Agreement and the proposed GT&Cs, from the perspectives of existing customers, potential NGV customers, and the shareholder. The WM Agreement is a negotiated commercial agreement, but it fits within the parameters set by the proposed GT&Cs;⁸⁵ hence, similar rate design considerations will apply to both. In this Part, FEI addresses how the proposed rate design appropriately allocates the benefits and risks associated with FEI’s investment in fuelling facilities, while also recognizing the commercial realities of the NGV market and legislated requirements. FEI submits that the terms and conditions of service reflected in the WM Agreement and the GT&Cs are “just and reasonable” for three reasons, each of which is discussed below:

- First, cost of service-based rates are equitable and consistent with accepted rate making principles;
- Second, the rate design equitably allocates the risk associated with generating the benefits, while still protecting existing customers to a greater extent than other customer additions; and
- Third, the rate design compensates the shareholder only by recovering from the CNG/LNG Customer as a cost of service the regulated rate of return on equity invested in the fuelling facilities, as is done for any utility investment.

59. These submissions regarding rate design expand on FEI’s Reply Submission filed on December 23, 2010 relating to the WM Agreement. FEI continues to rely on its Reply Submissions in support of the permanent approval of the WM Agreement.

⁸⁵ BCSEA 2.19.1.

A. FAIR ALLOCATION OF COSTS AND BENEFITS THROUGH COST OF SERVICE-BASED RATES

60. FEI discusses below how the costs and benefits associated with FEI's investment in fuelling assets are allocated and why the allocation of costs and benefits is appropriate.

61. The proposed rate design contemplates a cost of service-based rate and does not seek to allocate benefits based on an assessment of the value of service to NGV customers or existing customers. In other words, the rate design leaves the benefits where they fall and ensures that the forecast costs associated with the CNG/LNG fuelling facilities are recovered through the rate charged on a "take-or-pay" basis to the CNG/LNG Service customers. Cost of service-based rates are in complete alignment with established cost of service ratemaking principles that have been accepted by the Commission on many occasions. The Commission has specifically endorsed a cost of service approach in the context of main extensions.⁸⁶ Cost of service principles should logically apply to extensions to add load regardless of the end use in question.

62. There were a number of Information Requests that inquired about ways to allocate additional benefits to existing customers, to the detriment of potential CNG/LNG Service customers. One approach identified in IRs was to explicitly transfer a portion of the fuel cost savings that would accrue to NGV fleet owners to other customers.⁸⁷ Another approach identified in IRs was to charge NGV customers a premium above cost of service for the relative rate stability of natural gas relative to diesel, or the rate certainty that comes with using forecast (and not actual) costs for establishing the CNG/LNG Service rate.⁸⁸ Basing the rate on forecasted costs does not present a significant risk to FEI's existing customers that would require additional compensation over and above the benefit FEI's existing customers obtain

⁸⁶ The Commission stated, for instance, in the MX Decision: "One of the broad energy policy goals submitted by MEMPR (Appendix D) indicated that the prices charged for utility services should as much as possible reflect the costs of providing service. The Commission agrees with this policy goal." See *In the Matter of Utility System Extension Tests*, Decision, February 16, 1996, at p. 22.

⁸⁷ BCUC Confidential 2.7.1.

⁸⁸ BCUC 2.1.11.

from the additional throughput required to serve the NGVs.⁸⁹ Further, all FEI customers, not just NGV customers, benefit from the rate stability associated with quarterly adjustments of commodity rate and delivery rates being set on a forecast basis. FEI submits that, as there is no fundamental cost driver justifying a premium, it is appropriate to fix the rate with reference to the cost of constructing and maintaining the station assets.

63. Under the proposed rate design, existing customers will obtain significant benefits from FEI's investments in CNG/LNG fuelling stations; however, these benefits can only flow if there is take-up of the CNG/LNG Service by fleet owners. Potential NGV customers must have some economic incentive to switch from diesel or gasoline, which is familiar to them, to NGV, with which they are less familiar. The potential fuel cost savings provide much of that incentive, although the magnitude of the savings over time is at the NGV customer's risk because the savings are subject to future changes in the price of diesel. Allocating such benefits to existing customers on top of the delivery rate benefits that customers receive from the increased throughput would discourage the adoption of NGV.⁹⁰ It is counterproductive from the perspective of existing customers to implement a rate design that leaves little incentive for fleet owners to adopt the service and add cost-effective throughput to the FEI system.

64. The WM Agreement is silent on the ownership of carbon credits, as are the proposed GT&Cs. Some IRs inquired about the possibility of specifying in the rate design that potential carbon credits accrue to the benefit of existing customers, rather than NGV customers. FEI does not currently have a means of monetizing carbon credits,⁹¹ but is in the process of developing a strategy with respect to aggregating benefits. Some NGV customers such as municipalities with GHG reduction targets, and who also are unburdened from formal validation and verification protocols, will be strongly motivated to capture the environmental

⁸⁹ BCUC 2.1.11.

⁹⁰ BCUC Confidential 2.7.1.

⁹¹ Application, p.33; BCUC Confidential 2.7.2; BCUC 2.38.1-3; 2.40.1; BCSEA 2.25.1. In negotiating the WM Agreement, FEI determined that the monetization of the environmental attributes generated by the WM Agreement by itself would not cover the costs associated with the development of an accepted carbon credit protocol and the costs of validating and verifying the environmental attributes.

attributes from a project.⁹² Precluding that possibility in advance could discourage customer uptake. The allocation of carbon credits is a commercial term that should be subject to negotiation, as the value of carbon credits to either FEI or the CNG/LNG Service customer will depend on the circumstances.

B. RATE DESIGN EQUITABLY ALLOCATES RISK ASSOCIATED WITH GENERATING BENEFITS

65. In this Section, FEI addresses how the proposed rate design equitably allocates risk associated with the investment necessary to obtain the benefits described in Part Three of this Submission. FEI submits that the allocation of risk is equitable for two reasons:

- First, existing customers are protected from the risk that fuelling station assets will become stranded to a greater extent than is the case with other main extensions, while still allowing the offering to be attractive to potential NGV customers; and
- Second, the modest cost risk is allocated consistently with other main extensions by using forecast costs to set the cost of service-based rate.

(a) Existing Customers Protected Against Stranding Risk

66. Inherent in any utility investment is the risk that the assets may become no longer used and useful. In the case of investments in CNG/LNG Service assets, however, these risks are modest given the nature of the assets and how they are procured. These are small investments relative to the total utility rate base.⁹³ There are alternatives for redeploying assets that make up to 50-70% of the capital cost of the facilities into other services.⁹⁴ In this section, FEI explains how the proposed rate design addresses the residual risk of stranded CNG/LNG fuelling assets. FEI submits that the protections afforded by the proposed rate design are appropriate, and existing customers are subject to less risk due to CNG/LNG Service extensions than is the case with a standard main extension of similar size.

⁹² BCSEA 2.25.3.

⁹³ e.g. the WM facilities cost just over \$700,000.

⁹⁴ BCUC Confidential 2.3.1; CEC 2.3.2; 2.6.1.

67. The risk that the CNG/LNG fuelling station assets that cannot be redeployed will become stranded is almost entirely a function of volume risk, i.e. that the NGV customer will cease to take service. Reduced volumes ultimately led to the Company writing-off the remaining NGV fuelling station assets at the end of the 1990s. Thus, the primary way in which the proposed rate design manages the risk to existing customers of stranded fuelling station assets, and distinguishes this proposed rate design from the rate design employed in the 1990s, is by requiring CNG/LNG Service customers to enter into a long-term contract for service on a “take-or-pay” basis at a rate that recovers the forecast cost of service occurring during the contract term.⁹⁵ “Take-or-pay”, in this context, means that the customer pays the CNG/LNG Service rate calculated based on the customer taking a minimum specified volume of CNG/LNG, even if the customer ultimately requires less than that amount. In the case of the WM Agreement, approximately 50% of the capital invested will be recovered over the initial term under the WM Agreement using the “take-or-pay” contract methodology. Assuming that WM takes only its forecast volume, the unrecovered net book value of the assets used to serve WM that cannot be redeployed at the end of the initial term of the WM Agreement is approximately \$105,000 to \$175,000.⁹⁶ There are already indications from WM that it intends to increase the size of its NGV fleet in the near future, which would result in WM taking additional volume.⁹⁷ Additional throughput in the initial term above the “take-or-pay” volume is subject to an Excess Throughput Rate, resulting in a greater portion of the investment being recovered from the CNG/LNG Service customer during the initial term.

68. In addition, the WM Agreement includes a provision that requires the customer to pay to FEI the unrecovered amount if there is no renewal,⁹⁸ which eliminates stranding risk

⁹⁵ BCOAPO 2.1.1. The inputs into the cost of service model are set out in BCUC 2.4.1, and they are updated each time an agreement is contemplated.

⁹⁶ BCOAPO 2.3.1. In BCUC 2.9.2, FEI provides an example of the assets at risk after the passage of 15 years in the absence of a provision that requires a payment by the customer to offset a write-off. The at risk amount on a \$700,000 asset in this example is only approximately \$52,000-\$87,500.

⁹⁷ WM has a target of 100 NGVs operating from its site: BCSEA 3.29.3.

⁹⁸ WM Agreement, section 9(b) and (c), which are described in BCUC 1.14.1.

for all practical purposes.⁹⁹ FEI will seek to negotiate such clauses, while keeping in mind the commercial considerations outlined that may preclude negotiating such clauses.¹⁰⁰ In many circumstances a provision that requires the customer to pay to FEI the unrecovered amount if there is no renewal will be of little practical significance because the economic benefits flowing to a fleet owner associated with NGVs will induce the fleet-owner to renew.¹⁰¹ Also, a customer that has invested in additional vehicles after the installation of the fuelling station to enlarge their receipt of these benefits will be highly motivated to renew their contact for refuelling services as these later-acquired vehicles will likely have remaining useful life at the end of the initial term.¹⁰² Renewals will permit a larger portion (or the entirety) of the investment to be recovered.

69. In assessing the reasonableness of the proposed approach, it is useful to compare the proposed rate design to the allocation of risk under the MX Test that governs the addition of residential, commercial and industrial load.¹⁰³ The MX Test forecast, which is used to determine the CIAC necessary to make the extension cost-effective, is based on the best information available at the time, but neither the developer nor FEI controls how much natural gas the occupants of a subdivision ultimately use.¹⁰⁴ If new residential, commercial or industrial load anticipated for a main extension does not materialize then the result might be that the

⁹⁹ The only real stranding risk arises if the customer goes bankrupt during the contract term. WM is creditworthy and every indication is that WM will abide by the WM Agreement to ensure that its NGV fleet is supplied with CNG. FEI has credit review processes to mitigate credit risk for future CNG/LNG Service customers: CEC 2.9.1

¹⁰⁰ BCUC 2.5.3 (asked non-confidentially, but response submitted separately on confidential basis on February 10, 2011).

¹⁰¹ CEC 2.6.1.

¹⁰² BCUC 3.8.2.

¹⁰³ Specified in Section 12 of the GT&Cs. The MX test protects existing ratepayers by requiring a CIAC in the event that the PI index is less than 0.8, but there is no contractual commitment to take service. By contrast, the CNG/LNG Service rate recovers the costs; therefore, a CIAC is unnecessary: BCUC 2.16.1; CEC 2.1.1.3.

¹⁰⁴ BCUC 3.8.2. In its MX Decision, the Commission recognized four distinct risks with any system extension in estimating the required CIAC: "However, the Commission anticipates that no matter how precise the calculation method employed, there will be some variance between the estimated and actual difference between benefits and costs. That variance will depend on variances between: • estimated and actual construction costs; • estimated and actual average energy consumption (revenue) per customer; • anticipated and actual number of customers who connect to the system, and therefore between estimated and actual total consumption (revenue); and • anticipated and actual number of customers who connect to the system within the period requiring contributions-in-aid (contribution per customer)." See *In the Matter of Utility System Extension Tests*, Decision, February 16, 1996, p. 30.

assets are stranded or that the benefits of the new throughput on delivery rates are outweighed by the higher cost of service. There is no practical means of bringing certainty to the volume forecasts in most cases, and the approved MX Test is based on forecast volumes without requiring customer commitments to a minimum contract demand.¹⁰⁵ By contrast, the proposed rate design for CNG/LNG Service provides for a guaranteed minimum volume on a “take-or-pay” basis for a number of years. Since volume risk is the key driver of stranding risk in both NGV and main extensions, all other things being equal, the “take-or-pay” model with a cost of service-based rate reduces the stranding risk of NGV relative to a similar investment in a main extension. When the CNG/LNG Service “take-or-pay” rate design is coupled with assets that can be redeployed, the risk to existing customers is appreciably lower.¹⁰⁶

70. In considering the potential for stranded assets, it is worthwhile considering that should it become necessary to write-off of a portion of fuelling station assets, this would not necessarily mean that the utility’s investment in the fuelling station has turned out to be detrimental to the interests of existing customers. The financial benefits accruing to existing ratepayers in the form of reduced delivery rates (all else equal) during the initial term of a CNG/LNG Service contract might well exceed the value of the portion of the fuelling station assets that cannot be redeployed at the end of the contract. In such cases, customers are still benefitting, albeit not to the same degree, as would have been the case had the contract been renewed.¹⁰⁷ BCUC 3.14.1 shows that a net benefit still exists for the WM Agreement when one compares the present value of the delivery benefit accumulated to year 10, compared to the present value of the net book value of the assets in year 10. Even if one does not take the present value of the net book value, and uses the net book value in year 10, it is still close to break-even in year 10.

¹⁰⁵ See *In the Matter of Utility System Extension Tests*, Decision, February 16, 1996, at p. 18, where the Commission stated: “Although there may be the opportunity to ask for and receive revenue guarantees in some situations, estimates of gross revenue in system extension tests are usually based on the number of customers who are expected to connect to the system extension over some time period and the anticipated revenue per customer.” FEI has “take-or-pay” agreements only with some large customers: CEC 2.2.1.

¹⁰⁶ CEC 2.1.1.3, 2.2.1, 2.3.3; BCOAPO 2.1.1.

¹⁰⁷ BCOAPO 2.1.1. Also, BCOAPO 3.1.1 provides an illustration of this point. It references the magnitude of delivery rate benefits associated with the Company’s previous NGV initiative, despite the significant write-off that occurred.

71. The proposed GT&Cs do not specify a minimum contract term, but FEI intends to negotiate future “take-or-pay” agreements with a minimum term approximating the useful life of the customer’s NGVs. This is expected to be at least 5-10 years.¹⁰⁸ One alternative raised in IRs involved the Commission requiring a “take-or-pay” obligation to match the useful life of the fuelling assets as a means of mitigating stranding risk for existing customers.¹⁰⁹ This type of provision would provide essentially the equivalent risk protection for existing customers as the provision that requires the NGV customer to pay the net book value if the service agreement is not renewed. FEI successfully negotiated the latter type of clause in the WM Agreement, and will consider seeking such provisions in the future. However, there are two reasons why it would be ill-advised for the Commission to mandate either of these approaches for future contracts:

- First, in circumstances where a fleet operator like WM is embarking on a new NGV initiative, requiring it to commit to a minimum contract demand for 5-10 years already represents a significant business risk. FEI expects that many future CNG/LNG Service customers will balk at a “take-or-pay” volume for a term equal to the life of the fuelling station assets.¹¹⁰ The same would be true for a buy-out clause.
- Second, vehicles that only last 5 years are very high annual mileage vehicles that consume large quantities of fuel. Therefore, the load building benefits of adding such vehicles are greater. It would be counterproductive to set up a barrier that would make it more difficult to attract this type of fleet to CNG/LNG Service.¹¹¹

FEI’s approach of addressing the commercial impediment associated with a minimum contract demand through adjustments to the term of the agreement is appropriate at this time. Including a requirement in the rate design for a very long term contractual commitment from fleet owners or a buy-out clause will, in many instances, be too onerous to attract the fleet owners to the service.¹¹²

¹⁰⁸ BCUC 2.3.2 (IR was asked non-confidentially, but response was submitted separately under confidential cover on February 10, 2011).

¹⁰⁹ BCOAPO 2.1.1.

¹¹⁰ BCOAPO 2.1.1.

¹¹¹ BCUC 3.14.2.

¹¹² CEC 2.14.2.

72. BCOAPO inquired about adding a requirement that the new customer post a letter of credit as well so as to reduce stranding risk. FEI submits that the “take-or-pay” model already provides significant risk mitigation, and FEI has appropriate credit verification policies in place. A letter of credit represents an additional financial burden on the customer in the immediate term. Imposing additional barriers to commercial relationships with potential NGV customers, particularly where FEI’s proposed rate design already contractually allocates more risk to the new CNG/LNG Service customer than is allocated to new customers under the MX Test, is unnecessary and counterproductive to the goal of maximizing the opportunity for all customers to benefit from the additional load.¹¹³

73. In summary, the proposed rate design reduces stranding risk markedly from the rate design employed for NGVs in the 1990s, under which existing customers bore all of the volume risk associated with CNG fuelling facility investments.¹¹⁴ The proposed rate design also compares favourably in this regard, from the perspective of existing customers, to the MX Test. The Commission will also be able to address the risk of stranded assets on a case by case basis.

(b) Modest Cost Risk Addressed Consistently with Other Customer Additions

74. Estimates are, by their nature, subject to variances giving rise to cost risk for any utility investment intended to add load. In this Section, FEI describes the nature of the cost risk in the context of CNG/LNG facilities and explains how the risk is allocated. FEI submits that cost risk is modest in the case of CNG/LNG investments. Further, the allocation of cost risk is consistent with the MX Test applicable to other investments intended to add load.

75. The amount of cost risk associated with a new CNG/LNG Service facility is limited for two reasons. First, the total facilities cost is going to be relatively modest in most instances. In the case of the WM facilities, for instance, the total facilities cost was just over \$700,000. The potential for significant overruns on a project of this size is limited, particularly in light of the nature of the costs. A significant majority of the costs of CNG/LNG Service are the

¹¹³ BCOAPO 3.1.2, 3.1.3.

¹¹⁴ BCUC 2.6.1.

capital equipment required to refuel NGVs, which FEI acquires under fixed price contracts.¹¹⁵ Second, other cost of service items such as earned return, income taxes, property taxes and O&M are not expected to significantly vary such that they would detrimentally affect existing customers' rates.¹¹⁶ FEI has undertaken detailed and comparative quotations for the WM project.¹¹⁷ These costs are not expected to vary significantly.¹¹⁸ The WM facilities were completed for 105% of budget.¹¹⁹

76. The risk of unfavourable cost variance rests with existing customers under the proposed rate design because the cost of service-based rate for CNG/LNG Service uses forecast costs, and positive and negative variances are not "trued-up" after the fact. This parallels the situation that exists any time there is a main extension to add new load. The MX Test also uses forecast costs to determine whether customers can be added without making a CIAC, or to determine the amount of any CIAC. In the event that the costs of the commercial or residential extension turn out to be greater than forecasted, the CIAC will be insufficient to ensure that the extension meets the Profitability Index (PI). While the GT&C's governing customer extensions provide for a true-up *when it is favourable to the customer paying a CIAC*, FEI does not have a right to recover an additional CIAC from new customers in the event that extension costs turn out to be greater than forecast. In other words, existing customers bear the risk of construction cost overruns any time the system is extended to add new customers, and the addition of CNG/LNG Service customers should be no exception.¹²⁰

¹¹⁵ BCUC 2.1.1, 2.7.1. In BCUC 2.1.5, FEI incorrectly described the estimate as a P90 estimate. The accurate description of the estimating approach appeared in BCUC 1.9.1-1.9.3 and BCUC Confidential 3.1.1.

¹¹⁶ BCUC 2.7.1.

¹¹⁷ BCUC 1.9.6.

¹¹⁸ BCUC 2.7.1; 3.11.1.

¹¹⁹ BCUC 3.1.2: the variance was \$37,087. The additional cost was more than negated by the revenue generated from the associated work performed by FEI under a separate construction agreement with WM, which has been collected in a non-rate base deferral account to be returned to customers effective January 1, 2012: BCUC 3.1.4 (corrected error in BCUC 2.1.6). The financial treatment to ensure this is credited to ratepayers is discussed in BCUC Confidential 2.2.3 and 2.2.4.

¹²⁰ BCUC 2.1.1. The allocation of construction cost risk under CNG/LNG Service is arguably more favourable to existing customers than in the MX context in the sense that existing customers, and not the new CNG/LNG Service customer, receive the benefit if the fuelling station costs are under budget.

77. The use of forecast costs in the MX Test is founded on sound policy. The following passage from the Commission's decision on the MX Test is also apt in the case of a CNG/LNG Service extension:

With respect to customer contributions, the Commission believes that it is generally preferable to base the customer contribution on the estimate of costs rather than on actual costs, because customers are expected to want certainty of the contribution amount before they decide whether or not to proceed. However, this approach brings the accuracy of the estimate into focus because of the implications for other utility customers if there is an under collection.

During the hearing, there was some discussion of the degree of accuracy of construction cost estimates compared to the actual costs of past system extensions. Information from some of the utilities indicated significant variances.

The Commission expects the Utilities to ensure that estimates are as accurate as possible without adding substantially to the administrative workload associated with estimating system extension costs. The Commission will rely on prudence reviews to examine the accuracy of system extension estimates.¹²¹ [Emphasis added.]

78. Consistent with the Commission's analysis above, FEI's evidence was that in negotiating an agreement with WM, it had to recognize WM's desire for certainty on the price paid as a trade off in obtaining a long-term "take-or-pay" agreement. The WM Agreement would not have been possible without this risk allocation.¹²² FEI's discussions with fleet owners have similarly suggested that it is important to potential CNG/LNG Service customers to know the rate with certainty at the point in time when a long-term service agreement is executed. In general, the fleet owners have no experience with building fuelling stations, and will want to minimize the uncertainties. Fleet owners know that they can contract with fixed price certainty for the installation of diesel fuelling facilities. In the absence of a competitive offering with respect to price certainty, risk-averse fleet owners may elect not to switch to NGVs.¹²³

79. There were a number of IRs that inquired about the potential to mandate a particular level of contingency for the cost estimate used to determine the cost of service-

¹²¹ See *In the Matter of Utility System Extension Tests*, Decision, February 16, 1996, at p. 16.

¹²² BCUC 1.9.7.

¹²³ BCUC 2.1.8.

based CNG/LNG Service rate as a means of insulating existing customers from cost risk. FEI submits that contingencies should be included for costs that FEI expects to incur but where the amount is not known with precision and where the costs are not accounted for elsewhere. No contingency is added under the geocode pricing used to develop cost estimates for the MX Test.¹²⁴ A contingency was not included with the WM Agreement due to the degree of cost certainty, but a 20% contingency is being considered with other projects under consideration that involve a higher degree of complexity, a longer construction period and higher capital costs. Including a contingency where engineering practice indicates that one is not required is akin to overcharging the NGV customers. FEI submits that it is important to avoid intentional cross-subsidization through inflated contingencies, and to include contingencies when appropriate based on standard engineering practice.¹²⁵ FEI will provide for contingencies in cost estimates where appropriate.¹²⁶

80. As in the case of stranding costs, it is important to keep sight of the bigger picture in terms of how the cost risk measures up against the benefits accruing to existing customers. The present value of the rate benefit on the WM project is \$445,000,¹²⁷ which would have required a significant overrun to negate. In response to an IR, FEI performed an analysis of a hypothetical LNG project of approximately \$700,000 with a cost overrun of 20% or approximately \$140,000. It showed that a significant overrun would be required to negate the present value of the delivery margin benefit associated with the additional load on the FEI system. In this case, the 20% overrun reduced the total delivery margin benefit by 25%.

¹²⁴ CEC 3.6.1.

¹²⁵ BCUC 3.1.9; BCUC 2.1.3. Note that in the latter response FEI inadvertently referred to the estimate for WM as a P90 estimate.

¹²⁶ BCUC 2.1.3 and 2.1.4, BCUC Confidential 3.1.1. A LNG project under development is incorporating a 20% contingency. FEI uses contingencies to account for costs that FEI expects to incur but where the amount is not known with precision and where the costs are not accounted for elsewhere. FEI submits that incorporating excessive contingencies to introduce an intentional cross-subsidization for the benefit of existing customers should be avoided.

¹²⁷ BCUC 3.14.1.

Therefore it would take a cost overrun of \$560,000, i.e. an overrun of 80% of the forecast cost, to negate the positive delivery margin benefit.¹²⁸

81. The Commission must approve each future CNG/LNG Service agreement, providing the necessary advance oversight of the fuelling station cost estimates. In both instances, construction cost variances can be reviewed by the Commission in the normal course in revenue requirements proceedings, providing the Commission and customers with adequate oversight.¹²⁹

(c) Summary

82. While FEI is committed to taking appropriate steps to protect existing customers from unreasonable risks, and to secure the benefits for all customers where possible, the Commission must also consider the interests of potential NGV customers in determining “just and reasonable” rates and commercial realities. The WM Agreement, for example, is a product of negotiation between commercial parties, and the individual aspects of the agreement cannot be considered in isolation from the other trade-offs made as part of the overall package.¹³⁰ The WM Agreement and the proposed GT&Cs transfer more risk to the new CNG/LNG Service customer than was the case in the previous regulated NGV offering. It is reasonable to expect that there will be trade-offs required with NGV customers to convince them to take service under GT&Cs that require them to assume a volume risk for a fixed term. Overall, the requirement of a “take-or-pay”, cost of service-based rate is reasonable from the perspective of both existing customers and potential NGV customers.

83. FEI submits that it is only by treating potential NGV customers fairly that FEI will be successful in building additional NGV fuelling load for the benefit of existing customers.¹³¹ Tariff requirements that contractually transfer risk to the NGV customer do make CNG/LNG

¹²⁸ In other words, the hypothetical project cost would have to come in at \$1.3 million instead of \$712,000: BCUC 2.10.1; 3.13.1.

¹²⁹ BCUC 2.1.1.

¹³⁰ BCUC 1.9.9.

¹³¹ CEC 3.11.1.

Service less attractive relative to a scenario (like the MX Test) where no contractual commitment is required, and hence may slow the process of building cost-effective natural gas load. However, FEI submits that the additional contractual requirements not required of other new residential or commercial customers are presently warranted to provide existing customers with the necessary comfort as FEI embarks on this renewed NGV initiative.¹³² The proposed rate design has allowed FEI to secure the first new NGV customer in 10 years. It is counterproductive for existing customers to demand additional benefits, or to shift additional risk to potential NGV customers as such demands will have the effect of deterring the addition of cost effective load that is ultimately to the benefit of all customers.

C. SHAREHOLDER RISK AND REWARD DICTATED BY REGULATORY FRAMEWORK

84. Several IRs inquired about the benefits and risks to the shareholder of investing in CNG/LNG fuelling facilities.¹³³ Rates can only be “just and reasonable” under section 59(5) of the UCA if they provide for an opportunity for the shareholder to earn a fair return on its invested capital. FEI’s shareholder will benefit only by earning its regulated rate of return on the equity invested in the facility. The shareholder’s return on equity is recovered from WM as part of the forecasted cost of CNG/LNG Service under the WM Agreement. The proposed GT&Cs similarly allocate the forecasted cost of equity invested in CNG/LNG fuelling facilities to the NGV customer, to be recovered in the CNG/LNG Service rate. The compensation paid to the shareholder as compensation for the business risk associated with its investment - the allowed ROE – is the same regardless of whether the investment is in fuelling station assets or other utility assets such as a main extension. This is because the business risk to which the investments are subject is the same in either case – e.g. the same prudence test for return on capital, and the same stranding risk for distribution assets as a whole in the long-term. FEI submits that the shareholder’s compensation for any utility investment was determined in the last ROE proceeding, and it should not be an issue in this proceeding.

¹³² CEC IR 2.2.1 and 2.2.2.

¹³³ BCUC 1.2.1; BCUC 2.1.9 and 2.1.10; BCOAPO 2.2.1.

D. SUMMARY REGARDING RATE DESIGN

85. There is a significant advantage to customers to making CNG/LNG Service available to NGV customers within the FEI service area, provided that acceptable terms of service can be reached. FEI's proposed cost of service-based rate allocates the benefits associated with the development of NGV's in a fair manner, consistent with traditional cost of service ratemaking principles. The proposed "take-or-pay" contractual rate design protects existing customers more than the rate design for the Company's previous NGV initiative by allocating volume risk to potential NGV customers. This may deter some take-up of NGVs, with a delay in the attendant benefits to customers. However, the proposed rate design has allowed FEI to attract the first NGV customer in 10 years. In the next Part, FEI addresses potential means of streamlining the rate design and regulatory review in the future, so as to improve the Company's ability to attract cost-effective load.

PART FIVE: COMMISSION OVERSIGHT OF FUTURE PROJECTS AND SERVICE AGREEMENTS

86. FEI proposes that the Commission review each CNG/LNG Service agreement to ensure that the rate specified and other negotiated terms, considered as a package, are “just and reasonable”. A variety of alternative regulatory mechanisms were identified by stakeholders in IRs, which fell broadly into two categories: mechanisms intended to streamline the approval process for future CNG/LNG service agreements; and processes intended to impose additional procedural requirements. In this Part, FEI discusses the merits of the Company’s proposed review process, and addresses each of the suggested alternatives. FEI submits that using GT&Cs to set key commercial terms, combined with submitting service agreements for Commission review, is the preferred method at this time. The proposed process achieves an appropriate balance of regulatory efficiency and Commission oversight.

A. PROPOSED PROCESS IS EFFICIENT

87. An efficient regulatory process is vital to the success of the service offering. It is to be expected that a fleet owner’s commercial considerations will frequently require prompt review and approval of agreements (the WM Agreement being a good example of this), and delays in securing approval could prove problematic for the NGV customer and pose a challenge to attracting other new customers. The Company submits that its proposed process for assessing future CNG/LNG Service agreements is capable of providing the necessary efficiency for two reasons. First, the proposed GT&Cs ensure that the core terms of future CNG/LNG Service agreements (such as the “take-or-pay” provision and the cost of service based rate) will apply to each NGV customer to ensure consistent and fair treatment. Second, there will be no need to repeat the public interest review of expenditures because the nature of the benefits are the same and projects can, if necessary, be considered in a future revenue requirements application as is the case for other expenditures of this size. FEI submits that the

process for reviewing an individual service agreement can be limited and expedited in most circumstances.¹³⁴

88. There are two obvious potential alternatives to the proposed model, both of which FEI considered: an MX-type test, and a pro forma service agreement. An MX-type test has the advantages of establishing a clear test for proceeding with a project, and the Commission need only evaluate the results after the fact. The MX Test offers the most practical and efficient method of assessing the large number of main extensions handled by the Company each year, while providing reasonable comfort to existing customers based on a long track record of main extensions. Recognizing the potential benefits of this approach, FEI had proposed an MX-type test in the 2010-2011 RRA. However, FEI came away from that process with the impression that some stakeholders were desirous of extending additional protection to existing customers, which contributed to the decision to propose this contractual “take-or-pay” rate design.¹³⁵ FEI considers that the proposed rate design still strikes an appropriate balance between existing customers and potential NGV customers at this stage of NGV development; however, FEI will consider moving to a MX-type test if, down the road, it were to appear that the contractual model was unduly limiting the uptake of the service, or if the regulatory process relating to individual contracts that follow the GT&Cs was becoming unwieldy.¹³⁶ Ultimately, it is in the collective best interest of existing customers, potential NGV customers, and FEI to ensure that the rate design remains appropriate as experience is gained, and not more onerous on potential NGV customers than is reasonably necessary to protect existing customers.

89. FEI also considered the potential to develop a pro forma CNG/LNG Service agreement, even one that contains a list of potential “trade-offs”. A workable pro forma contract can be a very efficient rate model.¹³⁷ FEI has mandated key terms related to the

¹³⁴ BCUC 3.4.2. BCSEA 3.32.1 and 3.32.2.

¹³⁵ CEC 3.2.1.

¹³⁶ CEC 3.2.1.

¹³⁷ BCUC 3.2.3.

determination of the rate in the GT&Cs with efficiency in mind.¹³⁸ FEI believes, however, that it is desirable at this stage of NGV development to retain some flexibility to negotiate some of the other potential terms and conditions of service depending on the particular or unique nature of the customer's business and situation. Negotiations between motivated and sophisticated commercial parties can yield fair terms and creative trade-offs on matters such as term of the agreement, termination, minimum volumes, buy-out, carbon credits, and public refuelling access. FEI concluded that it would be more difficult at this time, i.e. with only one agreement completed, to develop a pro forma agreement that successfully anticipates varied customer needs, than to include key terms in straightforward GT&Cs and to negotiate the other provisions that might tip the balance to secure cost effective load.¹³⁹

90. As there are only a relatively small number of NGV contracts anticipated in the near term, there is limited efficiency gain at this time from adopting a pro forma service agreement to justify the risk of deterring customers by limiting FEI's flexibility to respond to the customer's commercial realities. The Company will attempt to standardize future contracts as much as possible and will follow the cost of service principles outlined in the GT&Cs. This will allow a pro forma contract to develop more organically, as it has with bypass rates.¹⁴⁰ The potential to develop a pro forma agreements, like the option of establishing an MX-type test, is best left for future consideration once the NGV business has developed.¹⁴¹

B. STAKEHOLDER-SUGGESTED MECHANISMS TO INCREASE REGULATORY REVIEW ARE UNNECESSARY

91. Three mechanisms identified in IRs as a possible means of increasing the regulation of CNG/LNG Service are addressed below. In light of the importance of regulatory efficiency and maintaining a competitive offering relative to diesel, FEI submits that these mechanisms are inappropriate and should not be employed.

¹³⁸ BCUC 3.2.1.

¹³⁹ BCUC 3.2.1.

¹⁴⁰ BCUC 3.2.3; 3.2.5.

¹⁴¹ BCUC 2.2.1; 2.2.2; 3.2.6.

92. One idea raised in IRs was to require an MX-type test to assess the cost effectiveness of the investment in fuelling facilities¹⁴² *as well as* adopt the contractual model. FEI submits that this would be redundant. The cost-of-service based rate accomplishes the same purpose as an MX-type test of ensuring that new customers are economic.¹⁴³ The MX Test is used in circumstances where there is a known rate and a forecast volume to determine if a CIAC is needed to make the addition cost-effective. For CNG/LNG Service the rate is derived from the forecast cost of service (excluding any CIAC), and the volume is known. As the forecast cost of service occurring during the term of the agreement is recovered from the new NGV customer, the new customer is cost-effective by definition - akin to a main extension that has achieved the required Profitability Index of 0.8 and without the same degree of volume risk.¹⁴⁴

93. A second idea raised was to require a CPCN for all NGV projects. The Commission could, in theory, require a CPCN application for each project and repeatedly undertake the public interest assessment as was suggested in one IR; however, FEI believes that it would be very inefficient to do so. First, the typical timeline to hear a CPCN application is much longer than the commercial requirements of most businesses and may represent an impediment to attracting customers. Second, the nature of the benefits to NGV customers, existing natural gas customers and British Columbians have been well canvassed in this proceeding.¹⁴⁵ The revenue requirements process is the standard process used to determine the recoverability of capital investments below the CPCN threshold, and using this cost-effective approach is appropriate in this context as well.

¹⁴² This should not be confused with applying the MX Test in the ordinary course to determine whether a CIAC is required from the NGV customer for improvements to the distribution system upstream of the CNG/LNG fuelling station. The MX Test applies to such extensions in the ordinary course.

¹⁴³ The Commission observed in its MX Decision: "An important aspect of a system extension test is that it determines who pays for what proportion of the total costs of a system extension. A test result which recovers less than the total cost of construction will either require a contribution-in-aid from those receiving the new service, or require a subsidy from other customers, usually in the form of an addition to the utility's rate base. Without a contribution, the total charges to the new customers served by such a system extension will not reflect the total cost of serving them, leading to possible distortions in their decision making." See *In the Matter of Utility System Extension Tests*, Decision, February 16, 1996, at p. 22.

¹⁴⁴ BCUC 2.15.1, 2.16.1; 3.8.1.

¹⁴⁵ BCUC 2.28.3.

94. FEI was also asked whether the Commission should impose a limit on FEI's CNG/LNG investments.¹⁴⁶ FEI submits that the Commission should avoid imposing any limit. As proposed, NGV load will only be added if it is expected to be cost-effective from the perspective of existing customers. This is ensured in two ways. First, any distribution system improvements required to provide natural gas to an NGV fuelling station will be subject to the MX Test, consistent with FEI's existing practices. Second, FEI's cost of service model ensures that NGV load is cost effective through the long-term "take-or-pay" service agreements that recover the forecast cost of service occurring during the contract term.¹⁴⁷ Proceeding with investments in CNG/LNG fuelling facilities is appropriate, regardless of the amount invested, so long as (a) the investment is delivering additional throughput on the FEI system, (b) the Commission is satisfied that FEI has appropriately applied the cost of service model stipulated in the GT&Cs in setting the rate payable by the CNG/LNG Service customer, and (c) the other terms in the agreement allocate cost risk appropriately. Thus, FEI submits that the Commission's ability to review and approve each service agreement pursuant to sections 59-61 of the UCA is adequate for this purpose, and makes any predetermined limit unnecessary and detrimental to customers.¹⁴⁸

¹⁴⁶ BCUC 3.5.2.

¹⁴⁷ BCUC 2.34.1.

¹⁴⁸ BCUC 3.28.3.

PART SIX: CONCLUSION AND ORDERS SOUGHT

95. FEI's provision of natural gas in a form usable as a vehicle fuel represents an opportunity for the transportation sector to achieve commercial benefits, and the additional throughput on FEI's delivery system will yield lower delivery rates for all customers (all else equal). In addition to making sense from a customer perspective, the proposed investment in the facilities to serve WM promotes "British Columbia's energy objectives". In light of the benefits associated with investments in fuelling infrastructure, FEI submits that the focus of this inquiry should be on ensuring that the rate design appropriately allocates benefits, costs and risks associated with utility investments. The contractual obligations included in the WM Agreement and required by the GT&Cs for CNG/LNG Service protect existing customers to an even greater extent than in the case of other customer additions, and differentiates these service offerings from FEI's past NGV offerings. FEI's rate design reflects a reasonable sharing of risk and reward between new NGV customers and existing customers. FEI respectfully submits that the Commission should grant the approvals sought because FEI's investment in the WM facilities is in the public interest and the terms and conditions of service in the WM Agreement and GT&Cs are "just and reasonable".

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated: March 28, 2011

[original signed by Matthew Ghikas]

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Terasen Gas Inc.)