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August 7, 2015

Via Email
Original via Mail

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

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

Re: Creative Energy Vancouver Platforms Inc. (Creative Energy)
Application for a Certificate of Public Convenience and Necessity (CPCN) for a
Low Carbon Neighbourhood Energy System (NES) for Northeast False Creek
and Chinatown (NEFCC) Neighbourhoods of Vancouver
Evidence of FortisBC Energy Inc. (FEI)

In accordance with the British Columbia Utilities Commission Order G-119-15, attached is FEI's Evidence in the above noted proceeding.

If further information is required, please contact Jason Wolfe, Director, Energy Solutions at (604) 592-7516.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Diane Roy

Attachments

cc (email only): Registered Parties

Application by

Creative Energy Vancouver Platforms Inc.

**for a Certificate of Public Convenience and Necessity (CPCN) for a Low Carbon
Neighbourhood Energy System for Northeast False Creek and Chinatown (NEFCC)
Neighbourhoods of Vancouver**

EVIDENCE OF

FORTISBC ENERGY INC.

August 7, 2015

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INTRODUCTION

1. FortisBC Energy Inc. (FEI or the Company) has prepared this evidence for filing in the following proceeding: *In the Matter of Creative Energy Vancouver Platforms Inc. Application for a Certificate of Public Convenience and Necessity for a Low Carbon Neighbourhood Energy System for Northeast False Creek and Chinatown Neighbourhoods of Vancouver.*
2. FEI's central concern with Creative Energy Vancouver Platforms Inc.'s (Creative Energy) Application relates to Creative Energy's desire to have the Commission approve a franchise agreement – the Neighbourhood Energy Agreement (NEA) - that purports to grant exclusivity not just over one type of delivered energy (i.e., piped hot water), but over end uses (i.e., space and water heating) that would otherwise be capable of being met by a variety of energy sources and providers. The nature of Creative Energy's request in this regard is unusual, and its implications are significant.
3. FEI supports maintaining the current competitive marketplace among energy providers. FEI is opposed to an end-use monopoly of this nature because it would impact:
 - (a) the ability of energy consumers to choose any other energy source for space and water heating – including natural gas, or an on-site solution that incorporates natural gas;
 - (b) FEI's ability to compete for space and water heating load that would contribute to recovering the cost of investments that FEI has made in natural gas infrastructure; and
 - (c) FEI's delivery rates.
4. FEI also disagrees with key elements of the business case advanced by Creative Energy for both the NEA and the Project itself, including Creative Energy's rate benchmarking. Both natural gas and Renewable Natural Gas (RNG) are viable and more cost-effective alternative sources of energy for consumers in the Northeast False Creek and Chinatown (NEFCC) areas.
5. In this evidence, FEI discusses:
 - (a) FEI's operations, both generally and in the areas affected by Creative Energy's proposals;
 - (b) FEI's investment in natural gas infrastructure to serve existing and future customers in the City of Vancouver (COV).

- (c) A description of energy choices currently available to energy consumers in the COV;
- (d) A discussion of how the NEA differs from other agreements between BC public utilities and municipalities;
- (e) A discussion of the attributes of natural gas and RNG, as well as barriers to future fuel switching once NEFC has been constructed;
- (f) A rate analysis for natural gas space and water heating that demonstrates the extent to which it is less expensive for consumers than Creative Energy's proposed service;
- (g) A discussion of how a RNG solution could provide an immediate low carbon option at a lower rate than the rate set forth by Creative Energy for Energy Phase 1; and
- (h) An analysis of how FEI's delivery rates could be affected, other things being equal, if FEI is precluded from competing for space and water heating load.

FEI'S OPERATIONS AND BUSINESS

6. Below, FEI provides a description of FEI's corporate history. FEI also describes its operations, both generally and in the areas affected by Creative Energy's proposals.

Corporate History

7. FEI is the largest natural gas distribution utility in British Columbia and one of the largest in Canada, providing sales and transportation services to approximately 968,000 residential, commercial, and industrial customers in over 125 communities in British Columbia, representing approximately 95 percent of the natural gas customers in the province. FEI currently owns and operates approximately 47,500 kilometres of natural gas transmission and distribution pipelines.
8. FEI and its predecessors have a history dating back to the 1950s. The Company has expanded through mergers and acquisitions while its core product and service offering has remained relatively unchanged throughout this time. A summary of FEI's corporate history is as follows:
- (a) The Company was originally founded as Inland Gas in 1951 (later incorporated as Inland Natural Gas Co. Ltd.) to supply the B.C. interior communities with natural gas.

- (b) Throughout the 1950s, Inland Gas purchased various subsidiaries including St. John Oil and Gas, Peace River Transmission, Canadian Northern Oil and Gas, and Grand Prairie Transmission. In 1977, it purchased Columbia Natural Gas. These acquisitions served to position the Company as the largest distributor of natural gas in the B.C. interior. In 1985 Inland acquired Fort Nelson Gas Ltd. and in 1987 Inland Gas purchased Squamish Gas Co. Ltd.
- (c) In 1988, Inland Gas purchased the Lower Mainland Gas Division of the British Columbia Hydro and Power Authority (BC Hydro). BC Gas Inc. was subsequently formed by way of amalgamation to supply gas and piped propane to customers throughout the province to the former service territories of both utilities.
- (d) In 2002, BC Gas Inc. acquired Centra Gas BC Inc. and Centra Gas Whistler Inc. (collectively Centra Gas). Centra Gas BC Inc. served natural gas to customers on the Sunshine Coast and Vancouver Island. Centra Gas Whistler Inc. served piped propane until it converted to natural gas in 2009.
- (e) The mainland utility and the two former Centra Gas utilities, now under common ownership, were later renamed as FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc. They amalgamated at the end of 2014 and currently carry on business as FortisBC Energy Inc.

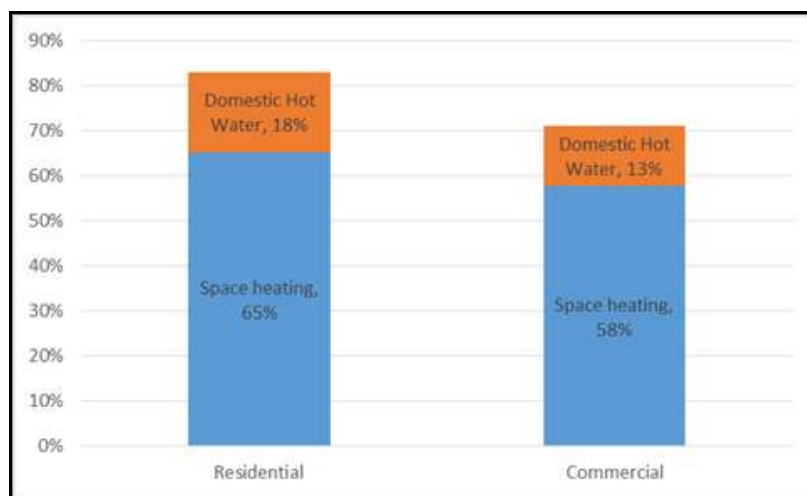
History of FEI's Operations in the COV

9. FEI and its predecessor companies have been operating in the COV since the 1950s. FEI's Lower Mainland operations were originally operated by the British Columbia Electric Company Limited (BC Electric), a Crown Corporation which later became BC Hydro. The original infrastructure was used to distribute manufactured gas within the COV, but it was later converted to natural gas.
10. In the early 1950s, BC Electric applied to the utilities regulator at the time, the Public Utilities Commission (the predecessor of today's Commission), for a CPCN covering its existing and future operations in the Lower Mainland. The Public Utilities Commission granted a CPCN in 1955 to construct and operate its system in the COV, among other municipalities in the Lower Mainland. Copies of the CPCN and the associated Reasons for Judgment are attached as **Attachment 1**. Around the same time, the Commission issued a CPCN for the Fraser Valley. Copies of that CPCN and the associated Reasons for Judgment are attached as **Attachment 2**.
11. Since 1955, FEI and its legal predecessors have been operating, maintaining and extending the natural gas system in the COV. FEI is the only natural gas distribution utility with a CPCN to operate in the COV.

FEI Customer Profile and End Uses in the COV

12. FEI’s core business within the COV and elsewhere is to provide energy for space and water heating for residential and commercial customers, together with industrial energy load. FEI customers also use natural gas for a variety of other appliances in home and business including but not limited to cooking and clothes drying.
13. Across FEI’s system, the dominant end uses for FEI’s residential and commercial customers are space and water heating. On a system wide basis, these two end uses account for about 83 percent and 71 percent of the total energy consumption for residential and commercial sectors respectively. Figure 1 below shows the percentage of gas used for these two dominant loads for FEI’s residential and commercial customers generally. FEI does not collect this type of consumption data broken down by municipality, but the information presented is largely going to be representative of the COV as the residential and commercial load in the COV represents a large portion of FEI’s total residential and commercial load (as shown below in Table 1).

Figure 1: Residential and Commercial Consumption by End Use¹



14. The COV comprises FEI’s second largest municipal customer base after the city of Surrey and the highest municipal aggregate annual natural gas consumption. FEI’s 108,000 customers in the COV represent approximately 11% of the Company’s total customer base and 13% of its natural gas consumption. Table 1 below shows the number of customers and natural gas consumption by customer segment for 2014 both for FEI as a whole and for COV customers.

¹ Source: 2014 Long Term Resource Plan (2011 consolidated data for FEU).

Table 1: Customer Count and Consumption for COV and FEI²

Customer Segment	Customer Count			Annual Consumption (GJ)		
	COV	FEI	COV as a % of Total FEI	COV	FEI	COV as a % of Total FEI
Residential	94,680	873,661	11%	9,385,983	73,189,840	13%
Commercial	13,379	90,316	15%	10,493,424	54,048,614	19%
Industrial	213	979	22%	6,932,334	81,606,859	8%
Total	108,272	964,956	11%	26,811,741	208,845,313	13%

FEI'S INVESTMENT IN THE NATURAL GAS SYSTEM IN THE COV

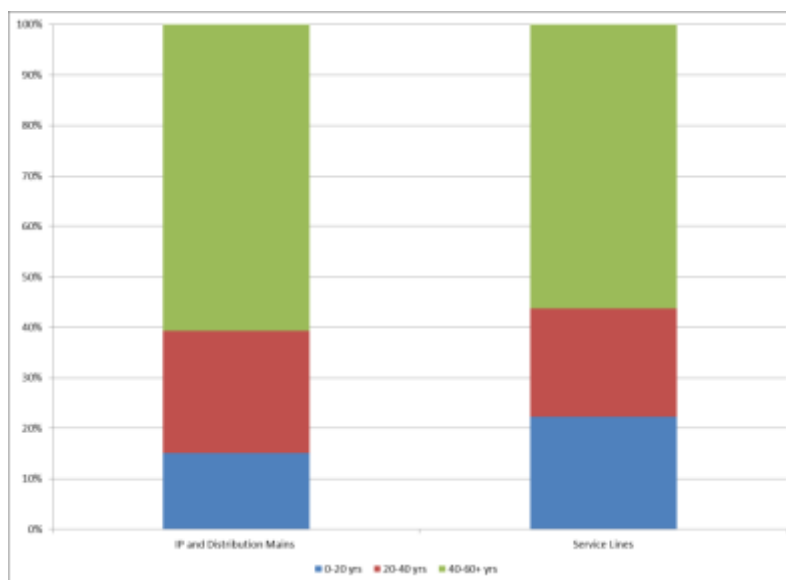
15. FEI has been making the necessary infrastructure investment in the COV over the last number of decades to provide natural gas to customers that request service, irrespective of the customer's intended end use.
16. FEI's total asset investment in intermediate pressure (IP) pipelines, and distribution mains and service lines in the COV (in terms of historical cost) is estimated at \$245 million, which represents 10.5% of the total infrastructure invested in IP and distribution mains and services for FEI as a whole (\$2.34 billion in 2014).
17. FEI has updated and added new assets within the COV over the years as necessary to meet customer demand. As such, the gas service infrastructure in the COV is a blend of both newer and older infrastructure as shown in Figure 2. The average service life of distribution mains for FEI is 64 years and of service lines 50 years³. As it pertains to the COV assets approximately 39% of the km of IP and distribution mains has a remaining service life of greater than 24 years⁴. FEI will continue to invest to maintain safe and reliable service to existing and future customers in the COV.

² As at December 31, 2014.

³ Based on a 2009 depreciation study.

⁴ Per Figure 2: 39% of assets are less than 40 years old; with a 64 year average life, these assets have greater than 24 years left to reach the average service life.

Figure 2: Age Distribution of IP, Distribution Mains and Services Lines in the COV



18. As it relates specifically to the NEFCC neighborhoods, the Northeast False Creek (NEFC) area has relatively new distribution mains infrastructure with the oldest distribution mains installed in 1985 as described in paragraph 21. In Chinatown there is a mix of both newer and older infrastructure aligned with the development of this neighbourhood with the oldest distribution mains installed in 1945 and the most recent in 2004.
19. Based on the map that Creative Energy filed as Appendix 1 to BCUC IR 1 showing the boundaries for the NEFCC areas, FEI has prepared Figures 3 and 4 to illustrate the active and dense network of distribution mains and service lines for NEFC and Chinatown respectively. These two figures show that the NEFCC neighbourhoods are already well serviced by natural gas infrastructure.
20. All customers and potential customers within these neighbourhoods are within a 200 metre radius of an existing distribution main, which is the distance identified in section 28 of the *Utilities Commission Act* that addresses extending public utility service to nearby premises.⁵

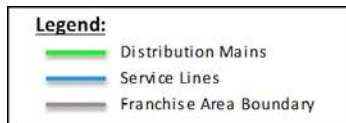
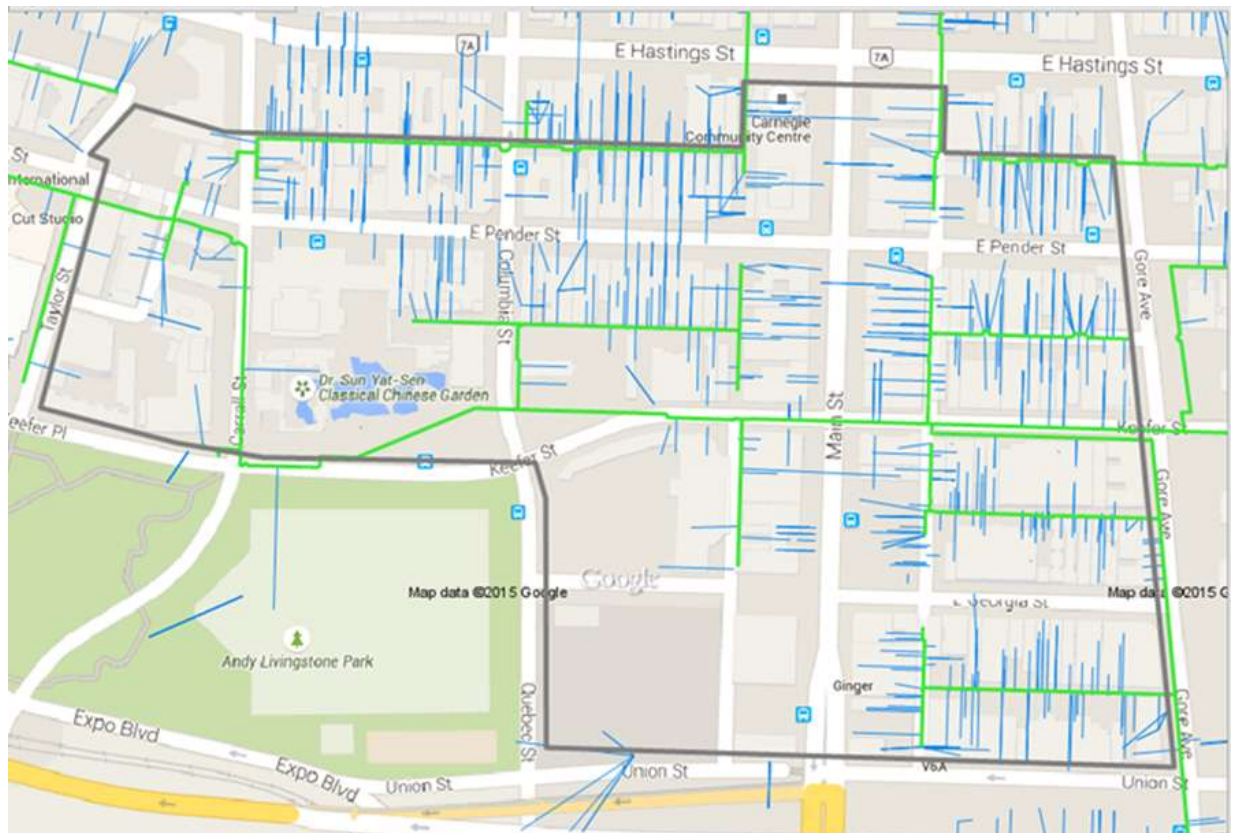
⁵ UCA Section 28(1) provides: “28(1) On being requested by the owner or occupier of the premises to do so, a public utility must supply its service to premises that are located within 200 metres of its supply line or any lesser distance that the commission prescribes suitable for that purpose.”

Figure 3: Map of Distribution Mains and Services available to Serve NEFC Area Customers



21. The map in Figure 3 above shows that FEI has a distribution main (shown in green) that runs along Pacific Boulevard adjacent to the parcels of land that are planned for development in this area. This provides future developments with ease of access to natural gas services using existing infrastructure. Rogers Arena and BC Place Stadium, located in the NEFC area, are among two of the existing natural gas customers in this neighbourhood. The largest section of this distribution main was installed in 1985 and then another section was added as recently as 2006. FEI's existing infrastructure is sized to sustain progressive future growth that would be typical for this area.

Figure 4: Map of Distribution Mains and Services available to Serve Chinatown Area Customers



22. The map in Figure 4 above shows the network of FEI’s distribution mains and service lines in the Chinatown neighborhood. In this neighbourhood FEI primarily services small commercial customers, which include establishments such as shops and restaurants along with professional and personal care services. FEI’s existing infrastructure is sized to serve progressive future growth that would be typical for this area.

COMPETITION AMONG ENERGY PROVIDERS IN THE COV

23. FEI competes with other energy providers in the COV, and this has long been the case. Apart from FEI, several public utilities currently serve space and water heating load in some or all of downtown Vancouver.

24. BC Hydro provides electric service to the downtown core, and throughout the COV. BC Hydro and its predecessors has been the sole provider of electricity within the COV for

many decades. BC Hydro provides electricity for a variety of end uses including space and water heating, cooling, industrial applications and cooktops.

25. Creative Energy provides steam service to a portion of the downtown core. Creative Energy describes its steam utility as follows:

“Creative Energy operates an existing gas-fired steam district energy system within the downtown core of Vancouver which serves over 210 customers including condo buildings, hotels, office buildings, social housing, small manufacturers, a major hospital, and other institutions. Creative Energy’s central steam plant is located at 720 Beatty Street. The company also owns and maintains 13 km of steam distribution mains in downtown Vancouver.”⁶

26. In addition, there are a number of small thermal energy systems (TES) within the COV that would fall within the definitions of Micro TES, Strata Corporation TES, and on-site Stream A TES, as described in the Commission’s Thermal Energy Services regulatory framework. A common trait of these systems is that the developer / strata corporation / landowner has made the commercial decision as to whether or not to install on-site thermal energy systems, and/or to take service from one of the other utilities like FEI, BC Hydro or Creative Energy.
27. Various companies compete to install TES systems of this nature, including FortisBC Alternative Energy Services Inc. (FAES), Corix Utilities, Creative Energy and Ameresco Canada Inc. among others. Completed or in-progress projects in the COV include such projects as Artemisia, Marine Gateway and TELUS Garden (FAES projects) and 188 Keefer Street (a Creative Energy project in Chinatown). There are a number of other TES projects constructed or in place elsewhere in the Lower Mainland.

THE UNUSUAL NATURE OF CREATIVE ENERGY’S PROPOSED FRANCHISE

28. It is not uncommon for B.C. public utilities to enter into agreements with municipalities regarding their operations, but the practice is by no means universal. FEI outlines below how the agreements typically entered into between investor-owned public utilities and B.C. municipalities deal with operational issues arising from the utility’s operations under a CPCN. FEI has not identified any instance of an agreement in which a municipality confers exclusivity on one investor-owned utility over certain end uses.

⁶ Application, p.1.

Precedents for Agreements with B.C. Municipalities

29. FEI provides below examples of agreements between B.C. public utilities and municipalities. They differ in nature from the proposed Neighbourhood Energy Agreement.

OPERATING AGREEMENTS WITH THE COV AND MUNICIPALITIES IN THE LOWER MAINLAND

30. Between the 1930s and 1950s, BC Electric entered into agreements with all but two municipalities in the Lower Mainland regarding its natural gas operations. They do not contain expiry provisions. A copy of the agreement that BC Electric entered into with the COV, which remains in place today as FEI's agreement with the COV, is attached as **Attachment 3** (FEI-COV Agreement).
31. The FEI-COV Agreement includes protocols for the construction and operation of system assets to facilitate coordination with the COV. For instance, it includes a provision (Art. 8) that recognizes the right of the Company "from time to time without submitting details or obtaining the approval of the City Engineer" to:
- (ii) place and construct on public property gas service pipes (including valves) from its mains to the premises of its customers; but the Company shall place and construct such service pipes in accordance with any reasonable written instructions that the City Engineer may from time to time give to the Company and shall, if so required in writing by the City Engineer, supply to the City Engineer each month a list of addresses of premises to which service pipes shall have been so placed and constructed during the preceding month.
32. In practice, service lines are installed at customer request with relatively little or no involvement by the COV although FEI typically provides the COV with weekly advance notice of installations. Work on IP and distribution mains often requires approved drawings to be sent to the COV engineering group for their review, particular if the service work is to occur on City rights of way. All paving on public property is completed by the COV, and FEI is billed in advance for this work.

OPERATING AGREEMENTS IN THE FORMER INLAND NATURAL GAS SERVICE TERRITORY

33. Inland Gas had entered into a number of standard form agreements with municipalities in 1957 when the original natural gas distribution system was installed, which included renewal requirements every 21 years. The original agreements were replaced as they

came due. A copy of the form of agreement approved by the Commission in 2014⁷ for FEI's future use is included as **Attachment 4**.

OPERATING AGREEMENTS ON VANCOUVER ISLAND AND THE SUNSHINE COAST

34. In 1991 the Commission approved a form of agreement for Centra Gas to use with municipalities on Vancouver Island and the Sunshine Coast.⁸ This Vancouver Island Pro Forma Agreement was used with 10 municipalities. These agreements are now expired and have been replaced as described next.
35. On March 24, 2015, FEI applied to the Commission for approval of new Operating Agreements between the Company and 26 municipalities on Vancouver Island, the Sunshine Coast and the City of Powell River. The Commission approved the proposed Operating Agreements for all 26 municipalities in June 2015 by Orders C-6-15, C-7-15 and C-8-15. An example of the new form of agreement is provided in **Attachment 5**.

OPERATING AGREEMENTS OF OTHER BC UTILITIES

36. Creative Energy has an operating agreement with the COV. Creative Energy provided a copy of its Municipal Access Agreement in response to FAES IR 1.1.2.1. Article 2.4 "Non-exclusive License" states:

This Agreement does not confer any exclusive rights on the Company. The City has the full and unrestricted right to grant similar and concurrent rights and privileges to any other Public Body or Private Entity including without limiting the general scope of this section the grant of rights which would enable the operation of any system or service competitive with the Distribution System.

37. FortisBC Inc. does not have any operating agreements with municipalities.

North American Experience with Franchises

38. **Attachment 6** is an excerpt from a text on public utility regulation, entitled *The Regulation of Public Utilities, Theory and Practice*, by Charles F. Philips, Jr. The author describes how regulation by municipal franchise was an early, and ultimately "ineffective" (p.131) method of government regulation. The author discusses how regulation by municipal franchises in the United States was supplanted by state public utility regulators. He states that, today, "In most cases, city franchises are limited in

⁷ July 24, 2014, by Order C-8-14.

⁸ Order G-13-91.

function, usually dealing with the use of city streets. Economic regulation is carried out by state and federal commissions.” (p.131).

IMPLICATIONS OF THE PROPOSED NEA FOR CONSUMER CHOICE

39. Approving the NEA would preclude the adoption of natural gas and RNG for space and water heating end uses, both of which are immediately available to serve energy consumers in the proposed franchise area. The attributes of both natural gas and RNG are discussed below. FEI also addresses some impediments to future fuel switching that would be associated with approval of the franchise and associated mandatory connections.

The Attributes of Natural Gas

40. Natural gas is one of the most affordable forms of energy available to energy consumers. FEI has provided information later in this evidence on the cost to the customer for natural gas service in NEFC for the purposes of comparison with the Creative Energy Phase 1 proposal. Natural gas is a less expensive alternative.
41. At today’s prices, delivered natural gas (including commodity, storage and transport, delivery and carbon tax) to a residential customer is one third to one half the price of electricity.
42. Natural gas has a lower carbon content than propane, oil, coal and wood. Consumers using natural gas are charged a carbon tax based upon the carbon content in the fuel. The current carbon tax is \$30/tonne. The carbon tax sends a price signal to consumers on the use of natural gas versus other forms of energy.

Renewable Natural Gas and Its Availability

43. FEI has been capturing and purifying biogas to provide to customers as RNG since 2011 on a pilot basis with the program becoming permanent in 2014. RNG is a renewable, carbon neutral energy option that is easily controlled and delivered through the gas delivery system.
44. Biogas is produced from either agriculture waste or is captured from landfills. In the case of agriculture waste, biogas is produced when bacteria degrade biological material in the absence of oxygen, in a process known as anaerobic digestion. In the case of landfill biogas, a collection of gases including methane is captured from decomposing landfill material. In both cases, the contaminants present in biogas are removed through processing to produce high quality gas or RNG. This RNG is interchangeable

with natural gas and can be injected into the existing natural gas pipeline infrastructure. RNG can be used by customers with their existing natural gas appliances.

45. RNG meets the definition of a “clean and renewable resource” under the *Clean Energy Act*, which provides:

"clean or renewable resource" means biomass, biogas, geothermal heat, hydro, solar, ocean, wind or any other prescribed resource;⁹" (emphasis added)
46. FEI charges a rate for RNG that is higher than the existing FEI natural gas commodity rate. With carbon tax included in the natural gas comparator, the current premium for RNG is \$10.43/GJ.¹⁰
47. FEI’s current annual RNG production capacity is approximately 265,000 GJ (with an additional banked inventory of 70,000 GJ). Moreover, FEI has two signed agreements with RNG suppliers that have been approved by the Commission. These projects, which are expected to come on line as early as 2016 will provide for an additional 100,000 GJ/yr.
48. Based on this, total available annual RNG capacity is expected to be approximately 365,000 GJ/yr as early as 2016. Projected demand for 2016 is expected to be approximately 150,000 GJ/yr, such that there is expected to be 215,000 GJs/yr of available supply. This is more than enough to supply NEFC based on Creative Energy’s projected load of approximately 8,000 GJ in 2016 and 145,000 GJ by 2020.
49. In addition to the 100,000 GJ/yr under contract and currently expected to come on line as early as 2016, FEI is currently in negotiations with three other potential suppliers of significant volumes. FEI continues to explore plans for expansion of production in future years that would meet future demand for RNG.
50. FEI has seen an encouraging level of customer uptake of RNG within the COV, with COV customers accounting for 12% and 17% of the residential and commercial RNG customer base respectively, as shown in Table 2 below.

⁹ Section 1, Bill 17- 2010 Clean Energy Act

¹⁰ The approved rate for RNG (the Biomethane Energy Recovery Charge) of \$14.414 per GJ as compared to a natural gas commodity rate of \$2.486 per GJ and carbon tax of \$1.50 per GJ (total of \$3.986 per GJ) as at July 1, 2015.

Table 2: RNG Customer Count for COV and FEI¹¹

RNG Customers			
Customer Segment	COV	FEI	COV as a % of Total FEI
Residential	783	6,680	12%
Commercial	22	130	17%
Industrial	4	14	29%
Total	809	6,824	12%

51. The attributes of RNG include:

- The ability to purchase blends in 5% increments, which would enable a stepped approach to increased RNG use over time to meet the COV’s Greenest City Action Policy and also provide pricing flexibility for customers;
- Uses the existing utility pipeline infrastructure;
- Uses the same customer equipment as natural gas heating, e.g., gas boilers;
- Regulated rates and pricing under an established offering;
- Low particulate matter emissions (lower than biomass, for instance);
- Relative to natural gas, no immediate and significant incremental capital investment required by FEI or customers to support a carbon neutral RNG solution in the NEFCC areas, thus reducing price and timing risk; and
- No requirement for customers or the COV to wait until 2020 for a conversion to a low carbon solution as sufficient supply already exists to meet projected NEFC load in 2020.

52. FEI has included a rate forecast for an RNG option in its discussion of benchmarking below.

Barriers to Future Fuel Switching

53. If Creative Energy’s proposal is approved, operational and capital cost factors may preclude any change of technology down the road, should that become an option (i.e., in the event that mandatory connection were to end).

¹¹ As at December 31, 2014.

54. Depending on the configuration and location in the building of the mechanical room housing the Energy Transfer Station (ETS), the building owner may have to incur a significant cost to switch to an on-site heating system from the Creative Energy NES. The building owner would need to retrofit the mechanical room to enable sufficient space for additional equipment, such as high efficient gas boilers and auxiliary equipment, and would require additional adjacent space to do so. For example in response to CEC supplemental IR 1.4.6, Creative Energy estimated a natural gas boiler plant will require more than double the floor space of an ETS.¹²

CREATIVE ENERGY'S BENCHMARKING ANALYSIS

55. In response to BCUC IR 2.19.2, Creative Energy provided a benchmarking analysis showing levelized rates and costs for the NEFC, 100% natural gas with an on-site gas boiler, and a number of other energy providers. In this IR response, the levelized rate for NEFC is shown as \$96/ MWh whereas the levelized rate for 100% natural gas is shown as \$85/MWh. Creative Energy indicates that these were “benchmarks requested by Commission staff and by interveners”.
56. Below, FEI makes three points about Creative Energy’s benchmarking:
- (a) First, Creative Energy has used a non-conventional approach to levelization that should be used with caution. Notably, it can be used for relative comparisons with other options like natural gas and RNG, but does not yield an accurate value for what customers of NEFC will pay.
 - (b) Second, even using Creative Energy’s non-conventional methodology and starting with its \$96/MWh value as a basis for comparison, FEI disagrees with Creative Energy’s inputs that went into determining the natural gas comparable. Correcting the input assumptions for natural gas yields the following results:
 - (i) 100% natural gas supplied by FEI is a far more cost effective option than Creative Energy’s Phase 1 levelized rate,
 - (ii) a low carbon solution of a blend of RNG and natural gas is also a substantially lower cost solution than Creative Energy’s Phase 1 levelized rate, and
 - (iii) both the RNG blend and 100% RNG options are less than Creative Energy’s low bookend for Energy Phase 2.
 - (c) Correcting the SEFC assumptions drives that result up significantly.

¹² Creative Energy estimated that 500 square feet of space would be required for a natural gas boiler plant as compared to an ETS Station which requires approximately 200 square feet.

Creative Energy's Non-Conventional Levelization Methodology

57. On page 100 of the Application Creative Energy describes the levelized rate calculations as: “The levelized rate converts a forecast of unit rates into an equivalent constant rate using a discount rate equal to the utility WACC”. The “levelized rate” as calculated by Creative Energy is effectively an average annual customer rate but discounted at the utility WACC of 6.34%, as evident in response to BCUC IR 2.19.2. Creative Energy’s approach to levelizing is not a conventional levelizing methodology.
58. FEI has accepted this “levelized rate” methodology for the purpose of updating the benchmarking analysis because FEI does not have access to all of the information to recalculate the NEFC rates using a more conventional approach. While using the \$96/MWh as a starting point and using a similar methodology to derive rates for other options to that methodology is workable for determining relative amounts among options, a more conventional methodology for calculating comparable rates should be used to set the Benchmark Energy Cost¹³ for purposes of determining Creative Energy’s proposed Cost Premium Cap.¹⁴ Under the terms of the NEA, the NEFCC rates approved by the BCUC are not to exceed the Cost Premium Cap in either Phase 1 or Phase 2.¹⁵

FEI’s Determination of the Natural Gas Benchmark

59. For the purpose of a relative comparison analysis, FEI has simply assumed that \$96/MWh is correct for NEFC, and endeavoured to ensure that the “levelized rate” for natural gas, RNG and SEFC are appropriate for an “apples to apples” comparison against Creative Energy’s NEFC \$96/MWh estimate. FEI has retained as many assumptions as possible for the natural gas and RNG options to permit comparability, while correcting the assumptions that are unreasonable. All assumptions have been set out, and explanations for changes are provided.
60. It appears that both Creative Energy and FEI agree in so far as there are two components to the “natural gas” rate that need to be included in order for the rate to be comparable. The first component is the natural gas rate paid by the customer to FEI for natural gas service. The second component is independent of FEI, and is the cost incurred by the customer to purchase, install and maintain natural gas boilers in order

¹³ Schedule A of the NEFCC NEA: “Benchmark Energy Cost” means a competitive benchmark accepted by the BCUC for the cost of heating for new development comparable to the Franchise Area Buildings, taking into account applicable building codes, provincial government policies, COV policies, and consumer expectations. For greater clarity, the competitive benchmark will consider other low-carbon energy options, including COV’s SEFC NES, other comparable neighbourhood energy systems, and on-site alternatives to achieve low carbon emissions such as electric heat, as applicable, and will not be based on the cost of service for gas-fired steam in CE’s existing service area.

¹⁴ Schedule A of the NEFCC NEA: “Cost Premium Cap” means 110% of the Benchmark Energy Cost.

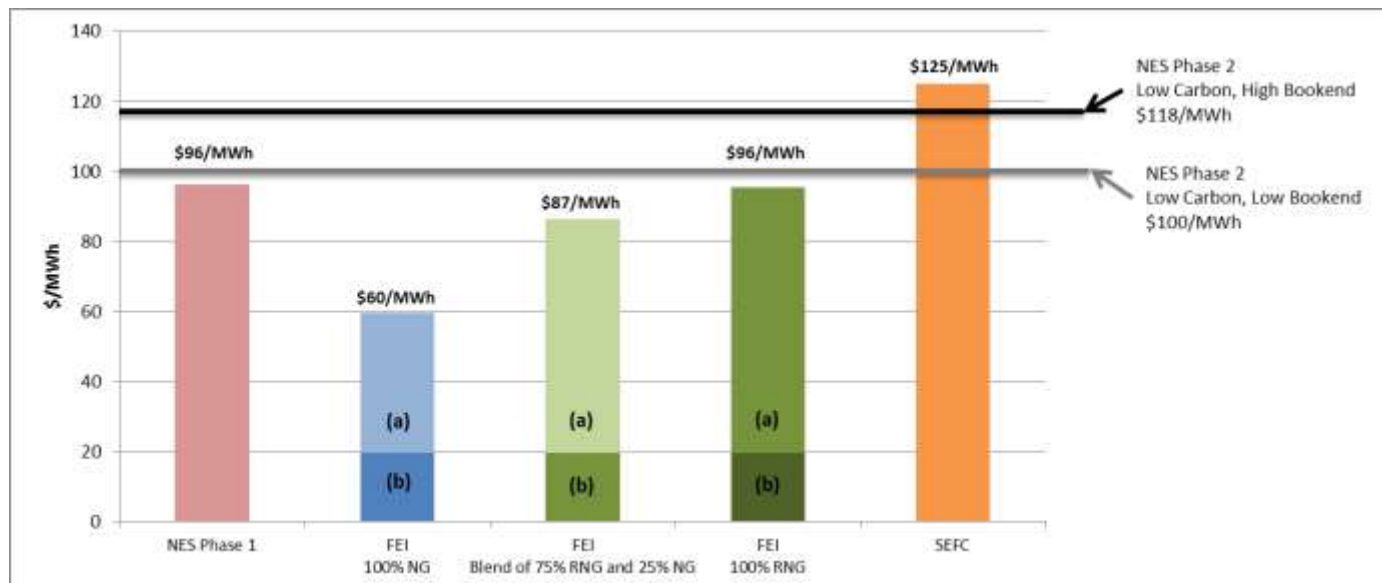
¹⁵ NEFCC NEA Sections 8.1 Phase 1 Requirements and 8.2 Phase 2 Requirements

to take natural gas service from FEI for space and hot water heating. Taken together, the addition of the FEI rate for delivered gas plus the customer cost for the on-site boilers equates to a rate the customer would pay for its own in-building production of heat and hot water and is therefore an appropriate basis for comparison against the rate a neighbourhood energy system would charge its customers.

61. Creative Energy and FEI depart significantly on what are the appropriate assumptions to be used in deriving these two components of a natural gas benchmark. As discussed later, FEI believes that the assumptions used by Creative Energy are wrong in many cases and significantly inflate the natural gas benchmark value in Creative Energy's analysis to the point where the \$/MWh values for NEFC and natural gas are presented as if they are nearly the same. FEI's calculations, based on different data inputs, yield a value for natural gas that is significantly lower.
62. Figure 6 below shows the natural gas levelized customer rate as being \$60/MWh based on Creative Energy's rate levelization methodology but using FEI's corrected assumptions. This number is 38 percent lower than the comparable NEFC levelized rate of \$96/MWh.
63. Creative Energy did not analyze RNG. The RNG rate values in Figure 6 were similarly calculated by FEI using Creative Energy's rate levelization methodology, but using FEI's corrected assumptions for natural gas, plus additional inputs for the RNG premium. The levelized rate for the blend of 75% RNG and 25% natural gas is an appropriate point of comparison to Creative Energy's Phase 2 low carbon bookends¹⁶. FEI calculates the levelized rate for RNG (assuming a 75% blend of RNG, and 25% blend of natural gas) as being \$87/MWh, which is 13% percent lower than the NES - Phase 2 low carbon, low bookend rate of \$100/MWh. It is 26% lower than the respective high bookend rate of \$118/MWh.
64. In addition, the 100% RNG option shown in Figure 6 at a levelized rate of \$96/ MWh provides a benchmark for an option that provides greater carbon reductions than would be achieved under Energy Supply Phase 2 as currently envisioned by Creative Energy. 100% RNG provides greater carbon reduction, and is \$4/MWh lower than Creative Energy's low carbon, low bookend estimate. It is \$22/MWh less than Creative Energy's low carbon, high bookend estimate.
65. The explanation for why the SEFC value in Figure 6 of \$125/MWh is higher than the rate presented by Creative Energy of \$115/MWh follows later in this section.

¹⁶ The 75% RNG assumption is based on an assumed mix of 75% biomass and 25% natural gas for peaking and backup after the low carbon fuel switch, as per Page 43, Exhibit B-1, NEFC District Energy Screening Study.

Figure 6: Levelized Rate Comparison



Notes:

- (a) This portion of the bar chart is the natural gas rate paid by the customer to FEI for natural gas delivery service.
- (b) This portion of the bar chart is the cost the customer would incur to purchase, install and maintain natural gas boilers
- (c) The SEFC levelized rate has been corrected by FEI as it relates to a comparable rate for NEFC development
- (d) FEI assumes that Creative Energy’s NES Phase 2- low carbon bookends are comparable to 75% renewable fuel source & 25% natural gas

FEI’s Levelized Rate Assumptions for Natural Gas and RNG

66. As stated above, the natural gas and RNG rates calculated and included in Figure 6, as with Creative Energy’s calculations, are composed of both the customer cost to purchase and maintain the boilers, and the cost to the customer of natural gas service from FEI.
67. The primary difference between the 100% natural gas levelized rate provided by Creative Energy of \$85/MWh and the levelized rate that FEI has provided in its evidence is the component of boiler and maintenance costs. FEI has attempted to gain clarity around the boiler and maintenance costs used by Creative Energy through the IR process, but remains unsure as to the basis for the inputs Creative Energy has used. For example, FEI asked Creative Energy in IR 2.13.1 to explain why Creative Energy appears to be using multiple different installed gas boiler and maintenance costs in various responses to round 1 IRs. In its response Creative Energy explained that “for simplicity Creative Energy has aligned these input assumptions for the two relevant benchmarks” but provided no rationale or source data to support its input assumption.
68. In the course of FEI’s review of Creative Energy’s calculation of the 100% natural gas rate it was apparent that the boiler and maintenance costs used by Creative Energy as inputs into the calculation of the levelized rate were much too high. In order to arrive at an appropriate cost that a customer would incur to purchase, install and maintain

natural gas boilers, FEI performed its own analysis and obtained data from credible sources as described below:

Boiler - Capital and Installation Cost:

- FEI reviewed a sample of 40 boiler installations from its Efficient Boiler Program¹⁷ for commercial customers to arrive at an indicative estimate of boiler and installation costs. These boiler costs were for multi-unit, mixed-use (residential and commercial) buildings located in the Lower Mainland, where the building owner had installed new high efficient commercial boilers in the last three years.
- The costs include: cost of the boiler at capacity peak ratio of 150%, installation costs including labour, auxiliary equipment, venting, piping, 10% contingency for gas hookups and 10% contingency for design and engineering.
- Using this approach, FEI arrived at a cost of \$201/kw as compared to \$250/kw¹⁸ used by Creative Energy. FEI is not clear on the source of Creative Energy's number.
- In addition, FEI has accounted for the market value of the space required for the on-site boilers separately, using assumptions similar to those used by Creative Energy. FEI derived the market value for the space from Creative Energy's response to Exhibit B-9 CEC IR 1.52.2 and the space requirement of 500 sqft from Exhibit B-18 CEC Supplemental Response IR 1.4.6.

Maintenance Costs:

- FEI provided eight local contractors with experience in boiler servicing with the size of an on-site boiler plant representative of what would be used for buildings in NEFC, and requested maintenance quotes.¹⁹ FEI used a simple average of the eight quotes, to arrive at an estimate of \$1.45/kW. Creative Energy used an estimate of 3% of the up-front capital and installation cost which is equivalent to \$7.50/kW and significantly higher than the estimate derived by FEI. FEI's concern with Creative Energy's "3% of the up-front capital and installation cost" approach is this includes many costs that are not associated with the ongoing maintenance of the boilers (e.g., design and engineering, market value of space required for

¹⁷ This program is part of FEI's Energy Efficiency and Conservation Portfolio

¹⁸ FEI believes, but is not able to confirm by way of IR responses, that the value used by Creative Energy may include the market value of the space of the mechanical room required to house the on-site boilers. FEI has accounted for this cost separately.

¹⁹ The scope of work for annual boiler maintenance includes items such as inspect and clean the combustion chamber, inspect boiler vents and combustion air, remove and clean burner head(s) and electrodes, verify operation of safety devices, flue gas analysis, combustion analysis, inspection of boiler controls, etc.

the mechanical room). FEI's value of \$1.45/kw represents approximately 2% of the boiler purchase price.

Using these sources of information FEI was able to derive a cost estimate for a customer to purchase, install and maintain their on-site boilers.

69. For FEI's utility rate component, FEI used:

- The approved 2015 basic charge, delivery rate, and storage and transportation rate for a Rate Schedule 3 commercial customer, plus carbon, tax, with a 2% annual inflationary increase thereafter. Creative Energy used Rate Schedule 5, which is actually *lower* than what FEI has used (i.e., this change, other things being equal, *drives up* the natural gas comparable rate and is more favourable to Creative Energy's position). Rate Schedule 3 was considered appropriate based on the consumption and load profile of the customers in the NEFC area. A 2% inflationary increase was used as this aligns with Creative Energy's assumption for the utility rate annual escalation.
- Gas commodity costs:
 - The natural gas commodity cost forecast is based on Sproule December 31, 2014 Forecast at BC Westcoast Station 2 as this is the most appropriate market hub for FEI. Creative Energy used the Huntingdon -Sumas hub rate in their 100% natural gas assumption which is a less liquid market hub and therefore not as relevant.
 - The RNG 2015 commodity cost is \$14.41 / GJ which is the 2015 approved RNG rate. FEI used a 2% annual inflationary increase thereafter, as this is the same inflationary factor used by Creative Energy for its natural gas commodity rate for NEFC.

70. For the customer component calculation, a 4% debt rate was used to reflect the borrowing rate at which that the developer/owner would finance the boilers. FEI estimates that this is a sufficiently high debt rate for a developer as to be considered conservative. Creative Energy had used its own WACC, which is not relevant to the borrowing rate that a developer would incur to finance the purchase of boilers.

71. In order to provide for a comparable rate, FEI kept the remaining assumptions the same as those used by Creative Energy in the calculation of their 100% natural gas rate. These assumptions are listed in Table 1 in Attachment 7.

Ensuring Comparability of the SEFC Rate

72. FEI has corrected the levelized rate for SEFC from \$115/MWh to \$125/MWh so it is calculated using a more appropriate basis for comparison to Creative Energy's \$96/MWh for the NEFC development.
73. For the SEFC levelized rate comparison Creative Energy had used the 2014 effective rate of \$97/MWh²⁰ as explained in response to FEI 2.16.5.1. This 2014 effective rate was derived based on a specific size of floor space, which is significantly smaller than the total floor space expected for the NEFC development. This was reasonable in the context of the COV Benchmarking because all the benchmarks for COV are based on a reference building with a specified floor space. However, it should not be used in the context of NEFC because Creative Energy's other benchmarks are all based on parameters relevant to NEFC including the square footage of floor space. This approach used by Creative Energy derives a lower rate for SEFC because it does not fully account for the fixed capacity levy per square meter associated with the larger NEFC total floor space.
74. In order to provide for an "apples to apples" comparison rate in Figure 6, FEI has corrected for this oversight and used the forecast customer rates (i.e. Fixed Capacity Levy per square meter and Variable Energy Use Charge per MWh) from 2016 to 2030²¹. The net result of FEI's analysis is that the SEFC benchmark is higher, at \$125/MWh

COV BENCHMARKING ANALYSIS

75. Creative Energy filed the Administrative Report on the Neighbourhood Energy By-law for Northeast False Creek and Chinatown (the COV Report) as Exhibit B-2 which included a benchmarking analysis. Creative Energy has stated that this benchmarking was conducted by the COV for its own purposes (COV Benchmarking).
76. The analysis significantly overstates the effective rate the customer would pay for heating and hot water derived from natural gas service for the assumed reference building. The analysis also did not reference RNG or offsets as a low carbon comparison, both of which are more cost effective.

COV Benchmarking Overview

77. The COV Benchmarking was undertaken using a different methodology from Creative Energy's analysis. In the COV Benchmarking, an effective rate is calculated for the

²⁰ Page 10, <http://vancouver.ca/files/cov/false-creek-neighbourhood-energy-utility-2014-rates-report.pdf>

²¹ Appendix G-2 to G-4, <http://vancouver.ca/files/cov/false-creek-neighbourhood-energy-utility-2014-rates-report.pdf>

purposes of comparison in a single year. The COV states that this rate illustrates “what customers will pay per megawatt-hour for heating.”²² As per the COV Report, the rate is calculated based on a reference building with an annual Energy Use Intensity (EUI) of 109 kWh per m² of floor area.

78. FEI has included below, for ease of reference, excerpts from the COV Report explaining the COV Benchmarking approach and results:

“Creative Energy has provided staff with preliminary rate information for the NEFC and Chinatown NES, which is subject to change as part of the BCUC review process. To assess the competitiveness of the NEFC and Chinatown NES, staff examined what a typical customer would pay compared with other energy providers (see Table 1).

Because the rate structure and type of service of these energy providers vary, an “effective rate” is calculated for the purposes of comparison. This rate illustrates what customers will pay per megawatt-hour for heating. The preliminary estimated effective rate for the NEFC and Chinatown NES is \$84 per MW.h. This effective rate is lower than all of the other benchmarks listed, with the exception of the existing Creative Energy Downtown steam system. This low cost is due to the very high development densities in NEFC, and the use of the established Creative Energy system for supply of initial heat to the new NES.” (emphasis added)²³

79. Table 1 of the COV Report summarizes the COV Benchmarking comparison.
80. City Council discussed the COV Report at the council meeting on April 28, 2015, where it was approved.

COV Benchmarking Overstates Amount Customers Would Pay For Natural Gas

81. FEI has performed the analysis of the natural gas rate using the same reference building assumptions that were used by the COV and has provided a corrected effective rate in Table 3 below. Table 3 restates the effective rate benchmarking comparison, showing both the original number for Creative Energy’s NEFCC and the corrected number for natural gas.
82. To arrive at the restated effective rate, FEI used the same boiler and maintenance cost assumptions described in paragraph 68 above for the Creative Energy cost comparison. Similar to the Creative Energy benchmarking, the primary difference between the COV natural gas effective rate and the effective rate provided by FEI is the cost of the boiler and associated maintenance. While boiler costs do vary by building type and size, the

²² Page 6, Exhibit B-2, COV Report

²³ *ibid*

boiler cost per MWh used by the COV in its calculation (\$500/kw²⁴) is more than double that verified by FEI (\$201/kw) and twice that used by Creative Energy (\$250/kw).

- 83. The correction for the lower boiler and maintenance costs resulted in a substantially lower effective rate for FEI’s natural gas than shown by the COV in its table.
- 84. All other assumptions used by FEI are the same as those used by the COV, and are provided in Table 2 in Attachment 7.

Table 3: Corrected COV Natural Gas Benchmarking for Reference Building

Energy Provider	GHG Emission Intensity (kg CO ₂ /MWh)	Estimated Effective Rate (\$/MWh)	Year of Effective Rate
Creative Energy for NEFC	230 (Initial) 70 (2020 onwards)	\$ 84	2016
FEI - Natural Gas as shown in COV Report	220	\$ 89	2015
FEI - Natural Gas (Corrected)	180	\$ 45	2015

- 85. The correct rate, using the reference building assumptions supplied by COV, is \$45/MWh. This rate is 49% lower than the FEI natural gas rate provided in the COV Benchmarking to City Council and 46% lower than Creative Energy’s proposed effective rate of \$84/MWh for the NEFC NES.
- 86. In addition, FEI has also corrected the GHG Emission intensity from 220kg CO₂/MWh to 180kg CO₂/MWh as the 180kg CO₂/MWh is the appropriate measure for GHG emissions produced from natural gas combustion due to activities/equipment within the building²⁵. The 180 kgCO₂/MWh is the appropriate intensity for a building that produces heating for its own consumption (i.e. natural gas combustion from natural gas boiler installed at the building, instead of purchased heat from a district energy system), as per the 2014 BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions. COV erroneously used the 220 kgCO₂/MWh which is the GHG Emission intensity for a building that uses a district energy system for heating with natural gas at 85% system efficiency, which includes both the plant efficiency and the efficiency of the district energy distribution network.

²⁴ In their IR response, COV indicate that this value includes the market value of the space of the mechanical room required to house the on-site boilers, which FEI has accounted for separately

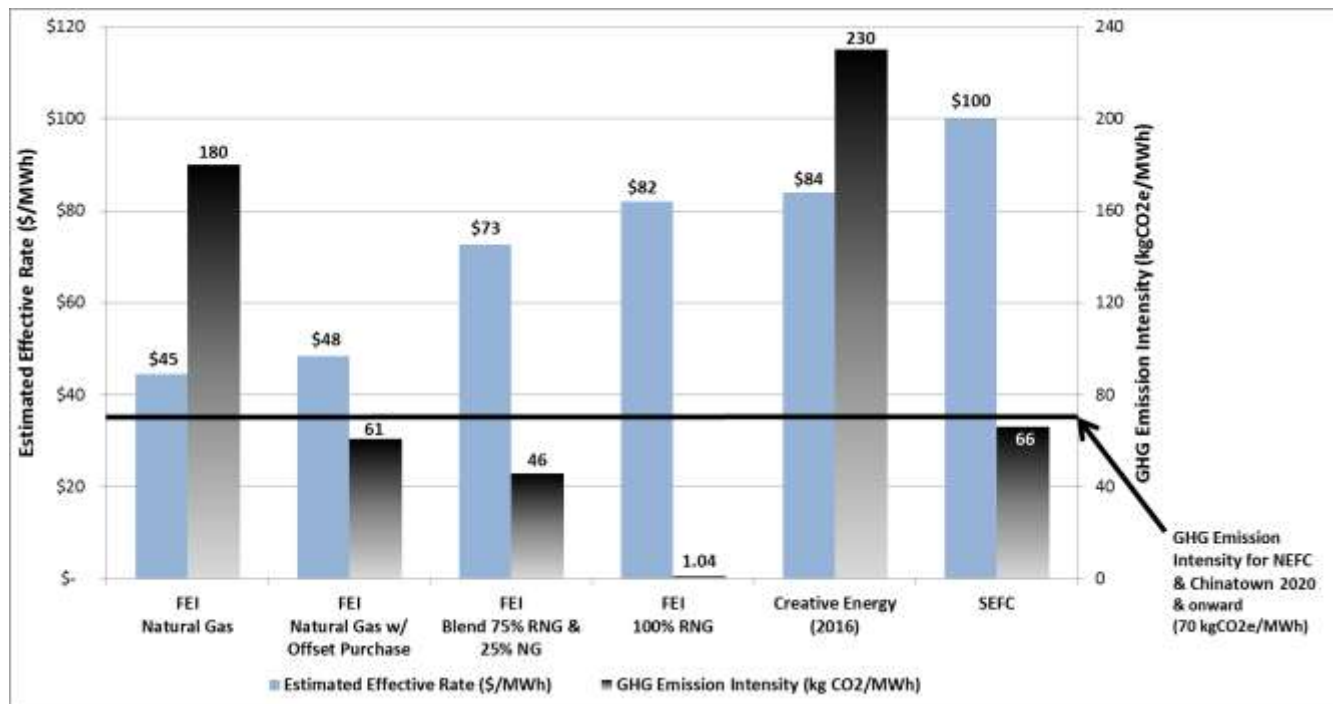
²⁵ Section 2.1: http://www2.gov.bc.ca/assets/gov/environment/climate-change/policy-legislation-and-responses/carbon-neutral-government/measure-page/2014_bc_best_practices_methodology_for_quantifying_greenhouse_gas_emissions.pdf

Benchmarking of RNG and Carbon Offsets

87. RNG and carbon offsets were not included in the COV Benchmarking. The results for both options compare favourably to Creative Energy’s proposal.
88. FEI has prepared Figure 7 to demonstrate how these additional options would compare among each other in terms of cost and carbon emissions. The COV’s objective for carbon emissions is depicted by the thick horizontal line. The GHG emission intensity for natural gas and RNG is based on 2014 BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions.
89. Using the COV’s “effective rate” benchmarking methodology, the 75% RNG blend results in a competitive rate of \$73/MWh. That number is 13% lower than the NEFC effective rate of \$84/ MWh.
90. FEI has also provided the pricing of purchasing carbon offsets in combination with FEI’s 100% natural gas option to achieve GHG emission levels comparable to those of NEFC after the proposed low carbon fuel switch in year 2020. The effective rate for this scenario is \$48/MWh, which is also lower than COV’s effective rate estimate for the NEFC. FEI estimated that 154 tonnes of carbon offsets would need to be purchased under this scenario, which is equivalent to a \$3/MWh premium over the FEI natural gas rate²⁶. In order to arrive at Carbon Offset pricing FEI assumed a purchase price of \$25 per tonne of CO₂e, which is the current offset price for the Public Sector per the BC Carbon Neutral Government Policy.

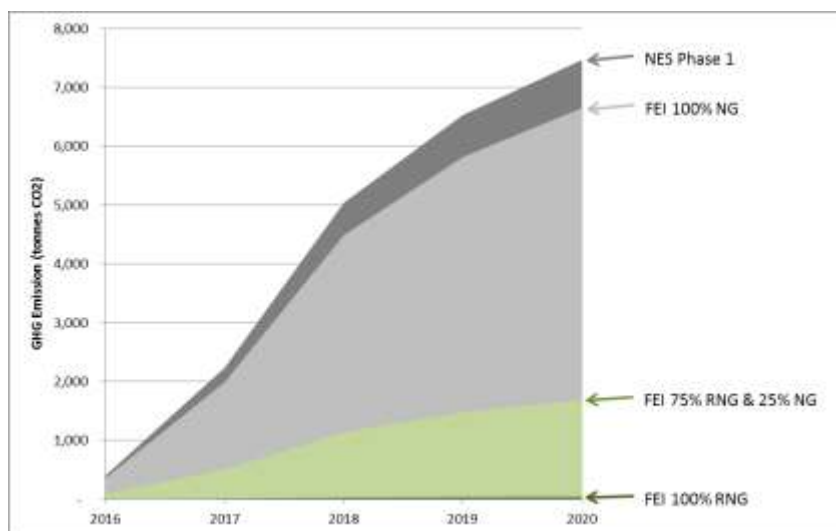
²⁶ FEI estimated that the amount of carbon offsets required to reach an equivalent annual GHG emission (tonne of CO₂) as Creative Energy’s low-carbon Phase 2 in 2020 is 154 tonnes. The 154 tonnes of carbon offsets is derived by taking the estimate of 231 tonnes of CO₂e for the reference building with on-site boilers and subtracting the target carbon emission of 77 tonnes.

Figure 7: Alternative Options Available to COV Residents



91. Figure 8 below shows the additional GHG emissions that can be displaced with choosing either a 75% or a 100% RNG blend effective in 2016 for the NEFC area, rather than waiting for a low carbon fuel switch in 2020. This represents a cumulative carbon emission displacement of approximately 16,000 tonnes for a 75% blend and approximately 21,000 tonnes for a 100% blend for the period 2016 to 2020 as compared to a delayed low-carbon fuel switch.

Figure 8: GHG Emission Reduction Advantage Starting in 2016

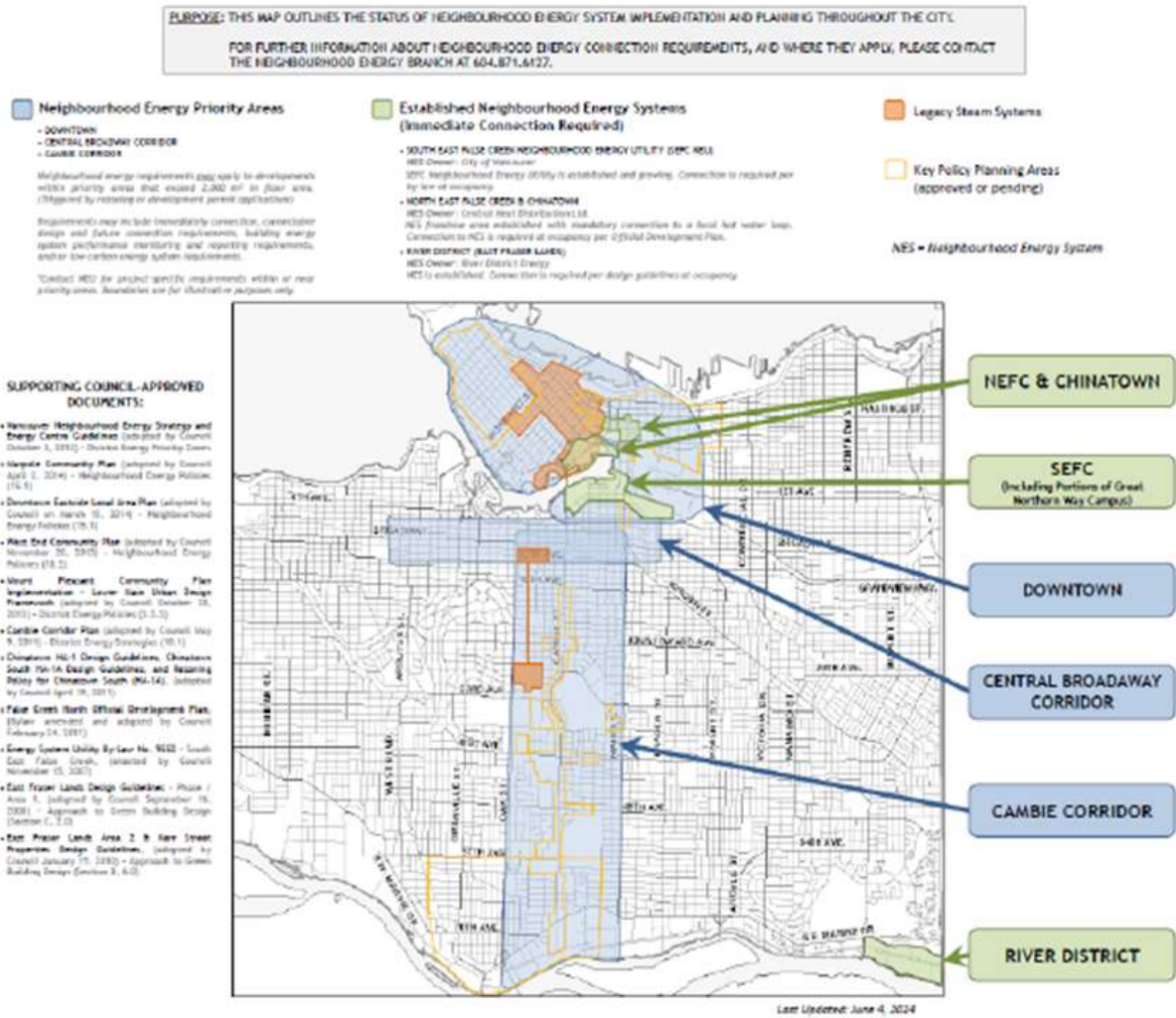


FUTURE RATE IMPLICATIONS FOR FEI CUSTOMERS

92. The Creative Energy proposal for exclusivity would, if granted, affect FEI's customers through higher natural gas rates (other things being equal).
93. FEI delivery rates are charged on a per GJ basis, meaning that (other things being equal) more throughput on the system will reduce delivery rates, and conversely, reduced throughput on the system will increase delivery rates.
94. The mandatory connection obligation for developers in the proposed franchise area and exclusivity over space and water heating for Creative Energy prevents FEI from competing for this future load in the proposed franchise area. This represents a forgone load for FEI in the range of 0.2 PJ for the NEFC if one assumes 100% capture for natural gas, equivalent to foregone future revenue of approximately \$600,000²⁷ per year in 2025 and beyond once Creative Energy reaches full build-out.
95. When this lost opportunity in the NEFC is translated into rates and considered in isolation, the percentage rate impact in a single year will not be material. However, FEI's customers do not look at such items in isolation, and interveners representing customers routinely scrutinize costs that in isolation have an annual revenue requirement impact that is far less than \$600,000.
96. Creative Energy included Figure 6 on page 26 of Exhibit- B-1, which is reproduced as Figure 9 below, to position its NEFCC Application in the context of the broader strategy. On page 3 of Exhibit B-2 the COV describes how "Creative Energy will conduct feasibility analysis" for conversion of the "Downtown Steam System", for "South Downtown" and for "other Expansion Areas" which include the "West End" and "Downtown Eastside".

²⁷ Based on approved FEI January 1, 2015 delivery rates, NEFC forecast load at full buildout and average service line capital and incremental operating and maintenance costs.

Figure 9: Vancouver Neighbourhood Energy Strategy



97. FEI has prepared a high-level rate impact analysis through an assessment of losing natural gas load in the neighbourhood areas of Downtown (including NEFC and excluding SEFC) and the Cambie and Central Broadway Corridors as shown in Figure 9. The implications on FEI's rates are potentially very significant if the Vancouver Neighbourhood Energy Strategy proceeds as planned.
98. FEI estimates that the Vancouver Neighbourhood Energy Strategy which includes NEFC, and other areas of Downtown, Central Broadway and Cambie Corridors currently represents an annual natural gas load of 10.5 PJ, which is approximately 5% of FEI's total annual load. This does not include any potential for load growth in these areas.
99. FEI does not have growth forecasts for these specific areas, or a forecast of the rate of redevelopment, so it is difficult to quantify the implications of the roll out of the

Vancouver Neighbourhood Energy Strategy under a framework equivalent to that being proposed by Creative Energy. However, the delivery rate impact, other things being equal, associated with foregone load of 10.5 PJ would be a loss of revenue of approximately \$32 million which equates to an increase of approximately 4.5% on natural gas delivery rates for the remaining FEI customers²⁸.

²⁸ Based on approved FEI January 1, 2015 delivery rates, consumption as depicted in Figure 9 above, and FEI's approved total non-bypass delivery margin for 2015.

Attachment 1

**BC ELECTRIC CPCN TO CONSTRUCT AND OPERATE A
NATURAL GAS SYSTEM IN THE COV, 1955**

PROVINCE OF BRITISH COLUMBIA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF the "Public Utilities Act"

and

IN THE MATTER OF a project for the supply of
natural gas in the Lower
Mainland area of British
Columbia

H. F. ANGUS, B.C.L., LL.D., F.R.S.C.	Chairman
D. K. PENFOLD, M.E.I.C.	Commissioner
P. E. GEORGE	Commissioner

The 29th day of July, A.D. 1955

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

THIS COMMISSION HEREBY CERTIFIES that public convenience and necessity will require the construction and operation by British Columbia Electric Company Limited ("the Company") of a project for the supply of natural gas to the public for compensation in that portion (hereinafter called "the Greater Vancouver area") of the Lower Mainland area of British Columbia comprising City of Vancouver, City of North Vancouver, District of North Vancouver, District of Burnaby, City of New Westminister, Township of Richmond, District of Coquitlam, City of Port Coquitlam, City of Port Moody, District of Fraser Mills, the Annacis Island portion of Delta, District Lot 172 in New Westminister Land District, and University Endowment Lands, and - without limiting the generality of the foregoing - that the said construction and operation will include the doing of the following among other things:


- (a) The laying through the District of Sumas, the District of Matsqui, the Township of Langley, and the District of Surrey of a trunk gas pipe, of a diameter of approximately eighteen inches, from a point in the facilities of Westcoast Transmission Company Limited at or near Huntingdon to a city gate to be constructed in either the District of Surrey or the Greater Vancouver area, including in either case a crossing of the Fraser River.
 - (b) In the area that the Company now serves with manufactured gas, the extension of the Company's existing distribution system, and the making of such alterations therein as may be necessary, with a view to changing over from supplying manufactured gas to supplying natural gas, and the operation of the said extended and altered system after such changeover.
 - (c) In the area last mentioned the conversion, so that they may burn natural gas, of the appliances of the customers whom the Company may be serving with manufactured gas immediately before the said changeover.
 - (d) From time to time as it may appear to be economic to do so, the running throughout the Greater Vancouver area of additional distribution mains and service pipes for the carrying and distribution of gas therein.
- 5

- (e) The establishment in the Greater Vancouver area of a distribution centre for natural gas.
- (f) After the conversion of customers' appliances referred to in clause (c) above, the conversion of the Company's existing gas production (including liquefied petroleum) plants to high B.T.U. gas operation and the abandonment of those portions of the said plants that are not useful in such operation.
- (g) From time to time as they can be done conveniently, the making of such changes in or relocation or abandonment of the presently existing facilities of the Company as may be appropriate in connection with the said changeover.
- (h) From time to time as the Company considers it advisable, to install - for peak shaving, standby and such other purposes as they may be used for - additional liquefied petroleum gas facilities in the Company's system up to a capacity of seven million cubic feet per day of 1,000 B.T.U. per cubic foot gas.
- (i) Generally, from time to time as natural gas is available to the Company from Westcoast Transmission Company Limited and as the Company's system or systems is or are changed over or extended in accordance with the foregoing, to carry on in the Greater Vancouver area the business of supplying to the public for compensation natural gas, or in an emergency liquefied petroleum gas, or mixed gas consisting of two or more of natural gas, liquefied petroleum gas and high B.T.U. oil gas.

AND THIS COMMISSION FURTHER CERTIFIES that the commencement of the said construction will be required if and after the Federal Power Commission of the United States of America shall grant to Pacific Northwest Pipeline Corporation the requisite authorizations in connection with the proposed exportation of natural gas from the United States to Canada at or near Sumas, Washington and Huntingdon, British Columbia and the proposed importation of natural gas into the United States of America from Canada at or near the same points; and that the continuation and completion of those portions of the said construction that will precede the said changeover will be required at such times as may be appropriate in relation to progress from time to time in the construction of the respective projects of Westcoast Transmission Company Limited and Pacific Northwest Pipeline Corporation referred to in the application herein.

AND THIS COMMISSION DOTH FURTHER CERTIFY that consideration of those portions of the Company's application herein that relate to the supply of natural gas in portions of the Lower Mainland area other than the Greater Vancouver area will be deferred until after further hearings thereon have been held.

This Certificate shall lapse on 1st July, 1956 or such later date as the Commission may fix by Order unless before such day the said Federal Power Commission shall have granted the authorizations referred to above.


Chairman
PUBLIC UTILITIES COMMISSION

PROVINCE OF BRITISH COLUMBIA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF the "Public Utilities Act"

and

IN THE MATTER OF a project for the supply of
natural gas in the Lower
Mainland area of British
Columbia

H. F. ANGUS, B.C.L., LL.D., F.R.S.C.

Chairman

D. K. PENFOLD, M.E.I.C.

Commissioner

P. E. GEORGE

Commissioner

The 29th day of July, A.D. 1955

REASONS FOR JUDGMENT

By its application dated 16th May, 1955 British Columbia Electric Company Limited ("the Company") applied under section 12 of the Public Utilities Act "for a Certificate of Public Convenience and Necessity in respect of a project for the supply of natural gas in the Lower Mainland area of British Columbia". More specifically, the area in respect of which the Company applied comprised:

City of Vancouver
University Endowment Lands
City of North Vancouver
District of North Vancouver
District of Burnaby
D.L. 172
City of New Westminster
District of Sumas
District of Matsqui
Village of Abbotsford
Township of Langley
City of Langley
District of Surrey
Delta (Annacis Island portion)
Township of Richmond
City of Port Moody
District of Fraser Mills
District of Coquitlam
City of Port Coquitlam
District of Pitt Meadows
District of Maple Ridge
District of Mission
Village of Mission City
Township of Chilliwack
City of Chilliwack
District of Kent
Village of Harrison Hot Springs
Village of Hope

Because of the importance of the matter, the Commission decided to hold a public hearing, which all interested parties were invited to attend. The hearing extended over June 28th, 29th and 30th, following which it was adjourned until 15th July, 1955.

The application was opposed at the hearing by certain municipalities (on a legal ground only), Valley Natural Gas Distributors Ltd., (a rival would-be distributor of gas in the Fraser Valley area but not in the Greater Vancouver area), and various organizations.

On 30th June it was suggested that, in order to postpone any conflict with Valley Natural Gas Distributors Ltd. the Company's application might be treated as consisting of two parts and accordingly the Company asked the Commission to deal with the first part before the other part. The first part was the Greater Vancouver area, comprising Vancouver, North Vancouver City, North Vancouver District, Burnaby, New Westminster, Richmond, Coquitlam, Port Coquitlam, Port Moody, Fraser Mills, the Annacis Island portion of Delta, University Endowment Lands and District Lot 172. The remainder comprises what was referred to as "the Fraser Valley area". There was no objection to - but rather general agreement with - this division of the application and the bulk of the remainder of the evidence was directed to the Greater Vancouver area portion of the application. What follows will deal only with that portion.

The provision under which the application was made reads as follows:

"12. Except as hereinafter provided:

- (b) No public utility shall hereafter begin the construction or operation of any public utility plant or system, or of any extension thereof, without first obtaining from the Commission a certificate that public convenience and necessity require or will require such construction or operation (in this Act referred to as a 'certificate of public convenience and necessity')."

The Commission's task then is to determine whether public convenience and necessity require, or will require, the construction and operation of the Company's proposed natural gas project in the Greater Vancouver area. In so doing, the Commission must, among other things, bear in mind the following provisions of the Act:

"14. Every applicant for a certificate of public convenience and necessity under either of the Clauses of section 12 shall, in case the applicant is a corporate body, file with the Commission a certified copy of its memorandum and articles of association, charter, or other document of incorporation, and in all cases shall file with the Commission such evidence as shall be required by the Commission to show that the applicant has received the consent, franchise, licence, permit, vote, or other authority of the proper municipality or other public authority, if required"

As stated in the Company's application, the Commission already had on file a copy of the Company's Memorandum and Articles of Association.

It is unnecessary to consider whether any "consent, franchise, licence, permit, vote, or other authority" of any municipality was required, because the Company satisfied the Commission that it already held franchises in Vancouver (part only), North Vancouver City, North Vancouver District, Burnaby and New Westminster, that it was already lawfully giving gas service in University Endowment Lands and D.L. 172, and that the Councils of Vancouver, Richmond, Coquitlam, Port Coquitlam, Port Moody, Fraser Mills, and Delta (with respect only to the Annacis Island portion of the Municipality) had given their specific consent to the Company's application. Consequently, if any consent or franchise was required, it has been received.

The project for the supply of natural gas to the Greater Vancouver area involves, among other things, the building of a trunk line from Huntingdon, near the international border, to a city gate to

be constructed either in the District of Surrey or the Greater Vancouver area, the extension of the Company's existing distribution system in the area it now serves with manufactured gas, and the running throughout the Greater Vancouver area of additional distribution mains and service pipes.

At Huntingdon the trunk line will take gas through facilities to be provided by Westcoast Transmission Company Limited ("Westcoast"). During a period starting when Pacific Northwest Pipeline Corporation ("Pacific") is ready to deliver gas from United States sources to Westcoast at the border, which will be not earlier than 1st July, 1956, the gas that the Company will have for distribution will come from Pacific. That period will end when Westcoast - on or before 1st November, 1957 - is ready to supply natural gas from the Peace River area of Alberta and British Columbia; and thereafter the Company will take Peace River gas from Westcoast.

The successful completion and operation of the Company's project is obviously dependent upon the construction and operation of the projects of Westcoast and Pacific. To help these projects to become actualities - in short to bring about the making of natural gas available in the Lower Mainland area - the Company has over a number of years expended substantial time and money.

There seems to be no difference of opinion as to the desirability of natural gas being made available in the Greater Vancouver area. Experience elsewhere and the average rates at which the Company proposes to sell the gas all point strongly to benefits that will result to residential, commercial and industrial customers from its introduction.

While a rough estimate of cost was presented to indicate the level of rates which might be anticipated, the rates ultimately sanctioned will, of course, depend on the cost actually incurred and will be subject to control by the Public Utilities Commission in accordance with principles established by it.

Among other reasons, because the Company already has in being a distribution system in a large part of the Greater Vancouver area and facilities that can be adapted for stand-by and peak shaving purposes, it appears to the Commission to be the logical utility to distribute gas in the area; and there is indeed no other applicant to serve the area.

The Commission is satisfied that the Company's project is a feasible one and that the Company will be able to finance the heavy expenditures that it will entail.

It was urged by certain of the interested parties that it would be more desirable to have the area served by the British Columbia Power Commission than by the Company, on the ground that consumers desired the cheapest possible source of supply and believed that a public authority not required to earn profit and not taxed on its corporate income would be in a position to have a lower scale of charges than the Company. This submission appears to us to have no relevance. The Public Utilities Commission has been established to regulate privately owned public utilities and it is quite outside the scope of its functions to express opinions on the relative merits and demerits of public ownership. This question is political and not regulatory.

Objection was also taken to the utility that supplies electricity, which for some purposes is competitive with gas, being permitted to supply gas also. However, apart from a number of arguments that were advanced by the Company in answer to this, the Commission notes that no competitive agency was suggested (except for the suggestion of Government agencies which has been considered above). The Public Utilities Commission is fully aware of the necessity for vigilant supervision of the rate structure to protect consumers from the use of monopolistic power to establish rates not strictly related to the cost of service.

In the result, the Commission is satisfied that public convenience and necessity will require the construction and operation by the Company of its proposed project in the Greater Vancouver area, and the Commission is issuing a certificate accordingly.

Further consideration of the Company's application with respect to the Fraser Valley area has been deferred until after Labour Day next, when it will come on for further hearing on a day to be set. The competing application of Valley Natural Gas Distributors Ltd. will be set for hearing at about the same time.



Chairman
PUBLIC UTILITIES COMMISSION

COPY OF MINUTE

APPROVED

SEP 12 1958

ADMINISTRATOR

REPORT:

THAT the Public Utilities Commission, pursuant to the provisions of Section 12 and Section 99 of the "Public Utilities Act", on the 9th day of September, 1958 made an Order amending the Certificate of Public Convenience and Necessity in respect of a project for the supply of natural gas in the Lower Mainland of British Columbia granted to B.C. Electric Railway Company Limited on the 29th day of July, 1955, a copy of which Order is attached hereto;

AND TO RECOMMEND THAT in accordance with the provisions of the "Public Utilities Act" the said Order be approved.

Dated this 11th day of Sept. A.D. 1958

"W. A. C. Bennett"

Premier

Approved this 11th day of Sept. A.D. 1958

"W. A. C. Bennett"

Presiding Member of the Executive Council.

PLC 80

PROVINCE OF BRITISH COLUMBIA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF the "Public Utilities Act"

and

IN THE MATTER OF a project for the supply of
natural gas in the Lower
Mainland area of British
Columbia

H. F. ANGUS

Chairman

P. B. GEORGE

Commissioner

A. B. JACKSON

Commissioner

The 9th day of September, A.D.1958

O R D E R

THIS COMMISSION HEREBY ORDERS that the Certificate of Public Convenience and Necessity relating to this matter granted by it to British Columbia Electric Company Limited on the 29th day of July, 1955, which certificate was approved by Order-in-Council No. 2133 on the 25th day of August, 1955, be and it is hereby amended by substituting for the word "seven" in clause (h) thereof the word "eleven".

"H. F. ANGUS"

Chairman
PUBLIC UTILITIES COMMISSION

(SEAL)

Attachment 2

**BC ELECTRIC CPCN TO CONSTRUCT AND OPERATE A
NATURAL GAS SYSTEM IN THE FRASER VALLEY, 1955**

PROVINCE OF BRITISH COLUMBIA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF the "Public Utilities Act
and
IN THE MATTER OF a project for the supply of
natural gas in the Lower
Mainland area of British
Columbia

H. F. ANGUS

Chairman

P. E. GEORGE

Commissioner

The 13th day of December, A. D. 1955.

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

THIS COMMISSION HEREBY CERTIFIES that public convenience and necessity will require the construction and operation by British Columbia Electric Company Limited ("the Company") of a project for the supply of natural gas to the public for compensation in that portion (hereinafter called "the Fraser Valley Area") of the Lower Mainland area of British Columbia comprising Village of Hope, Village of Harrison Hot Springs, District of Kent, City of Chilliwack, Township of Chilliwack, Village of Mission City, District of Mission, District of Maple Ridge, District of Pitt Meadows, District of Surrey, City of Langley, Township of Langley, Village of Abbotsford, District of Matsqui, District of Sumas, and without limiting the generality of the foregoing - that the said construction and operation will include the doing the following among other things:

- (a) To run lateral pipes from the Company's trunk gas pipe, referred to in the Commission's Certificate granted to the Company on July 29th, 1955, to and into those municipal areas that can be served most conveniently from the trunk gas pipe namely District of Sumas (westerly portion), District of Matsqui, Village of Abbotsford, Township of Langley, City of Langley, District of Surrey, District of Pitt Meadows, District of Maple Ridge, District of Mission and Village of Mission City, all of which areas are hereinafter referred to collectively as "the first new service area."
- (b) In the first new service area, to extend from the said lateral pipes such distribution facilities as may be within economic distribution distance thereof.
- (c) To construct lateral pipes from delivery points on the transmission line of Westcoast Transmission Co. Ltd. east of Huntingdon into or through the municipalities that may be conveniently served from the said points, namely, District of Sumas (easterly portion), Township of Chilliwack, City of Chilliwack, District of Kent, Village of Harrison Hot Springs and Village of Hope, all of which municipalities are hereinafter referred to collectively as "the second new service area."
- (d) In the second new service area to extend from the said lateral pipes such distribution facilities as may be within economic distribution distance thereof.
- (e) From time to time as the Company considers it advisable, to install - for peak shaving, standby and such other purposes as they may be used for - additional liquefied petroleum gas facilities in the Company's system up to a capacity of seven million cubic feet per day of 1,000 B.T.U. per cubic foot gas.
- (f) As circumstances from time to time and place to place render it economic, to extend further in the first new service area, and the second new service area, the lateral pipes and distribution systems mentioned above.

- (g) To build, install and operate all necessary works so that consumers will have available to them a reliable supply of gas.
- (h) To conduct its gas operation in the FraserValley area and in the Greater Vancouver area, as much as possible, as one operating unit.
- (i) Generally, from time to time as natural gas is available to the Company from Westcoast Transmission Co. Ltd. and as the Company's system or systems is or are installed or extended in accordance with the foregoing to carry on in the Fraser Valley area the business of supplying to the public for compensation natural gas, or in an emergency liquefied petroleum gas, or mixed gas consisting of two or more of natural gas liquefied petroleum gas and high B.T.U. oil gas,

subject to the condition that the rights granted by this Certificate will not be effective in any City, municipality, or village which shall both

- (a) inform the Commission not later than February 1st, 1956 of its unwillingness to consent to the supply of gas within its boundaries by B. C. Electric Co. Ltd. and
- (b) shall take before April 1st, 1957 - or such later date as the Commission may approve - effective steps satisfactory to the Commission to ensure to its citizens and consumers in its reasonable vicinity, a supply of natural gas by constructing and operating a municipal gas service.

J. D. Angus

Chairman,
PUBLIC UTILITIES COMMISSION

PROVINCE OF BRITISH COLUMBIA

PUBLIC UTILITIES COMMISSION

IN THE MATTER OF the "Public Utilities Act"

and

IN THE MATTER OF a project for the supply of
natural gas in the Lower
Mainland area of British
Columbia

H. F. ANGUS

Chairman

P. E. GEORGE

Commissioner

The 13th day of December, A.D. 1955

REASONS FOR JUDGMENT

By its application dated 16th May, 1955 British Columbia Electric Company Limited ("B.C. Electric") applied under section 12 of the Public Utilities Act "for a Certificate of Public Convenience and Necessity in respect of a project for the supply of natural gas in the Lower Mainland area of British Columbia". The area in respect of which B.C. Electric applied was divided into two portions: The Greater Vancouver Area and the Fraser Valley Area as follows:-

Greater Vancouver Area

City of Vancouver
✓ University Endowment Lands
City of North Vancouver
District of North Vancouver
District of Burnaby
✓ D.L. 172
City of New Westminster
District of Delta (Anacis Island portion)
Township of Richmond
City of Port Moody
District of Fraser Mills
District of Coquitlam
City of Port Coquitlam

Fraser Valley Area

District of Sumas
District of Matsqui
Village of Abbotsford
Township of Langley
City of Langley
District of Surrey
District of Pitt Meadows
District of Maple Ridge
District of Mission
Village of Mission City
Township of Chilliwack
City of Chilliwack
District of Kent
Village of Harrison Hot Springs
Village of Hope

Because of the importance of the matter, the Commission decided to hold public hearings, which all interested parties were invited to attend. The hearings took place on June 28th, 29th and 30th, July 15th, September 26th, 27th, 28th, 29th, 30th and November 15th, 1955.

The B.C. Electric was granted a Certificate of Public Convenience and Necessity for the Greater Vancouver area on July 29th, 1955.

No decision was made at that time with respect to the Fraser Valley area.

By its application dated June 14th, 1955, Valley Natural Gas Distributors Ltd. ("Valley Distributors") applied under section 14 of the Public Utilities Act for an Order preliminary to the issue of a Certificate of Public Convenience and Necessity for supplying gas in the Fraser Valley area.

Certain Municipalities, while not expressing a preference between the merits of the two applications, opposed that of B.C. Electric on legal grounds. Two Municipalities - the Township of Chilliwack and the City of Chilliwack - did express a preference for Valley Distributors, partly because of the proposed option of purchase, mentioned below, and partly because of a desire for genuine competition. If the preliminary Order were not to be granted to Valley Distributors, the two Councils desired an opportunity of proposing a scheme for public ownership to their voters.

In essence the Commission had to reach a decision as to which of two competitive projects was the more meritorious from the standpoint of the long term interests of prospective consumers of gas in the Fraser Valley area.

The proposals which B.C. Electric submitted for supplying the Fraser Valley area were closely linked with the supply of the Greater Vancouver area and it was contemplated that uniform rates would be extended to consumers in both areas. The project of Valley Distributors was obviously confined to the Fraser Valley area.

The proposals of B.C. Electric were submitted in great detail and were the result of a very thorough study of the area. The proposals of Valley Distributors were of necessity somewhat vaguer in character as the Company itself was still in the organizational stage. These differences in character in the two projects made comparison somewhat difficult, particularly as the details of either project might be changed in the course of its execution.

It appeared at one time as if B.C. Electric, which had negotiated a contract with Westcoast Transmission Co. Ltd., was in a much more assured position with regard to its supply of gas than Valley Distributors who had no such contract. However, a statement of policy made by Mr. D.P. McDonald on behalf of Westcoast Transmission which had been joined as an interested party in the proceedings made it clear that that Company would sell on non-discriminatory terms to any company to which a Certificate of Public Convenience and Necessity might be granted by the Public Utilities Commission.

The rates suggested as probable by Valley Distributors were somewhat lower than those suggested as probable by B.C. Electric. In practice the rates charged by the successful Company would be regulated by the Public Utilities Commission and would depend on the actual investment and not on the estimated investment. Valley Distributors' estimated investment was higher than that of B.C. Electric which was in a position to make use of its properties in the Valley and of the proposed pipeline from Huntingdon to the city gate at the entrance to Greater Vancouver area and whose financial charges would be lower than those of a company in process of organization. It would seem to follow that the rates justified by B.C. Electric investment would be lower than those justified by Valley Distributors investment.

Valley Distributors were able to offer prospects for lower rates than B.C. Electric mainly because they made a much more optimistic forecast of the number of consumers and the quantity of gas to be supplied. The estimates of B.C. Electric were much more cautious and

an increase in consumption in the Valley area would not have the same effect on B.C. Electric rates as on Valley Distributor rates because of B.C. Electric policy of uniform prices throughout the area, which would include Greater Vancouver. Each project had special features. Valley Distributors expressed the intention of installing pipelines to the doors of all prospective consumers. Valley Distributors also proposed to offer to every municipality an opportunity of acquiring the natural gas system at the end of a 20 year period, should Valley Distributors fail to renew the contract or the municipality refuse to do so. B.C. Electric submitted an attractive extension policy.

After very careful examination of the two projects the Commission came to the conclusion that the B.C. Electric project was the more meritorious and that it offered to consumers in the Fraser Valley an assured supply of natural gas at reasonable prices.

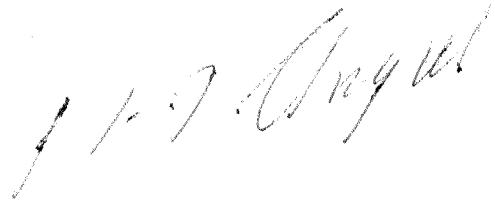
Before giving effect to this exercise of its discretion as between the merits of the two projects the Commission had to consider the legal objection taken both by the municipalities and by Valley Distributors to the application of B.C. Electric. That Company had applied under section 12 of the Public Utilities Act for a Certificate of Public Convenience and Necessity. Counsel for the municipalities and Counsel for Valley Distributors contended that B.C. Electric was bound by section 14 of the Act to produce evidence to show that it had received the consent or other authority of the municipalities concerned. This objection, if valid, would have been fatal to the application of B.C. Electric as that Company did not wish to apply under section 14 for an Order preliminary to the issue of a Certificate.

The Commission came to the conclusion that no consent or other authority is required by the Public Utilities Act or any other law and that, in the case of an applicant like the B.C. Electric which is a gas utility for the purpose of the Gas Utilities Act, none is necessary. That Act provides that every gas utility which obtains a Certificate of Public Convenience and Necessity under the Public Utilities Act to operate in any municipality may proceed subject to arriving at an agreement with the municipality as to matters falling under section 3(c) of the Act.

The Commission felt, however, that there was merit in the contention advanced on behalf of the municipalities that they should not be precluded from making arrangements for their own supply of natural gas as they are empowered to do by the Municipal Act. A municipality, from its very nature, cannot adopt a policy involving a substantial investment with anything like the speed with which a public utility company can act. On the other hand prospective consumers should not have to wait indefinitely for an assured supply of gas.

The Commission, therefore, decided to attach conditions to the exercise of the rights to be granted to B.C. Electric by a Certificate of Public Convenience and Necessity which would preserve the power of the municipalities to decide whether or not they wished to supply themselves with gas. Any municipality to which the Certificate extends may, prior to February 2nd, 1956, indicate that it is unwilling to be supplied by B.C. Electric. If it takes this action it may, prior to March 31st, 1957, take the necessary steps for insuring a supply by a municipal enterprise designed so as to protect the interests of potential consumers in the reasonable vicinity of the municipality. If a municipality does not indicate its unwillingness to receive gas from B.C. Electric the Certificate of Public Convenience and Necessity will become effective in that municipality on February 2nd, 1956, and if, after indicating its unwillingness, it does not take effective action itself the Certificate will become effective in respect of that municipality on April 1st, 1957.

The legal power of the Commission to attach a condition of this character for the exercise of the rights granted by the Certificate was contested by Counsel for B.C. Electric but the Commission came to the conclusion that it would not be exceeding its powers in attaching a condition of this character which appears to it to be in accordance with the spirit of the Public Utilities Act read in conjunction with other provincial legislation.



Chairman
PUBLIC UTILITIES COMMISSION

Attachment 3

FEI-COV AGREEMENT

THIS AGREEMENT made and entered into this 22nd day of November,
in the year of Our Lord One Thousand Nine Hundred and Fifty-
six (1956),

BETWEEN:

CITY OF VANCOUVER

(hereinafter called "the Corporation")

OF THE ONE PART

AND:

BRITISH COLUMBIA ELECTRIC
COMPANY LIMITED

(hereinafter called "the Company")

OF THE OTHER PART

WHEREAS:

A. Section 3 of the Gas Utilities Act, being Chapter
13 S.B.C. 1954, reads as follows:

"3. Every gas utility which at the date when this Act comes into force is carrying on business as such in a municipality or area in unorganized territory shall in such municipality or area, and every gas utility to which a certificate of public convenience and necessity is thereafter granted under the 'Public Utilities Act' shall in the municipality or area in unorganized territory mentioned in such certificate, be authorized and empowered to carry on, subject to the provisions of the 'Public Utilities Act,' its business as a gas utility, and, without limiting the generality of the foregoing, shall be authorized and empowered:-

- (a) To produce, generate, store, mix, transmit, distribute, deliver, furnish, sell, and take delivery of gas:
- (b) To construct, develop, renew, alter, repair, maintain, operate, and use real and personal property for any of the said purposes; and
- (c) To place, construct, renew, alter, repair, maintain, operate, and use its pipes and other equipment and appliances for mixing, transmitting, distributing, delivering, furnishing, and taking delivery of gas upon, along, across, over, or under any public street, lane, square, park, public place, bridge, viaduct, subway, or watercourse upon such conditions:-

(i) In a municipality as the gas utility and the municipality may agree upon; and

(ii) In unorganized territory as the Minister of Highways may approve."

B. Since before the date on which the "Gas Utilities Act" came into force the Company has been carrying on in the area (hereinafter called "the City") comprising the City of Vancouver the business of a gas utility within the meaning of that term in the said Act.

C. The Company has obtained from the Public Utilities Commission of British Columbia a Certificate of Public Convenience and Necessity dated the 29th day of July, 1955 and approved by Order-in-Council made the 23rd day of August, 1955, which Certificate, inter alia, certifies that public convenience and necessity will require the construction and operation by the Company of a project for the supply of natural gas to the public for compensation in the City, among other places.

D. The parties desire to agree upon the conditions under which the Company may exercise in the City its powers under the "Gas Utilities Act" and the Certificate of Public Convenience and Necessity referred to in Recital C hereof.

NOW THIS AGREEMENT WITNESSETH that the parties hereto have mutually agreed as follows:

1. THE CORPORATION AND THE COMPANY HEREBY AGREE that the conditions upon which the Company may, pursuant to the "Gas Utilities Act" and the said Certificate of Public Convenience and Necessity, place, construct, renew, alter, repair, maintain, operate and use its pipes and other equipment and appliances for mixing, transmitting, distributing, delivering, furnishing and taking delivery of gas (which pipes and other equipment - including gas regulating vaults and vents therefrom and cathodic protection equipment - and appliances are hereinafter called "the said works") upon, along, across, over or under any public street, lane, square, park, public place, bridge,

viaduct, subway, or watercourse in the City (all or any of which are hereinafter called "public property") shall be those set out in the paragraphs hereof numbered 2 to 15.

2. Subject to paragraph 3 hereof, before placing or constructing any of the said works on public property, or removing such works, the Company shall submit details thereof in writing to the Corporation's City Engineer. Such details shall include plans and specifications showing the location, size and dimension of the said works. The Company shall not proceed with such placing, construction or removal of the said works until the City Engineer shall have approved the proposed works, such approval not to be unreasonably withheld or delayed. If such approval is not acted upon within one (1) year then a new approval shall be obtained.

3. The Company may from time to time without submitting details to or obtaining the approval of the City Engineer, but subject to the provisions of paragraph 8:

- (i) open up any public property for the purpose of carrying out repairs and maintenance to any part of the said works; and
- (ii) place and construct on public property gas service pipes (including valves) from its mains to the premises of its customers; but the Company shall place and construct such service pipes in accordance with any reasonable written instructions that the City Engineer may from time to time give to the Company and shall, if so required in writing by the City Engineer, supply to the City Engineer each month a list of addresses of premises to which service pipes shall have been so placed and constructed during the preceding month.

4. Upon the written request of the Corporation or the City

Engineer on its behalf, the Company shall change the location (which in the case of pipe means any change of either or both of line and elevation) of any part of the said works on public property to some other reasonable location on public property, and shall carry out each such change with reasonable speed.

5. If there is any change in the location of any portion of the said works as provided in paragraph 4 hereof, the Corporation shall bear, and pay to the Company, 50% of the cost of labour and trucking incurred by the Company as a result of such change, labour being considered as wages plus twenty per cent (20%) of the said wages to cover supervision and administration costs. The above mentioned cost shall not include any allowance for the cost of material or depreciation of material used in carrying out such change in location.

6. Notwithstanding anything hereinbefore contained, if either party shall request the other party to make some temporary change in such other party's pipes, equipment, plant or appliances installed on, over, under or adjacent to public property in order to facilitate the installation or construction of new pipes, equipment, plant or appliances by the requesting party, such other party shall, if it reasonably can, carry out the said temporary change or alteration requested and shall charge the requesting party with the entire cost thereof.

7. The Corporation shall not stop up or close to the public for the benefit of some person or corporation other than the Corporation any public property on or under which the Company has any of its said works until the Company shall have agreed with such person or corporation for the removal, abandonment or relocation of the said works at the expense of such person or corporation.

8. The Company shall carry out all work done by it on public property pursuant to this agreement in accordance with the plans and specifications approved pursuant to paragraph 2 hereof (where applicable) and in a manner reasonably satisfactory to the City Engineer, without undue delay, in a good and workmanlike manner, and so as to cause as little damage and obstruction as practicable, and shall reinstate the paving or surface on public property which it has disturbed in as good a state of repair as it was in prior to its disturbance and in accordance with any reasonable specifications laid down by, and subject to the supervision of, the City Engineer. Except in the case of emergency work, the time at which all work is carried out shall be subject to the approval of the City Engineer. The City Engineer may require that he shall be given reasonable notice of the proposed time at which any work, other than emergency work, is to be carried out.

9. In the placing, construction, renewal, alteration, repair, maintenance, removal, operation and use of the said works, the Company shall not destroy or damage the property of the Corporation, except as it is authorized to do so by this agreement or by the Corporation; but, if at any time the Company does destroy or damage the property of the Corporation, the Company shall bear the cost of repairing the same in such manner as to leave the same in as good a state of repair as it was in prior to the doing of such destruction or damage and to the reasonable satisfaction of the City Engineer.

10. If the Corporation shall destroy or damage any part of the said works on, over or under public property which was installed

- (1) before the date hereof and either (a) as to both line and elevation in accordance with the approval

or instructions of the City Engineer or (b) as to line in accordance with the approval or instructions of the City Engineer and at a depth of at least 18 inches below the surface of the public property, or (11) after the date hereof either in accordance with the plans and specifications approved by the City Engineer under paragraph 2 hereof or in accordance with instructions given under paragraph 3 hereof, whichever is applicable,

the Corporation shall bear the cost of repairing the same in such manner as to leave the same in as good a state of repair as it was in prior to the doing of such destruction or damage and to the reasonable satisfaction of the Company. In all other cases the cost of repairing such destruction or damage shall be borne by the Company.

11. The Company agrees that it will indemnify and save the Corporation harmless against and from all loss, costs, damages, expenses, suits, demands, actions, claims and liabilities of every kind (other than such as are caused by or arise from any wilful act of the Corporation, or act of the Corporation amounting to negligence on the part of the Corporation) caused by or arising out of the Company placing, constructing, renewing, altering, repairing, maintaining, removing, operating or using any of the said works upon, along, across, over or under any public property.

12. The parties hereto agree from time to time to execute such further assurances, approvals and consents as may be necessary to carry out the intent of this agreement.

13. The said works shall be placed, worked upon, or removed in such a manner as not to interfere with any pipe, conduit, wire, duct, manhole, or other structure which shall have been laid down in any street, lane, alley, square, or

other public place by the Corporation or under the permission of the Corporation or by virtue of any charter granted by competent authority.

14. The said works and every part of them from time to time placed, constructed or maintained on, along, across, over, or under any public property shall be and remain the property of the Company, and the Company shall be entitled at any time to remove the same, subject to the terms of this agreement.

15. This agreement supersedes the following agreements, namely:

- (i) An agreement dated 5th December, 1944, between the Corporation and the Company (then British Columbia Electric Power & Gas Company Limited), as amended by an agreement dated 5th January, 1948, between the same parties.
- (ii) An agreement dated 15th November, 1922, between the Corporation and The British Columbia Gas Company, Limited.
- (iii) An agreement dated 8th July, 1922, between the Corporation of the District of South Vancouver and British Columbia Gas Company, Limited.
- (iv) An agreement dated 13th August, 1923, between the Corporation of Point Grey and British Columbia Gas Company, Limited.

16. This agreement shall enure to the benefit of and be binding upon the parties hereto, their successors and assigns.

IN WITNESS WHEREOF the Corporation has caused these presents to be sealed with its common seal and signed by the Mayor and City Clerk, and the Company has hereunto caused

its common seal to be affixed, under the hands of its proper officers duly authorized in that behalf, as of the day and year first above written.

SEALED with the Common Seal of the CITY OF VANCOUVER and signed by:

Wm

[Signature]
Mayor

[Signature]
City Clerk

[Signature]

APPROVE
as to form only
am.
Solicitor
B.C.E. Co. Ltd.

The Common Seal of BRITISH COLUMBIA ELECTRIC COMPANY LIMITED was hereunto affixed in the presence of:

[Signature]
VICE-PRESIDENT
[Signature]
SECRETARY

Attachment 4

FEI FORM OF OPERATING AGREEMENT - INLAND

OPERATING AGREEMENT

THIS OPERATING AGREEMENT (the “Agreement”) made this _____ day of _____, 2015.

BETWEEN:

(hereinafter called the “**Municipality**”)

OF THE FIRST PART

AND:

FORTISBC ENERGY INC., a body corporate duly incorporated under the laws of the Province of British Columbia, formerly known as Terasen Gas Inc., and having its registered office in the City of Vancouver, in the Province of British Columbia

(hereinafter called “**FortisBC**”)

OF THE SECOND PART

RECITALS:

- A. Whereas by a certificate of public convenience and necessity (CPCN), FortisBC was granted the right to construct and operate gas distribution facilities within the Municipality;
- B. And whereas pursuant to the Community Charter, S.B.C. 2003, a Municipal council may, by resolution adopt and enter into a licensing and operating agreement;
- C. And whereas FortisBC and the Municipality are the parties to a Franchise or Operating Agreement dated the ____ day of _____, ____ which has or will expire on _____;
- D. And whereas FortisBC and the Municipality wish to enter into this Agreement to clarify and settle the terms and conditions under which FortisBC shall exercise its rights to use Public Places in conducting its business of distributing Gas within the Municipality.

NOW THEREFORE THIS AGREEMENT WITNESSES that the parties covenant and agree as follows:

1. DEFINITIONS

For the purposes of this Agreement:

- (a) “Boundary Limits” means the boundary limits of the Municipality as they exist from time to time and that determine the area over which the Municipality has control and authority;
- (b) “BCUC” means the British Columbia Utilities Commission or successor having regulatory jurisdiction over natural gas distribution utilities in British Columbia;
- (c) “CPCN” means a Certificate of Public Convenience and Necessity granted by the BCUC which allows FortisBC to operate, maintain and install Company Facilities for the distribution of Gas within the Municipality;
- (d) “Company Facilities” means FortisBC’s facilities, including pipes, buildings, structures, valves, signage, storage facilities, machinery, vehicles and other equipment used to maintain, operate, renew, repair, construct and monitor a natural Gas Distribution and transmission system;
- (e) “Distribution Pipelines” means pipelines operating at a pressure less than 2071 kilopascals (300 psi);
- (f) “FortisBC Employees” means personnel employed by or engaged by FortisBC including officers, employees, directors, contractors, and agents;
- (g) “Gas” means natural gas, propane, methane, synthetic gas, liquefied petroleum in a gaseous form or any mixture thereof;
- (h) “Gas Distribution” means fixed equipment, structures, plastic and metal lines and pipe, valves, fittings, appliances and related facilities used or intended for the purpose of conveying, testing, monitoring, distributing, mixing, storing, measuring and delivering Gas and making it available for use within the Municipality;
- (i) “Highway” means street, road, lane, bridge or viaduct controlled by the Municipality or Provincial Government of British Columbia;
- (j) “Mains” means pipes used by FortisBC to carry gas for general or collective use for the purposes of Gas Distribution;
- (k) “Municipal Employees” means personnel employed by or engaged by the municipality, including officers, employees, directors, contractors and agents;
- (l) “Municipal Facilities” means any facilities, including highways, sidewalks, conduits, manholes, equipment, machinery, pipes, wires, valves, buildings, structures, signage, bridges, viaducts and other equipment within the Public Places used by the Municipality for the purposes of its public works or municipal operations;

- (m) “Municipal Supervisor” means the Municipal Engineer or other such person designated by the Municipality to receive notices and issue approval as set out in this Agreement;
- (n) “New Work” means any installation, construction, repair, maintenance, alteration, extension or removal work of the Company Facilities in Public Places except;
 - (i) routine maintenance and repair of the Company Facilities that does not involve any cutting of asphalted road surface;
 - (ii) installation or repair of Service Lines whether or not such installation or repair involves cutting of asphalted road surface; or
 - (iii) emergency work;but notwithstanding such exceptions, New Work shall include any installation, construction or removal of the Company Facilities in Public Places that are planned to disturb underground Municipal Facilities;
- (o) “Pipeline Markers” means post, signage or any similar means of identification used to show the general location of Transmission Pipelines and distribution pipelines or FortisBC Rights of Way;
- (p) “Planned Facilities” means those facilities not yet constructed but which have been identified by way of documented plans for the works of the Municipality, for works of third parties, where such works are identified by documented plans approved by the Municipality, or for works of FortisBC submitted to the Municipality subject to Municipal approval;
- (q) “Public Places” means any public thoroughfare, highway, road, street, lane, alley, trail, square, park, bridge, right of way, viaduct, subway, watercourse or other public place in the Municipality;
- (r) “Service Line” means that portion of FortisBC’s gas distribution system extending from a Main to the inlet of a meter set and, for the purposes of this Agreement, includes a service header and service stubs;
- (s) “Transmission Pipeline” means a pipeline of FortisBC having an operating pressure in excess of 2071 kilopascals (300 psi); and
- (t) “Utilities” means the facilities or operations of any water, waste water, sewer, telecommunications, energy, cable service or similar service provider located in Public Places within the Municipality.

2. INTERPRETATION

For the purposes of interpreting this Agreement:

- (a) the headings are for convenience only and are not intended as a guide to interpretation of this Agreement;
- (b) words in the singular include the plural, words importing a corporate entity include individuals, and vice versa;
- (c) in calculating time where the agreement refers to “at least” or “not less than” a number of days, weeks, months or years, the first and last days must be excluded and where the agreement refers to “at least” or “not less than” a number of days, Saturdays, Sundays and holidays must be excluded;
- (d) the word “including”, when following any general term or statement, is not to be construed as limiting the general term or statement to the specific items or matters, but rather as permitting the general term or statement to refer to all other items or matters that could reasonably fall within the broadest possible scope of the general term or statement.

3. OBLIGATION TO ACT IN GOOD FAITH

FortisBC and the Municipality acknowledge and agree that they will act in good faith, in carrying out the terms and conditions of this Agreement and within reasonable time frames, carry out the obligations under this Agreement.

FortisBC and the Municipality will at all times carry out all work and operations with the due care and attention that is necessary to safeguard the interests of the public, their own employees, and the other party’s employees.

4. FORTISBC RIGHTS TO ACCESS & USE PUBLIC PLACES

The Municipality hereby acknowledges FortisBC’s rights to:

- (a) develop, construct, install, maintain or remove Company Facilities on, over, in and under Public Places in the Municipality;
- (b) enter on Public Places from time to time as may be reasonably necessary for the purpose of maintaining, repairing, or operating the Company’s Facilities;
- (c) place pipeline identification markers within Public Places where a Transmission Pipeline or Distribution Pipeline crosses or is otherwise within a Public Place;

subject to terms and conditions defined in this Agreement.

5. FORTISBC COMPLIANCE WITH STANDARDS FOR USE OF PUBLIC PLACES

5.1 Non-discriminatory Standards for FortisBC

In its use of Public Places, FortisBC shall comply with all Federal and Provincial laws, regulations and codes and shall comply with all Municipal bylaws, standards and policies except that FortisBC shall not have to comply with such Municipal bylaws, standards and policies that:

- (a) conflict with terms of this Agreement or limit any rights or concessions granted to FortisBC by the Municipality under this Agreement; or
- (b) conflict with other legislation governing FortisBC.

Further, where the Municipality has established requirements and standards for work in Public Places, the Municipality shall apply them in a fair, reasonable and non-discriminatory manner consistent with the manner that the Municipality establishes requirements on other Utilities.

5.2 Provide emergency contacts.

FortisBC will provide the Municipality with a 24 hour emergency contact number which the Municipality will use to notify FortisBC of emergencies including; gas leaks, third party accidents around work sites, ruptures of gas lines, and other potentially hazardous situations.

5.3 Assist with facility locates

FortisBC will, at no cost to the Municipality, provide locations of its Company Facilities within a time frame as may be reasonably requested by the Municipality unless the reason for the request is the result of an emergency; in which case the information shall be provided forthwith. FortisBC shall provide gas locations from FortisBC records. FortisBC shall perform on site facility locates in accordance with the *Safety Standards Act – Gas Safety Regulations Section 39*.

6. FORTISBC WORK OBLIGATIONS:

6.1 Notices - General Requirements

6.1.1. Notice for New Work

For New Work, FortisBC shall give notice to the Municipality or such officer or official thereof who has been designated from time to time by the Municipality that it intends to perform such New Work. The Notice shall include:

- (a) a plan and specifications showing the proposed location and dimensions of the New Work;

- (b) FortisBC's plans for the restoration of the Public Place affected by the New Work if FortisBC's restoration plans are different from those set out in Section 6.4.2 of this Agreement;
- (c) the name of a FortisBC representative who may be contacted for more information;
- (d) projected commencement and completion dates; and
- (e) such other information relevant to the New Work as the Municipality may reasonably request from time to time.

6.1.2. Exception for Emergency

Where FortisBC is required to carry out work urgently in the interests of public safety or health or to preserve the safety of property and Company Facilities, FortisBC shall not be required to give prior notice but shall do so as soon as possible thereafter.

6.1.3. Municipal Approval for New Work

The Municipality may object to the New Work on the following grounds:

- (a) the proposed location of the New Work conflicts with existing Municipal Facilities, existing third party facilities or Planned Facilities; or
- (b) the proposed location or design of the New Work is likely to compromise public safety or does not conform with Municipal bylaws, standards or policies; or
- (c) in instances where FortisBC can delay the New Work without compromising the supply, capacity or safety of its Gas Distribution System or its customers' need for gas service and the Municipality intends within the next 3 months to undertake work in the same location and wishes to co-ordinate both work;

by providing FortisBC with notice of its objections, provided such objections are reasonable, no more than 10 days after receiving FortisBC's notice of New Work. If the Municipality has not provided such notice of its objections to FortisBC, or in the case of large and complex New Work, the Municipality has not provided FortisBC with a notice to extend the time to reply to FortisBC until a stated time, the Municipality shall be deemed to have granted its approval of the New Work. The Municipality shall not otherwise withhold or delay its approval.

In addition, the Municipality may request FortisBC to provide the public with notice of the New Work.

6.1.4. Work Not to Proceed

If the Municipality has notified FortisBC of its objections or has requested a time extension, no more than 10 days after receiving FortisBC's notice of New Work, FortisBC shall not proceed with the New Work until FortisBC and the Municipality have agreed upon a resolution to the Municipality's objections. If the Municipality and FortisBC are unable to agree, then the matter shall be resolved in accordance with Section 17 (Resolution of Disputes).

6.2 Notice of Service Lines

FortisBC shall provide the Municipality with notice of its intent to install, remove or repair Service Lines no less than three (3) days prior to commencement of such work. FortisBC's request for the location of the Municipality's utilities shall be deemed to be a notice of FortisBC's intent to install, remove or repair Service Lines. The Municipality may object to such work on the same grounds as set out in Subsection 6.1.3 (a) and (b) above by providing FortisBC with notice of its objections within two (2) days of receiving FortisBC's notice. If the Municipality has not provided such notice of its objections to FortisBC, the Municipality shall be deemed to have granted its approval of the installation, removal or repair of the Service Lines. The Municipality shall not otherwise withhold or delay its approval.

6.3 FortisBC to Obtain Locate Information

Prior to conducting any New Work, FortisBC shall locate other Utilities and satisfy itself that it is clear to proceed.

6.4 Work Standards

All work carried out by FortisBC shall be carried out in accordance with sound engineering practices.

6.4.1. Specific Work Requirements Remove Materials

FortisBC shall keep its work sites clean and tidy. FortisBC shall remove all rubbish and surplus material from Public Places upon completion of its work.

The Company shall not leave any part of its gas system in such a state as to constitute a nuisance or a danger to the public through neglect, non-use and want or repair.

6.4.2. Restore Surface and Subsurface

Where FortisBC has performed any operations or New Work in a Public Place, FortisBC shall restore without unreasonable delay and return such Public Place, as much as reasonably practical, to the condition and use which existed prior to such activity. The restoration will be in accordance with the specifications set out by the Municipality. Such specifications may include the degree and nature of compaction, subsurface structure, surface finish and landscaping required.

Without limiting the generality of this section and by way of example only, the Municipality may require FortisBC to restore asphalt and concrete surfaces with a permanent repair or a temporary repair. Should a temporary repair be directed, FortisBC or the Municipality at its discretion will subsequently construct a permanent repair in accordance to its usual maintenance/replacement schedule for that area. The cost of permanent and temporary repairs to remediate Highway surfaces will be at the expense of FortisBC proportional to the surface area affected by the New Work.

Where FortisBC is required to cut pavement on a Public Place such cuts and restoration will be limited to less than 1.5 meters unless at the discretion of FortisBC a larger excavation is warranted due to the depth or size of the pipe or requirements of the Workers' Compensation Board or other relevant Provincial or Federal regulations. FortisBC will be responsible for any repairs and maintenance of the surface repair for a period of three (3) years. However, where pavement restoration has been conducted by the Municipality, whether or not such work was undertaken to repair cuts on FortisBC's behalf, FortisBC shall not be responsible for the repairs or maintenance of the surface repair.

6.4.3. Repair Damage to Municipal Facilities

To the extent that any of the work being done by FortisBC results in damage to Municipal Facilities or Public Places, other than the usual physical disruption to Public Places caused by the installation of Company Facilities that FortisBC shall restore in accordance with Section 6.4.2 above, FortisBC will, as soon as reasonably possible, report such damage and reimburse the Municipality for its costs arising from such damage calculated in accordance with Section 14.1 below. Where such damage results directly from inaccurate or incomplete information supplied by Municipality, and FortisBC has complied with all applicable laws and regulations, and with instructions supplied by the Municipality, then the cost of repairing damaged Municipal Facilities or Public Places will be at the expense of the Municipality.

6.5 Conformity Requirement

The New Work must be carried out in conformity with FortisBC's notice of New Work except that FortisBC may make in-field design changes when carrying out the New Work to accommodate field conditions which could not have been reasonably foreseen by FortisBC. If such in-field conditions materially impact FortisBC's plans for restoration or materially change the impact of FortisBC's work on Municipal Facilities, other than in respect of projected commencement and completion dates, FortisBC shall notify the Municipality of the changes and the reasons for them as soon as reasonably possible.

6.6 Non-Compliance

If Company Facilities located in Public Places are later found not to be located in compliance with FortisBC's notice of New Work provided in accordance with Section

6.1 and 6.5, then any alteration or upgrading required to bring them into compliance with such notice will be at the expense of FortisBC provided that the work has not been altered, damaged or modified by the Municipality or a third party.

7. COMPANY FACILITY CHANGES REQUIRED BY THE MUNICIPALITY

7.1 Notice of Closure of Public Places

Before any Public Places containing Company Facilities may be legally closed or alienated by the Municipality, the Municipality shall as soon as reasonably possible notify FortisBC of its intent to close or alienate such Public Places and either:

- (a) grant FortisBC a registered statutory right of way in a form satisfactory to FortisBC so as to maintain FortisBC's right to use the land; or
- (b) request FortisBC to remove and (if possible and practicable) relocate those Company Facilities affected by such closure or alienation at the sole cost of the Municipality.

If the Public Places are expropriated by an expropriating authority and FortisBC is required to remove the Company Facilities then the Municipality shall as soon as reasonably possible notify FortisBC of the expropriation. This provision is applicable when the Municipality receives official notice of expropriation or otherwise becomes aware of expropriation through communications with the expropriating authority.

8. FACILITY CHANGES REQUIRED

8.1 By FortisBC

FortisBC may provide Notice to the Municipality that it requires Municipal Facilities to be altered, changed, temporarily shut-down, temporarily by-passed, or relocated to accommodate its requirements. The Municipality will comply with FortisBC's requests to the extent it is reasonably able to do so and with reasonable speed and dispatch after receipt of written request. FortisBC agrees to pay for all of the costs for changes to the affected Municipal Facilities.

8.2 By the Municipality

The Municipality may provide Notice to FortisBC that it requires Company Facilities to be altered, changed or relocated to accommodate its requirements. FortisBC will comply with the Municipality's requests to the extent it is reasonably able to do so and with reasonable speed and dispatch after receipt of written request. The Municipality agrees to pay for all of the costs for changes to the affected Company Facilities. This section 8.2 is an agreement between the Municipality and FortisBC for the purpose of section 76(1)(c) of the *Oil and Gas Activities Act*.

9. JOINT PLANNING, COOPERATION AND COORDINATION

9.1 Conduct of Construction and Maintenance Activities

The Municipality and FortisBC agree to use reasonable efforts in carrying out their construction and maintenance activities in a manner that is responsive to the effect that it may have on the other party, as well as other users of Public Places. Such reasonable efforts include attending the planning meetings described in Section 9.2 below and reducing as much as is practical, the obstruction of access to Public Places, and interference with the facilities and activities of others in Public Places.

9.2 Communication and Coordination Activities

At the initiation of the Municipality, representatives of the Municipality, FortisBC and other affected Utilities and third parties will meet each year, prior to the construction season, to discuss the parties' anticipated construction activities for that year. Such discussions will include

- (a) the use of common trenching, common utility access facilities and such other common facilities as may be commercially reasonable and comply with operating and safety standards; and
- (b) the consolidation of planned maintenance work where pavement must be cut in order to avoid multiple excavations.

9.3 Municipal Planning Lead

During such annual planning meetings, the Municipality shall lead the planning process for all Utilities and third parties with Planned Facilities in Public Places.

10. MUTUAL INDEMNITY

10.1 Indemnity by FortisBC

10.1.1. FortisBC indemnifies and protects and saves the Municipality harmless from and against all claims by third parties in respect to loss of life, personal injury (including, in all cases, personal discomfort and illness), loss or damage to property caused by FortisBC in:

- (a) placing, constructing, renewing, altering, repairing, maintaining, removing, extending, operating or using the Company's Facilities on or under any Public Places;
 - (b) any breach of this Agreement by FortisBC;
- except to the extent contributed by negligence or default of the Municipality or the Municipal Employees.

10.1.2. This indemnity expressly extends to all acts and omissions of FortisBC Employees.

10.2 Indemnity by the Municipality

10.2.1. The Municipality indemnifies and protects and saves FortisBC harmless from and against all claims by third parties in respect to loss of life, personal injury (including, in all cases, personal discomfort and illness), loss or damage to property to the extent caused by the Municipality in:

- (a) placing, constructing, renewing, altering, repairing, maintaining, removing, extending, operating or using the Municipal Facilities on or under any Public Places;
- (b) any breach of this Agreement by the Municipality;

except to the extent contributed by the negligence or default of FortisBC or FortisBC Employees.

10.2.2. This indemnity expressly extends to all acts and omissions of Municipal Employees.

10.3 Limitations on Municipality's Liability

All property of FortisBC kept or stored on the Public Places will be kept or stored at the risk of FortisBC. For further certainty, FortisBC acknowledges that the Municipality has made no representations or warranties as to the state of repair or the suitability of the Public Places for any business, activity or purpose whatsoever. FortisBC accepts its use of Public Places on an "as is" basis.

11. OPERATING FEE

11.1 Fee Calculation

11.1.1. FortisBC agrees to pay to the Municipality a fee of three percent (3%) of the gross revenues (excluding taxes) received by FortisBC for provision and distribution of all gas consumed within the Boundary Limits of the Municipality provided that the Municipality is permitted by law to charge such a fee. Such amount will not include any amount received by FortisBC for gas supplied or sold for resale.

11.1.2. The Municipality will provide FortisBC with thirty (30) days prior written notice of any boundary expansion so that existing and new customers in the expanded area can be included as a part of the annual payment fee.

11.1.3. FortisBC will be responsible for adding those existing and new customers within the new Municipal boundary upon receipt of such notice from the Municipality and the revised calculation of the fee will commence

effective the date that is the later of the date of actual boundary change or thirty (30) days after the notification under section 11.1.2.

11.2 Payment Date and Period

Payments by FortisBC to the Municipality will be made on the first day of March of each year of the Agreement in respect of the amount received by FortisBC during that portion of the term of this Agreement which is in the immediately preceding calendar year. By way of example only, payment made on March 1, 2014 will be the amount received during the 2013 calendar year.

11.3 BCUC Decision or Provincial Legislation

In the event that a decision by the BCUC, other than periodic rate changes as a result of commodity, delivery or margin increases or decreases, or new legislation by the Provincial Government, impacts the operating fee being paid to the Municipality so as to increase it or decrease it by more than 5% annually at the time of the decision or in subsequent years, the parties shall negotiate a new operating fee formula which best reflects the revenue stream received by the Municipality under this Agreement. For greater certainty, the parties acknowledge that a change to the BCUC's decision that FortisBC shall provide the agency billing and collections service for marketers on a mandatory basis, as set out in the "Business Rules for Commodity Unbundling dated June 5, 2003 as set out in Appendix A to Letter No. L-25-03, may impact the operating fee being paid to the Municipality.

12. OTHER APPROVALS, PERMITS OR LICENSES

Except as specifically provided in this Agreement, the Municipality will not require FortisBC to seek or obtain approvals, permits or licenses. The Municipality will not charge or levy against FortisBC any approval, license, inspection or permit fee, or charge of any other type, that in any manner is related to or associated with FortisBC constructing, installing, renewing, altering, repairing, maintaining or operating Company Facilities on any Public Places or in any manner related to or associated with FortisBC exercising the powers and rights granted to it by this Agreement (other than for repair of damage to the Municipal Facilities or Public Places in accordance with Section 14).

If the Municipality does charge or levy fees or costs against FortisBC (other than for repair of damage to the Municipal Facilities or Public Places in accordance with Section 14) then FortisBC may reduce the annual operating fee payable to the Municipality under Section 11 by an amount equal to such charges, fees or costs or in the event no annual operating fee is payable, FortisBC will not be required to pay such charges or fees or costs.

13. MUNICIPAL OBLIGATIONS

13.1 Municipal Work

13.1.1. Before the Municipality undertakes any construction or maintenance activity which is likely to affect a part of the Company Facilities, excluding routine maintenance and repair that does not involve any cutting of asphalted road surface, it must give FortisBC notice not less than 10 days before commencing such construction or maintenance activity.

Before the Municipality undertakes routine maintenance and repair that does not involve any cutting of asphalted road surface and is likely to affect Company Facilities, it must give FortisBC notice not less than 3 days before commencing such construction or maintenance activity.

13.1.2. Where the Municipality is required to carry out work urgently in the interests of public safety or health or to preserve the safety of property and Municipal Facilities, the Municipality shall not be required to give prior notice but shall do so as soon as possible thereafter.

13.1.3. FortisBC will be entitled to appoint at its cost a representative to inspect any construction or maintenance activity undertaken by the Municipality. The provisions of this section do not relieve the Municipality of its responsibilities under the *Gas Safety Act*, *Oil and Gas Activities Act*, and successor legislation, regulations thereunder, or the requirements of the BC Workers' Compensation Board.

13.1.4. In addition, the Municipality shall provide Notice to FortisBC of any work planned that will be adjacent to, across, over or under a Transmission Pipeline or within a right-of-way for a Transmission Pipeline. To the extent that FortisBC requires that permit be issued for construction or other activities within a Transmission Pipeline right-of-way, the Municipality will submit an application for such a permit in sufficient time for the application to be reviewed and approved by FortisBC prior to the commencement of the construction or other activity.

13.1.5. The Municipality shall assist FortisBC in FortisBC's efforts to reduce instances of residences being built over gas lines and other similarly unsafe building practices by third parties.

13.1.6. The Municipality shall not interfere with Transmission Pipeline markers.

13.1.7. The Municipality shall provide notice to FortisBC of any damage caused by the Municipality to Company Facilities or Transmission Pipeline Markers as soon as reasonably possible. To the extent that any of the work being done by the Municipality results in damage to the Company Facilities, the Municipality will report such damage and pay FortisBC its costs arising from such damage in accordance with Section 14.1 below.

Where such damage results directly from inaccurate or incomplete information supplied by FortisBC, and the Municipality has complied with all applicable laws and regulations, and with instructions supplied by FortisBC, then the cost of repairing the damaged Company Facilities will be at the expense of FortisBC.

- 13.1.8.** The Municipality shall notify FortisBC of any new bylaws, standards or policies adopted or passed by the Municipality that are likely to affect FortisBC's operations in Public Places.

14. COSTS AND PAYMENT PROCEDURES

14.1 Definition of Costs

Wherever one party is required to pay the other party Costs as a result of damage caused by one party to the other's property, the Costs shall be:

- (a) all direct expenses and disbursements incurred to restore such property to as good a state of repair as had existed prior to the damage;
- (b) reasonable administration and overhead charges on labour, equipment and materials;
- (c) such taxes as may be required in the appropriate jurisdiction;
- (d) in the case of loss of gas or re-lights, the cost of the commodity as determined by the length of time that the gas is leaking, size of pipe and hole and the pressure; and
- (e) in the case of water, electrical or sewer, cost of supplying alternate service.

14.2 Cost Claim Procedures

14.2.1. Wherever one party is claiming Costs of the other party in regard to any work or issue arising under this Agreement the claiming party shall:

- (a) provide an invoice to the other party no later than one year after incurring Costs;
- (b) provide detailed descriptions of the cost items;
- (c) provide the time period the invoice covers;
- (d) provide a minimum of 21 day terms for payment of the invoice; and
- (e) provide for late payment interest at the rate consistent with the party's policy for charging for late payments, which rate must be reasonable;

14.2.2. The party claiming Costs shall have no right of set off for these invoices against any amounts otherwise payable to the other party, except to the extent so approved in writing by the other party.

14.3 Cost Verification Procedures

14.3.1. Wherever either party is the recipient of or is claiming Costs and or fees that party may at its own discretion request from the other party:

- (a) Certification by an officer or designated representative verifying the calculations and computations of the Costs and or fees, or
- (b) An internal review or audit of the calculations and computations of the Costs and or fees, with the internal review or audit to be carried out by a person appointed by the party being asked to provide the review; or
- (c) An independent external audit of the calculations and computations of the costs and fees, with the independent external auditor being a Chartered or a Certified General Accountant in British Columbia appointed by the party requesting the external audit;

14.3.2. The costs of this cost verification process shall be borne by the party who is required to supply the information except as otherwise specified providing the frequency of such requests does not exceed once per calendar year. For all future cases which occur in that calendar year, the costs of such further verifications shall be at the expense of the requester.

Where the independent external audit finds and establishes errors representing a variance greater than 2% of the originally calculated value in favour of the party claiming Costs, the costs shall be at the expense of the party supplying the information. Once an error has been verified, payment or refund of the amount found to be in error will be made within 21 days.

15. START, TERMINATION AND CONTINUITY

15.1 Municipal Authority to Enter into Agreement

Prior to entering into this Agreement the Municipality will complete all procedures, obtain all consents and enact and bring into force all resolutions required under the *Community Charter*, and amendments thereto, and all other applicable legislation, to approve and authorize this Agreement.

15.2 Agreement Not Binding Until Approved by BCUC

15.2.1. This Agreement will not come into effect and does not bind the parties until FortisBC has obtained such approvals of this Agreement, or its terms, as may be required under the *Utilities Commission Act*. Upon executing this Agreement FortisBC shall make reasonable efforts to fulfill this

condition. If this condition is not fulfilled or waived within one (1) year of the date of execution of this Agreement, then the obligation on FortisBC to make reasonable efforts to fulfill this condition will terminate, and neither party will have any further obligation to the other under this Agreement.

15.3 Termination of Franchise Agreement

If not already terminated or expired, any franchise and operating agreement between the Municipality and FortisBC is terminated upon the effective date of this Agreement as referred to in section 15.2 of this Agreement.

15.4 Term of Agreement

This Agreement will have a term of 20 years from the date that it comes into effect and after the initial term shall continue indefinitely unless terminated in accordance with Section 15.5 below.

15.5 Termination of Agreement

15.5.1. This Agreement may be terminated by the Municipality upon the occurrence of any of the following events:

- (a) FortisBC admits its inability to pay its debts generally as they become due or otherwise acknowledges its insolvency;
- (b) FortisBC starts proceedings or takes any action to commence or executes an agreement to authorize its participation in any proceeding:
 - (i) seeking to adjudicate it bankrupt or insolvent;
 - (ii) seeking liquidation, reorganization, arrangement, protection, relief or composition of it or any of its property or debt or making a proposal with respect to it under any law relating to bankruptcy, insolvency, reorganization or compromise of debts or other similar laws; or
 - (iii) seeking the appointment of a receiver, trustee, agent, custodian or other similar official for it or for any substantial part of its assets or if a creditor seeks the appointment of a receiver, trustee, agent, custodian or other similar official for any substantial part of its assets; and such proceeding is not dismissed, discharged, stayed or restrained within 20 days of the Municipality becoming aware of it.

15.5.2. Either party may terminate if other breaches any term, provision, obligation hereunder and such breach, is a material major breach, and has not been cured within sixty (60) days of receipt of Notice of such breach. A Party will not be considered to be in default if such matter is in dispute

or has been referred to commercial arbitration, the outcome of which is pending, or is being resolved in good faith compliance with the dispute resolution and arbitration processes of this Agreement.

15.5.3. After the initial twenty (20) year term of this Agreement, either party may terminate this Agreement by giving the other not less than one (1) year's notice of termination.

15.6 Amendments and Waivers

This Agreement may be amended only by an agreement in writing signed by the parties. No waiver of any provision nor consent to any exception to the terms of this Agreement shall be effective unless in writing and signed by the parties to be bound, and then only to the specific purpose, extent and instance so provided. No waiver, delay or failure to exercise any rights under this Agreement shall be construed as a continuing waiver of such right or as a waiver of any other right under this Agreement.

The parties agree to meet to discuss the operations of the Agreement within thirty (30) days of either party making the request. Such a meeting will determine whether any amendments are required to this Agreement and the parties shall discuss any proposed amendments with a view to maximizing the benefit of the relationship.

15.7 Negotiations on Termination or Expiry of this Agreement

Upon one party giving Notice to the other of termination of this Agreement, the parties shall negotiate in good faith to enter into a new agreement with respect to the terms and conditions under which FortisBC may use the Public Places. In the event that such negotiations break down and in the opinion of one or other of the parties acting in good faith that settlement is unlikely, either party may give Notice to the other of its intention to apply to the BCUC to seek resolution of the terms and conditions applicable to FortisBC's continued operations and construction activities within the Municipality.

15.8 Continuity In The Event No Agreement Is Settled

Upon termination of this Agreement, if a new agreement has not been ratified or if the BCUC has not imposed the terms and conditions under which FortisBC may use the Public Places, the following provisions will apply:

- (a) The Company Facilities within the boundary limits of the Municipality both before and after the date of this Agreement, shall remain FortisBC's property and shall remain in the Public Places.
- (b) The Company Facilities may continue to be used by FortisBC for the purposes of its business, or removed from Public Places in whole or in part at FortisBC's sole discretion.
- (c) FortisBC may continue to use Public Places within the Municipality for the purposes of its business. FortisBC's employees, may enter upon all the Public Places within the Boundary Limits of the Municipality to maintain,

operate, install, construct, renew, alter, or place Company Facilities; provided that FortisBC continues to operate in a manner consistent with the terms and conditions of this Agreement as if the term had been extended except with respect to the payment of the operating fee.

- (d) FortisBC will with the support of the Municipality take such steps necessary to seek BCUC approvals of the extension of terms and conditions including payment of the operating fee under the terminated agreement during negotiations of a new agreement.
- (e) Should FortisBC no longer be authorized or required to pay the operating fee under any Agreement between it and the Municipality or by any order of the BCUC, the Municipality shall be free to apply such approval, permit and licence fees, charges and levies it is legally entitled to collect.

16. ACCOMMODATION OF FUTURE CHANGES

16.1 Outsourcing of Infrastructure Management

In the event that the Municipality assigns the task of infrastructure management to a third party the Municipality will ensure that:

- (a) its contracts for such infrastructure management contain provisions that will allow the Municipality to meet its obligations under and to comply with the terms and conditions of, this Agreement, and
- (b) FortisBC will accept the appointment of such third party as the Municipality's agent or subcontractor to enable such third party to deal directly with FortisBC so as to enable the Municipality to comply with the terms, obligations and conditions of this Agreement.

16.2 Changes to the Community Charter

In the event that the provisions of the *Community Charter* or other legislation affecting the rights and powers of municipalities change in such a way as to materially, in the opinion of the Municipality, affect municipal powers in respect to matters dealt with in this Agreement,

- (a) the Municipality may within one year of the change coming into effect propose new agreement terms with respect to only those specific changes and FortisBC agrees to negotiate such terms; and
- (b) failing satisfactory resolution of the terms of the Agreement either of the parties may seek resolution through the Dispute Resolution Process, Section 17.

16.3 Changes to the Utilities Commission Act

In the event that the provisions of the *Utilities Commission Act* or other legislation affecting the rights and powers of regulated Utilities change in such a way as to materially, in FortisBC's opinion, affect FortisBC's powers in respect to matters dealt with in this Agreement,

- (a) FortisBC may within one year of the change coming into effect propose new agreement terms with respect to only those specific changes and the Municipality agrees to negotiate such terms; and
- (b) failing satisfactory resolution either of the parties will seek resolution through the Dispute Resolution Process, Section 17.

17. DISPUTE RESOLUTION

17.1 Mediation

Where any dispute arises out of or in connection with this Agreement, including failure of the parties to reach agreement on any matter arising in connection with this Agreement, the parties agree to try to resolve the dispute by participating in a structured mediation conference with a mediator under the Rules of Procedure for Commercial Mediation of The Canadian Foundation for Dispute Resolution.

17.2 Referral to the BCUC or Arbitration

If the parties fail to resolve the dispute through mediation, the unresolved dispute shall be referred to the BCUC if within its jurisdiction. If the matter is not within the jurisdiction of the BCUC, such unresolved dispute shall be referred to, and finally resolved or determined by arbitration under the Rules of Procedure for Commercial Arbitration of The Canadian Foundation for Dispute Resolution. Unless the parties agree otherwise the arbitration will be conducted by a single arbitrator.

17.3 Additional Rules of Arbitration

The arbitrator shall issue a written award that sets forth the essential findings and conclusions on which the award is based. The arbitrator will allow discovery as required by the *Commercial Arbitration Act* of British Columbia in arbitration proceedings.

17.4 Appointment of Arbitrator

If the arbitrator fails to render a decision within thirty (30) days following the final hearing of the arbitration, any party to the arbitration may terminate the appointment of the arbitrator and a new arbitrator shall be appointed in accordance with these provisions. If the parties are unable to agree on an arbitrator or if the appointment of an arbitrator is terminated in the manner provided for above, then any party to Agreement shall be entitled to apply to a judge of the British Columbia Supreme Court to appoint an arbitrator and the arbitrator so appointed shall proceed to determine the matter *mutatis mutandis* in accordance with the provisions of this Section.

17.5 Award of Arbitrator

The arbitrator shall have the authority to award:

- (a) money damages;
- (b) interest on unpaid amounts from the date due;
- (c) specific performance; and
- (d) permanent relief.

17.6 Cost of Arbitration

The costs and expenses of the arbitration, but not those incurred by the parties, shall be shared equally, unless the arbitrator determines that a specific party prevailed. In such a case, the non-prevailing party shall pay all costs and expenses of the arbitration, but not those of the prevailing party.

17.7 Continuation of Obligations

The parties will continue to fulfill their respective obligations pursuant to this Agreement during the resolution of any dispute in accordance with this Section 17, provided that, neither party shall proceed with any work or activity or take any further action which is the subject matter of the dispute.

18. GENERAL TERMS & CONDITIONS

18.1 No Liens

FortisBC will do its best to not allow, suffer or permit any liens to be registered against the Company Facilities located in Public Places as a result of the conduct of FortisBC. If any such liens are registered, FortisBC will start action to clear any lien so registered to the Public Place within ten (10) days of being made aware such lien has been registered. FortisBC will keep the Municipality advised as to the status of the lien on a regular basis. In the event that such liens are not removed within ninety (90) days of the registration of such lien, FortisBC will pay them in full or post sufficient security to ensure they are discharged from title.

18.2 Corporate Authority

FortisBC now warrants, represents and acknowledges that:

- (a) it has the full right, power and authority to enter into this Agreement;
- (b) it is a corporation, duly organized, legally existing and in good standing under the laws of its jurisdiction of incorporation or continuance and is lawfully registered and licensed to do business in British Columbia.

18.3 Representations

Nothing in this Agreement shall be deemed in any way or for any purpose to constitute either party as the legal representative, agent, partner or joint venturer of the other, nor shall either party have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against, in the name of, or on behalf of the other party.

18.4 Assignments and Enurement

This Agreement and any rights or obligations under it are not assignable by either party, without the prior written consent of the other party hereto, such consent not to be unreasonably withheld. This Agreement shall be binding upon, enure to the benefit of, and be enforceable by, the successors and permitted assigns of the parties hereto.

18.5 Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia.

18.6 General

This Agreement is subject to the laws of Province of British Columbia and the applicable laws of Canada, and nothing in this Agreement will be deemed to exclude the application of the provisions of such laws, or regulations thereunder.

18.7 Entire Agreement

This Agreement constitutes the entire agreement and understanding of the parties with respect to the subject matter herein contained and supersedes all prior agreements and undertakings with respect thereto.

18.8 Severability

If any provision of this Agreement is held invalid by any court, governmental agency or regulatory body, the other provisions to the extent permitted by law shall remain in full force and effect. To the extent permitted by applicable law, the parties hereby waive any provision of law that renders any provision hereof prohibitive or unenforceable in any respect.

18.9 Force Majeure

Neither party shall be liable to the other for temporary failure to perform hereunder, if such failure is caused by reason of an Act of God, labour dispute, strike, temporary breakdown of facilities, fire, flood, government order or regulations, civil disturbance, non-delivery by program suppliers or others, or any other cause beyond the parties' respective control.

18.10 Notice

Any notice or other written communication required, or permitted to be made or given pursuant to this Agreement (the “Notice”) shall be in writing and shall be deemed to have been validly given if delivered in person or transmitted electronically and acknowledged by the respective parties as follows:

A) if to the Municipality:

(B) If to FortisBC:

FORTISBC ENERGY INC.
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Attention: Director, Regulatory Affairs

by its authorized signatories

Authorized Signatory

Authorized Signatory

FORTISBC ENERGY INC.
by its authorized signatories

Authorized Signatory

Authorized Signatory

Attachment 5

**FEI FORM OF OPERATING AGREEMENT
VANCOUVER ISLAND AND SUNSHINE COAST**

OPERATING AGREEMENT

THIS OPERATING AGREEMENT (the “Agreement”) made this ____day of _____, 20____.

BETWEEN:

(hereinafter called the “**Municipality**”)

OF THE FIRST PART

AND:

FORTISBC ENERGY (VANCOUVER ISLAND) INC., a body corporate duly incorporated under the laws of the Province of British Columbia, and having its registered office in the City of Vancouver, in the Province of British Columbia

(hereinafter called “**FortisBC**”)

OF THE SECOND PART

RECITALS:

- A. Whereas by a certificate of public convenience and necessity (CPCN), FortisBC (formerly Terasen Gas (Vancouver Island) Inc.) was granted the right to construct and operate gas distribution facilities within the Municipality;
- B. And whereas pursuant to the Community Charter, S.B.C. 2003, a Municipal council may, by resolution adopt and enter into a licensing and operating agreement;
- C. And whereas FortisBC and the Municipality are the parties to a Franchise or Operating Agreement dated the _____ day of _____, 20____ which has or will expire on _____;
- D. And whereas FortisBC and the Municipality wish to enter into this Agreement to clarify and settle the terms and conditions under which FortisBC shall exercise its rights to use Public Places in conducting its business of distributing Gas within the Municipality;

NOW THEREFORE THIS AGREEMENT WITNESSES that the parties covenant and agree as follows:

1. DEFINITIONS

1.1 For the purposes of this Agreement:

- (a) “Boundary Limits” means the boundary limits of the Municipality as they exist from time to time and that determine the area over which the Municipality has control and authority;
- (b) “BCUC” means the British Columbia Utilities Commission or successor having regulatory jurisdiction over natural gas distribution utilities in British Columbia;
- (c) “CPCN” means a Certificate of Public Convenience and Necessity granted by the BCUC which allows FortisBC to operate, maintain and install Company Facilities for the distribution of Gas within the Municipality;
- (d) “Company Facilities” means FortisBC’s facilities, including pipes (live and abandoned), buildings, structures, valves, signage, storage facilities, machinery, vehicles and other equipment used to maintain, operate, renew, repair, construct and monitor a natural Gas Distribution and transmission system;
- (e) “Costs” has the meaning ascribed to it in Section 15.1;
- (f) “Distribution Pipelines” means pipelines operating at a pressure less than 2071 kilopascals (300 psi);
- (g) “Emergency Work” means any work that, in its reasonable opinion, each party carrying out the work believes is urgently required to preserve public safety or health or to preserve the safety of Company Facilities or Municipal Facilities, as the case may be, or other property;
- (h) “FortisBC Employees” means personnel employed by or engaged by FortisBC including officers, employees, directors, contractors, and agents;
- (i) “Gas” means natural gas, propane, methane, synthetic gas, liquefied petroleum in a gaseous form or any mixture thereof;
- (j) “Gas Distribution” means fixed equipment, structures, plastic and metal lines and pipe, valves, fittings, appliances and related facilities used or intended for the purpose of conveying, testing, monitoring, distributing, mixing, storing, measuring and delivering Gas and making it available for use within the Municipality;
- (k) “Impact Service Work” means Service Line Work that:
 - (i) requires cutting of asphalted or concrete surfaces

- (ii) impact to trees, or requires working in or near wetlands, water bodies or other areas of special environmental sensitivity,
 - (iii) requires working on a site known to have archeological significance, including those designated by the Province of British Columbia or by the Municipality as heritage sites; or
 - (iv) impacts existing Municipal or third party underground Facilities.
- (l) “Mains” means pipes used by FortisBC to carry gas for general or collective use for the purposes of Gas Distribution;
 - (m) “Municipal Employees” means personnel employed by or engaged by the municipality, including officers, employees, directors, contractors and agents;
 - (n) “Municipal Facilities” means any facilities, including highways, sidewalks, conduits, manholes, equipment, machinery, pipes, wires, valves, buildings, structures, signage, bridges, viaducts and other equipment within the Public Places used by the Municipality for the purposes of its public works or municipal operations;
 - (o) “Municipal Supervisor” means the Municipal Engineer or other such person designated by the Municipality to receive notices and issue approval as set out in this Agreement;
 - (p) “New Work” means any installation, construction, repair, maintenance, alteration, extension or removal work of the Company Facilities in Public Places except:
 - (i) routine maintenance and repair of the Company Facilities that does not require any cutting of asphalted or concrete surface;
 - (ii) Service Line Work or Impact Service Work; or
 - (iii) Emergency Work;
 - (q) “Park” means land dedicated, held, managed or operated by the Municipality as a public park;
 - (r) “Pipeline Markers” means post, signage or any similar means of identification used to show the general location of Transmission Pipelines and distribution pipelines or FortisBC Rights of Way;
 - (s) “Planned Facilities” means those facilities not yet constructed but which have been identified by way of documented plans for Utilities, for works of third parties, where such works are identified by documented plans permitted by the Municipality;
 - (t) “Public Places” means any public thoroughfare, highway, road, street, lane, alley, trail, square, bridge, right of way, viaduct, subway,

watercourse or other public place in the Municipality but does not mean Parks;

- (u) “Service Line Work” means installation, construction, repair, maintenance, alteration, extension or removal work of that portion of FortisBC’s gas distribution system extending from a Main to the inlet of a meter set and, for the purposes of this Agreement, includes a service header and service stubs;
- (v) “Transmission Pipeline” means a pipeline of FortisBC having an operating pressure in excess of 2071 kilopascals (300 psi); and
- (w) “Utilities” means the facilities or operations of any water, waste water, sewer, telecommunications, energy, cable service or similar service provider located in Public Places within the Municipality.

2. INTERPRETATION

2.1 For the purposes of interpreting this Agreement:

- (a) the headings are for convenience only and are not intended as a guide to interpretation of this Agreement;
- (b) words in the singular include the plural, words importing a corporate entity include individuals, and vice versa;
- (c) in calculating time where the agreement refers to “at least” or “not less than” a number of days, weeks, months or years, the first and last days must be excluded and where the agreement refers to “at least” or “not less than” a number of days, Saturdays, Sundays and holidays must be excluded;
- (d) the word “including”, when following any general term or statement, is not to be construed as limiting the general term or statement to the specific items or matters, but rather as permitting the general term or statement to refer to all other items or matters that could reasonably fall within the broadest possible scope of the general term or statement.

3. OBLIGATION TO ACT IN GOOD FAITH

3.1 FortisBC and the Municipality acknowledge and agree that they will act in good faith, in carrying out the terms and conditions of this Agreement and within reasonable time frames, carry out the obligations under this Agreement.

3.2 FortisBC and the Municipality will at all times carry out all work and operations with the due care and attention that is necessary to safeguard the interests of the public, their own employees, and the other party’s employees.

4. FORTISBC RIGHTS TO ACCESS & USE PUBLIC PLACES

4.1 Use of Public Places

The Municipality hereby acknowledges FortisBC's rights to:

- (a) develop, construct, install, maintain or remove Company Facilities on, over, in and under Public Places in the Municipality;
- (b) enter on Public Places from time to time as may be reasonably necessary for the purpose of maintaining, repairing, or operating Company Facilities; and
- (c) place pipeline identification markers within Public Places where a Transmission Pipeline or Distribution Pipeline crosses or is otherwise within a Public Place;

subject to terms and conditions defined in this Agreement.

4.2 Use of Parks

- (a) The Municipality may authorize Fortis BC to use Parks for the Company Facilities. The Municipality shall not unreasonably withhold permission in circumstances where Utilities owned by third parties are already placed within the Park and the Municipality does not consider that the use of the Park by Fortis BC will materially affect the public's use of the Park or existing Utilities. Where such permission has been granted to Fortis BC, the Municipality shall grant FortisBC:
 - (i) a right of way in registerable form; or
 - (ii) in the case of a dedicated Park or other Park for which there is no registered title, a license or permit;

allowing FortisBC to use the Park for the Company Facilities and Fortis BC shall pay to the Municipality compensation for the fair market value of the right-of-way, the license or permit as the case may be. Fair market value shall be as agreed by the Municipality and Fortis BC based on compensation by Fortis BC or other public utilities or other municipalities in the Province of British Columbia for similar rights-of-way, licenses or permits, as the case may be, granted with respect to similar public lands in other municipalities. Failing agreement between Fortis BC and the Municipality as to the fair market value of any right-of-way, license or permit, compensation shall be determined in accordance with the *Expropriation Act*, RSBC 1996. c125. as amended or replaced from time to time.

5. GRANDFATHERING FOR EXISTING USE OF PARKS

5.1 The Municipality acknowledges that Company Facilities may have been installed in Parks. Where FortisBC has existing Company Facilities in a Park, FortisBC may maintain, replace or remove such Company Facilities and enter such park from time to time as may be reasonably necessary for the same purposes, subject to the same terms and conditions defined in this Agreement with respect to FortisBC's use of Public Places, as reasonably applicable.

6. FORTISBC COMPLIANCE WITH STANDARDS FOR USE OF PUBLIC PLACES

6.1 Non-discriminatory Standards for FortisBC

In its use of Public Places, FortisBC shall comply with all Federal and Provincial laws, regulations and codes and shall comply with all Municipal bylaws, standards and policies except that FortisBC shall not have to comply with such Municipal bylaws, standards and policies that:

- (a) conflict with terms of this Agreement or limit any rights or concessions granted to FortisBC by the Municipality under this Agreement; or
- (b) conflict with other legislation governing FortisBC.

Further, where the Municipality has established requirements and standards for work in Public Places, the Municipality shall apply them in a fair, reasonable and non-discriminatory manner consistent with the manner that the Municipality establishes requirements on other Utilities.

6.2 Depth of Cover

Subject to Section 6.1 above, FortisBC shall comply with Municipal standards that establish a minimum depth of cover for the installation of Company Facilities to a maximum of 75cm depth of cover. Notwithstanding the foregoing, the Municipality may require a greater depth of cover for the installation of Company Facilities where such cover is required to accommodate Planned Facilities.

6.3 Provide emergency contacts.

FortisBC will provide the Municipality with a 24 hour emergency contact number which the Municipality will use to notify FortisBC of emergencies including; gas leaks, third party accidents around work sites, ruptures of gas lines, and other potentially hazardous situations.

6.4 Assist with facility locates

FortisBC will, at no cost to the Municipality, provide locations of its Company Facilities within a time frame as may be reasonably requested by the Municipality unless the reason for the request is the result of an emergency; in which case the information shall be

provided forthwith. FortisBC shall provide gas locations from FortisBC records. FortisBC shall perform on site facility locates in accordance with the *Safety Standards Act – Gas Safety Regulations*, section 39.

7. FORTISBC WORK OBLIGATIONS:

7.1 New Work

7.1.1. Application for New Work

For New Work, FortisBC shall submit an application to the Municipal Supervisor for a permit when it intends to perform New Work. The application shall include:

- (a) a plan and specifications showing:
 - (i) the size and dimensions of all New Works, their proposed depth below the surface of the ground and their proposed locations related to property lines;
 - (ii) profiles for gas applications for gas mains 114 mm or greater that may impact Planned Facilities, if requested by the Municipality;
 - (iii) the edge of hard surfaces of affected roads, streets or highways or other Public Places;
 - (iv) the proposed location and/or clearances of the New Works where the New Works cross existing Utilities provided that all such locations and elevations are made available to FortisBC by the Municipality or the owner of such Utilities; and
 - (v) boundaries and legal descriptions of any private lands affected or within 1.5 meters of the proposed centre line of the New Work;
- (b) FortisBC's plans for the restoration of the Public Place affected by the New Work if FortisBC's restoration plans are different from those set out in Section 7.6.4 of this Agreement;
- (c) the name of a FortisBC representative who may be contacted for more information;
- (d) projected commencement and completion dates; and
- (e) such other information relevant to the New Work as the Municipality may reasonably require from time to time.

7.1.2. Exception for Emergency

Where FortisBC is required to carry out Emergency Work, FortisBC shall not be required to give prior notice but shall do so as soon as possible thereafter.

7.1.3. Municipal Permits for New Work

The Municipality shall use its best efforts to issue a permit for New Work within fifteen (15) days of receipt by the Municipality of an application containing all the information required under Section 7.1.1, or a time extension if large and complex. The Municipality may refuse to issue a permit for the New Work on the following grounds:

- (a) the proposed location of the New Work conflicts with existing Municipal Facilities, existing third party facilities or Planned Facilities, trees, wetlands, water bodies or other areas of special environmental sensitivity, or areas that are of archeological significance, including areas designated by the Province of British Columbia or by the Municipality as heritage sites; or
- (b) the proposed location or design of the New Work is likely to compromise public safety or does not conform with Municipal bylaws, standards or policies; or
- (c) in instances where FortisBC can delay the New Work without compromising the supply, capacity or safety of its Gas Distribution System or its customers' need for gas service and the Municipality intends within the next three (3) months to undertake work in the same location and wishes to co-ordinate both work; or
- (d) FortisBC has not provided the Municipality with the information required by Section 7.1.1;

and shall provide FortisBC with grounds for its refusal to grant the permit, provided such grounds are reasonable, no more than fifteen (15) days after receiving FortisBC's permit application for New Work, except that in the case of work that is large or complex, the Municipality may extend the time for response by a maximum of ten (10) additional days.

7.1.4. Conditions of Permit

Notwithstanding Section 7.1.3 above, the Municipality may include conditions in its permit for the New Work to address the matters set out in Subsections 7.1.3(a) and 7.1.3(b). In addition, the Municipality may require FortisBC to provide the public with notice of the New Work. Any additional terms or conditions contained in a permit for the New Work shall be of no force and effect except to the extent that such terms or conditions are consistent with the terms of this Operating Agreement.

7.1.5. Work Not to Proceed

If the Municipality

- (a) fails to provide FortisBC with a permit within fifteen (15) days of FortisBC's application of New Work or, in the case of large and complex New Work, within such extended time as may be set out in the Municipality's notice to FortisBC; or
- (b) notifies FortisBC of its objections to the New Work;

FortisBC may refer the matter to dispute resolution in accordance with Section 18. FortisBC shall not proceed with the New Work until the Municipality provides FortisBC with a permit for such work including a permit issued as a result of the resolution of a dispute by the parties.

7.2 Impact Service Work

7.2.1. Application for Impact Service Work

For Impact Service Work, FortisBC shall submit an application to the Municipal Supervisor for a permit when it intends to perform Impact Service Work. The application shall be in the form attached as Schedule A to this Agreement and shall include a sketch showing:

- (a) property lines and street addresses;
- (b) existing gas main and proposed service location offset to property;
- (c) all hard surfaces, trees, archeological or environmental areas impacted by the new service installation; and
- (d) buried utilities identified in the planning stages to be impacted by the proposed service.

7.2.2. Municipal Permits for Impact Service Work

The Municipality shall use its best efforts to issue a permit for Impact Service Work within five (5) days of receipt by the Municipality of an application containing all the information required under Section 7.2.1. The Municipality may refuse to issue a permit for the Impact Service Work on the following grounds:

- (a) the proposed location of the Impact Service Work conflicts with existing Municipal Facilities, existing third party facilities or Planned Facilities, trees, wetlands, water bodies or other areas of special environmental sensitivity, or areas that are of archaeological significance, including areas designated by the Province of British Columbia or by the Municipality as heritage sites; or
- (b) FortisBC has not provided the Municipality with the information required by Section 7.2.1;

and shall provide FortisBC with the grounds for its refusal to grant the permit, provided such grounds are reasonable, no more than ten (10) days after receiving FortisBC's permit application for Impact Service Work.

7.2.3. Conditions of Permit

Notwithstanding Section 7.2.2 above, the Municipality may include conditions in its permit for the Impact Service Work to address the matters set out in Subsection 7.2.1(a). Any additional terms or conditions contained in a permit for the Impact Service Work shall be of no force and effect except to the extent that such terms or conditions are consistent with the terms of this Operating Agreement.

7.2.4. Work Not to Proceed

If the Municipality

- (a) fails to provide FortisBC with a permit within ten (10) days of FortisBC's application of Impact Service Work; or
- (b) notifies FortisBC of its objections to the Impact Service Work;

FortisBC may refer the matter to dispute resolution in accordance with Section 18. FortisBC shall not proceed with the Impact Service Work until the Municipality provides FortisBC with a permit for such work including a permit issued as a result of a resolution of a dispute between the Parties.

7.3 Notices of Service Line Work

7.3.1 Notice

FortisBC shall provide the Municipality with notice of its intent to undertake Service Line Work. When it intends to undertake Service Line Work, FortisBC shall provide such notice in the form attached as Schedule A to this Agreement.

7.3.2 Objections

The Municipality may object to Service Line Work on the grounds set out in Subsections 7.2.2(a) and (b) above, by providing FortisBC with notice of its objections within five (5) days of receiving FortisBC's notice. If the Municipality does not provide such notice of its objections to FortisBC within five (5) days of receiving FortisBC's notice, the Municipality shall be deemed to have granted its approval of the Service Line Work.

7.3.3 Resolving Objections

If the Municipality has objections to the planned Service Line Work and if the Municipality and FortisBC are unable to agree on a resolution, then either party may refer the matter to dispute resolution in accordance with Section 18. The Municipality shall not otherwise withhold or delay its approval.

7.4 Expiry of Permit or Approval After Twelve Months

A permit or deemed approval will expire in the event that FortisBC does not carry out New Work, or Service Line Work within twelve months of the date of the permit or deemed approval.

7.5 FortisBC to Obtain Locate Information

Prior to conducting any New Work, FortisBC shall locate other Utilities and satisfy itself that it is clear to proceed.

7.6 Work Standards

7.6.1. Engineering Practices

All work carried out by FortisBC shall be carried out in accordance with sound engineering practices.

7.6.2. Specific Work Requirements to Remove Materials

FortisBC shall keep its work sites clean and tidy. FortisBC shall remove all rubbish and surplus material from Public Places upon completion of its work.

7.6.3. No Nuisance

Fortis BC shall not leave any part of its gas system in such a state as to constitute a nuisance or a danger to the public through neglect, non-use and want or repair.

7.6.4. Restore Surface and Subsurface

Where FortisBC has performed any operations, Service Line Work or New Work in a Public Place, FortisBC shall restore without unreasonable delay and return such Public Place, as much as reasonably practical, to the condition and use which existed prior to such activity. The restoration will be in accordance with the specifications set out by the Municipality. Such specifications may include the degree and nature of compaction, subsurface structure, surface finish and landscaping required.

Where FortisBC is required to cut pavement on a Public Place such cuts and restoration will be limited to less than 1.5 meters in width unless at the discretion of FortisBC a larger excavation is warranted due to the depth or size of the pipe or requirements of the Workers' Compensation Board or other relevant Provincial or Federal regulations. FortisBC will be responsible for any repairs and maintenance of the surface repair for a period of five (5) years. However, where pavement restoration has been conducted by the Municipality, whether or not such work was undertaken to repair cuts on FortisBC's behalf, FortisBC shall not be responsible for the repairs or maintenance of the surface repair.

7.6.5. Repair Damage to Municipal Facilities

To the extent that any of the work being done by FortisBC results in damage to Municipal Facilities or Public Places, other than the usual physical disruption to Public Places caused by the installation of Company Facilities that FortisBC shall restore in accordance with Section 7.6.4 above, FortisBC will, as soon as reasonably possible, report such damage and reimburse the Municipality for its Costs arising from such damage calculated in accordance with Section 15.1 below. Where such damage results directly from inaccurate or incomplete information supplied by Municipality, and FortisBC has complied with all applicable laws and regulations, and with instructions supplied by the Municipality, then the cost of repairing damaged Municipal Facilities or Public Places will be at the expense of the Municipality.

7.6.6. Restoration Audit

FortisBC may retain a third party, at FortisBC's expense, to carry out audits of FortisBC's repairs or restoration of Municipal Facilities, and the number and frequency of such audits shall be determined in consultation with, and with the agreement of the Municipality. The audit shall take into account different road classification, the results of previous audits and other criteria agreed upon by FortisBC and the Municipality. Notwithstanding the foregoing, the extent and the frequency of the audits will be results based and therefore, the results of any audits will determine whether the frequency and the extent of any audits should be increased or decreased. This system of audits shall replace any testing required by the Municipality under its bylaws.

7.7 Conformity Requirement

The New Work and Service Line Work must be carried out in conformity with Municipal Permits or approved notices for New Work or Service Line Work, as the case may be, except that FortisBC may make in-field design changes when carrying out the New Work or Service Line Work to accommodate field conditions which could not have been reasonably foreseen by FortisBC. If such in-field conditions materially impact FortisBC's plans for restoration or materially change the impact of FortisBC's work on Municipal Facilities, other than in respect of projected commencement and completion dates, FortisBC shall notify the Municipality of the changes and the reasons for them prior to continuing the work.

7.8 Non-Compliance

If Company Facilities located in Public Places are later found not to be located in compliance with FortisBC's notice of New Work or Service Line Work provided in accordance with Sections 7.1 and 7.3, then any alteration or upgrading required to bring them into compliance with such notice will be at the expense of FortisBC provided that the work has not been altered, damaged or modified by the Municipality or a third party.

7.9 Prime Contractor

Where FortisBC performs any work in a Public Place, FortisBC shall act as the prime contractor or designate in writing its contractor to act as the prime contractor, within the meaning of Section 118 of the Workers Compensation Act (British Columbia) unless otherwise designated in writing by the Municipality or a third party working in such Public Place.

8. CLOSURE OR EXPROPRIATION OF PUBLIC PLACES

8.1 Closure of Public Places

Before any Public Places containing Company Facilities may be legally closed or alienated by the Municipality, the Municipality shall as soon as reasonably possible notify FortisBC of its intent to close or alienate such Public Places and either:

- (a) grant FortisBC a registered statutory right of way in a form satisfactory to FortisBC so as to maintain FortisBC's right to use the land; or
- (b) request FortisBC to remove and (if possible and practicable) relocate those Company Facilities affected by such closure or alienation at the sole cost of the Municipality.

8.2 Expropriation of Public Places

If the Public Places are expropriated by an expropriating authority and FortisBC is required to remove the Company Facilities then the Municipality shall as soon as reasonably possible notify FortisBC of the expropriation. This Section 8.2 is applicable when the Municipality receives official notice of expropriation or otherwise becomes aware of expropriation through communications with the expropriating authority.

9. FACILITY CHANGES REQUIRED

9.1 By FortisBC

FortisBC may provide Notice to the Municipality that it requires Municipal Facilities to be altered, changed or relocated to accommodate its requirements. The Municipality will comply with FortisBC's requests to the extent it is reasonably able to do so and with reasonable speed and dispatch after receipt of written request. FortisBC agrees to pay for all of the Costs for changes to the affected Municipal Facilities. The Municipality shall provide estimates and invoices to FortisBC in respect of such work in accordance with Section 15 of this Agreement.

9.2 By the Municipality

The Municipality may provide Notice to FortisBC that it requires Company Facilities to be altered, changed, temporarily shut-down, temporarily by-passed, or relocated to accommodate its requirements. FortisBC will comply with the Municipality's requests to

the extent it is reasonably able to do so and with reasonable speed and dispatch after receipt of written request. The Municipality agrees to pay for all of the Costs for changes to the affected Company Facilities except where such Company Facilities were not installed in conformity with Section 7.7 of this Agreement. FortisBC shall provide estimates and invoices to the Municipality in respect of such work in accordance with Section 15 of this Agreement.

This Section 9.2 is an agreement between the Municipality and FortisBC for the purpose of section 76(1)(c) of the *Oil and Gas Activities Act*.

10. JOINT PLANNING, COOPERATION AND COORDINATION

10.1 Conduct of Construction and Maintenance Activities

The Municipality and FortisBC agree to use reasonable efforts in carrying out their construction and maintenance activities in a manner that is responsive to the effect that it may have on the other party, as well as other users of Public Places. Such reasonable efforts include attending the planning meetings described in Section 10.2 below and reducing as much as is practical, the obstruction of access to Public Places, and interference with the facilities and activities of others in Public Places.

10.2 Communication and Coordination Activities

At the initiation of the Municipality, representatives of the Municipality, FortisBC and other affected Utilities and third parties will meet each year, prior to the construction season, to discuss the parties' anticipated construction activities for that year and to review Planned Facilities. Such discussions will include

- (a) safe working practices;
- (b) the use of common trenching, common utility access facilities and such other common facilities as may be commercially reasonable and comply with operating and safety standards; and
- (c) the consolidation of planned New Work, Impact Service Work and maintenance work especially where pavement must be cut in order to avoid multiple excavations.

10.3 Municipal Planning Lead

During such annual planning meetings, the Municipality shall lead the planning process for all Utilities and third parties with Planned Facilities in Public Places.

10.4 Mapping Information

10.4.1. Municipal Information

The Municipality shall supply to FortisBC at no cost all record drawings and information it has for Municipal Facilities.

10.4.2. FortisBC Information

FortisBC shall supply to the Municipality at no cost all record drawings and information it has for Company Facilities within the Municipality, including abandoned mains.

10.4.3. Co-Operation

FortisBC and the Municipality shall co-operate to improve their mapping systems so they are compatible, provide the necessary information and are easily accessible to both parties.

11. MUTUAL INDEMNITY

11.1 Indemnity by FortisBC

11.1.1. FortisBC indemnifies and protects and saves the Municipality harmless from and against all claims by third parties in respect to loss of life, personal injury (including, in all cases, personal discomfort and illness), loss or damage to property caused by FortisBC in:

- (a) placing, constructing, renewing, altering, repairing, maintaining, removing, extending, operating or using the Company's Facilities on or under any Public Places; and
- (b) any breach of this Agreement by FortisBC;

except to the extent contributed by negligence or default of the Municipality or the Municipal Employees.

11.1.2. This indemnity expressly extends to all acts and omissions of FortisBC Employees.

11.2 Indemnity by the Municipality

11.2.1. The Municipality indemnifies and protects and saves FortisBC harmless from and against all claims by third parties in respect to loss of life, personal injury (including, in all cases, personal discomfort and illness), loss or damage to property to the extent caused by the Municipality in:

- (a) placing, constructing, renewing, altering, repairing, maintaining, removing, extending, operating or using the Municipal Facilities on or under any Public Places;
- (b) any breach of this Agreement by the Municipality;

except to the extent contributed by the negligence or default of FortisBC or FortisBC Employees.

11.2.2. This indemnity expressly extends to all acts and omissions of Municipal Employees.

11.3 Limitations on Municipality's Liability

All property of FortisBC kept or stored on the Public Places will be kept or stored at the risk of FortisBC. For further certainty, FortisBC acknowledges that the Municipality has made no representations or warranties as to the state of repair or the suitability of the Public Places for any business, activity or purpose whatsoever. FortisBC accepts its use of Public Places on an "as is" basis.

11.4 No Liability for Approval of Drawings and Plans

The Municipality shall not be liable to FortisBC as a result only of the Municipality's approval of drawings and plans in connection with notices or applications for permits provided by FortisBC to the Municipality pursuant to this Agreement.

12. OPERATING FEE

12.1 Fee Calculation

12.1.1. FortisBC agrees to pay to the Municipality a fee of three percent (3%) (the "Operating Fee") of the gross revenues (excluding taxes) received by FortisBC for provision and distribution of all gas consumed within the Boundary Limits of the Municipality, other than gas consumed by customers from whom the BCUC has not allowed FortisBC to collect the Operating Fee, provided that the Municipality is permitted by law to charge such a fee. Such amount will not include any amount received by FortisBC for gas supplied or sold for resale.

12.1.2. The Municipality will provide FortisBC with thirty (30) days prior written notice of any boundary expansion so that existing and new customers in the expanded area can be included as a part of the annual payment fee.

12.1.3. FortisBC will be responsible for adding those existing and new customers within the new Municipal boundary upon receipt of such notice from the Municipality and the revised calculation of the fee will commence effective the date that is the later of the date of actual boundary change or thirty (30) days after the notification under section 12.1.2.

12.2 Payment Date and Period

Payments by FortisBC to the Municipality will be made on the first day of March of each year of the Agreement in respect of the amount received by FortisBC during that portion of the term of this Agreement which is in the immediately preceding calendar year. By way of example only, payment made on March 1, 2015 will be the amount received during the 2014 calendar year.

12.3 BCUC Decision or Provincial Legislation

In the event that a decision by the BCUC, other than periodic rate changes as a result of commodity, delivery or margin increases or decreases, or new legislation by the Provincial Government, impacts the operating fee being paid to the Municipality so as to increase it or decrease it by more than 5% annually at the time of the decision or in subsequent years, the parties shall negotiate a new operating fee formula which best reflects the revenue stream received by the Municipality under this Agreement. For greater certainty, the parties acknowledge that a change to the BCUC's decision that FortisBC shall provide the agency billing and collections service for marketers on a mandatory basis, as set out in the "Business Rules for Commodity Unbundling", dated June 5, 2003 as set out in Appendix A to Letter No. L-25-03, may impact the operating fee being paid to the Municipality.

13. OTHER APPROVALS, PERMITS OR LICENSES

Except as specifically provided in this Agreement, the Municipality will not require FortisBC to seek or obtain approvals, permits or licenses related to FortisBC's use of the Public Places as contemplated in this Agreement. The Municipality will not charge or levy against FortisBC any approval, license, inspection or permit fee, or charge of any other type, that in any manner is related to or associated with FortisBC constructing, installing, renewing, altering, repairing, maintaining or operating Company Facilities on any Public Places or in any manner related to or associated with FortisBC exercising the powers and rights granted to it by this Agreement (other than for repair of damage to the Municipal Facilities or Public Places in accordance with Section 15) .

If the Municipality does charge or levy fees or costs against FortisBC (other than for repair of damage to the Municipal Facilities or Public Places in accordance with Section 15) then FortisBC may reduce the annual operating fee payable to the Municipality under Section 12 by an amount equal to such charges, fees or costs or in the event no annual operating fee is payable, FortisBC will not be required to pay such charges or fees or costs.

14. MUNICIPAL OBLIGATIONS

14.1 Municipal Work

14.1.1. Before the Municipality undertakes routine maintenance and repair that is likely to affect Company Facilities, it must give FortisBC as much notice as it can but not less than fifteen (15) days before commencing such construction or maintenance activity.

14.1.2. Where the Municipality is required to carry out Emergency Work, the Municipality shall not be required to give prior notice but shall do so as soon as possible thereafter.

14.1.3. FortisBC will be entitled to appoint at its cost a representative to inspect any construction or maintenance activity undertaken by the Municipality. The provisions of this section do not relieve the Municipality of its responsibilities under the *Gas Safety Act*, *Oil and Gas Activities Act*, and successor legislation, regulations thereunder, or the requirements of the BC Workers' Compensation Board.

14.1.4. In addition, the Municipality shall provide Notice to FortisBC of any work planned that will be adjacent to, across, over or under a Transmission Pipeline or within a right-of-way for a Transmission Pipeline. To the extent that FortisBC requires that permit be issued for construction or other activities within a Transmission Pipeline right-of-way, the Municipality will submit an application for such a permit in sufficient time for the application to be reviewed and approved by FortisBC prior to the commencement of the construction or other activity.

14.1.5. The Municipality shall assist FortisBC in FortisBC's efforts to reduce instances of residences being built over gas lines and other similarly unsafe building practices by third parties.

14.1.6. The Municipality shall not interfere with Transmission Pipeline markers.

14.1.7. The Municipality shall provide notice to FortisBC of any damage caused by the Municipality to Company Facilities or Transmission Pipeline Markers as soon as reasonably possible. To the extent that any of the work being done by the Municipality results in damage to the Company Facilities, the Municipality will report such damage and pay FortisBC its Costs arising from such damage in accordance with Section 15.1 below. Where such damage results directly from inaccurate or incomplete information supplied by FortisBC, and the Municipality has complied with all applicable laws and regulations, and with instructions supplied by FortisBC, then the cost of repairing the damaged Company Facilities will be at the expense of FortisBC.

14.1.8. The Municipality shall notify FortisBC of any new bylaws, standards or policies adopted or passed by the Municipality that are likely to affect FortisBC's operations in Public Places.

15. COSTS AND PAYMENT PROCEDURES

15.1 Definition of Costs

Wherever one party is required to pay the other party Costs as a result of damage caused by one party to the other's property or for facility changes required in accordance with Section 9 of this Agreement, the Costs shall be:

- (a) all direct expenses and disbursements incurred to restore such property to as good a state of repair as had existed prior to the damage;

- (b) reasonable administration and overhead charges on labour, equipment and materials;
- (c) such taxes as may be required in the appropriate jurisdiction;
- (d) the cost of the lost commodity as determined by the claiming party;
- (e) the cost for additional work related to the damage (for example, gas relights, flushing water mains); and
- (f) cost of supplying alternate or temporary service until the repair of the property is made.

15.2 Cost Claim Procedures

15.2.1. Wherever one party is claiming Costs of the other party in regard to any work or issue arising under this Agreement the claiming party shall:

- (a) Notify the other party of the loss no later than two (2) months after incurring costs and provide an invoice to the other party no later than one year after incurring Costs;
- (b) provide detailed descriptions of the cost items, provided that claiming party may require the other party to keep sensitive business information, including third party information, confidential;
- (c) provide the time period the invoice covers;
- (d) provide a minimum of twenty-one (21) day terms for payment of the invoice; and
- (e) provide for late payment interest at the rate consistent with the party's policy for charging for late payments, which rate must be reasonable.

15.2.2. The party claiming Costs shall have no right of set off for these invoices against any amounts otherwise payable to the other party, except to the extent so approved in writing by the other party.

15.3 Cost Verification Procedures

15.3.1. Wherever either party is the recipient of or is claiming Costs and or fees that party may at its own discretion request from the other party:

- (a) Certification by an officer or designated representative verifying the calculations and computations of the Costs and or fees; or
- (b) An internal review or audit of the calculations and computations of the Costs and or fees, with the internal review or audit to be carried

out by a person appointed by the party being asked to provide the review; or

- (c) An independent external audit of the calculations and computations of the costs and fees, with the independent external auditor being a Chartered or a Certified General Accountant in British Columbia appointed by the party requesting the external audit.

15.3.2. The costs of this cost verification process shall be borne by the party who is required to supply the information except as otherwise specified providing the frequency of such requests does not exceed once per calendar year. For all future cases which occur in that calendar year, the costs of such further verifications shall be at the expense of the requester.

Where the independent external audit finds and establishes errors representing a variance greater than two (2%) percent of the originally calculated value in favour of the party claiming Costs, the costs shall be at the expense of the party supplying the information. Once an error has been verified, payment or refund of the amount found to be in error will be made within twenty-one (21) days.

16. START, TERMINATION AND CONTINUITY

16.1 Municipal Authority to Enter into Agreement

Prior to entering into this Agreement the Municipality will complete all procedures, obtain all consents and enact and bring into force all resolutions required under the *Community Charter*, and amendments thereto, and all other applicable legislation, to approve and authorize this Agreement.

16.2 Agreement Not Binding Until Conditions Met

This Agreement will not come into effect and does not bind the parties until:

- (a) FortisBC has obtained such approvals of this Agreement, or its terms, as may be required under the *Utilities Commission Act*; and
- (b) The Municipality has obtained authority permitting it to charge the operating fee set out in Section 12.1 this Agreement.

Upon executing this Agreement FortisBC shall make reasonable efforts to fulfill the condition under paragraph (a) and the Municipality shall make reasonable efforts to fulfill the condition under paragraph (b). If these conditions is not fulfilled or waived within one (1) year of the date of execution of this Agreement, then the obligation on FortisBC or the Municipality, as the case may be, to make reasonable efforts to fulfill the condition will terminate, and neither party will have any further obligation to the other under this Agreement.

16.3 Termination of Franchise Agreement

If not already terminated or expired, any franchise and operating agreement between the Municipality and FortisBC is terminated upon the effective date of this Agreement as referred to in Section 16.2 of this Agreement.

16.4 Term of Agreement

This Agreement will have a term of twenty (20) years from the date that it comes into effect and after the initial term shall continue indefinitely unless terminated in accordance with Section 16.5 below.

16.5 Termination of Agreement

16.5.1. This Agreement may be terminated by the Municipality upon the occurrence of any of the following events:

- (a) FortisBC admits its inability to pay its debts generally as they become due or otherwise acknowledges its insolvency;
- (b) FortisBC starts proceedings or takes any action to commence or executes an agreement to authorize its participation in any proceeding:
 - (i) seeking to adjudicate it bankrupt or insolvent;
 - (ii) seeking liquidation, reorganization, arrangement, protection, relief or composition of it or any of its property or debt or making a proposal with respect to it under any law relating to bankruptcy, insolvency, reorganization or compromise of debts or other similar laws; or
 - (iii) seeking the appointment of a receiver, trustee, agent, custodian or other similar official for it or for any substantial part of its assets or if a creditor seeks the appointment of a receiver, trustee, agent, custodian or other similar official for any substantial part of its assets; and such proceeding is not dismissed, discharged, stayed or restrained within twenty (20) days of the Municipality becoming aware of it.

16.5.2. Either party may terminate if other breaches any term, provision, obligation hereunder and such breach, is a material major breach, and has not been cured within sixty (60) days of receipt of Notice of such breach. A Party will not be considered to be in default if such matter is in dispute or has been referred to commercial arbitration, the outcome of which is pending, or is being resolved in good faith compliance with the dispute resolution and arbitration processes of this Agreement.

16.5.3. After the initial twenty (20) year term of this Agreement, either party may terminate this Agreement by giving the other not less than one (1) year's notice of termination.

16.6 Amendments and Waivers

This Agreement may be amended only by an agreement in writing signed by the parties. No waiver of any provision nor consent to any exception to the terms of this Agreement shall be effective unless in writing and signed by the parties to be bound, and then only to the specific purpose, extent and instance so provided. No waiver, delay or failure to exercise any rights under this Agreement shall be construed as a continuing waiver of such right or as a waiver of any other right under this Agreement.

The parties agree to meet to discuss the operations of the Agreement within thirty (30) days of either party making the request. Such a meeting will determine whether any amendments are required to this Agreement and the parties shall discuss any proposed amendments with a view to maximizing the benefit of the relationship.

16.7 Negotiations on Termination or Expiry of this Agreement

Upon one party giving Notice to the other of termination of this Agreement, the parties shall negotiate in good faith to enter into a new agreement with respect to the terms and conditions under which FortisBC may use the Public Places. In the event that such negotiations break down and in the opinion of one or other of the parties acting in good faith that settlement is unlikely, either party may give Notice to the other of its intention to apply to the BCUC to seek resolution of the terms and conditions applicable to FortisBC's continued operations and construction activities within the Municipality.

16.8 Continuity In The Event No Agreement Is Settled

Upon the expiry or termination of this Agreement, if a new agreement has not been ratified or if the BCUC has not imposed the terms and conditions under which FortisBC may use the Public Places, the following provisions will apply:

- (a) The Company Facilities within the boundary limits of the Municipality both before and after the date of this Agreement shall remain FortisBC's property and shall remain in the Public Places.
- (b) The Company Facilities may continue to be used by FortisBC for the purposes of its business, or removed from Public Places in whole or in part at FortisBC's sole discretion.
- (c) FortisBC may continue to use Public Places within the Municipality for the purposes of its business. FortisBC's employees, may enter upon all the Public Places within the Boundary Limits of the Municipality to maintain, operate, install, construct, renew, alter, or place Company Facilities; provided that FortisBC continues to operate in a manner consistent with the terms and conditions of this Agreement as if the term had been extended except with respect to the payment of the operating fee.

- (d) FortisBC will with the support of the Municipality take such steps necessary to seek BCUC approvals of the extension of terms and conditions including payment of the operating fee under the terminated agreement during negotiations of a new agreement.
- (e) Should FortisBC no longer be authorized or required to pay the operating fee under this or any other Agreement between it and the Municipality or by any order of the BCUC, the Municipality shall be free to apply such approval, permit and licence fees, charges and levies it is legally entitled to collect.

17. ACCOMMODATION OF FUTURE CHANGES

17.1 Outsourcing of Infrastructure Management

In the event that the Municipality assigns the task of infrastructure management to a third party:

- (a) the Municipality will ensure that its contracts for such infrastructure management contain provisions that will allow the Municipality to meet its obligations under and to comply with the terms and conditions of, this Agreement; and
- (b) FortisBC will accept the appointment of such third party as the Municipality's agent or subcontractor to enable such third party to deal directly with FortisBC so as to enable the Municipality to comply with the terms, obligations and conditions of this Agreement.

17.2 Changes to the Community Charter

In the event that the provisions of the *Community Charter* or other legislation affecting the rights and powers of municipalities change in such a way as to materially, in the opinion of the Municipality, affect municipal powers in respect to matters dealt with in this Agreement,

- (a) the Municipality may within one year of the change coming into effect propose new agreement terms with respect to only those specific changes and FortisBC agrees to negotiate such terms; and
- (b) failing satisfactory resolution of the terms of the Agreement either of the parties may seek resolution through the Dispute Resolution Process, Section 18.

17.3 Changes to the Utilities Commission Act

In the event that the provisions of the *Utilities Commission Act* or other legislation affecting the rights and powers of regulated Utilities change in such a way as to

materially, in FortisBC's opinion, affect FortisBC's powers in respect to matters dealt with in this Agreement,

- (a) FortisBC may within one year of the change coming into effect propose new agreement terms with respect to only those specific changes and the Municipality agrees to negotiate such terms; and
- (b) failing satisfactory resolution either of the parties will seek resolution through the Dispute Resolution Process, Section 18.

18. DISPUTE RESOLUTION

18.1 Mediation

Where any dispute arises out of or in connection with this Agreement, including failure of the parties to reach agreement on any matter arising in connection with this Agreement, the parties agree to try to resolve the dispute by participating in a structured mediation conference with a mediator under the Rules of Procedure for Commercial Mediation of The Canadian Foundation for Dispute Resolution.

18.2 Referral to the BCUC or Arbitration

If the parties fail to resolve the dispute through mediation, the unresolved dispute shall be referred to the BCUC if within its jurisdiction. If the matter is not within the jurisdiction of the BCUC, such unresolved dispute shall be referred to, and finally resolved or determined by arbitration under the Rules of Procedure for Commercial Arbitration of The Canadian Foundation for Dispute Resolution. Unless the parties agree otherwise the arbitration will be conducted by a single arbitrator.

18.3 Additional Rules of Arbitration

The arbitrator shall issue a written award that sets forth the essential findings and conclusions on which the award is based. The arbitrator will allow discovery as required by the *Arbitration Act* of British Columbia in arbitration proceedings.

18.4 Appointment of Arbitrator

If the arbitrator fails to render a decision within thirty (30) days following the final hearing of the arbitration, any party to the arbitration may terminate the appointment of the arbitrator and a new arbitrator shall be appointed in accordance with these provisions. If the parties are unable to agree on an arbitrator or if the appointment of an arbitrator is terminated in the manner provided for above, then any party to Agreement shall be entitled to apply to a judge of the British Columbia Supreme Court to appoint an arbitrator and the arbitrator so appointed shall proceed to determine the matter *mutatis mutandis* in accordance with the provisions of this Section.

18.5 Award of Arbitrator

The arbitrator shall have the authority to award:

- (a) money damages;
- (b) interest on unpaid amounts from the date due;
- (c) specific performance; and
- (d) permanent relief.

18.6 Cost of Arbitration

The costs and expenses of the arbitration, but not those incurred by the parties, shall be shared equally, unless the arbitrator determines that a specific party prevailed. In such a case, the non-prevailing party shall pay all costs and expenses of the arbitration, but not those of the prevailing party.

18.7 Continuation of Obligations

The parties will continue to fulfill their respective obligations pursuant to this Agreement during the resolution of any dispute in accordance with this Section 18, provided that, neither party shall proceed with any work or activity or take any further action which is the subject matter of the dispute.

18.8 Matters Not subject to Arbitration

For certainty the conditions precedent referred to in Section 16.2 shall not be subject to arbitration.

19. GENERAL TERMS & CONDITIONS

19.1 No Liens

FortisBC will do its best to not allow, suffer or permit any liens to be registered against the Company Facilities located in Public Places as a result of the conduct of FortisBC. If any such liens are registered, FortisBC will start action to clear any lien so registered to the Public Place within ten (10) days of being made aware such lien has been registered. FortisBC will keep the Municipality advised as to the status of the lien on a regular basis. In the event that such liens are not removed within ninety (90) days of the registration of such lien, FortisBC will pay them in full or post sufficient security to ensure they are discharged from title.

19.2 Corporate Authority

FortisBC now warrants, represents and acknowledges that:

- (a) it has the full right, power and authority to enter into this Agreement; and

- (b) it is a corporation, duly organized, legally existing and in good standing under the laws of its jurisdiction of incorporation or continuance and is lawfully registered and licensed to do business in British Columbia.

19.3 Representations

Nothing in this Agreement shall be deemed in any way or for any purpose to constitute either party as the legal representative, agent, partner or joint venturer of the other, nor shall either party have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against, in the name of, or on behalf of the other party.

19.4 Assignments and Enurement

This Agreement and any rights or obligations under it are not assignable by either party, without the prior written consent of the other party hereto, such consent not to be unreasonably withheld. This Agreement shall be binding upon, enure to the benefit of, and be enforceable by, the successors and permitted assigns of the parties hereto.

19.5 Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia.

19.6 General

This Agreement is subject to the laws of Province of British Columbia and the applicable laws of Canada, and nothing in this Agreement will be deemed to exclude the application of the provisions of such laws, or regulations thereunder.

19.7 Entire Agreement

This Agreement constitutes the entire agreement and understanding of the parties with respect to the subject matter herein contained and supersedes all prior agreements and undertakings with respect thereto.

19.8 Severability

If any provision of this Agreement is held invalid by any court, governmental agency or regulatory body, the other provisions to the extent permitted by law shall remain in full force and effect. To the extent permitted by applicable law, the parties hereby waive any provision of law that renders any provision hereof prohibitive or unenforceable in any respect.

19.9 Force Majeure

Neither party shall be liable to the other for temporary failure to perform hereunder, if such failure is caused by reason of an Act of God, labour dispute, strike, temporary breakdown of facilities, fire, flood, government order or regulations, civil disturbance,

non-delivery by program suppliers or others, or any other cause beyond the parties' respective control.

19.10 Notice

Any notice or other written communication required, or permitted to be made or given pursuant to this Agreement (the "Notice") shall be in writing and shall be deemed to have been validly given if delivered in person or transmitted electronically and acknowledged by the respective parties as follows:

(A) If to the Municipality:

(B) If to FortisBC:

FORTISBC ENERGY (VANCOUVER ISLAND) INC.
16705 Fraser Highway
Surrey, B.C. V4N 0E8
Attention: Director, Regulatory Affairs

CITY OF _____
by its authorized signatories

Authorized Signatory

Authorized Signatory

FORTISBC ENERGY (VANCOUVER ISLAND) INC.
by its authorized signatories

Authorized Signatory

Authorized Signatory

**Gas Service Line Work
Permit Request
Vancouver Island Municipalities**

SCHEDULE A



To Municipality:	<i>Fax/email:</i>	Date (Yr/ Mth/ Day) / /
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FortisBC Energy (Vancouver Island) Inc. hereby gives notice of its intention to perform work on a natural gas service to the following listed addresses, and that excavations within a public place will occur at each location

Project number	Fortis Contact	Address	Service location	Impacts involved	Permit#

Instructions:

- Email is preferred
- Describe service location relative to facing front of property. i.e. Front/Left, Centre or Right: Back/Right Centre or Right
- Brief description of impact;
 - Impacts are:**
 - Public pavement
 - Public trees, wetlands or other such environmentally sensitive areas
 - Archeologically significant areas
 - Existing municipal or third party facilities

General Conditions:

As contained in the operating agreement between the Municipality and FortisBC Energy (Vancouver Island) Inc.

Reply to:

Pre-Requisite Desk
 FortisBC Energy (Vancouver Island) Inc.
 16705 Fraser Highway, Surrey, BC V4N 0E8
 E-mail: Pre-RequisiteDesk@FortisBC.com
 Toll free tel: 1-866-771-7337
 Toll free fax: 1-877-413-1152

Attachment 6

**EXCERPT FROM
*THE REGULATION OF PUBLIC UTILITIES, THEORY AND
PRACTICE, BY CHARLES F. PHILIPS, JR.***

The Regulation of Public Utilities Theory and Practice

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Chapter 4

INDEPENDENT REGULATORY COMMISSIONS

The need for a commission arises . . . when the legislative body finds that particular conditions call for continual and very frequent acts of legislation, based on a uniform and consistent policy, which in themselves require intimate and expert knowledge of numerous and complex facts, a knowledge which can only be obtained by processes of patient, impartial, and continued investigation.

—Joseph B. Eastman*

Regulatory functions may be exercised by administrative agencies or by executive departments. The agency has become the most important form of economic regulation at both the federal and state levels in the United States. Such was not always the case. Competition was relied on to protect the consumer during the early developmental stages of all now-regulated utilities. As a result, charters and franchises to operate in certain specified areas were granted almost indiscriminately by cities and states. In 1880, Denver granted a general electric utility franchise “to all comers.”¹ New York City gave franchises in 1887 to six electric utility companies at the same time.² In fact, the general policy throughout the country was to grant a franchise to any company that applied.³

The impossibility of relying on competition as a regulatory force gradually became evident. As outlined in Chapter 2, the economic characteristics of certain industries indicate that they operate more efficiently as monopolies. Detailed government regulation was needed, however, to ensure that these potential economic advantages were realized by consumers. Attention

in this chapter is focused on early methods of public control and on the development of commission regulation, as well as on relations between federal and state commissions, and between commissions and each of the three branches of government.

Pre-Commission Methods of Regulation

Three early methods of government regulation were: (1) by the terms of decisions handed down by courts at common law; (2) by the terms of charters granted by state legislatures; and (3) by the terms of franchises issued by local governments. These methods frequently overlapped, but they are treated separately for discussion purposes.

Judicial Regulation

Present-day regulation is based upon statutes and ordinances enacted by the legislative bodies of local, state or federal governments. As previously noted, however, statutory law was preceded by the common law — the nonlegislative body of principles built up by court decisions. The common law was developed in England during and following the last part of the Middle Ages, and resulted from decisions handed down by the courts in cases brought by private litigants.

There were no preventive features in the common law. Any person who thought himself injured could sue. As conditions changed and new problems arose, many different issues were brought before the courts. Each decision, therefore, either built upon an old precedent or created a new precedent. The common law thus developed from case to case, from one individual lawsuit to another.

Two major principles of the common law unfolded. First, monopoly and restraints of trade were held to be contrary to the public interest. Damages might even be awarded in case of proven injury. The modern parallel is our antitrust laws. Second, certain occupations were recognized as “common callings.” In these occupations, the general right of refusal to sell was denied. Instead, the common law imposed on such callings the duty of serving all customers, at reasonable prices and without discrimination. The modern parallel is the public utility sector.

As a method of regulation, the common law had many limitations. Litigation was (and still is) expensive. An individual might not have known that he had been injured and, even when he was aware of that fact, he might not have had the funds necessary to sue. Lacking staffs of trained accountants, economists, engineers and rate experts, the courts had no special competence to deal with the issues brought before them, especially those involving intricate industry-specific problems. Expertise was required for effective regulation. Further, even

when the courts found a business practice unreasonable, only negative action could be taken. The problem of deciding on new rates and regulation for a future period is a legislative, not a judicial, function. The courts, moreover, could decide only the cases brought before them; they could not take the initiative. And the court system was unable to handle the required volume of cases that arose from regulatory adjudication. Under such limitations, regulation was discontinuous, expensive and often slow.

Direct Legislative Regulation

Prior to the enactment of general incorporation laws, public utilities were incorporated through the passage of special legislative acts. These charters included both the usual corporate rights and a number of special privileges, such as the power of eminent domain. Their regulatory provisions varied considerably, but frequently prescribed only maximum rates and/or limited the yield on common stock to stated percentages. To illustrate, the New York legislature passed a law in 1886 to incorporate the New York Mutual Gas Light Company. The law provided that:

Whenever the profits which shall be earned by said company, after deducting all expenses and necessary outlays for labor and materials used in carrying on and extending the business of said company shall exceed in any one year the sum of 10 percent upon the whole capital stock of said company, then, and in that event, the excess over the said sum of 10 per cent shall be divided, one half of such excess between the consumers of the gas furnished by said company pro rata according to the amount consumed by them respectively, and the other half shall be paid as dividend to such owners and holders of the stock of said company as may be consumers of the gas furnished by said company; provided that no individual owner or holder of said stock shall be entitled to, or shall receive, nor shall there be paid to him, such dividend upon more than fifty shares of said stock.⁴

Toward the end of the nineteenth century, the states started to enact general incorporation laws. The regulatory provisions in these laws were equally ineffective, since they continued to be written in broad, general terms.

Direct legislative regulation of this sort was, above all else, inflexible. Economic conditions were constantly changing as modern technology was developed. Adjustments were required if regulation was to be up-to-date. Each adjustment, however, necessitated an amendment of the law. But legislatures were in session only a small percentage of the time and found their attention being claimed by many other matters. Under such circumstances, continuous regulation was impossible.⁵ Little effort was expended to enforce regulatory provisions of charters, and, in the absence of effective

accounting and financial control, rate regulation was inadequate. Just as the courts lacked specialized knowledge of regulatory problems, so did the members of state legislatures. In practice, therefore, noneconomic considerations would often dictate the type of regulation followed. It should be stressed also that the proper function of a legislative body is to enact and formulate policy and not to engage in administrative work. For all of these reasons, direct statutory regulation proved to be a poor method of controlling an industry.

Local Franchise Regulation

Some local (municipal) control was exercised by the enactment of city ordinances, but local regulation relied particularly on the franchise.⁶ In order to enter a field, certain businesses had to acquire a franchise from the relevant city council before they could commence operations. When well-drawn, the franchise set exact standards for service to be rendered, rates to be charged or methods of arriving at the rates, accounting methods to be employed, and in the case of term franchises, the method of renewing the franchise or provision for the locality's taking over the company at expiration of the franchise. Such agreements usually were to run for a definite period, although many franchises were granted in perpetuity.

While use of the well-drawn franchise had some merit, in the main the franchise, as actually used, proved a defective instrument for detailed regulation. When franchises were issued indiscriminately, little regard was paid to the interest of the public. When they were issued in perpetuity, franchises were often exclusive. In either case, they tended to be poorly drafted due to the inexperience of city councilmen.⁷ And even when they were well-drawn, the company often benefited, since it was common for the utility's lawyers to draft the franchise and then present it to the city council for approval.

Changes in the prescribed rates or in the service standards were made with great difficulty. This difficulty was due to a Supreme Court decision that held that a franchise had the status of a contract, which a state could not impair;⁸ thus both parties had to approve a change. As expected, the companies resisted downward rate changes, and the city councils, upward adjustments. Nor was it easy to change the prescribed service standards, especially when the companies were asked to raise the standards at the same level of rates. In the case of a franchise issued for a definite period of time, another problem arose. Service often became poor as the termination date on the franchise drew near. The company would try to keep its investment as small as possible to avoid loss if the contract were not renewed. The agreements also failed to provide for administrative machinery to keep check on the company to see that it met the terms of its franchise. It was often possible, therefore, for the actual service rendered to fall for long periods of time below the level specified in the franchise.

It was often impossible, consequently, for franchise or charter provisions to be changed, "however ill-considered or antiquated with respect to current needs for regulation they might be."⁹ Especially where exclusive franchises were issued, authorities "found themselves in the disagreeable situation of having bargained away their right to allow competition without having retained effective control over rates and service."¹⁰ Thus, as with direct legislative regulation, franchise regulation proved to inflexible. Detailed requirements were unsatisfactory under changing conditions. New York City granted to a subway corporation a franchise that provided for a five-cent fare, and in Georgia a franchise given a street railway company required it to run cars over its lines as often as every thirty minutes, day and night. Such detailed requirements obstructed adjustments to changing consumer demands. Moreover, franchises were frequently sought by speculators to be sold to the highest bidder. Some cities, feeling that a franchise carried with it valuable rights, issued one only for a monetary consideration. Chicago, for instance, issued to its utilities franchises that required annual payments of 3 percent of their gross incomes.¹¹

In addition, a more serious drawback to franchise regulation soon became apparent — the significant change in scope of operations. Whereas at first each company usually serviced but one market area (community), technological developments gradually made it both feasible and advisable to have one company serve two or more towns. As this change took place, it became obvious that state regulation would have to succeed the earlier regulation obtained through the local franchise.

Many cities continue to issue franchises to public utilities serving their areas. In a few instances, these franchises are a method of regulation. In Texas, incorporated cities may control the rates and services of electric, gas and private water utilities within their boundaries, with the public utility commission exercising appellate jurisdiction over electric and water rates within municipalities (and primary jurisdiction over telephone rates) and the railroad commission exercising appellate jurisdiction over gas rates within municipalities (and primary jurisdiction over gas rates in unincorporated areas). In Nebraska, municipalities grant permits and set rates for gas utilities (there are no private electric utilities in that state). But in most cases, city franchises are limited in function, usually dealing with the use of city streets. Economic regulation is carried out by state and federal commissions.

Commission Regulation

Each of the early methods of regulation proved ineffective. Court control was expensive, slow and negative in character. Direct legislative control was inflexible as well as slow. Local franchise control had the same defects. Each of these methods was incapable of adapting to the development of an

industrialized and highly complex society — a development requiring expertise, flexible regulation and continuity of policy.¹² Furthermore, there were no defined lines of authority between state and local governments. “Owing often to the lack of clearness in the general laws, serious questions arose whether a city, in granting the special franchise, was authorized to impose conditions upon applicant companies in addition to those imposed by general statute.”¹³ Under these conditions, regulation failed to safeguard the interests of consumers, investors and the companies involved. Gradually the demand for more stringent and continuous control arose, and the states responded by turning to regulatory commissions. These commissions, operating under general legislative statutes, are referred to as “independent” regulatory commissions (agencies).

The initial state commissions, generally those created prior to 1870, were largely fact-finding and advisory bodies, with jurisdiction limited to the railroads. Six states set up such commissions before the Civil War: Rhode Island in 1839, New Hampshire in 1844, Connecticut in 1853, New York and Vermont in 1855 and Maine in 1858. Ohio, in 1867, and Massachusetts, in 1869, followed right after the war. These commissions made recommendations to their state legislatures¹⁴ and to railroad managements, appraised property taken by railroads under the right of eminent domain and enforced railroad safety standards, but they had no control over rates. Thus, they had to rely heavily on publicity and public opinion to obtain enforcement of their orders.¹⁵

Shortly after the beginning of the Granger movement in the Midwest, the first commissions with mandatory powers were established. Between 1871 and 1874, Illinois, Iowa, Minnesota and Wisconsin established commissions with power to set maximum rates, prevent discrimination and forbid mergers of competing railroad lines. While the Granger laws, except in Illinois, were repealed by the end of the 1870s, they established a pattern followed by other states. By 1887, when Congress created the Interstate Commerce Commission (partly patterned after the British Railway Commission established in 1873) to regulate the nation’s railroads, “twenty-five states had established commissions to assist the legislature in this work.”¹⁶

Commission regulation of other industries was slower to develop, reflecting in part their later development. In 1859, an Office of Inspector of Gas Meters was established by the New York legislature; two years later, electric light companies were added to its jurisdiction. But most non-transportation industries were not subject to commission regulation until the beginning of the twentieth century. Many abuses long went unrecognized. Despite evidence of ineffective control long before this time, local authorities were reluctant to give up their regulatory power. In the absence of public agitation, state legislatures were slow to act.

The public clamor for reform, however, became widespread early in the twentieth century as notorious abuses began to appear. In New York, Charles Evans Hughes was elected governor primarily because of his 1905 expose of

insurance scandals. Under his leadership, the legislature enacted the Public Service Commissions Law in May 1907, creating two district commissions: the First District Commission, with jurisdiction over rapid transit, railroad, gas and electric companies in New York City, and the Second District Commission, with jurisdiction over the same industries in the remainder of the state.¹⁷ Little more than a month later, largely on the urging of Governor Robert M. LaFollette, the Wisconsin legislature expanded the powers and duties of its existing railroad commission to cover such utilities as gas, light, power and telephone companies. These powerful state commissions became the models, and gradually other states followed suit, either by establishing new commissions or by extending the powers and duties of existing bodies.

By 1920, more than two-thirds of the states had regulatory commissions.¹⁸ Their jurisdictions and powers were often limited, as was clearly shown after the stock market crash of 1929 and the resulting financial scandals. Thereafter, state commissions were strengthened, their jurisdictions extended and their powers increased. Today, all 50 states, plus the District of Columbia, have commissions (listed in Table 4-1), known as public utilities or public service commissions, corporation commissions or commerce commissions. Four federal commissions also have been established with jurisdiction over the interstate activities of the industries under consideration.

*State Regulatory Commissions*¹⁹

The jurisdiction (sometimes limited) by type of industry of the state commissions, including the District of Columbia, is shown in Table 4-1 and can be summarized as follows:

Telephone and telegraph	51
Electric utilities	50
Gas utilities	50
Water utilities	43
Municipal: electric and/or gas	37
Electric cooperatives	23

Fifty of the regulatory commissions have jurisdiction over one or more additional businesses and/or activities, including transportation utilities, toll bridges, sewage systems, warehouses, cable TV systems, security laws and blue-sky laws. Moreover, in states where one or more of the public utilities are not subject to commission control, the statutes frequently provide other methods of ensuring service at a reasonable rate. The most common of these methods, as noted earlier, is local regulation.

Attachment 7

**ADDITIONAL LIST OF ASSUMPTIONS FOR NATURAL GAS
AND RNG LEVELIZED RATES**

1

ATTACHMENT 7

2

Table 1: FEI Levelized Rate Assumptions that are Equivalent to Creative Energy Assumptions

Assumptions	Reference
6.34 % discount rate	Exhibit B-22, BCUC IR 2.19.2
Discounted period of 15 years	Exhibit B-22, BCUC IR 2.19.2
Service life of boiler – 20 years	Exhibit B-22, BCUC IR 2.19.2
2% annual inflation rate	Exhibit B-22, BCUC IR 2.19.2
Average annual boiler efficiency of 85%	Exhibit B-22, BCUC IR 2.19.2
Boiler capacity peak ratio of 150%	Exhibit B-22 BCUC IR 2.19.2

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Table 2: FEI Effective Rate Assumptions that are Equivalent to COV Assumptions

Assumptions	Reference
Building floor area of 10,000 m ²	COV Response IR 1.6.1
Unit peak energy demand intensity factor of 48 W/m ²	COV Response IR 1.6.1
Annual Energy Use Intensity of 109.5 kWh/m ²	COV Response IR 1.6.1
Boiler Power of 480 kW	COV Response IR 1.6.1
Redundancy of 100%	COV Response IR 1.6.1
Service life of Boiler - 25 yrs	COV Response IR 1.6.1
Boiler Efficiency of 85%	COV Response IR 1.6.1
FEI Rate Schedule 3	COV Response IR 1.6.0

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