



FortisBC Energy Inc.

Application for Acceptance of the Biogas Purchase Agreement between FortisBC Energy Inc. and the City of Vancouver

Decision and Order G-122-19

June 6, 2019

Before:

D. M. Morton, Commissioner / Panel Chair
A. K. Fung, QC, Commissioner
R. I. Mason, Commissioner

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COMMISSION ORDER G-122-19

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1.0 Introduction

1.1 Application and Approval Sought

On September 21, 2018, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC) an application for acceptance of a Biogas Purchase Agreement (BPA) between FEI and the City of Vancouver (COV) (Application). Under the COV BPA, FEI will purchase raw landfill gas¹ (LFG) from the COV landfill and will construct and operate upgrading and interconnection facilities (Facilities) on COV land to upgrade the LFG to pipeline-quality biomethane or renewable natural gas (RNG) for injection into FEI's natural gas system. The cost of these facilities will be included in FEI's rate base with the resulting cost of service (COS) accounted for in the Biomethane Variance Account (BVA). The purchase of raw LFG and construction and operation of the Facilities are together referred to as the Project.

FEI requests BCUC acceptance of the COV BPA pursuant to section 71 of the *Utilities Commission Act* (UCA).

1.2 Legislative Framework

On April 18, 2010, the Government of British Columbia enacted the *Clean Energy Act* (CEA). The CEA provides that the Lieutenant Governor in Council (LGIC) can enact "prescribed undertakings" that are intended to encourage "the use of electricity, or energy directly from a clean or renewable resource instead of the use of other energy sources that produce higher greenhouse gas emissions."²

Section 18(1) of the CEA defines a prescribed undertaking as "...a project, program, contract or expenditure that is in a class of projects, programs, contracts or expenditures prescribed for the purpose of reducing greenhouse gas emissions in British Columbia."³

On May 14, 2012, the LGIC issued Order in Council (OIC) No. 295 approving the Greenhouse Gas Reduction (Clean Energy) Regulation (GGRR), which describes classes of prescribed undertakings pursuant to section 18 of the CEA.

By OIC No. 161⁴ the LGIC approved an amendment to the GGRR which, among other things, classifies the acquisition of RNG as a prescribed undertaking. Sections 2(3.7) to 2(3.9) of the GGRR states that:

(3.7) A public utility's undertaking that is in the class defined in subsection (3.8) is a prescribed undertaking for the purposes of section 18 of the Act.

(3.8) The public utility acquires renewable natural gas

- a) for which the public utility pays no more than \$30 per GJ, and
- b) that, subject to subsection (3.9), in a calendar year, does not exceed 5% of the total volume of natural gas provided by the public utility to its non-bypass customers in 2015.

¹ Landfill is a common source of biogas. Landfill biogas is commonly referred to as landfill gas or LFG in the gas utility industry.

² *Clean Energy Act*, SBC 2010, c. 22, s. 35.

³ Ibid., s. 18.

⁴ Province of British Columbia, Lieutenant Governor in Council, Order in Council No. 161, approved and ordered March 21, 2017, section 2(3.7) and 2(3.8).

(3.9) The volume referred to in subsection (3.8)(b) does not include renewable natural gas acquired by the public utility that the public utility provides to a customer in accordance with a rate under which the full cost of the following is recovered from the customer:

- a) the acquisition of the renewable natural gas;
- b) the service related to the provision of the renewable natural gas.⁵

On August 1, 2013, the LGIC issued OIC No. 347 approving the exemption by the BCUC of RNG suppliers to a public utility from certain sections of the UCA. By Order G-126-16 dated August 20, 2016, the BCUC set out the parameters for the entities that qualify for the exemption. Where the purchaser of RNG is a public utility, the BCUC has the opportunity to review the supply arrangements through the public utility's filing of the energy supply contract under section 71 of the UCA.

Section 71 of the UCA sets out the criteria the BCUC must consider when determining whether an energy supply contract is in the public interest. By Order G-130-06, dated October 27, 2006, the BCUC established the Rules for Natural Gas Energy Supply Contracts (Rules) to facilitate the review of natural gas energy supply contracts pursuant to section 71 of the UCA. Further, sections 18(2) and 18(3) of the CEA establish the BCUC's role in the setting of rates related to prescribed undertakings in these terms:

- (2) In setting rates under the *Utilities Commission Act* for a public utility carrying out a prescribed undertaking, the commission must set rates that allow the public utility to collect sufficient revenue in each fiscal year to enable it to recover its costs incurred with respect to the prescribed undertaking.
- (3) The commission must not exercise a power under the *Utilities Commission Act* in a way that would directly or indirectly prevent a public utility referred to in subsection (2) from carrying out a prescribed undertaking.⁶

1.3 Regulatory Process

By Order G-219-18 dated November 16, 2018, the BCUC established a regulatory timetable for review of the Application which consisted of:

- intervener registration;
- one round of BCUC information requests (IR); and
- a procedural conference.

The Ministry of Energy, Mines & Petroleum Resources (MEMPR), the Commercial Energy Consumers Association of British Columbia (CEC), and the COV registered as interveners in the proceeding.

⁵ *Greenhouse Gas Reduction (Clean Energy) Regulation*, s. 2(3.7)–2(3.9).

⁶ *Clean Energy Act*, SBC 2010, c. 22, s. 18(2)–18(3).

By Order G-234-18, dated December 7, 2018, the BCUC amended the regulatory timetable to include FEI and intervener written submissions, and an FEI written reply, on whether the term “the public utility acquires renewable natural gas” in section 2(3.8) of the GGRR includes:

1. The purchase of LFG (as opposed to RNG); and/or
2. The construction of capital facilities to upgrade LFG to RNG for injection into FEI’s natural gas system.

The regulatory timetable also extended the IR deadlines and amended the date of the procedural conference, which was held on January 16, 2019.

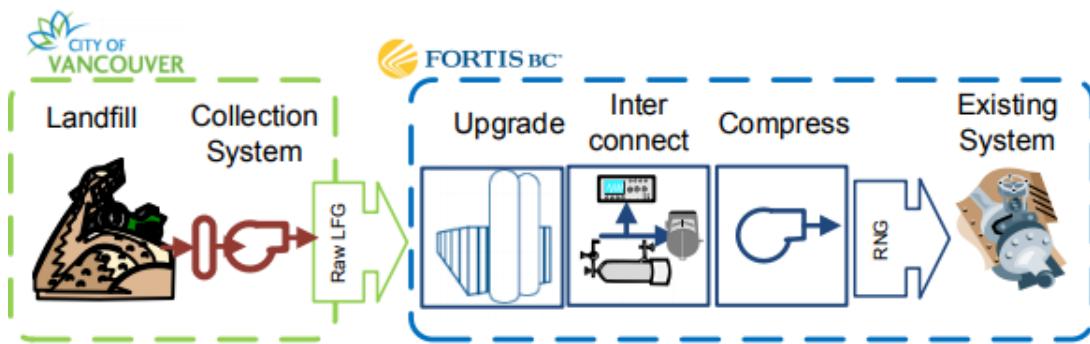
By Order G-14-19 dated January 22, 2019, the BCUC subsequently amended the regulatory timetable to include intervener IR and final and reply arguments.

2.0 Project Description

The COV owns and operates a landfill located in Delta, British Columbia, which has a gas capture system in place that currently provides a portion of captured LFG to a third party, with the remainder of the LFG flared. In the summer of 2012, the COV wished to find a beneficial use for the flared LFG and issued a Request for Expressions of Interest. In the fall of 2012, FEI’s proposal to purchase the LFG from the COV and upgrade it to biomethane or RNG for injection into FEI’s natural gas system was selected for further discussion and ultimately as the preferred option.⁷

Under the COV BPA, FEI will purchase raw LFG from the COV landfill and construct and operate Facilities on COV-owned property to upgrade the raw LFG to meet FEI’s biomethane quality requirements. The biomethane will then be compressed and injected into FEI’s existing natural gas distribution system via an interconnection pipeline of approximately 500 meters in length. FEI shows the arrangement of the Project in Figure 1 below:⁸

Figure 1: Project Arrangement



FEI submits the total cost to acquire RNG under the COV BPA qualifies as a prescribed undertaking under section 18 of the CEA, pursuant to section 2(3.8) and 2(3.9) of the GGRR. According to FEI, the total cost to acquire RNG under the COV BPA is less than the maximum price of \$30 per gigajoule (GJ) as per section 2(3.8)(a) of the GGRR. FEI derived the cost of RNG acquisition by adding the adjusted raw LFG supply purchase price⁹ to the leveled

⁷ Exhibit B-1, p. 8.

⁸ Ibid.

⁹ The raw landfill gas (LFG) supply purchase price on the City of Vancouver Biogas Purchase Agreement (COV BPA) is adjusted by the estimated recovery rate and leveled over the initial term of the COV BPA to arrive at the adjusted raw LFG supply purchase price.

COS of building and operating the Facilities. To calculate the Project's COS, the 20-year revenue requirement over the COV BPA's initial term was determined and discounted using FEI's weighted average cost of capital of 5.61 percent to arrive at the present value (PV) COS. The PV of the COS is then divided by the PV of the total volume of RNG obtained from the Facilities.

FEI's current contracted maximum supply of RNG is 639,000 GJ. FEI states that the projected RNG volume for the Project is well within the maximum annual RNG acquisition volume of 8,900,000 GJ that would qualify as a prescribed undertaking under section 2(3.8)(b) of the GGRR.

FEI states that if the Project is deemed a prescribed undertaking, all raw LFG, capital and O&M costs related to the Project are included in calculating FEI's revenue requirement, with capital items included in the calculation of rate base.¹⁰

2.1 Summary of the COV BPA

FEI submits that the COV BPA sets out terms that govern the ownership of respective facilities, access and use of the land, biomethane delivery quantities and qualities, relevant prices and fees, termination and insurance requirements, as well as other general terms.¹¹ The COV BPA includes a supply-based review, which provides a mechanism to re-evaluate the ongoing viability of the agreement and is triggered in the event the COV is unable to provide the minimum supply volumes.¹² FEI submits that the primary purpose of the supply-based review is to determine if the Project remains economically viable and allows for renegotiation of the BPA.

In addition, the COV BPA is subject to anniversary reviews which allow for evaluation of biogas volume and composition to determine whether the COV BPA may need adjustment. This provides the opportunity for the COV to adjust its LFG management practices with the intention to increase flow and/or improve gas quality.¹³ The anniversary review may include, among other things, a recalculated COS to ensure that the RNG acquisition price remains within expectations or amending the BPA to improve viability, for example by lowering the price of LFG. In the event a renegotiated agreement cannot be reached, FEI may terminate the BPA.¹⁴ Information regarding the COV BPA is summarized in the table below (excluding confidential redactions).¹⁵

Item	Amount	Contract Clause	Comment
Contract Term	20 Years	Clause 2.1	Renewal period is for 5 additional years upon mutual agreement. The Agreement is subject to Supply-based reviews, which may affect renewal.

¹⁰ Exhibit B-4, British Columbia Utilities Commission (BCUC) Information Request (IR) 5.2, p. 18.

¹¹ Exhibit B-1, p. 9.

¹² Ibid., p. 10.

¹³ Exhibit B-4, BCUC IR 4.1, p. 15.

¹⁴ Exhibit B-1, p. 10.

¹⁵ Ibid., pp. 9-10.

Anniversary Reviews	10 Years and 18 years		10 Year review will re-base expectations with respect to volume and LFG composition. 18 Year review will evaluate Project with focus on extending term beyond 20 years.
Maximum Volume	[REDACTED] GJ/Yr	Clause 5.4 Schedule C	This represents the maximum amount of LFG volume FEI may purchase. The amount of injected RNG will depend on upgrade plant performance.
Minimum Volume	[REDACTED] GJ/6 month period	Clause 5.3 (ii)	The City must meet this amount or a supply-based review is triggered which may result in termination.
Price (LFG)	[REDACTED]	Clause 6.1	Fixed rate subject to [REDACTED] [REDACTED].
LFG Composition		Schedule A	LFG must meet a minimum specification for composition. FEI may accept raw biogas outside of specification. If biogas does not meet specification, it is subject to a discount on price.
Termination Payment	[REDACTED] [REDACTED]	Clause 9.2	In event of termination, FEI is entitled to removal costs.

2.1.1 Projected Supply and Gas Composition

FEI submits that the COV captured an estimated 64 million cubic metres of LFG in 2016. Of the total volume of LFG collected, the COV allocated a portion of captured LFG to a third party, with the remaining volume being flared.

Based on discussions with the COV, FEI determined that the full volume of remaining LFG would not always be available to FEI over the duration of the COV BPA. Therefore, the COV agreed to allocate a lower volume of LFG annually. Despite the allocation, FEI has based its projected long-run supply on a more conservative volume of LFG per year. FEI states that it defined the size of the Facilities based on this more conservative volume.¹⁶

FEI determined that a lower limit of 48 percent methane and an upper limit of 12 percent nitrogen would maximize the expected future LFG processing availability and lifespan of the upgrading plant. FEI submits that these limits were confirmed by LFG technology suppliers as reasonable.¹⁷

FEI submits that the possibility to upgrade non-compliant biogas will form part of the equipment specifications and design which will ensure the upgrading facilities are capable of processing compliant and non-compliant biogas. Processing non-compliant biogas decreases production efficiency, and FEI claims that it would be uneconomical to process LFG at a nitrogen level of 50 percent above design tolerance.¹⁸

¹⁶ Ibid., p. 11.

¹⁷ Ibid., p. 12.

¹⁸ Exhibit B-4, BCUC IR 3.1, p. 12.

2.1.2 Upgrading Process and Technology

FEI submits that different technologies to upgrade LFG to RNG are commercially available that meet FEI's biomethane specifications, and states that the most crucial operation is the separation of carbon dioxide from the LFG.¹⁹

FEI submits that it established a shortlist of the most suitable technologies by conducting a review of LFG upgrading technologies currently in operation and injecting RNG into pipelines in North America. FEI identified five different technologies in use at a combined total of 43 LFG upgrading facilities that were in commercial operation.²⁰ FEI concluded that three technologies (Pressure Swing Absorption [PSA], Water wash and Membrane separation) were capable of producing pipeline-quality biomethane. After further evaluation, using a weighted scale of five key criteria, FEI concluded that the membrane-based process together with a PSA stage process was the preferred technology to maximize methane production.²¹ Final selection of upgrading technology which balances effectiveness, capital costs, operating cost and potential expansion will be made at the time of Project execution and completing the final design.²²

FEI states that the benefits of combining the membrane-based and PSA technologies include scalability, the potential for lower maintenance costs and future operational flexibility. Additional membranes can be added without any other major changes being required and cost less to maintain because they have fewer moving parts. The PSA technology is well-suited to removing nitrogen and complements the membrane-based system which is effective at removing carbon dioxide.²³

2.1.3 Interconnection Facilities

FEI submits that the key functions of the interconnection facilities are to monitor gas quality, and to meter, odorize, compress, connect to and inject the upgraded RNG into FEI's natural gas distribution system. The facilities include the interconnect station, which will be constructed within the existing COV raw biogas plant footprint, a gas compressor and a pipeline. The interconnect station will be connected to the outlet of the upgrader plant and its key functions are to measure and monitor the flow rate and the composition of the incoming RNG as well as odorize the gas. FEI plans to construct a new 114 mm steel pipeline to connect the interconnection facilities to FEI's natural gas distribution system via its transmission pressure (TP) pipeline. The RNG leaves the upgrader at a pressure lower than the transmission pressure and will need to be compressed to higher pressures in order to be injected into the TP pipeline.²⁴

The route for the pipeline will be through the COV landfill running primarily in an east-west direction in the access road. The entire route will be on the COV landfill property within a licence area incorporated into the COV BPA.

¹⁹ Exhibit B-1, p. 13.

²⁰ Exhibit B-4, BCUC IR 1.3, p. 2.

²¹ Ibid., p. 2

²² Exhibit B-1, p. 13.

²³ Exhibit B-4, BCUC IR 1.7, p. 6.

²⁴ Exhibit B-1, p. 14.

2.1.4 Capital Costs and O&M

FEI states that the total costs for the facilities have been estimated in accordance with the American Association of Cost Engineers International Class 3 guidelines with an accuracy range of +30/-20 percent.²⁵

The preliminary upgrader design was developed from a conceptual process flow based on the combined membrane separation and PSA technology. From the process flow, the process engineering was completed and the upgrading system chosen was based on the inlet LFG composition and the outlet parameters required for RNG injection into FEI's system. An equipment layout was created using the chosen technology which provided a basis to estimate costs associated with installation, such as foundations and piping connections between components.

FEI states that cost estimates were developed using a bottom-up approach, which uses a list of materials, quantities and types to build the Facilities based on preliminary design drawings. This was provided to estimators for material and installation pricing. The estimate includes all costs to engineer, procure, construct and commission the LFG Facilities.

FEI submits that O&M costs are forecast to be approximately \$1.0 million per year, based on variable costs related to the raw LFG throughput and fixed costs based on expected upgrader maintenance.²⁶

2.1.5 Rate Impact

The unrecovered cost of the Project is the difference between the COS for the Project and the forecast cost recovery based on selling the projected RNG volume at the current Biomethane Energy Recovery Charge Rate of \$10.04 per GJ.

Any unrecovered amount is divided by the non-bypass volume to calculate the incremental rate impact to non-bypass customers. The incremental COS and rate impact was evaluated over a 20-year period, consistent with the COV BPA contract terms, plus an additional year to capture the planning and construction phase of the Project.

Based on the above, FEI submits that the incremental rate impact to non-bypass customers is estimated at \$0.011 per GJ beginning in 2021, when the Project is expected to enter service and the total Project costs enter rate base. This results in a bill impact of approximately \$1.03 per year for a typical residential customer consuming an average of 90 GJ per year.²⁷

3.0 Is the Project a Prescribed Undertaking?

In order for the Panel to determine whether to accept the filing of the COV BPA under section 71 of the UCA, it must first consider whether the BPA, independently or in conjunction with the rest of the Project, constitutes a prescribed undertaking under sections 2(3.7) to 2(3.9) of the GGRR. If so, the Panel is precluded from exercising its power in a manner that would directly or indirectly prevent the utility from carrying out the prescribed undertaking pursuant to section 18(3) of the CEA.

²⁵ Ibid., p. 14.

²⁶ Ibid., p. 15.

²⁷ Ibid., p. 17.

To avail itself of the benefit of section 18(3) of the CEA, however, FEI must demonstrate to the reasonable satisfaction of the Panel that the BPA or the Project qualifies as a prescribed undertaking as defined under Section 2(3.8) of the GGRR, which sets out a three-part test:

- The public utility must be acquiring renewable natural gas (as opposed to some other form of commodity);
- The utility must pay no more than \$30 per GJ for that renewable natural gas; and
- Subject to certain exceptions, the annual volume of renewable natural gas acquired must not exceed 5% of the total volume of natural gas the utility provided to its non-bypass customers in 2015.

In sections 3.1 and 3.2 below, the Panel considers whether each element of this three-part test has been met.

3.1 What does “acquires renewable natural gas” mean?

In considering whether FEI is carrying out a prescribed undertaking by entering into the COV BPA, the Panel notes that the product that is being purchased initially by FEI from the COV under that BPA is not RNG but raw LFG. In its natural state, LFG is not RNG. As discussed in Section 2.1.2 above and as the evidence shows, RNG is only producible by subjecting LFG to a further upgrading process. However, that is not the end of the analysis that is needed to determine whether the Project itself (taken as a whole) amounts to an acquisition of RNG by FEI, of which the purchase of LFG is just the first step. Accordingly, by Order G-234-18 dated December 7, 2018, the BCUC invited FEI and registered interveners to provide written submissions on whether the term “the public utility acquires renewable natural gas” in section 2(3.8) of the GGRR includes the following components of the Project:

1. The purchase of LFG (as opposed to RNG); and/or
2. The construction of capital facilities to upgrade LFG to RNG for injection into FEI’s natural gas system.

Position of FEI

FEI submits that the meaning of “acquire” as it occurs in section 2(3.8) of the GGRR is broad. Both FEI and the COV submit that, as noted by the BCUC in its letter dated December 7, 2018, section 29 of the *Interpretation Act* defines “acquire” in these terms:²⁸

...to obtain by any method and includes accept, receive, purchase, be vested with, lease, take possession, control or occupation of, and agree to do any of those things, but does not include expropriate;

FEI submits that the words of any legislation are to be read in their entire context and the words “obtain by any method” is broad enough to include the method of purchasing LFG and constructing capital facilities to upgrade LFG to RNG for injection into FEI’s natural gas system.²⁹ The context and purpose of section 2(3.8) of the GGRR support a broad interpretation of acquire, which includes FEI’s biomethane program and acquisition of RNG through purchasing raw biogas and owning and operating Facilities to upgrade LFG to RNG.

²⁸ *Interpretation Act*, RSBC 1996, c. 238, s. 29.

²⁹ FortisBC Energy Inc. (FEI) Final Argument, p. 14.

In its submission, FEI states that section 2(3.8) of the GGRR must be interpreted in accordance with accepted principles of statutory interpretation and that when interpreting section 2(3.8) of the GGRR, the BCUC must have regard to section 8 of the *Interpretation Act* which states that every enactment must be interpreted remedially³⁰:

Every enactment must be construed as being remedial, and must be given such fair, large and liberal construction and interpretation as best ensures the attainment of its objects.

FEI states that in accordance with these principles and statutory requirements, section 18 of the CEA and sections 2(3.7) to (3.9) of the GGRR must be interpreted in their entire context and given a fair, large and liberal interpretation to accomplish this purpose, which is to increase FEI's ability to acquire RNG.³¹ FEI submits that Provincial policy objectives related to RNG provide a key part of the context in which section 18 of the CEA and sections 2(3.7) to 2(3.9) of the GGRR must be interpreted, and that the CEA provides a new and heightened importance in FEI's role in developing renewable resources, reducing greenhouse gas emissions and reducing waste by using biogas. FEI states the importance of FEI's role in developing RNG has been significantly increased by the BC Government's CleanBC plan published in December 2018, which includes making residential and industrial gas consumption cleaner by placing a minimum requirement of 15 percent to come from RNG.³²

FEI submits that its RNG supply side model provides another important aspect of context of sections 2(3.7) to (3.9) of the GGRR. All of FEI's RNG supply projects consist of three major components that require assets to digest and collect raw biogas, assets to upgrade the raw biogas and interconnection facilities including metering, monitoring and piping. Under the RNG supply side model, FEI may enter into long term contracts with suppliers for either raw biogas or for finished RNG, and in the case of raw biogas, FEI may invest in the upgrading facilities that purify raw biogas so that is interchangeable with natural gas. The Project therefore fits with FEI's RNG supply model.³³

Within this context, FEI states that the objective of section 2 (3.8) of the GGRR is to increase the maximum price and maximum volume for RNG supply for FEI's biomethane program to achieve the policy objective of the government.³⁴

FEI submits that section 2(3.8) of the GGRR does not state that the acquisition of RNG must be by contract or that the utility must contract for RNG, but instead only that the public utility "acquires" RNG. By section 18 of the CEA, together with sections 2(3.8) of the GGRR, acquisition of RNG may be accomplished by a 'project, program, contract or expenditure' which includes the acquisition of RNG by the COV project.³⁵

Position of the Intervenors

The COV submits that section 2(3.8) of the GGRR provides that a public utility that acquires RNG in accordance with section 2(3.8) is a prescribed undertaking. RNG is commonly used in the gas industry to describe raw biogas, of which a landfill is a common source, which has been cleaned and upgraded to pipeline-quality natural

³⁰ *Interpretation Act*, c. 238, s. 8.

³¹ FEI Final Argument, p. 3.

³² *Ibid.*, pp. 4–5.

³³ *Ibid.*, pp. 7–8.

³⁴ *Ibid.*, p. 9.

³⁵ *Ibid.*, p. 14.

gas. The cleaning and upgrading of raw LFG requires specialized capital facilities that are contemplated in the BPA.

The COV submits that biogas is an essential ingredient in RNG, and LFG is a common type of biogas. Since biogas (including LFG) must be cleaned to make RNG, and since cleaning and upgrading requires specialized capital facilities, the word “acquire” in section 2(3.8) of the GGRR includes the purchase of LFG and the construction of capital facilities to upgrade LFG to RNG for injection into FEI’s natural gas system.³⁶

The CEC adopts and supports FEI’s submission dated December 11, 2018.³⁷ Further, the CEC is of the view that the Project may be considered to be “acquiring renewable natural gas” and that FEI has provided significant evidence that a broad interpretation of section 2(3.8) is appropriate and includes purchasing LFG and constructing capital facilities to upgrade LFG to RNG.³⁸

The CEC notes that acquisition of RNG could be achieved directly if the COV constructed and operated upgrading facilities to supply RNG to FEI, although while this approach might have a similar end result, it might potentially have higher delivered costs. The CEC supports acquisition of RNG at the lowest cost possible, and argues that FEI’s participation could potentially result in a lower cost due to FEI’s experience and avoided COV costs such as debt which could be included in the COV’s final delivered RNG price to FEI.³⁹

The CEC submits that FEI’s proposed approach to purchasing LFG and constructing capital facilities is reasonable and in keeping with the supply-side model routinely used in FEI’s biomethane program and there is no substantive evidence to suggest that the Project falls outside these parameters. The CEC submits that a broad interpretation of “acquire” is appropriate and FEI has provided sound reasoning and ample evidence to support the purchase of LFG and construction of capital costs as falling within a broad definition of “acquire.”⁴⁰

The CEC submits that the presence of cost and quantity constraints in the legislation weighs in favour of a broad interpretation of “acquire” in that the constraints provide some definition as to the acceptable end results, but leave leeway on how these results are achieved.⁴¹

Panel Determination

The Panel does not disagree that the accepted principles of statutory interpretation require that “acquire” be given a fair, large and liberal interpretation to accomplish the purpose of the GGRR and the CEA.

However, before considering the purpose of this legislation, the Panel must first consider the meaning of the term “acquire” as it is commonly used. The *Interpretation Act* states that “acquire” means to obtain by any method and includes: “...accept, receive, purchase, be vested with, lease, take possession, control or occupation of, and agree to do any of those things, but does not include expropriate.”

As noted earlier, the commodity relinquished or sold to FEI by the COV is raw biogas in the form of LFG, not RNG. RNG is only extractable following an additional upgrading process which entails initial capital expenditures

³⁶ Exhibit C2-2.

³⁷ Exhibit C3-2.

³⁸ Commercial Energy Consumers Association of BC (CEC) Final Argument, p. 8.

³⁹ Ibid., p. 9.

⁴⁰ Ibid., pp. 8–9.

⁴¹ Ibid.

and operating costs related to the Facilities over the life of the contractual arrangement, all of which must be taken into account in determining the overall cost of the RNG.

We turn then to the Cambridge Dictionary, which defines “acquire” as:

to obtain or begin to have something⁴²

Similarly, “obtain” is defined as:

to get something, especially by asking for it, buying it, working for it, or *producing it from something else*⁴³

Given the accepted principles of statutory interpretation and these broad definitions, the Panel is satisfied that, when considered together, the process of purchasing and taking possession of raw landfill gas from the COV and upgrading it to RNG satisfies the meaning of “acquires renewable natural gas” in section 2(3.8) of the GGRR.

3.2 Pays no more than \$30 per GJ

We now turn to a consideration of the second part of the three-part test, namely, the price that FEI pays for RNG. FEI interprets “pays no more than \$30 per GJ” to refer to the total levelized cost of biomethane delivered to the FEI system, including all costs associated with the Facilities to the FEI system. In the case of the COV BPA contract to acquire raw biogas, FEI submits the maximum price of \$30 per GJ should include the purchase price of raw biogas plus the upgrading and interconnection costs. The costs of upgrading and interconnection are included because these costs are ultimately necessary to acquire the RNG.⁴⁴ FEI used approved depreciation rates but also performed a secondary evaluation using a 20-year asset life to ensure the acquisition price per GJ remained below the prescribed maximum of \$30 per GJ over the 20-year term of the COV BPA.⁴⁵

FEI further states the acquisition price for RNG, which includes the levelized LFG price and FEI’s COS attributable to constructing and operating the Facilities, is well below the stipulated maximum acquisition price of \$30 per GJ.⁴⁶ Further, FEI states that the acquisition price is based on conservative assumptions. LFG volume is based on 85 percent of the maximum allocation from the COV, recovery rates are below expected upgrader recovery rates and FEI used a 50 percent methane content compared to the average value of 51.8 percent.⁴⁷ FEI states that based on estimated construction costs, initial operating costs and ongoing operating costs, the resulting total acquisition cost is \$22.24 per GJ⁴⁸, well below the maximum acquisition price of \$30 per GJ.

FEI submits it has taken significant steps to create robust and reasonable estimates, including supply projections from the COV and inputs from industry consultants and suppliers. FEI states that the Project would remain within the \$30 per GJ acquisition price even if the estimated capital costs increased by 50 percent.⁴⁹ Given the robust cost estimate, conservative assumptions and risk mitigation strategies, FEI does not expect the cost per

⁴² Cambridge Dictionary, “acquire”, retrieved from <https://dictionary.cambridge.org/dictionary/english/acquire>.

⁴³ Ibid., “obtain”, retrieved from <https://dictionary.cambridge.org/dictionary/english/obtain>.

⁴⁴ FEI Final Argument, p. 16.

⁴⁵ Exhibit B-4, BCUC IR 1.2, p. 1.

⁴⁶ FEI Final Argument, p. 10.

⁴⁷ Ibid., pp. 11–12.

⁴⁸ Exhibit B-4, BCUC IR 5.4, p. 19.

⁴⁹ FEI Final Argument, p. 11.

GJ of the COV Project to exceed \$30 per GJ at any time. However, FEI states that in the unlikely event that increases in actual construction costs, initial operating costs or annual operating costs result in the cost of acquiring RNG to exceed \$30 per GJ, all prudently incurred costs, even costs in excess of \$30 per GJ, would nonetheless be recovered through the BVA.⁵⁰

Section 18(2) of the CEA requires that the BCUC allow a public utility to recover its costs with respect to a prescribed undertaking. In addition, FEI states that the BCUC should not impose conditions or prescribe potential sanctions on a prescribed undertaking pursuant to section 18(3) of the CEA as this could indirectly prevent FEI from carrying out the Project.⁵¹

FEI states that once the Project is approved as being in the public interest, it will be prudent for FEI to proceed with the COV BPA and construct and operate facilities required to fulfill FEI's obligations to deliver RNG onto its system, even if FEI's costs exceed \$30 per GJ.⁵²

FEI states that the leveled cost is a reasonable means of determining a portion of the acquisition cost because it averages the effects that the change in annual COS has on the cost per GJ of produced biomethane in any one year. Due to temporary or variable factors, such as capital cost allowance or initial ramping up of volumes during the start-up period of the Project, FEI submits it would not be reasonable to use a non-levelized acquisition price for the purpose of the GGRR. Further, leveled cost is a well-established approach which is used by FEI to determine the delivery price of biomethane upgrading projects and to set FEI's compressed natural gas and liquefied natural gas station rates in order to comply with the BCUC's maximum price of methane before the \$30 per GJ limit was established in section 2(3.8)(a) of the GGRR.⁵³

FEI states that calculating the price per GJ based on an annual basis is not a reasonable interpretation of section 2(3.8)(a) of the GGRR, because while the legislature intended the maximum volume to apply to any calendar year and specified the annual requirement in section 2(3.8)(b), there is no similar reference to an annual requirement for the acquisition price to remain constant in section 2(3.8)(a) of the GGRR . If the legislature intended there to be an annual cost per GJ requirement, then it would have drafted that requirement as it did for the volume requirement. FEI further states that as section 2(3.8)(a) of the GGRR specifies \$30 per GJ without reference to a time span, it would be arbitrary to impose a requirement that is measured annually as opposed to any other measure. With the notable absence of a reference to calendar year in section 2(3.8)(a) of the GGRR, FEI submits that imposing an annual cost per GJ requirement is not a reasonable interpretation of the GGRR.⁵⁴

FEI submits that if the Project cost estimates show a leveled cost below the prescribed undertaking maximum of \$30 per GJ, then section 2(3.8)(a) of the GGRR is satisfied even if the non-levelized cost per GJ is greater than \$30 per GJ at any time during the term of the COV BPA. FEI states that the words of any legislation are to be read in their entire context; and in the case of section 2(3.8) of the GGRR, the context is FEI's RNG supply-side model for its biomethane program, which replaced the BCUC's maximum price for delivered biomethane. Further, FEI states that as required by section 8 of the *Interpretation Act* the object of section 2(3.8) of the GGRR is to increase FEI's ability to obtain RNG. Interpreting section 2(3.8) of the GGRR and applying the non-levelized

⁵⁰ Exhibit B-4, BCUC IR 5.4, p. 20.

⁵¹ FEI Final Argument, p. 24.

⁵² Ibid., pp.22–23.

⁵³ Ibid., p. 18

⁵⁴ Ibid., p. 17.

cost over the life of the COV BPA would reduce FEI's ability to obtain RNG and be contrary to the purpose and objective of the GGRR.⁵⁵

FEI submits that it would be impractical and more difficult to evaluate a project's non-levelized variable annual costs compared to calculating the leveled cost. As costs vary from year to year, the non-levelized cost approach is stricter than the leveled cost criteria previously applied by the BCUC. Furthermore, as a leveled cost has been used to evaluate FEI's prior upgrading projects, a non-levelized cost approach would create differences between how biogas and biomethane purchases are judged.⁵⁶

Position of Intervenors

The CEC is of the view that the Project qualifies as a prescribed undertaking under the GGRR and the Project fulfills the considerations established in sections 2(3.8)(a) and (b) of the GGRR, which provide for the acquisition of RNG as a prescribed undertaking for the purposes of section 18 of the CEA.⁵⁷ The COV BPA includes a delivered RNG cost which is below \$30 per GJ on a leveled basis. FEI has calculated the maximum annual volume of RNG that would qualify as a prescribed undertaking for FEI is 8.9 million GJ. The CEC accepts FEI's evidence that the Project will not result in FEI exceeding this volume.⁵⁸

The CEC submits that the Project is encompassed in the definition of a prescribed undertaking in that FEI's biomethane program is intended to reduce greenhouse gas emissions associated with natural gas distribution.⁵⁹

In a letter dated February 27, 2019, MEMPR "...confirm[ed] that the policy position of the Ministry and the Government of British Columbia (Government) is to support projects and initiatives that will lead to an increased Renewable Natural Gas (RNG) supply in British Columbia (BC)" and "...the Province is supportive of projects that help increase the supply of RNG for use by the transportation sector and for use in homes and businesses."⁶⁰

The CEC agrees with FEI's view and considers that the leveled cost is the appropriate criterion for evaluating the cost per GJ where the Project involves the construction of facilities and there is a long-term contract.⁶¹

The CEC does not object to the particulars of the Project and finds it to be adequately considered and evaluated. The CEC submits that the total cost of the Project is well below the prescribed maximum, and the CEC has reviewed the cost estimates and finds them to be acceptable. The CEC further submits that 20 years is an appropriate term over which to recover equipment costs.⁶²

The CEC notes that the proposed purchase agreement includes a delivered RNG cost and considers that the leveled cost is significantly below \$30 per GJ. However, it also submits that it is not in the ratepayers' interest for the utility to have unfettered license to recover costs from projects that do not fall or are no longer falling within the prescribed limits and "...the long term effect of such policy could be to encourage optimistic

⁵⁵ Exhibit B-4, BCUC IR 5.5, pp. 20–22.

⁵⁶ Ibid.

⁵⁷ CEC Final Argument, p. 4.

⁵⁸ Ibid.

⁵⁹ Ibid., p. 6.

⁶⁰ Exhibit C1-2.

⁶¹ CEC Final Argument, p. 10.

⁶² Ibid., pp.3–4.

valuations since the utility bears no responsibility for excess expenditures which are borne without recourse by ratepayers.”⁶³

With respect to conditions or potential sanctions imposed that could indirectly prevent FEI from carrying out the Project, the CEC submits that FEI’s interpretation of “indirectly” is excessively broad, with FEI relying on the reasoning that the Project is a prescribed undertaking indefinitely.⁶⁴

The CEC notes that the intent of the legislation is to enable FEI to acquire RNG that is within the cost and volume constraints established by sections 2(3.8) and 2(3.9) of the GGRR. Further, it is appropriate for FEI to develop projects with the understanding that actual costs may exceed those forecast and that the project will be required to remain within the constraints of the legislation over the life of the project.⁶⁵

The CEC further submits that if the cost per GJ or volumes on a levelized basis fall outside the constraints defined in section 2(3.8) of the GGRR, it would be appropriate for the BCUC to examine whether or not to assess the prudence of expenditures and that failure to re-examine a project that falls outside the bounds of the prescribed undertaking would not support the intent of the legislation.⁶⁶

Panel Determination

The CEC’s view is that the intent of the legislation is to enable “...FEI to acquire more RNG that is within cost and volume constraints.”⁶⁷ We do not find any evidence in this proceeding to identify the intent of this portion of the GGRR. However, we do find that the GGRR does enable utilities such as FEI to acquire RNG that is within stipulated cost and volume constraints. Our assessment of this proposed Project therefore focuses on ensuring that the constraints provided by section 2(3.8)(a) and 2(3.8)(b) of the GGRR are met.

If this were an application to acquire finished RNG supply at a contract price of, say \$30.50 per GJ, our decision would be much more straightforward. A contract price of \$30.50 per GJ is above the cost cap provided by the GGRR and therefore the acquisition of RNG would not be a prescribed undertaking. Conversely, if the contract price were \$29.50 per GJ, the acquisition of RNG could be a prescribed undertaking, if the other relevant conditions were met. In this proceeding though, we are asked to approve, as a prescribed undertaking, a contract with a levelized cost that is “significantly below” \$30 per GJ and is “unlikely” to exceed that cap.

FEI has acknowledged that the cost of the RNG from the Project may exceed \$30 per GJ, albeit as a “very unlikely event.”⁶⁸ However, the probability of exceeding the \$30 per GJ cap, or more precisely the particular level of that probability, is not determinative. Simply stated, the Panel finds that FEI has not provided a certain, fixed cost for the acquired RNG during the term of the contract. **As such, the Panel is unable to determine with any degree of certainty whether the cost is below, at or above the \$30 per GJ threshold and therefore cannot find this Project to be a prescribed undertaking.**

⁶³ Ibid., p. 12.

⁶⁴ Ibid., p. 13.

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ Exhibit B-4, BCUC IR 5.4, p. 20.

As for the third element of the three-part test regarding volume constraints, however, the Panel is satisfied that given FEI's current contracted maximum supply of RNG is 639,000 GJ annually, the projected RNG volume for the Project remains well within the maximum annual RNG acquisition volume of 8,900,000 GJ that would qualify under section 2(3.8)(b) of the GGRR.

To summarize, the Panel finds that FEI has adduced sufficient evidence to demonstrate that the Project amounts to an acquisition of RNG within the volumes stipulated under section 2(3.8)(b) of the GGRR but has failed to satisfy the Panel that FEI would be paying no more than \$30 per GJ of RNG throughout the life of the Project, even on a conservative levelized cost basis. Accordingly, the Panel finds that the Project does not meet the requirements as a prescribed undertaking under the GGRR, and hence section 18(3) of the CEA does not apply.

Having determined that the Project does not qualify as a prescribed undertaking, the Panel finds that it is not necessary to make any determination regarding FEI's position that if the BCUC finds the Project is a prescribed undertaking, the Project remains a prescribed undertaking indefinitely and FEI is allowed to recover its costs indefinitely, regardless of changing circumstances.

4.0 Request for BCUC Acceptance of the COV BPA

In light of the above findings, **the Panel declines to make any determination with regard to FEI's request for acceptance of the COV BPA in its current form under section 71 of the UCA.**

The Panel notes that FEI has indicated that in the event the Project is not deemed a prescribed undertaking, it may adjust the current Application or potentially prepare and file an application for a Certificate of Public Convenience and Necessity (CPCN) for the Project.⁶⁹ Accordingly, the Panel adjourns this proceeding for 60 days to allow FEI, should it so choose, to restructure and resubmit the Project and its BPA with the COV in a way that provides the required certainty to FEI's acquisition cost of the RNG so as to qualify as a prescribed undertaking within the specified cost threshold. Alternatively, FEI may withdraw this Application and file a new application for approval of a CPCN for the Project should it wish to do so.

⁶⁹ Exhibit B-4, BCUC IR 5.7, pp. 23.

DATED at the City of Vancouver, in the Province of British Columbia, this

6th

day of June 2019.

Original signed by:

D. M. Morton
Panel Chair / Commissioner

Original signed by:

A. K. Fung, QC
Commissioner

Original signed by:

R. I. Mason
Commissioner



ORDER NUMBER
G-122-19

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Energy Inc.
Application for Acceptance of the Biogas Purchase Agreement
Between FortisBC Energy Inc. and the City of Vancouver

BEFORE:

D. M. Morton, Panel Chair
A. K. Fung, QC, Commissioner
R. I. Mason, Commissioner

on June 6, 2019

ORDER

WHEREAS:

- A. On September 21, 2018, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC), on a confidential basis, an application for acceptance of a Biogas Purchase Agreement (BPA) between FEI and the City of Vancouver (COV) pursuant to section 71 of the *Utilities Commission Act* (Application);
- B. On October 31, 2018, the BCUC issued a letter requesting FEI to file a non-confidential redacted version of the Application and the BPA, pursuant to section 18.01(b) of the BCUC's Rules of Practice and Procedure to allow for a public hearing process;
- C. Under the BPA, FEI intends to: purchase landfill gas from the COV; construct and operate facilities to upgrade landfill gas to renewable natural gas; and construct interconnection facilities including a 500 metre pipeline to connect to FEI's existing natural gas distribution system;
- D. By Order G-219-18 dated November 16, 2018, the BCUC established a regulatory timetable which included intervener registration, one round of BCUC information requests, a procedural conference and further process to be determined;
- E. By December 4, 2018, the British Columbia Ministry of Energy, Mines & Petroleum Resources, COV and the Commercial Energy Consumers Association of British Columbia registered as interveners;
- F. By Order G-234-18 dated December 7, 2018, the BCUC amended the regulatory timetable to include written submissions from FEI and registered interveners as well as a written reply from FEI;

- G. On January 16, 2019, the BCUC held a procedural conference and requested parties to provide comments on: the need for intervener information requests to FEI; the appropriate issues to be included in final arguments; and each party's proposed regulatory timetable for the remainder of the proceeding. FEI, COV, MEMPR and the CEC attended and made submissions at the conference;
- H. By Order G-14-19 dated January 22, 2019, the BCUC established the remainder of the regulatory timetable which included intervener information requests , FEI's final argument ,intervener final arguments and FEI's reply argument;
- I. On March 1, 2019, FEI submitted its final argument;
- J. On March 8, 2019, the interveners submitted final arguments;
- K. On March 15, 2019, FEI submitted its reply argument; and
- L. The BCUC has reviewed the evidence and arguments submitted in this proceeding and makes the following determinations.

NOW THEREFORE pursuant to section 71 of the *Utilities Commission Act*, and for the reasons outlined in the decision issued concurrently with this order; the BCUC adjourns this proceeding for 60 days from the date of this order to allow FEI to restructure and resubmit to this Panel the Project and/or its Biogas Purchase Agreement with the City of Vancouver in a way that provides the required certainty to FEI's acquisition cost of the RNG so as to qualify as a prescribed undertaking within the specified cost threshold.

DATED at the City of Vancouver, in the Province of British Columbia, this 6th day of June 2019.

BY ORDER



D. M. Morton
Commissioner

FortisBC Energy Inc.
Application for Acceptance of the Biogas Purchase Agreement
between FortisBC Energy Inc. and the City of Vancouver

LIST OF ACRONYMS

FEI	FortisBC Energy Inc.
BCUC	British Columbia Utilities Commission
BPA	Biogas Purchase Agreement
COV	City of Vancouver
Application	On September 21, 2018, FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC) an application for acceptance of a Biogas Purchase Agreement (BPA) between FEI and the City of Vancouver (COV).
LFG	Landfill gas
RNG	Renewable natural gas
COS	Cost of Service
Facilities	Under the COV BPA, FEI will purchase raw landfill gas ⁷⁰ (LFG) from the COV landfill and will construct and operate upgrading and interconnection facilities (Facilities) on COV land to upgrade the LFG to pipeline-quality biomethane or renewable natural gas (RNG) for injection into FEI's natural gas system.
BVA	Biomethane Variance Account
Project	The purchase of raw LFG and construction and operation of the Facilities are together referred to as the Project.
UCA	Utilities Commission Act
CEA	Clean Energy Act
LGIC	Lieutenant Governor in Council
OIC	Order in Council
GGRR	Greenhouse Gas Reduction (Clean Energy) Regulation
Rules	BCUC Rules for Natural Gas Energy Supply Contracts
IR	Information Request
MEMPR	The Ministry of Energy, Mines & Petroleum Resources
CEC	The Commercial Energy Consumers Association of British Columbia

⁷⁰ Landfill is a common source of biogas. Landfill biogas is commonly referred to as landfill gas or LFG in the gas utility industry.

PV	Present Value
GJ	Gigajoule
PSA	Pressure Swing Absorption
TP	Transmission Pressure
CPCN	Certificate of Public Convenience and Necessity

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

FortisBC Energy Inc.
Application for Acceptance of the Biogas Purchase Agreement
Between FortisBC Energy Inc. and the City of Vancouver

EXHIBIT LIST

Exhibit No.	Description
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COMMISSION DOCUMENTS

- | | |
|-------|--|
| A-1 | Letter dated November 16, 2018 – Appointing the Panel for the review of FEI's Application for Acceptance of the Biogas Purchase Agreement Between FortisBC Energy Inc. and the City of Vancouver |
| A-2 | Letter dated November 16, 2018 – BCUC Order G-219-18 establishing a regulatory timetable |
| A-3 | Letter dated December 7, 2018 – BCUC Order G-234-18 amending the regulatory timetable and request for submissions |
| A-4 | Letter dated December 21, 2018 – BCUC Information Request No. 1 to FEI |
| A-4-1 | CONFIDENTIAL Letter dated December 21, 2018 – BCUC Confidential Information Request No. 1 to FEI |
| A-5 | Letter dated January 14, 2019 – BCUC Procedural Conference details |
| A-6 | Letter dated January 22, 2019 – BCUC Order G-14-19 establishing a regulatory timetable |

APPLICANT DOCUMENTS

- B-1 **FORTISBC ENERGY INC. (FEI)** Letter dated November 8, 2018 - FEI Biogas Purchase Agreement between FEI and the COV Application
- B-1-1 **CONFIDENTIAL** Letter dated November 8, 2018 - Confidential FEI Biogas Purchase Agreement between FEI and the COV Application
- B-2 Letter dated December 11, 2018 – FEI Submission on Renewable Natural Gas Acquisition
- B-3 Letter dated December 19, 2018 – FEI no Reply Submissions to file
- B-4 Letter dated January 10, 2019 – FEI Submitting Responses to BCUC Information Request No. 1
- B-4-1 **CONFIDENTIAL** Letter dated January 10, 2019 – FEI Submitting Confidential Responses to BCUC Information Request No. 1
- B-5 Letter dated February 15, 2019 – FEI Submitting Response to CEC Information Request No. 1
- B-6 **CONFIDENTIAL** Letter dated February 15, 2019 – FEI Submitting Response to CEC Confidential Information Request No. 1

INTERVENER DOCUMENTS

- C1-1 **BC MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES (MEMPR)** – Letter dated November 22, 2018 Request for Intervener Status by Jennifer Davison
- C1-2 Letter dated February 27, 2019 – MEMPR Submitting a Letter of Comment
- C2-1 **CITY OF VANCOUVER (CoV)** – Letter dated December 3, 2018 Request for Intervener Status by David Li
- C2-2 Letter dated December 14, 2018 – CoV Submission to BCUC Information Request
- C3-1 **COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC)** – Letter dated December 4, 2018 Request for Intervener Status by Christopher Weafer
- C3-2 Letter dated December 14, 2018 – CEC Submission to BCUC Information Request
- C3-3 Letter dated January 15, 2019 – CEC Submitting Confidentiality Undertakings for Christopher Weafer, Jane Rhodes and David Craig
- C3-4 Letter dated January 31, 2019 – CEC Submitting Information Request No. 1
- C3-5 **CONFIDENTIAL** Letter dated January 31, 2019 – CEC Submitting Confidential Information Request No. 1

INTERESTED PARTY DOCUMENTS

D-1

LETTERS OF COMMENT

E-1