

City of Vancouver Landfill Biomethane Project

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Agenda

Streamlined Review Scope

- *The topic in scope for the SRP is FortisBC Energy Inc.'s (FEI) proposed mechanism to provide the required certainty that FEI's RNG acquisition cost is within the specified cost threshold, including the need for a deferral account and circumstances where RNG acquisition costs will be borne by the shareholder.*

1. What is the required degree of certainty?
2. What additional certainty is provided by the deferral mechanism?
3. Circumstances for recovery of any remaining balance?
4. Alternative to move the Project forward

What is the required degree of certainty?

- The decision accepted this form of acquisition of RNG under the GGRR
 - ❑ Costs can only be provided on a forecast basis
 - ❑ Costs are expected to fluctuate from year to year
- FEI's View: Reasonable Price Certainty based on levelized cost of the Project at \$22.24 per GJ
 - ❑ Well below the threshold
 - ❑ Class 3 estimate of capital costs
 - ❑ Conservative assumptions
 - ❑ Due diligence and sensitivity analysis
 - ❑ Anniversary and supply-based reviews

What is the required degree of certainty?

- Panel did not find that FEI “pays no more than \$30 per GJ”
 - “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”
 - “...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 basis.”
- The Panel gave an opportunity to restructure the application
 - “...in a way that provides the required certainty to FEI’s acquisition cost of RNG to qualify as a prescribed undertaking within a specified cost threshold”

What additional certainty is provided by the deferral mechanism?

- Mechanics of the Proposed and Alternate Treatments
 - ❑ Proposed treatment ensures cumulative costs to customers remain below \$30/GJ throughout the Project lifecycle
 - ❑ Alternate treatment ensures annual costs to customers remain below \$30/GJ throughout the Project lifecycle
- Deferral account treatment adds certainty
 - ❑ Smooths year to year fluctuation ('throughout the life of the Project')
 - ❑ No guarantee of recovery of any remaining balance

Circumstances for recovery of any remaining balance?

- FEI cannot guarantee with 100 percent certainty that there will be no remaining balance in the deferral account
 - ❑ FEI would only seek to recover costs if there were a material remaining balance that it believed was prudently incurred
 - ❑ FEI would bear the onus to prove prudence
 - ❑ Costs recovery would be subject to BCUC approval
- Whistler Case
 - ❑ Cap functioned to rebut the presumption of prudence
 - ❑ FEI applied to recover prudently incurred costs
 - ❑ BCUC approved the majority of those costs
- There is no difference between the COV and Whistler projects in relation to the right to apply for recovery of prudently incurred costs

Summary of proposal

- Levelized cost based on conservative, Class 3 estimate
- Deferral account minimizes cost fluctuation
 - ▣ Cost fluctuation is minimized 'throughout the life of the Project'
- Shareholder at risk for any remaining balance
- FEI believes it has provided the highest degree of certainty that can be achieved for this type of RNG acquisition
- FEI believes meets the spirit and intent of the GGRR
 - ▣ Enables RNG acquisition with a reasonable degree of certainty

Alternative to move the Project forward

- If the Panel cannot find this Project meets the definition of a prescribed undertaking, the Panel can still accept the BPA and approve the Project as a CPCN
- The COV Biomethane Project is in the public interest
 - ❑ Aligned with CleanBC policy to achieve 15% renewable gas
 - ❑ COV is the largest landfill-based RNG Project in the province
 - ❑ Ministry has confirmed policy supports these types of projects (C1-2)
 - ❑ RNG demand is greater than supply
- Substantial information already on the public record



**For further information,
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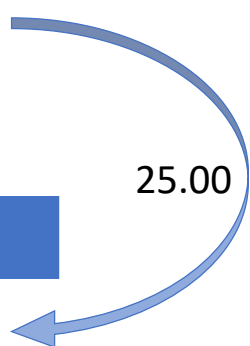


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Deferral Account Illustration

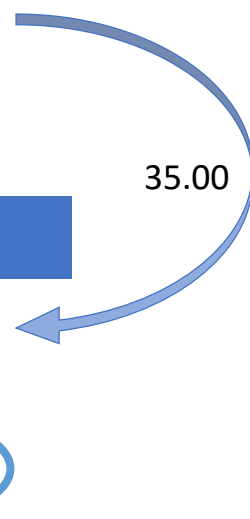
Deferral Account Mechanism - Proposed

Year	1
Annual Cost/GJ	25.00
Average Cost/GJ	25.00
Cost to BVA	25.00
Average Cost in BVA	25.00
Cost to Deferral	0.00
Deferral Balance	0.00



Deferral Account Mechanism - Proposed

Year	1	2
Annual Cost/GJ	25.00	35.00
Average Cost/GJ	25.00	30.00
Cost to BVA	25.00	35.00
Average Cost in BVA	25.00	30.00
Cost to Deferral	0.00	0.00
Deferral Balance	0.00	0.00



Deferral Account Mechanism - Proposed

Year	1	2	3
Annual Cost/GJ	25.00	35.00	36.00
Average Cost/GJ	25.00	30.00	32.00
Cost to BVA	25.00	35.00	30.00
Average Cost in BVA	25.00	30.00	30.00
Cost to Deferral	0.00	0.00	6.00
Deferral Balance	0.00	0.00	6.00

Deferral Account Mechanism - Proposed

Year	1	2	3	4
Annual Cost/GJ	25.00	35.00	36.00	26.00
Average Cost/GJ	25.00	30.00	32.00	30.50
Cost to BVA	25.00	35.00	30.00	30.00
Average Cost in BVA	25.00	30.00	30.00	30.00
Cost to Deferral	0.00	0.00	6.00	(4.00)
Deferral Balance	0.00	0.00	6.00	2.00

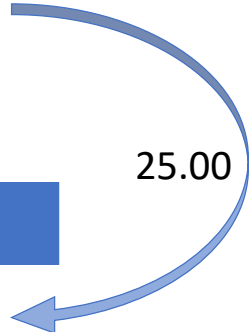
Diagram illustrating the Deferral Account Mechanism - Proposed. The table shows costs over 4 years. A green oval highlights the Annual Cost/GJ for Years 1-4 (25.00, 35.00, 36.00, 26.00). A blue oval highlights the Cost to BVA for Years 1-4 (25.00, 35.00, 30.00, 30.00). A blue oval highlights the Average Cost in BVA for Year 4 (30.00). A blue oval highlights the Deferral Balance for Year 4 (2.00). Arrows indicate the flow of costs: 26.00 from Annual Cost/GJ Year 4 to Cost to BVA Year 4, and 4.00 from Cost to Deferral Year 4 to the Deferral Balance Year 4.

Deferral Account Mechanism - Proposed

Year	1	2	3	4	5
Annual Cost/GJ	25.00	35.00	36.00	26.00	24.00
Average Cost/GJ	25.00	30.00	32.00	30.50	29.20
Cost to BVA	25.00	35.00	30.00	30.00	26.00
Average Cost in BVA	25.00	30.00	30.00	30.00	29.20
Cost to Deferral	0.00	0.00	6.00	(4.00)	(2.00)
Deferral Balance	0.00	0.00	6.00	2.00	0.00

Deferral Account Mechanism - Alternate

Year	1
Annual Cost/GJ	25.00
Cost to BVA	25.00
Average Cost in BVA	25.00
Cost to Deferral	0.00
Deferral Balance	0.00



Deferral Account Mechanism - Alternate

Year	1	2
Annual Cost/GJ	25.00	35.00
Cost to BVA	25.00	30.00
Average Cost in BVA	25.00	27.50
Cost to Deferral	0.00	5.00
Deferral Balance	0.00	5.00

The diagram illustrates the flow of costs from the Annual Cost/GJ to the Deferral Balance. A curved arrow labeled 30.00 points from the Annual Cost/GJ in Year 2 to the Cost to BVA in Year 2. Another curved arrow labeled 5.00 points from the Annual Cost/GJ in Year 2 to the Cost to Deferral in Year 2. A third curved arrow labeled 5.00 points from the Deferral Balance in Year 2 to the Cost to BVA in Year 2.

Deferral Account Mechanism - Alternate

Year	1	2	3
Annual Cost/GJ	25.00	35.00	36.00
Cost to BVA	25.00	30.00	30.00
Average Cost in BVA	25.00	27.50	28.33
Cost to Deferral	0.00	5.00	6.00
Deferral Balance	0.00	5.00	11.00

The diagram illustrates the flow of costs from the Annual Cost/GJ to the Cost to BVA, then to the Average Cost in BVA, and finally to the Cost to Deferral and Deferral Balance. The values are as follows:

- Annual Cost/GJ:** 25.00 (Year 1), 35.00 (Year 2), 36.00 (Year 3)
- Cost to BVA:** 25.00 (Year 1), 30.00 (Year 2), 30.00 (Year 3)
- Average Cost in BVA:** 25.00 (Year 1), 27.50 (Year 2), 28.33 (Year 3)
- Cost to Deferral:** 0.00 (Year 1), 5.00 (Year 2), 6.00 (Year 3)
- Deferral Balance:** 0.00 (Year 1), 5.00 (Year 2), 11.00 (Year 3)

Arrows indicate the flow of costs:

- A curved arrow labeled 30.00 points from the Year 3 Annual Cost/GJ to the Year 3 Cost to BVA.
- A curved arrow labeled 6.00 points from the Year 3 Annual Cost/GJ to the Year 3 Cost to Deferral.

Deferral Account Mechanism - Alternate

Year	1	2	3	4
Annual Cost/GJ	25.00	35.00	36.00	26.00
Cost to BVA	25.00	30.00	30.00	30.00
Average Cost in BVA	25.00	27.50	28.33	28.75
Cost to Deferral	0.00	5.00	6.00	(4.00)
Deferral Balance	0.00	5.00	11.00	7.00

Deferral Account Mechanism - Alternate

Year	1	2	3	4	5
Annual Cost/GJ	25.00	35.00	36.00	26.00	24.00
Cost to BVA	25.00	30.00	30.00	30.00	30.00
Average Cost in BVA	25.00	27.50	28.33	28.75	29.00
Cost to Deferral	0.00	5.00	6.00	(4.00)	(6.00)
Deferral Balance	0.00	5.00	11.00	7.00	1.00

Deferral Account Mechanism - Comparison

Year	1	2	3	4	5	Average
Proposed						
Cost to BVA	25.00	35.00	30.00	30.00	26.00	
Average Cost in BVA	25.00	30.00	30.00	30.00	29.20	
Cost to Deferral	0.00	0.00	6.00	(4.00)	(2.00)	
Deferral Balance	0.00	0.00	6.00	2.00	0.00	1.60
Alternate						
Cost to BVA	25.00	30.00	30.00	30.00	30.00	
Average Cost in BVA	25.00	27.50	28.33	28.75	29.00	
Cost to Deferral	0.00	5.00	6.00	(4.00)	(6.00)	
Deferral Balance	0.00	5.00	11.00	7.00	1.00	4.80

CPCN Guidelines Comparison

CPCN Guidelines - Application Requirements G-20-15

Excerpt from CPCN Guidelines: Scope and Purpose:

"The guidelines do not alter the fundamental regulatory relationship between utilities and the Commission. They provides general guidance regarding the Commission's expectations of the information that should be included in CPCN applications while providing the flexibility for an application to reflect the specific circumstances of the applicant, the size and nature of the Project, and the issues raised by the application. An applicant is expected to apply the guidelines in a flexible and reasonable manner that reflects the spirit and intent of the guidelines."

CPCN Guidelines Comparison

#	Topic	Exhibit # / Reference	Description
1	Applicant		<ul style="list-style-type: none"> As a known applicant, further description of FEI (as considered in the guideline) is not necessary Application has already been subject to a public and transparent review process
2	Project Need, Alternatives and Justification	<ul style="list-style-type: none"> B-1 (4) B-2 B-7 	<ul style="list-style-type: none"> Supports the Biomethane Program. Findings that Biomethane Program is in the public interest are well-established <ul style="list-style-type: none"> 2010 Biomethane Decision G-194-10 (page 27) 2013 Biomethane Decision G-210-13 (pages 8, 25-27, 53) 2015 BERC Rate Methodology Decision G-133-16 (page 42 re-affirmed) Benefits of the Project align with government policy (reducing GHGs / carbon), BC's Energy Objectives Project need and justification is clear based on consideration of evidence Project supports addition of RNG supply and GHG reductions in province Project aligns with climate goals of COV (COV Renewable City Strategy 2016) Project will support growing customer demand for RNG - evidence in BVA Annual Report Project and contract structure largely aligns with previous RNG Projects Limited opportunities for domestic RNG supply in the province
	<ul style="list-style-type: none"> Technical, economic and financial feasibility 	<ul style="list-style-type: none"> B-1 (2) B-4 B-4-1 B-6 	<ul style="list-style-type: none"> Technical Feasibility <ul style="list-style-type: none"> Discussed in Application, Section 2 Explored during IR process: <ul style="list-style-type: none"> BCUC IR 1.1 series BCUC IR 1.1 series, BCUC Confidential IR 1.1 series CEC Confidential IRs 1.1 and 1.2 series Economic and Financial Feasibility <ul style="list-style-type: none"> Application Section 3.0 and 4.7

CPCN Guidelines Comparison

#	Topic	Exhibit # / Reference	Description
	<ul style="list-style-type: none"> Cost, benefits, associated risks and feasible alternatives (min Class 4) 	<ul style="list-style-type: none"> B-1 (4.7) B-4 	<ul style="list-style-type: none"> Feasible alternatives described for technology selection <ul style="list-style-type: none"> No alternatives identified, limited to technology selection Application Section 4.7 BCUC IR 1.1 Series
	<ul style="list-style-type: none"> Revenue requirement and rate impacts 	<ul style="list-style-type: none"> B-1 (4.9) B-1-1 (App. C) 	<ul style="list-style-type: none"> Rate impact calculation provided Cost of Service Model provides revenue requirement - Appendix C
	<ul style="list-style-type: none"> NPV of incremental cost and benefit 	<ul style="list-style-type: none"> B-1-1 (App. C) 	<ul style="list-style-type: none"> Addressed by providing a Cost of Service Model (Appendix C)
	<ul style="list-style-type: none"> Comparing Social and Environmental of Project and feasible alternatives 		<ul style="list-style-type: none"> Biomethane Program's social and environment benefits are well-established <ul style="list-style-type: none"> Supports government policy, BC Energy Objectives, and Biomethane Program, which has been determined to be in the public interest Use of a wasted resource Reduced GHG emissions (renewable energy) Option for FEI customers to participate Investment within BC
	<ul style="list-style-type: none"> Relation to filed Long-Term Resource Plan (if applicable) 		<ul style="list-style-type: none"> Biomethane program an integral component of the most recent LTGRP Application and review process <ul style="list-style-type: none"> LTGRP Application <ul style="list-style-type: none"> Section 2.4.2 Section 3.4.6 Section 8.2.4 RNG supply and demand considered in LTGRP proceeding

CPCN Guidelines Comparison

#	Topic	Exhibit # / Reference	Description
3	Consultation		<ul style="list-style-type: none"> • Consultation requirements on the Project are limited <ul style="list-style-type: none"> ○ No archaeological impact ○ No stream or water body impact (no crossings) ○ No crown land required for Project ○ Brownfield industrial site located on municipal lands ○ Consultation with land owners within 200m radius of Project <ul style="list-style-type: none"> ▪ Letters sent to affected neighbours for pipeline permit ○ Multiple updates to City of Delta council (on record)
4	Project Description	<ul style="list-style-type: none"> • B-1 (4.1-4.6) 	<ul style="list-style-type: none"> • Project overview described in Application <ul style="list-style-type: none"> ○ Application Sections 4.1 - 4.6
	<ul style="list-style-type: none"> • Purpose and Cost (design, capacity, location, safety/reliability) 	<ul style="list-style-type: none"> • B-1 (4.1-4.6) • B-4 • B-4-1 	<ul style="list-style-type: none"> • Project overview described in Application <ul style="list-style-type: none"> ○ Application Sections 4.1 - 4.6 ○ BCUC IR 1.1 series ○ BCUC IR 1.4 series ○ BCUC IR 1.5 series ○ BCUC Confidential IR 1.2 series
	<ul style="list-style-type: none"> • Construction and Operation Schedule 	<ul style="list-style-type: none"> • B-1 (4.9, App. A) 	<ul style="list-style-type: none"> • BPA has limitation on latest operational date to avoid default • 2021 in service date • BPA, Section 5.3 requires FEI to have an operational facility to avoid potential default <ul style="list-style-type: none"> ○ FEI will ensure Project is executed within that timeframe
	<ul style="list-style-type: none"> • Human capital resources 		<ul style="list-style-type: none"> • Not applicable

CPCN Guidelines Comparison

#	Topic	Exhibit # / Reference	Description
	<ul style="list-style-type: none"> • Risk Analysis 	<ul style="list-style-type: none"> • B-1 (5) • B-4 • B-4-1 • B-6 	<ul style="list-style-type: none"> • Risks and Mitigation discussed in the Application <ul style="list-style-type: none"> ○ Section 5 (LFG quality and volume risk, cost risk, technology risk) • IR process explored risk of volume, cost and technology <ul style="list-style-type: none"> ○ BCUC IR 1.2 series ○ BCUC IR 1.3 series ○ BCUC IR 1.1.7 ○ BCUC Confidential IR 1.1 series ○ BCUC Confidential IR 1.2 series ○ BCUC Confidential IR 1.3 series ○ CEC IR 1.2 series ○ CEC IR 1.3 series
	<ul style="list-style-type: none"> • Potential Negative Effects (physical, biological, social, First Nations, public) and proposal to reduce negative effects 	<ul style="list-style-type: none"> • B-1 (4) 	<ul style="list-style-type: none"> • Positive Benefits (government policy, BC Energy Objectives, public interest) <ul style="list-style-type: none"> ○ Project will lower overall GHGs in BC ○ no negative impact on environment, local community due to location inside existing landfill property
	<ul style="list-style-type: none"> • Required Approvals, Permits, Licenses, Authorizations) 	<ul style="list-style-type: none"> • B-1 (App. A) 	<ul style="list-style-type: none"> • Approvals either in place or identified • BPA addresses need for LF to obtain necessary amendment to operating agreement to allow for RNG facility (BPA, Section 3.5) • FEI has experience with similar Projects • Building permit and appropriated Technical Services BC permits are required <ul style="list-style-type: none"> ○ FEI already has a permit from BC OGC for the high pressure pipeline
	<ul style="list-style-type: none"> • Material Conditions (if any) 	<ul style="list-style-type: none"> • B-1 (App. A) 	<ul style="list-style-type: none"> • Condition precedent, BCUC approval (BPA, Section 1.1)

CPCN Guidelines Comparison

#	Topic	Exhibit # / Reference	Description
5	Project Cost Estimate	<ul style="list-style-type: none"> • B-1 (4.7) • B-1-1 (App. D & E) • B-4 • B-4-1 	<ul style="list-style-type: none"> • Application, Section 4.7, Cost Estimate done to Class 3 level of accuracy (+30%/-20%) <ul style="list-style-type: none"> ○ Appendix D for upgrader facilities ○ Appendix E for interconnect facilities • BCUC IR 1.5.4 • BCUC Confidential IR 1.2 series
6	Provincial Energy Objectives and Policy Considerations	<ul style="list-style-type: none"> • Application (2, 3) 	<ul style="list-style-type: none"> • Aligns with Provincial policy and energy objectives • Application Section 2.0 establishes link to Clean Energy Act • Previous decisions all indicate that expansion of the Biomethane Program aligns with government policy (reducing GHGs / carbon), BC's Energy Objectives and is in the public interest
7	New Service Areas		<ul style="list-style-type: none"> • Not applicable