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May 21, 2020

British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC
V6Z 2N3

Attention: Mr. Patrick Wruck, Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

Re: FortisBC Energy Inc. (FEI)

Section 71 of the *Utilities Commission Act* (UCA) and British Columbia Utilities Commission (BCUC) Rules for Natural Gas Energy Supply Contracts

Filing of a Biomethane Purchase Agreement (BPA) between FEI and Tidal Energy Marketing Inc. (Tidal) (Application)

In accordance with section 71 of the UCA and the BCUC's Rules for Natural Gas Energy Supply Contracts (Rules), FEI respectfully files, for acceptance by the BCUC, the attached fully executed BPA between FEI and Tidal (Tidal GSE BPA). A copy of the executed Tidal GSE BPA is provided in Appendix A.

The Tidal GSE BPA establishes the terms and conditions for Tidal's provision of finished biomethane to FEI at the Huntington and Station 2 interconnection points on the Enbridge Westcoast Energy Inc.¹ (Westcoast) pipeline system and the AECO/NIT interconnection point on the NOVA Gas Transmission Ltd. (NGTL) pipeline system. The biomethane will be produced at a Hydrogen Reduction (HR)² facility located in London, Ontario (ON), which will be owned and operated by [REDACTED]

The acquisition of biomethane, also referred to as renewable natural gas (RNG)³, under the Tidal GSE BPA qualifies as a prescribed undertaking under section 18 of the *Clean Energy Act* (CEA) and section 2(3.7) to (3.9) of the *Greenhouse Gas Reduction (Clean Energy) Regulation* (GGRR).

¹ A wholly owned subsidiary of Enbridge Inc.

² See Section 2.3 of the Application for a description of the Hydrogen Reduction process.

³ RNG or Renewable Natural Gas is interchangeable with the term "biomethane" for this Application. In previous regulatory decisions, FEI and the BCUC have used biomethane and RNG, while the GGRR uses the term renewable natural gas.

Confidentiality Request

The Tidal GSE BPA contains confidential and commercially sensitive terms, including negotiated rates and volumes. The public disclosure of this information could compromise FEI's ability to negotiate favourable terms with other Biomethane suppliers which could serve to increase overall costs of the Biomethane Program and potentially impact rates for all non-bypass customers. FEI has redacted the confidential information from the public version of this Application.

FEI requests that the confidential, unredacted version of this Application, including the unredacted version of the Tidal GSE BPA attached as Appendix A, and the confidential financial schedules attached as Appendix B, be treated as confidential by the BCUC, pursuant to section 71(5) of the UCA, Section 18 of the BCUC's Rules of Practice and Procedure regarding confidential documents adopted by Order G-15-19, and Section 6.0 of the Rules for Natural Gas Energy Supply Contracts. FEI believes this will ensure that market sensitive information is protected, protecting FEI's ability in the future to negotiate competitive pricing.

1. LEGISLATIVE AND REGULATORY FRAMEWORK

On April 18, 2010, the Province of BC enacted the CEA. The CEA established a number of energy objectives and provided that the Lieutenant Governor in Council (LGIC) can prescribe undertakings to encourage public utilities to pursue certain greenhouse gas (GHG) reducing initiatives.

On May 14, 2012, the LGIC issued Order in Council (OIC) 295/2012 approving the GGRR, which described classes of prescribed undertakings pursuant to section 18 of the CEA.

On March 21, 2017, the LGIC issued OIC 161/2017 approving an amendment to the GGRR related to RNG as follows:

- (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 [gigajoule], 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.

The Ministry has stated that the “amendments were made to the Greenhouse Gas Reduction (Clean Energy) Regulation in the spring of 2017 to increase incentives for using renewable natural gas in transportation and to establish measures to increase the supply of RNG.”⁴

The BCUC in its Decision and Order G-122-19⁵ determined that for a project to qualify as a prescribed undertaking under section 2(3.8) of the GGRR, it must satisfy the following 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 2015.⁶

FEI submits that the Tidal GSE BPA satisfies the three-part test and qualifies as a prescribed undertaking based on the following:

- FEI is acquiring RNG through the Tidal GSE BPA;
- The acquisition price for RNG in the Tidal GSE BPA is below the \$30 per GJ maximum acquisition price in section 2(3.8)(a) of the GGRR. The terms of the Tidal GSE BPA dictate that the maximum price payable by FEI to Tidal for finished biomethane cannot exceed the GGRR maximum acquisition cost; and
- The combined total volume of RNG is below the calculated maximum volume set out in section 2(3.8)(b) in the GGRR for FEI of approximately 8,900,000 GJs. The contractual maximum volume of RNG under the Tidal GSE BPA is [REDACTED] GJs and the current maximum supply contracted by FEI totals [REDACTED] GJs annually⁷. The total maximum contracted RNG volume, if the Tidal GSE BPA is accepted, would be [REDACTED] GJs annually, which is below the maximum volume under the GGRR. FEI notes that there is one application currently filed with and awaiting acceptance by the BCUC – Bradam Canada Inc. (Bradam) – which includes a contractual maximum RNG supply volume of [REDACTED] GJs. Approval of the BPAs with Bradam would further increase FEI’s total contracted maximum RNG supply to [REDACTED] GJs annually.

⁴ In the Matter of FEI’s Application for Acceptance of the Biogas Purchase Agreement between FEI and the City of Vancouver, Exhibit C1-2.

⁵ In the Matter of FEI’s Application for Acceptance of the Biogas Purchase Agreement between FEI and the City of Vancouver.

⁶ Decision and Order G-122-19, page 8.

⁷ Includes only accepted agreements to date and not the agreements under consideration from Bradam Canada Inc. (Bradam).

As FEI has demonstrated above, and will further explain in this Application, the Tidal GSE BPA satisfies the three-part test under Section 2(3.8) of the GGRR.

FEI submits that satisfying the GGRR's three-part test is sufficient to determine that the Tidal GSE BPA is a prescribed undertaking. As FEI submitted in its oral submissions⁸ in the FEI Application for Acceptance of BPAs between FEI and Tidal Energy Marketing Inc. (Tidal Application), it would be an error of law to interpret section 18(1) of the CEA as a "fourth test" regarding physical GHG emissions reductions in BC that an acquisition of RNG must meet to qualify as a prescribed undertaking.⁹ Rather, the purpose language in the definition of "prescribed undertaking" in section 18(1) of the CEA sets out the purpose for which the LGIC may prescribe in a regulation certain classes of undertakings to which sections 18(2) to (4) of the CEA apply. In accordance with that purpose, the LGIC has prescribed in section 2(3.8) of the GGRR the conditions under which an acquisition of RNG qualifies as a prescribed undertaking. The BCUC accepted the acquisition of RNG from out-of-province in the Tidal BPAs by Order G-40-20.

Increasing biomethane supply aligns with a number of the energy objectives in the CEA. The acceptance of the Tidal GSE BPA will contribute to achieving these objectives.

2. PROJECT OVERVIEW

This section provides a high-level overview of the project that will supply finished biomethane to FEI under the Tidal GSE BPA (GSE Project).

2.1 PROJECT SUMMARY

The following table summarizes the GSE Project and its concordance with the GGRR's three-part test.

Table 1: Table of Concordance

Project Characteristic	Description
Is FEI acquiring biogas or biomethane?	Yes - FEI is purchasing finished biomethane from Tidal
Is FEI making a capital investment?	No
Are the costs of the capital investment recovered from the producer (if applicable)?	Not Applicable
Does the price to acquire biomethane (including any capital or operating costs incurred by FEI) exceed the \$30 per GJ maximum price at any time during the project term?	No – Section 9 of the Transaction Confirmation in the Tidal GSE BPA stipulates that the Maximum Price payable to Tidal for RNG cannot exceed the GGRR Threshold (currently set at \$30 per GJ)

⁸ In the Matter of the FEI Application for Acceptance of BPAs between FEI and Tidal, Transcript Volume 1, pp. 5-38.

⁹ In the Matter of the FEI Application for Acceptance of BPAs between FEI and Tidal, Transcript Volume 1, pp. 6-7 and 14-16.

Project Characteristic	Description
Will the project's supply of biogas or biomethane result in FEI's total annual volume of biomethane exceeding 5% of the total volume of natural gas provided by FEI to its non-bypass customers in 2015?	No

2.2 PROJECT LOCATION AND FACILITIES

Tidal has entered into a contract with [REDACTED] to purchase RNG produced from a Hydrogen Reduction facility located in London, ON. [REDACTED] will design, build, own and operate a facility capable of producing finished biomethane from organic feedstock. The facility will use Hydrogen Reduction, which is described in more detail below, to produce pipeline quality RNG, which [REDACTED] will inject into the Enbridge Distribution System. Tidal will notionally deliver the RNG to Station 2, AECO/NIT, or Huntingdon.

Figure 1: [REDACTED] Facility Location



2.3 HYDROGEN REDUCTION (HR)

The RNG industry has traditionally used the anaerobic digestion process to create biogas. While anaerobic digestion is a proven method, it has limitations in terms of scalability and availability of digestible organics. In recognition of the significant renewable gas volume targets set out in the Province's CleanBC Plan, FEI is pursuing a variety of projects using

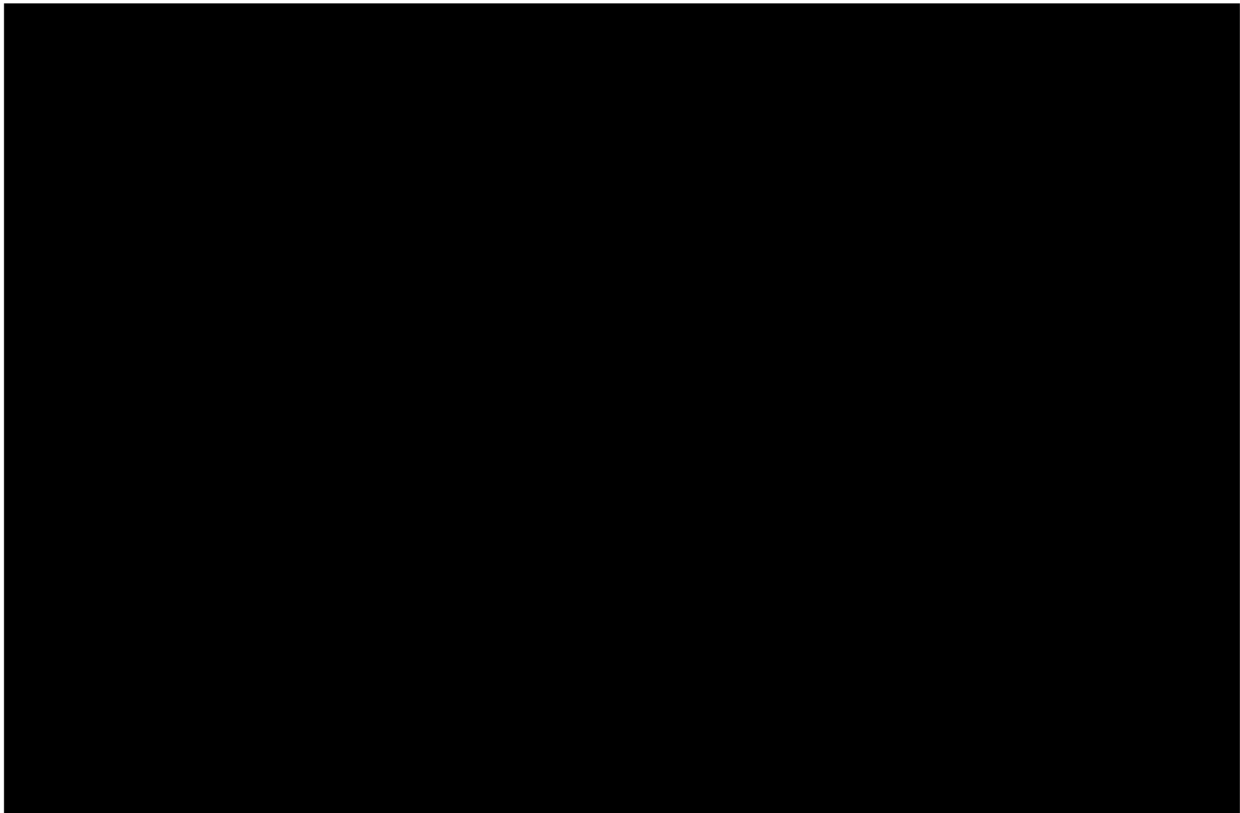
new technologies that produce RNG on a larger scale, including the GSE Project. HR is a chemical process that involves the reaction of organic molecules with hydrogen. In the case of the GSE Project, the waste material used will include a wide range of organics including residential food scraps and yard waste such as leafy material and grasses. This technology is also unique because wood could be used as feedstock. However, unlike in the process of gasification of wood waste, the presence of water in the waste stream can help improve the efficiency of the HR process.

The HR process (shown in Figure 2 below) is best characterized as a synthesis process, followed by purification. This is in contrast to digestion, which is a biological process where bacteria produce methane and other gases while consuming organic waste; the other gases are removed to leave the methane.

The HR process is briefly described below:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Figure 2: Hydrogen Reduction Process



For comparison, Table 2 below summarizes the key differences and similarities between Anaerobic Digestion and Hydrogen Reduction.

Table 2: Comparison of Anaerobic Digestion and HR

	Anaerobic Digestion	Hydrogen Reduction
Initial Gas Production	Bacteria digest organics in the absence of oxygen and produce biogas (methane, CO ₂).	Organic feedstock is heated in the presence of excess hydrogen to volatilize it into gaseous molecules (hydrogen, methane, CO, CO ₂).
Initial Capital Cost	Lower	Higher (due to scale and complexity)
Purification	Methane concentration by removal of other gases. Pre-treatment plus water wash, PSA or membrane-based system.	Methane synthesis followed by methane concentration and then by removal of other gases. This process will use water wash, followed by a membrane system to purify gases.
Final Product	Biomethane (RNG)	Biomethane (RNG)
Carbon Intensity (CI)	Typically below zero. Final CI is highly dependent on feedstock and digester heating source.	Below zero. Final CI is highly dependent on feedstock and plant electricity source.

	Anaerobic Digestion	Hydrogen Reduction
Feedstock	Organics	Organics (including wood waste)
Byproducts	Digestate CO ₂	Hydrogen, CO, CO ₂
Energy Consumption	Lower conversion efficiency of feedstock to RNG.	Higher conversion efficiency of feedstock. Higher energy out per kilogram (kg) of input versus digestion.
Scale	Projects are typically in the range of 40,000 to 150,000 GJs per year.	Large-scale RNG production. Projects typically will range from [REDACTED] GJs per year.

2.4 ***GAS ELECTRONIC DATA INTERCHANGE (GASEDI) STANDARD FORM OF CONTRACT FOR THE TIDAL GSE BPA***

FEI and Tidal have entered into a GasEDI standard form of contract for the Tidal GSE BPA, similar to the previous BCUC-accepted BPAs with Tidal, Matter Global Solutions BC Ltd. and Faromor CNG Corporation. This form of contract is similar to FEI's Rate Schedule (RS) 30 – Off-System Sales and Purchases Rate Schedule and Agreement (Canada and U.S.A.). FEI has experience using RS 30 for acquiring conventional natural gas from within or outside BC. The GasEDI standard form of contract offers an industry standard form of contract for FEI to purchase out-of-province and/or off-system RNG.

The elements of the contract specific to RNG are captured in a Transaction Confirmation (the Confirm) that is subject to the General Terms and Conditions (including special provisions) of the GasEDI. The terms and conditions of the GasEDI cover the elements of the Tidal GSE BPA that are common to all conventional natural gas transactions, while the Confirm addresses the following items:

- **Term of agreements, delivery point and quantities.** The Confirm sets out a minimum and maximum daily and annual volume which the supplier must meet. FEI has exclusive ownership of the biomethane up to the maximum annual amount.
- **Nominations.** Tidal must give FEI advance notice (3 days) for the amount of biomethane that it will deliver to FEI at the delivery point each month.
- **Environmental attributes and Carbon Intensity.** All environmental attributes, namely GHG emissions reduction benefits, of the biomethane purchased under the Tidal GSE BPA will be transferred to FEI. This ensures the full value of the RNG will be received by FEI and its customers and is the same as FEI's agreements to purchase RNG from projects located within BC. The environmental attributes, namely GHG reductions, associated with RNG are an essential element of the RNG program for customers. Tidal will ensure that the carbon intensity of the biomethane will not exceed [REDACTED] of CO₂ equivalent per megajoule. A negative carbon intensity for an RNG project arises when a project avoids methane emissions that would otherwise be vented to the atmosphere. In the Tidal GSE BPA, the avoided

methane emissions arise from capturing and processing methane from organic waste that would have otherwise gone to a landfill.

- **Reports and Audit rights.** FEI will receive regular meter data to confirm biomethane volumes and has the right to request and receive records from the GSE Project. FEI may also physically access the GSE Project.
- **Default termination payment.** In the event of default, there is a reciprocal termination payment over the term of the Tidal GSE BPA. FEI wishes to ensure that Tidal meets its long-term commitments to supply RNG while Tidal wishes to ensure FEI purchases RNG for the term of the BPA. In the event of supplier default, Tidal is obligated to supply an equal amount of RNG from the market (if available) or pay FEI an amount equal to the value of that RNG up to the maximum limits established. In the event of FEI default, Tidal is entitled to payment for the unpurchased RNG if it cannot find another buyer. This is different compared to certain RNG projects within BC, where FEI has stranded asset risk. In the Tidal GSE BPA, FEI does not have physical assets that are at risk of being stranded; this risk is borne by the supplier.

2.5 TRANSPORTATION OF FINISHED BIOMETHANE

As outlined in Clauses 4 and 9 of the Confirm, Tidal has the option to deliver finished biomethane to FEI at either the Huntingdon, Station 2 or AECO/NIT trading hubs and FEI will pay either [REDACTED] per GJ (Huntingdon) or [REDACTED] per GJ (Station 2 and AECO/NIT) based on the selected delivery point.

As part of the BPA, Tidal negotiated the flexibility to deliver biomethane to multiple delivery points. In exchange, FEI negotiated a pricing structure to account for this flexibility and to encourage delivery to Huntingdon.

FEI currently purchases term supply of conventional natural gas at both Station 2 and AECO/NIT. These are the main trading points for natural gas supply in western Canada. FEI holds firm transportation service capacity on the Westcoast and NGTL natural gas transmission systems. The costs of this service are already included as part of FEI's Storage and Transportation costs and are captured in the Midstream Cost Recovery Account (MCRA).

Since FEI already contracts for transportation service from Station 2 to Huntingdon and from AECO/NIT to Huntingdon, the biomethane purchased from Tidal will displace conventional natural gas that is currently being transported. Therefore, no incremental transportation capacity will be required to transport the biomethane to the demand centres.

3. ANALYSIS OF THE PROJECT

This section provides an analysis of the GSE Project, including the terms of the Tidal GSE BPA, the risks and mitigation measures associated with the GSE Project, and the incremental rate impact of the GSE Project for FEI's non-bypass customers.

3.1 SUMMARY OF THE TIDAL GSE BPA

The Tidal GSE BPA is a [REDACTED] agreement that allows FEI to acquire RNG from Tidal. The key elements of the Tidal GSE BPA are summarized in the table below:

Table 3: Tidal GSE BPA Summary

Item	Tidal	Confirm Contract Clause	Comment
Contract Term	[REDACTED] Years	Section 3	
Minimum Annual Volume	[REDACTED] GJs	Section 5 (b)	Represents the minimum biomethane volume that FEI agrees to purchase annually from Tidal.
Maximum Annual Volume	[REDACTED] GJs	Section 5 (d)	Represents the maximum biomethane volume that FEI agrees to purchase annually from Tidal.
Price (per GJ) delivered to Huntingdon	[REDACTED] + Inflation Factor	Section 9 (a)	Represents the price, including delivery to BC, that FEI will pay to Tidal for biomethane, subject to the maximum acquisition price in Section 9 of the Confirm.
Price (per GJ) delivered to Station 2 or AECO/NIT	[REDACTED] + Inflation Factor	Section 9 (a)	Represents the price, including delivery to BC, that FEI will pay to Tidal for biomethane, subject to the maximum acquisition price in Section 9 of the Confirm.
Inflation Factor on Price	[REDACTED]	Section 9 (b)	[REDACTED], adjusted annually each anniversary of in-service date.
Maximum Price	BCUC or BC Government RNG Supply Purchase Price	Section 9 (c)	Maximum Price as determined by FEI will not exceed the GRR maximum acquisition cost.
Delivery Point	Huntingdon, Station 2, or AECO/NIT	Section 4	Multiple delivery points provides greater flexibility to Tidal and is neutral for FEI due to the pricing structure and because FEI has firm transportation contracts in place to deliver gas from the Station 2 and AECO/NIT trading hubs to its system.
Carbon Intensity (CI)	[REDACTED] kgCO ₂ e/GJ	Section 10	CI of the biomethane will be [REDACTED] kgCO ₂ e per GJ.

3.2 RISKS AND MITIGATION

FEI is not providing any capital investment to Tidal as part of the Tidal GSE BPA and is thus assuming no capital risk. As the GSE Project is located out-of-province, FEI has obtained contractual assurances from Tidal within the BPA on the biomethane volume and quality. FEI also has the ability to audit the GSE Project in order to ensure accuracy of volumes, gas quality and carbon intensity.

FEI has included measures to mitigate risk to ensure that the Tidal GSE BPA is consistent with previous biomethane projects and established criteria for biogas or biomethane purchase agreements. The risks and associated mitigation measures are summarized in Table 4.

Table 4: Risks and Mitigation

Risk Item	Description of Risk Item	Risk Mitigation	Description of Risk Mitigation
Biomethane Purchase from Out-of-province Supply	FEI is purchasing RNG in the same manner as it purchases conventional natural gas from out-of-province.	Gas EDI	The GasEDI standard form of contract for the Tidal GSE BPA relies on established and tested terms and conditions used for many years across North America.
Acquisition Price	The purchase price of RNG plus any costs incurred by FEI must not exceed the regulated maximum.	Section 9, Contract Price	Section 9 of the Confirm states that the purchase price must not exceed the maximum regulated purchase price established by the Province of BC.
Supplier Default	In the event the supplier defaults and is unable to deliver Biomethane to FEI, FEI may be at risk of being in a supply deficit for its voluntary program.	Section 15, Remedies for Default	In the event of default by Tidal, it is obligated to pay a termination payment. FEI requires security in the form of a letter of credit that covers the termination payment.
Technical Risk	Hydrogen Reduction underperformance.	Confirm Section 1 (Default) (v)	Tidal will be required to supply the Minimum Annual Volume or be considered in default whereby FEI may terminate and be entitled to the termination payment.
Stranded Assets	FEI assets not recoverable in the event the agreement is terminated.	Gas EDI/Confirm	Tidal assumes all asset risk. FEI is not providing any capital investment in the GSE Project; therefore, there is no risk to FEI of stranded assets.

3.3 *COST OF SERVICE AND INCREMENTAL RATE IMPACT*

The cost of service associated with the Tidal GSE BPA includes the price paid to Tidal for biomethane, which is either [REDACTED] or [REDACTED] per GJ escalated annually by [REDACTED] up to a maximum price of \$30 per GJ, as specified in Section 9 of the Confirm. The acquisition price is dependent on the delivery point – if Tidal delivers the RNG to Huntingdon than the acquisition price is [REDACTED] per GJ whereas if Tidal delivers the RNG to Station 2 or AECO/NIT, the acquisition price will be [REDACTED] per GJ.

To calculate the cost of service and incremental rate impact, FEI used an expected annual volume of [REDACTED] GJs and an expectation of [REDACTED] percent delivery to Huntingdon and [REDACTED] percent delivery to Station 2 and AECO/NIT for the duration of the Tidal GSE BPA term. These assumptions regarding volumes and delivery point percentages are based on information provided by Tidal.

The incremental rate impact associated with the Tidal GSE BPA is the difference between the biomethane acquisition cost and the amount recovered from biomethane customers at the current Biomethane Energy Recovery Charge (BERC) rate. FEI has calculated the initial delivery rate impact to non-bypass residential customers due to the difference between costs and recoveries to be 0.66 percent or \$0.031 per GJ¹⁰, resulting in an average annual bill impact of \$2.75. This analysis is based on an average residential customer who consumes 90 GJs per year.

4. APPROVALS SOUGHT

In this Application, FEI respectfully seeks acceptance from the BCUC of the Tidal GSE BPA, pursuant to section 71 of the UCA and the Rules, as a prescribed undertaking under section 18 of the CEA and the GGRR.

FEI further requests, as explained on page 2 of the Application, that the confidential, unredacted version of this Application, including the unredacted version of the Tidal GSE BPA attached as Appendix A, and the confidential financial schedules attached as Appendix B, be treated as confidential by the BCUC pursuant to section 71(5) of the UCA, Section 18 of the BCUC's Rules of Practice and Procedure regarding confidential documents adopted by Order G-15-19, and Section 6.0 of the Rules for Natural Gas Energy Supply Contracts.

A draft form of order sought is provided in Appendix C.

5. CONCLUSION

Given the growing demand and the policy direction in BC to increase renewable gas supply to 15 percent by 2030, RNG supply obtained from out-of-province projects is a vital part of FEI's RNG supply mix. RNG supply from outside of BC provides a further opportunity to grow the program and reach the CleanBC target of 15 percent renewable gas.

¹⁰ Appendix B, Schedule 12, Line 10.

Based on responses FEI received for its 2018 Request for Expression of Interest, FEI sees an opportunity to secure multiple long-term contracts ahead of other jurisdictions that have been slower in their adoption of RNG. Because FEI is one of the first utilities to acquire RNG, it has the advantage of securing RNG at better prices than if it were competing for the gas with other jurisdictions. A lower price of acquisition from outside of BC will provide an opportunity to secure an overall lower average RNG supply pool cost.

Finally, the GSE Project meets the requirements of the three-part test as a prescribed undertaking under the GGRR. The GSE Project is to acquire RNG, at a maximum acquisition price not exceeding the \$30 per GJ threshold, and FEI's annual volumes of biomethane supply will remain below the maximum volume. As such, the Tidal GSE BPA should be accepted by the BCUC under section 71 of the UCA as a prescribed undertaking under the GGRR.

If further information is required, please contact Scott Gramm, Manager, Renewable Natural Gas, at (604) 576-7242.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Doug Slater

Attachments

Appendix A

FEI-TIDAL BIOMETHANE PURCHASE AGREEMENT

TRANSACTION CONFIRMATION

Date: _____
("Effective Date")

Transaction Confirmation #: _____

This is a Transaction under the GasEDI Base Contract for the Sale and Purchase of Biomethane dated March 19, 2019 ("Base Contract") and the Special Provisions attached to the Base Contract made between the parties hereto and is made subject to the condition set forth in Section 16 of this Transaction Confirmation.

IT IS AGREED:

1. Definitions.

- (a) Capitalized terms used, but not defined in this Transaction Confirmation, have the meanings given to those terms in the General Terms and Conditions of the Base Contract and in addition:

"Biogas" means raw gas composed primarily of methane derived from the decomposition of organic matter.

"Biomethane" means pipeline quality Gas derived from the decomposition of organic matter. Pipeline quality means meeting the gas quality requirements of the receiving pipeline at the Delivery Point.

"Carbon Offsets" means, for the purposes of calculating Market Value, Offsets that are created from emissions reduction at a facility or project located in Canada and are verified using a standard that is at least equivalent to the protocols established under the British Columbia Greenhouse Gas Emission Control Regulation or a replacement standard which might include, but is not limited to, standards that are recognized by the International Carbon Reduction & Offset Alliance (ICROA) as compliant with the ICROA Code of Best Practice.

"Commodity Cost Recovery Charge" means the Buyer's cost to supply conventional Gas to its utility customers which shall be established by the Commodity Cost Recovery Charge set out in the Buyer's Table of Charges in Rate Schedule 1 for Residential Service as approved by the British Columbia Utilities Commission from time to time.

"Condition" means the condition set out in Section 16 of this Transaction Confirmation.

"Condition Removal Date" means the date set out for the removal of the condition in Section 16 of this Transaction Confirmation.

"Contract Quantity" shall mean the quantity of Biomethane to be delivered and received pursuant to this Transaction.

"Contract Year" means each twelve (12) consecutive month period starting on the Start Date.

"Director" means the British Columbia government employee designated as the director for the purposes of the RLCFRA.

"Environmental Attribute" means

- (i) all attributes associated with, or that may be derived from the actual or assumed reduction, displacement or offset of emissions associated with the Facilities;
- (ii) the right to quantify and register the interests and rights associated with such attributes or characteristics with competent authorities;
- (iii) any existing or future instrument, including any Offset, environmental emission allowances and reduction credits, reduction right, allowance, certificate or other unit of any kind whatsoever, whether or not tradable and any other proprietary or contractual right, whether or not tradable, and any resulting from, or otherwise related to the actual or assumed reduction, displacement or offset of emissions associated with, or that may be derived from the actual or assumed reduction, displacement or offset of emissions associated with the Facilities and related activities;
- (iv) all revenues, entitlement, benefits and other proceeds arising from or related to the foregoing.

"Facilities" means a hydrogen reduction facility located in London, Ontario.

"Green Premium" means the difference between the Contract Price and the Commodity Cost Recovery Charge.

"Market Value" The market value of the Transaction means the net present value (applying the Present Value Discount Rate) of the product of (1) the Minimum Annual Quantity for each Contract Year (or part of a Contract Year, prorated) remaining under the Transaction set out in this Confirmation multiplied by (2) a market price for a similar transaction considering the Environmental Attributes of the Biomethane and the remaining Delivery Period, Contract Quantity and Delivery Point, either as follows:

- (i) in the case of default by Seller, at the Buyer's option, either as
 - (a) a transaction consisting of Biomethane; or,
 - (b) a transaction consisting of conventional Gas plus Carbon Offsets equal to the greenhouse gas reduction that would have been achieved by the Biomethane supply for the remainder of the Transaction; the number of Carbon Offsets to be equivalent to the product of (1) the difference between 0.05 metric tonnes of CO₂e/GJ (being the CO₂ equivalency of conventional Gas) and the carbon intensity of the Biomethane set out in Section 10 multiplied by (2) the Minimum Annual Quantity for each Contract Year (or part of a Contract Year

prorated) remaining under the Transaction, provided such carbon Offsets with the required quality are readily available in the market, and

- (ii) in the case of default by Buyer, the higher of:
 - (a) a transaction consisting of Biomethane; or,
 - (b) a transaction consisting of conventional Gas plus Carbon Offsets equal to the greenhouse gas reduction that would have been achieved by the Biomethane supply for the remainder of the Transaction; the number of carbon Offsets to be equivalent to the product of (1) the difference between 0.05 metric tonnes of CO₂e/GJ (being the CO₂ equivalency of conventional Gas) and the carbon intensity of the Biomethane set out in Section 10 multiplied by (2) the Minimum Annual Quantity for each Contract Year (or part of a Contract Year prorated) remaining under the Transaction, and

The Non-Defaulting Party shall determine the Market Value using good faith and in a commercially reasonable manner but is not required to actually enter into a transaction in order to determine the market price.

"Offset" means any credits, emission offsets or other tradable or recognized instruments issued or granted by a government or program authority or recognized under a regulation, in recognition of emission reductions or sequestration that may be applied to achieving compliance with any emissions related obligations or commitments whether voluntary or mandatory.

"Production Audit" means the records and physical audit described in Section 13 of this Transaction Confirmation.

"Production Location" means London, Ontario.

"RLCFRA" means the British Columbia Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act and its regulations and amendments thereto.

"Upstream Seller" means Tidal Energy Marketing Inc. and [REDACTED]

"Start Date" means the start date for the delivery of Biomethane to the Buyer set out in Section 3.

- (b) For the purposes of this Transaction Confirmation, the definition of Event of Default set out in the General Terms and Conditions of the Base Contract shall be replaced by the definition set out below:

"Event of Default" shall mean

- (i) the failure to make payment when due under the Contract, which is not remedied within two (2) Business Days after receiving Notice thereof (except

- for a failure to make an Accelerated Payment Invoice which shall immediately constitute an Event of Default);
- (ii) the making of an assignment or any general arrangement for the benefit of creditors, the filing of a petition or otherwise commencing, authorizing, or acquiescing in the commencement of a proceeding or cause under any bankruptcy or similar law for the protection of creditors or having such petition filed or proceeding or cause under any bankruptcy or similar law for the protection of creditors commenced against it, any bankruptcy or insolvency (however evidenced) or the inability to pay debts as they fall due;
 - (iii) the failure to provide Performance Assurance in accordance with Section 10.1 of the General Term and Conditions;
 - (iv) Seller's failure to deliver at least the Minimum Daily Quantity or the Minimum Annual Quantity unless:
 - (a) excused by supply interruption in accordance with Section 8 (Basis of Sale, Purchase) of this Transaction Confirmation,
 - (b) excused by Buyer's Non-Performance, or
 - (c) prevented by Force Majeure in accordance with Section 11 of the General Terms and Conditions as amended by the Special Provisions (Force Majeure);
 - (v) Buyer's failure to receive up to the Maximum Daily Quantity or the Minimum Annual Quantity unless:
 - (a) excused by supply interruption in accordance with Section 8 (Basis of Sale, Purchase) of this Transaction Confirmation,
 - (b) excused by Seller's Non-Performance, or
 - (c) prevented by Force Majeure in accordance with Section 11 of the General Terms and Conditions as amended by the Special Provisions (Force Majeure);
 - (vi) breach by Seller of any representation or warranty set forth in Section 10 (Environmental Attributes) of this Transaction Confirmation or its obligations under Section 14 (Part 3 Fuel under the RLCFA);
 - (vii) a Buyer's finding or, in the case a dispute was arbitrated, an arbitrator's decision made pursuant to the Production Audit finds that the gas delivered hereunder does not meet the definition of Biomethane under Section 1 (Definitions);
 - (viii) if Buyer is prevented from completing a Production Audit due to the actions or inaction of the Seller or Upstream Seller which is not remedied within ten (10) Business Days after receiving Notice thereof; or
 - (ix) the failure to perform any other material obligation under the Contract, which is not remedied within ten (10) Business Days after receiving Notice thereof.

2. Parties.

Seller: Tidal Energy Marketing Inc.
Buyer: FortisBC Energy Inc.

3. Delivery Period.

Start Date:

- (a) Buyer acknowledges that Seller will source the entire quantity of Biomethane from the Upstream Seller's Facilities which are being designed and constructed;
- (b) Buyer shall provide Seller with written notice of the date on which the condition in Section 16 (a) is waived or satisfied;
- (c) Seller shall provide Buyer with written notice of the date on which the Facilities are fully operational and the Seller will begin to deliver Biomethane to the Buyer as soon as reasonably practicable (the "Start Date") but in any event the Start Date shall be no later than the earlier of (a) thirty-six (36) months after the date referred to in Section 3(b) and (b) thirty-six (36) months after the Condition Removal Date; If no such notice is provided by Seller to Buyer by six (6) months after the Condition Removal Date], then Buyer shall elect, at its sole and unfettered discretion, by written notice to Seller by seven (7) months after the Condition Removal Date either:
 - (i) terminating this Transaction Confirmation effective immediately by providing written notice to Buyer without penalty or further liability; or
 - (ii) specifying a later date as the amended Start Date; and
- (d) in the case of subsection 3(c)(ii) above, if the Seller cannot commence delivery of Biomethane on the amended Start Date, then Buyer shall elect to either: (i) terminate this Transaction Confirmation effective on the amended Start Date; or (ii) specify a later date as the amended Start Date. In the case of the latter, the provisions of this section shall apply to each additional amended Start Date, if any.

End Date: [REDACTED] Contract Years from the Start Date.

- 4. **Delivery Point.** Huntingdon, British Columbia, Station 2, British Columbia or Nova Inventory Transfer ("NIT").
- 5. **Contract Quantity of Biomethane.** All Gas supplied by the Seller to the Buyer pursuant to this Transaction shall be exclusively Biomethane from the Facilities in the Contract Quantity below:
 - (a) Minimum Daily Quantity: [REDACTED] GJ per day.
 - (b) Minimum Annual Quantity: [REDACTED] GJ per Contract Year
 - (c) Maximum Daily Quantity: [REDACTED] GJ per day. Seller may exceed Maximum Daily Quantity on a case-by-case basis, at Buyer's discretion, in order to meet but not exceed Maximum Annual Quantity.
 - (d) Maximum Annual Quantity: [REDACTED] GJ per Contract Year. Buyer, may, at its discretion, accept more than the Maximum Annual Quantity.
- 6. **Exclusivity.** The Seller covenants to supply Buyer exclusively with all the Biomethane produced by the Seller at the Facilities and any expansions thereof, up to the Maximum Annual Quantity.
- 7. **Nominations.** At least three (3) Business Days prior to the start of each Month, Seller shall notify Buyer of the quantity of Biomethane that the Seller shall nominate for delivery

at the Delivery Point on each Day for that Month and the Delivery Point for that Month. The Seller may only nominate to one Delivery Point in each Month. Without expanding or limiting the Seller's obligation to supply the Minimum Daily Quantity, the Seller may revise its daily nominations for that month in the event of unplanned maintenance of the Facilities or for reasons of Force Majeure (as set out in the General Terms and Conditions and the Special Provisions). These obligations are in addition to those set out in Section 4.2 of the General Terms and Conditions.

8. Basis of Sale, Purchase. Firm, subject to the following: Seller shall not be considered to be in default of the Contract if its failure to supply the Minimum Daily Quantity is for the following reasons:

- (a) Upstream Seller is undertaking maintenance or repair on the Facilities;
- (b) an interruption of electricity service by the electric LDC that prevents the production of RNG; or
- (c) an interruption of service by gas utility serving the Facilities that prevents the production of RNG
and on the conditions that:
- (d) Upstream Seller is diligently undertaking maintenance or repair on the Facilities or otherwise using reasonable efforts to minimize the supply interruption;
- (e) Seller provides as much notice to the Buyer as Seller is reasonably able, of supply interruptions and maintenance and repair, whether planned or unplanned, and the anticipated length thereof; and
the number of days of actual or anticipated supply interruption does not exceed ninety (90) days in any one Contract Year.

In the event of Force Majeure, the Minimum Annual Quantity shall be reduced by an amount equal to the Minimum Daily Quantity multiplied by the number of Days on which a party is excused by reason of Force Majeure, in accordance with the conditions set out in Section 11 of the General Terms and Conditions (as amended by the Special Provisions) during the same Contract Year.

9. Contract Price.

- (a) Subject to subsection (b) below, the Contract Price per GJ (the "Base Rate") payable for the Contract Quantity at each Delivery Point is:

Huntington		
Station 2		
NIT		

- (b) Subject to subsection (c) below, commencing from the November 1st occurring after the first anniversary of the Start Date and on every November 1st thereafter, the Base Rate will be adjusted by the percentage increase, if any, in the [REDACTED] over the previous year.
- (c) No adjustment will be made which results in the applicable rate payable by the Buyer exceeding the applicable of:

- (i) the then current maximum RNG supply purchase price approved by the British Columbia Utilities Commission; or
- (ii) the maximum RNG supply purchase price established by the Province of British Columbia.

10. Environmental Attributes and Representations.

- (a) Seller represents and warrants that the Biomethane produced is generated through a hydrogen reduction process of organic matter and is not supplemented, replaced in whole or in part with fuels purchased or extracted other than from the Production Location.
- (b) Seller represents that the calculated carbon intensity of the Biomethane shall be [REDACTED] grams of CO₂ equivalent or less per mega joule (gCO₂e/MJ) and as soon as commercially reasonable after the Start Date, shall provide the Buyer with a report as described in Section 12 (*Carbon Intensity Reports* below) calculating the carbon intensity and the calculated carbon intensity of the Biomethane shall not exceed [REDACTED] gCO₂e/MJ during the Term of the Contract.
- (c) Seller represents and warrants that, under the contractual agreement for the purchase of Biomethane with the Upstream Seller and, all Environmental Attributes that could be associated with the produced Biomethane at the time of delivery to Buyer are attached thereto and that neither the Biomethane nor the Environmental Attributes associated therewith have been sold more than once by either the Seller or, by the Upstream Seller, at any point between production and sale to Buyer whether by sales into carbon markets or otherwise.
- (d) Seller represents and warrants that Seller does not have and no third party has, any claim to the Environmental Attributes associated with the Biomethane purchased by Buyer under this Transaction Confirmation.
- (e) Seller represents and warrants that, up to the point of delivery to Buyer, neither the Environment Attributes nor the Biomethane have been used by Seller or the Upstream Seller to meet any federal, state, provincial or local renewable energy requirement, renewable energy procurement, renewable energy portfolio standard, or other renewable energy mandate.
- (f) Seller shall transfer to Buyer at the Delivery Point all Environmental Attributes, whether current or future, known or unknown at the time of delivery, associated with the Biomethane along with the transfer of title in the Biomethane.

11. Reports. Seller shall provide Buyer the following information, in respect of the Month of delivery, and supporting documentation acceptable in industry practice:

- (a) daily production volume of Biomethane produced at the Facilities;
- (b) daily Gas nominations made by Seller in total on the Enbridge Gas Inc. pipeline system; and
- (c) daily load balancing account activity.

12. Carbon Intensity Report. Seller shall provide Buyer with a report by January 15 of each Contract Year, certifying the carbon intensity of the Biomethane produced at the Facilities and delivered to the Buyer during the previous calendar year. The carbon intensity shall be calculated in accordance with the requirements of the government of

British Columbia as set out in section 6 (6) of the RLCFRA and shall be certified by an Officer of the Upstream Seller.

13. Production Audit.

- (a) Seller shall, upon reasonable request by Buyer provide the following:
- (i) no more than twice in any 12-month period, records and other documentation; and
 - (ii) no more than once in any 12-month period, to provide Buyer and Buyer's consultant with reasonable and physical access to the Facilities;

for the purpose of confirming compliance with the obligations, representations and warranties regarding the Biomethane and the Environmental Attributes associated therewith.

- (b) No more than twice in any 12-month period, Buyer may request Seller to confirm in writing that the representations and warranties concerning the Biomethane and Environmental Attributes associated therewith, as made by Seller, under Section 10 (*Environmental Attributes*) remain valid.
- (c) Seller agrees to cooperate and provide all reasonable assistance to Buyer regarding any audit of the Facilities for the purpose of confirming compliance with the obligations, representations and warranties regarding the Biomethane and the Environmental Attributes associated therewith and shall seek the co-operation and reasonable assistance of Upstream Seller to Buyer for the same purposes.
- (d) If Buyer, acting reasonably, finds that the obligations, representations or warranties regarding the Biomethane and the Environmental Attributes associated therewith are in non-compliance with this Transaction Confirmation, then Seller may, acting reasonably, dispute such finding. Each Party agrees to provide the other Party and Upstream Seller with its findings and supporting documentation and agrees to cooperate, in good faith, with each other and with Upstream Seller to resolve the dispute.
- (e) Any dispute of the nature described in, and not resolved under, subsection (b) above shall be resolved in accordance with Section 13.10 of the Special Provisions to the GasEDI Base Contract.

14. Part 3 Fuel under the RLCFRA.

- (a) Seller acknowledges that Buyer may wish to resell Biomethane purchased under this agreement to its customers in British Columbia who may intend to use Biomethane as a transportation fuel and Buyer and its customers wish to report such use under Part 3 of the RLCFRA.
- (b) Immediately following the Start Date, Seller shall apply under the RLCFRA for a determination by the Director of the carbon intensity of the Biomethane supplied to Buyer under this Agreement for the purposes of Part 3 of the RLCFRA and observe the requirements of the RLCFRA applicable to a producer of Part 3 fuel.
- (c) If the Seller becomes aware that the carbon intensity of the Biomethane will change or has changed, Seller shall promptly give written notice required by the RLCFRA and shall provide a copy of such notice to the Buyer.

- (d) Seller shall apply for new determination of the carbon intensity of the Biomethane changes or if the determination by the Director has expired.
- (e) Seller may authorize Buyer to act on its behalf in applying for a determination by the Director of the carbon intensity of the Biomethane.
- (f) Seller shall indemnify and hold Buyer, its directors, officers, agents and employees harmless from and against all actions, claims, damages, costs and expenses which may be brought against or suffered by Buyer, its directors, officers, agents and employees arising out of any failure by the Seller to comply with the provisions of this Section 14.

15. Remedies for Default.

- (a) Section 3.2 of the GasEDI Base Contract shall not apply to this Transaction.
- (b) For the purposes of this Transaction, the definition of Market Value set out in Section 2.1 of the GasEDI Base Contract shall not apply to this Transaction and the definition of Market Value set out in Section 1 (*Definitions*) of this Transaction Confirmation shall apply.
- (c) For the purposes of Section 10.1, 10.3 and 10.4 of the GasEDI Base Contract, the Total Termination Payment of this Transaction shall not exceed the Minimum Daily Quantity multiplied by [REDACTED] multiplied by the Contract Price in effect at the time. The Total Termination Payment is a reasonable pre-estimate of the loss suffered and is not intended as a penalty.
- (d) If Buyer's determination or, in the case a dispute was arbitrated, an arbitrator's decision made pursuant to the Production Audit, finds that the Gas delivered under this Transaction failed to meet the definition of Biomethane under Section 1 (*Definitions*) or the Environmental Attributes delivered were not associated with the Biomethane as represented and warranted under Section 10 (*Environmental Attributes*) then, Seller shall either not charge or return the Green Premium paid by Buyer in respect of such Gas.

16. Condition.

- (a) This Transaction shall be of no force or effect unless the following conditions ("*Conditions*") are satisfied or waived by Buyer on or before [REDACTED] ("*Condition Removal Date*"):
 - (i) this Transaction has obtained the necessary regulatory approvals, if any, required to be obtained by Buyer to purchase energy, including but not limited to approval from the British Columbia Utilities Commission.
 - (ii) the Seller has provided to the Buyer as Performance Assurance [REDACTED] of the Total Termination Payment.
- (b) In the event the Buyer has submitted an application to the British Columbia Utilities Commission for the approval of this Transaction no less than three (3) months before the Condition Removal Date, and the British Columbia Utilities Commission has not made its decision by the Condition Removal Date, the Condition Removal Date shall be automatically extended for another three (3) months.

(c) Buyer shall make reasonable good faith efforts to satisfy or, shall waive, the Condition by the then-current Condition Removal Date. Buyer shall provide written notice of the satisfaction or waiver of the Condition, if any, on or prior to the Condition Removal Date.

17. **Change of Law.** If on or after the date of this Agreement, there is any change to the methodologies prescribed by a governmental authority under applicable laws and regulations for calculating the carbon intensity of fuels (including, but not limited to, changes in quantification methods, emission factors, global warming potentials, and other input values) with which Buyer or Seller is required to comply and, as a result, a party is unable to comply with, or faces a materially negative impact from one or more provisions of this Agreement (a "Change"), then, at the written request of either party, the parties shall enter into good faith negotiations and may amend this Agreement to take account of the Change or, if agreed, take such other actions as commercially reasonable to take account of the Change, so that the Transactions contemplated hereunder can be completed in keeping with the intentions of the parties at the time of entry into the Agreement.

Executed by the Parties on the dates specified below.

TIDAL ENERGY MARKETING INC.

Signed

Judd Florence
Name **President**
Tidal Energy Marketing Inc.

Title

Date

10/21/2019

FORTISBC ENERGY INC.

Signed: Roger Dall'Antonia
President & CEO
FortisBC

Name

Title

Date

10/08/2019

Appendix B
FINANCIAL SCHEDULES

FILED CONFIDENTIALY



ORDER NUMBER

E-xx-xx

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

and

FortisBC Energy Inc.
Application for Acceptance of a Biomethane Purchase Agreement between
FortisBC Energy Inc. and Tidal Energy Marketing Inc.

BEFORE:

[Panel Chair]
Commissioner
Commissioner

on Date

ORDER

WHEREAS:

- A. On May 21, 2020, pursuant to section 71 of the *Utilities Commission Act* (UCA), FortisBC Energy Inc. (FEI) filed with the British Columbia Utilities Commission (BCUC) an application for acceptance of a Biomethane Purchase Agreement (BPA) between FEI and Tidal Energy Marketing Inc. (Tidal) for a renewable natural gas (RNG) project (Application);
- B. The Application satisfies the criteria for an acquisition of RNG (also referred to as biomethane) as a prescribed undertaking under the *Greenhouse Gas Reduction (Clean Energy) Regulation* (GGRR);
- C. By Order G-130-06 dated October 26, 2006, the BCUC approved the Rules for Natural Gas Energy Supply Contracts (Rules). The Rules are intended to facilitate the BCUC's review of natural gas supply contracts pursuant to section 71 of the UCA;
- D. On April 18, 2010, the Province of BC enacted the *Clean Energy Act* (CEA). The CEA established a number of energy objectives and provided that the Lieutenant Governor in Council (LGIC) can prescribe undertakings to encourage public utilities to pursue certain greenhouse gas (GHG) reducing initiatives;
- E. On May 14, 2012, the LGIC issued Order in Council (OIC) 295/2012 approving the GGRR, which described classes of prescribed undertakings pursuant to section 18 of the CEA;
- F. On March 21, 2017, by OIC 161/2017, the LGIC approved an amendment to the GGRR which, among other things, indicated that the acquisition of RNG is a prescribed undertaking subject to:
 - the public utilities paying no more than \$30 per gigajoule (GJ); and

- the total volume of RNG purchased in a calendar year not exceeding 5% of the total volume of natural gas provided by a public utility to its non-bypass customers in 2015.
- G. Section 18(3) of the CEA states that “the commission must not exercise a power under the UCA in a way that would directly or indirectly prevent a public utility...from carrying out a prescribed undertaking.”;
- H. FEI requests that the redacted portions of the Application and certain appendices be kept confidential due to their commercially sensitive nature; and
- I. The BCUC has not reviewed the Application from a public interest perspective as it is a prescribed undertaking.

NOW THEREFORE pursuant to section 71 of the UCA, the Rules and section 18 of the CEA, the BCUC accepts the BPA between FEI and Tidal. The BCUC will keep the redacted portions of the Application and certain appendices confidential as requested by FEI as they contain commercially sensitive information.

DATED at the City of Vancouver, in the Province of British Columbia, this (XX) day of (Month Year).

BY ORDER

(X. X. last name)
Commissioner

Attachment (Yes? No?)