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February 28, 2023

Borden Ladner Gervais LLP
1200 Waterfront Centre
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Vancouver, BC
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Attention: Rick Williams

Dear Rick Williams:

Re: FortisBC Energy Inc. (FEI)

Revised Renewable Gas Program Application – Stage 2 (Application)

FEI Rebuttal Evidence to Kurt G. Strunk, Managing Director of NERA Economic Consulting (Strunk) Intervener Evidence

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In accordance with the amended regulatory timetable established in British Columbia Utilities Commission Order G-28-23, FEI hereby files its Rebuttal Evidence to Strunk Intervener Evidence in the above referenced proceeding.

If further information is required, please contact the undersigned.

Sincerely,

FORTISBC ENERGY INC.

Original signed:

Sarah Walsh

Attachments

cc (email only): Commission Secretary
Registered Parties

Biomethane Energy Recovery Charge Rate Methodology and Comprehensive Review of a Revised Renewable Gas Program

Rebuttal Evidence
of FortisBC Energy Inc.

to the Intervener Evidence of Kurt G. Strunk filed by the City of Vancouver et al.

February 28, 2023

1. REBUTTAL TO THE EVIDENCE OF KURT G. STRUNK

Q1: What is the purpose of this Rebuttal Evidence?

A1: In this Rebuttal Evidence, FEI responds to the evidence of Kurt G. Strunk, Managing Director of NERA Economic Consulting (Exhibit C7-5) filed jointly by the City of Vancouver, the City of Richmond, the Metro Vancouver Regional District, the District of North Vancouver, the District of Saanich, the City of Victoria and Lulu Island Energy Company Ltd. The capitalized terms in this Rebuttal Evidence are defined in the Application. For example, "FEI" or the "Company" refers to FortisBC Energy Inc.

Although FEI has addressed a number of matters in this Rebuttal Evidence, FEI's silence on any particular matter should not be construed as agreement.

Further, attached as Appendix A to FEI's Rebuttal Evidence is the rebuttal evidence of Mr. John J. Reed, Chairman and Chief Executive Officer of Concentric Energy Advisors Inc. (Concentric) who provides his independent, expert opinion in response to certain statements of Mr. Strunk.

Q2: Mr. Strunk states at pages 6 to 7 of his evidence that: "FEI stated in its application that the RNG blend for these customers is estimated to be 1 percent in 2024, escalating to a target of 15 percent in 2030.[1] However, FEI referenced a higher target 2024 blend of 14 percent in its discovery responses, which it now projects will escalate to 33 percent in 2030.[2]" Please explain why FEI refers to a higher target in its response to CoR IR2 19.5 compared to what is in the Application?

A2: The RNG Blend that sales service customers will experience between 2024 to 2030 and beyond is dependent on a number of factors:

- The supply of RNG and other low carbon energy that FEI is able to procure to meet Provincial GHG reduction targets;
- The ability of FEI to secure RNG supply;
- The demand for RNG through the Voluntary Renewable Gas service offering;
- The demand for RNG through the Renewable Gas Connections service offering;

[1] Note that the FEI application states that FEI is targeting 15 percent by 2030. (Exhibit B-11, FEI Stage 2 Comprehensive Review and Revised Renewable Gas Program Application (FEI Application), at 29.) However, it projects a blend that escalates to 11 percent by 2032. (Id., at 123.)

[2] Exhibit B-49, FEI Response to City of Richmond (CoR) Information Request (IR) No. 2, Attachment 19.5, Sheet "Program Design", Row 216.

- The demand for RNG by T-Service (typically, Industrial) customers;
- The demand for RNG by Transportation (i.e. vehicles) customers; and
- Any changes to Provincial legislation setting out the volume of renewable and low carbon gas that FEI is enabled to acquire.

In the Application, FEI estimated that the percent Renewable Gas Blend for sales service customers would range between 1 percent to 14 percent for 2024 to 2030, which was based on the assumption of a Renewable Gas acquisition volume of 30 PJ aligned with Provincial regulation. In response to City of Richmond IR2 19.5 and as requested by City of Richmond, FEI used a different assumption for the acquisition volume, of approximately 60 PJ, which produced a Renewable Gas Blend of 14 percent[3] to 33 percent.

However, both the estimates in the Application and the response to COV IR2 19.5 are only two possible futures of the Renewable Gas Blend that may occur.

As discussed in the response to CoR IR2 19.5, the volumes of energy delivered by FEI and pathways to meet the Province's targeted emissions reductions are expected to vary from what is assumed in that IR response. The Provincial emission cap has not been set out in legislation, and final targets, mechanisms for meeting the targets, and customer groups (such as sales service, transportation Service and bypass and special rates customers) that will be affected by the legislation have not been determined. Once targets and rules are clear, FEI will endeavor to meet these compliance targets. This will be an iterative process that changes regularly as FEI has success or failure in reducing emissions by various actions. Given the immaturity of the market, unknown demand, unsettled targets, and unspecified legislation, FEI is not able to determine with certainty the RNG Blend in 2030, whether it be 14 percent, 33 percent or some other percent.

Q3: Mr. Strunk states on page 8 of his evidence that the S&T LC Rider is a "catch-all rider" that has "nothing to do with storage or transportation costs". Is this characterization accurate?

A3: No, Mr. Strunk's characterization of the S&T LC Rider is inaccurate. The S&T LC Rider does not recover the costs of storage and transport resources that are contracted for activities that take place upstream of its distribution system. The name of the rider is reflective of the charge to which the rider will be attached, FEI's Storage and Transport Charge. As discussed in Mr. Reed's response to BCUC IR1 13.2, the cost to acquire renewable and low carbon gas is a compliance cost in response to governmental objectives and policy. The reason that FEI has proposed to attach the rider to FEI's Storage and Transport Charge is to ensure customers that acquire gas through FEI's

[3] Note that in order for FEI to respond to CoR IR2 19.5, FEI straight lined the growth of RNG from 2023 to 2030, reaching 60 PJ as requested by the IR. What is more likely to occur, if FEI were to follow the pathway as set out in response to CoR IR2 19.5 and acquire 60 PJ of RNG, is that growth would be less straight line and more exponential; therefore it is unlikely that FEI would have enough RNG to provide a 14 percent RNG blend in 2024.

Customer Choice program will also receive renewable gas and contribute to the recovery of emissions reductions compliance costs. Additionally, the mechanism proposed in this Application, to attach this compliance cost to FEI's Storage and Transport Charge, is to ensure that all customers to which FEI supplies energy in the form of conventional or renewable resources, for both existing and new customers, bear this cost in such a fashion that their annual bills are equal[4] at equivalent use rates.

Q4: On page 14 of his evidence, Mr. Strunk says: "It is my understanding that under the applicable regulations, newly-connected residential customers are not mandated to take 100 percent RNG in 2024. Thus, the characterization that the Renewable Gas Connections service is mandated misconstrues the factual circumstances." Is Mr. Strunk correct?

A4: No, it is Mr. Strunk who is mischaracterizing the factual circumstances. There are, of course, no regulations that explicitly mandate that residential customers must use 100 percent RNG. There are, however, regulations that can only be met with a low carbon resource, such as electricity or RNG. By ruling out conventional natural gas, RNG is in effect mandated in some municipalities for any residential customer that seeks to access gas service.

As described in Appendix A of the Application, various local governments are adopting policies and regulations to achieve emissions reductions in buildings, which, by design, effectively rule out the use of conventional natural gas in new residential buildings. Further, the Provincial Government has recently released amendments to the building code that provide an opt-in Zero Carbon Step Code (formerly known as the Carbon Pollution Standard), which takes effect May 1, 2023. Progressively higher blends of RNG would be required to meet the GHG intensity levels mandated by levels two, three and four of the opt-in Zero Carbon Step Code.

The result is that an RNG service is required for FEI to continue to have the potential to connect new customers in these municipalities. FEI's Renewable Gas Connections service is designed to meet these requirements. Without the Renewable Gas Connections service, many consumers will be denied a choice in how their energy needs are met and will be compelled to use only electricity.

Q5: Mr. Strunk states that "This complete process of 1) Calculating the under recovery of renewable gas supply by customer group, 2) Dividing the under recovered costs by a significantly larger customer base to determine the S&T LC Rider, and 3) Calculating the combined rate from the LCG Charges and S&T LC Rider – All to calculate the effective rate charge for existing and newly – connected residential

[4] Noting that bills are not equal at equivalent use rates for Voluntary Renewable Gas customers.

customers – is what makes FEI's proposal complex and difficult to understand." How does FEI respond?

A5: FEI refers to Q&A 31 in the Rebuttal Evidence of Mr. Reed of Concentric, attached as Appendix A to this Rebuttal Evidence.

Further, FEI disagrees that its proposal is complex and difficult to understand when considered in the context of rate calculations generally. It is common for there to be complex calculations underlying public utility rates. Indeed, FEI has a number of charges and rate riders that are as equally or more complex than the calculation of the S&T LC Rider. For example, FEI's existing Biomethane Variance Account (BVA) Rate Rider must be calculated using multiple steps which include complex projections, forecasts and calculations. The BVA Rate Rider, and account, is an approved mechanism whereby FEI is able to recover the costs in its Biomethane Variance Account (BVA) that are greater than the value of the inventory of RNG in the BVA account at the end of a year, where the value of RNG in the BVA is equal to the volume (in GJ) multiplied by the Biomethane Energy Recovery Charge (BERC). The following steps are taken to set the BVA Rate Rider for an upcoming Rate Setting Year (Y0) with the year preceding the rate setting year referred to as (Y-1).

1. Project an amount to transfer from the BVA to the BVA Rate Rider account at the end of the Y-1 using the following steps.

    a. Project the RNG supply volume and cost for Y-1 based on the projected receipts of RNG supply from FEI's RNG suppliers.

    b. Project the RNG volume and cost recoveries for Y-1 based on a projected number of voluntary RNG customers, their RNG election percentages, their use rates and the BERC.

    c. Determine the dollar amount to leave in the BVA at the end of Y-1 by multiplying the projected ending Y-1 volume remaining in the BVA multiplied by the Y-1 approved BERC.

    d. The amount to transfer from the BVA to the BVA Rate Rider account at the end of Y-1 is equal to the Y-1 BVA opening balance plus projected Y-1 RNG supply cost (1.a) less the Y-1 projected recoveries from the sale of RNG to voluntary RNG customers (1.b) less the amount determined to be left in the BVA (1.c).

2. Project the balance in the BVA Rate Rider account at the end of Y-1 to set the BVA Rate Rider for Y0 using the following steps.

a. Project the total demand of all non-bypass customers[5] in Y-1 by projecting the number of customers and their use rates for all rate schedules multiplied by the Y-1 approved BVA Rate Rider.

b. Determine the total amount to collect from all non-bypass customers by way of the BVA Rate Rider by taking the BVA Rate Rider account balance at the beginning Y-1 less projected Y-1 BVA Rate Rider Recoveries (2.a).

c. Project the total demand of all non-bypass customers[6] in Y0 by projecting the number of non-bypass customers and their use rates for all rate schedules.

d. Determine the Y0 BVA Rate Rider by dividing 2.b by 2.c

FEI's Storage and Transportation Charge and associated rider also requires assumptions and complex calculations. FEI's Storage and Transport Charge is calculated by forecasting FEI's Y0 midstream charges[7] allocating those charges to FEI's sales service customers based on load factor weighted Y0 demand. Load factor is calculated by first determining the peak day demand by region and rate schedule using a regression of load and temperature. Then the peak day temperature is inserted into the regression equation to determine the peak day demand. Next, normalized average consumption by region and rate schedule is divided by the peak day demand to determine the load factor of each region and rate schedule. Next, the regional load factors are averaged using a customer weighting to get a system wide load factor by rate schedule. Finally, the load factor weighted midstream costs by rate schedule are divided by the Y0 forecast load of each rate schedule to determine the Storage and Transport Charges.

However, from the customer's viewpoint of simplicity and ease of understanding (which is the relevant viewpoint when considering this important rate design principle), the customer bills for FEI's Renewable Gas Connections customers would be no more complex than those of its Renewable Gas Blend customers. This is evident in the sample bills that FEI provided in response to BCOAPO IR1 11.1.

FEI also reiterates that it would be more confusing for customers to have bills vastly different from those of their neighbours, simply due to the time at which they commenced taking service.

Q6: Does this conclude your rebuttal evidence to Mr. Strunk?

A6: Yes.

[5] Currently all non-bypass customers have the BVA Rate Rider attached to their delivery charge.
[6] Ibid.
[7] Midstream charges include the cost to use upstream pipeline systems to transport gas from gas wells and also storage charges to store gas in non-peak periods for utilization in peak periods.

Appendix A

REBUTTAL EVIDENCE OF JOHN J. REED, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, CONCENTRIC ENERGY ADVISORS

BRITISH COLUMBIA UTILITIES COMMISSION

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

and

FortisBC Energy Inc.
Stage 2 Comprehensive Review and Application for Approval
of a Revised Renewable Gas Program

Written Rebuttal Evidence of John J. Reed

on behalf of FortisBC Energy Inc.

February 28, 2023

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I. INTRODUCTION

Q.1 PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A.1 My name is John J. Reed. My business address is 293 Boston Post Road West, Suite 500, Marlborough, Massachusetts 01752.

Q.2 BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A.2 I am Chairman and Chief Executive Officer of Concentric Energy Advisors, Inc. ("Concentric"). Concentric is a management consulting firm specializing in financial and economic services to the energy industry.

Q.3 PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND AND EXPERIENCE.

A.3 I have more than 45 years of experience in the North American energy industry. Prior to my current position with Concentric, I served in executive positions with various consulting firms and as Chief Economist with Southern California Gas Company, North America's largest gas distribution utility. I have provided expert testimony on financial and economic matters on more than 200 occasions before the state and Provincial regulatory agencies, the Canada Energy Regulator ("CER"), the National Energy Board ("NEB" or "Board"), the Federal Energy Regulatory Commission ("FERC"), various state and federal courts, and before arbitration panels in Canada and the United States. I have also served as an arbitrator in cases involving energy contract disputes. A copy of my résumé and a listing of the testimony I have sponsored is included as Attachment A.

Q.4 HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A.4 No. This is my first opportunity to submit evidence before the British Columbia Utilities Commission ("BCUC").

Q.5 ON WHOSE BEHALF ARE YOU SPONSORING THIS WRITTEN REBUTTAL EVIDENCE?

A.5 I am sponsoring this Written Rebuttal Evidence on behalf of FortisBC Energy Inc. ("FEI" or the "Company").

Q.6 PLEASE DESCRIBE THE INFORMATION IN THE APPLICATION YOU HAVE REVIEWED FOR THE DEVELOPMENT OF YOUR REBUTTAL EVIDENCE.

A.6 For the preparation of my evidence, I have reviewed the Application and attachments filed by FEI, information requests and responses filed in this case, the Renewable Natural Gas Supply and Demand in North America report prepared by the Brattle Group, and intervener evidence, including the evidence of the City of Vancouver, and particularly the evidence of Kurt G. Strunk ("Strunk Evidence"). Along with these materials, I have also reviewed precedent from the BCUC and those referenced in the Strunk Evidence. I have formed my conclusions and opinions provided in this rebuttal evidence based on a review of the materials noted above, discussions with FEI, my experience in the energy industry generally, and my experience in the Canadian energy industry specifically.

II. EXECUTIVE SUMMARY

Q.7 WHAT IS THE PURPOSE OF YOUR REBUTTAL EVIDENCE?

A.7 The purpose of my rebuttal evidence is to respond to certain statements in the Strunk Evidence. I begin by providing some general principles regarding the link between cost causation and cost responsibility, what constitutes just and unjust discrimination, and how to address potentially conflicting objectives within the set of ratemaking principles. I then address the following issues raised by Mr. Strunk:

1) whether FEI's new Residential Gas Connections Service ("Connections") customers cause the need for higher RNG costs and, therefore, should be assigned the cost responsibility for those costs;

2) whether the new Connections customers are the principle beneficiaries of the Connections service, which would provide further support for assigning those customers the cost responsibility for the procurement of RNG;

3) whether charging the Connections customers a far higher gas cost than is charged to existing customers is unjustly discriminatory; and

4) whether the proposed rolled-in pricing for new and existing residential customers is economically inefficient, and is therefore not a just and reasonable ratemaking methodology.

In certain instances Mr. Strunk discusses statutes and case law. While I am not an attorney and offer no legal opinions in this evidence, I will respond to those issues raised by Mr. Strunk from my economic understanding of the topics as well as my regulatory experience.

Q.8 PLEASE SUMMARIZE YOUR REBUTTAL EVIDENCE CONCLUSIONS.

A.8 Mr. Strunk and I appear to agree on the most basic elements of ratemaking principles that are applicable to FEI's proposed RNG program. The principles are that just and reasonable rates should balance three key objectives, namely that rates should: 1) reflect a link between cost causation and cost responsibility; 2) not unjustly discriminate in the prices charged to similarly situated customers; and 3), promote economic efficiency, which means that rates should, to the extent possible, send a price signal to customers that promotes the cost-effective use of scarce resources. However, Mr. Strunk and I disagree on many fundamental points about how these principles can be applied to the circumstances of FEI's RNG services. Further, Mr. Strunk also apparently disagrees with longstanding regulatory precedent regarding the application of these principles.

- First, contrary to Mr. Strunk's assertions, Connections customers are not receiving a different product than other existing customers, as there aren't different systems used to deliver gas to the new customers, the supply delivered is physically the same product and the new customers certainly have not done anything to have caused far higher costs to be incurred. Connections customers do not require special meters, different service piping, new main material types or any other atypical upgrade to the delivery system in order to take service. As I discuss later, the RNG costs that FEI expects to incur are essentially a compliance cost that is the product of a change in environmental policy, not a change in cost drivers for any subset of customers. As such, and as would have been appropriate in the cases of, for example, changes in safety codes requiring the use of different pipe, or environmental regulations that would have required the installation of new

environmental controls at a city-gate station, these costs are best treated as one which would be allocated to all sales customers on the system. The notion that new customers cause the need for new safer pipe, or new air quality controls, makes no sense, as does the notion that new customers cause the need for higher gas procurement costs that are occasioned by policy shifts.

- Second, Mr. Strunk is equally outside the norms of approved ratemaking standards when he suggests that Connections customers are the ones that benefit from the new service, as opposed to all customers, and that therefore the new customers should bear the responsibility for the higher gas costs. That view ignores the very nature of decarbonization programs, which are designed to reduce carbon emissions across the globe.

- Third, Mr. Strunk fails to properly evaluate the very important question as to whether his proposal for vintaged commodity rates would create unjust discrimination among new and old customers. In short, that proposal would violate almost every test for unjust discrimination. It must also be recognized that Mr. Strunk does not propose vintage differentiated rates for mains, service lines, meters or any other element of the distribution system, although these costs for new customers are also very different than for the pool of existing customers, and always have been. I suspect that Mr. Strunk realizes that a proposal to differentiate between old and new customers for distribution charges would put his proposal even further outside the range of accepted ratemaking practices.

- Fourth, Mr. Strunk completely misses the key considerations for when the use of incremental pricing will promote economic efficiency. Those requirements are that

the same incremental cost economic price signal be sent to all customers – not just new ones – and that it also be the accepted form of pricing for the substitutable product offerings of competitors, which in this case would be electric utility service. None of those conditions are present in Mr. Strunk's proposal, and his proposal would not enhance economic efficiency in the least. Moreover, the BCUC considers social issues, including environmental policy, when evaluating the ratemaking principle of efficiency and its benefits.[1] Mr. Strunk discusses consumption signals from his proposal but stops short of explaining how his approach will facilitate reaching decarbonization goals.

III. REBUTTAL TO MR. STRUNK

A. General Ratemaking Principles

Q.9 HOW DO YOU RESPOND TO THE STRUNK EVIDENCE WHERE IT STATES "THE PRINCIPLE OF COST CAUSATION REQUIRES THAT RATES REFLECT THE COST TO SERVE DIFFERENT GROUPS OF CUSTOMERS WITH DIFFERENT COSTS."[2]?

A.9 There appears to be some common ground on the foundational ratemaking principles from James C. Bonbright ("Bonbright") inherent in the Connections proposal.[3] I agree that

[1] "Efficiency benefits can be described as promotion of: (i) efficient customer consumption and investment decisions, (ii) efficient utility investment and operational decisions and (iii) innovation. The Panel also considers any effect on British Columbia social issues, including environmental and energy policy." BCUC Decision and Order G-60-14, PDF p. 64 (May 6, 2014) (British Columbia Hydro and Power Authority, Application for Approval of Rates between BC Hydro and FortisBC Inc.) (G-60-14).

[2] Exhibit C7-5, Strunk Evidence, p. 27, lines 21-22, p. 28 line 1.

[3] "The Panel finds that an evaluation under the Bonbright Principles is appropriate for agreements that describe the utility to customer relationship." G-60-14, PDF p. 43.

regulated gas and, indeed, electric utility service rates should be based on the costs of that service.[4] As noted over sixty years ago by Bonbright, "One standard of reasonable rates can fairly be said to outrank all others in the importance attached to it by experts and public opinion alike – the standard of cost of service, often qualified by the stipulation that the relevant cost is necessary cost or cost reasonably or prudently incurred."[5] The cost causation principle is rooted in fairness and is intended to align the cost burden on those customers who cause the need for the costs to be incurred on the utility system.[6] The BCUC places special emphasis on fairness in rate design[7] in those circumstances where the Bonbright principles apply. The proper application of the cost causation principle – which Mr. Strunk does not do – will naturally eliminate or minimize cross-subsidies between customers.[8]

[4] "Cost of service studies are among the basic tools of ratemaking. While opinions vary on the appropriate methodologies to be used to perform cost studies, few analysts seriously question the standard that service should be provided at cost. Non-cost concepts and principles often modify the cost of service standard, but it remains the primary criterion for the reasonableness of rates. The cost principle applies not only to the overall level of rates, but to the rates set for individual services, classes of customers, and segments of the utility's business. Cost studies are therefore used by regulators for the following purposes: To attribute costs to different categories of customers based on how those customers cause costs to be incurred … ." *Electric Utility Cost Allocation Manual,* National Association of Regulatory Utility Commissioners (1992), p. 12.

[5] *Principles of Public Utility Rates,* James C. Bonbright (1961), p. 67.

[6] "The cornerstone of fair rate setting is the comparison of revenues collected from each class of customer with the cost of providing service to them. The [Cost of Service Analysis] is a means of equitably allocating the revenue requirement of the utility to the various customer classes and takes account of cost-causal factors of specific customer classes." BCUC Decision and Order G-156-10, PDF p. 6, (October 19, 2010) (FortisBC, 2009 Rate Design and Cost of Service Analysis) (G-156-10).

[7] "With regard to the Bonbright Fairness Principle, the Commission Panel maintains the view that fairness is critical to a sound rate design and that cost causation is basic to fairness (i.e. similar customers should be charged similar rates)." G-60-14, PDF p. 44.

[8] "As cross subsidization tends to move away from cost causation, significant cross subsidization may therefore be considered to be unfair and to be avoided, when practical to do so." BCUC Decision and Order G-26-13, PDF p. 26 (February 25, 2013)(FortisBC Energy Utilities, Common Rates, Amalgamation And Rate Design Application) (G-26-13).

Q.10 WHAT IS YOUR RESPONSE TO THE STRUNK EVIDENCE WHERE IT STATES "UNDER THE UTILITIES COMMISSION ACT, RATES MUST NOT BE UNDULY DISCRIMINATORY."[9]?

A.10 A prohibition on undue discrimination is another foundational principle of ratemaking, and like cost causation, is based on fairness.[10] The principle aims to curtail a monopolist from exercising market power to extract higher prices for the same service from different groups of customers, a practice that would otherwise be undercut in a competitive market.[11] Similarly situated customers should be treated similarly, and rate differentials should be based on cost differentials. The standard expressly acknowledges that there will be some level of discrimination inherent in the regulated ratemaking process and, therefore, prohibits only undue levels. The *Utilities Commission Act* ("UCA") proscribes a utility from making, demanding or receiving an unduly discriminatory rate under Section 59(1)(a) and assigns to the BCUC as "the sole judge" under Section (4) to determine whether any "undue discrimination" has actually occurred. These provisions taken together form a functional structure to allow the BCUC to apply ratemaking techniques to check for unfair

[9] Exhibit C7-5, Strunk Evidence, p. 14, lines 13-14, citing the *Utilities Commission Act*, Section 59.

[10] "The Panel also finds that where an evaluation under the Bonbright Principles is appropriate, the evaluation should focus on the Bonbright Principles of fairness (Principles 2 and 8) and efficiency (Principle 3)." G-60-14, PDF p. 43. These principles have been described as follows by the BCUC: "Principle 2: Fair apportionment of costs among customers (appropriate cost recovery should be reflected in rates, Principle 8: Avoidance of undue discrimination (interclass equity must be enhanced and maintained) and Principle 3: Price signals that encourage efficient use and discourage inefficient use (consideration of social issues including environmental and energy policy)." Id., PDF p. 41. The BCUC has used a different ordering and somewhat different wording of the eight Bonbright principles than the original Bonbright formulation. Compare *Principles of Public Utility Rates,* James C. Bonbright (1961), p. 291.

[11] "In the literature of economics, one of the cardinal attributes of prices under assumed conditions of 'perfect competition' is that of a uniform price for any one product at any given time and place. This uniformity precludes not only the price higgling that still characterizes many European markets but also the systematic practice of price differentiation designed to impose different charges on different groups of persons depending on differences in their capacity and willingness to pay." *Principles of Public Utility Rates,* James C. Bonbright (1961), p. 372.

levels of rate differences between customer classes by, for example, ensuring the development of a cost of service allocation study to achieve comparable rates of return on a class-by-class basis or returns within an acceptable range.[12] This process helps ensure that each class of customers will pay the costs for the provision of each's particular service.[13]

Q.11 HOW DO YOU RESPOND TO THE STRUNK EVIDENCE WHERE IT IDENTIFIES "EFFICIENCY OF THE RATE CLASSES AND RATE BLOCKS IN DISCOURAGING WASTEFUL USE OF SERVICE WHILE PROMOTING ALL JUSTIFIED TYPES AND AMOUNT OF USE" . . . AS A "WELL-ESTABLISHED RATEMAKING PRINCIPLE."[14]?

A.11 Along with rate fairness, the efficiency of the rate structure in promoting economic use of services is another of the eight Bonbright ratemaking principles.[15] The BCUC has stated the principle somewhat differently than the classic Bonbright formulation quoted by Mr. Strunk, and expressly notes that efficiency should be considered alongside social issues, including environmental policy: "Principle 3: Price signals that encourage efficient use and discourage inefficient use (consideration of social issues including environmental and

[12] "Sections 59 and 60 of the UCA address the setting of rates for service. They require that the Commission have due regard in setting a rate that is not unjust or unreasonable, unduly discriminatory, or unduly preferential. One consideration in assessing this is the [Revenue/Cost] ratio for different classes of customer. That is, there must be a fair apportionment of costs amongst customers and there must be a reasonable recovery of costs allocated to different customer groups to avoid rates being set that would be unjust, unreasonable, unduly discriminatory, or unduly preferential." G-156-10, PDF p. 75.

[13] "Generally speaking, customer classes that fall within the range of reasonableness are considered to be paying an appropriate share of their costs." Id.

[14] Exhibit C7-5, Strunk Evidence, p. 15, lines 15-16, 20.

[15] *Principles of Public Utility Rates,* James Bonbright (1961), p. 291.

energy policy)."[16] While fairness and efficiency embody three of the eight Bonbright principles, not all principles are fully relevant to every rate design filing.[17] As the BCUC has noted some principles are more important than others,[18] and the proper application of the principles require balancing the relevant concerns.[19] In the context of this proceeding the two noted fairness principles should be accorded relatively more weight than the economic efficiency, as will be explained in more detail later in this rebuttal evidence.

Q.12 DO YOU HAVE ANY ADDITIONAL COMMENTS ON THE APPLICABILITY OF THE BONBRIGHT RATEMAKING PRINCIPLES TO THE COMPANY'S PROPOSAL?

A.12 Yes. The Bonbright principles apply equally to both delivery and supply portions of service, and there is no different set of principles for the commodity portion.[20] The Strunk

[16] G-60-14, PDF p. 41.

[17] "Although there are a number of Bonbright-based principles, in the Panel's view, some are more relevant than others to the circumstances of this Application, and some may also be more important than others and therefore deserving of more weight." G-26-13, PDF p. 23.

[18] Id.

[19] "The Panel agrees with FEI that different rate design principles may vary in importance in different circumstances. The relevance and weight given to principles will vary with the circumstances and context of a specific rate design proposal. Further, the Panel acknowledges [Elenchus Research Associates'] statement:

> It is inevitable that in applying these principles, conflicts arise in trying to apply all of the principles simultaneously. An allocation that is more equitable may well compromise economic efficiency or simplicity. Determining the optimal trade-offs between the principles in developing rates therefore requires judgment. For this reason, cost of service allocation and rate design are often referred to as being as much art as science."

BCUC Decision and Order G-135-18, PDF p. 13 (July 20, 2018) (FortisBC Energy Inc., 2016 Rate Design Application)(G-135-18).

[20] *See, e.g.*, G-135-18, PDF p. 5, applying Bonbright principles to residential, commercial and industrial rate designs ("The context for the Panel's review of FEI's rate design proposals consists of (1) the legal framework as set out in sections 58 to 61 of the Utilities Commission Act; (2) accepted rate design principles identified by Dr. James C. Bonbright; and (3) government policy.") *and* G-60-14, PDF p. 7 applying Bonbright principles to power purchase agreements ("By way of a summary, the Panel concluded that the New PPA and Energy Export Agreement pass the Bonbright fairness and efficiency principles test and that the other Associated Agreements were not unjust, unreasonable, unduly discriminatory or unduly preferential.")

evidence faults my analysis for referring to decisions on ratemaking principles that address "network service" (delivery) as opposed to commodity services.[21] However, this distinction is meaningless as there is no different set of ratemaking principles for supply as opposed to distribution portions of regulated service. Moreover, Mr. Strunk does not begin to develop what this alternate set of ratemaking principles for commodity service might look like, other than implying that certain of the Bonbright principles relied on for "network service" decisions somehow don't apply to a determination of whether supply costs are just and reasonable or unduly discriminatory.

B. Cost Causation

Q.13 HOW DO YOU RESPOND TO THE STRUNK EVIDENCE THAT STATES "RENEWABLE GAS CONNECTIONS . . . WILL RECEIVE 100 PERCENT RNG UNDER THE FEI PROPOSAL"[22] AND "NEWLY-CONNECTED RESIDENTIAL CUSTOMERS PAY THE SAME RATES AS EXISTING CUSTOMERS, THEY RECEIVE A COMPLETELY DIFFERENT, MORE EXPENSIVE COMMODITY"[23] ?

A.13 FEI does not operate two separate gas distribution systems, one for existing customers served with conventional natural gas and another system for RNG customers, so Connections customers will not be receiving 100% of gas directly from any one particular source, including RNG, or be served by a "more expensive commodity." FEI operates a

[21] Exhibit C7-5, Strunk Evidence, pp. 9-10 ("Mr. Reed relies on pricing precedent for network service, not commodity service.")

[22] Exhibit C7-5, Strunk Evidence, p. 7, lines 5-6.

[23] Exhibit C7-5, Strunk Evidence, p. 39, lines 20-21.

single distribution system with one comingled gas stream that is used to serve all customers. Mr. Strunk's notions that Connections customers receive a different product, or are served using a different gas supply, are factually incorrect. It would be equally implausible to assume that a customer electing to receive gas from a competitive marketer would be delivered different "marketer" gas instead of system gas. Mr. Strunk seeks to isolate one portion of the bill, commodity charges, and differentiate on that element in cost of service between new and old customers. I am not aware of any gas distribution system in North America that makes such a distinction. Mr. Strunk's basis for this position is his perception that new customers are signing up for a fundamentally different service and have a different product delivered to their meters. This assumption is demonstrably false and its liberal application through his evidence leads Mr. Strunk to misapply fairness ratemaking principles, as illustrated in the following pages.

Q.14 DO YOU AGREE WITH MR. STRUNK WHEN HE STATES "FEI PROPOSES TO PROVIDE THE SAME RATE FOR TWO DIFFERENT SERVICES"? [24]

A.14 No. Mr. Strunk's notion that the Connection's customers sign up for a different service is incorrect. What the new service customers sign up for, and get, is not different at all than that which underlies service to existing customers, which is why there is appropriately no differentiation in the facilities charges for Connections customers, even though there are significant differences between the embedded costs to serve existing customers and the incremental cost of serving new customers. Connections customers require no atypical mains, service lines, risers, meters or other equipment. Again, there is no separate system

[24] Exhibit C7-5, Strunk Evidence, p. 12, lines 16-17.

to deliver RNG alone to Connections customers, nor would Connections customers require incremental capital or operational expenditures that would be out of line with the needs of other customers.

Q.15 DOES MR. STRUNK ANALYZE THE DECISION IN THE REVELSTOKE PROCEEDING WHERE THE BCUC APPLIED BONBRIGHT PRINCIPLES TO APPROVE THE AMALGAMATION OF PROPANE AND NATURAL GAS SUPPLY COSTS BETWEEN TWO DIFFERENT DELIVERY SYSTEMS?

A.15 The Strunk Evidence largely leaves the Revelstoke decision unexamined. [25] Rather than directly analyze the BCUC's application of ratemaking principles in any detail[26], Mr. Strunk makes a public interest argument based on cost differentials between natural gas and RNG in an apparent effort to sidestep the decision.[27] This position overlooks the price differentials between propane and natural gas argued by interveners in Revelstoke.[28] While there are several other important aspects of the decision relative to ratemaking, perhaps the most important for this proceeding are the findings by the BCUC that "the provision of a

[25] Exhibit C7-5, Strunk Evidence, p. 10, citing Exhibit B-17, BCUC IR 1, at 74, lines 3-7.

[26] "The Panel has given full consideration to the Application and the relevance of Bonbright's principles regarding public utility rates. In the Panel's view, the arguments presented do not suggest that FEI's proposal would be inconsistent with those principles. FEI's proposal is considered in keeping with these principles by equalizing rates fairly across its service territory. FEI's proposal brings about a balanced allocation of costs, improves price stability and reduces the burden on Revelstoke customers by means of a proposal which minimizes negative effects and allows for alternatives in the future. The Panel accepts that FEI's proposal may suggest discrimination, given the effect on natural gas users' costs. However, the Panel judges this effect by its degree and how overall fairness in the apportionment of costs fits within the public interest framework. In consequence, the Panel does not find that FEI's proposal is unduly discriminatory or that the principles or price signals are critically compromised." BCUC Order and Decision, G-245-20, PDF p. 13 (October 1, 2020) (FortisBC Energy Inc., Revelstoke Propane Portfolio Cost Amalgamation Application) (G-245-20).

[27] "The public interest is not better served from a policy perspective by the equalization of rates when two products have very different costs. Public interest depends on the efficient provision of service, and subsidizing new customers is not efficient and encourages uneconomic consumption of RNG." Exhibit C7-5, Strunk Evidence, p. 10.

[28] "[BC Sustainable Energy Association] asserts that propane and natural gas are different commodities, and the difference in commodity charges reflects this." G-245-20, PDF p. 11.

gas propane service, of the type extant in Revelstoke, is not materially different from that of a natural gas service" and that "where delivery charges are already standardized as an element of a service, it would be neither irrational nor unwarranted to take an additional step of equalizing commodity-related costs in providing that service." [29] The BCUC concluded that "FEI's energy provision service is sufficiently similar for propane and natural gas as to indicate the existence of a single class of service." [30] If propane and natural gas delivered over different systems are considered a single class of service for ratemaking purposes, it is a small logical step to also conclude that natural gas and RNG delivered over the same system should be considered the same service. This decision by the BCUC clearly is opposed to Mr. Strunk's view that commodity costs for natural gas and RNG need to be treated as separate services and priced at very different levels.

Q.16 DO YOU HAVE ANY COMMENTS ON MR. STRUNK'S CLAIM THAT YOU AGREE THAT THE SERVICES ARE NOT THE SAME? [31]

A.16 Yes. Mr. Strunk cites my response to Information Request ("IR") No. 2 from the City of Vancouver to claim I agree that there are two different services. He does so within the framework of discussing undue discrimination, a fairness principle, but leaves out context important for a complete application of fairness. Specifically, my response stated that "in terms of the 'cost causation' principle of ratemaking, the two customer groups do not have a different cost profile" and that product differentiation for the Connections customers stemmed from complying with fuel mix policies.[32] Mr. Strunk's position in this case is far

[29] G-245-20, PDF p. 13.
[30] Id.
[31] Exhibit C7-5, Strunk Evidence, p. 12, lines 11-12, citing Exhibit B-37, CoV IR2 3.1, at 5, lines. 15-17.
[32] Exhibit B-37 , CoV IR2 3.1, at 5, lines 17-21 .

outside of ratemaking norms as new customers are not singled out from other customers on any other gas or electric distribution system in North America that I know, even though, especially on the electric systems, the decarbonization requirements impose much higher costs for serving new customers.

Q.17 SO HOW DO YOU RESPOND TO MR. STRUNK'S CLAIM THAT NEW CONNECTIONS CUSTOMERS CAUSE HIGHER COSTS, SPECIFICALLY HIGHER COSTS RNG SUPPLIES?[33]

A.17 While there are additional costs for the higher blends of RNG, these new customers are not the "cause" of the need for RNG purchases. The need for RNG is the product of a change in policy at the political level impacting supply. Mr. Strunk's own evidence discusses four policies aimed at mitigating or eliminating greenhouse gas ("GHG") emissions: The Pan-Canadian Framework on Clean Growth and Climate Change, CleanBC Plan and Roadmap, BC Energy Step Code and the City of Vancouver's Zero Emission Building Plan.[34] One of those policies, the CleanBC Roadmap to 2030 includes a cap on GHG emissions for natural gas utilities by 2030,[35] and a "goal for renewable energy to make up at least 15% of the content of B.C.'s natural gas by 2030."[36] As noted in the CleanBC Roadmap to 2030, the "B.C. Utilities Commission will have a mandate to review gas utilities' plans, investments

[33] Exhibit C7-5, Strunk Evidence, p. 20, lines 5-9.

[34] Exhibit C7-5, Strunk Evidence, pp. 4-5.

[35] "Following further modelling and analysis, the cap will be set at approximately 6 Mt of CO2e per year for 2030, which is approximately 47% lower than 2007 levels." *The CleanBC Roadmap to 2030*, PDF p. 31 (CleanBC Roadmap to 2030).

[36] "Waste management will be supported by growing opportunities to capture biogas, turning farm waste into a valuable resource. Pathway strategies related to biogas will contribute to our goal for renewable energy to make up at least 15% of the content of B.C.'s natural gas by 2030." CleanBC Roadmap to 2030, PDF p. 62.

and expenditures to ensure they're aligned with the GHG emissions cap and cost effective, helping to keep rates affordable for people and businesses."[37]

It should be clear that the need for FEI to increase the use of RNG is not a point of physical differentiation on the system that could be reflected as atypical in a cost study and attributed to Connections customers. Rather, it is one of cost incurrence to help meet social decarbonization goals. Indeed, these costs may be incurred off-system in Vermont, or Wisconsin, or Ontario to increase the flow of RNG into a gas system there, with that renewable gas never entering the Company's system.

Q.18 HOW SHOULD THE COST OF RNG BE CONSIDERED FOR COST CAUSATION PURPOSES?

A.18 The costs associated with RNG are best considered as an environmental compliance cost, which is no different than a safety compliance cost. If safety regulators required that new mains use a thicker walled pipe, or if environmental regulators required that new city-gate stations use new technologies for noise abatement, I find nothing in the principles of cost causation and cost responsibility to conclude that it would be proper to charge only new customers for those costs. Such "new" costs have arisen frequently in the past decades and have always been rolled-in to existing cost pools. RNG costs are no different.

[37] Id., PDF p. 31.

C. Beneficiaries of the Use Of RNG

Q.19 WHAT IS YOUR RESPONSE TO MR. STRUNK WHERE HE STATES THAT "IT IS OBVIOUS THAT THE BENEFICIARY OF THE NEW GAS COMMODITY SERVICE IS THE NEWLY CONNECTED RESIDENTIAL GAS CUSTOMER. HENCE UNDER COST CAUSATION / BENEFICIARY PAYS PRECEDENT THE NEWLY CONNECTED RESIDENTIAL CUSTOMER MUST PAY THE COST TO SERVE IT."[38]?

A.19 Mr. Strunk argues that existing customers are not the beneficiaries of the greater use of RNG, nor is there a public interest benefit from the FEI proposal.[39] On this basis he concludes that new customers should be allocated this cost. This is simply not true. The use of RNG can displace the same amount of conventional natural gas and provide GHG reduction benefits.[40] The effects of GHG mitigation from RNG use is very broad, literally global, and affects new and existing customers alike. New customers will not live in a carbon-free "bubble" while existing customers experience climate change. The entire RNG program is founded on providing a very public benefit that goes beyond Provincial or national borders and certainly benefits all Company customers. There can be no doubt that these costs are driven by policies that are intended to benefit everyone. Asking new

[38] Exhibit C7-5, Strunk Evidence, p. 36, lines 5-8.

[39] "FEI's Proposal Does Not Benefit All Residents of BC and Does Not Advance the Public Interest." Exhibit C7-5, Strunk Evidence, p. 34, lines 15-16.

[40] "The fundamental feature of biogas & RNG projects is the capture and utilization of methane (CH4) emissions. Methane is a powerful greenhouse gas with a global warming effect 80 times stronger than carbon dioxide (CO2) over the short term, and that has contributed to roughly one quarter of all global warming to date." *Hitting Canada's Climate Targets with Biogas & RNG*, Canadian Biogas Association, PDF p. 8 (March 2022) (CBA Report 2002).

customers to foot the bill for these very public benefits is entirely unsupported by ratemaking policy.

Q.20 BUT WON'T NEW CONNECTIONS CUSTOMERS RECEIVE ENERGY BENEFITS FROM THE SERVICE?

A.20 To the extent that Mr. Strunk is arguing that the new Connections customers benefit directly from the energy value of the commodity they use, I agree, but the energy value benefit they derive is the exact same for existing customers since FEI is using only one gas system to deliver a single commingled gas supply. Following the beneficiary pays reasoning, then all customers should share in the commodity costs. I find nothing in Mr. Strunk's reasoning to support a determination under the Bonbright fairness principles that new customers pay more than already proposed. Whatever incremental benefits that Mr. Strunk believes accrue to Connections customers alone, they are not recognizable for cost causation purposes.

D. Undue Discrimination

Q.21 DO YOU HAVE ANY COMMENTS TO THE STRUNK DISCUSSION ON RATE VINTAGING?[41]

A.21 Yes, and as an initial matter, a more detailed definition of the ratemaking technique would be useful. Vintaging is a form of discriminatory pricing under which new customers are assumed to be the only factor causing new costs to be added to the utility system and thus

[41] Exhibit C7-5, Strunk Evidence, p. 38, lines 1-3.

they should be responsible for all those new costs.[42] Existing customers are then entitled to maintain existing or "vintaged" rates, resulting in two otherwise similar customers paying very different rates for the same delivery or commodity service (or both) based on how and when the vintaging is applied.

Q.22 IS VINTAGING FAVORED BY UTILITY RATE REGULATORS IN NORTH AMERICA?

A.22 No. Vintaging is most often disfavored since it discards fairness principles and rests on the economic fiction that new customers are more responsible for expanded system needs than legacy customers who maintain the level of their use of the system rather than reduce it.[43] New components and resources are added to the system to meet the joint demands of new and existing customers as well as to serve existing customers through the replacement of existing facilities and resources that may no longer be useful due to age, condition or obsolescence. This new plant and equipment, and the labor used to deploy it, will certainly cost more than what it replaces due to general wage and material inflation as well as more modern environmental requirements that have grown more stringent over time. These

[42] "We may expect therefore to be confronted constantly with proposals for vintaged rates — lower rates for existing subscribers and higher rates for new. Since most commissions have probably been presented with similar reasoning in the case of electricity — namely, that it is the new electric customers, or those whose demands are growing, who are responsible for our having to incur the higher current costs, and that rates approximating incremental costs should therefore be applied discriminatorily to them — it seems to us very important to get the basic principles straight. So far as generating and transmission costs, at least, are concerned, new customers coming on the line are no more responsible causally for the incurrence of higher current costs than old customers staying on the line." *Costing and Pricing for Old and New Customers,* Steve H. Hanke and John T. Wenders, p. 5, Public Utilities Fortnightly, Vol. 198, No. 9 (March 31, 2013) quoting *Proper Objectives in Telephone Rate Structuring*," by Alfred E. Kahn and Charles A. Zielinski, 97 Public Utilities Fortnightly 20, (April 8, 1976) (Costing and Pricing for Old and New Customers).

[43] "By staying on the system, the old customer causes exactly the same changes in costs as the new customer does by coming on the system. Hence, there is no economic justification for distinguishing between old and new customers, when they are jointly using facilities. Each causes costs to change equally, one by staying and the other by joining." Costing and Pricing for Old and New Customers, pp. 4-5.

higher costs compound the burden placed on new customers while the legacy customers enjoy the benefits of using the system based on the lower depreciated historic costs. Vintaging is a form of ratemaking resulting in distorted consumption signals, causing old customers to consume relatively more and new customers to consume relatively less because of the two-tier rate system that is unrelated to the true cost burdens imposed on the utility to provide service.

Q.23 IS MR. STRUNK'S RECOMMENDATION THAT "AN APPROPRIATE RATE STRUCTURE WOULD HAVE RENEWABLE GAS CONNECTION CUSTOMERS PAY FOR THE HIGHER COST OF RNG SUPPLY THEY CAUSE"[44] IS ANOTHER WAY OF RECOMMENDING SUPPLY VINTAGING ON THE FEI SYSTEM?

A.23 Yes. Mr. Strunk's proposal here is textbook vintaging for the following reasons that have been discussed above: 1) new Connections customers are not causing a need for RNG on the system (the RNG requirement comes from environmental policy); 2) there is no physical point of differentiation on the system for cost allocation purposes (all customers receive the supply over the same system); and 3) new customers are not receiving any other commodity than what other customers are receiving (all customers are receiving a blended supply).

While it is curious that Mr. Strunk only recommends vintaging for the supply portion of service, rather than the delivery as well, the following example will illustrate how his proposal would operate in practice. Envision an existing customer that built a new house

[44] Exhibit C7-5, Strunk Evidence, p. 38, lines 1-3.

in 2022 and then envision a second customer, a Connections customer, who built the same type of house right next door in 2024. Both customers are served off of the same facilities and receive the same stream of gas. Mr. Strunk is asking the new customer to pay a gas commodity charge that is four times the gas cost the "old" customer is charged and the ***only*** difference between these two customers is ***when*** each neighbor initiated service. That is a clear case of unjust discrimination and the essence of vintaged pricing, which reflects the creation of wealth entitlements through ratemaking, and which reflects the notion that the existing customer has acquired rights to historic costs because of its past use. These concepts have been flatly rejected in Canada.

Q.24 DO YOU AGREE WITH MR. STRUNK'S STATEMENT THAT "THE NO-ACQUIRED-RIGHTS PRINCIPLE THAT MR. REED REFERENCES HAS NO RELATION TO THIS PROCEEDING, AS THIS PROCEEDING INSTEAD CONCERNS THE PRINCIPLE THAT EXISTING CUSTOMERS HAVE A RIGHT TO JUST AND REASONABLE PRICES" AND DO YOU AGREE WITH HIS RELATED INTERPRETATION OF NATIONAL ENERGY BOARD ("NEB") DECISION GH-5-89?[45]

A.24 Not at all. First, the "no acquired rights" principle can be thought of as just another manifestation of pricing through vintaging, which as discussed above, is a form of discriminatory ratemaking prohibited under the Bonbright fairness principles of cost causation and undue discrimination at the very least. There can be no rate that

[45] Exhibit C7-5, Strunk Evidence, p. 37, lines 3-23.

fundamentally fails these Bonbright tests that the BCUC would nonetheless label as just and reasonable. The no acquired rights principle is indeed relevant here.

Second, Mr. Strunk's summary of the Reasons for Decision in GH-5-89 is incorrect. The NEB concluded that existing customers do ***not*** have the right to be protected from increased costs[46] while Mr. Strunk says the opposite.[47] The language in the NEB decision that Mr. Strunk quotes[48], and apparently relies upon, is mostly a description of party positions on an issue, rather than the NEB determination of that issue. In the very next line of the order the NEB provides the context that Mr. Strunk omitted:

> While factors such as the size, cost or impact on tolls of the proposed facilities may be relevant to the Board's decision on whether to authorize the construction of facilities, they do not in this case justify discriminating among shippers on the basis of ***when*** they commenced, or will commence, paying tolls and receiving service.[49]

Moreover, the NEB indicates that only special facilities that are dedicated to use by only new customers should be given different ratemaking treatment:

> In the Board's opinion, when the new facilities are completed they will become an integral part of TransCanada's pipeline system and will not be associated with or dedicated to any individual shipper's gas. While it is possible to notionally associate the cost of certain facilities with certain gas

[46] "In this regard, the Board agrees with those who submitted that the payment of tolls confers no future benefit on tollpayers beyond the provision of service. In other words, previous tollpayers have no acquired rights. Therefore, they cannot expect to be exempted from a toll increase simply because they have paid tolls in the past." TransCanada PipeLines Limited, GH-5-89, PDF pp. 30-31 (November 1990) (GH-5-89).

[47] "From this NEB proceeding, it is evident that existing customers have the right to be protected from an unduly burdensome increase in their rates resulting from unique circumstances— such as the subsidizing of the commodity of a separate customer base — regardless of whether or not they legally hold a claim to acquired rights." Exhibit C7-5, Strunk Evidence, p. 39, lines 16-20.

[48] "In this proceeding parties have not laid claim to any acquired rights, *per se.* Rather, the proponents of alternative toll methodologies have asserted that the sheer size and cost of the proposed facilities together with the impact on tolls and the nature of the market to be served, are unique circumstances which justify some level of toll protection for the existing shippers". Exhibit C7-5, Strunk Evidence, p. 37, lines 10-15 quoting GH-5-89, PDF p. 31.

[49] GH-5-89, PDF p. 31 (emphasis added).

volumes, it would not be a true reflection of how the Board views the way the system operates.[50]

The NEB in GH-5-89 clearly directs that vintaged pricing[51] with resulting wealth entitlements and acquired rights are not appropriate results in ratemaking.[52] The fairness principles incorporated into the NEB's reasoning are not in any way limited to facilities charges rather than commodity charges. Suggestions that one set of rate principles should apply to delivery and another to supply are unsupportable.

Q.25 HOW DO YOU RESPOND TO MR. STRUNK'S RELIANCE ON RH-003-2011 FOR THE STATEMENT THAT "TRANSCANADA MUST NOT LOOK TO REGULATION TO SHIELD THE MAINLINE FROM ITS FUNDAMENTAL BUSINESS RISK."[53]

A.25 This application concerns the appropriate ratemaking principles to apply to the Company's RNG proposal[54] and not whether "fundamental risk" has manifested against FEI.[55] As I

[50] GH-5-89, id.

[51] "With regard to the debate as to who caused the need for the new facilities, the Board is persuaded by the argument that it is the aggregate demand of all shippers that gives rise to the need for additional pipeline capacity." GH-5-89, id.

[52] "Both the CPA proposal for a capital contribution and the Consumers' proposal for a demand surcharge make a distinction based on vintages of shippers. This implies the existence of certain rights for existing shippers which, in the Board's view, they do not have." GH-5-89, id.

[53] Exhibit C7-5, Strunk Evidence, p. 36, lines 14-15.

[54] The BCUC has identified the issues in this proceeding as follows: "1. The ways in which renewable natural gas (RNG or biomethane) will be sold under FEI's services and offerings. 2. The rates and rate design for each of the RNG service based on rate-making principles. This includes the examination of rate design objectives and the appropriate allocation of costs to be recovered from certain class or classes of customers. 3. The price elasticity of demand for conventional natural gas and RNG. 4. The impacts of the FEI's RNG services and offerings on energy choice. Understanding the customer demand and cost implications on the competitiveness of natural gas equipment versus other types of equipment such as electric heat pumps. 5. The short term (5 years) forecast demand for RNG and the feasibility of FEI's plan meet this demand. 6. The short term (5 years) forecast supply of RNG and FEI's plan for the RNG supply acquisition, security of the RNG supply, price of the RNG supply, and supply substitutes such as carbon offsets." Decision and Order G-165-22A, Appendix C, (June 16, 2022) (G-165-22A).

[55] TransCanada Pipelines Limited, RH-003-2011, PDF pp. 61-63 (March 2013) (RH-003-2011).

understand the issues set for hearing, this is a rate design proceeding for pricing and not a proceeding about long-term cost recovery or the future of the gas business. FEI has filed a proposal in response to changing environmental policies and not one based on natural market forces creating fundamental risk. The implication that FEI is proposing rolled-in pricing for the RNG program as a regulatory life boat to save it from competitive outcomes - which is what Mr. Strunk seems to see as an issue here - misconstrues the nature of the ratemaking principles under review.

Q.26 DO YOU AGREE WITH MR. STRUNK WHEN HE POINTS TO VOLUNTARY RNG PROGRAMS TO SUPPORT HIS CLAIMS THAT ROLLED-IN PRICING RESULTS IN UNDULY DISCRIMINATORY PRICING?[56]

A.26 No. RNG programs that are voluntary allow customers to opt-in or opt-out and provide consumers with a level of choice over how much of their energy dollars will support the policy behind the program. There is no issue of unduly discriminatory pricing if you offer all customers a nondiscriminatory cost-based rate but also allow them to choose a higher rate as an alternative. Such an offering would not violate the obligation to provide just and reasonable rates to customers and provides no support for Mr. Strunk's contention that the proposed rolled-in pricing is inappropriate under the Connections program.

[56] Exhibit C7-5, Strunk Evidence, p. 17, lines 7-26, p. 18.

Q.27 MR. STRUNK SITES WASHINGTON STATE AS AN EXAMPLE OF A JURISDICTION WITH THE SEPARATELY PRICED VOLUNTARY RNG PROGRAM. [57] IN WASHINGTON STATE COULD A GAS UTILITY OFFER A GENERAL RNG PROGRAM IN ADDITION TO THE VOLUNTARY RNG PROGRAM REFERENCED BY MR. STRUNK?

A.27 Yes, and there are important differences between the cost recovery of the two programs. Washington state allows gas utilities to implement a general RNG program for all customers to replace a portion of conventional gas supply [58] with the general program costs – including those for the RNG supply[59] – to be recovered from all customers :

> RCW 80.28.385, which allows each natural gas utility to propose a program to replace a portion of its conventional natural gas supply with RNG for all retail customers, permits regulated natural gas utilities to acquire RNG through purchased gas agreements or other Commission-approved contracts, and ***to recover those costs from all*** retail gas customers consistent with existing Commission rules and policies.[60]

Recovery of the supply costs occurs through a purchase gas adjustment mechanism[61] or other approved mechanism. While gas utilities are required to carefully track and record

[57] Exhibit C7-5, Strunk Evidence, p. 17, lines 11-13.

[58] "A natural gas company may propose a renewable natural gas program under which the company would supply renewable natural gas for a portion of the natural gas sold or delivered to its retail customers. The renewable natural gas program is subject to review and approval by the commission. The customer charge for a renewable natural gas program may not exceed five percent of the amount charged to retail customers for natural gas." General Renewable Natural Gas Program, RCW 80.28.385 (1) (RCW 80.28.385).

[59] "[A]ny RNG program tariff filed with the Commission must reflect all aggregate costs, including, but not limited to: the administrative costs of the program, costs associated with tracking and verification of environmental attributes, commodity costs, and infrastructure costs. The utility must also identify how costs will be tracked and from which customer classes they seek to recover those costs. Costs associated with programs developed under RCW 80.28.385 and RCW 80.28.390 must be tracked and classified separately to support cost recovery specific to each program." Renewable Natural Gas Programmatic Design and Pipeline Safety Standards, Policy Statement, Docket U-190818, PDF p. 6. (December 16, 2020) (U-190818).

[60] U-190818, id., (emphasis added).

[61] Purchased Gas Adjustment, WAC 480-90-233 (WAC 480-90-233).

RNG-related costs[62], the supply costs including those for the general RNG program are recovered from all customers under the Washington Utilities and Transportation Commission implementation policy guidelines.[63]

The state also requires that all utilities offer a voluntary RNG program as well,[64] but the costs of that program are recovered just from the participants in the voluntary program:

> Consistent with existing Commission and ratemaking policy related to cost causation, cross-subsidization and voluntary alternative energy offerings, all costs related to voluntary RNG programs must be borne by customers selecting such voluntary service. For example, RNG purchased for voluntary programs implemented pursuant to RCW 80.28.390 may not be included in the cost of providing or purchasing RNG for all customers through programs implemented to comply with RCW 80.28.385 [the general RNG program].[65]

No one is arguing in this proceeding that incremental costs could not be isolated for FEI's voluntary RNG program, and indeed, the BCUC had previously required that costs be tracked for purposes of review of the earlier Renewable Gas Pilot Program..[66] RNG has

[62] ["T]he Commission intends to apply the long-standing rate setting principle of cost causation, which assigns costs to those customers who cause the expense to occur. In applying this principle in utility general rate cases, the Commission requires utilities to conduct cost of service studies to provide support in determining the rates charged to each customer class based on the utility's authorized revenue requirement. When a utility submits a cost-of-service study in the initial general rate case filing in which it seeks cost recovery of programs implemented pursuant to RCW 80.28.385 or RCW 80.28.390, the Commission encourages each utility to account for RNG-related costs within its cost-of-service study. In the absence of addressing RNG costs in a cost-of-service study, a utility must identify and classify all RNG costs that it seeks to recover through rates." U-190818, PDF p. 6.

[63] U-190818, id.

[64] "Each gas company must offer by tariff a voluntary renewable natural gas service available to all customers to replace any portion of the natural gas that would otherwise be provided by the gas company." Voluntary Renewable Natural Gas Service, RCW 80.28.390(1) (RCW 80.28.390).

[65] U-190818, pp. 7-8.

[66] BCUC Decision and Order, G-194-10, PDF pp. 58-60 (December 14, 2010) (Terasen Gas Inc., Application for Approval of a Biomethane Service Offering and Supporting Business Model, for the Approval of the Salmon Arm Biomethane Project and for the Approval the Catalyst Biomethane Project) (G-194-10).

moved well beyond the pilot and experimentation phase and has become a part of the supply mix delivered to all customers.

E. Incremental Cost Pricing

Q.28 HOW DO YOU RESPOND TO MR. STRUNK'S OPINIONS THAT "BONBRIGHT'S PRINCIPLES CALL FOR INCREMENTAL PRICING OF SERVICE FOR NEW RENEWABLE NATURAL GAS CONNECTIONS" AND THAT "THE AVERAGE COST PRICING METHOD DOES NOT LEAD TO ECONOMIC EFFICIENCY BASED ON ECONOMIC AND BONBRIGHT PRINCIPLES"[67]?

A.28 It is not the standard anywhere in North America that economic efficiency for regulated service can be achieved only through incremental cost pricing. I agree that incremental cost pricing – standing alone as an economic principle – leads to economic efficiency, but as applied to utility service, incremental cost pricing would need to be applied to all gas customers, not just new customers, and to competing utility services as well to achieve the efficiency goals. Mr. Strunk does not extend this rationale for incremental cost pricing to the delivery function of the gas system, nor to all gas customers, nor does he recommend that it be applied to the electric utility market. As noted by economist Alfred Kahn, "Thou shalt not optimize piecemeal."[68] That is because under piecemeal use of incremental cost pricing consumer consumption choices will shift to the service priced at average embedded costs and erode hoped for efficiency gains in the market.

[67] Exhibit C7-5, Strunk Evidence, p. 41, lines 16-17, 20-21.
[68] *The Economics Of Regulation: Principles And Institutions*, Alfred E. Kahn, p. 70 (1971) quoting *Welfare Economics And The Theory Of The State,* 2nd ed., William J. Baumol, p. 30 (1965).

Q.29 ARE THERE OTHER BONBRIGHT PRINCIPLES THAT ARE RELEVANT IN THE CONTEXT OF EFFICIENCY GAINS FROM A PROGRAM OF INCREMENTAL COST PRICING?

A.29 Yes, economic efficiency is just one of the Bonbright principles for ratemaking, and should be considered alongside other principles; namely, the effectiveness of yielding the total revenue requirement in the case of incremental cost pricing.[69] Mr. Strunk's proposal - applied fully to both gas and electric services to avoid the economic hazard of piecemeal optimization - would yield revenues far above the revenue requirement based on depreciated original cost. Cost causation is another Bonbright principle, and new customers are not causing new atypical costs on the system, but rather, the new costs are being imposed by the need to comply with new environmental policies. If we are trying to solely achieve economic efficiency and we don't care about limiting utility revenues to embedded cost of service, then we should charge incremental price to all gas and electric customers. That proposal is not before the BCUC and no North American energy regulator has adopted that approach.

[69] "Principle 1: Recovering the Cost of Service; the aggregate of all customer rates and revenues must be sufficient to recover the utility's total cost of service." G-135-18, PDF p. 11. Bonbright states the standard this way: "Effectiveness in yielding total revenue requirements under the fair-return standard." *Principles of Public Utility Rates*, James C. Bonbright (1961), p. 291 .

Q.30 DOES THE BCUC CONSIDER ANY OTHER FACTORS WHEN IT EXAMINES ECONOMIC EFFICIENCY UNDER BONBRIGHT?

A.30 Yes. When considering efficiency benefits the BCUC examines the effects on social issues as well as environmental and energy policy.[70] Given the magnitude of the price difference between rolled-in pricing and incremental cost pricing for new Connections customers, the results of Mr. Strunk's proposal would be to unjustifiably curtail growth while doing nothing to further the decarbonization goals of the natural gas supply to help British Columbia transition to a cleaner energy future.

Q.31 DO YOU HAVE ANY COMMENTS WHERE MR. STRUNK STATES THAT "THIS COMPLETE PROCESS OF 1) CALCULATING UNDER RECOVERY OF RENEWABLE GAS SUPPLY COST BY CUSTOMER GROUP, 2) DIVIDING THE UNDER RECOVERED COSTS BY A SIGNIFICANTLY LARGER CUSTOMER BASE TO DETERMINE THE S&T LC RIDER, AND 3) CALCULATING THE COMBINED RATE FROM THE LCG CHARGE AND S&T LC RIDER — ALL TO CALCULATE THE EFFECTIVE RATE CHARGE FOR EXISTING AND NEWLY-CONNECTED RESIDENTIAL CUSTOMERS — IS WHAT MAKES FEI'S PROPOSAL COMPLEX AND DIFFICULT TO UNDERSTAND."?[71]

A.31 Yes. That Mr. Strunk can describe the process in three straightforward steps belies his argument that the proposed charges are too complex and difficult. In my experience modern ratemaking routinely involves calculations and reconciliations based on formula

[70] "Efficiency benefits can be described as promotion of: (i) efficient customer consumption and investment decisions, (ii) efficient utility investment and operational decisions and (iii) innovation. The Panel also considers any effect on British Columbia social issues, including environmental and energy policy." G-60-14, PDF p. 64.
[71] Exhibit C7-5, Strunk Evidence, p. 41, lines 1-6.

rates without becoming so complex as to be faulted under Bonbright's "practical attributes of simplicity, understandability, public acceptability, and feasibility of application."[72] According to the Rebuttal Evidence submitted by FEI, this calculation would be similar to and no more complex than other charges and rate riders that have been approved by the BCUC.[73] Mr. Strunk offers no evidence that customers themselves will find the notion of spreading certain costs across other customers to be so complex as to lead to confusion.

IV. CONCLUSION

Q.32 WHAT ARE YOUR CONCLUSIONS?

A.32 The underlying problems with Mr. Strunk's positions are that he assumes the existence of two gas systems, one that delivers natural gas and another that delivers RNG, and that new Connections customers cause the need for RNG rather than it being the product of decarbonization policies. These fundamental factual misunderstandings are applied throughout his evidence resulting in the misapplication of the Bonbright fairness principle. Moreover, Mr. Strunk's narrow focus on just one of the Bonbright Principles – economic efficiency – without balancing it against more relevant and weighty principles in this proceeding results in a recommendation for "piecemeal" economic optimization through selective use of incremental cost which would undermine rather than promote efficiency and legitimize the ratemaking technique of vintaging.

Q.33 DOES THIS CONCLUDE YOUR REBUTTAL EVIDENCE?

A. 33 Yes.

[72] *Principles of Public Utility Rates*, James C. Bonbright (1961), p. 291.

[73] FEI's Rebuttal Evidence to Mr. Strunk, Q&A 5.