

# ONTARIO ENERGY BOARD NOTICE TO CUSTOMERS OF ENBRIDGE GAS INC.

**Enbridge Gas Inc. has applied to raise its natural gas rates effective April 1, 2021, to recover costs associated with the federal government's *Greenhouse Gas Pollution Pricing Act*.**

**Learn more. Have your say.**

Enbridge Gas Inc. (Enbridge Gas) has applied to the Ontario Energy Board for approval to increase its rates effective April 1, 2021, to recover the costs associated with meeting its obligations under the federal government's *Greenhouse Gas Pollution Pricing Act*.

The *Greenhouse Gas Pollution Pricing Act* establishes a carbon pricing program under which a natural gas utility in Ontario, such as Enbridge Gas, is required to pay a carbon charge to the federal government for emissions from the natural gas that it delivers to its customers, and for excess emissions from the operation of Enbridge Gas's natural gas distribution system. The federal carbon charge came into effect on April 1, 2019, increased on April 1, 2020, and will increase again on April 1, 2021.

Enbridge Gas says that if its application is approved as filed, it will have the following bill impacts:

- A typical residential customer in the EGD rate zone (former customers of Enbridge Gas Distribution Inc.) will see an annual bill increase of \$47.08.
- A typical residential customer in the Union rate zones (former customers of Union Gas Limited), will see an annual bill increase of \$43.23.

**Other customers, including businesses, will also be affected.**

## THE ONTARIO ENERGY BOARD WILL HOLD A PUBLIC HEARING

The OEB will hold a public hearing to consider Enbridge Gas's application. During this hearing, which could be an oral or written hearing, we will question Enbridge Gas on its application. We will also hear questions and arguments from individuals that have registered to participate (called intervenors) in the OEB's hearing.

The OEB is an independent and impartial public agency. We make decisions that serve the public interest. Our goal is to promote a financially viable and efficient energy sector that provides you with reliable energy services at a reasonable cost.

## BE INFORMED AND HAVE YOUR SAY

You have the right to information regarding this application and to be involved in the process.

- You can review Enbridge Gas's application on the OEB's website now
- You can file a letter with your comments, which will be considered during the hearing
- You can become an intervenor. As an intervenor you can ask questions about Enbridge Gas's application and make arguments on whether the OEB should approve Enbridge Gas's request. Apply by **November 3, 2020** or the hearing will go ahead without you and you will not receive any further notice of the proceeding
- At the end of the process, you can review the OEB's decision and its reasons on our website

## LEARN MORE

Our file number for this case is: **EB-2020-0212**. To learn more about this hearing, find instructions on how to file a letter with your comments or become an intervenor, or to access any document related to this case please select the file number **EB-2020-0212** from the list on the OEB website: **[www.oeb.ca/notice](http://www.oeb.ca/notice)**. You can also phone our Consumer Relations Centre at 1-877-632-2727 with any questions.

## ORAL VS. WRITTEN HEARINGS

There are two types of OEB hearings – oral and written. Enbridge Gas has applied for a written hearing. The OEB will determine at a later date whether to proceed by way of a written or oral hearing. If you think an oral hearing is needed, you can write to the OEB to explain why by **November 3, 2020**.

## PRIVACY

*If you write a letter with your comments, your name and the content of your letter will be put on the OEB's public record and the OEB website. However, your personal telephone number, home address and email address will be removed. If you are a business, all your information will remain public. If you apply to become an intervenor, all information will be public.*

*This hearing will be held under section 36 of the Ontario Energy Board Act, 1998, S.O. 1998, c.15 (Schedule B).*



# AVIS DE LA COMMISSION DE L'ÉNERGIE DE L'ONTARIO À L'INTENTION DES CLIENTS D'ENBRIDGE GAS INC.

**Enbridge Gas Inc. a soumis une demande pour augmenter ses tarifs de gaz naturel à compter du 1<sup>er</sup> avril 2021 afin de recouvrer les coûts associés à la *Loi sur la tarification de la pollution causée par les gaz à effet de serre* du gouvernement fédéral.**

## **Apprenez-en plus. Faites-vous entendre.**

Enbridge Gas Inc. (Enbridge Gas) a soumis une demande à la Commission de l'énergie de l'Ontario pour obtenir l'autorisation d'augmenter ses tarifs à compter du 1<sup>er</sup> avril 2021 afin de recouvrer les coûts associés au respect de ses obligations en vertu de la *Loi sur la tarification de la pollution causée par les gaz à effet de serre* du gouvernement fédéral.

La *Loi sur la tarification de la pollution causée par les gaz à effet de serre* établit un programme de tarification du carbone en vertu duquel un service public de gaz naturel en Ontario, comme Enbridge Gas, doit payer une redevance sur le carbone au gouvernement fédéral pour les émissions provenant du gaz naturel qu'elle fournit à ses clients, et pour les émissions excédentaires provenant de l'exploitation du système de distribution de gaz naturel d'Enbridge Gas. La redevance sur le carbone du gouvernement fédéral est entrée en vigueur le 1<sup>er</sup> avril 2019, a augmenté le 1<sup>er</sup> avril 2020 et augmentera de nouveau le 1<sup>er</sup> avril 2021.

Enbridge Gas indique que si sa demande est approuvée telle qu'elle est déposée, elle aura les conséquences suivantes sur la facture des consommateurs :

- Un client résidentiel type dans la zone de tarification d'EGD (anciens clients d'Enbridge Gas Distribution Inc.) verra sa facture annuelle augmenter de 47,08 \$.
- Un client résidentiel type dans les zones de tarification d'Union (anciens clients d'Union Gas Limited) verra sa facture annuelle augmenter de 43,23 \$.

**D'autres clients, y compris les entreprises, seront également touchés.**

### **LA COMMISSION DE L'ÉNERGIE DE L'ONTARIO TIENDRA UNE AUDIENCE PUBLIQUE**

La CEO tiendra une audience publique pour prendre en compte la demande d'Enbridge Gas. Pendant cette audience écrite ou orale, elle interrogera Enbridge Gas concernant sa demande. Elle écoutera également les questions et les arguments des particuliers qui se sont inscrits pour participer (appelés des intervenants) à l'audience de la CEO.

La CEO est un organisme public indépendant et impartial. Elle prend des décisions qui servent l'intérêt public. Son objectif est de promouvoir un secteur de l'énergie viable et efficace sur le plan financier qui vous fournit des services d'énergie fiables à des prix raisonnables.

### **SOYEZ INFORMÉ ET FAITES-VOUS ENTENDRE**

Vous avez le droit d'obtenir des renseignements concernant cette demande et de participer au processus.

- Vous pouvez consulter la demande d'Enbridge Gas sur le site Web de la CEO dès maintenant.
- Vous pouvez déposer une lettre avec vos commentaires qui sera prise en compte pendant l'audience.
- Vous pouvez devenir un intervenant. En tant qu'intervenant, vous pouvez poser des questions concernant la demande d'Enbridge Gas et formuler des arguments quant à la question de savoir si la CEO devrait approuver ou non la demande d'Enbridge Gas. Vous devez envoyer votre candidature d'ici le **3 novembre, 2020** à défaut de quoi l'audience se déroulera sans vous et vous ne pourrez recevoir aucun autre avis de la procédure.
- À la fin du processus, vous pouvez examiner la décision de la CEO et ses motifs sur son site Web.

### **POUR EN SAVOIR D'AVANTAGE**

Notre numéro de dossier pour ce cas est le suivant : **EB-2020-0212**. Pour en apprendre davantage sur cette audience, obtenir des directives sur la façon de déposer une lettre avec vos commentaires ou de devenir un intervenant, ou encore pour accéder à tout document lié à ce cas, veuillez sélectionner le numéro de dossier **EB-2020-0212** dans la liste sur le site Web de la CEO à l'adresse <https://www.oeb.ca/fr/participez>. Vous pouvez aussi communiquer avec notre Centre des relations avec les consommateurs au numéro 1 877 632-2727 si vous avez des questions.

### **AUDIENCES ORALES OU ÉCRITES**

Il existe deux types d'audience de la CEO : orales et écrites. Enbridge Gas a présenté une demande d'audience écrite. La CEO déterminera à une date ultérieure s'il faut procéder au moyen d'une audience écrite ou orale. Si vous croyez qu'une audience orale est nécessaire, vous pouvez écrire à la CEO pour en expliquer la raison d'ici le **3 novembre, 2020**.

### **CONFIDENTIALITÉ**

Si vous écrivez une lettre avec vos commentaires, votre nom et le contenu de votre lettre seront inscrits dans le dossier public de la CEO et sur le site Web de la CEO. Cependant, votre numéro de téléphone personnel, votre adresse résidentielle et votre adresse courriel seront supprimés. Si vous êtes une entreprise, tous vos renseignements demeureront publics. Si vous posez votre candidature pour devenir un intervenant, tous vos renseignements seront publics.

Cette audience se tiendra en vertu de l'article 36 de la Loi de 1998 sur la Commission de l'énergie de l'Ontario, L.O., chap. 15 (annexe B).



Ontario

Ontario Energy Board Commission de l'énergie de l'Ontario

## ONTARIO ENERGY BOARD

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sch. B;

**AND IN THE MATTER OF** an application by Enbridge Gas Inc., for an order or orders for gas distribution rate changes related to compliance obligations under the *Greenhouse Gas Pollution Pricing Act*, S.C. 2018, c. 12, s. 186.

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### APPLICATION

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1. Enbridge Gas Inc. ("Enbridge Gas"), the Applicant, was formed by the amalgamation of Enbridge Gas Distribution Inc. and Union Gas Limited on January 1, 2019 pursuant to the *Ontario Business Corporations Act*, R.S.O. 1990, c. B. 16. Enbridge Gas carries on the business of distributing, transmitting and storing natural gas within Ontario.
2. On June 21, 2018, the *Budget Implementation Act, 2018, No. 1* received Royal Assent. Included in Part V is the *Greenhouse Gas Pollution Pricing Act*, S.C. 2018, c. 12, s. 186 ("GGPPA"). Under the GGPPA, a federal carbon pricing program ("FCPP") applies to any province or territory that requested it or that did not have an equivalent carbon pricing system in place by January 1, 2019. On October 23, 2018, the federal government confirmed that the GGPPA would apply to Ontario.
3. The FCPP is composed of two elements: (i) a charge on fossil fuels (the "Federal Carbon Charge") imposed on distributors, importers and producers effective April 1, 2019 and increasing each year on April 1; and (ii) an Output-Based Pricing System ("OBPS") for prescribed industrial facilities effective January 1, 2019. Enbridge Gas's operations as an integrated natural gas utility in Ontario fall under the purview of the GGPPA, which result in the following costs being incurred:
  - a. Incremental administration and program costs;

- b. Customer-related Federal Carbon Charge costs for volumes delivered by Enbridge Gas to its residential, commercial and industrial customers who are not covered under the OBPS; and
  - c. Facility-related costs (“Facility Carbon Charge”) arising from Enbridge Gas’s facilities and operation of its gas distribution system.
4. Enbridge Gas hereby applies to the OEB, pursuant to the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B (the “Act”), for:
- a. an order or orders allowing it to charge customers a Federal Carbon Charge on a volumetric basis, in the amount of the Federal Carbon Charge required to be paid pursuant to the GGPPA, effective April 1, 2021; and
  - b. an order or orders approving or fixing just and reasonable rates for all Enbridge Gas rate zones (EGD, Union North and Union South),<sup>1</sup> effective April 1, 2021, to allow Enbridge Gas to recover other costs (including Facility Carbon Charge costs) in compliance with the GGPPA.
5. Enbridge Gas further applies to the OEB for all necessary orders and directions concerning pre-hearing and hearing procedures for the determination of this application.
6. This application is supported by written evidence that has been filed with this application and may be amended from time to time as circumstances may require.
7. The persons affected by this application are the customers resident or located in the municipalities, police villages, Indigenous communities and Métis organizations served by Enbridge Gas, together with those to whom Enbridge Gas sells gas, or on whose behalf Enbridge Gas distributes, transmits or stores gas. It is impractical to set out in this application the names and addresses of such persons because they are too numerous.

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<sup>1</sup> Collectively, the Union North and Union South rate zones are referred to as the “Union rate zones”.

8. Enbridge Gas requests that the OEB's review of this application proceed by way of written hearing in English.
9. Enbridge Gas requests that all documents relating to this application and its supporting evidence, including the responsive comments of any interested party, be served on Enbridge Gas and its counsel as follows:

Enbridge Gas Inc.  
P.O. Box 2001  
50 Keil Drive North  
Chatham, Ontario N7M 5M1

Attention: Adam Stiers  
Technical Manager, Regulatory Applications – Regulatory Affairs  
Telephone: (519) 436-4558  
Fax: (519) 436-4641  
Email: [astiers@uniongas.com](mailto:astiers@uniongas.com)  
[egiregulatoryproceedings@enbridge.com](mailto:egiregulatoryproceedings@enbridge.com)

**-and-**

Attention: Tania Persad  
Senior Legal Counsel  
Telephone: (416) 495-5891  
Fax: (416) 495-5994  
Email: [tania.persad@enbridge.com](mailto:tania.persad@enbridge.com)

Dated: September 30, 2020

**Enbridge Gas Inc.**

*[original signed by]*

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Adam Stiers  
Technical Manager, Regulatory Applications – Regulatory Affairs

## OVERVIEW

1. The purpose of this evidence is to summarize the application of Enbridge Gas Inc. (“Enbridge Gas”) for just and reasonable rates to recover the costs associated with the *Greenhouse Gas Pollution Pricing Act*, S.C. 2018, c. 12, s. 186 (“GGPPA”) as a pass-through to customers throughout the Enbridge Gas Distribution (“EGD”) rate zone and Union Gas (“Union”)<sup>1</sup> rate zones effective April 1, 2021 (“Application”).
2. The evidence is organized as follows:
  - Exhibit A: Overview
  - Exhibit B: Forecasts
    - Tab 1: EGD Rate Zone
    - Tab 2: Union Rate Zones
  - Exhibit C: Deferral and Variance Accounts
  - Exhibit D: Cost Recovery
    - Tab 1: EGD Rate Zone
    - Tab 2: Union Rate Zones
3. This exhibit of evidence discusses Enbridge Gas’s OEB-approved 2019 and 2020 Federal Carbon Pricing Program (“FCPP”) applications, Enbridge Gas’s obligations under the GGPPA as a natural gas utility, and the approvals sought by Enbridge Gas from the Ontario Energy Board (“Board” or “OEB”).
4. This exhibit of evidence is organized as follows:
  1. Background
    - 1.1 The Federal Carbon Pricing Program
  2. Enbridge Gas’s Obligations Under the GGPPA
    - 2.1 Volumes Subject to Federal Carbon Charge

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<sup>1</sup> “Union rate zones” collectively refers to the Union North rate zone and the Union South rate zone.

2.2 Volumes Subject to OBPS

2.3 Management of Facility-Related Emissions and Costs

3. Requested Approvals

4. Administration

1. BACKGROUND

5. On June 21, 2018, the *Budget Implementation Act, 2018, No. 1* received Royal Assent. Part V included the *Greenhouse Gas Pollution Pricing Act*. The FCPP applies to any province or territory that requested it or that did not have an equivalent carbon pricing system in place by January 1, 2019. On October 23, 2018, the federal government confirmed that the GGPPA would apply to Ontario.
6. Enbridge Gas filed a consolidated 2019 Federal Carbon Pricing Program application with the OEB on January 11, 2019 (EB-2018-0205) ("2019 Application"), seeking approval to increase rates to recover costs in the EGD rate zone and Union rate zones associated with Enbridge Gas's obligations under the FCPP. The OEB "generally found the proposals by Enbridge Gas reasonable";<sup>2</sup> approving forecasts and rate increases as filed and finalizing the establishment of new FCPP-related deferral and variance accounts.<sup>3</sup> In its written submission on Enbridge Gas's 2019 Application, OEB Staff stated that Enbridge Gas should apply to dispose of the 2019 balances in its FCPP-related deferral and variance accounts as part of a future annual FCPP-related application so that all FCPP-related costs and balances are reviewed in the same proceeding.<sup>4</sup>
7. On November 18, 2019, Enbridge Gas filed its 2020 Federal Carbon Pricing Program application (EB-2019-0247) ("2020 Application") with the OEB seeking approval to: (i) increase rates to recover costs in the EGD rate zone and Union rate

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<sup>2</sup> EB-2018-0205, OEB Decision and Order, July 4, 2019, pp. 1-2.

<sup>3</sup> EB-2018-0205, OEB Decision and Order, July 4, 2019, pp. 5-6, 9-10 and 12.

<sup>4</sup> EB-2018-0205, OEB Staff Submission, May 27, 2019, p. 6.

zones associated with Enbridge Gas's obligations under the FCPP; and (ii) dispose of 2019 balances for all FCPP-related deferral and variance accounts.<sup>5</sup> The OEB generally found the proposals of Enbridge Gas reasonable, approving: (i) rate increases previously approved on an interim basis on a final basis effective April 1, 2020; and (ii) 2019 FCPP-related deferral and variance account balances and associated disposition unit rates.<sup>6</sup> The Board also supported Enbridge Gas's proposal to delay seeking OEB approval to dispose of 2020 balances in FCPP-related deferral and variance accounts by one year (to be filed as part of Enbridge Gas's 2022 Federal Carbon Pricing Program application by September 2021) in order for Enbridge Gas to file final audited year-end 2020 balances in these accounts.<sup>7</sup>

8. As part of its Decision and Order on Enbridge Gas's 2020 Application, the OEB ordered that for First Nations on-reserve customers the Federal Carbon Charge remain interim and that Enbridge Gas track charges for these customers until such time that the OEB makes a determination regarding the constitutional applicability of FCPP-related charges to them ("Deferred Issues"). Further, in its Decision and Rate Order dealing with Enbridge Gas's 2020 Application the OEB ordered that Enbridge Gas include in its rate schedules a reference to the interim nature of the Federal Carbon Charge for these customers.

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<sup>5</sup> On May 14, 2020, as directed by the OEB in its Interim Decision and Order dated February 11, 2020, Enbridge Gas filed an Updated 2020 Federal Carbon Pricing Program Application with the OEB to: (i) reflect actual December 31, 2019 balances in the Federal Carbon Pricing Program-related deferral and variance accounts; and (ii) discuss options for the approach to disposition of balances.

<sup>6</sup> EB-2019-0247, OEB Decision and Order, August 13, 2020, p. 12. The OEB's approval was subject to adjustment of interest calculations on 2019 FCPP-related deferral and variance account balances for Q3 2020 to reflect an amended OEB-prescribed rate of 0.57% and disposition of account balances in three monthly installments beginning October 1, 2020. Federal Carbon Charges and disposition of 2019 balances in the Customer Variance Accounts were approved on a final basis for all customers except First Nations on-reserve customers for which these charges and rates were approved on an interim basis, until the OEB's determination of the Deferred Issues regarding the constitutional applicability of FCPP charges to these customers.

<sup>7</sup> EB-2019-0247, OEB Decision and Order, August 13, 2020, p. 21.



9. Consistent with the Board's previous findings on Enbridge Gas's 2019 Application and 2020 Application, and considering that at the time of this submission the OEB has not yet made any determination regarding the Deferred Issues, this Application requests approval to: (i) increase the Federal Carbon Charge and Facility Carbon Charge (both of which are discussed below) to recover costs associated with meeting Enbridge Gas's obligations under the FCPP on a final basis for all customers, with the exception of Federal Carbon Charges as they apply to First Nations on-reserve customers; and (ii) increase rates on an interim basis for First Nations on-reserve customers and to continue tracking such charges until the OEB makes a determination on the Deferred Issues.<sup>8</sup>

#### 1.1 THE FEDERAL CARBON PRICING PROGRAM

10. The FCPP is composed of two elements:

- i) A charge on fossil fuels (the "Federal Carbon Charge") as a cost per unit of fuel, including natural gas (cubic meters or m<sup>3</sup>), imposed on distributors, importers and producers applicable from 2019 to 2022 under Part 1 of the GGPPA. This charge applies to fuel delivered by Enbridge Gas to its customers and to Enbridge Gas's own fuel use within its distribution system (i.e. for distribution buildings, boilers/line heaters and Natural Gas Vehicle ("NGV") fleet fuel). Exemptions from the Federal Carbon Charge are explained below. The Federal Carbon Charge is equivalent to \$40 per tonne of carbon dioxide equivalent ("tCO<sub>2</sub>e") or 7.83 ¢/m<sup>3</sup> in 2021 and increases by \$10/tCO<sub>2</sub>e annually, reaching \$50/tCO<sub>2</sub>e or 9.79 ¢/m<sup>3</sup> in 2022 (see Table A-1). The Federal Carbon Charge became effective April 1, 2019 and increases each subsequent year on April 1.

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<sup>8</sup> Enbridge Gas proposes to maintain a reference to the interim nature of the Federal Carbon Charge for First Nations on-reserve customers in its rate schedules in accordance with the Board's Decision and Rate Order on its 2020 Application (EB-2019-0247, OEB Decision and Rate Order, September 3, 2020, p. 7).

Table A-1  
2019 – 2022 Federal Carbon Charge Rates for Marketable Natural Gas<sup>9</sup>

<u>Year</u>	<u>\$/tCO<sub>2</sub>e</u>	<u>¢/m<sup>3</sup></u>
2019	\$20	3.91
2020	\$30	5.87
2021	\$40	7.83
2022	\$50	9.79

- ii) Entities that are covered under Part 2 of the GGPPA, “Industrial Greenhouse Gas Emissions”, are exempt from coverage under Part 1 of the GGPPA, “Fuel Charge”. Part 2 entities are instead covered under an Output-Based Pricing System (“OBPS”), with mandatory and voluntary participation thresholds, established for prescribed industrial facilities that emit specified volumes of greenhouse gas (“GHG”) emissions, measured in tCO<sub>2</sub>e, annually.<sup>10</sup> This component of the GGPPA became effective January 1, 2019.

The OBPS creates a pricing incentive to reduce GHG emissions from Energy Intensive and Trade Exposed (“EITE”) industrial facilities while limiting the impacts of carbon pricing on their respective competitiveness. Entities included in the OBPS will be required to apply to Environment and Climate Change Canada (“ECCC”), and to the Canada Revenue Agency (“CRA”) for exemption from the Federal Carbon Charge. The exemption certificate issued by the CRA must then be submitted to Enbridge Gas to ensure that the entity is not charged the Federal Carbon Charge on its natural gas bill. Participants in the OBPS will be required to report and manage their own compliance obligations and have the

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<sup>9</sup> The GGPPA, Schedule 2 and Schedule 4.

<sup>10</sup> The mandatory emissions threshold for entities identified as being in an Energy Intensive and Trade Exposed sector has been established as 50 ktCO<sub>2</sub>e or more per year by Environment and Climate Change Canada. Voluntary participants may opt-in to the OBPS if the entity emits between 10 - 50 ktCO<sub>2</sub>e per year. In both cases, facilities must carry out an activity for which an Output-Based Standard is prescribed to be eligible; <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system.html>

following options to satisfy annual emissions that exceed their sector-based emission intensity benchmark:<sup>11</sup>

- (i) pay the excess emissions charge;<sup>12</sup>
- (ii) submit surplus credits issued by the federal government (“Credits”);<sup>13</sup> or
- (iii) submit eligible offset credits (“Offset Credits”).<sup>14</sup>

11. The only aspects of the FCPP that currently remain under development are the tracking system for surplus credits and the federal GHG offset system regulations and offset protocols, which are anticipated to be completed in 2021.

12. On September 21, 2020, the province of Ontario announced that the federal government has accepted the Ontario Emissions Performance Standards (“EPS”) program as an alternative to the OBPS. The timeline for transition from OBPS to EPS has not been clarified. Enbridge Gas is working to understand the transition plan from the OBPS to the EPS and reserves its right to amend this Application as

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<sup>11</sup> Output Based Standards are included for each industrial activity in Schedule 1 of the Output Based Pricing System Regulations <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2019-266/page-15.html#h-1185036>

<sup>12</sup> Excess emission charge is the carbon price in \$/tCO<sub>2</sub>e as outlined in Table A-1. Rates of charge applicable from 2019-2022 are outlined in Schedule 4 of the GGPPA.

<sup>13</sup> Credits are issued by the federal government to facilities that achieve annual emissions volumes below their annual output-based emissions limit. Each credit represents one tCO<sub>2</sub>e, can be banked for future use against emissions or traded, has a useful life of five years from the period following the year for which the credits were issued and will be tracked using a centralized system.

<sup>14</sup> Offset Credits represent greenhouse gas emissions reductions or removal enhancements generated from Canadian voluntary project-based activities that are not subject to carbon pricing and that would not have occurred under business as usual conditions (i.e. the reductions go beyond legal requirements and standard practice). Details of the proposed federal offset credit program were made available in June 2019 through a discussion paper entitled Carbon Pollution Pricing: Options for a Federal GHG Offset System (<https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/federal-offset-system.html>) and in July 2020 through a discussion paper entitled Carbon Pollution Pricing: Considerations for Protocol Development in the Federal GHG Offset System (<https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system/carbon-pollution-pricing-considerations-protocol-development.html>). The federal GHG offset regulation is anticipated to be published in draft in the Fall of 2020 and finalized in 2021.

appropriate once additional details are announced. For the purposes of this Application, Enbridge Gas has assumed it will be subject to the OBPS in 2021. Any cost impacts to the Facility Carbon Charge due to a change in the estimated OBPS compliance obligation will be included in Enbridge Gas's future FCPP applications for disposition of FCPP-related deferral and variance account balances.

13. Enbridge Gas's Application is being submitted at this time to be able to comply with the GGPPA and begin charging customers the 2021 Federal Carbon Charge Rate for natural gas, in accordance with the FCPP, beginning April 1, 2021.

## 2. ENBRIDGE GAS'S OBLIGATIONS UNDER THE GGPPA

14. As a natural gas utility in Ontario, a "listed province" in the GGPPA, Enbridge Gas is required to register under Part 1 of the GGPPA with the CRA as a "distributor" for volumes of natural gas delivered to its customers.<sup>15</sup> Further, Enbridge Gas is required to register under the GGPPA as an "emitter" since its transmission and storage compressor stations are "covered facilities" under Part 2 of the GGPPA.<sup>16</sup>
15. As a "distributor" Enbridge Gas is required to remit Federal Carbon Charges related to the GGPPA to the Government of Canada. As an "emitter" Enbridge Gas is required to remit payment for any excess emissions under the OBPS. Enbridge Gas has estimated its 2021 cost of compliance with the GGPPA to be approximately \$1.42 billion: \$863.66 million for the EGD rate zone (see Exhibit B, Tab 1 for additional detail) and \$556.37 million for the Union rate zones (see Exhibit B, Tab 2 for additional detail). In addition, Enbridge Gas estimates that it will incur 2021 administrative costs of approximately \$4.41 million associated with the

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<sup>15</sup> The GGPPA, s.55 (1); The GGPPA requires registration of distributors of marketable or non-marketable natural gas. The GGPPA defines "marketable natural gas" as natural gas that consists of at least 90% methane and that meets the specifications for pipeline transport and sale for general distribution to the public. The GGPPA defines "non-marketable natural gas" as natural gas other than marketable natural gas.

<sup>16</sup> The GGPPA, s.57(1).

administration of its requirements under the GGPPA (see Exhibit C for additional detail).

## 2.1 VOLUMES SUBJECT TO FEDERAL CARBON CHARGE

16. With the exception of customer volumes that are covered under the OBPS program, or those that are otherwise fully or partially exempt from the Federal Carbon Charge, all distribution volumes delivered by Enbridge Gas in Ontario ("Customer Volumes") are covered under Part 1 of the GGPPA and are subject to the Federal Carbon Charge.<sup>17</sup>

17. Under the GGPPA Enbridge Gas is required, on a monthly basis, to:<sup>18</sup>

- calculate and report to the CRA the volume of fuel consumed which is covered under Part 1 of the GGPPA, including Enbridge Gas's own use within its distribution system (i.e. distribution buildings, boilers/line heaters and NGV fleet volumes); and
- remit the amount of the Federal Carbon Charge in respect of the monthly volume that has been calculated.

### Forecast Customer Volumes and Costs

18. As set out in Table A-1, Enbridge Gas is required to remit the 2021 Federal Carbon Charge rate of 7.83 ¢/m<sup>3</sup> of natural gas consumed for applicable customers from April 1, 2021 to March 31, 2022. As outlined at Exhibit D and consistent with Enbridge Gas's treatment of 2019 and 2020 FCPP-related charges, Enbridge Gas

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<sup>17</sup> To calculate Enbridge Gas's 2021 customer volume forecast at Exhibit B, Tab 1, Schedule 1, and at Exhibit B, Tab 2, Schedule 1, Enbridge Gas excluded customers who have provided Enbridge Gas with an exemption certificate, in accordance with Section 17(2) of the GGPPA. This includes downstream distributors, registered emitters covered under the OBPS program, and customers who use natural gas in a non-covered activity. 80% of volumes for eligible greenhouses are also excluded.

<sup>18</sup> The GGPPA, s.68 (2b), s.71 (3).

will present these charges as a separate line item on customers' bills. Enbridge Gas's forecast cost associated with Customer Volumes for the period of April 1, 2021 to March 31, 2022 is \$1,414.11 million: \$862.60 million for the EGD rate zone and \$551.51 million for the Union rate zones (please see Exhibit B for additional detail on costs associated with Customer Volumes for the period of April 1, 2021 to March 31, 2022).

19. These cost estimates are subject to change based on actual distribution volumes and are meant to be used for informational purposes only. Customers will be charged the Federal Carbon Charge rate monthly based on actual billed volumes.
20. Customers that hold an Exemption Certificate must provide a copy to Enbridge Gas no later than two weeks in advance of the first day of the month in which they wish to have their consumption volumes exempted from the Federal Carbon Charge. Similarly, if a customer is no longer eligible to hold an Exemption Certificate, they must provide notice to Enbridge Gas to remove the exemption from the Federal Carbon Charge.

*Forecast Company Use Volumes and Costs*

21. As set out in Table A-1, Enbridge Gas is required to remit the 2021 Federal Carbon Charge rate of 7.83 ¢/m<sup>3</sup> for natural gas consumed in the operation of Enbridge Gas's facilities which are not covered by the OBPS (i.e. distribution buildings, boilers/line heaters and NGV fleet volumes). The costs associated with Company Use Volumes will be recovered from customers as part of the Facility Carbon Charge, as detailed at Exhibit D, included in delivery or transportation charges on customers' bills. Enbridge Gas's forecast cost associated with Company Use Volumes for the period of April 1, 2021 to March 31, 2022 is approximately \$1.97 million: \$0.50 million for the EGD rate zone and \$1.47 million for the Union rate zones (please see Exhibit B for additional detail on costs associated with Company Use Volumes for the period of April 1, 2021 to March 31, 2022).

22. The forecast Company Use Volumes and associated Facility Carbon Charge cost estimate are subject to change based on actual Facility Volumes.

## 2.2 VOLUMES SUBJECT TO OBPS

23. Transmission of marketable natural gas is a covered activity under the OBPS and includes installations and equipment such as compressor stations, storage installations, and compressor units that have a common owner/operator within a province.<sup>19</sup> For Enbridge Gas, this includes fuel used in transmission and storage compressor facilities ("OBPS Volumes").

24. Under the GGPPA, Enbridge Gas is required, on an annual basis, to:

- calculate and report to ECCC Enbridge Gas's emissions and emissions limit for each compliance period; and
- provide compensation for, or otherwise obtain Credits or Offset Credits to cover, any excess emissions by the applicable deadline.

25. OBPS-qualified facilities have a compliance obligation for the portion of their emissions that exceed an annual facility emission limit. Under the OBPS, annual facility emissions limits are calculated based on a specific OBS and annual facility production. The OBS for the transmission of marketable natural gas is 80% of production-weighted national average emissions intensity. The costs associated with OBPS Volumes will be recovered from customers as part of the Facility Carbon Charge, as detailed at Exhibit D, included in delivery or transportation charges on customers' bills. Enbridge Gas's forecast 2021 (January 1, 2021 to December 31,

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<sup>19</sup> The GGPPA, Part 2 (industrial GHG Emissions) and the Output Based Pricing System Regulations SOR/2019-266.

2021) cost associated with OBPS Volumes is \$3.96 million: \$0.57 million for the EGD rate zone and \$3.39 million for the Union rate zones (please see Exhibit B for additional detail on costs associated with OBPS Volumes for the period of January 1, 2021 to December 31, 2021).

### 2.3 MANAGEMENT OF FACILITY-RELATED EMISSIONS AND COSTS

26. Consistent with Enbridge Gas's commitment "...to provide the OEB with a summary of the preliminary economic assessment (compared to the Federal Carbon Charge) of projects with the potential to reduce Enbridge Gas's emission intensity under OBPS" this section of evidence contains details on the potential options for reducing Enbridge Gas's facility-related emissions and associated costs.<sup>20</sup> Facility-related emissions and associated costs can be reduced through the reduction of either Company-Use Volumes or OBPS Volumes, or, in the case of OBPS emissions, through the use of lower cost compliance options (as discussed in paragraph 10 above).

#### Facility-Related Volume Reductions

27. As discussed in Enbridge Gas's responses to interrogatories dealing with its 2020 Application, in 2019, Enbridge Inc. (the parent company of Enbridge Gas) implemented a Carbon and Energy Efficiency Plan ("CEE Plan") to identify emission reduction opportunities in each of its business units, including at Enbridge Gas.<sup>21</sup> At that time, Enbridge Gas stated that it had not yet identified cost-effective opportunities that would result in significant reductions in emissions related to stationary combustion and flaring.<sup>22</sup> However, Enbridge Gas has continued its work in this regard, evaluating the feasibility, emission reduction potential and cost of

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<sup>20</sup> EB-2019-0247, Enbridge Gas Reply Argument, July 16, 2020, p.13. The OEB subsequently found that Enbridge Gas's proposal was appropriate; EB-2019-0247, OEB Decision and Order, August 13, 2020, pp. 9-10.

<sup>21</sup> EB-2019-0247, Exhibit I.STAFF.9 d), June 18, 2020.

<sup>22</sup> Cost-effectiveness on a \$/tCO<sub>2</sub>e basis is based on a comparison to the excess emission charge, which is the carbon price in \$/tCO<sub>2</sub>e as outlined in Table A-1. Rates of charge applicable from 2019-2022 are outlined in Schedule 4 of the GGPPA.



opportunities identified. Based on work to date, four opportunities have been identified that may reduce OBPS-volumes, as shown in Table A-2.<sup>23</sup> Only two of the opportunities are cost-effective and are currently being implemented. An overview of the four opportunities follows:

**Table A-2**  
**Facility-Related Emission Reduction Project Summary**

	<b>Opportunity</b>	<b>Estimated Capital Cost (\$millions)</b>	<b>Estimated Emissions Reductions –2021 (tCO<sub>2</sub>e)</b>	<b>Estimated Emissions Reductions – 10-yr Cumulative (tCO<sub>2</sub>e)</b>	<b>Cost per Tonne of GHG Emissions (\$/tCO<sub>2</sub>e)<sup>24</sup></b>
1	Online Monitoring	0.05	202	1,300	-32
2	Air Filters	0 <sup>25</sup>	540	2,700	-47
3	Plant J Twinning (Electric Drive)	70.00	N/A <sup>26</sup>	N/A <sup>27</sup>	117
4	Re-wheeling Turbines	17.19	N/A <sup>28</sup>	N/A <sup>29</sup>	191

#### 1. Online Monitoring for Storage and Transmission Operations –

An online monitoring project is being implemented to connect the main transmission stations together in order to optimize engine use, resulting in less maintenance and reduced fuel consumption. Although this project was initially

<sup>23</sup> While these opportunities are expected to reduce OBPS-volumes, there may not be an overall reduction in OBPS volumes depending on compressor usage in 2021. Compressor usage is impacted by many factors including storage volumes, and weather-related volume demands.

<sup>24</sup> A Discounted Cash Flow analysis was conducted to calculate the \$/tCO<sub>2</sub>e cost (represented by a positive \$/tCO<sub>2</sub>e figure) or savings (represented by a negative \$/tCO<sub>2</sub>e figure) of CEE plan opportunities. Cash outflows include incremental capital costs of each opportunity. Cash inflows include resulting natural gas savings, avoided carbon charges, any other incremental O&M costs or savings, income tax impacts and any operating costs or savings resulting from the opportunity. The net present value (“NPV”) of cash inflows and outflows is divided by total expected emissions avoided to determine the \$/tCO<sub>2</sub>e.

<sup>25</sup> Initial O&M costs for the air filter replacement program are estimated to be \$10,000 in 2021 but once the program is fully implemented, it is estimated that there will be an O&M savings of approximately \$150,000/year.

<sup>26</sup> This opportunity is currently not being implemented as it is not cost-effective, and therefore no emission reductions will occur in 2021.

<sup>27</sup> The expected total 10-year cumulative emissions reduction related to this opportunity, if it were to be implemented, is 14,800 tCO<sub>2</sub>e.

<sup>28</sup> This opportunity is currently not being implemented as it is not cost effective, and therefore no emission reductions will occur in 2021.

<sup>29</sup> This opportunity is currently not being implemented as it is not cost-effective. The expected total 10-year emissions reduction related to this opportunity, if it were to be implemented, is 3,100 tCO<sub>2</sub>e.

driven by Enbridge Gas's standard operational maintenance program, it is expected to reduce stationary combustion emissions covered under the OBPS. This initiative has already been implemented on two compressor units and Enbridge Gas intends to implement on four additional compressor units by the end of 2021.

2. Turbine Air Filter Replacements –

As part of a program to increase compressor efficiency and reduce maintenance costs, a study was conducted to evaluate current air filtration systems on Enbridge Gas compressors. As a result of this study, Enbridge Gas has developed and is in the process of implementing a program to upgrade turbine air filters and implement a more effective maintenance strategy. This project is anticipated to reduce stationary combustion emissions covered under the OBPS.

3. Plant J Twinning –

An opportunity exists to reduce the overall compressor fleet emissions by installing an electric drive block of compression that could operate parallel to, and in place of, an existing turbine powered compressor. Dawn Plant J is a likely candidate to be displaced during normal operating conditions by an electric drive compressor as it has higher run time hours, is utilized in a consistent manner throughout the year and was constructed with provisions to install a second plant at a future date. This project would reduce stationary combustion emissions covered under the OBPS. However, this project is currently not feasible due to its high cost per tonne compared to the excess emissions charge.

4. Re-wheeling Turbines –

Compressor impellers can be made more efficient by assessing the viability of their design. There may be opportunities to re-manufacture the impellers to be more efficient and thus reduce the amount of combusted emissions. There are currently four units that have not been re-wheeled on the system. This project

would reduce stationary combustion emissions covered under the OBPS. However, this project is currently not feasible due to its high cost per tonne compared to the excess emissions charge.

28. Additional emission reductions are anticipated as part of regular asset management work and equipment life-cycle replacement. For example, the Asset Management Plan includes replacement of heating equipment which is installed to prevent equipment from freezing as well as to prevent or reduce the amount of frost heave experienced at a station. It is expected that the regular upgrade of heaters within the system will result in additional emission reductions of 1,400 tCO<sub>2e</sub> by 2030, reducing emissions covered under the Federal Carbon Charge. This project has not been listed in the table above because it is considered “business as usual” and has not been included as a project under the CEE Plan.

29. Going forward, Enbridge Gas will continue to identify, track and report on emission reduction opportunities using criteria that effectively balance management of its compliance obligations under the FCPP, estimated capital costs, safety and operational reliability. Enbridge Gas will include details of cost-effective emission reduction opportunities, as appropriate, in future FCPP applications. Actual GHG emission and cost reductions resulting from these opportunities will be reflected in Enbridge Gas’s future FCPP applications for clearance of FCPP-related deferral and variance accounts.

#### OBPS Compliance Cost Reductions

30. As discussed in paragraph 10 above, Enbridge Gas has alternative compliance options to satisfy its annual OBPS compliance obligation aside from paying the excess emissions charge, including the purchase of Credits from other OBPS participants or Offset Credits. To date, no Credits have been issued, and the federal offset program has not yet been established. Once these compliance options become effective, Enbridge Gas will review their respective availability and market

attributes to determine if they present a viable means of reducing OBPS compliance costs. If Enbridge Gas procures Credits or Offset Credits at a lower price than the excess emissions charge, the difference between these two costs will be recorded in the Federal Carbon Charge – Facility Variance Accounts and, as discussed in the responses to interrogatories and Enbridge Gas’s Reply Argument dealing with its 2020 Application, Enbridge Gas will seek to dispose of that variance through a future FCPP application.<sup>30</sup>

31. Additional administrative costs may be incurred, such as increased staffing and consulting costs, in order to pursue and acquire Credits and Offset Credits. All actual administrative costs incurred will be recorded in the Greenhouse Gas Emissions Administration Deferral Accounts and Enbridge Gas will seek to dispose of those amounts in a future FCPP application.

### 3. REQUESTED APPROVALS

32. As the costs to comply with the GGPPA in 2021 form part of Enbridge Gas’s ongoing operating costs as a utility, and consistent with Enbridge Gas’s 2020 Application, Enbridge Gas proposes to continue to treat all prudently incurred costs of compliance with the GGPPA as a pass-through to customers (Y Factor).

33. Through this Application and by February 11, 2021, Enbridge Gas is seeking final OEB approval of rates, with the exception of First Nations on-reserve customers for which Enbridge Gas requests that rate increases be approved on an interim basis, subject to the OEB’s determinations regarding the Deferred Issues, to be applied to customer bills beginning April 1, 2021, as set out at Exhibit D. Enbridge Gas will file a draft rate order for final rates following the issuance of the OEB’s Decision and Order for this Application. Subject to the OEB’s approval of that draft rate order

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<sup>30</sup> EB-2019-0247, Exhibit I.STAFF.8 b) and c), June 18, 2020; EB-2019-0247, Enbridge Gas Reply Argument, July 16, 2020, p. 12.

Enbridge Gas intends to reflect 2021 rate increases to the Federal Carbon Charge and Facility Carbon Charge in its April 1, 2021 Quarterly Rate Adjustment Mechanism (“QRAM”) application.

#### 4. ADMINISTRATION

Table of Contents	Please see Exhibit A, Schedule 1.
Glossary of Acronyms and Defined Terms	Please see Exhibit A, Schedule 2.
Bill Impacts	<p>The bill impact of the 2021 carbon charges for a typical residential customer with annual consumption of 2,400 m<sup>3</sup> is an increase of \$47.08 per year in the EGD rate zone.</p> <p>The bill impact of the 2021 carbon charges for a typical residential customer with annual consumption of 2,200 m<sup>3</sup> is an increase of \$43.23 per year in the Union rate zones.</p>
Specific Approvals Requested	Approval by February 11, 2021, of proposed 2021 rate increases effective April 1, 2021, on a final basis for all customers with the exception of First Nations on-reserve customers for which Enbridge Gas requests that rate increases be approved on an interim basis, subject to the OEB’s determinations regarding the Deferred Issues.

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## GLOSSARY OF ACRONYMS AND DEFINED TERMS

This glossary is intended to serve as a reference for the benefit of readers in their overall understanding of the terminology used in Enbridge Gas's Application. More detailed definitions may apply to specific terms when used in the context of this Application.

**2019 APPLICATION** – Enbridge Gas's 2019 Federal Carbon Pricing Program Application and pre-filed evidence (EB-2018-0205).

**2020 APPLICATION** – Enbridge Gas's 2020 Federal Carbon Pricing Program Application and pre-filed evidence (EB-2019-0247).

**APPLICATION** – Enbridge Gas's 2021 Federal Carbon Pricing Program Application and pre-filed evidence (EB-2020-0212). An application seeking approval of: (i) just and reasonable rates to recover the costs associated with the GGPPA as a pass-through to customers throughout the EGD rate zone and Union rate zones effective April 1, 2021.

**BOARD** – The Ontario Energy Board.

**CEE Plan** – Enbridge Inc. Carbon and Energy Efficiency Plan to identify emission reduction opportunities in each of its business units, including Enbridge Gas.

**CFS** – Federal Clean Fuel Standard.<sup>1</sup>

**CO<sub>2</sub>** – Carbon dioxide.

**CO<sub>2e</sub>** – Carbon dioxide equivalent.

**COMPANY USE** – Volumes of natural gas consumed in the operation of Enbridge Gas's facilities including distribution buildings, boilers/line heaters, and NGV fleet volumes (which are subject to the Federal Carbon Charge under Part 1 of the GGPPA).

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<sup>1</sup> <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard.html>



**COVERED FACILITY** – An entity registered under the OBPS and therefore exempt from the Federal Carbon Charge for volumes of fuel delivered by Enbridge Gas (i.e. Fuel Charge under Section 40 of the GGPPA). Covered Facilities are classified as mandatory or voluntary based on annual emissions. Covered Facilities are not exempt from Enbridge Gas's Facility Carbon Charges or administration-related costs.

**CRA** – Canada Revenue Agency.

**CREDITS** – Issued by the federal government to facilities that achieve annual emissions volumes below their annual output-based emissions limit. Each credit represents one tonne of CO<sub>2</sub>e, can be banked for future use against emissions or traded, has a useful life of five years from the period following the year for which the credit was issued, and will be tracked using a centralized system (currently under development).

**CUSTOMER VOLUMES** – Distribution volumes delivered by Enbridge Gas in Ontario, except for volumes delivered to customers that hold an Exemption Certificate.

**CUSTOMER-RELATED OBLIGATIONS** – The obligation related to GHG emissions associated with the natural gas delivered by Enbridge Gas, other than to Covered Facilities.

**DCQ** – Daily Contract Quantity.

**Deferred Issues** – As part of its Decision and Order on Enbridge Gas's 2020 Application, the OEB ordered that for First Nations on-reserve customers the Federal Carbon Charge remain interim and that Enbridge Gas track charges for these customers until such time that the OEB makes a determination regarding the constitutional applicability of FCPP-related charges to them.

**DISTRIBUTOR** – An entity that imports or delivers marketable and non-marketable natural gas, and/or that measures consumption of marketable natural gas and is required to register as a Distributor under the GGPPA.<sup>2</sup>

**DSM** – Demand Side Management.

**ECCC** – Environment and Climate Change Canada.

**EGD** – Enbridge Gas Distribution.

**EITE** – Energy Intensive and Trade Exposed industrial facilities.

**EMITTER** – An entity deemed by the Minister of National Revenue to be eligible to receive an exemption certificate. The entity must be responsible for a covered facility that has been issued a covered facility certificate by the Minister of ECCC.<sup>3</sup>

**ENBRIDGE GAS** – Enbridge Gas Inc.

**EPS** – Ontario Emissions Performance Standards program.<sup>4</sup>

**EXEMPTION CERTIFICATE** – A certificate issued by the CRA upon an entity's registration under the OBPS, exempting an entity from the application of the Federal Carbon Charge.<sup>5</sup>

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<sup>2</sup> The GGPPA, s.55.

<sup>3</sup> The GGPPA, s.57.

<sup>4</sup> <https://www.ontario.ca/laws/regulation/r19241>

<sup>5</sup> The GGPPA, s.36.

**FACILITY CARBON CHARGE** – The common volumetric charge proposed by Enbridge Gas, for the EGD rate zone and Union rate zones, to recover the facility costs resulting from the GGPPA related to Enbridge Gas's: (i) Company Use Volumes including distribution buildings, boiler/line heaters and NGV fleet volumes (which are subject to the Federal Carbon Charge under Part 1 of the GGPPA); and, (ii) transmission and storage compression volumes (which are subject to the OBPS as Enbridge Gas's transmission and storage system is a "covered facility" under Part 2 of the GGPPA).

**FACILITY VOLUMES** – Composed of: (i) Company Use Volumes including distribution buildings, boilers/line heaters, and NGV fleet volumes; and, (ii) transmission and storage compression volumes.

**FCCCVA** – Federal Carbon Charge – Customer Variance Account.

**FCCFVA** – Federal Carbon Charge – Facility Variance Account.

**FCPP** – As part of the GGPPA, a federal carbon pricing program (also known as the "Backstop") applies in any province or territory that requested it or that did not have an equivalent carbon pricing system in place that meets federal carbon pricing requirements by January 1, 2019.<sup>6</sup> The FCPP is composed of a charge on fossil fuels and an Output-Based Pricing System.

**FEDERAL CARBON CHARGE** – As part of the FCPP, a charge applied to fossil fuels imposed on distributors, importers and producers applicable from 2019-2022 and equivalent to \$40/tCO<sub>2</sub>e in 2021 and increasing by \$10/tCO<sub>2</sub>e annually each April, reaching \$50/tCO<sub>2</sub>e in April 2022. This charge applies to volumes delivered by Enbridge Gas to its customers and to Enbridge Gas's Company Use Volumes (i.e. distribution buildings, boilers/line heaters and NGV fleet volumes).

**FTE** – Full-Time Equivalents.

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<sup>6</sup> <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work.html>

**GGEADA** – Greenhouse Gas Emissions Administration Deferral Account.

**GGPPA** – The *Greenhouse Gas Pollution Pricing Act*, included as *Part V of the Budget Implementation Act, 2018, No. 1*.<sup>7</sup>

**GHG** – Greenhouse Gas as set out in the GGPPA.<sup>8</sup>

**ktCO<sub>2</sub>e** – Kilo-tonne of carbon dioxide equivalent.

**LISTED PROVINCE** – A province or territory covered under the GGPPA.<sup>9</sup>

**MANDATORY PARTICIPANT** – Entities that emit 50 ktCO<sub>2</sub>e or greater annually, that undertake a primary activity which has an OBS specified and are required to register under the OBPS.

**MARKETABLE NATURAL GAS** – Natural gas that consists of at least 90% methane and that meets the specifications for pipeline transport and sale for general distribution to the public, as defined by the GGPPA.<sup>10</sup>

**MUSH** – Municipalities, universities, school boards and hospitals.

**MW** – Megawatt.

**MWh** – Megawatt hour.

**NGV** – Natural gas vehicle.

**NON-MARKETABLE NATURAL GAS** – Natural gas other than marketable natural gas, as defined by the GGPPA.<sup>11</sup>

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<sup>7</sup> The GGPPA, <https://laws-lois.justice.gc.ca/eng/acts/G-11.55/>

<sup>8</sup> The GGPPA, Column 1, Schedule 3.

<sup>9</sup> The GGPPA, Part 1, Schedule 1.

<sup>10</sup> The GGPPA, s.3.

<sup>11</sup> The GGPPA, s.3.

**OBPS** – Output-based pricing system; a component of the FCPP that provides an entity relief from the full impact of the Federal Carbon Charge. A registered entity will have a compliance obligation based on the portion of its emissions that exceed the annual output-based emissions limit.

**OBPS regulations** – Output-Based Pricing System Regulations published in Canada Gazette II on June 28, 2019.<sup>12</sup>

**OBPS VOLUMES** - Volumes of natural gas consumed in the operation of Enbridge Gas's transmission and storage compressor facilities (which are subject to the OBPS as Enbridge Gas's transmission and storage system is a "covered facility" under Part 2 of the GGPPA).

**OBS** – Output-based standard; a percentage of production-weighted national average emissions intensity applied to annual facility production to determine annual facility emission limits under the OBPS.

**OEB** – The Ontario Energy Board.

**OFFSET CREDITS** – Represent greenhouse gas emissions reductions or removal enhancements generated from Canadian voluntary project-based activities that are not subject to carbon pricing and that would not have occurred under business as usual conditions.<sup>13</sup>

**Order** – The *Greenhouse Gas Emissions Information Production Order* published in Canada Gazette II on October 31, 2018.<sup>14</sup>

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<sup>12</sup> SOR/2019-266 available at <http://www.gazette.gc.ca/rp-pr/p2/2019/2019-07-10/html/sor-dors266-eng.html>

<sup>13</sup> <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/output-based-pricing-system.html>

<sup>14</sup> SOR/2018-214 available at <http://gazette.gc.ca/rp-pr/p2/2018/2018-10-31/html/sor-dors214-eng.html>, as amended on December 20, 2018 by SOR/2018-277 available at <http://gazette.gc.ca/rp-pr/p2/2018/2018-12-20-x2/html/sor-dors277-eng.html>

**PDCI** – Parkway Delivery Commitment Incentive.

**QRAM** – Quarterly Rate Adjustment Mechanism.

**Regulatory Proposal** – ECCC Regulatory Proposal for the Output-Based Pricing System Regulations under the *Greenhouse Gas Pollution Pricing Act*, released on December 20, 2018.<sup>15</sup>

**tCO<sub>2e</sub>** – Metric tonne of carbon dioxide equivalent. The unit of measure of GHG emissions. A quantity of GHG, expressed in tonnes, is converted into tCO<sub>2e</sub> by multiplying the quantity by the global warming potential.<sup>16</sup>

**UNION** – Union Gas.

**VOLUNTARY PARTICIPANT** – Entities that emit between 10 ktCO<sub>2e</sub> and 50 ktCO<sub>2e</sub> and undertake a primary activity which has an OBS specified may voluntarily register to be part of the OBPS at any point under the FCPP.

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<sup>15</sup> Available at <https://www.canada.ca/content/dam/eccc/documents/pdf/climate-change/pricing-pollution/obps-regulatory-proposal-en.pdf>

<sup>16</sup> The GGPPA, Column 2, Schedule 3.

## FORECASTS - OVERVIEW

1. The purpose of this exhibit of evidence is to provide Enbridge Gas's forecast of volumes and the associated forecasted costs of complying with the GGPPA for each of the EGD rate zone and Union rate zones.<sup>1</sup>
2. This exhibit of evidence is organized as follows:  
Tab 1: Forecasts - EGD Rate Zone  
Tab 2: Forecasts - Union Rate Zones

### FORECAST PERIOD

3. In this Application, Enbridge Gas has forecast volumes and associated costs in alignment with the annual effective date of changes to the Federal Carbon Charge and the OBPS:
  - For volumes subject to the Federal Carbon Charge (including customer-related and facility-related volumes) – April 1, 2021 to March 31, 2022; and
  - For volumes subject to the OBPS (including facility-related volumes) – January 1, 2021 to December 31, 2021.
4. Natural gas volumes delivered by Enbridge Gas for the period of January 1, 2021 to March 31, 2021 will continue to be charged the Federal Carbon Charge and Facility Carbon Charge rates approved by the OEB as part of Enbridge Gas's 2020 Application.

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<sup>1</sup> Forecast administration costs of complying with the GGPPA are detailed at Exhibit C.

FORECAST 2021 VOLUME AND CARBON COST

5. Enbridge Gas's total 2021 regulated volume forecast subject to the GGPPA is 18,227,952  $10^3\text{m}^3$ .<sup>2</sup> This results in an associated forecast total 2021 cost of \$1,420.03 million. The details of this volume forecast and associated cost are included at Exhibit B, Tab 1 for the EGD rate zone and at Exhibit B, Tab 2 for the Union rate zones.

FORECAST 2021 CUSTOMER VOLUME AND FEDERAL CARBON CHARGE COST

6. Enbridge Gas's total 2021 Customer Volume forecast subject to the Federal Carbon Charge is 18,060,106  $10^3\text{m}^3$  for the period of April 1, 2021 to March 31, 2022.<sup>3</sup> This results in an associated forecast 2021 Federal Carbon Charge cost of \$1,414.11 million. This cost estimate is subject to change based on actual distribution volumes and is meant to be used for informational purposes only. Customers will be charged the Federal Carbon Charge rate monthly based on actual billed volumes.
7. To estimate the Customer Volume forecast, Enbridge Gas excluded customer volumes exempt from Part 1 of the GGPPA, including customer volumes qualifying for exemption for non-covered activities,<sup>4</sup> and OBPS-qualified customer volumes with emissions exceeding 10  $\text{ktCO}_2\text{e}$ .<sup>5</sup> Enbridge Gas also excluded volumes delivered to downstream distributors, including those distributors that are out of

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<sup>2</sup> Total of regulated customer and facility-related volumes for the EGD rate zone and Union rate zones. Calculated as: Exhibit B, Tab 1, Schedule 1, Col. 3, Line 13 + Exhibit B, Tab 1, Schedule 2, Col. 1, Line 6 + Exhibit B, Tab 2, Schedule 1, Col. 3, Line 16 + Exhibit B, Tab 2, Schedule 2, Col. 1, Line 6.

<sup>3</sup> Calculated as: Exhibit B, Tab 1, Schedule 1, Col. 3, Line 13 + Exhibit B, Tab 2, Schedule 1, Col. 3, Line 16.

<sup>4</sup> Under the GGPPA, entities that use natural gas which is not put into a fuel system that produces heat or energy and those entities that use natural gas: (i) as a raw material in an industrial process that produces another fuel, substance, material or thing; or (ii) as a solvent or diluent in the production or transport of crude bitumen or another substance, material or thing, meet the definition of a non-covered activity and may be exempt from Part 1 of the GGPPA.

<sup>5</sup> The 2021 Customer Volume forecast excludes customer volumes from mandatory and voluntary participants under the GGPPA that have registered under the OBPS.



province, which are also exempt from Part 1 of the GGPPA. Further, Enbridge Gas excluded 80% of the volumes delivered to commercial greenhouse operators.<sup>6</sup>

8. Customers exempt from Part 1 of the GGPPA who have provided Enbridge Gas their Exemption Certificate, which is issued to the customer upon registration with the CRA, will continue to be exempted unless they otherwise notify Enbridge Gas that they are no longer eligible for exemption. Enbridge Gas will also exempt any additional eligible customers who submit an Exemption Certificate in the future. For those customers covered under the OBPS or undertaking non-covered activities, Enbridge Gas will exempt the customer on the date provided by the CRA on the customer's CRA-issued registration confirmation letter. For customers operating commercial greenhouses, exemption will begin the first day of the calendar month following the month in which they provide Enbridge Gas with their Exemption Certificate.
9. The Exemption Certificate indicates that a customer is fully or partially exempt from paying the Federal Carbon Charge on their natural gas combustion fuel delivered by Enbridge Gas. Enbridge Gas uses a customer declaration form to identify which of a customer's accounts are exempt from the Federal Carbon Charge. Enbridge Gas also requests, and maintains on file, copies of each customer's CRA-issued Exemption Certificate and registration confirmation letter.
10. Enbridge Gas exempts customers from the Federal Carbon Charge in its billing systems based on the accounts listed on the customer declaration form, provided a CRA-issued Exemption Certificate and registration confirmation letter has been provided.<sup>7</sup> Customers who are no longer eligible for an exemption from Part 1 of the GGPPA are required, as stated on Enbridge Gas's declaration form, to notify

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<sup>6</sup> Under the GGPPA, greenhouse operators receive partial relief of 80% of the Federal Carbon Charge for natural gas used in the operation of a commercial greenhouse.

<sup>7</sup> Registration confirmation letters are not applicable to commercial greenhouse customers.

Enbridge Gas of any changes to the information that they had initially provided. Upon receipt of such notification, Enbridge Gas will process the change within its billing systems effective at either the start of the next calendar month, or the next compliance period, whichever is applicable.

FORECAST 2021 FACILITY VOLUME AND FACILITY CARBON CHARGE COST

11. Enbridge Gas's total 2021 regulated Facility Volume forecast is 167,846 10<sup>3</sup>m<sup>3</sup>.<sup>8</sup>

This results in an associated forecast 2021 Facility Carbon Charge cost of \$5.93 million. Facility Volumes are based on the amount of natural gas required for Enbridge Gas to operate its facilities as well as the emissions resulting from the distribution of natural gas. Facility Volumes are composed of: (i) Company Use Volumes including distribution buildings, boilers/line heaters, and NGV fleet volumes (which are subject to the Federal Carbon Charge under Part 1 of the GGPPA) for the period of April 1, 2021 to March 31, 2022; and, (ii) transmission and storage compression volumes (which are subject to the OBPS as Enbridge Gas's transmission and storage system is a "covered facility" under Part 2 of the GGPPA) for the period of January 1, 2021 to December 31, 2021. The parameters underpinning Enbridge Gas's estimated OBPS Compliance Obligation can be found at Exhibit B, Appendix A. The forecast 2021 Facility Volume and associated Facility Carbon Charge cost estimate are subject to change based on actual Facility Volumes.

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<sup>8</sup> Calculated as: Exhibit B, Tab 1, Schedule 2, Col. 1, Line 6 + Exhibit B, Tab 2, Schedule 2, Col. 1, Line 6.

## ENBRIDGE GAS ESTIMATED OBPS COMPLIANCE OBLIGATION

1. On October 31, 2018 the *Greenhouse Gas Emissions Information Production Order* (the “Order”) was published in Canada Gazette II.<sup>1</sup> On December 20, 2018, ECCC released the Regulatory Proposal for the Output-Based Pricing System Regulations under the *Greenhouse Gas Pollution Pricing Act* (the “Regulatory Proposal”).<sup>2</sup> On June 28, 2019, the Output-Based Pricing System Regulations (the “OBPS regulations”) were published in Canada Gazette II.<sup>3</sup> Based on OBPS regulations, the annual compliance obligation under OBPS is calculated as follows:

***Compliance Obligation (tCO<sub>2</sub>e) =***

*Annual Facility Emissions – Annual Facility Emissions Limit*

*Where:*

***Annual Facility Emissions (tCO<sub>2</sub>e) =***

*Total Annual Facility Emissions<sup>4</sup> (Gas Transmission pipeline system)*

***Annual Facility Emissions Limit (tCO<sub>2</sub>e) =***

*OBS (tCO<sub>2</sub>e/production units) × Annual Production (production units)*

2. For forecasting purposes, the annual facility emissions limit was calculated by using ECCC’s Output Based Standard (“OBS”) for the natural gas transmission sector of

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<sup>1</sup> SOR/2018-214 available at <http://gazette.gc.ca/rp-pr/p2/2018/2018-10-31/html/sor-dors214-eng.html>, as amended on December 20, 2018 by SOR/2018-277 available at <http://gazette.gc.ca/rp-pr/p2/2018/2018-12-20-x2/html/sor-dors277-eng.html>

<sup>2</sup> Available at <https://www.canada.ca/content/dam/eccc/documents/pdf/climate-change/pricing-pollution/obps-regulatory-proposal-en.pdf>

<sup>3</sup> SOR/2019-266 available at <http://www.gazette.gc.ca/rp-pr/p2/2019/2019-07-10/html/sor-dors266-eng.html>

<sup>4</sup> Excluding emissions covered by ECCC’s Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector).

0.393 tCO<sub>2</sub>e/MWh.<sup>5</sup> This benchmark was developed by ECCC based on data provided by companies in the natural gas pipeline sector and represents 80% of the production-weighted average of that data.

3. Forecast annual production is forecast compressor energy use based on the following formula:

***Energy (MWh)*<sup>6</sup> =**

*Rated Compressor Brake Power (MW) × Load (%) × Operating Hours (h)*

*Where:*

***Load (%) =***

*The % load of the engine*

*-or-*

*Calculated by Average Annual Speed (RPM) ÷ Max Rated Speed (RPM)*

4. To forecast the annual production value for 2021, Enbridge Gas has calculated the compressor energy use in MWh for 2017 to 2019 and used an average of this data. Enbridge Gas's detailed calculations of the 2021 forecast emissions, facility emissions limit, OBPS compliance obligation and OBPS facility carbon cost for each of the EGD rate zone and Union rate zones can be found at Exhibit B, Tab 1, Schedules 3-5 and at Exhibit B, Tab 2, Schedules 3-5.

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<sup>5</sup>As shown in Item 5 in Schedule 1 of the Output-Based Pricing System Regulations. The value of the OBS was updated in the Final Regulation. The value stated in the Regulatory Proposal was 0.419 tCO<sub>2</sub>e/MWh.

<sup>6</sup> Amount of work required by a compressor to transport gas.

## FORECASTS - EGD RATE ZONE

1. The purpose of this tab of evidence is to provide Enbridge Gas's 2021 forecast of volumes and the associated forecasted costs of complying with the GGPPA, for the EGD rate zone.
2. This tab of evidence is organized as follows:
  1. Forecast 2021 Volume and Carbon Cost
  2. Forecast 2021 Customer Volumes and Federal Carbon Charge Cost
  3. Forecast 2021 Facility Volumes and Facility Carbon Charge Cost
    - 3.1. Company Use Volumes
    - 3.2. OBPS Volumes
1. FORECAST 2021 VOLUME AND CARBON COST
3. The EGD rate zone 2021 regulated volume forecast subject to the GGPPA is 11,039,937  $10^3\text{m}^3$ .<sup>1</sup> This results in an associated forecast total 2021 cost of \$863.66 million. The details of this volume forecast and associated cost are included at Exhibit B, Tab 1, Schedules 1-5. The forecast employs the same methodologies which underpinned forecasts previously approved by the OEB. Enbridge Gas has excluded unregulated non-utility storage volumes and associated costs. Non-utility costs are those associated with Enbridge Gas's unregulated non-utility storage business.
2. FORECAST 2021 CUSTOMER VOLUMES AND FEDERAL CARBON CHARGE COST
4. The EGD rate zone total 2021 Customer Volume forecast subject to the Federal Carbon Charge is 11,016,602  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 1, Schedule 1. This results in an associated forecast 2021 Federal Carbon Charge cost of \$862.60

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<sup>1</sup> Calculated as: Exhibit B, Tab 1, Schedule 1, Col. 3, Line 13 + Exhibit B, Tab 1, Schedule 2, Col. 1, Line 6.

million as detailed at Exhibit B, Tab 1, Schedule 5. Enbridge Gas has included forecast distribution volumes subject to the Federal Carbon Charge for all rate classes within the EGD rate zone as detailed at Exhibit B, Tab 1, Schedule 1. The cost estimates are subject to change and are meant to be used for informational purposes only. Customers will be charged the Federal Carbon Charge monthly based on actual billed volumes.

### 3. FORECAST 2021 FACILITY VOLUMES AND FACILITY CARBON CHARGE COST

5. The EGD rate zone 2021 regulated Facility Volume forecast is 23,335  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 1, Schedule 2. This results in an associated forecast 2021 Facility Carbon Charge cost of \$1.06 million as detailed at Exhibit B, Tab 1, Schedule 5. Facility Volumes are composed of: (i) Company Use Volumes including distribution buildings, boilers/line heaters, and NGV fleet volumes (which are subject to the Federal Carbon Charge under Part 1 of the GGPPA); and, (ii) OBPS Volumes which includes compressor fuel (which is subject to the OBPS as Enbridge Gas's storage and transmission system is a "covered facility" under Part 2 of the GGPPA). The forecast 2021 regulated Facility Volume and associated forecast Facility Carbon Charge cost estimate are based on the best available information at this time and are subject to change based on actual Facility Volumes.

#### 3.1. COMPANY USE VOLUMES

6. The regulated Company Use Volume forecast for 2021 including distribution buildings, boilers/line heaters and NGV fleet volumes for the EGD rate zone is 6,354  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 1, Schedule 2. This results in an associated forecast 2021 Facility Carbon Charge cost of \$0.50 million as detailed at Exhibit B, Tab 1, Schedule 5.

### 3.2. OBPS VOLUMES

7. The OBPS Volume forecast for 2021 for the EGD rate zone is 19,049 10<sup>3</sup>m<sup>3</sup> as detailed at Exhibit B, Tab 1, Schedule 2.<sup>2</sup> The subsequent forecast 2021 OBPS obligation of 15,894 tCO<sub>2</sub>e results in a Facility Carbon Charge cost of \$0.64 million as detailed at Exhibit B, Tab 1, Schedules 4 and 5. Of the \$0.64 million, \$0.57 million is attributable to Enbridge Gas's regulated operations in the EGD rate zone.
8. The OBPS Volume forecast is derived by combining forecasts for regulated utility and unregulated non-utility compression activity into an overall physical activity forecast. Enbridge Gas has excluded unregulated non-utility compression volumes and associated costs in deriving the Facility Carbon Charge cost to be recovered in regulated rates. The OBPS Volume forecast for the EGD rate zone includes storage compression and dehydration fuel.
9. Enbridge Gas's detailed calculations of the 2021 forecast compressor emissions, facility emissions limit, OBPS compliance obligation and compressor fuel use cost for the EGD rate zone can be found at Exhibit B, Tab 1, Schedules 3-5.

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<sup>2</sup> This includes both utility (regulated) and non-utility (unregulated) volumes.

Enbridge Gas Inc.  
EGD Rate Zone  
2021 Customer-Related Volumes by Rate Class (April 2021 to March 2022)  
(10<sup>3</sup>m<sup>3</sup>)

Line No.	Rate Class	Col. 1	Col. 2	Col. 3 (Col. 1 - Col. 2)
		Forecast Volumes <sup>1</sup>	OBPS Participant & Other Exempt Volumes <sup>2</sup>	Net Volumes
1	1	5,116,256	455	5,115,801
2	6	4,903,468	181,241	4,722,227
3	9	-	-	-
4	100	33,431	13,660	19,771
5	110	957,019	251,008	706,011
6	115	469,919	174,475	295,444
7	125 <sup>3</sup>	560,000	560,000	-
8	135	61,643	-	61,643
9	145	27,157	6,189	20,968
10	170	267,329	192,591	74,738
11	200 <sup>4</sup>	181,853	181,853	-
12	300	-	-	-
Total				
13	Customer-Related	12,578,074	1,561,472	11,016,602

Notes:

- (1) Forecast Volumes after DSM from April 1, 2021 to March 31, 2022.
- (2) Estimated forecast volumes for mandatory and voluntary participants in the Output Based Pricing System (OBPS), volumes qualifying for exemption for non-covered activities and partial relief (80%) for greenhouse operators.
- (3) Dedicated unbundled customers.
- (4) Includes volumes delivered to downstream distributors and landfill gas.



Enbridge Gas Inc.  
EGD Rate Zone  
2021 Facility-Related Volumes  
(10<sup>3</sup>m<sup>3</sup>)

Line No.	Particulars	Col. 1	Col. 2	Col.3 (Col. 1 + Col.2)
		Utility Forecast Amount (regulated)	Non-Utility Forecast Amount (unregulated)	Total 2021 Forecast
1	Company Use - Buildings	1,494	-	1,494
2	Company Use - Boilers/Line Heaters	3,849	-	3,849
3	Company Use - NGV Fleet	1,011	-	1,011
4	Total Company Use <sup>1</sup>	6,354	-	6,354
5	Compressor Fuel <sup>2</sup>	16,981	2,068	19,049
6	Total Facility-Related	23,335	2,068	25,403

Notes:

(1) Forecast Company-Use volumes for April 1, 2021 to March 31, 2022.

(2) Forecast Compressor Fuel for January 1 to December 31, 2021.

Enbridge Gas Inc.  
EGD Rate Zone

Table 1  
2021 Forecast Compressor Emissions

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5
Line No.	Particulars	Volumes <sup>1</sup> (10 <sup>3</sup> m <sup>3</sup> )	CO <sub>2</sub> Emissions <sup>2</sup> (Tonnes CO <sub>2</sub> )	CH <sub>4</sub> Emissions <sup>3</sup> (Tonnes CH <sub>4</sub> )	N <sub>2</sub> O Emissions <sup>4</sup> (Tonnes N <sub>2</sub> O)	CO <sub>2</sub> e Emissions <sup>5</sup> (Tonnes CO <sub>2</sub> e)
1	Compressor Fuel & Transmission Ancillary Fuel	19,049	37,149	37	1	38,361

Notes:

- (1) Exhibit B, Tab 1, Schedule 2, Col. 3, Line 5.  
(2) Environment and Climate Change Canada "Canada's Greenhouse Gas Quantification Requirements - December 2017", Equation 2-11.  
(3) Col. 1 x Table 2, Col. 2, Line 1 x Table 2, Col. 2, Line 2.  
(4) Col. 1 x Table 2, Col. 3, Line 1 x Table 2, Col. 3, Line 2.  
(5) Col. 2 + (Col. 3 x Table 3, Col. 1, Line 1) + (Col. 4 x Table 3, Col. 2, Line 1).

Table 2  
Emission Factors

			Col. 1	Col. 2	Col. 3
Line No.	Particulars	Units	CO <sub>2</sub> Emission Factor	CH <sub>4</sub> Emission Factor <sup>1</sup>	N <sub>2</sub> O Emission Factor <sup>1</sup>
1	Natural Gas Pipelines	Tonne/GJ		0.00005	0.0000013
2	Heat Value <sup>2</sup>	GJ/10 <sup>3</sup> m <sup>3</sup>	38.88	38.88	38.88

Notes:

- (1) Environment and Climate Change Canada "Canada's Greenhouse Gas Quantification Requirements - December 2017", Table 2-4.  
(2) Assumed Budget Heat Value = 38.88 GJ/10<sup>3</sup>m<sup>3</sup>. In calculating actual emissions, actual heating value will be used.

Table 3  
Conversion Factors

			Col. 1	Col. 2
Line No.	Particulars	Units	Methane <sup>1</sup>	Nitrous Oxide <sup>1</sup>
1	Global Warming Potential for Carbon Dioxide Equivalent	Tonnes CO <sub>2</sub> e	25	298

Notes:

- (1) Environment and Climate Change Canada "Greenhouse Gas Pollution Pricing Act, Schedule 3".

Enbridge Gas Inc.  
EGD Rate Zone  
2021 Forecast OBPS Obligation

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Line No.	2021 Forecast Compressor Emissions <sup>1</sup> (tCO <sub>2</sub> e)	2017 - 2019 EGD Average Emission Intensity (tCO <sub>2</sub> e/MWh)	2021 Forecast Production <sup>2</sup> (MWh)	Sector Emission Intensity Target <sup>3</sup> (tCO <sub>2</sub> e/MWh)	Facility Emissions Limit <sup>4</sup> (tCO <sub>2</sub> e)	OBPS Compliance Obligation <sup>5</sup> (tCO <sub>2</sub> e)
1	38,361	0.671	57,169	0.393	22,467	15,894

Notes:

(1) Exhibit B, Tab 1, Schedule 3, Table 1, Col. 5.

(2) Col. 1 / Col. 2.

(3) Based on value in the Output-Based Pricing System Regulations: SOR/2019-266 under the Greenhouse Gas Pollution Pricing Act.

(4) Col. 3 x Col. 4.

(5) Col. 1 - Col. 5.

Enbridge Gas Inc.  
EGD Rate Zone  
2021 Summary of Customer-Related and Facility-Related Costs

Line No.	Particulars	2021 Forecast
	<u>Customer-Related Cost Forecast</u>	
1	Customer-related Forecast Volume ( $10^3\text{m}^3$ ) <sup>(1)</sup>	11,016,602
2	Federal Carbon Charge (\$/m <sup>3</sup> ) <sup>(2)</sup>	0.0783
3	<b>Total Customer-Related Costs (\$)</b>	<b>862,599,969</b>
	<u>Facility-Related Cost Forecast</u>	
4	Company-Use Forecast Volume ( $10^3\text{m}^3$ ) <sup>(3)</sup>	6,354
5	Federal Carbon Charge (\$/m <sup>3</sup> ) <sup>(2)</sup>	0.0783
6	Company Use Costs (\$)	497,512
7	OBPS Obligation (tCO <sub>2</sub> e) <sup>(4)</sup>	15,894
8	Federal Excess Emissions Charge (\$/tCO <sub>2</sub> e) <sup>(2)</sup>	40.00
9	Compressor Fuel Use Costs (\$)	635,753
10	Compressor Fuel Use Costs - Unregulated (\$) <sup>(5)</sup>	(69,006)
11	Compressor Fuel Use Costs - Regulated (\$)	566,747
12	<b>Total Facility Related Costs (\$)</b>	<b>1,064,260</b>
13	<b>Total Cost Forecast (\$)</b>	<b>863,664,228</b>

Notes:

- (1) Exhibit B, Tab 1, Schedule 1. Forecast volumes from April 1, 2021 to March 31, 2022.
- (2) Exhibit A, Table A-1.
- (3) Exhibit B, Tab 1, Schedule 2, Column 1, Line 4. Forecast volumes from April 1, 2021 March 31, 2022.
- (4) Exhibit B, Tab 1, Schedule 4. Forecast from January 1 to December 31, 2021.
- (5) Unregulated OBPS costs are allocated based on pro-rata regulated/unregulated total compressor volumes per Exhibit B, Tab 1, Schedule 2.

## FORECASTS - UNION RATE ZONES

1. The purpose of this tab of evidence is to provide Enbridge Gas's 2021 forecast of volumes and the associated forecasted costs of complying with the GGPPA, for the Union rate zones.
2. This tab of evidence is organized as follows:
  1. Forecast 2021 Volume and Carbon Cost
  2. Forecast 2021 Customer Volumes and Federal Carbon Charge Cost
  3. Forecast 2021 Facility Volumes and Facility Carbon Charge Cost
    - 3.1. Company Use Volumes
    - 3.2. OBPS Volumes
1. FORECAST 2021 VOLUME AND CARBON COST
3. The Union rate zones 2021 regulated volume forecast subject to the GGPPA is 7,188,015  $10^3\text{m}^3$ .<sup>1</sup> This results in an associated forecast total 2021 cost of \$556.37 million. The details of this volume forecast and associated cost are included at Exhibit B, Tab 2, Schedules 1 - 5. The forecast employs the same methodologies which underpinned forecasts previously approved by the OEB. Enbridge Gas has excluded unregulated non-utility storage volumes and associated costs. Non-utility costs are those associated with Enbridge Gas's unregulated non-utility storage business.
2. FORECAST 2021 CUSTOMER VOLUMES AND FEDERAL CARBON CHARGE COST
4. The Union rate zones total 2021 Customer Volume forecast subject to the Federal Carbon Charge is 7,043,504  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 2, Schedule 1. This

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<sup>1</sup> Calculated as: Exhibit B, Tab 2, Schedule 1, Col. 3, Line 16 + Exhibit B, Tab 2, Schedule 2, Col. 1, Line 6.

results in an associated forecast 2021 Federal Carbon Charge cost of \$551.51 million as detailed at Exhibit B, Tab 2, Schedule 5. Enbridge Gas has included forecast distribution volumes subject to the Federal Carbon Charge for all rate classes within the Union rate zones as detailed at Exhibit B, Tab 2, Schedule 1. The cost estimates are subject to change and are meant to be used for informational purposes only. Customers will be charged the Federal Carbon Charge monthly based on actual billed volumes.

### 3. FORECAST 2021 FACILITY VOLUMES AND FACILITY CARBON CHARGE COST

5. The Union rate zones total 2021 regulated Facility Volume forecast is 144,511  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 2, Schedule 2. This results in an associated forecast 2021 Facility Carbon Charge cost of \$4.86 million as detailed at Exhibit B, Tab 2, Schedule 5. Facility Volumes are composed of: (i) Company Use Volumes including distribution buildings, boilers/line heaters, and NGV fleet volumes (which are subject to the Federal Carbon Charge under Part 1 of the GGPPA); and (ii) OBPS Volumes which includes compressor fuel (which is subject to the OBPS as Enbridge Gas's storage and transmission system is a "covered facility" under Part 2 of the GGPPA). The forecast 2021 regulated Facility Volume and associated forecast Facility Carbon Charge cost estimate are based on the best available information at this time and are subject to change based on actual Facility Volumes.

#### 3.1. COMPANY USE VOLUMES

6. The regulated Company Use Volume forecast for 2021 including distribution buildings, boilers/line heaters and NGV fleet volumes for the Union rate zones is 18,763  $10^3\text{m}^3$  as detailed at Exhibit B, Tab 2, Schedule 2.<sup>2</sup> This results in an

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<sup>2</sup> Enbridge Gas's buildings and boiler/line heater fuel volume forecast for the Union rate zones is based on a three-year average of consumption by location. For new buildings with no historical information, a volume estimate is used.

associated forecast 2021 Facility Carbon Charge cost of \$1.47 million as detailed at Exhibit B, Tab 2, Schedule 5.<sup>3</sup>

### 3.2. OBPS VOLUMES

7. The OBPS Volume forecast for 2021 for the Union rate zones is 143,679 10<sup>3</sup>m<sup>3</sup> as detailed at Exhibit B, Tab 2, Schedule 2.<sup>4</sup> The subsequent forecast 2021 OBPS obligation of 96,961 tCO<sub>2</sub>e results in a Facility Carbon Charge cost of \$3.88 million as detailed at Exhibit B, Tab 2, Schedules 4 and 5. Of the \$3.88 million, \$3.39 million is attributable to Enbridge Gas's regulated operations in the Union rate zones.
8. The OBPS Volume forecast is derived by combining forecasts for regulated utility and unregulated non-utility compression activity into an overall physical activity forecast. Enbridge Gas has excluded unregulated non-utility compression volumes and associated costs in deriving the Facility Carbon Charge cost to be recovered in regulated rates. The OBPS Volume forecast for the Union rate zones includes transmission compression, storage compression and dehydration fuel.<sup>5</sup>
9. Enbridge Gas's detailed calculations of the 2021 forecast compressor emissions, facility emissions limit, OBPS compliance obligation and compressor fuel use cost for the Union rate zones can be found at Exhibit B, Tab 2, Schedule 3-5.

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<sup>3</sup> Included in the Company Use Volume forecast for 2021 is 18 10<sup>3</sup>m<sup>3</sup> for distribution buildings associated with non-utility unregulated storage activity. Enbridge Gas has not accounted for this amount separately as it is immaterial, resulting in costs of less than \$1,500.

<sup>4</sup> This includes both utility (regulated) and non-utility (unregulated) volumes.

<sup>5</sup> The transmission and storage compression forecast is derived by combining forecasts for in-franchise and ex-franchise transmission and storage activity into an overall physical activity forecast. For dehydration fuel, average historical utilization is used to estimate the monthly forecasted usage.

Enbridge Gas Inc.  
Union Rate Zone  
2021 Customer-Related Volumes by Rate Class (April 2021 to March 2022)  
(10<sup>3</sup>m<sup>3</sup>)

Line No.	Rate Class	Col. 1	Col. 2	Col. 3 (Col. 1 - Col. 2)
		Forecast Volumes <sup>1</sup>	OBPS Participant & Other Exempt Volumes <sup>2</sup>	Net Volumes
1	1	1,023,567	270	1,023,297
2	10	358,449	10,262	348,187
3	M1	3,141,401	2,360	3,139,041
4	M2	1,334,183	89,744	1,244,438
5	20	668,106	511,377	156,729
6	25	79,886	56,587	23,299
7	100	1,018,057	1,018,057	-
8	M4	679,456	227,301	452,155
9	M5	69,356	18,601	50,755
10	M7	560,929	334,722	226,206
11	M9 <sup>3</sup>	101,338	101,338	-
12	M10 <sup>3</sup>	379	-	379
13	T1	320,854	134,745	186,109
14	T2	4,128,487	3,935,578	192,909
15	T3 <sup>3</sup>	283,374	283,374	-
Total				
16	Customer-Related	13,767,822	6,724,318	7,043,504

Notes:

- (1) Forecast Volumes after DSM from April 1, 2021 to March 31, 2022.
- (2) Estimated forecast volumes for mandatory and voluntary participants in the Output Based Pricing System (OBPS), volumes qualifying for exemption for non-covered activities and partial relief (80%) for greenhouse operators.
- (3) Includes volumes delivered to downstream distributors and landfill gas.



Enbridge Gas Inc.  
Union Rate Zone  
2021 Facility-Related Volumes  
(10<sup>3</sup>m<sup>3</sup>)

Line No.	Particulars	Col. 1	Col. 2	Col.3 (Col. 1 + Col.2)
		Utility Forecast Amount (regulated)	Non-Utility Forecast Amount (unregulated)	Total 2021 Forecast
1	Company Use - Buildings	1,620	18	1,638
2	Company Use - Boilers/Line Heaters	17,142	-	17,142
3	Company Use - NGV Fleet	-	-	-
4	Total Company Use <sup>1</sup>	18,763	18	18,781
5	Compressor Fuel <sup>2</sup>	125,749	17,930	143,679
6	Total Facility-Related	144,511	17,948	162,459

Notes:

(1) Forecast Company-Use volumes for April 1, 2021 to March 31, 2022.

(2) Forecast Compressor Fuel for January 1 to December 31, 2021.

Enbridge Gas Inc.  
Union Rate Zone

Table 1  
2021 Forecast Compressor Emissions

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5
Line No.	Particulars	Volumes <sup>1</sup> (10 <sup>3</sup> m <sup>3</sup> )	CO <sub>2</sub> Emissions <sup>2</sup> (Tonnes CO <sub>2</sub> )	CH <sub>4</sub> Emissions <sup>3</sup> (Tonnes CH <sub>4</sub> )	N <sub>2</sub> O Emissions <sup>4</sup> (Tonnes N <sub>2</sub> O)	CO <sub>2</sub> e Emissions <sup>5</sup> (Tonnes CO <sub>2</sub> e)
1	Compressor Fuel & Transmission Ancillary Fuel	143,679	283,680	282	7	292,921

Notes:

- (1) Exhibit B, Tab 2, Schedule 2, Col. 3, Line 5.  
(2) Environment and Climate Change Canada "Canada's Greenhouse Gas Quantification Requirements - December 2017", Equation 2-11.  
(3) Col. 1 x Table 2, Col. 2, Line 1 x Table 2, Col. 2, Line 2.  
(4) Col. 1 x Table 2, Col. 3, Line 1 x Table 2, Col. 3, Line 2.  
(5) Col. 2 + (Col. 3 x Table 3, Col. 1, Line 1) + (Col. 4 x Table 3, Col. 2, Line 1).

Table 2  
Emission Factors

			Col. 1	Col. 2	Col. 3
Line No.	Particulars	Units	CO <sub>2</sub> Emission Factor	CH <sub>4</sub> Emission Factor <sup>1</sup>	N <sub>2</sub> O Emission Factor <sup>1</sup>
1	Natural Gas Pipelines	Tonne/GJ		0.00005	0.0000013
2	Heat Value <sup>2</sup>	GJ/10 <sup>3</sup> m <sup>3</sup>	39.28	39.28	39.28

Notes:

- (1) Environment and Climate Change Canada "Canada's Greenhouse Gas Quantification Requirements - December 2017", Table 2-4.  
(2) Assumed Budget Heat Value = 39.28 GJ/10<sup>3</sup>m<sup>3</sup>. In calculating actual emissions, actual heating value will be used.

Table 3  
Conversion Factors

			Col. 1	Col. 2
Line No.	Particulars	Units	Methane <sup>1</sup>	Nitrous Oxide <sup>1</sup>
1	Global Warming Potential for Carbon Dioxide Equivalent	Tonnes CO <sub>2</sub> e	25	298

Notes:

- (1) Environment and Climate Change Canada "Greenhouse Gas Pollution Pricing Act, Schedule 3".

Enbridge Gas Inc.  
Union Rate Zone  
2021 Forecast OBPS Obligation

	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6
Line No.	2021 Forecast Compressor Emissions <sup>1</sup> (tCO <sub>2</sub> e)	2017 - 2019 EGD Average Emission Intensity (tCO <sub>2</sub> e/MWh)	2021 Forecast Production <sup>2</sup> (MWh)	Sector Emission Intensity Target <sup>3</sup> (tCO <sub>2</sub> e/MWh)	Facility Emissions Limit <sup>4</sup> (tCO <sub>2</sub> e)	OBPS Compliance Obligation <sup>5</sup> (tCO <sub>2</sub> e)
1	292,921	0.587	498,628	0.393	195,961	96,961

Notes:

(1) Exhibit B, Tab 2, Schedule 3, Table 1, Col. 5.

(2) Col. 1 / Col. 2.

(3) Based on value in the Output-Based Pricing System Regulations: SOR/2019-266 under the Greenhouse Gas Pollution Pricing Act.

(4) Col. 3 x Col. 4.

(5) Col. 1 - Col. 5.

Enbridge Gas Inc.  
Union Rate Zone  
2021 Summary of Customer-Related and Facility-Related Costs

Line No.	Particulars	2021 Forecast
	<u>Customer-Related Cost Forecast</u>	
1	Customer-related Forecast Volume ( $10^3\text{m}^3$ ) <sup>(1)</sup>	7,043,504
2	Federal Carbon Charge (\$/m <sup>3</sup> ) <sup>(2)</sup>	0.0783
3	<b>Total Customer-Related Costs (\$)</b>	<b>551,506,350</b>
	<u>Facility-Related Cost Forecast</u>	
4	Company-Use Forecast Volume ( $10^3\text{m}^3$ ) <sup>(3)</sup>	18,763
5	Federal Carbon Charge (\$/m <sup>3</sup> ) <sup>(2)</sup>	0.0783
6	Company Use Costs (\$)	1,469,109
7	OBPS Obligation (tCO <sub>2</sub> e) <sup>(4)</sup>	96,961
8	Federal Excess Emissions Charge (\$/tCO <sub>2</sub> e) <sup>(2)</sup>	40.00
9	Compressor Fuel Use Costs (\$)	3,878,429
10	Compressor Fuel Use Costs - Unregulated (\$) <sup>(5)</sup>	(483,988)
11	Compressor Fuel Use Costs - Regulated (\$)	3,394,441
12	<b>Total Facility Related Costs (\$)</b>	<b>4,863,550</b>
13	<b>Total Cost Forecast (\$)</b>	<b>556,369,900</b>

Notes:

- (1) Exhibit B, Tab 2, Schedule 1. Forecast volumes from April 1, 2021 to March 31, 2022.
- (2) Exhibit A, Table A-1.
- (3) Exhibit B, Tab 2, Schedule 2, Column 1, Line 4. Forecast volumes from April 1, 2021 to March 31, 2022.
- (4) Exhibit B, Tab 2, Schedule 4. Forecast from January 1 to December 31, 2021.
- (5) Unregulated OBPS costs are allocated based on pro-rata regulated/unregulated total compressor volumes per Exhibit B, Tab 2, Schedule 2.

## DEFERRAL AND VARIANCE ACCOUNTS

1. The purpose of this exhibit of evidence is to address deferral and variance account matters associated with Enbridge Gas's Application. This exhibit of evidence includes background on the established FCPP-related deferral and variance accounts as well as a forecast of 2021 administration costs, based on best available information at the time of this submission, for informational purposes. As discussed at Exhibit A, paragraph 7, Enbridge Gas will seek disposition of final audited year-end 2020 balances in FCPP-related deferral and variance accounts for each of the EGD rate zone and Union rate zones as part of its 2022 FCPP Application (to be filed by September 2021).
2. This exhibit of evidence is organized as follows:
  1. Established FCPP-Related Deferral and Variance Accounts
  2. Forecast 2021 Administration Costs
1. ESTABLISHED FCPP-RELATED DEFERRAL AND VARIANCE ACCOUNTS
3. In its 2019 Application, to ensure compliance with the GGPPA in 2019 and beyond and that the costs of compliance with the GGPPA were clearly delineated from those incurred under the Cap-and-Trade Program, Enbridge Gas requested OEB approval to establish five new deferral and variance accounts. The new accounts would record: (i) actual combined administration costs for all rate zones (effective January 1, 2019); (ii) Federal Carbon Charge cost variances between the actual costs incurred and the amount collected through rates related to the volumes delivered by Enbridge Gas for each of the EGD rate zone and Union rate zones (effective April 1, 2019); and (iii) Facility Carbon Charge cost variances between the actual costs incurred and the amount collected through rates related to Company Use and OBPS

volumes associated with Enbridge Gas's own operations for each of the EGD rate zone and the Union rate zones (effective January 1, 2019).<sup>1</sup>

4. In its Decision and Order on Enbridge Gas's 2019 Application, the OEB approved the establishment of Enbridge Gas's requested new FCPP-related deferral and variance accounts with a single exception; rather than approving a single deferral account to record the combined administration costs for all rate zones, the OEB directed that Enbridge Gas should establish two Greenhouse Gas Emissions Administration Deferral Accounts, one for each of the EGD rate zone and the Union rate zones.<sup>2</sup>
5. Accordingly, Enbridge Gas established the following FCPP-related deferral and variance accounts:
  1. Greenhouse Gas Emissions Administration Deferral Account ("GGEADA") – EGD Rate Zone;<sup>3</sup>
  2. Greenhouse Gas Emissions Administration Deferral Account – Union Rate Zones;<sup>4</sup>
  3. Federal Carbon Charge – Customer Variance Account ("FCCCVA") – EGD Rate Zone;<sup>5</sup>

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<sup>1</sup> EB-2018-0205, Exhibit D, pp. 2-4.

<sup>2</sup> EB-2018-0205, Decision and Order, July 4, 2019, pp. 9-10.

<sup>3</sup> EGD Rate Zone Account No. 179-501, to record the administration costs associated with the impacts of federal regulations related to greenhouse gas emission requirements for Enbridge Gas within the EGD rate zone effective January 1, 2019.

<sup>4</sup> Union Rate Zones Account No. 179-422, to record the administration costs associated with the impacts of federal regulations related to greenhouse gas emission requirements for Enbridge Gas within the Union rate zones effective January 1, 2019.

4. Federal Carbon Charge – Customer Variance Account – Union Rate Zones;<sup>6</sup>
5. Federal Carbon Charge – Facility Variance Account (“FCCFVA”) – EGD Rate Zone;<sup>7</sup> and
6. Federal Carbon Charge – Facility Variance Account – Union Rate Zones.<sup>8</sup>

## 2. FORECAST 2021 ADMINISTRATION COSTS

6. As set out in Table C-1, Enbridge Gas’s forecast 2021 administration costs are \$4.41 million: \$2.42 million for the EGD rate zone; and \$1.99 million for the Union rate zones. Enbridge Gas will record actual 2021 costs in the GGEADAs until such time that these costs are incorporated into rates. Enbridge Gas is providing forecast 2021 administration costs for informational purposes only and will seek recovery of its actual 2021 administration costs in a future proceeding. A description of the components of Enbridge Gas’s forecast 2021 administration costs follows.

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<sup>5</sup> EGD Rate Zone Account No. 179-502, to record the variances between actual customer carbon costs and customer carbon costs recovered in rates for distribution volumes delivered by Enbridge Gas within the EGD rate zone effective April 1, 2019. Except for exempted customers as explained in Exhibit A.

<sup>6</sup> Union Rate Zones Account No. 179-421, to record the variances between actual customer carbon costs and customer carbon costs recovered in rates for distribution volumes delivered by Enbridge Gas within the Union rate zones effective April 1, 2019. Except for exempted customers as explained in Exhibit A.

<sup>7</sup> EGD Rate Zone Account No. 179-503, to record the variance between actual facility carbon costs and facility carbon costs recovered in rates within the EGD rate zone effective January 1, 2019.

<sup>8</sup> Union Rate Zones Account No. 179-420, to record the variance between actual facility carbon costs and facility carbon costs recovered in rates within the Union rate zones effective January 1, 2019.

**Table C-1**  
**Forecast 2021 Administration Costs**

<b>Cost Element</b>	<b>2021 Forecast Costs</b> (\$millions)		
	<b>EGD Rate Zone</b>	<b>Union Rate Zones</b>	<b>Total</b>
IT Billing System	0.12	0.10	0.22
Staffing Resources	0.67	0.43	1.10
Consulting & External Legal Support	0.18	0.12	0.30
GHG Reporting & Verification	0.03	0.02	0.05
Bad Debt	1.32	1.26	2.58
Other Miscellaneous Costs	0.10	0.06	0.16
<b>Total</b>	<b>2.42</b>	<b>1.99</b>	<b>4.41</b>

7. Shared administrative costs set out in Table C-1, including costs related to: staffing resources, consulting and external legal support, GHG reporting and verification and other miscellaneous costs, have been allocated to the EGD rate zone and Union rate zones in proportion to forecast customer consumption volumes subject to the Federal Carbon Charge from January 1, 2021 to December 31, 2021.<sup>9</sup> Unique administrative costs set out in Table C-1 that are directly attributable to a particular rate zone, including costs related to: IT billing systems and bad debt, have been allocated to that respective rate zone accordingly.
8. Enbridge Gas's current OEB-approved 2020 rates and proposed 2021 rates for the EGD rate zone and Union rate zones do not include any FCPP-related administration costs as these costs are considered to be incremental to Enbridge Gas's traditional operations as a regulated natural gas utility in Ontario.

**IT BILLING SYSTEM COSTS**

9. For 2021, Enbridge Gas forecasts the IT billing system costs to be \$0.22 million, which includes \$0.16 million (\$0.12 million for the EGD rate zone; and \$0.04 million

<sup>9</sup> Approximately 61% of forecast customer consumption volumes are attributable to the EGD rate zone and 39% of forecast customer consumption volumes are attributable to the Union rate zones.



for the Union rate zones) revenue requirement associated with Cap and Trade-related billing system functionality re-purposed for GGPPA-related charges and the revenue requirement of \$0.06 million associated with the additional billing system modifications required in 2020 for the Union rate zones.<sup>10</sup> The 2021 revenue requirement for these costs has not been previously collected from customers.

#### STAFFING RESOURCES

10. For 2021, staffing costs are currently estimated to be approximately \$1.10 million. These fully allocated costs are for the five FTEs that comprise the Carbon Strategy team in 2020 plus one additional FTE. This level of staffing reflects the incremental level of effort Enbridge Gas has experienced to-date and expects to require across the organization to comply with the GGPPA in 2021 including the incremental effort to evaluate and procure Offset Credits and begin preparations to comply with the federal Clean Fuel Standard (“CFS”).<sup>11</sup> With the establishment of other carbon emission-related programming and initiatives in the future, including the increasing level of effort required to implement the CFS, Enbridge Gas may require incremental staffing resources. Enbridge Gas will seek OEB approval to recover prudently incurred actual 2021 staffing costs that reflect the incremental effort required to comply with the GGPPA and other GHG or carbon pricing regulations, together with its overall 2021 administration costs, in a future proceeding.
11. The GGPPA impacts a wide variety of groups across the organization and wherever reasonable to do so Enbridge Gas has leveraged existing resources outside of the Carbon Strategy team and will continue to do so going forward. This demonstrates Enbridge Gas’s commitment to cost-effectiveness, productivity gains and continuous

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<sup>10</sup> As set out in Enbridge Gas’s 2020 Application (EB-2019-0247), Exhibit C, p. 7, included in the calculation of 2021 revenue requirement for the Union rate zones are capital costs related to additional billing system modifications previously expected to be incurred in 2019 and actually incurred in 2020.

<sup>11</sup> <https://www.canada.ca/en/environment-climate-change/services/managing-pollution/energy-production/fuel-regulations/clean-fuel-standard.html>

improvement. These ancillary resources and related costs will not be recorded in the GGEADA in 2021.

CONSULTING AND EXTERNAL LEGAL SUPPORT

12. Enbridge Gas anticipates that it will incur \$0.30 million in consulting and external legal costs in 2021 for work supporting the development and sustainment of Enbridge Gas's carbon strategy and related analyses, the review and interpretation of any new or updated regulations associated with the GGPPA or other GHG or carbon pricing programs and for work supporting the development of Enbridge Gas's Application and associated OEB proceedings.
13. These expenditures are required to ensure that Enbridge Gas remains well-informed of, and in compliance with, current and new regulatory requirements. Enbridge Gas also notes that it may incur additional consulting and external legal costs associated with other GHG or carbon pricing programs, such as the CFS. These costs will also be recorded in the GGEADA.

GHG REPORTING AND VERIFICATION

14. In accordance with OBPS regulations, Enbridge Gas is required to have its annual OBPS report verified by a third-party auditor. The verification includes both the GHG emissions and the production from each specified industrial activity during the compliance period that was used in calculation of the emissions limit.<sup>12</sup> The emission report and verification report must be submitted by June 1 of the year following a respective compliance period. For the 2020 compliance period, verification will be completed and submitted by June 1, 2021. Enbridge Gas anticipates the fees associated with 2020 emissions verification to be \$0.05 million.

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<sup>12</sup> Output-Based Pricing System Regulations, Schedule 5; <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2019-266/index.html>

BAD DEBT

15. Absent any COVID-19 impacts, Enbridge Gas estimates that it will incur approximately \$2.58 million in incremental bad debt expenses in 2021 based on forecasted costs recoverable from customers as a result of the GGPPA, as set out in Exhibit B. While Enbridge Gas has included total 2021 forecast bad debt costs in Table C-1, only actual bad debt related to the GGPPA will be recorded in the GGEADAs for each rate zone.
16. Ongoing COVID-19 related conditions may impact bad debt related to the GGPPA beyond what Enbridge Gas would typically forecast. Consistent with the OEB's Decision and Order on Enbridge Gas's 2020 Application, Enbridge Gas will record bad debt expenses for the FCPP related to the COVID-19 emergency in the COVID-specific sub-account so that all matters related to the COVID-19 emergency are recorded in the same account.<sup>13</sup>

OTHER MISCELLANEOUS COSTS

17. Enbridge Gas expects to incur approximately \$0.16 million in other miscellaneous costs for customer outreach and communications, training, conferences, travel expenses, memberships and subscriptions associated with the GGPPA or other GHG or carbon pricing programs in 2021.

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<sup>13</sup> EB-2019-0247, OEB Decision and Order, August 13, 2020, p. 11.

## COST RECOVERY

1. The purpose of this exhibit of evidence is to support Enbridge Gas's request to update the impacts of the GGPPA in rates for the EGD rate zone and Union rate zones, effective April 1, 2021. Enbridge Gas requests that the OEB approve the proposed rate changes on a final basis with the exception of First Nations on-reserve customers for which Enbridge Gas requests that rate increases be approved on an interim basis, subject to the OEB's determinations regarding the Deferred Issues, by February 11, 2021 for inclusion in rates beginning April 1, 2021.<sup>1</sup> Enbridge Gas will file a draft rate order for final rates following the issuance of the OEB's Decision and Order for this Application.

2. This exhibit of evidence is organized as follows:

1. FCPP-Related Unit Rates

- 1.1 2021 Federal Carbon Charge
- 1.2 2021 Facility Carbon Charge
- 1.3 Union South – Parkway Delivery Commitment Incentive Costs
- 1.4 2021 Administration Costs
- 1.5 Bill Impacts of Carbon Charges

Supporting schedules and appendices:

- Tab 1: Cost Recovery - EGD Rate Zone
- Tab 2: Cost Recovery - Union Rate Zones

1. FCPP-Related UNIT Rates

3. Under the GGPPA, Enbridge Gas is required to remit payment of the Federal Carbon Charge to the government of Canada for volumes delivered to its customers and for Company Use Volumes. Enbridge Gas is also required to remit payment for

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<sup>1</sup> Enbridge Gas proposes to maintain a reference to the interim nature of the Federal Carbon Charge for First Nations on-reserve customers in its rate schedules in accordance with the Board's Decision and Rate Order on its 2020 Application (EB-2019-0247, OEB Decision and Rate Order, September 3, 2020, p. 3).

any excess emissions related to OBPS Volumes. These costs will be recovered from customers through the Federal Carbon Charge and Facility Carbon Charge unit rates respectively.

4. The combined Federal Carbon Charge and Facility Carbon Charge unit rate for the April 1, 2021 to March 31, 2022 period is summarized at Exhibit D, Tab 1, Schedule 1, p. 3, for the EGD rate zone and at Exhibit D, Tab 2, Schedule 1, p. 3, for the Union rate zones. A summary of the Federal Carbon Charge and Facility Carbon Charge unit rates by rate class for the April 1, 2021 to March 31, 2022 period for the EGD rate zone is provided at Exhibit D, Tab 1, Schedule 1, pp. 4-5.

#### 1.1 2021 FEDERAL CARBON CHARGE

5. Effective April 1, 2021, Enbridge Gas proposes to increase the Federal Carbon Charge from 5.8700 ¢/m<sup>3</sup> (or \$30/tCO<sub>2</sub>e) to 7.8300 ¢/m<sup>3</sup> (or \$40/tCO<sub>2</sub>e), as outlined in the GGPPA and set out at Exhibit A, Table A-1.<sup>2</sup>
6. The Federal Carbon Charge is applicable to distribution customers in all rate zones. Entities that are exempt under Part 1 of the GGPPA will not be charged the Federal Carbon Charge. Further, Enbridge Gas will apply 20% of the Federal Carbon Charge to distribution volumes for qualified commercial greenhouse customers, resulting in 80% greenhouse relief. The Federal Carbon Charge is shown as a separate line item on customers' bills, where applicable.
7. Enbridge Gas tracks the difference between the Federal Carbon Charge amount collected through rates and the actual costs incurred in the FCCCVA for each of the EGD rate zone and the Union rate zones.

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<sup>2</sup> The GGPPA, Schedule 2 and Schedule 4.

8. The Federal Carbon Charge customer-related forecast volumes and costs by rate class for the April 1, 2021 to March 31, 2022 period is set out at Exhibit D, Tab 1, Schedule 1, p. 1, for the EGD rate zone and at Exhibit D, Tab 2, Schedule 1, p. 1, for the Union rate zones.

#### 1.2 2021 FACILITY CARBON CHARGE

9. Enbridge Gas incurs costs of compliance with the GGPPA that are associated with its own operations. Enbridge Gas's Facility Carbon Charge costs are incurred pursuant to both Company Use Volumes (generated from distribution buildings, boilers/line heaters and NGV fleet volumes) and OBPS Volumes (generated from compressor fuel volumes). The estimated Facility Carbon Charge costs for the April 1, 2021 to March 31, 2022 time period are \$1.06 million for the EGD rate zone and \$4.86 million for the Union rate zones, as detailed at Exhibit B, Tab 1, and at Exhibit B, Tab 2, respectively.
10. Enbridge Gas recovers Facility Carbon Charge costs from rate classes based on in-franchise delivery volumes and ex-franchise transportation volumes. All customers in each rate class are responsible for the Facility Carbon Charge costs, regardless of whether the customer is exempt from the Federal Carbon Charge. Enbridge Gas adds the Facility Carbon Charge to the current approved delivery or transportation charges on customers' bills.
11. Effective April 1, 2021, Enbridge Gas is proposing to increase the Facility Carbon Charge from 0.0049 ¢/m<sup>3</sup> to 0.0066 ¢/m<sup>3</sup> for the EGD rate zone and from 0.0088 ¢/m<sup>3</sup> to 0.0127 ¢/m<sup>3</sup> for the Union rate zones. When expressed in \$/GJ, the Facility Carbon Charge increases from \$0.001/GJ to \$0.002/GJ for the EGD rate zone and from \$0.002/GJ to \$0.003/GJ for the Union rate zones. The derivation of the proposed 2021 Facility Carbon Charge for each rate zone is set out in Table D-1.

Table D-1  
Derivation of 2021 Facility Carbon Charges

Line No.	Particulars	Rate Zones	
		EGD	Union
		(a)	(b)
1	Total Facility Carbon Cost (\$000's)	1,064 <sup>(1)</sup>	4,864 <sup>(2)</sup>
2	2021 Forecast Volumes (10 <sup>3</sup> m <sup>3</sup> )	16,177,867 <sup>(3)</sup>	38,329,224 <sup>(4)</sup>
3	Facility Carbon Charge (¢/m <sup>3</sup> ) (line 1 ÷ line 2 × 100)	0.0066	0.0127
4	Facility Carbon Charge (\$/GJ) (line 3 ÷ Heat Value × 10) <sup>(5)</sup>	0.002	0.003

Notes:

- (1) Exhibit B, Tab 1, Schedule 5.
- (2) Exhibit B, Tab 2, Schedule 5.
- (3) Forecast volumes per Exhibit D, Tab 1, Schedule 1.
- (4) Forecast volumes per Exhibit D, Tab 2, Schedule 1.
- (5) Conversion to GJs based on heat value adjustment of 38.53 GJ/10<sup>3</sup>m<sup>3</sup> for the EGD rate zone  
Conversion to GJs based on heat value adjustment of 39.28 GJ/10<sup>3</sup>m<sup>3</sup> for the Union rate zones.

12. Enbridge Gas tracks the difference between the amount collected through rates and the actual costs incurred in the FCCFVA for each of the EGD rate zone and the Union rate zones.

13. Facility Carbon Charge forecast volumes by component, costs and unit rate for 2021 is detailed at Exhibit D, Tab 1, Schedule 1, p. 2, for the EGD rate zone and at Exhibit D, Tab 2, Schedule 1, p. 2, for the Union rate zones.

### 1.3 UNION SOUTH – PARKWAY DELIVERY COMMITMENT INCENTIVE COSTS

14. Enbridge Gas is proposing an update to the Parkway Delivery Commitment Incentive ("PDCI") credit and PDCI costs recovered in Union South distribution rates as a result of the increase in the Facility Carbon Charge from \$0.002/GJ to

\$0.003/GJ for the Union rate zones. Enbridge Gas includes the Facility Carbon Charge in the payment of the PDCI in the Union South rate zone for any continued obligated Daily Contract Quantity ("DCQ") at Parkway. The PDCI credit is set at the M12 Dawn to Parkway rate at 100% load factor, which increased by \$0.001/GJ as a result of the increase in the Facility Carbon Charge in the M12 commodity rate. By recovering the Facility Carbon Charge costs in Rate M12, the cost of the PDCI credit increases from \$12.766 million to \$12.854 million. The increase in the PDCI costs of \$0.089 million is recovered in Union South in-franchise delivery rates. The derivation of the Union South in-franchise delivery unit rate changes and the calculation of the PDCI costs are provided at Exhibit D, Tab 2, Schedule 2.

#### 1.4 2021 ADMINISTRATION COSTS

15. Administration costs incurred in 2021 will be recorded in the OEB-approved GGEADAs and disposed of as part of Enbridge Gas's 2022 Federal Carbon Pricing Program application to the OEB, as previously described at Exhibit A and at Exhibit C.

#### 1.5 BILL IMPACTS OF CARBON CHARGES

16. For the EGD rate zone, the bill impact of the 2021 carbon charges for a typical residential customer with annual consumption of 2,400 m<sup>3</sup> is an increase of \$47.08 per year. Exhibit D, Tab 1, Schedule 2 details customer bill impacts for the EGD rate zone relative to October 1, 2020 QRAM rates (EB-2020-0195).
17. For the Union rate zones, the bill impact of the 2021 carbon charges for a typical residential customer with annual consumption of 2,200 m<sup>3</sup> is an increase of \$43.23 per year. Exhibit D, Tab 2, Schedule 3 details customer bill impacts for the Union rate zones general service rate classes relative to October 1, 2020 QRAM rates (EB-2020-0195). Exhibit D, Tab 2, Schedule 4 details bill impacts for the Union rate zones in-franchise rate classes.



**EGD RATE ZONE**

Filed: 2020-09-30  
EB-2020-0212  
Exhibit D  
Tab 1  
Schedule 1  
Page 1 of 5

**TABLE 1: 2021 CUSTOMER-RELATED VOLUMES AND DERIVATION OF FEDERAL CARBON CHARGE UNIT RATE**

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Line	Rate	Forecast Volumes <sup>1</sup>	Less: Transportation Volumes	Customer-Related Forecast Volumes <sup>2</sup>	OBPS Participant & Other Exempt Volumes <sup>3</sup>	Net Volumes <sup>4</sup>	Federal Carbon Charge <sup>5</sup>	Federal Carbon Cost <sup>6</sup>	Federal Carbon Charge Unit Rate <sup>7</sup>
		(10 <sup>3</sup> m <sup>3</sup> )	(10 <sup>3</sup> m <sup>3</sup> )	(10 <sup>3</sup> m <sup>3</sup> )	(10 <sup>3</sup> m <sup>3</sup> )	(10 <sup>3</sup> m <sup>3</sup> )	(\$/m <sup>3</sup> )	(\$)	(\$/m <sup>3</sup> )
1.1	1	5,116,256	0	5,116,256	455	5,115,801	0.0783	400,567,250	
1.2	6	4,903,468	0	4,903,468	181,241	4,722,227	0.0783	369,750,356	
1.3	9	0	0	0	0	0	0.0783	0	
1.4	100	33,431	0	33,431	13,660	19,771	0.0783	1,548,079	
1.5	110	957,019	0	957,019	251,008	706,011	0.0783	55,280,649	
1.6	115	469,919	0	469,919	174,475	295,444	0.0783	23,133,236	
1.7a	125	560,000	0	560,000	560,000	0	0.0783	0	
1.8	135	61,643	0	61,643	0	61,643	0.0783	4,826,623	
1.9	145	27,157	0	27,157	6,189	20,968	0.0783	1,641,783	
1.10	170	267,329	0	267,329	192,591	74,738	0.0783	5,851,992	
1.11	200	181,853	0	181,853	181,853	0	0.0783	0	
1.12	300	0	0	0	0	0	0.0783	0	
1.13	332	3,599,792	3,599,792	0	0	0	0.0783	0	
1	Total	16,177,867	3,599,792	12,578,074	1,561,472	11,016,602		862,599,969	7.8300

Notes:

(1) Exhibit B, Tab 1, Schedule 1, Col. 1 + Rate 332 forecast volume

(2) Col. 1 - Col. 2

(3) Exhibit B, Tab 1, Schedule 1, Col. 2

(4) Col. 3 - Col. 4

(5) Exhibit B, Tab 1, Schedule 5, Line 2

(6) Col. 5 x Col. 6 x 1000

(7) (Col. 7 / (Col. 5 x 1000)) x 100

**EGD RATE ZONE**

Filed: 2020-09-30

EB-2020-0212

Exhibit D

Tab 1

Schedule 1

Page 2 of 5

TABLE 2: 2021 FACILITY-RELATED VOLUMES AND DERIVATION OF FACILITY CARBON CHARGE UNIT RATE

		Col. 1	Col. 2	Col. 3	Col. 4
Line		Utility Forecast Volume (Regulated) <sup>1</sup> (10 <sup>3</sup> m <sup>3</sup> )	Carbon Charge <sup>2</sup> (\$/m <sup>3</sup> )	Facility Carbon Cost (\$)	Facility Carbon Charge Unit Rate (¢/m <sup>3</sup> )
2.1	Company Use				
2.1.1	Buildings	1,494			
2.1.2	Boilers/Line Heaters	3,849			
2.1.3	NGV Fleet	1,011			
2.1	Company Use	6,354	0.0783	497,512	<sup>3</sup>
2.2	Compressor Fuel	16,981	-	566,747	<sup>4</sup>
2	Total	23,335		1,064,260	0.0066 <sup>5</sup>

Notes:

(1) Exhibit B, Tab 1, Schedule 2, Col. 1

The Company Use forecast volumes for April 1, 2021 to March 31, 2022 and the Compressor Fuel forecast volume for January 1 to December 31, 2021.

(2) Exhibit B, Tab 1, Schedule 5, Line 5

(3) Col. 2 x Col. 3 x 1000

(4) Exhibit B, Tab 1, Schedule 5, Line 11

(5) Facility Carbon Cost / Total forecast volume = [Line 2, Col. 3 / (Table 1, Line 1, Col. 1 x 1000)] x 100

**EGD RATE ZONE**

Filed: 2020-09-30

EB-2020-0212

Exhibit D

Tab 1

Schedule 1

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TABLE 3: 2021 CARBON CHARGE UNIT RATE SUMMARY

		Col. 1	
Line		Unit Rate	
		(¢/m <sup>3</sup> )	
1	Federal Carbon Charge	7.8300	1
2	Facility Carbon Charge	0.0066	2
3	Total	7.8366	3

## Notes:

(1) Table 1, Line 1, Col. 8

(2) Table 2, Line 2, Col. 4

(3) Line 1 + Line 2

**EGD RATE ZONE**

Filed: 2020-09-30

EB-2020-0212

Exhibit D

Tab 1

Schedule 1

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**TABLE 4: 2021 CARBON CHARGE UNIT RATE BY RATE CLASS**

Rate Class		(¢/m <sup>3</sup> )
Rate 1	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 6	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 9	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 100	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 110	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 115	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 125	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 135	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 145	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066

Rate Class		(¢/m <sup>3</sup> )
Rate 170	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 200	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 300	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 300 Interruptible	Federal Carbon Charge (If Applicable)	7.8300
	Facility Carbon Charge	0.0066
Rate 315	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 316	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 320	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0000
Rate 325	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 330	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 331	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066
Rate 332	Federal Carbon Charge (If Applicable)	0.0000
	Facility Carbon Charge	0.0066

## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - RESIDENTIAL CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item			Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
<u>No.</u>										
			Heating & Water Htg.				Heating, Water Htg. & Other Uses			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
1.1	VOLUME	m³	3,064	3,064	0	0.0%	4,691	4,691	0	0.0%
1.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%	257.76	257.76	0.00	0.0%
1.3	DISTRIBUTION CHG.	\$	265.91	265.86	0.05	0.0%	400.96	400.88	0.08	0.0%
1.4	LOAD BALANCING	§ \$	160.40	160.40	0.00	0.0%	245.58	245.58	0.00	0.0%
1.5	SALES COMMDTY	\$	322.28	322.28	0.00	0.0%	493.41	493.41	0.00	0.0%
1.6	FEDERAL CARBON CHARGE	\$	239.91	179.86	60.05	33.4%	367.31	275.36	91.94	33.4%
1.7	TOTAL SALES	\$	1,246.26	1,186.16	60.11	5.1%	1,765.01	1,672.99	92.02	5.5%
1.8	TOTAL T-SERVICE	\$	923.99	863.88	60.11	7.0%	1,271.61	1,179.58	92.02	7.8%

Heating Only							Heating & Water Htg.			
			(A)	(B)	CHANGE					
					(A) - (B)	%	(A)	(B)	(A) - (B)	%
2.1	VOLUME	m³	1,955	1,955	0	0.0%	2,005	2,005	0	0.0%
2.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%	257.76	257.76	0.00	0.0%
2.3	DISTRIBUTION CHG.	\$	170.54	170.51	0.03	0.0%	177.44	177.40	0.03	0.0%
2.4	LOAD BALANCING	§ \$	102.35	102.35	0.00	0.0%	104.96	104.96	0.00	0.0%
2.5	SALES COMMDTY	\$	205.63	205.63	0.00	0.0%	210.89	210.89	0.00	0.0%
2.6	FEDERAL CARBON CHARGE	\$	153.08	114.76	38.32	33.4%	156.99	117.69	39.30	33.4%
2.7	TOTAL SALES	\$	889.35	851.00	38.35	4.5%	908.04	868.71	39.33	4.5%
2.8	TOTAL T-SERVICE	\$	683.73	645.37	38.35	5.9%	697.15	657.82	39.33	6.0%

§ The Load Balancing Charge shown here includes proposed transportation charges

## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - RESIDENTIAL CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Heating, Pool Htg. & Other Uses							General & Water Htg.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
3.1	VOLUME	m³	5,048	5,048	0	0.0%		1,081	1,081	0	0.0%		
3.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%		257.76	257.76	0.00	0.0%		
3.3	DISTRIBUTION CHG.	\$	431.21	431.13	0.09	0.0%		100.11	100.09	0.02	0.0%		
3.4	LOAD BALANCING	§ \$	264.27	264.27	0.00	0.0%		56.59	56.59	0.00	0.0%		
3.5	SALES COMMDTY	\$	530.96	530.96	0.00	0.0%		113.70	113.70	0.00	0.0%		
3.6	FEDERAL CARBON CHARGE	\$	395.26	296.32	98.94	33.4%		84.64	63.45	21.19	33.4%		
3.7	TOTAL SALES	\$	1,879.46	1,780.43	99.03	5.6%		612.80	591.59	21.21	3.6%		
3.8	TOTAL T-SERVICE	\$	1,348.50	1,249.48	99.03	7.9%		499.10	477.89	21.21	4.4%		

Heating & Water Htg.							Heating & Water Htg.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
4.1	VOLUME	m³	2,480	2,480	0	0.0%		2,400	2,400	0	0.0%		
4.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%		257.76	257.76	0.00	0.0%		
4.3	DISTRIBUTION CHG.	\$	217.10	217.06	0.04	0.0%		210.15	210.11	0.04	0.0%		
4.4	LOAD BALANCING	§ \$	129.83	129.83	0.00	0.0%		125.64	125.64	0.00	0.0%		
4.5	SALES COMMDTY	\$	260.85	260.85	0.00	0.0%		252.44	252.44	0.00	0.0%		
4.6	FEDERAL CARBON CHARGE	\$	194.18	145.58	48.61	33.4%		187.92	140.88	47.04	33.4%		
4.7	TOTAL SALES	\$	1,059.72	1,011.07	48.65	4.8%		1,033.91	986.83	47.08	4.8%		
4.8	TOTAL T-SERVICE	\$	798.87	750.22	48.65	6.5%		781.47	734.39	47.08	6.4%		

§ The Load Balancing Charge shown here includes proposed transportation charges

## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - COMMERCIAL & INDUSTRIAL CUSTOMERS** **INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
			Commercial Heating & Other Uses				Com. Htg., Air Cond'ng & Other Uses			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
1.1	VOLUME	m <sup>3</sup>	22,606	22,606	0	0.0%	29,278	29,278	0	0.0%
1.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%	872.16	872.16	0.00	0.0%
1.3	DISTRIBUTION CHG.	\$	1,557.28	1,556.89	0.38	0.0%	1,998.23	1,997.73	0.50	0.0%
1.4	LOAD BALANCING	§ \$	1,166.09	1,166.09	0.00	0.0%	1,510.25	1,510.25	0.00	0.0%
1.5	SALES COMMDTY	\$	2,382.66	2,382.66	0.00	0.0%	3,085.89	3,085.89	0.00	0.0%
1.6	FEDERAL CARBON CHARGE	\$	1,770.05	1,326.97	443.08	33.4%	2,292.47	1,718.62	573.85	33.4%
1.7	TOTAL SALES	\$	7,748.24	7,304.78	443.46	6.1%	9,758.99	9,184.65	574.35	6.3%
1.8	TOTAL T-SERVICE	\$	5,365.58	4,922.12	443.46	9.0%	6,673.11	6,098.76	574.35	9.4%
			Medium Commercial Customer				Large Commercial Customer			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
2.1	VOLUME	m <sup>3</sup>	169,563	169,563	0	0.0%	339,125	339,125	0	0.0%
2.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%	872.16	872.16	0.00	0.0%
2.3	DISTRIBUTION CHG.	\$	8,413.03	8,410.15	2.88	0.0%	15,419.68	15,413.92	5.77	0.0%
2.4	LOAD BALANCING	§ \$	8,746.61	8,746.61	0.00	0.0%	17,493.17	17,493.17	0.00	0.0%
2.5	SALES COMMDTY	\$	17,871.86	17,871.86	0.00	0.0%	35,743.61	35,743.61	0.00	0.0%
2.6	FEDERAL CARBON CHARGE	\$	13,276.78	9,953.35	3,323.43	33.4%	26,553.49	19,906.64	6,646.85	33.4%
2.7	TOTAL SALES	\$	49,180.44	45,854.12	3,326.32	7.3%	96,082.11	89,429.49	6,652.62	7.4%
2.8	TOTAL T-SERVICE	\$	31,308.58	27,982.26	3,326.32	11.9%	60,338.50	53,685.88	6,652.62	12.4%

§ The Load Balancing Charge shown here includes proposed transportation charges



## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - COMMERCIAL & INDUSTRIAL CUSTOMERS** **INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Industrial General Use							Industrial Heating & Other Uses						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
3.1	VOLUME	m³	43,285	43,285	0	0.0%		63,903	63,903	0	0.0%		
3.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%		872.16	872.16	0.00	0.0%		
3.3	DISTRIBUTION CHG.	\$	2,762.62	2,761.88	0.74	0.0%		3,708.49	3,707.40	1.09	0.0%		
3.4	LOAD BALANCING	§ \$	2,232.78	2,232.78	0.00	0.0%		3,296.32	3,296.32	0.00	0.0%		
3.5	SALES COMMDTY	\$	4,562.22	4,562.22	0.00	0.0%		6,735.34	6,735.34	0.00	0.0%		
3.6	FEDERAL CARBON CHARGE	\$	3,389.22	2,540.83	848.39	33.4%		5,003.60	3,751.11	1,252.50	33.4%		
3.7	TOTAL SALES	\$	13,818.99	12,969.87	849.12	6.5%		19,615.92	18,362.34	1,253.59	6.8%		
3.8	TOTAL T-SERVICE	\$	9,256.77	8,407.65	849.12	10.1%		12,880.58	11,626.99	1,253.59	10.8%		
Medium Industrial Customer							Large Industrial Customer						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
4.1	VOLUME	m³	169,563	169,563	0	0.0%		339,124	339,124	0	0.0%		
4.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%		872.16	872.16	0.00	0.0%		
4.3	DISTRIBUTION CHG.	\$	8,613.08	8,610.19	2.88	0.0%		15,568.53	15,562.76	5.77	0.0%		
4.4	LOAD BALANCING	§ \$	8,746.61	8,746.61	0.00	0.0%		17,493.11	17,493.11	0.00	0.0%		
4.5	SALES COMMDTY	\$	17,871.86	17,871.86	0.00	0.0%		35,743.50	35,743.50	0.00	0.0%		
4.6	FEDERAL CARBON CHARGE	\$	13,276.78	9,953.35	3,323.43	33.4%		26,553.41	19,906.58	6,646.83	33.4%		
4.7	TOTAL SALES	\$	49,380.48	46,054.17	3,326.32	7.2%		96,230.71	89,578.12	6,652.60	7.4%		
4.8	TOTAL T-SERVICE	\$	31,508.63	28,182.31	3,326.32	11.8%		60,487.21	53,834.61	6,652.60	12.4%		

§ The Load Balancing Charge shown here includes proposed transportation charges

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Rate 100 - Small Commercial Firm							Rate 100 - Average Commercial Firm						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
1.1	VOLUME	m³	339,188	339,188	0	0.0%		598,567	598,567	0	0.0%		
1.2	CUSTOMER CHG.	\$	1,511.16	1,511.16	0.00	0.0%		1,511.16	1,511.16	0.00	0.0%		
1.3	DISTRIBUTION CHG.	\$	13,896.69	13,890.93	5.77	0.0%		67,628.24	67,618.07	10.18	0.0%		
1.4	LOAD BALANCING	\$	17,496.41	17,496.41	0.00	0.0%		30,876.02	30,876.02	0.00	0.0%		
1.5	SALES COMMDTY	\$	35,750.25	35,750.25	0.00	0.0%		63,088.67	63,088.67	0.00	0.0%		
1.6	FEDERAL CARBON CHARGE	\$	26,558.42	19,910.34	6,648.08	33.4%		46,867.80	35,135.88	11,731.91	33.4%		
1.7	TOTAL SALES	\$	95,212.94	88,559.08	6,653.85	7.5%		209,971.89	198,229.80	11,742.09	5.9%		
1.8	TOTAL T-SERVICE	\$	59,462.69	52,808.84	6,653.85	12.6%		146,883.22	135,141.13	11,742.09	8.7%		
Rate 100 - Large Industrial Firm													
			(A)	(B)	CHANGE								
					(A) - (B)	%							
2.1	VOLUME	m³	1,500,000	1,500,000	0	0.0%							
2.2	CUSTOMER CHG.	\$	1,511.16	1,511.16	0.00	0.0%							
2.3	DISTRIBUTION CHG.	\$	135,811.36	135,785.86	25.50	0.0%							
2.4	LOAD BALANCING	\$	77,374.85	77,374.85	0.00	0.0%							
2.5	SALES COMMDTY	\$	158,099.27	158,099.27	0.00	0.0%							
2.6	FEDERAL CARBON CHARGE	\$	117,450.00	88,050.00	29,400.00	33.4%							
2.7	TOTAL SALES	\$	490,246.64	460,821.14	29,425.50	6.4%							
2.8	TOTAL T-SERVICE	\$	332,147.37	302,721.87	29,425.50	9.7%							

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Rate 145 - Small Commercial Interr.							Rate 145 - Average Commercial Interr.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
3.1	VOLUME	m³	339,188	339,188	0	0.0%		598,568	598,568	0		0.0%	
3.2	CUSTOMER CHG.	\$	1,527.48	1,527.48	0.00	0.0%		1,527.48	1,527.48	0.00		0.0%	
3.3	DISTRIBUTION CHG.	\$	12,622.04	12,616.27	5.77	0.0%		19,166.82	19,156.64	10.18		0.1%	
3.4	LOAD BALANCING	\$	13,703.70	13,703.70	0.00	0.0%		24,183.55	24,183.55	0.00		0.0%	
3.5	SALES COMMDTY	\$	35,567.92	35,567.92	0.00	0.0%		62,767.01	62,767.01	0.00		0.0%	
3.6	FEDERAL CARBON CHARGE	\$	26,558.42	19,910.34	6,648.08	33.4%		46,867.87	35,135.94	11,731.93		33.4%	
3.7	TOTAL SALES	\$	89,979.55	83,325.70	6,653.85	8.0%		154,512.73	142,770.63	11,742.11		8.2%	
3.8	TOTAL T-SERVICE	\$	54,411.64	47,757.79	6,653.85	13.9%		91,745.72	80,003.61	11,742.11		14.7%	
Rate 145 - Small Industrial Interr.							Rate 145 - Average Industrial Interr.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
4.1	VOLUME	m³	339,188	339,188	0	0.0%		598,567	598,567	0		0.0%	
4.2	CUSTOMER CHG.	\$	1,527.48	1,527.48	0.00	0.0%		1,527.48	1,527.48	0.00		0.0%	
4.3	DISTRIBUTION CHG.	\$	12,897.83	12,892.07	5.77	0.0%		19,410.96	19,400.79	10.18		0.1%	
4.4	LOAD BALANCING	\$	13,703.70	13,703.70	0.00	0.0%		24,183.51	24,183.51	0.00		0.0%	
4.5	SALES COMMDTY	\$	35,567.92	35,567.92	0.00	0.0%		62,766.91	62,766.91	0.00		0.0%	
4.6	FEDERAL CARBON CHARGE	\$	26,558.42	19,910.34	6,648.08	33.4%		46,867.80	35,135.88	11,731.91		33.4%	
4.7	TOTAL SALES	\$	90,255.35	83,601.49	6,653.85	8.0%		154,756.65	143,014.56	11,742.09		8.2%	
4.8	TOTAL T-SERVICE	\$	54,687.43	48,033.58	6,653.85	13.9%		91,989.75	80,247.66	11,742.09		14.6%	

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Rate 110 - Small Ind. Firm - 50% LF							Rate 110 - Average Ind. Firm - 50% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
5.1	VOLUME	m³	598,568	598,568	0	0.0%		9,976,121	9,976,121	0	0.0%		
5.2	CUSTOMER CHG.	\$	7,229.16	7,229.16	0.00	0.0%		7,229.16	7,229.16	0.00	0.0%		
5.3	DISTRIBUTION CHG.	\$	14,468.34	14,458.16	10.18	0.1%		237,246.14	237,076.55	169.59	0.1%		
5.4	LOAD BALANCING	\$	25,817.66	25,817.66	0.00	0.0%		430,293.76	430,293.76	0.00	0.0%		
5.5	SALES COMMDTY	\$	62,744.94	62,744.94	0.00	0.0%		1,045,747.75	1,045,747.75	0.00	0.0%		
5.6	FEDERAL CARBON CHARGE	\$	46,867.87	35,135.94	11,731.93	33.4%		781,130.27	585,598.30	195,531.97	33.4%		
5.7	TOTAL SALES	\$	157,127.97	145,385.87	11,742.11	8.1%		2,501,647.09	2,305,945.53	195,701.57	8.5%		
5.8	TOTAL T-SERVICE	\$	94,383.03	82,640.92	11,742.11	14.2%		1,455,899.34	1,260,197.77	195,701.57	15.5%		
Rate 110 - Average Ind. Firm - 75% LF							Rate 115 - Large Ind. Firm - 80% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
6.1	VOLUME	m³	9,976,120	9,976,120	0	0.0%		69,832,850	69,832,850	0	0.0%		
6.2	CUSTOMER CHG.	\$	7,229.16	7,229.16	0.00	0.0%		7,662.36	7,662.36	0.00	0.0%		
6.3	DISTRIBUTION CHG.	\$	188,905.15	188,735.56	169.59	0.1%		1,000,344.34	999,157.18	1,187.16	0.1%		
6.4	LOAD BALANCING	\$	430,293.72	430,293.72	0.00	0.0%		2,919,046.42	2,919,046.42	0.00	0.0%		
6.5	SALES COMMDTY	\$	1,045,747.65	1,045,747.65	0.00	0.0%		7,320,234.59	7,320,234.59	0.00	0.0%		
6.6	FEDERAL CARBON CHARGE	\$	781,130.20	585,598.24	195,531.95	33.4%		5,467,912.16	4,099,188.30	1,368,723.86	33.4%		
6.7	TOTAL SALES	\$	2,453,305.88	2,257,604.33	195,701.55	8.7%		16,715,199.87	15,345,288.85	1,369,911.02	8.9%		
6.8	TOTAL T-SERVICE	\$	1,407,558.23	1,211,856.68	195,701.55	16.1%		9,394,965.27	8,025,054.26	1,369,911.02	17.1%		

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR NON-OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8
Rate 135 - Seasonal Firm							Rate 170 - Average Ind. Interr. - 50% LF				
			(A)	(B)	CHANGE			(A)	(B)	CHANGE	
					(A) - (B)	%				(A) - (B)	%
7.1	VOLUME	m³	598,567	598,567	0	0.0%		9,976,121	9,976,121	0	0.0%
7.2	CUSTOMER CHG.	\$	1,426.08	1,426.08	0.00	0.0%		3,444.00	3,444.00	0.00	0.0%
7.3	DISTRIBUTION CHG.	\$	11,049.17	11,038.99	10.18	0.1%		82,507.47	82,337.88	169.59	0.2%
7.4	LOAD BALANCING	\$	19,470.53	19,470.53	0.00	0.0%		309,588.44	309,588.44	0.00	0.0%
7.5	SALES COMMDTY	\$	62,787.75	62,787.75	0.00	0.0%		1,045,747.75	1,045,747.75	0.00	0.0%
7.6	FEDERAL CARBON CHARGE	\$	46,867.80	35,135.88	11,731.91	33.4%		781,130.27	585,598.30	195,531.97	33.4%
7.7	TOTAL SALES	\$	141,601.32	129,859.24	11,742.09	9.0%		2,222,417.93	2,026,716.37	195,701.57	9.7%
7.8	TOTAL T-SERVICE	\$	78,813.58	67,071.49	11,742.09	17.5%		1,176,670.18	980,968.62	195,701.57	19.9%

Rate 170 - Average Ind. Interr. - 75% LF							Rate 170 - Large Ind. Interr. - 75% LF			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
8.1	VOLUME	m³	9,976,120	9,976,120	0	0.0%	69,832,850	69,832,850	0	0.0%
8.2	CUSTOMER CHG.	\$	3,444.00	3,444.00	0.00	0.0%	3,444.00	3,444.00	0.00	0.0%
8.3	DISTRIBUTION CHG.	\$	75,121.85	74,952.26	169.59	0.2%	408,487.97	407,300.82	1,187.16	0.3%
8.4	LOAD BALANCING	\$	309,588.41	309,588.41	0.00	0.0%	2,167,119.16	2,167,119.16	0.00	0.0%
8.5	SALES COMMDTY	\$	1,045,747.64	1,045,747.64	0.00	0.0%	7,320,234.55	7,320,234.55	0.00	0.0%
8.6	FEDERAL CARBON CHARGE	\$	781,130.20	585,598.24	195,531.95	33.4%	5,467,912.16	4,099,188.30	1,368,723.86	33.4%
8.7	TOTAL SALES	\$	2,215,032.10	2,019,330.55	195,701.55	9.7%	15,367,197.84	13,997,286.82	1,369,911.02	9.8%
8.8	TOTAL T-SERVICE	\$	1,169,284.45	973,582.91	195,701.55	20.1%	8,046,963.29	6,677,052.27	1,369,911.02	20.5%

## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - RESIDENTIAL CUSTOMERS** **INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
			Heating & Water Htg.				Heating, Water Htg. & Other Uses			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
1.1	VOLUME	m <sup>3</sup>	3,064	3,064	0	0.0%	4,691	4,691	0	0.0%
1.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%	257.76	257.76	0.00	0.0%
1.3	DISTRIBUTION CHG.	\$	265.91	265.86	0.05	0.0%	400.96	400.88	0.08	0.0%
1.4	LOAD BALANCING	\$	160.40	160.40	0.00	0.0%	245.58	245.58	0.00	0.0%
1.5	SALES COMMDTY	\$	322.28	322.28	0.00	0.0%	493.41	493.41	0.00	0.0%
1.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
1.7	TOTAL SALES	\$	1,006.35	1,006.30	0.05	0.0%	1,397.71	1,397.63	0.08	0.0%
1.8	TOTAL T-SERVICE	\$	684.08	684.03	0.05	0.0%	904.30	904.22	0.08	0.0%

			Heating Only				Heating & Water Htg.			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
2.1	VOLUME	m <sup>3</sup>	1,955	1,955	0	0.0%	2,005	2,005	0	0.0%
2.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%	257.76	257.76	0.00	0.0%
2.3	DISTRIBUTION CHG.	\$	170.54	170.51	0.03	0.0%	177.44	177.40	0.03	0.0%
2.4	LOAD BALANCING	\$	102.35	102.35	0.00	0.0%	104.96	104.96	0.00	0.0%
2.5	SALES COMMDTY	\$	205.63	205.63	0.00	0.0%	210.89	210.89	0.00	0.0%
2.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
2.7	TOTAL SALES	\$	736.28	736.25	0.03	0.0%	751.05	751.01	0.03	0.0%
2.8	TOTAL T-SERVICE	\$	530.65	530.62	0.03	0.0%	540.16	540.13	0.03	0.0%

§ The Load Balancing Charge shown here includes proposed transportation charges

**EGD RATE ZONE**

**ANNUAL BILL COMPARISON - RESIDENTIAL CUSTOMERS**  
**INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Heating, Pool Htg. & Other Uses							General & Water Htg.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
3.1	VOLUME	m³	5,048	5,048	0	0.0%		1,081	1,081	0	0.0%		
3.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%		257.76	257.76	0.00	0.0%		
3.3	DISTRIBUTION CHG.	\$	431.21	431.13	0.09	0.0%		100.11	100.09	0.02	0.0%		
3.4	LOAD BALANCING	§ \$	264.27	264.27	0.00	0.0%		56.59	56.59	0.00	0.0%		
3.5	SALES COMMDTY	\$	530.96	530.96	0.00	0.0%		113.70	113.70	0.00	0.0%		
3.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
3.7	TOTAL SALES	\$	1,484.20	1,484.11	0.09	0.0%		528.16	528.14	0.02	0.0%		
3.8	TOTAL T-SERVICE	\$	953.24	953.16	0.09	0.0%		414.46	414.44	0.02	0.0%		
Heating & Water Htg.							Heating & Water Htg.						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
4.1	VOLUME	m³	2,480	2,480	0	0.0%		2,400	2,400	0	0.0%		
4.2	CUSTOMER CHG.	\$	257.76	257.76	0.00	0.0%		257.76	257.76	0.00	0.0%		
4.3	DISTRIBUTION CHG.	\$	217.10	217.06	0.04	0.0%		210.15	210.11	0.04	0.0%		
4.4	LOAD BALANCING	§ \$	129.83	129.83	0.00	0.0%		125.64	125.64	0.00	0.0%		
4.5	SALES COMMDTY	\$	260.85	260.85	0.00	0.0%		252.44	252.44	0.00	0.0%		
4.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
4.7	TOTAL SALES	\$	865.54	865.50	0.04	0.0%		845.99	845.95	0.04	0.0%		
4.8	TOTAL T-SERVICE	\$	604.69	604.65	0.04	0.0%		593.55	593.51	0.04	0.0%		

§ The Load Balancing Charge shown here includes proposed transportation charges

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - COMMERCIAL & INDUSTRIAL CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
			Commercial Heating & Other Uses				Com. Htg., Air Cond'ng & Other Uses			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
1.1	VOLUME	m³	22,606	22,606	0	0.0%	29,278	29,278	0	0.0%
1.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%	872.16	872.16	0.00	0.0%
1.3	DISTRIBUTION CHG.	\$	1,557.28	1,556.89	0.38	0.0%	1,998.23	1,997.73	0.50	0.0%
1.4	LOAD BALANCING	§	1,166.09	1,166.09	0.00	0.0%	1,510.25	1,510.25	0.00	0.0%
1.5	SALES COMMDTY	\$	2,382.66	2,382.66	0.00	0.0%	3,085.89	3,085.89	0.00	0.0%
1.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
1.7	TOTAL SALES	\$	5,978.19	5,977.81	0.38	0.0%	7,466.53	7,466.03	0.50	0.0%
1.8	TOTAL T-SERVICE	\$	3,595.53	3,595.14	0.38	0.0%	4,380.64	4,380.14	0.50	0.0%
			Medium Commercial Customer				Large Commercial Customer			
			(A)	(B)	CHANGE		(A)	(B)	CHANGE	
					(A) - (B)	%			(A) - (B)	%
2.1	VOLUME	m³	169,563	169,563	0	0.0%	339,125	339,125	0	0.0%
2.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%	872.16	872.16	0.00	0.0%
2.3	DISTRIBUTION CHG.	\$	8,413.03	8,410.15	2.88	0.0%	15,419.68	15,413.92	5.77	0.0%
2.4	LOAD BALANCING	§	8,746.61	8,746.61	0.00	0.0%	17,493.17	17,493.17	0.00	0.0%
2.5	SALES COMMDTY	\$	17,871.86	17,871.86	0.00	0.0%	35,743.61	35,743.61	0.00	0.0%
2.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
2.7	TOTAL SALES	\$	35,903.66	35,900.77	2.88	0.0%	69,528.62	69,522.85	5.77	0.0%
2.8	TOTAL T-SERVICE	\$	18,031.80	18,028.92	2.88	0.0%	33,785.01	33,779.24	5.77	0.0%

§ The Load Balancing Charge shown here includes proposed transportation charges



## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - COMMERCIAL & INDUSTRIAL CUSTOMERS** **INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Industrial General Use							Industrial Heating & Other Uses						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
3.1	VOLUME	m³	43,285	43,285	0	0.0%		63,903	63,903	0	0.0%		
3.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%		872.16	872.16	0.00	0.0%		
3.3	DISTRIBUTION CHG.	\$	2,762.62	2,761.88	0.74	0.0%		3,708.49	3,707.40	1.09	0.0%		
3.4	LOAD BALANCING	\$	2,232.78	2,232.78	0.00	0.0%		3,296.32	3,296.32	0.00	0.0%		
3.5	SALES COMMDTY	\$	4,562.22	4,562.22	0.00	0.0%		6,735.34	6,735.34	0.00	0.0%		
3.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
3.7	TOTAL SALES	\$	10,429.78	10,429.04	0.74	0.0%		14,612.32	14,611.23	1.09	0.0%		
3.8	TOTAL T-SERVICE	\$	5,867.56	5,866.82	0.74	0.0%		7,876.97	7,875.89	1.09	0.0%		
Medium Industrial Customer							Large Industrial Customer						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
4.1	VOLUME	m³	169,563	169,563	0	0.0%		339,124	339,124	0	0.0%		
4.2	CUSTOMER CHG.	\$	872.16	872.16	0.00	0.0%		872.16	872.16	0.00	0.0%		
4.3	DISTRIBUTION CHG.	\$	8,613.08	8,610.19	2.88	0.0%		15,568.53	15,562.76	5.77	0.0%		
4.4	LOAD BALANCING	\$	8,746.61	8,746.61	0.00	0.0%		17,493.11	17,493.11	0.00	0.0%		
4.5	SALES COMMDTY	\$	17,871.86	17,871.86	0.00	0.0%		35,743.50	35,743.50	0.00	0.0%		
4.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
4.7	TOTAL SALES	\$	36,103.70	36,100.82	2.88	0.0%		69,677.30	69,671.54	5.77	0.0%		
4.8	TOTAL T-SERVICE	\$	18,231.84	18,228.96	2.88	0.0%		33,933.80	33,928.03	5.77	0.0%		

§ The Load Balancing Charge shown here includes proposed transportation charges

## EGD RATE ZONE

### ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32

(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing

Item No.			Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8
Rate 100 - Small Commercial Firm							Rate 100 - Average Commercial Firm			
			(A)	(B)	CHANGE					
					(A) - (B)	%				
1.1	VOLUME	m³	339,188	339,188	0	0.0%	598,567	598,567	0	0.0%
1.2	CUSTOMER CHG.	\$	1,511.16	1,511.16	0.00	0.0%	1,511.16	1,511.16	0.00	0.0%
1.3	DISTRIBUTION CHG.	\$	13,896.69	13,890.93	5.77	0.0%	67,628.24	67,618.07	10.18	0.0%
1.4	LOAD BALANCING	\$	17,496.41	17,496.41	0.00	0.0%	30,876.02	30,876.02	0.00	0.0%
1.5	SALES COMMDTY	\$	35,750.25	35,750.25	0.00	0.0%	63,088.67	63,088.67	0.00	0.0%
1.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%	0.00	0.00	0.00	0.0%
1.7	TOTAL SALES	\$	68,654.52	68,648.75	5.77	0.0%	163,104.10	163,093.92	10.18	0.0%
1.8	TOTAL T-SERVICE	\$	32,904.27	32,898.50	5.77	0.0%	100,015.43	100,005.25	10.18	0.0%
Rate 100 - Large Industrial Firm										
			(A)	(B)	CHANGE					
					(A) - (B)	%				
2.1	VOLUME	m³	1,500,000	1,500,000	0	0.0%				
2.2	CUSTOMER CHG.	\$	1,511.16	1,511.16	0.00	0.0%				
2.3	DISTRIBUTION CHG.	\$	135,811.36	135,785.86	25.50	0.0%				
2.4	LOAD BALANCING	\$	77,374.85	77,374.85	0.00	0.0%				
2.5	SALES COMMDTY	\$	158,099.27	158,099.27	0.00	0.0%				
2.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%				
2.7	TOTAL SALES	\$	372,796.64	372,771.14	25.50	0.0%				
2.8	TOTAL T-SERVICE	\$	214,697.37	214,671.87	25.50	0.0%				

## EGD RATE ZONE

### **ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8
Rate 145 - Small Commercial Interr.							Rate 145 - Average Commercial Interr.				
			(A)	(B)	CHANGE			(A)	(B)	CHANGE	
					(A) - (B)	%				(A) - (B)	%
3.1	VOLUME	m³	339,188	339,188	0	0.0%		598,568	598,568	0	0.0%
3.2	CUSTOMER CHG.	\$	1,527.48	1,527.48	0.00	0.0%		1,527.48	1,527.48	0.00	0.0%
3.3	DISTRIBUTION CHG.	\$	12,622.04	12,616.27	5.77	0.0%		19,166.82	19,156.64	10.18	0.1%
3.4	LOAD BALANCING	\$	13,703.70	13,703.70	0.00	0.0%		24,183.55	24,183.55	0.00	0.0%
3.5	SALES COMMDTY	\$	35,567.92	35,567.92	0.00	0.0%		62,767.01	62,767.01	0.00	0.0%
3.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%
3.7	TOTAL SALES	\$	63,421.13	63,415.37	5.77	0.0%		107,644.86	107,634.68	10.18	0.0%
3.8	TOTAL T-SERVICE	\$	27,853.22	27,847.45	5.77	0.0%		44,877.85	44,867.67	10.18	0.0%
Rate 145 - Small Industrial Interr.							Rate 145 - Average Industrial Interr.				
			(A)	(B)	CHANGE			(A)	(B)	CHANGE	
					(A) - (B)	%				(A) - (B)	%
4.1	VOLUME	m³	339,188	339,188	0	0.0%		598,567	598,567	0	0.0%
4.2	CUSTOMER CHG.	\$	1,527.48	1,527.48	0.00	0.0%		1,527.48	1,527.48	0.00	0.0%
4.3	DISTRIBUTION CHG.	\$	12,897.83	12,892.07	5.77	0.0%		19,410.96	19,400.79	10.18	0.1%
4.4	LOAD BALANCING	\$	13,703.70	13,703.70	0.00	0.0%		24,183.51	24,183.51	0.00	0.0%
4.5	SALES COMMDTY	\$	35,567.92	35,567.92	0.00	0.0%		62,766.91	62,766.91	0.00	0.0%
4.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%
4.7	TOTAL SALES	\$	63,696.93	63,691.16	5.77	0.0%		107,888.86	107,878.68	10.18	0.0%
4.8	TOTAL T-SERVICE	\$	28,129.01	28,123.24	5.77	0.0%		45,121.95	45,111.77	10.18	0.0%

**EGD RATE ZONE**

**ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS**  
**INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Rate 110 - Small Ind. Firm - 50% LF							Rate 110 - Average Ind. Firm - 50% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
5.1	VOLUME	m³	598,568	598,568	0	0.0%		9,976,121	9,976,121	0	0.0%		
5.2	CUSTOMER CHG.	\$	7,229.16	7,229.16	0.00	0.0%		7,229.16	7,229.16	0.00	0.0%		
5.3	DISTRIBUTION CHG.	\$	14,468.34	14,458.16	10.18	0.1%		237,246.14	237,076.55	169.59	0.1%		
5.4	LOAD BALANCING	\$	25,817.66	25,817.66	0.00	0.0%		430,293.76	430,293.76	0.00	0.0%		
5.5	SALES COMMDTY	\$	62,744.94	62,744.94	0.00	0.0%		1,045,747.75	1,045,747.75	0.00	0.0%		
5.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
5.7	TOTAL SALES	\$	110,260.10	110,249.92	10.18	0.0%		1,720,516.82	1,720,347.22	169.59	0.0%		
5.8	TOTAL T-SERVICE	\$	47,515.16	47,504.98	10.18	0.0%		674,769.06	674,599.47	169.59	0.0%		
Rate 110 - Average Ind. Firm - 75% LF							Rate 115 - Large Ind. Firm - 80% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
6.1	VOLUME	m³	9,976,120	9,976,120	0	0.0%		69,832,850	69,832,850	0	0.0%		
6.2	CUSTOMER CHG.	\$	7,229.16	7,229.16	0.00	0.0%		7,662.36	7,662.36	0.00	0.0%		
6.3	DISTRIBUTION CHG.	\$	188,905.15	188,735.56	169.59	0.1%		1,000,344.34	999,157.18	1,187.16	0.1%		
6.4	LOAD BALANCING	\$	430,293.72	430,293.72	0.00	0.0%		2,919,046.42	2,919,046.42	0.00	0.0%		
6.5	SALES COMMDTY	\$	1,045,747.65	1,045,747.65	0.00	0.0%		7,320,234.59	7,320,234.59	0.00	0.0%		
6.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
6.7	TOTAL SALES	\$	1,672,175.68	1,672,006.09	169.59	0.0%		11,247,287.71	11,246,100.55	1,187.16	0.0%		
6.8	TOTAL T-SERVICE	\$	626,428.03	626,258.44	169.59	0.0%		3,927,053.12	3,925,865.96	1,187.16	0.0%		

**EGD RATE ZONE**

**ANNUAL BILL COMPARISON - LARGE VOLUME CUSTOMERS**  
**INCLUDING FEDERAL CARBON PRICING IMPACTS FOR OBPS PARTICIPANTS AND RIDER K BILL 32**

**(A) EB-2020-0195 Inclusive of 2021 Federal Carbon Pricing vs (B) EB-2020-0195 Inclusive of 2020 Federal Carbon Pricing**

Item No.			Col. 1	Col. 2	Col. 3	Col. 4		Col. 5	Col. 6	Col. 7	Col. 8		
Rate 135 - Seasonal Firm							Rate 170 - Average Ind. Interr. - 50% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
7.1	VOLUME	m³	598,567	598,567	0	0.0%		9,976,121	9,976,121	0	0.0%		
7.2	CUSTOMER CHG.	\$	1,426.08	1,426.08	0.00	0.0%		3,444.00	3,444.00	0.00	0.0%		
7.3	DISTRIBUTION CHG.	\$	11,049.17	11,038.99	10.18	0.1%		82,507.47	82,337.88	169.59	0.2%		
7.4	LOAD BALANCING	\$	19,470.53	19,470.53	0.00	0.0%		309,588.44	309,588.44	0.00	0.0%		
7.5	SALES COMMDTY	\$	62,787.75	62,787.75	0.00	0.0%		1,045,747.75	1,045,747.75	0.00	0.0%		
7.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
7.7	TOTAL SALES	\$	94,733.53	94,723.35	10.18	0.0%		1,441,287.66	1,441,118.06	169.59	0.0%		
7.8	TOTAL T-SERVICE	\$	31,945.78	31,935.61	10.18	0.0%		395,539.91	395,370.32	169.59	0.0%		
Rate 170 - Average Ind. Interr. - 75% LF							Rate 170 - Large Ind. Interr. - 75% LF						
			(A)	(B)	CHANGE					(A)	(B)	CHANGE	
					(A) - (B)	%						(A) - (B)	%
8.1	VOLUME	m³	9,976,120	9,976,120	0	0.0%		69,832,850	69,832,850	0	0.0%		
8.2	CUSTOMER CHG.	\$	3,444.00	3,444.00	0.00	0.0%		3,444.00	3,444.00	0.00	0.0%		
8.3	DISTRIBUTION CHG.	\$	75,121.85	74,952.26	169.59	0.2%		408,487.97	407,300.82	1,187.16	0.3%		
8.4	LOAD BALANCING	\$	309,588.41	309,588.41	0.00	0.0%		2,167,119.16	2,167,119.16	0.00	0.0%		
8.5	SALES COMMDTY	\$	1,045,747.64	1,045,747.64	0.00	0.0%		7,320,234.55	7,320,234.55	0.00	0.0%		
8.6	FEDERAL CARBON CHARGE	\$	0.00	0.00	0.00	0.0%		0.00	0.00	0.00	0.0%		
8.7	TOTAL SALES	\$	1,433,901.90	1,433,732.31	169.59	0.0%		9,899,285.69	9,898,098.53	1,187.16	0.0%		
8.8	TOTAL T-SERVICE	\$	388,154.26	387,984.66	169.59	0.0%		2,579,051.14	2,577,863.98	1,187.16	0.0%		

UNION RATE ZONES  
2021 Customer-Related Volumes and Derivation of Federal Carbon Charge Unit Rate  
Effective April 1, 2021

Line No	Rate Class	Forecast Volumes (10 <sup>3</sup> m <sup>3</sup> ) (1) (a)	Less: Transportation Volumes (10 <sup>3</sup> m <sup>3</sup> ) (b)	Customer-Related Forecast Volumes (10 <sup>3</sup> m <sup>3</sup> ) (2) (c) = (a - b)	OBPS Participant & Other Exempt Volumes (10 <sup>3</sup> m <sup>3</sup> ) (3) (d)	Net Volumes (10 <sup>3</sup> m <sup>3</sup> ) (e) = (c - d)	Federal Carbon Charge (\$/m <sup>3</sup> ) (4) (f)	Federal Carbon Cost (\$) (g) = (e * f * 1000)	Federal Carbon Charge Unit Rate (¢/m <sup>3</sup> ) (h) = (g/(e*1000))*100
Union South In-Franchise Delivery									
1	Rate M1	3,141,401	-	3,141,401	2,360	3,139,041	0.0783	245,786,911	
2	Rate M2	1,334,183	-	1,334,183	89,744	1,244,438	0.0783	97,439,525	
3	Rate M4	679,456	-	679,456	227,301	452,155	0.0783	35,403,713	
4	Rate M5	69,356	-	69,356	18,601	50,755	0.0783	3,974,108	
5	Rate M7	560,929	-	560,929	334,722	226,206	0.0783	17,711,945	
6	Rate M9	101,338	-	101,338	101,338	-	0.0783	-	
7	Rate M10	379	-	379	-	379	0.0783	29,685	
8	Rate T1	320,854	-	320,854	134,745	186,109	0.0783	14,572,337	
9	Rate T2	4,128,487	-	4,128,487	3,935,578	192,909	0.0783	15,104,791	
10	Rate T3	283,374	-	283,374	283,374	-	0.0783	-	
11	Total Union South In-Franchise	10,619,757	-	10,619,757	5,127,764	5,491,993		430,023,014	
Union North In-Franchise Delivery									
12	Rate 01	1,023,567	-	1,023,567	270	1,023,297	0.0783	80,124,117	
13	Rate 10	358,449	-	358,449	10,262	348,187	0.0783	27,263,038	
14	Rate 20	668,106	-	668,106	511,377	156,729	0.0783	12,271,866	
15	Rate 25	79,886	-	79,886	56,587	23,299	0.0783	1,824,315	
16	Rate 100	1,018,057	-	1,018,057	1,018,057	-	0.0783	-	
17	Total Union North In-Franchise	3,148,065	-	3,148,065	1,596,553	1,551,511		121,483,336	
18	Total In-Franchise	13,767,822	-	13,767,822	6,724,318	7,043,504		551,506,350	
Ex-Franchise									
19	Rate M12 - Firm Transportation	18,143,991	18,143,991	-	-	-	0.0783	-	
20	Rate M13	65,732	65,732	-	-	-	0.0783	-	
21	Rate M16	257,502	257,502	-	-	-	0.0783	-	
22	Rate C1 - Firm Transportation	6,094,178	6,094,178	-	-	-	0.0783	-	
23	Total Ex-Franchise	24,561,403	24,561,403	-	-	-		-	
24	Total In-Franchise & Ex-Franchise	38,329,224	24,561,403	13,767,822	6,724,318	7,043,504		551,506,350	7.8300

Notes:

- (1) Exhibit B, Tab 2, Schedule 1, Col. 1 + ex-franchise forecast volumes.  
(2) Exhibit B, Tab 2, Schedule 1, Col. 1.  
(3) Exhibit B, Tab 2, Schedule 1, Col. 2.  
(4) Exhibit B, Tab 2, Schedule 5, Line 2.

UNION RATE ZONES  
2021 Facility-Related Volumes and Derivation of Facility Carbon Charge Unit Rate  
Effective April 1, 2021

Line No.	Particulars	Forecast Volumes (10 <sup>3</sup> m <sup>3</sup> ) (1) (a)	Federal Carbon Charge (\$/m <sup>3</sup> ) (2) (b)	Facility Carbon Cost (\$) (c)	Facility Carbon Charge Unit Rate (¢/m <sup>3</sup> ) (d)
	Company Use				
1	Buildings	1,620			
2	Boilers/Line Heaters	17,142			
3	NGV Fleet	-			
4	Tota Company Use	18,763	0.0783	1,469,109 (3)	
5	Compressor Fuel	125,749		3,394,441 (4)	
6	Total	144,511		4,863,550	0.0127 (5)

Notes:

- (1) Exhibit B, Tab 2, Schedule 2, Col 1.  
The Company Use volume is for April 1, 2021 to March 31, 2022 and the Compressor Fuel volume is for January 1 to December 31, 2021.
- (2) Exhibit B, Tab 2, Schedule 5, Line 5.
- (3) Exhibit B, Tab 2, Schedule 5, Line 6. The Company Use cost is for April 1, 2021 to March 31, 2022.
- (4) Exhibit B, Tab 2, Schedule 5, Line 11. The Compressor Fuel cost is for January 1 to December 31, 2021.
- (5) Total Facility Carbon Cost / Total Forecast Volumes = [column (c) / (Exhibit D, Tab 2, Schedule 1, p. 1, line 24, column (a) x 1000)] x 100.

UNION RATE ZONES  
2021 Carbon Charge Unit Rate Summary  
Effective April 1, 2021

Line No.	Particulars (¢/m <sup>3</sup> )	Unit Rate (a)
1	Federal Carbon Charge	7.8300 (1)
2	Facility Carbon Charge	0.0127 (2)
3	Total (line 1 + line 2)	<u>7.8427</u>

Notes:

- (1) Exhibit D, Tab 2, Schedule 1, p. 1, line 24, column (h).  
(2) Exhibit D, Tab 2, Schedule 1, p. 2, line 6, column (d).



UNION RATE ZONES  
Calculation of Union South In-franchise Unit Rate Change  
Parkway Delivery Commitment Incentive (PDCI) Costs Updated to Include Facility Carbon Charge  
Effective April 1, 2021

Line No.	Particulars	Billing Units	2020 PDCI Cost Change (\$000's) (1) (a)	2020 Forecast Usage (2) (b)	Unit Rate Change (cents / m³) (c)=(a / b*100)
<u>Rate M1</u>					
	Monthly Delivery Commodity Charge				
1	First 100 m³	10³m³	12	1,017,309	0.0012
2	Next 150 m³	10³m³	10	886,061	0.0012
3	All over 250 m³	10³m³	12	1,224,360	0.0009
4	Total Rate M1		<u>35</u>	<u>3,127,730</u>	<u>0.0011</u>
<u>Rate M2</u>					
	Monthly Delivery Commodity Charge				
5	First 1,000 m³	10³m³	1	86,821	0.0012
6	Next 6,000 m³	10³m³	4	380,493	0.0012
7	Next 13,000 m³	10³m³	4	368,606	0.0011
8	All over 20,000 m³	10³m³	5	488,370	0.0010
9	Total Rate M2		<u>14</u>	<u>1,324,290</u>	<u>0.0011</u>
<u>Rate M4</u>					
	Monthly Demand Charge				
10	First 8,450 m³	10³m³/d	2	21,870	0.0101
11	Next 19,700 m³	10³m³/d	1	21,005	0.0046
12	All over 28,150 m³	10³m³/d	0	4,639	0.0039
	Monthly Delivery Commodity Charge				
13	First Block	10³m³	2	687,513	0.0003
14	All remaining use	10³m³	0	2,362	0.0001
15	Total Rate M4		<u>6</u>	<u>689,875</u>	<u>0.0008</u>
<u>Rate M5A</u>					
	Firm contracts				
16	Monthly Delivery Commodity Charge	10³m³	0	8,484	0.0003
17	Total Delivery - Firm M5A		<u>0</u>	<u>8,484</u>	<u>0.0003</u>
	Interruptible contracts				
18	Delivery Commodity Charge (Avg Price)	10³m³	1	67,400	0.0009
19	Total Delivery -Interruptible M5A		<u>1</u>	<u>67,400</u>	<u>0.0009</u>
20	Total Rate M5A		<u>1</u>	<u>75,884</u>	<u>0.0008</u>
<u>Rate M7</u>					
	Firm Contracts				
21	Monthly Delivery Commodity Charge	10³m³	3	451,763	0.0007
22	Total Delivery - Firm M7		<u>3</u>	<u>451,763</u>	<u>0.0007</u>
	Interruptible / Seasonal Contracts				
23	Monthly Delivery Commodity Charge	10³m³	1	75,607	0.0009
24	Total Rate M7		<u>4</u>	<u>527,370</u>	<u>0.0007</u>
<u>Rate M9</u>					
25	Monthly Delivery Commodity Charge	10³m³	1	79,729	0.0015
26	Total Rate M9		<u>1</u>	<u>79,729</u>	<u>0.0015</u>
<u>Rate M10</u>					
27	Monthly Delivery Commodity Charge	10³m³	0	311	0.0015
28	Total Rate M10		<u>0</u>	<u>311</u>	<u>0.0015</u>

Notes:

- (1) Exhibit D, Tab 2, Schedule 2, p. 3, column (i).  
(2) EB-2019-0194, Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, column (a).

UNION RATE ZONES  
Calculation of Union South In-franchise Unit Rate Change  
Parkway Delivery Commitment Incentive (PDCI) Costs Updated to Include Facility Carbon Charge  
Effective April 1, 2021

Line No.	Particulars	Billing Units	2020 PDCI Cost Change (\$000's) (1) (a)	2020 Forecast Usage (2) (b)	Unit Rate Change (cents / m³) (c)=(a / b*100)
	<u>Rate T1</u>				
	Transportation Firm				
1	All Volumes	10³m³	4	407,556	0.0010
2	Interruptible	10³m³	1	37,005	0.0015
3	Total Rate T1		<u>5</u>	<u>444,561</u>	<u>0.0011</u>
	<u>Rate T2</u>				
	Transportation Firm				
4	All Volumes	10³m³	19	4,243,605	0.0004
5	Interruptible	10³m³	0	159,604	-
6	Total Rate T2		<u>19</u>	<u>4,403,209</u>	<u>0.0004</u>
	<u>Rate T3</u>				
	Transportation Commodity				
7		10³m³	4	278,781	0.0015
8	Total Rate T3		<u>4</u>	<u>278,781</u>	<u>0.0015</u>
9	Total PDCI Cost Change		<u>89</u>		

Notes:

- (1) Exhibit D, Tab 2, Schedule 2, p. 3, column (i).  
(2) EB-2019-0194, Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, column (a).

UNION RATE ZONES  
Rate Adjustment Summary based on  
Changes to the Parkway Delivery Commitment Incentive (PDCI) Costs Updated for the 2021 Facility Carbon Charge

Line No.	Particulars (\$000's)	PDCI Costs per EB-2019-0194 (1)			Updated PDCI Costs			Difference		
		Dawn-Parkway Demand Costs	Commodity Costs	Total PDCI Costs	Dawn-Parkway Demand Costs (2)	Commodity Costs (3)	Total PDCI Costs	Dawn-Parkway Demand Costs	Commodity Costs	Total Costs
		(a)	(b)	(c) = (a + b)	(d)	(e)	(f) = (d + e)	(g) = (d - a)	(h) = (e - b)	(i) = (g + h)
1	Rate M1	5,160	872	6,032	5,160	907	6,067	-	35	35
2	Rate M2	1,948	360	2,308	1,948	375	2,323	-	14	14
3	Rate M4	444	140	584	444	145	590	-	6	6
4	Rate M5 - Firm	1	1	2	1	1	2	-	0	0
5	Rate M5 - Interruptible	-	15	15	-	16	16	-	1	1
6	Rate M7 - Firm	334	79	413	334	82	416	-	3	3
7	Rate M7 - Interruptible	-	17	17	-	18	18	-	1	1
8	Rate M9	111	29	140	111	30	141	-	1	1
9	Rate M10	1	0	1	1	0	1	-	0	0
10	Rate T1 - Firm	312	106	418	312	110	423	-	4	4
11	Rate T1 - Interruptible	-	13	13	-	14	14	-	1	1
12	Rate T2 - Firm	1,698	482	2,180	1,698	502	2,200	-	19	19
13	Rate T2 - Interruptible	-	0	0	-	0	0	-	0	0
14	Rate T3	540	101	641	540	106	645	-	4	4
15	Total Costs	10,550	2,216	12,766	10,550	2,305	12,854	-	89	89

Notes:

- (1) EB-2019-0194, Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, p.2, columns (d), (e), and (f).
- (2) Exhibit D, Tab 2, Schedule 2, p.4, column (b) + Exhibit D, Tab 2, Schedule 2, p.5, column (b).
- (3) Exhibit D, Tab 2, Schedule 2, p.4, column (d) + Exhibit D, Tab 2, Schedule 2, p.5, column (d).

UNION RATE ZONES  
Derivation of the 2020 Sales Service PDCI Costs Updated for the 2021 Facility Carbon Charge

Line No.	Particulars	Demand Costs		Commodity Costs		Total Sales Service PDCI Costs (\$000's) (e) = (b + d)
		2020 Forecast Dawn-Parkway Design Day Demands (10 <sup>3</sup> m <sup>3</sup> /d) (a)	11 TJ Sales Service Demand Costs (1) (\$000's) (b)	2020 Forecast Delivery Volumes East of Dawn (10 <sup>3</sup> m <sup>3</sup> ) (c)	11 TJ Sales Service Fuel and UFG Costs (3) (\$000's) (d)	
1	Rate M1	24,166	234	2,394,495	41	275
2	Rate M2	9,123	88	989,895	17	105
3	Rate M4	2,081	20	383,970	7	27
4	Rate M5 Firm	7	0	1,424	0	0
5	Rate M5 Interruptible	-	-	41,655	1	1
6	Rate M7 Firm	1,564	15	216,781	4	19
7	Rate M7 Interruptible	-	-	47,203	1	1
8	Rate M9	519	5	79,729	1	6
9	Rate M10	4	0	311	0	0
10	Rate T1 Firm	1,462	14	291,833	5	19
11	Rate T1 Interruptible	-	-	37,005	1	1
12	Rate T2 Firm	7,951	77	1,325,037	23	100
13	Rate T2 Interruptible	-	-	143	0	0
14	Rate T3	2,527	24	278,781	5	29
15	Total	49,404	478 (2)	6,088,262	104 (4)	582

Notes:

- (1) Allocated in proportion to column (a). Parkway Delivery Obligation of 11 TJ/d as per EB-2019-0194, Exhibit B, Tab 1, Appendix A, column (g), line 25.  
(3) Calculated as 11 TJ x \$0.119/GJ/d x 365 = \$0.478 million. Rate represents the M12 Dawn-Parkway demand rate per EB-2019-0194.  
(3) Allocated in proportion to column (c).  
(4) Calculated as 11 TJ x \$0.026/GJ/d x 365 = \$0.104 million. Rate represents the average Dawn-Parkway (TCPL / EGT) fuel rate per EB-2019-0194 Rate M12 Schedule 'C' at October 2019 QRAM Dawn Reference WACOG.

UNION RATE ZONES  
Derivation of the 2020 Direct Purchase (DP) PDCI Costs Updated for the 2021 Facility Carbon Charge

Line No.	Particulars	Demand Costs		Commodity Costs		Total DP PDCI Costs (\$000's) (e) = (b+d)
		2020 Forecast Dawn-Parkway Design Day Demands (10 <sup>3</sup> m <sup>3</sup> /d) (a)	232 TJ DP Demand Costs (1) (\$000's) (b)	2020 Forecast Delivery Volumes East of Dawn (10 <sup>3</sup> m <sup>3</sup> ) (c)	232 TJ DP Fuel and UFG Costs (3) (\$000's) (d)	
1	Rate M1	24,166	4,927	2,394,495	865	5,792
2	Rate M2	9,123	1,860	989,895	358	2,218
3	Rate M4	2,081	424	383,970	139	563
4	Rate M5 Firm	7	1	1,424	1	2
5	Rate M5 Interruptible	-	-	41,655	15	15
6	Rate M7 Firm	1,564	319	216,781	78	397
7	Rate M7 Interruptible	-	-	47,203	17	17
8	Rate M9	519	106	79,729	29	135
9	Rate M10	4	1	311	0	1
10	Rate T1 Firm	1,462	298	291,833	105	404
11	Rate T1 Interruptible	-	-	37,005	13	13
12	Rate T2 Firm	7,951	1,621	1,325,037	479	2,100
13	Rate T2 Interruptible	-	-	143	0	0
14	Rate T3	2,527	515	278,781	101	616
15	Total	49,404	10,072 (2)	6,088,262	2,201 (4)	12,272

Notes:

- (1) Allocated in proportion to column (a). Parkway Delivery Obligation of 232 TJ/d as per EB-2019-0194, Exhibit B, Tab 1, Appendix A, column (g), line 13 + line 19 adjusted by 7 TJ/d to reflect the annual impact of a seasonal Parkway Delivery Obligation.
- (2) Calculated as 232 TJ x \$0.119/GJ/d x 365 = \$10.072 million. Rate represents the M12 Dawn-Parkway demand rate per EB-2019-0194.
- (3) Allocated in proportion to column (c).
- (4) Calculated as 232 TJ x \$0.026/GJ/d x 365 = \$2.201 million. Rate represents the average Dawn-Parkway (TCPL / EGT) fuel rate per EB-2019-0194 Rate M12 Schedule 'C' at October 2019 QRAM Dawn Reference WACOG.

UNION RATE ZONES  
Union South  
General Service Customer Bill Impacts

Line No.	Particulars	Rate M1 - Residential (Annual Consumption of 2,200 m³)			Rate M2 - Commercial (Annual Consumption of 73,000 m³)		
		EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (a)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (b)	Impact (\$) (c) = (b) - (a)	EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (d)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (e)	Impact (\$) (f) = (e) - (d)
	<u>Delivery Charges</u>						
1	Monthly Charge	270.00	270.00	-	872.16	872.16	-
2	Delivery Commodity Charge	114.72	114.82	0.10	3,518.73	3,522.44	3.71
3	Storage Services	16.93	16.93	-	489.78	489.78	-
4	Total Delivery Charge	401.65	401.75	0.10	4,880.67	4,884.38	3.71
5	Federal Carbon Charge	129.14	172.27	43.13	4,285.08	5,715.91	1,430.83
	<u>Supply Charges</u>						
6	Transportation to Union	-	-	-	-	-	-
7	Commodity	270.98	270.98	-	8,991.49	8,991.49	-
8	Total Gas Supply Charge	270.98	270.98	-	8,991.49	8,991.49	-
9	Total Bill	801.77	845.00	43.23	18,157.24	19,591.78	1,434.54
10	Total Bill Excluding Federal Carbon Charge	672.63	672.73	0.10	13,872.16	13,875.87	3.71
	<u>Impacts</u>						
11	Sales Service			43.23			1,434.54
12	Direct Purchase			43.23			1,434.54
13	Total Bill Impact			5.4%			7.9%
14	Commodity Bill Impact			-			-

Notes:

- (1) Reflects rates approved in October 1, 2020 QRAM (EB-2020-0195) at 2020 Federal Carbon rates.  
(2) Excludes temporary charges/(credits) and prospective recovery.

UNION RATE ZONES  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	Union North West Zone Rate 01 - Residential (Annual Consumption of 2,200 m³)			Union North East Zone Rate 01 - Residential (Annual Consumption of 2,200 m³)		
		EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (a)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (b)	Impact (\$) (c) = (b) - (a)	EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (d)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (e)	Impact (\$) (f) = (e) - (d)
	<u>Delivery Charges</u>						
1	Monthly Charge	270.00	270.00	-	270.00	270.00	-
2	Delivery Commodity Charge	206.11	206.21	0.10	206.11	206.21	0.10
3	Total Delivery Charge	476.11	476.21	0.10	476.11	476.21	0.10
4	Federal Carbon Charge	129.14	172.27	43.13	129.14	172.27	43.13
	<u>Supply Charges</u>						
5	Transportation to Union	120.64	120.64	-	45.75	45.75	-
6	Storage Services	44.58	44.58	-	110.17	110.17	-
7	Subtotal	165.22	165.22	-	155.92	155.92	-
8	Commodity	234.68	234.68	-	277.20	277.20	-
9	Total Gas Supply Charge	399.90	399.90	-	433.12	433.12	-
10	Total Bill	1,005.15	1,048.38	43.23	1,038.37	1,081.60	43.23
11	Total Bill Excluding Federal Carbon Charge	876.01	876.11	0.10	909.23	909.33	0.10
	<u>Impacts</u>						
12	Sales Service			43.23			43.23
13	Direct Purchase			43.23			43.23
14	Total Bill Impact			4.3%			4.2%
15	Commodity Bill Impact			-			-

Notes:

- (1) Reflects rates approved in October 1, 2020 QRAM (EB-2020-0195) at 2020 Federal Carbon rates.  
(2) Excludes temporary charges/(credits).

UNION RATE ZONES  
Union North  
General Service Customer Bill Impacts

Line No.	Particulars	Union North West Rate 10 - Commercial / Industrial (Annual Consumption of 93,000 m³)			Union North East Rate 10 - Commercial / Industrial (Annual Consumption of 93,000 m³)		
		EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (a)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (b)	Impact (\$) (c) = (b) - (a)	EB-2020-0195 Approved (1) 1-Oct-20 Total Bill (\$) (2) (d)	EB-2020-0212 Proposed 1-Apr-21 Total Bill (\$) (2) (e)	Impact (\$) (f) = (e) - (d)
	<u>Delivery Charges</u>						
1	Monthly Charge	872.16	872.16	-	872.16	872.16	-
2	Delivery Commodity Charge	6,390.29	6,393.91	3.62	6,390.29	6,393.91	3.62
3	Total Delivery Charge	7,262.45	7,266.07	3.62	7,262.45	7,266.07	3.62
4	Federal Carbon Charge	5,459.09	7,281.90	1,822.81	5,459.09	7,281.90	1,822.81
	<u>Supply Charges</u>						
5	Transportation to Union	4,465.23	4,465.23	-	1,768.86	1,768.86	-
6	Storage Services	1,395.65	1,395.65	-	3,268.77	3,268.77	-
7	Subtotal	5,860.88	5,860.88	-	5,037.63	5,037.63	-
8	Commodity	9,920.22	9,920.22	-	11,717.52	11,717.52	-
9	Total Gas Supply Charge	15,781.10	15,781.10	-	16,755.15	16,755.15	-
10	Total Bill	28,502.64	30,329.07	1,826.43	29,476.69	31,303.12	1,826.43
11	Total Bill Excluding Federal Carbon Charge	23,043.55	23,047.17	3.62	24,017.60	24,021.22	3.62
	<u>Impacts</u>						
12	Sales Service			1,826.43			1,826.43
13	Direct Purchase			1,826.43			1,826.43
14	Total Bill Impact			6.4%			6.2%
15	Commodity Bill Impact			-			-

Notes:

- (1) Reflects rates approved in October 1, 2020 QRAM (EB-2020-0195) at 2020 Federal Carbon rates.  
(2) Excludes temporary charges/(credits).



**UNION RATE ZONES**  
Union North In-Franchise  
Calculation of 2021 Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers

		Approved - EB-2020-0195 (1)		Proposed - EB-2020-0212		Bill Impact		
Line		Total Bill	Unit Rate	Total Bill	Unit Rate	Total Bill Change	Including Federal Carbon Charge	Excluding Federal Carbon Charge
No.	Particulars	(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)	(%)
		(a)	(b)	(c)	(d)	(e) = (c - a)	(f) = (e / a)	(g)
	<u>Small Rate 01</u>							
1	Delivery Charges	476	21.6414	476	21.6459	0.10	0.0%	0.0%
2	Federal Carbon Charge	129	5.8700	172	7.8300	43.13	33.4%	0.0%
3	Gas Supply Charges (2)	433	19.6873	433	19.6873	-	0.0%	0.0%
4	Total Bill	1,038	47.1986	1,082	49.1636	43.23	4.2%	0.0%
5	Sales Service Impact					43.23	4.2%	0.0%
6	Bundled-T (Direct Purchase) Impact					43.23	5.7%	0.0%
	<u>Small Rate 10</u>							
7	Delivery Charges	5,127	8.5451	5,129	8.5490	2	0.0%	0.0%
8	Federal Carbon Charge	3,522	5.8700	4,698	7.8300	1,176	33.4%	0.0%
9	Gas Supply Charges (2)	10,810	18.0163	10,810	18.0163	-	0.0%	0.0%
10	Total Bill	19,459	32.4314	20,637	34.3953	1,178	6.1%	0.0%
11	Sales Service Impact					1,178	6.1%	0.0%
12	Bundled-T (Direct Purchase) Impact					1,178	9.9%	0.0%
	<u>Large Rate 10</u>							
13	Delivery Charges	16,747	6.6987	16,757	6.7026	10	0.1%	0.1%
14	Federal Carbon Charge	14,675	5.8700	19,575	7.8300	4,900	33.4%	0.0%
15	Gas Supply Charges (2)	45,041	18.0163	45,041	18.0163	-	0.0%	0.0%
16	Total Bill	76,463	30.5850	81,372	32.5489	4,910	6.4%	0.0%
17	Sales Service Impact					4,910	6.4%	0.0%
18	Bundled-T (Direct Purchase) Impact					4,910	10.9%	0.0%
	<u>Small Rate 20</u>							
19	Delivery Charges	88,314	2.9438	88,431	2.9477	117	0.1%	0.1%
20	Federal Carbon Charge	176,100	5.8700	234,900	7.8300	58,800	33.4%	0.0%
21	Gas Supply Charges (2)	433,788	14.4596	433,788	14.4596	-	0.0%	0.0%
22	Total Bill	698,202	23.2734	757,119	25.2373	58,917	8.4%	0.0%
23	Sales Service Impact					58,917	8.4%	0.0%
24	Bundled-T (Direct Purchase) Impact					58,917	17.7%	0.1%
	<u>Large Rate 20</u>							
25	Delivery Charges	345,103	2.3007	345,688	2.3046	585	0.2%	0.2%
26	Federal Carbon Charge	880,500	5.8700	1,174,500	7.8300	294,000	33.4%	0.0%
27	Gas Supply Charges (2)	2,119,676	14.1312	2,119,676	14.1312	-	0.0%	0.0%
28	Total Bill	3,345,279	22.3019	3,639,864	24.2658	294,585	8.8%	0.0%
29	Sales Service Impact					294,585	8.8%	0.0%
30	Bundled-T (Direct Purchase) Impact					294,585	19.4%	0.1%
	<u>Average Rate 25</u>							
31	Delivery Charges	72,996	3.2086	73,085	3.2125	89	0.1%	0.1%
32	Federal Carbon Charge	133,543	5.8700	178,133	7.8300	44,590	33.4%	0.0%
33	Gas Supply Charges (2)	300,530	13.2101	300,530	13.2101	-	0.0%	0.0%
34	Total Bill	507,068	22.2887	551,747	24.2526	44,679	8.8%	0.0%
35	Sales Service Impact					44,679	8.8%	0.0%
36	T-Service (Direct Purchase) Impact					44,679	21.6%	0.1%
	<u>Small Rate 100</u>							
37	Delivery Charges	317,310	1.1752	318,363	1.1791	1,053	0.3%	0.3%
38	Federal Carbon Charge	1,584,900	5.8700	2,114,100	7.8300	529,200	33.4%	0.0%
39	Gas Supply Charges (2)	4,859,476	17.9981	4,859,476	17.9981	-	0.0%	0.0%
40	Total Bill	6,761,686	25.0433	7,291,939	27.0072	530,253	7.8%	0.0%
41	Sales Service Impact					530,253	7.8%	0.0%
42	T-Service (Direct Purchase) Impact					530,253	27.9%	0.3%
	<u>Large Rate 100</u>							
43	Delivery Charges	2,592,750	1.0803	2,602,110	1.0842	9,360	0.4%	0.4%
44	Federal Carbon Charge	14,088,000	5.8700	18,792,000	7.8300	4,704,000	33.4%	0.0%
45	Gas Supply Charges (2)	42,582,410	17.7427	42,582,410	17.7427	-	0.0%	0.0%
46	Total Bill	59,263,160	24.6930	63,976,520	26.6569	4,713,360	8.0%	0.0%
47	Sales Service Impact					4,713,360	8.0%	0.0%
48	T-Service (Direct Purchase) Impact					4,713,360	28.3%	0.4%

Notes:

- (1) Reflects proposed rates per EB-2020-0195, Exhibit E, Tab 2, Rate Order, Appendix A.  
(2) Gas Supply charges based on Union North East Zone.

**UNION RATE ZONES**  
Union South In-Franchise  
Calculation of 2021 Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers

Line No.	Particulars	Approved - EB-2020-0195 (1)		Proposed - EB-2020-0212		Bill Impact		
		Total Bill	Unit Rate	Total Bill	Unit Rate	Total Bill Change	Including Federal Carbon Charge	Excluding Federal Carbon Charge
		(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)	(%)
		(a)	(b)	(c)	(d)	(e) = (c - a)	(f) = (e / a)	(g)
	<u>Small Rate M1</u>							
1	Delivery Charges	402	18.2568	402	18.2614	0.10	0.0%	0.0%
2	Federal Carbon Charge	129	5.8700	172	7.8300	43.13	33.4%	0.0%
3	Gas Supply Charges	271	12.3171	271	12.3171	-	0.0%	0.0%
4	Total Bill	802	36.4441	845	38.4091	43.23	5.4%	0.0%
5	Sales Service Impact					43.23	5.4%	0.0%
6	Direct Purchase Impact					43.23	8.1%	0.0%
	<u>Small Rate M2</u>							
7	Delivery Charges	4,182	6.9703	4,185	6.9754	3	0.1%	0.1%
8	Federal Carbon Charge	3,522	5.8700	4,698	7.8300	1,176	33.4%	0.0%
9	Gas Supply Charges	7,390	12.3171	7,390	12.3171	-	0.0%	0.0%
10	Total Bill	15,094	25.1574	16,273	27.1225	1,179	7.8%	0.0%
11	Sales Service Impact					1,179	7.8%	0.0%
12	Direct Purchase Impact					1,179	15.3%	0.1%
	<u>Large Rate M2</u>							
13	Delivery Charges	14,014	5.6056	14,027	5.6106	12	0.1%	0.1%
14	Federal Carbon Charge	14,675	5.8700	19,575	7.8300	4,900	33.4%	0.0%
15	Gas Supply Charges	30,793	12.3171	30,793	12.3171	-	0.0%	0.0%
16	Total Bill	59,482	23.7927	64,394	25.7577	4,912	8.3%	0.0%
17	Sales Service Impact					4,912	8.3%	0.0%
18	Direct Purchase Impact					4,912	17.1%	0.1%
	<u>Small Rate M4</u>							
19	Delivery Charges	49,791	5.6904	49,833	5.6952	43	0.1%	0.1%
20	Federal Carbon Charge	51,363	5.8700	68,513	7.8300	17,150	33.4%	0.0%
21	Gas Supply Charges	107,775	12.3171	107,775	12.3171	-	0.0%	0.0%
22	Total Bill	208,928	23.8775	226,120	25.8423	17,193	8.2%	0.0%
23	Sales Service Impact					17,193	8.2%	0.0%
24	Direct Purchase Impact					17,193	17.0%	0.1%
	<u>Large Rate M4</u>							
25	Delivery Charges	380,331	3.1694	380,866	3.1739	535	0.1%	0.1%
26	Federal Carbon Charge	704,400	5.8700	939,600	7.8300	235,200	33.4%	0.0%
27	Gas Supply Charges	1,478,052	12.3171	1,478,052	12.3171	-	0.0%	0.0%
28	Total Bill	2,562,783	21.3565	2,798,518	23.3210	235,735	9.2%	0.0%
29	Sales Service Impact					235,735	9.2%	0.0%
30	Direct Purchase Impact					235,735	21.7%	0.1%
	<u>Small Rate M5</u>							
31	Delivery Charges	33,112	4.0136	33,152	4.0184	40	0.1%	0.1%
32	Federal Carbon Charge	48,428	5.8700	64,598	7.8300	16,170	33.4%	0.0%
33	Gas Supply Charges	101,616	12.3171	101,616	12.3171	-	0.0%	0.0%
34	Total Bill	183,156	22.2007	199,365	24.1655	16,210	8.9%	0.0%
35	Sales Service Impact					16,210	8.9%	0.0%
36	Direct Purchase Impact					16,210	19.9%	0.1%
	<u>Large Rate M5</u>							
37	Delivery Charges	187,456	2.8839	187,768	2.8887	312	0.2%	0.2%
38	Federal Carbon Charge	381,550	5.8700	508,950	7.8300	127,400	33.4%	0.0%
39	Gas Supply Charges	800,612	12.3171	800,612	12.3171	-	0.0%	0.0%
40	Total Bill	1,369,618	21.0710	1,497,330	23.0358	127,712	9.3%	0.0%
41	Sales Service Impact					127,712	9.3%	0.0%
42	Direct Purchase Impact					127,712	22.4%	0.2%
	<u>Small Rate M7</u>							
43	Delivery Charges	781,733	2.1715	783,389	2.1761	1,656	0.2%	0.2%
44	Federal Carbon Charge	2,113,200	5.8700	2,818,800	7.8300	705,600	33.4%	0.0%
45	Gas Supply Charges	4,434,156	12.3171	4,434,156	12.3171	-	0.0%	0.0%
46	Total Bill	7,329,089	20.3586	8,036,345	22.3232	707,256	9.6%	0.0%
47	Sales Service Impact					707,256	9.6%	0.0%
48	Direct Purchase Impact					707,256	24.4%	0.2%
	<u>Large Rate M7</u>							
49	Delivery Charges	3,141,008	6.0404	3,143,400	6.0450	2,392	0.1%	0.1%
50	Federal Carbon Charge	3,052,400	5.8700	4,071,600	7.8300	1,019,200	33.4%	0.0%
51	Gas Supply Charges	6,404,892	12.3171	6,404,892	12.3171	-	0.0%	0.0%
52	Total Bill	12,598,300	24.2275	13,619,892	26.1921	1,021,592	8.1%	0.0%
53	Sales Service Impact					1,021,592	8.1%	0.0%
54	Direct Purchase Impact					1,021,592	16.5%	0.1%

Notes:

(1) Reflects proposed rates per EB-2020-0195, Exhibit E, Tab 2, Rate Order, Appendix A.

**UNION RATE ZONES**  
Union South In-Franchise  
Calculation of 2021 Sales Service and Direct Purchase Bill Impacts for Typical Small and Large Customers

Line No.	Particulars	Approved - EB-2020-0195 (1)		Proposed - EB-2020-0212		Bill Impact		
		Total Bill	Unit Rate	Total Bill	Unit Rate	Total Bill Change	Including Federal Carbon Charge	Excluding Federal Carbon Charge
		(\$)	(cents/m <sup>3</sup> )	(\$)	(cents/m <sup>3</sup> )	(\$)	(%)	(%)
		(a)	(b)	(c)	(d)	(e) = (c - a)	(f) = (e / a)	(g)
	<u>Small Rate M9</u>							
1	Delivery Charges	174,996	2.5179	175,371	2.5233	375		0.2%
2	Gas Supply Charges	856,038	12.3171	856,038	12.3171	-		0.0%
3	Total Bill	1,031,035	14.8350	1,031,410	14.8404	375		0.0%
4	Sales Service Impact					375		0.0%
5	Direct Purchase Impact					375		0.2%
	<u>Large Rate M9</u>							
6	Delivery Charges	520,462	2.5794	521,552	2.5848	1,090		0.2%
7	Gas Supply Charges	2,485,344	12.3171	2,485,344	12.3171	-		0.0%
8	Total Bill	3,005,807	14.8965	3,006,896	14.9019	1,090		0.0%
9	Sales Service Impact					1,090		0.0%
10	Direct Purchase Impact					1,090		0.2%
	<u>Average Rate M10</u>							
11	Delivery Charges	7,227	7.6481	7,233	7.6535	5		0.1%
12	Gas Supply Charges	11,640	12.3171	11,640	12.3171	-		0.0%
13	Total Bill	18,867	19.9652	18,872	19.9706	5		0.0%
14	Sales Service Impact					5		0.0%
15	Direct Purchase Impact					5		0.1%
	<u>Small Rate T1</u>							
16	Delivery Charges	163,900	2.1746	164,269	2.1795	369	0.2%	0.2%
17	Federal Carbon Charge	442,422	5.8700	590,147	7.8300	147,725	33.4%	0.0%
18	Gas Supply Charges	928,340	12.3171	928,340	12.3171	-	0.0%	0.0%
19	Total Bill	1,534,662	20.3617	1,682,756	22.3266	148,095	9.6%	0.0%
20	Sales Service Impact					148,095	9.6%	0.0%
21	Direct Purchase Impact					148,095	24.4%	0.2%
	<u>Average Rate T1</u>							
22	Delivery Charges	254,878	2.2037	255,444	2.2086	567	0.2%	0.2%
23	Federal Carbon Charge	678,921	5.8700	905,613	7.8300	226,692	33.4%	0.0%
24	Gas Supply Charges	1,424,588	12.3171	1,424,588	12.3171	-	0.0%	0.0%
25	Total Bill	2,358,386	20.3908	2,585,645	22.3557	227,259	9.6%	0.0%
26	Sales Service Impact					227,259	9.6%	0.0%
27	Direct Purchase Impact					227,259	24.3%	0.2%
	<u>Large Rate T1</u>							
28	Delivery Charges	574,140	2.2406	575,396	2.2455	1,256	0.2%	0.2%
29	Federal Carbon Charge	1,504,133	5.8700	2,006,365	7.8300	502,232	33.4%	0.0%
30	Gas Supply Charges	3,156,144	12.3171	3,156,144	12.3171	-	0.0%	0.0%
31	Total Bill	5,234,417	20.4277	5,737,905	22.3926	503,488	9.6%	0.0%
32	Sales Service Impact					503,488	9.6%	0.0%
33	Direct Purchase Impact					503,488	24.2%	0.2%
	<u>Small Rate T2</u>							
34	Delivery Charges	736,047	1.2421	738,595	1.2464	2,548	0.3%	0.3%
35	Federal Carbon Charge	3,478,327	5.8700	4,639,745	7.8300	1,161,418	33.4%	0.0%
36	Gas Supply Charges	7,298,621	12.3171	7,298,621	12.3171	-	0.0%	0.0%
37	Total Bill	11,512,995	19.4292	12,676,961	21.3935	1,163,966	10.1%	0.0%
38	Sales Service Impact					1,163,966	10.1%	0.0%
39	Direct Purchase Impact					1,163,966	27.6%	0.3%
	<u>Average Rate T2</u>							
40	Delivery Charges	1,781,689	0.9008	1,790,194	0.9051	8,505	0.5%	0.5%
41	Federal Carbon Charge	11,610,264	5.8700	15,486,945	7.8300	3,876,681	33.4%	0.0%
42	Gas Supply Charges	24,361,974	12.3171	24,361,974	12.3171	-	0.0%	0.0%
43	Total Bill	37,753,927	19.0879	41,639,113	21.0522	3,885,186	10.3%	0.0%
44	Sales Service Impact					3,885,186	10.3%	0.0%
45	Direct Purchase Impact					3,885,186	29.0%	0.5%
	<u>Large Rate T2</u>							
46	Delivery Charges	2,946,220	0.7961	2,962,134	0.8004	15,914	0.5%	0.5%
47	Federal Carbon Charge	21,724,224	5.8700	28,977,969	7.8300	7,253,744	33.4%	0.0%
48	Gas Supply Charges	45,584,232	12.3171	45,584,232	12.3171	-	0.0%	0.0%
49	Total Bill	70,254,676	18.9832	77,524,335	20.9475	7,269,658	10.3%	0.0%
50	Sales Service Impact					7,269,658	10.3%	0.0%
51	Direct Purchase Impact					7,269,658	29.5%	0.5%
	<u>Large Rate T3</u>							
52	Delivery Charges	5,605,628	2.0555	5,620,355	2.0609	14,726		0.3%
53	Gas Supply Charges	33,590,210	12.3171	33,590,210	12.3171	-		0.0%
54	Total Bill	39,195,838	14.3726	39,210,564	14.3780	14,726		0.0%
55	Sales Service Impact					14,726		0.0%
56	Direct Purchase Impact					14,726		0.3%

Notes:

(1) Reflects proposed rates per EB-2020-0195, Exhibit E, Tab 2, Rate Order, Appendix A.