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British Columbia Utilities Commission  
Sixth Floor, 900 Howe Street  
Vancouver, BC V6Z 2N3

**Attention: Laurel Ross**  
**Acting Commission Secretary and Director**

Dear Sirs/Mesdames:

**Re: FortisBC Energy Inc.**  
**FEI Proposal for Depreciation & Net Salvage Rate Changes**  
**Project No. 3698871**

In accordance with the regulatory timetable for this proceeding set out in Commission Order G-41-16, dated May 11, 2016, we enclose for filing the electronic version of the Final Argument of FortisBC Energy Inc.

Yours truly,

**FASKEN MARTINEAU DuMOULIN LLP**

*[original signed by Christopher R. Bystrom]*

Christopher R. Bystrom

CB  
Enclosure

**BRITISH COLUMBIA UTILITIES COMMISSION**  
**IN THE MATTER OF THE UTILITIES COMMISSION ACT,**  
**R.S.B.C. 1996, CHAPTER 473**

**and**

**FORTISBC ENERGY INC.**  
**PROPOSAL FOR DEPRECIATION & NET SALVAGE RATE CHANGES**

**FINAL ARGUMENT OF**  
**FORTISBC ENERGY INC.**

**MAY 27, 2016**

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## PART ONE: INTRODUCTION AND OVERVIEW

1. In this proceeding, FortisBC Energy Inc. (FEI or the Company) is requesting approval of the depreciation and net salvage rates proposed in its Annual Review for 2016 Rates (the Application) effective January 1, 2017. The adoption of the depreciation and net salvage rates as recommended by Gannett Fleming Valuation and Rate Consultants Inc. (Gannett Fleming) is necessary in order to properly reflect the useful lives of FEI's assets and a fair allocation and recovery of depreciation expense between current and future ratepayers.

2. As set out in the Application, FEI requested Commission approval for updated depreciation and net salvage rates pursuant to sections 59 to 61 of the *Utilities Commission Act*, as follows:<sup>1</sup>

(a) Depreciation rates in the amounts set out in Table 12-2 in Section 12 of the Application.<sup>2</sup>

(b) Net salvage rates in the amounts set out in Table 12-3 in Section 12 of the Application.<sup>3</sup>

3. FEI continues to seek the above approvals in this proceeding.

4. On December 7, 2015, the British Columbia Utilities Commission (Commission) issued Order G-193-15 establishing interim delivery rates for FEI effective January 1, 2016. In its Reasons for Decision supporting Order G-193-15 (the Decision), the Commission did not approve FEI's requested changes to depreciation and net salvage rates, directed FEI to maintain existing depreciation and net salvage rates until otherwise directed by the Commission and stated that "2016 delivery rates will not be adjusted to reflect changes, if any, to FEI's depreciation and net salvage rates and will instead take effect commencing in 2017". The

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<sup>1</sup> Exhibit B-2, section 1.2, in FEI's Annual Review of 2016 Delivery Rates.

<sup>2</sup> Exhibit A2-1.

<sup>3</sup> Exhibit A2-1.

Commission further directed FEI to submit additional information and analysis on its proposed depreciation and net salvage rate changes by February 29, 2016.

5. On February 29, 2016, FEI filed the additional information and analysis as requested by the Commission in its Decision. This included additional background information on the depreciation methodology utilized by FEI and specific responses to the questions posed by the Commission in the Decision.<sup>4</sup> In addition to the information request and undertaking responses filed in FEI's Annual Review for 2016 Delivery Rates proceeding,<sup>5</sup> FEI responded to further information requests from the Commission and the British Columbia Old Age Pensioners' and Seniors' Organization et al. ("BCOAPO") in this proceeding.

6. FEI's evidence confirms that its proposed depreciation and net salvage rates are based on a sound and reliable method and that the resulting rates are reasonable and should be approved.

7. The remainder of this submission addresses the main topics explored in this proceeding.

## **PART TWO: PROPOSED DEPRECIATION AND NET SALVAGE RATES**

8. FEI's proposed depreciation and net salvage rates are described in section 12 of the Application and are based on the Depreciation Study undertaken by Larry Kennedy of Gannett Fleming, a leading depreciation expert in Canada.<sup>6</sup> As in prior studies, Gannett Fleming estimated the depreciation rates using the Average Service Life (ASL) depreciation methodology, relying on various statistical methods, operational interviews with FEI staff and informed judgment based on Gannett Fleming's experience in the natural gas industry. Straight-line depreciation was developed for the assets in a particular class beginning with the original cost, the estimated average and remaining service life characteristics and then

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<sup>4</sup> Exhibit B-1.

<sup>5</sup> Exhibit A2-3, A2-3 and A2-4.

<sup>6</sup> Exhibit A2-2.

accounting for the accumulated depreciation already booked in that class. The depreciation study includes recommendations for both depreciation rates and net salvage rates.<sup>7</sup>

9. Implementation of the recommended depreciation rates result in a decrease to the average composite depreciation rate for FEI from 3.19 percent to 3.06 percent. The asset categories that account for the majority of the forecast change in the average composite depreciation rate are Services (473-00), Meters and Regulators Installations (474-00), Measurement and Regulating Additions (477-10), Meters (478-10) and Telemetry Equipment (467-20). The recommended changes to these accounts are explained in section 12.3.2.1 of the Application and pages II-4 to II-10 of the Depreciation Study.<sup>8</sup>

10. The Depreciation Study also includes updated estimates of net salvage rates. Net salvage (removal costs less salvage proceeds) is recovered from customers over the useful life of the asset, as approved by the Commission. As recommended by Gannett Fleming, the composite net salvage rate is proposed to increase from 0.44% using the current approved rates to 0.64% using the recommended rates. The recommended net salvage rate increase is supported by historical increases in net salvage activities. The asset categories that account for the majority of the forecast change in the composite net salvage rate are Transmission Pipeline (465-00), Services (473-00), Meters and Regulators Installations (474-00), Distribution Mains (475-00) and Meters (478-10). The recommended changes to these accounts are explained in section 12.3.2.2 of the Application and pages II-4 to II-10 of the Depreciation Study.<sup>9</sup>

11. Generally, the information requests posed to FEI explored the reasons for particular recommendations, but did not indicate any issue with FEI's proposed methodology or the resulting depreciation and net salvage rates.

12. Four topics that were explored in particular detail were:

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<sup>7</sup> Exhibit A2-1, section 12.3.2.

<sup>8</sup> Exhibit A2-1, section 12.3.2.1 and Exhibit A2-2.

<sup>9</sup> Exhibit A2-1, section 12.3.2.2 and Exhibit A2-2.

- (a) Reconciling the recommended ASL of certain asset classes (465, 475, 467 and 477) with the historical losses on removal;
- (b) The Equal Life Group (“ELG”) procedure;
- (c) The recommended ASL of Account 478.10 – Distribution – Meters;
- (d) The whole life method and meter installation asset classes.

13. Each of these topics is addressed further below.

**A. Reconciling Recommended ASLs with Historical Losses on Removal**

14. In the Decision, the Commission posed a number of questions to FEI that predominantly focused on reconciling the recommended ASLs for a number of asset classes with the continued experience of asset losses. This topic was addressed in detail in the Additional Evidence of Gannett Fleming.<sup>10</sup> In short, the occurrence of asset losses and gains is a defining characteristic of the ASL procedure and does not indicate any flaw with the ASL chosen for the asset class.<sup>11</sup> Since the ASL of the Asset Class is an *average* service life, it follows that the actual lives of assets will either be shorter or longer than the ASL. Under the ASL procedure, it is expected that asset losses will occur when assets are retired before the ASL for the asset class because all retirements prior to the ASL are under recovered. This is the expected result even if the ASL of the asset class as a whole is increasing.

15. Gannett Fleming explained the ASL procedure as follows:

As detailed in Gannett Fleming’s filed depreciation study, the depreciation rates for FEI’s depreciable assets are based on the straight line method using the Average Service Life (“ASL”) procedure. The ASL procedure is also known as the Average Life Group (“ALG”) procedure.

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<sup>10</sup> Exhibit B-1.

<sup>11</sup> Exhibit B-1, p. 8.

With the ASL procedure, all assets in a fixed asset account are depreciated and recovered over that fixed asset account's average service life. In the Vehicle's account example, which has an average service life of 10 years, all vehicles would be recovered over a 10 year basis equating to an approximate 10% depreciation rate (assuming 0% net salvage). Thus all vehicles that physically retire prior to the 10 year average service life are under depreciated at the time of retirement. Similarly, all vehicles that physically retire after the 10 year average service life are over depreciated at the time of retirement. The under depreciation of all the vehicles that retire before the average service life is rectified by the over depreciation of all vehicles that retire after the average service life. This is the basic theory and expected results of the ASL procedure.<sup>12</sup>

16. As indicated above, it is a characteristic of the ASL procedure that "losses" will occur as assets retire prior to the ASL and "gains" will occur as assets retire after the ASL that compensate for the recorded "losses". However, the continual addition of assets will result in "losses" continuing to outpace "gains", and this will be magnified due to the impacts of inflation on new capital investment.<sup>13</sup>

17. Once the ASL procedure is clearly understood, it can be seen that the historical experience of asset losses in a particular account is consistent with a recommended increase in the ASL. For example, Gannett Fleming explained why the recommended increase in the ASL for Asset Class 475 is consistent with the historical losses in that account as follows:

The recommended increase to the average service life of Asset Class 475 is consistent with the past twelve years of historical net asset losses experienced in this asset class because the average service life is 64 years and the average year of installation of assets in this account is 1995, indicating that the assets in the account are relatively young on average. Therefore significant losses are expected under the ASL procedure as described further below.

As discussed above in the "Under Recovery (Loss)/ Over Recovery (Gain)" section, the past twelve years of historical net asset losses in this account are expected due to the usage of the ASL procedure. As shown in the observed life table on page V-37 in the filed depreciation study and in the actual retirement history shown on pages V-38 to V-39, the bulk of observed historic retirements have occurred prior to the average service life of age 64.

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<sup>12</sup> Exhibit B-1, p. 3.

<sup>13</sup> Exhibit B-1, p. 8; Exhibit B-3, BCOAPO IR 1.6.2.



As discussed above in the “Under Recovery (Loss)/ Over Recovery (Gain)” section, all retirements prior to the average service life are under recovered and considered to be “losses”.

The fact that the majority of retirements have occurred prior to the average service life of 64 years reflects on the relatively young age of the assets in the account. An investment weighted average of the original cost as detailed in VII-42 to VII-43 results in an average vintage year of 1995. Therefore, the majority of recorded retirements have been on young plant where the retirement ages are less than the average service life of 64 years.

Additionally any “loss” on retirements less than the average service life will be larger compared to any “gains” on those retirements with an age greater than the average service life due to the effects of inflation and deflation and the fact that retirements are based on the cost of the original capitalization.

As this account ages and retirements begin to occur at ages greater than the recommended 64 year average service life, then “gains” will occur. These eventual “gains” will compensate for the recorded “losses”. This is the defining characteristic of the ASL procedure. However, it should be recognized that the continual addition of assets will result in “losses” continuing to outpace “gains”. In particular, due to the impacts of inflation on new capital investment, the under recovery of depreciation on short-lived assets will defer the ability of the utility to recognize a gain.<sup>14</sup>

18. FEI provided explanations of this nature for other accounts, as discussed in the Additional Evidence and information responses.

19. In summary, FEI’s recommended ASLs are consistent with the experience of historical losses and have been appropriately determined for the purpose of setting its depreciation rates.

## **B. The ELG Procedure**

20. In the Additional Evidence Gannett Fleming explained that the ELG procedure is an alternative procedure for determining depreciation rates that could reduce the amount of asset losses that accumulate over time. As explained in detail in the Additional Evidence, the

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<sup>14</sup> Exhibit B-1, p. 8.

adoption of the ELG procedure would reduce losses because each year's asset additions are separately depreciated.<sup>15</sup> While losses would be reduced, they would still occur to the extent that actual retirements did not fully match the expected retirement pattern. These losses would either be determined and recognized on an annual basis or charged to a deferral account as they occur throughout the year.<sup>16</sup>

21. FEI does not recommend the adoption of the ELG method at this time for the reasons discussed below.

- (a) Adoption of the ELG procedure would result in significant rate impacts. Switching to the ELG procedure will result in roughly a 12% higher annual revenue requirement impact over ALG for 2017, 2018 and 2019, and the initial implementation of the change in 2017 would result in a delivery rate increase of approximately 5 percent.<sup>17</sup>
- (b) Various changes are required to convert from ASL to ELG, including the calculation of the depreciation rate within depreciation studies, the implementation into FEI's SAP accounting system and the day to day accounting within FEI's SAP system, the processes and procedures used to record retirement transactions, and quarterly and year end process for financial reporting purposes.<sup>18</sup>
- (c) FEI's preliminary estimate of the costs and resources required to implement the ELG procedure are up to \$500 thousand for changes to SAP and additional labour resources of approximately 0.5 FTE.<sup>19</sup>

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<sup>15</sup> Exhibit B-1, pp. 3-5

<sup>16</sup> Exhibit B-2, BCUC IR 1.2.1.

<sup>17</sup> Exhibit B-2, BCUC IR 1.2.3.1.

<sup>18</sup> Exhibit B-2, BCUC IR 1.2.1.

<sup>19</sup> Exhibit B-2, BCUC 1.2.1.1.

- (d) The historical occurrence of asset losses is not indicative of any flaw in the ASL procedure, but is rather the expected result as the actual service lives of the assets are expected to vary from the average.<sup>20</sup> Asset losses are also expected to continue with use of the ELG procedure, although to a lesser extent.<sup>21</sup>
- (e) The ASL procedure remains a reasonable and acceptable depreciation method, which is used by the other major utilities in BC (FortisBC Inc., Pacific Northern Gas, and BC Hydro) and accepted in other jurisdictions in Canada.<sup>22</sup>

22. FEI submits that the rate impact and additional complexity and cost of the ELG procedure far outweigh any perceived benefit of reducing asset losses as experienced under the ASL procedure. The continued use of the ASL procedure is therefore the superior approach and should continue to be approved for use by FEI.

### **C. The Recommended ASL of Account 478.10 – Distribution – Meters**

23. Given the future expectation that residential meters will be retired prior to reaching an age of 20 years, Gannett Fleming recommends a two year reduction in the average service life for the residential, commercial and industrial meters in Account 478.10 – Distribution – Meters.<sup>23</sup> The reasons for this recommendation were explained in the Depreciation Study and explored in IRs.

24. As discussed in response to BCUC IR 1.1.5, due to the new Measurement Canada requirements for testing of meters that came into effect January 1, 2014, gas utilities across Canada are expected to experience a requirement to increase the number of scheduled residential meter exchanges, which will result in a higher number of residential meters being retired.<sup>24</sup> As discussed in the response to BCUC IR 1.1.6, the extent of the reduction in the

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<sup>20</sup> Exhibit B-1.

<sup>21</sup> Exhibit B-2, BCUC IR 1.2.1.

<sup>22</sup> Exhibit B-2, BCUC 1.2.3.1.

<sup>23</sup> Exhibit A2-2, Depreciation Study, page II-8,

<sup>24</sup> Exhibit B-2.

service lives of residential meters was not fully determinable at the time of the depreciation study since only one year of data under the new sampling plan was included in the study. The actual experienced retirement activity of all types of meters in the asset class in the next depreciation study will help to determine if a further average service life reduction to the current 18 year recommendation is warranted.<sup>25</sup>

25. FEI submits that the evidence shows that its recommended ASL for Account 478.10 – Distribution – Meters is reasonable and appropriate for setting its depreciation rates.

#### **D. The Whole Life Method and Meter Installation Asset Classes**

26. Based on Gannett Fleming's recommendation, FEI uses the Whole Life method for Account 474.02 – New Meter Installations and certain General Plant accounts where there are numerous units of property which are difficult to track in detail. FEI explained the Whole Life method, and the related Amortization Accounting approach, in response to BCUC IR 1.8.1. In short, the Whole Life method bases the depreciation rate on an estimated average service life of the plant category as a whole, instead of relying on individual retirement of assets, resulting in an evenly distributed allocation of the asset cost over the total life of the investment. Under the Amortization Accounting approach, the assets are not tracked individually; rather, the original cost of the assets is depreciated over the estimated life of the assets with depreciation based on the whole life rate.<sup>26</sup>

27. As discussed in response to BCUC IR 1.8.3, the creation of account 474.02 – New Meter Installation was approved by Order G-44-12 to capture any additions for meter installations on a go forward basis. Under this approved approach, starting January 2012 all regulator and meter installation asset additions are recorded in account 474.02 and are depreciated using the Whole Life method.

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<sup>25</sup> Exhibit B-2.

<sup>26</sup> Exhibit B-2, BCUC IR 1.8.1.

28. The creation of Account 474.02 was designed to address the accumulation of asset losses related to meter installations. FEI explained the challenges experienced in the past in response to BCUC IR 1.8.4, as follows:

As indicated in the Asset Loss report (Exhibit A2-6, Asset Loss, pp. 2-4), there is a wide disparity of activities and costs recorded in the Asset Class 474 New Meter Installations. The costs include amounts for regulators and meter installation labour for all customer types including residential, commercial and industrial. A residential meter installation costs less than \$100 compared to a larger commercial meter installation at double or more. When assets are recorded in account 474, they are not linked to a specific meter, making it impossible to know the amount of costs to remove from the asset class when a meter is retired. In the past, average costs had been utilized to estimate the amount to remove when a meter is retired, but with the wide disparity in costs per unit, basing asset retirements on an average unit cost for this Asset Class results in misstatement of any gains/losses associated with retirements such as occurred in the time period leading up to 2012.<sup>27</sup>

29. As explained in response to BCUC IR 1.8.5, adoption of the Whole Life method for meter installation costs has minimized the asset losses related to meter installation. The gains/losses associated with retirements in 2012, 2013 and 2014 were low or minimal, at \$296 thousand, \$57 thousand and \$54 thousand, respectively. In contrast, in the years from 2003 to 2012, the asset losses were \$37.6 million cumulatively or in excess of \$4 million on average annually.

30. It is clear that the adoption of the Whole Life method for Meter Installations has successfully reduced asset losses related to meter installs. This approach remains appropriate for future years.

### **PART THREE: CONCLUSION**

31. FEI's proposed depreciation and net salvage rates as recommended by Gannett Fleming are based on a sound and acceptable methodology that is in use by the other major utilities in B.C. and in other jurisdictions. The recommended rates are reasonable and based on

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<sup>27</sup> Exhibit B-2.

the uncontroverted expert evidence of Gannett Fleming. While information requests probed the basis for various recommendations, there were no issues raised with Gannett Fleming's expertise, the depreciation method used, or the reasoning and analysis employed. FEI submits that based on the evidence in this proceeding, the updated depreciation and net salvage rates proposed by FEI are just and reasonable and should be approved as filed.

ALL OF WHICH IS RESPECTFULLY SUBMITTED.

Dated: May 27, 2016

***[original signed by Christopher Bystrom]***  
Christopher Bystrom  
Counsel for FortisBC Energy Inc.