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May 4, 2016

British Columbia Public Interest Advocacy Centre  
Suite 208 – 1090 West Pender Street  
Vancouver, B.C.  
V6E 2N7

Attention: Ms. Tannis Braithwaite, Executive Director

Dear Ms. Braithwaite:

**Re: FortisBC Energy Inc. (FEI)**

**Project No. 3698871**

**Proposal for Depreciation and Net Salvage Rate Changes (the Application)**

**Response to the British Columbia Public Interest Advocacy Centre representing the British Columbia Old Age Pensioners' Organization, Active Support Against Poverty, Disability Alliance BC, Council of Senior Citizens' Organizations of BC, and the Tenant Resource and Advisory Centre *et al.* (BCOAPO) Information Request (IR) No. 1**

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On February 29, 2016, FEI filed the Application referenced above. In accordance with Commission Order G-41-16 setting out the Regulatory Timetable for the review of the Application, FEI respectfully submits the attached response to BCOAPO IR No. 1.

If further information is required, please contact the undersigned.

Sincerely,

**FORTISBC ENERGY INC.**

***Original signed:***

Diane Roy

Attachments

Cc (email only): Commission Secretary  
Registered Parties



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1   **1.0   Reference:   Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 3 of 18**

2   **Preamble:**   On page 4 of 18 (PDF page 6 of 76) GF states:

3   The depreciation analyst, through analysis of historical actual retirement records  
4   (assuming a significant and accurate quantum of historical records are available), is able  
5   to ascertain the expected statistical service life of each asset in a fixed asset account.  
6   **Thus a depreciation analyst has a high degree of confidence that the statistical**  
7   **dispersion will accurately estimate the actual retirement of the fixed asset**  
8   **account.** Based on the analysis, a depreciation analyst is able to determine that, for  
9   example, for all vehicles capitalized in Year 1 approximately 1% of those vehicles will be  
10   estimated to retire in that same year. These vehicles would typically retire from collisions  
11   or catastrophic events resulting in a very short service life. Similarly, determinations of  
12   vehicle retirements at each successive year can be statistically determined until the  
13   complete retirement of all vehicles comprising the original capitalization in year 1. The  
14   last vehicle retired, say in year 20, would typically retire due to age resulting in a very  
15   long service life. (Emphasis Added)

16   *BCOAPO et al.* requires information to assess how GF can state it has a high degree of  
17   confidence.

18   1.1   Please fully discuss and describe all statistical analyses and tests of statistical  
19   significance that is done by GF for each of the accounts in the Net Salvage  
20   analysis that supports the assertion that there is a “high degree of confidence  
21   that the statistical dispersion will accurately estimate the actual retirement of the  
22   fixed asset account” and demonstrate that the results are statistically significant.

23  
24   **Response:**

25   The following response has been prepared by Gannett Fleming.

26   The quoted section from page 3 (not page 4) of Exhibit B-1 was not describing the net salvage  
27   analysis, but rather the determination of the life estimates (the section heading is Historical Life  
28   Analysis).

29   A depreciation study requires selection of two separate and distinct parameters, a life parameter  
30   (i.e., an Iowa Curve selection and an average service life selection which combined reflects a  
31   life parameter) and a net salvage parameter (i.e., gross salvage, which reflects funds into the  
32   company, and cost of retirement, which reflects funds out of the company, which combined  
33   reflects a net salvage parameter). The quote in the preamble relates to the determination of the  
34   life parameter. However, the actual question references the “Net Salvage analysis”. In  
35   providing this response, Gannett Fleming has assumed that the question is actually referring to  
36   the life parameter determination and has responded to that question below.



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1 As detailed in the preamble, a depreciation analyst analyses all historical actual retirement  
2 records which include the original cost, the original capitalization year (i.e., vintage year), and  
3 the retirement year (i.e., transaction year). With a vintage year and a transaction year, an actual  
4 realized service life for each retirement can be ascertained. At each applicable retirement age,  
5 the depreciation analyst is able to determine the aged original investment (i.e., exposures)  
6 applicable to the aged retirement. A retirement ratio is then calculated (i.e., aged retirement /  
7 applicable exposures), from which a survival ratio can then be calculated (i.e., 1 – retirement  
8 ratio). Assuming a significant and accurate quantum of historical records is available, a detailed  
9 historical record of actual realized life for each aged historical retirement is ascertained.  
10 Standardized lowa curves (please refer to BCUC IR 1.5.2) can then be statistically fit through a  
11 Residual Measure mechanism. This Residual Measure is based on a least squares solution of  
12 the differences between the stub curve (or original data points) and smooth survivor curve which  
13 also requires a balancing of the differences above and below the stub curve. A visual analysis  
14 is also then performed to ensure an accurate fit of the lowa Curve and average service life to  
15 the stub curve or observed data points.

16 The final step is a confirmation from the company's operational and engineering groups that the  
17 recommended life parameters are indicative of the future expectations for the equipment in the  
18 account under analysis.

19 The combination of these two steps ensures that the depreciation analyst has a high degree of  
20 confidence that the statistical dispersion will accurately estimate the actual retirement of the  
21 fixed asset account.

22  
23

24  
25 1.2 In the response to 1.1, above, please include the supporting data and the results  
26 of the statistical analysis and tests of statistical significance that was done by GF  
27 for each of the accounts in the Net Salvage study.

28  
29 **Response:**

30 The following response has been prepared by Gannett Fleming.

31 Please refer to Section V of the Depreciation Study (Exhibit A2-2).

32



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1   **2.0   Reference:   Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 5 of 18**

2           2.1   GF discusses the ASL methodology compared to the ELG Methodology. Please  
3           fully explain which methodology is used by FEI in determining depreciation  
4           expense for each of the accounts in the Net Salvage Study.

5  
6   **Response:**

7   The following response has been prepared by Gannett Fleming.

8   As stated in the Deprecation Study (Exhibit A2-2) at page vi: “The depreciation rates are based  
9   on the straight line method using the average service life (“ASL”) procedure and were applied  
10   on a remaining life basis.” This statement applies to all of the accounts that have net salvage  
11   recommendations.

12  
13

14  
15           2.2   Please confirm that GF believes that the ELG method is superior to the ASL  
16           method. If not confirmed, please fully explain.

17  
18   **Response:**

19   The following response has been prepared by Gannett Fleming.

20   Confirmed.

21



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1   **3.0   Reference:   Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 5 of 18**

2           3.1   GF discusses Under Recovery (Loss) / Over Recovery (Gain). Please confirm  
3           that if the average service life is correct, over time any under recoveries in the  
4           early years will be offset by over recoveries in the later years. If not confirmed,  
5           please fully explain.

6  
7    **Response:**

8    The following response has been prepared by Gannett Fleming.

9    Confirmed. However, as stated on page 8 of Exhibit B-1, it should be recognized that the  
10   continual addition of assets will result in “losses” continuing to outpace “gains”. In particular, due  
11   to the impacts of inflation on new capital investment, the under recovery of depreciation on  
12   short-lived assets will defer the ability of the utility to recognize a gain.

13  
14

15  
16           3.2   If the response to 3.1, above is not confirmed, please fully explain how the  
17           average service lives could be correct.

18  
19   **Response:**

20   The response to BCOAPO IR 1.3.1 was confirmed.

21



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1 **4.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 6 and 7**  
2 **of 18**

3 4.1 In the first bullet in response to Question 1 (a), GF mentions information provided  
4 by FEI. Please provide all information, directions, memos, or any other  
5 communication provided to GF from FEI.  
6

7 **Response:**

8 The referenced first bullet in response to Question 1 (a) states that "FEI provided Gannett  
9 Fleming with updated historical aged retirements from 2010 to 2014 which provided a complete  
10 aged retirement history for this asset class from the first retirement in 1963 to 2014, for a total of  
11 almost \$46M in assets."

12 This is true for the specific asset account 475 and also for the Depreciation Study more  
13 generally; that FEI provided Gannett Fleming with all asset record data for the period 2010 to  
14 2014. This information is already reflected in the Depreciation Study (Exhibit A2-2) and can be  
15 found in the schedules within the study.

16  
17

18  
19 4.2 At the top of page 7, FEI refers to statistical analysis. Please provide all working  
20 papers, and supporting documents, of the statistical analysis.  
21

22 **Response:**

23 The following response has been prepared by Gannett Fleming.

24 Please refer to Section V of the filed Depreciation Study (Exhibit A2-2) for the statistical analysis  
25 for all accounts. Specifically with respect to account 475 which was being discussed at the top  
26 of page 7 of Exhibit B-1, please refer to page V-37 through V-39 of Exhibit A2-2.

27  
28

29  
30 4.3 In the second complete bullet on page 7, GF mentions discussions with FEI  
31 operating and engineering staff. Please provide copies of all interview notes,  
32 meeting notes, meeting minutes, meeting agendas, questionnaires, or any other  
33 documentation of the meetings discussed.  
34



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1 **Response:**

2 The following response has been prepared by Gannett Fleming.

3 Meetings regarding account 475 included a discussion of Gannett Fleming's recommendations  
4 and confirmation from FEI personnel of the facts noted in the referenced paragraph. The results  
5 of the meeting are reported in the Depreciation Study and the minutes of the meeting regarding  
6 Distribution Mains (account 475) are provided in Attachment 4.3.

7



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1   **5.0   Reference:   Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 8 of 18**

2           5.1    In the third paragraph, GF states that the majority of retirements have occurred  
3                   prior to the average service life of 64 years.   Please provide all supporting  
4                   analysis in support of the GF assertions.

5  
6    **Response:**

7    The following response has been prepared by Gannett Fleming.

8    Please refer to page V-38 and V-39 of Exhibit A2-2.   Retirements are indicated at each age from  
9    age 0 to age 74.5.   Retirements up to age 63.5 total \$45.9M with a total actual retirement of  
10   \$46M indicating 99.7% of the total actual retirement activity has occurred prior to the average  
11   service life of 64 years.

12





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1 **6.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 13 of**  
2 **18**

3 6.1 In response to Question 3 (b), in the first paragraph on page 13, GF states that  
4 the assets are young on average. Please provide all detailed working papers in  
5 support of the assertions.  
6

7 **Response:**

8 The following response has been prepared by Gannett Fleming.

9 Question 3 (b) was related to two accounts - 467.10 Measuring and Regulating Additions –  
10 Transmission Plant and 477.10 Measuring and Regulating Additions – Distribution Plant.

11 Please refer to page V-23 and V-24 of Exhibit A2-2 for the service life statistic tables for account  
12 467.10, which has a 36 year service life recommendation. For this account, retirements are  
13 indicated from age 0 to age 42.5. Retirements up to age 35.5 total \$6.838M and the total actual  
14 retirement to the end of 2014 is \$6.859M, indicating that 99.7% of the total actual retirement  
15 activity has occurred prior to the average service life of 36 years.

16 Please refer to page V-41 and V-42 of Exhibit A2-2 for the service life statistic tables for account  
17 477.10 which has a 30 year service life recommendation. For this account, retirements are  
18 indicated from age 0 to age 50.5. Retirements up to age 29.5 total \$14.900M and the total  
19 actual retirement to the end of 2014 is \$15.837M, indicating that 94.1% of the total actual  
20 retirement activity has occurred prior to the average service life of 30 years.

21  
22

23  
24 6.2 In the third paragraph, GF indicates that losses will be larger than gains due to  
25 inflation. Please fully explain why the reverse is not true, that inflation would  
26 make later retirements more cost effective.  
27

28 **Response:**

29 The following response has been prepared by Gannett Fleming.

30 Gannett Fleming does not understand how “inflation would make later retirements more cost  
31 effective”. The paragraph referenced on page 13 of Exhibit B-1 refers to how the magnitude of  
32 gains on assets that survive beyond the average service life will be smaller than the losses on  
33 similar assets that retire before the average service life, because the original cost base of older  
34 assets is smaller than for newer assets due to inflation. In other words, due to inflation the same  
35 types of assets cost more today than they did, say, in the 1950s, such that gains or losses on an  
36 asset added in the 1950s will be much smaller than gains or losses on a similar asset added



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- 1 today. The referenced paragraph does not refer to the incremental cost of retiring assets, which
- 2 may be what is being referred to in the question.
- 3



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1 **7.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 13 of**  
2 **18**

3 **Preamble:** GF does not appear to respond to Question 5, but rather provides a  
4 response from the 2012-2013 RRA.

5 7.1 Please provide a chart similar to the charts on page 16 of 18 (PDF 19 of 73) for  
6 each of the accounts in the net salvage study. In the response, please provide  
7 the supporting data, underlying calculations, and underlying assumptions.

8  
9 **Response:**

10 The following response has been prepared by Gannett Fleming.

11 There are 33 accounts for which Gannett Fleming is recommending net salvage rates. To  
12 provide the requested information for each of these accounts would require a significant amount  
13 of time and effort and would provide no additional benefit. Please refer to the response to  
14 Question #4 in Exhibit B-1, Gannett Fleming Additional Evidence. The original chart reference  
15 was provided to show an example of the expected effect that would be applicable to all  
16 accounts. As stated, “(t)he response provided to BCUC IR 2.74.13 was in relation to Account  
17 475 but is indicative of all the accounts.” Each account would show the same effect, i.e., that  
18 losses prior to the average service are offset by gains after the average service life for every  
19 account.

20

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1 **8.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Page 17 of**  
 2 **18**

3 8.1 In response to Question 5, GF discusses the difference between the ASL and  
 4 ELG methods. Please provide the service lives, depreciation rates, and net  
 5 salvage rate for each account in the net salvage study, for each of the ELG  
 6 method, and the ASL method, along with the supporting calculations and  
 7 assumptions.  
 8

9 **Response:**

10 The following response has been prepared by Gannett Fleming.

11 The depreciation parameters of life and net salvage remain unchanged whether using an ELG  
 12 procedure or an ASL procedure and can therefore be found in Exhibit A2-2. The depreciation  
 13 rates and net salvage rates under the ASL method have been provided in Exhibit A2-1 Tables  
 14 12-2 and 12-3. The depreciation rates and net salvage rates under the ELG method have been  
 15 prepared on a preliminary basis only to respond to this question and also to respond to BCUC  
 16 IR 1.2.3.21 and are provided in the table below.

ACCOUNT	ACCOUNT DESCRIPTION	Life ELG *	Net Salvage ELG *
<b>INTANGIBLE PLANT</b>			
401.01	Franchises and Consents	3.01	0.00
402.01	Computer Software Application 8 years	12.50	0.00
402.02	Computer Software Application 5 years	20.00	0.00
402.03	Intangible Plant	2.08	0.00
402.11	Intangible Plant	2.50	0.00
<b>TOTAL INTANGIBLE PLANT</b>			
<b>MANUFACTURING PLANT</b>			
432.00	Mfg. Gas Structures	2.70	0.00
433.00	Mfg. Gas Equipment	4.88	0.00
434.00	Mfg. Gas Holders	2.47	0.00
436.00	Mfg. Gas Compressor Equipment	3.87	0.00
437.00	Mfg. Gas Meas. & Reg. Equipment	3.21	0.00
<b>TOTAL MANUFACTURING PLANT</b>			



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**LNG PLANT**

442.00 LNG Plant - Structures	3.89	0.43
442.01 LNG Plant - Structures Mt. Hayes	4.47	0.51
443.00 LNG Plant - Equipment	2.20	0.52
443.05 LNG Plant - Equipment Mt. Hayes	1.68	0.36
448.10 LNG Plant - Piping	2.85	0.31
448.20 LNG Plant - Pre-treatment	4.47	0.51
448.30 LNG Plant - Liquefaction Equipment	2.85	0.62
448.40 LNG Plant - Send Out Equipment	3.22	0.35
448.50 LNG Plant - Sub-Station and Electrical	3.22	0.69
448.60 LNG Plant - Control Room	7.22	0.00
449.00 LNG Plant - Other Equipment	4.06	0.41
449.01 LNG Plant - Other Equipment Mt. Hayes	3.37	0.34
465.30 Mt. Hayes - Mains	1.51	0.32
467.00 Mt. Hayes - Meas. & Reg. Equipment	3.65	0.29

**TOTAL LNG PLANT**

**TRANSMISSION PLANT**

462.00 Trans. Plant - Compressor Structures	3.67	0.03
463.00 Trans. Plant - Meas. & Reg. Structures	2.72	0.60
464.00 Trans. Plant - Other Structures	3.86	0.22
465.00 Trans. Plant - Trans. Pipeline	1.68	0.40
465.11 Intermediate Pipe - Whistler	1.77	0.38
466.00 Trans. Plant - Compressor Equipment	3.08	-0.08
467.10 Trans. Plant - Meas. & Reg. Equipment	3.08	0.26
467.20 Trans. Plant - Telemetry Equipment	12.58	0.00
467.31 Intermed. Pressure - Meas. & Reg. Equipment - Whis	3.51	0.29
468.00 Trans. Plant - Communications Equipment	1.33	0.00

**TOTAL TRANSMISSION PLANT**

**DISTRIBUTION PLANT**

472.00 Dist. Systems - Structures	3.20	0.38
473.00 Dist. Systems - Services	3.12	1.98
474.00 Dist. Systems - Meters/Reg. Installations	6.71	1.76
474.02 New Meter Installations	4.55	0.00
475.00 Dist. Systems - Mains	1.80	0.49
476.00 Dist. Systems - NGV Fuel Equipment	-9.30	0.00
477.10 Dist. Systems - Meas. & Reg. Additions	3.72	0.49
477.20 Dist. Systems - Telemetry	5.27	0.54
477.30 Dist. Systems - Meas. & Reg. Equipment	-9.48	0.00
478.10 Dist. Systems - Meters	6.62	0.00
478.20 Dist. Systems - Instruments	3.04	0.00

**TOTAL DISTRIBUTION PLANT**



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**BIO GAS**

472.20 Bio Gas - Strct. & Improvements	4.54	0.46
474.10 Bio Gas Reg & Mtr Installations	8.20	2.08
475.10 Bio Gas Mains - Land	2.06	0.51
477.40 Bio Gas Meas & Reg	4.61	0.00
478.30 Bio Gas Meters	6.18	0.00
418.10 Bio Gas Purification Overhaul	5.00	0.00
418.20 Bio Gas Purification Upgrader	4.90	0.25
418.30 Bio Gas - Strct. & Improvements - Special Facilities	N/A **	N/A **
418.40 Bio Gas Reg & Mtr Installations - Special Facilities	N/A **	N/A **
418.50 Bio Gas Mains - Land - Special Facilities	N/A **	N/A **
418.60 Bio Gas Meas & Reg - Special Facilities	N/A **	N/A **
418.70 Bio Gas Meters - Special Facilities	N/A **	N/A **

**TOTAL BIO GAS**

**NG FOR TRANSPORTATION**

476.10 NG Transp - CNG Disp E	4.82	0.00
476.20 NG Transp - LNG Disp E	4.79	0.00
476.30 NG Transp - CNG Found	4.90	0.00
476.40 NG Transp - LNG Found	4.73	0.00
476.50 NG Transp - LNG Pumps	8.98	0.00
476.60 NG Transp - CNG Dehydr	4.95	0.00

**TOTAL NG FOR TRANSPORTATION**

**GENERAL PLANT**

482.10 General Plant - Structures (Frame)	6.05	0.00
482.20 General Plant - Structures (Masonry)	2.34	0.28
483.10 Computer Hardware	20.00	0.00
483.20 Computer Software 12.5%	12.50	0.00
483.30 Office Furniture and Equipment	6.67	0.00
483.40 Furniture	5.00	0.00
484.00 Vehicles	16.55	-1.14
485.10 Heavy Work Equipment	9.10	-0.72
485.20 Heavy Mobile Equipment	13.07	-2.91
486.00 Small Tools/Equipment	5.00	0.00
487.20 NGV Cylinders	6.67	0.00
488.10 Telephone Equipment	6.67	0.00
488.20 Radio Equipment	6.67	0.00

**TOTAL GENERAL PLANT**

Notes:

\* Rates under the ELG procedure are preliminary rates

\*\* Asset classes not assessed under the ELG procedure. ASL Rates based on current vintage theoretical values.



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1           8.2    Please provide an analysis of the impact on revenue requirement of adopting the  
2                    ELG method compared to the ASL method for each account.

3  
4    **Response:**

5    Please refer to the response to BCUC IR 1.2.3.1.

6



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1 **9.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Attachment**  
2 **1, Service Life Statistics.**

3 9.1 Please provide the proposed survivor curves for each of the accounts in the net  
4 salvage study, along with a plot of the actual historic retirements.

5  
6 **Response:**

7 The following response has been prepared by Gannett Fleming.

8 Please refer to Section V of the Depreciation Study (Exhibit A2-2) for the survivor curves used in  
9 support of the depreciation life parameters. The survivor curves are not used in net salvage  
10 analysis.

11 Please also refer to the response to BCOAPO IR 1.1.1.

12





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1 **10.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Attachment**  
2 **2, Group Accounting.**

3 10.1 Starting on PDF page 35 of 73, GF discusses the nature of retirements,  
4 including, third party strikes, and forces of nature including storms and soil  
5 erosion, and other. Please provide an analysis of all retirements in the study  
6 splitting the number of retirements and cost of retirements for each year and  
7 each account by each of the causes listed by GF.  
8

9 **Response:**

10 The requested analysis is often referred to as a "Cause of Retirement Study". Provided that the  
11 information is available, a Cause of Retirement Study would take a significant amount of time  
12 and effort and could not be completed within the time allotted for responding to IRs in this  
13 proceeding. Using account 473-00 - Distribution Services as an example, a Cause of  
14 Retirement Study would involve researching each individual asset retirement in each year from  
15 1963 to 2014. This would then be replicated for each of the 68 asset accounts studied. Since  
16 FEI does not track the causes of plant retirements in its SAP system, FEI is not able to provide  
17 such information.

18  
19

20  
21 10.2 For the analysis provided in response to 10.1 above, please also provide the age  
22 of the asset retired for each cause.  
23

24 **Response:**

25 Please refer to the response to BCOAPO IR 1.10.1.  
26



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1 **11.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Attachment**  
2 **3, Accumulated Depreciation Reserve True-up Process.**

3 11.1 Please fully explain how this evidence relates to the determination of net salvage.  
4

5 **Response:**

6 The following response has been prepared by Gannett Fleming.

7 The true-up process does not relate to the determination of net salvage parameters. Question  
8 #5 in the request for Additional Evidence asked for a comparison of FEI's depreciation rates to  
9 other large Canadian gas utilities. The true-up process is a major determinate in depreciation  
10 rate differences even when utility assets share the same life, and was provided to provide  
11 details on the relevance of the true-up process and its mechanics.

12  
13

14  
15 11.2 Please provide the actual reserve true up analysis, and related charts and  
16 working papers for each account included in this update.  
17

18 **Response:**

19 The following response has been prepared by Gannett Fleming.

20 Please refer to Section VII of Exhibit A2-2.

21



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1 **12.0 Reference: Exhibit B-1, Gannett Fleming (GF) Additional Evidence, Attachment**  
2 **4, Peer IOWA Curves.**

3 12.1 For each of the comparators, please indicate which are GF clients and which are  
4 not.

5  
6 **Response:**

7 The following response has been prepared by Gannett Fleming.

8 All the comparators are Gannett Fleming clients.

9  
10

11  
12 12.2 If all comparators are GF clients, please fully explain why no other comparators  
13 were used.

14  
15 **Response:**

16 The following response has been prepared by Gannett Fleming.

17 Knowledge of each company's operating environment, operating, capitalization, retirement, and  
18 accounting policies is imperative for proper comparison analysis as each can contribute to  
19 significant differences in the depreciation parameters. Without this detailed knowledge, proper  
20 comparisons cannot be done.

21 Further, there are only two utilities that are usually included in FEI's comparator group that are  
22 not included on the list - Union Gas and Gaz Metro. Union Gas is not a client of Gannett  
23 Fleming. While Gaz Metro is a client of Gannett Fleming, it was excluded from the comparison  
24 because of significant differences in accounting policies affecting the comparability of the data.

25  
26

27  
28 12.3 Please provide an updated table on PDF 73, including the FEI net salvage rates  
29 prior to any changes or updates.

30  
31 **Response:**

32 The requested table is provided below, showing the original table and also including a column  
33 for FEI's approved 2009 net salvage rates.

34



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**FORTISBC ENERGY - PEER NET SALVAGE PERCENTAGE ANALYSIS**

ACCOUNT	ATCO GAS 2009	CENTRA GAS MANITOBA 2010	ENBRIDGE GAS DISTRIBUTION 2010	ALTAGAS 2012	SASK ENERGY 2005	ATCO PIPELINES 2011	FEI 2009	FEI 2014
Transmission Plant								
462.00 Trans. Plant - Compressor Structures						-5%	-5%	-3%
463.00 Trans. Plant - Meas. & Reg. Structures		0%		0%		-15%	-5%	-15%
464.00 Trans. Plant - Other Structures		0%				-20%	-5%	-5%
465.00 Trans. Plant - Trans. Pipeline		0%		-10%		-50%	-10%	-20%
466.00 Trans. Plant - Compressor Equipment						-5%	-10%	-2%
467.10 Trans. Plant - Meas. & Reg. Equipment		0%		-35%		-20%	-5%	-7%
467.30 Trans. Plant - Meas. & Reg. Equipment								-7%
Distribution Plant								
472.00 Dist. Systems - Structures	-40%	0%	20%	0%	-5%		-5%	-10%
473.00 Dist. Systems - Services	-100%	0%	-45%	-30%	-50%		-50%	-60%
474.00 Dist. Systems - Meters/Reg. Installations	-30%	0%		0%	0%		-10%	-20%
474.02 New Meter Installations	-20%							0%
475.00 Dist. Systems - Mains	-60%	0%	-85%/-90%	-10%	-10%		-20%	-25%
476.00 Dist. Systems - NGV Fuel Equipment							-20%	0%
477.10 Dist. Systems - Meas. & Reg. Additions	-40%	0%	0%		-5%		0%	-10%
477.20 Dist. Systems - Telemetry							0%	-5%
477.30 Dist. Systems - Meas. & Reg. Equipment							-5%	0%
478.10 Dist. Systems - Meters	0%	0%	5%	0%	0%		-5%	0%
478.20 Dist. Systems - Instruments								0%
General Plant								
482.10 General Plant - Structures (Frame)								0%
482.20 General Plant - Structures (Masonry)	0%	0%		0%	0%	-5%		-10%
483.10 Computer Hardware				0%				0%
483.20 Computer Software 12.5%								0%
483.30 Office Furniture and Equipment	0%	0%	0%	0%	0%			0%
483.40 Furniture			0%					0%
484.00 Vehicles	10%	10%	0%	25%	20%	15%	20%	4%
485.10 Heavy Work Equipment	25%	20%	25%	25%	20%	15%		5%
485.20 Heavy Mobile Equipment							10%	15%
486.00 Small Tools/Equipment	0%	0%	0%	0%	0%			0%
487.20 NGV Cylinders								0%
488.10 Telephone Equipment								0%
488.20 Radio Equipment	0%		0%	0%		0%		0%



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1           12.4    Please confirm that, for each of the comparators, there is no more recent data. If  
2                   not confirmed, please fully explain.

3  
4    **Response:**

5    The following response has been prepared by Gannett Fleming.

6    Confirmed.

7  
8

9  
10           12.5    Please fully explain why each of the comparators was chosen, including the  
11                   criteria for selection.

12  
13   **Response:**

14   The following response has been prepared by Gannett Fleming.

15   Gannett Fleming selected only peer gas utilities for which Gannett Fleming had recently  
16   completed depreciation studies. Gannett Fleming understands each company's accounting  
17   policies, accounting systems and data retrieval processes, management and operational  
18   procedures, and the magnitude of large historic retirement events, etc. Gannett Fleming was  
19   able to use this knowledge to consider which utility accounts are comparable to FEI.

20  
21

22  
23           12.6    Please provide a list of all Gas Transmission and Distribution utilities in Canada,  
24                   along with an explanation of why the utilities not in the exhibit were excluded  
25                   from the list of comparators.

26  
27   **Response:**

28   Please refer to the response to BCOAPO IR 1.12.2.

29

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1 **13.0 Reference: FEI Accounting Policy.**

2 13.1 Please fully explain how FEI differentiates the cost of retirement and removal of  
3 an asset from the construction cost of the replacement of a new asset. In the  
4 response, please provide a detailed discussion of the criteria, allocations, and  
5 assumptions used in making the determination.  
6

7 **Response:**

8 FEI considers the costs associated with retiring an asset as those incurred to remove or  
9 dismantle the asset. This is different than the costs associated with the acquisition and  
10 construction of a new asset.

11 Retirement activities and costs include those required to dispose of and remove the existing  
12 asset from the construction site. This includes expenditures for labour, material, contract  
13 services required to demolish, dismantle, tear down or otherwise remove the plant from service.  
14 Additionally, it includes the activities and costs to make the retired asset and equipment safe  
15 and to comply with any regulations (i.e., environment, municipal) if the asset is left in the  
16 ground. For example, for a mains replacement job, this involves sealing the ends of mains and  
17 segmenting a longer length of main into shorter segments.

18 To differentiate between the retirement and new construction costs, separate accounts and  
19 internal/service orders are used. One account and internal/service order is used for the costs  
20 associated with the retirement activities, while another separate account and internal/service  
21 order is used for the costs associated with the new asset.

22  
23

24

25 13.2 Please fully explain if or how FEI differentiates between the historic cost of labour  
26 to install assets from the cost of the assets themselves in its accounting records,  
27 and in the retirement study.  
28

29 **Response:**

30 FEI does not differentiate between the historic cost of labour to install assets from the cost of  
31 the assets themselves in its accounting records, and in the retirement study, as those costs  
32 together represent the total capital cost of installing that asset, and it is the total capital costs  
33 that is considered in the depreciation study.

34  
35

36



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1           13.3 Please fully explain if any asset or equipment is refurbished and reused. If any  
2 is, please fully explain how GF takes such reuse into account in the preparation  
3 of its studies.

4  
5 **Response:**

6 FEI's capitalization policy indicates that when an asset is refurbished and reused, and provided  
7 that the costs of refurbishment exceed 50 percent of the replacement cost of the new plant, the  
8 costs are capitalized as a new capital addition, with the costs of the addition being assigned an  
9 install year equal to the year of the addition. A partial retirement is recorded for the asset that  
10 was replaced or removed during the upgrade.

11 An example of such refurbishment activity is renewal work at a Gate/ District Station. The  
12 amount of work at a station depends on the nature of the deficiencies or concerns identified.  
13 Most often, deficiencies are addressed by the refurbishment of the station rather than complete  
14 replacement (i.e., FEI will replace components of the station but not the entire station). The new  
15 components will be recorded as new capital additions and the removed components will be  
16 retired. This is how the refurbishment is reflected in the data provided to Gannett Fleming and  
17 used in the depreciation study. Gannett Fleming advises that this procedure is commonly used  
18 by utilities throughout Canada, and has no or only minimal impact on the average service life  
19 characteristics.

20  
21

22  
23           13.4 Please fully explain how GF uses the FEI policy in determining the cost of  
24 retirement in comparison to the policy of other utilities used in Exhibit B-1,  
25 Gannett Fleming (GF) Additional Evidence, Attachment 4, Peer IOWA Curves.

26  
27 **Response:**

28 The following response has been prepared by Gannett Fleming.

29 The actual cost of retirement is provided to Gannett Fleming as part of the initial data assembly.  
30 Gannett Fleming develops the costs of retirement as a percentage of the dollars retired and  
31 compares this result to the costs of retirement percentages as experienced by other peer  
32 utilities. As Gannett Fleming makes this comparison to a peer group for which Gannett Fleming  
33 has recently completed depreciation studies, Gannett Fleming has the background related to  
34 the cost of removal policies and practices of both FEI and the group to which the FEI results are  
35 being compared to.

36



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1 **14.0 Reference: PBR incentives.**

2 14.1 From FEI's perspectives, please fully explain any and all impacts of changes in  
3 depreciation rates and negative salvage rates will have on the Incentive  
4 properties of a PBR framework.

5  
6 **Response:**

7 Since depreciation and net salvage rates are flowed through to customers outside of the PBR  
8 formula, changes to the depreciation and net salvage rates have no impact on the incentive  
9 properties of FEI's PBR Plan.

10



**Attachment 4.3**

---

FortisBC - Energy

Operational Interview Summary

Distribution Plant Mains & Services

March 9, 2015

Interviewed: Gary Johnson, Lee Robson

**Purpose of Interview**

The average service lives and net salvage estimates for Distribution Plant Mains and Services assets are directly dependent upon the accounting and reuse policies of the utility and regulatory jurisdiction. Additionally, the company practices with regard to reuse and future plans for deployment can have a significant impact on the life and net salvage estimates. As such, interviews are required to determine the reasonableness of using historic retirement and salvage indications for the estimation of the future retirement and salvage patterns.

**Background of Mr. Johnson**

- Position: Asset and Improvement Manager
- 9 year(s) in current position
- 35 years with company. Has been in distribution and transmission operations, engineering, governance and asset management.

**Background of Mr. Robson**

- Position: Sustainment Planning Manager
- 3 year(s) in current position
- 15 years with company (3 years in Asset Management (current area) and 2 years in IT (CCE Project), 7 years in Forecasting (Marketing Dept), 3 years in Compensation (HR Dept)

**Mains:**

- Under 300 PSI on Mainland, 450 PSI on Vancouver Island
- ¾" to 30" Diameter.
- Distinction between Transmission and Distribution is the related pressure.
- All distribution mains are approximately 50% steel composition (no bare steel) and 50% plastic (i.e. PE).

- Plastic
  - No ABS or PVC
  - No issues with plastic mains.
  - Majority of past retirements due to third party requirements.
  - Capacity issues are solved by supplemental installation rather than retirement activity.
- Steel
  - Steel replacements are usually replaced with plastic or insertion
  - Age is not an issue on retirements, usually more related to increased risk.
- General agreement that distribution mains are equal to transmission mains. Steel distribution may be like steel transmission in terms of degradation over time. Steel distribution has a lot more construction and third party damage.
- Large 1990 retirement due to purchase of lower mainland at NBV.
  - 1990 vintage was re-allocated to older vintages based on existing investment composition.
- General agreement on a 65 year average service life as a reasonable expectation.

#### **Services:**

- General agreement that Services Life < Mains Life.
- ¾" to 30" Diameter.

#### **Net Salvage**

- COR is generally considered incremental costs to installation activity.
- Large COR activity in Mains vintages 2012 and 2014 as a result of normal business activity and timing of completing the abandonment.
- General agreement that historical indications are indicative of the future.
- General agreement on a -25% Mains and -100% Services net salvage as reasonable expectations.