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VIA EFILING

April 20, 2016

FORTISBC ENERGY PROPOSAL FOR DEPRECIATION & NET SALVAGE RATE CHANGES EXHIBIT A2-6

Ms. Diane Roy
Director, Regulatory Affairs
FortisBC Energy Inc.
16705 Fraser Highway
Surrey, BC V4N 0E8

Dear Ms. Roy:

Re: FortisBC Energy Inc.
Proposal for Depreciation and Net Salvage Rate Changes Application

Commission staff submit the following document for the record in this proceeding: Appendix E-3 "Asset Loss Report" filed in Exhibit B-1 in the FortisBC Energy Utilities 2012-2013 Revenue Requirements and Rates proceeding.

Yours truly,

Original signed by:

Laurel Ross

SW/dg
Enclosure

Appendix E-3
ASSET LOSS REPORT

1 ANALYSIS OF ASSET RETIREMENT LOSSES

1.1 Introduction

As part of the 2010 Depreciation Study update requested by the BCUC in its decision on FortisBC Energy Inc.'s ("FEI") 2009 RRA, FEI undertook a project to analyze and support the accumulated losses recorded to date. At the end of 2009, the total asset retirement loss balance stood at approximately $149 million with the asset categories, Mains, Services, Regulator and Meter Installation, and Meters accounting for the majority of the losses.

The purpose of this report is to provide:

- An overview of the asset retirement and accounting processes at FEI and how the processes led to the financial gains/losses recorded; and
- Explanations and reasons for the losses recorded for each of the asset categories noted.

1.2 Overview of Asset Retirement Process at FEI

Upon retirement of a fixed asset, the Plant Accounting department is notified. For retirement of recurring plant (Mains, Meters, Services), the plant units retired are provided by Field Operations. To calculate the retirement values, original costs per plant unit are used. If original costs are not known, estimates are used to retire specific plant. A plant retirement request form capturing the specifics of the plant being retired is completed and submitted to Plant Accounting. Each specific plant is identified in terms of its physical characteristics, function, location, etc.

Upon retirement, the service value (i.e. original cost or estimate) of the retired asset is credited to the appropriate capital account with the associated accumulated depreciation amount debited to the accumulated depreciation account, with the difference (remaining net book value) remaining in a component of accumulated depreciation called "accumulated loss". Retirement costs (i.e. labour to dismantle the asset) and salvage proceeds (i.e. scrap value) are allocated also to the accumulated loss component of the accumulated depreciation account.

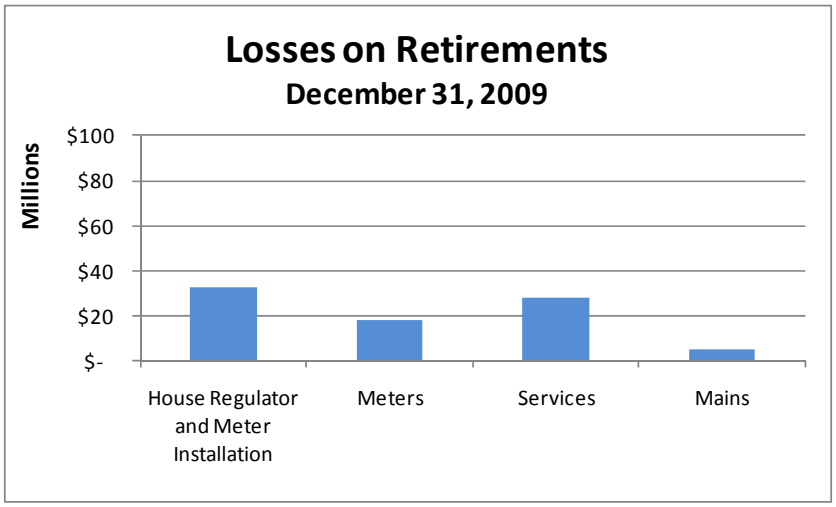
The treatment of both the removal costs and the remaining net book value of plant on retirement as a component of Accumulated Depreciation is an accepted regulatory accounting practice in accordance with the BCUC Uniform System of Accounts

1.3 Losses by Asset Category

Four asset categories totalling to $138 million account for over 90% of $149 million of the losses recorded to the end of 2009. The $138 million figure includes $54.1 million of removal costs less salvage proceeds. Excluding the removal costs less salvage proceeds, the "unrecovered

losses" total to $84.1 million. This represents approximately 4% of the historical cost balance of $2 billion for these four asset categories. The losses by asset class are shown in Table E3-1 below, followed by an analysis of each class.

Table E3-1: Four Asset Categories Contribute to Accumulated Losses to end of 2009



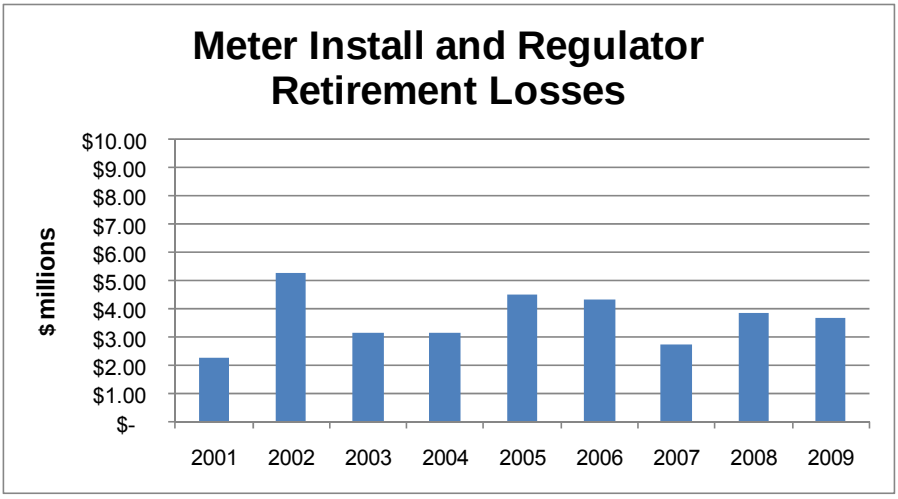
1.3.1 REGULATORS AND METER INSTALLATIONS (ASSET CLASS 474)

This account includes the cost of regulators, and labour and materials used and expenses incurred in the connection with the original installation of regulators and meters for all customer types including residential, commercial and industrial.

At the end of 2009, accumulated losses in this asset class were approximately $32.4 million (excluding removal costs less salvage proceeds of $5.6 million). As a percentage, the $32.4 million accumulated loss represents 22% of the historical cost balance of $148 million.

The following graph shows the losses recorded in this asset category for the years 2001 to 2009. Prior to the year 2001, the gains/losses observed for this asset category were minimal.

Figure E3-1: Losses for Asset Class 474 by Year



Further analysis of the retirement losses suggest that the attributed losses have been amplified as the result of an overstatement of the historic unit costs used for determining the gains/losses on retirements.

Starting in 2001, FEI implemented a process to retire the install labour costs included in this asset category, using the number of meters scrapped and the applicable historical unit costs based on a composite average of the activities being recorded in this account. However, there is a wide disparity in the actual cost for the different types of meter install activities, with a simple residential install costing approximately $60 per install compared to a larger diaphragm meter install for a commercial customer at double or more. For this reason, applying a composite unit cost to determine gains/losses for retirements, particularly a lower cost residential install, has resulted in an overstatement of losses.

Analysis of the losses reported for the recent years 2006 to 2009 show that of the approximately 120,000 meters scrapped during this period, over 90% were for smaller diaphragm meters used for residential customers. Yet, the loss reported on a per meter installed basis ranged from $100 to $150 each, significantly higher than the $60 per meter install stated earlier.

On a retrospective basis, if a revised historic unit cost ranging from $60 to $100 meter install was used for the period 2006 to 2009, the retirement loss recorded for that period would instead range only from $4 to $7 million compared to the actual reported loss of approximately $15 million. Total rate base would remain unchanged as the losses would be reclassified to accumulated depreciation from the asset loss balance.

The preceding analysis suggests that the losses reported of $32 million for the period 2001 to 2009 is likely to be overstated by approximately 50%, reflecting the challenges in coming up with an applicable representative unit cost. This conclusion is corroborated by the $16 million of

losses recorded in the Meter asset category during the same time period. It is reasonable to expect retirement losses in the Meter Install (474) asset category to follow and be similar to that of the Meter (478) category. Currently, for 2001 to 2009, the retirement losses for the Meter Install asset category exceed that of the Meter asset category by approximately double ($32 million vs. $16 million). All else equal, the overstatement effect for this account will likely even out over time as future retirements are recorded using a lower unit cost based on an understated remaining cost pool.

The above analysis highlights the challenges with developing a retirement process for a wide and disparate asset category such as the Meter Install. To address this, Gannett Fleming recommends adopting an approach that records new plant additions for this asset class in a separate account, with depreciation calculated using a whole life rate. The existing meter install costs would remain in the current account and continue depreciating at the current depreciation rate, which includes a factor for recovery of the retirement losses. This recommended approach would simplify the retirement process (i.e. no retirement entries required) while still recording the appropriate level of depreciation expense.

1.3.2 METERS (ASSET CLASS 478)

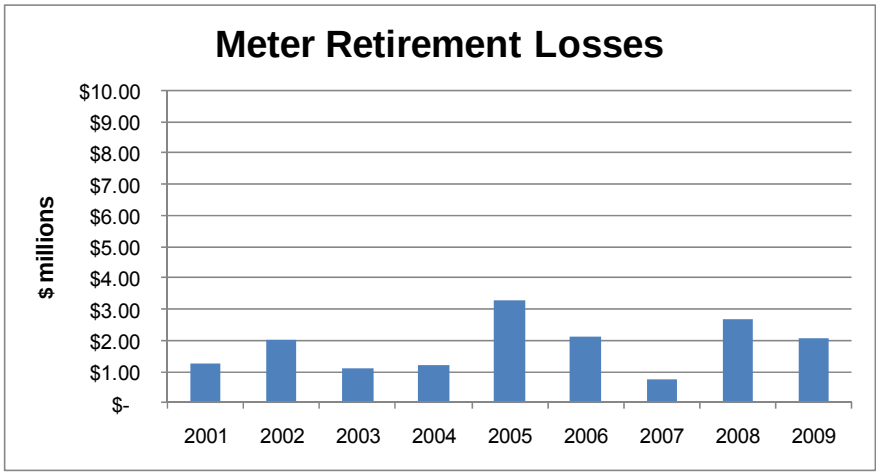
This account includes the cost of meters or devices (including the cost of badging and testing) for use in measuring the quantity of gas delivered to all customer types including residential, commercial and industrial.

Consistent with the industry, FEI currently expects the lives of its residential meter assets to currently last no longer than 15 to 20 years. Commercial and industrial meters, comprising approximately 20 – 25% of the investment in meters however are expected to last beyond 20 years as the larger volume meters are refurbished when they are removed for testing.

At the end of 2009, accumulated losses in this asset class were approximately $18.4 million (excluding removal costs less salvage proceeds of ($2.1) million). As a percentage, the $18.4 million accumulated loss represents approximately 9% of the historical cost balance of $205 million.

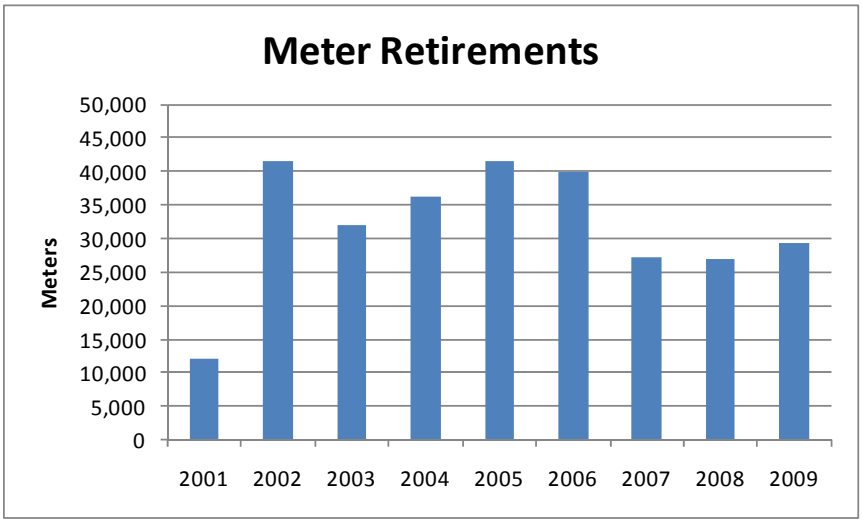
The following graph shows the losses recorded in this asset category for the period 2001 to 2009.

Figure E3-2: Losses for Asset Class 478 by Year



The following graph shows the numbers of meters retired for the years 2001 to 2009.

Figure E3-3: Number of Meters Retired by Year



Meters are retired and scrapped when they have reached the end of their useful lives. After the initial install of meters for new customers, meters subsequently are subject to a meter exchange program where in-service meters are removed and replaced with new or repaired meters to maintain accurate measurement as required by the Electricity and Gas Inspection Act of Canada.

For residential gas meters, upon installation, a seal with an associated expiry date is attached to the meters. A year prior to the expiration of the seal, the meters must be evaluated to ensure the accuracy is within federally regulated tolerances. A representative sample is extracted from pre-determined groups of meters according to Measurement Canada regulations. The sample meters are tested under strictly controlled conditions in certified test facilities with the test data analyzed using government mandated statistical methods. The test results are then used to determine if the meters from the group of which the sample was withdrawn are legally permitted to remain in service. The greater the level of error observed in the sampled meters, the shorter the time period of the seal extension as directed by the Electricity and Gas Inspection Act of Canada. Where test results fail to meet regulated accuracy requirements, the meter group in question will be removed from the field and replaced, at which time a determination is made whether the removed meters will be retired.

Based on the company's meter retirement data, FEI has observed that the average residential meter life has been less than the 25 – 28 years as previously anticipated. The shorter residential meter life is linked to the increased cost to refurbish residential meters relative to the cost to replace these same meters. In the past, FEI's operating model had residential meters being removed from the field after approximately 14 years in service for refurbishment. The meters were then re-installed with the expectation that these meters would again be removed from the field within another 14 years, for a service life totalling 28 years. However, since then, the cost of labour and materials for retrieval and refurbishment continued to rise with the cost to replace with new meters falling. Consequently, over the last decade, the refurbishment of residential meters has been become uneconomical. As a result, to maximize the full value of these meters, these meters have been allowed to remain in the field until such time they are replaced with a new meter. Recent FEI sampling results indicate that on average residential meters approach the maximum allowable error limit at approximately the 20 year mark.

To a lesser extent, another reason for the early retirement of meters is due to inferior residential meters, arising from manufacturing issues. A notable example is the planned removal of batches of meters installed during the late 1990s, with sample testing showing loss of accuracy at much faster rates than expected. FEI expects that these meters will be required to be removed from service in accordance with ongoing meter sample test results to prevent large scale unscheduled failures.

It is expected that the current 20 year life expectancy for residential meters will continue in the foreseeable future. As such, FEI will continue to require that a certain portion of the meter fleet be exchanged every year (i.e. 1 / 20 years or 5% of the meter fleet).

Finally, in 2005, Measurement Canada began the process of rewriting a number of specifications to reflect a change in approach toward regulation of organizations using custody transfer meters from being less prescriptive to more performance based, with a greater focus upon enforcement. Most recently, Specification SS06 came into effect January 1, 2011 with a

required date for full implementation no later than January 1, 2014. This specification is designed to meet Measurement Canada`s goal of greater assurance of compliance with the Electricity and Gas Inspection Regulations among organizations which choose to apply compliance sampling in order to extend the use of their meters. At this time, FEI believes its existing meter fleet management practices will ensure the company remains in compliance with the increased rigor of this specification.

1.3.3 SERVICES (ASSET CLASS 473)

The assets in this class consist of installations of various service pipes for new and existing customers including:

- new and conversion distribution pressure (DP) and intermediate pressure (IP) services to single and multi-family dwellings;
- pre-installed service stubs from mains;
- services extended from stubs;
- vertical header subdivisions (a vertical service line system within a building such as a high-rise);
- DP and IP new or conversion service header mains (distribution mains installed on private property such as multi-family strata owned complexes); and
- DP and IP service header laterals.

FEI expects the lives of its distribution services assets to be within the range of its industry peers, with typical service lives ranging from 40 to 65 years. At the end of 2009, accumulated losses in this asset class were approximately $27.8 million (excluding removal costs less salvage proceeds of $45.8 million). As a percentage, the $27.8 million accumulated loss represents only 4% of the historical cost balance of $664 million.

Reasons that services may be retired earlier than their expected lives and contribute to the retirement losses recorded to date can be classified into two categories - Customer and Safety. The table below provides a summary of the services retired in recent years 2006 to 2009 with the length of the service pipe retired and the associated retirement costs separated into the categories Customer and Safety.

Table E3-2: Most Services Retired Due to Customer Requests

Reasons for Retirement	2006		2007		2008		2009	
	Metres of Services Retired	Retirement Costs	Metres of Services Retired	Retirement Costs	Metres of Services Retired	Retirement Costs	Metres of Services Retired	Retirement Costs
Customer	76,958	$ 4,079,701	76,893	$ 4,235,239	68,959	$ 4,913,276	72,817	$ 4,906,138
Safety	11,303	$ 584,850	30,733	$ 311,291	45,852	$ 471,291	10,811	$ 499,975
Total	88,261	$ 4,664,551	107,626	$ 4,546,530	114,811	$ 5,384,566	83,628	$ 5,406,113

The data above indicates that the majority of retirements expressed in metres of pipe retired and the retirement costs incurred were the result of customer initiated requests.

Customer requests to retire services originate as a result of land development activities and specific requirements of customers. As the demand for housing in the more densely populated regions (i.e. Lower Mainland) increases, existing housing and land are being redeveloped with larger plots of land being subdivided and existing housing demolished to make way for multi-family housing (i.e. townhouses, condos). This is contributing to a shorter useful life observed than originally anticipated. Other customer driven requests include those resulting from homeowners performing building modifications and landscaping activities that often require the retirement of service line assets. To mitigate the rate impact to all customers, FEI seeks to recover the retirement costs from the customer that initiates the work wherever possible.

The other contributor to early service retirements is safety. FEI has a service retirement program to remove inactive services. An inactive service to a premise is a live gas service or meter with no existing customer. These assets continue to attract regular maintenance but are not presently being used for gas delivery. Inactive services are often forgotten by the property owner and represent a significant risk of third party damage. Removal of inactive services initiated by FEI improves the safety of the public, the natural gas delivery system and its employees.

1.3.4 MAINS (ASSET CLASS 475)

This asset class consists of the installation and material costs of new and replacement intermediate pressure and distribution pressure mains from the pressure regulator station to the customer service line including:

- Main extensions and tie-ins to serve new customers;
- Gas main additions or replacements (i.e. system improvements) and tie-ins needed to service increasing demands placed on the system;
- Replacements (i.e. renewals) of portions of existing mains to remove corroded or damaged sections; and

- Replacement of pipe that has been identified as non-compliant due to geographical location (close to highways or bridges) or pipe configuration.

FEI expects the lives of its distribution mains assets to be within the range of its industry peers with typical service lives for mains ranging from 50 to 65 years. At the end of 2009, accumulated losses in this asset class were approximately $5.5 million (excluding removal costs less salvage proceeds of $4.8 million). As a percentage, the $5.5 million accumulated loss represents only 0.6% of the historical cost balance of $861 million.

Reasons that distribution mains may be retired earlier than their expected lives and that contribute to the retirement losses recorded to date can be classified into two categories, Customer and Safety/Reliability. The table below provides a summary of the distribution mains retired in recent years 2006 to 2009 with the length of the mains pipe retired and the associated retirement costs separated into Customer and Safety/Reliability.

Table E3-3: Most Mains Retired for Safety and Reliability Reasons

Reasons for Retirement	2006		2007		2008		2009	
	Metres of Main Retired	Retirement Costs	Metres of Main Retired	Retirement Costs	Metres of Main Retired	Retirement Costs	Metres of Main Retired	Retirement Costs
Customer	1,048	$ 22,981	-	$ 6,083	-	$ -	15	$ 535
Safety/Reliability	26,169	$ 513,060	54,548	$ 525,600	53,832	$ 474,834	21,107	$ 591,413
Total	27,217	$ 536,041	54,548	$ 531,683	53,832	$ 474,834	21,122	$ 591,948

The data above indicates that the majority of retirements, expressed in metres of pipe retired and correlated to the retirement costs are primarily the result of safety/reliability related reasons.

FEI is committed to ensure the safety and reliability of the distribution system. To achieve this, FEI regularly assesses and monitors the health of its distribution mains system, noting factors such as the age and condition of the pipe installed, identified leaks, effectiveness of corrosion prevention and condition of coatings on the pipe. Where warranted, the Company replaces the distribution mains earlier than expected in order to maintain the integrity of the pipe. Where the opportunity permits, FEI schedules mains pipe replacement to coincide with municipal or road construction activities in order to minimize the costs. In the past, high failure rates leading to early retirement of distribution mains have resulted from leaks caused by corrosion in mains installed prior to 1980. Prior construction practices, use of coal tar and asphalt enamel pipe coatings from 1930 to 1970, and use of tape coatings in the 1970s have been contributing factors to earlier retirements.

Customer requests to relocate distribution mains may also lead to earlier retirement than expected. Highway construction, municipality activities and private industry development may result in FEI having to retire and relocate an existing main. To mitigate the rate impact to all

customers, FEI seeks to recover the related costs wherever possible from the initiator of the request.

1.4 Conclusion

As the above analysis and explanations indicate, FEI's recorded retirement losses for the asset categories mains, meters and services are reasonable and reflective of the regulations it faces and the environment which it operates in as a natural gas utility.