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April 27, 2017

British Columbia Utilities Commission
6th Floor, 900 Howe Street
Vancouver, BC
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Attention: Mr. Patrick Wruck, Commission Secretary and Manager, Regulatory Support

Dear Mr. Wruck:

**Re: FortisBC Energy Inc. (FEI)
British Columbia Utilities Commission (the Commission) Order E-10-16
Price Risk Management Annual Report (Annual Report) – May 1, 2017**

In accordance with Commission Order E-10-16, FEI respectfully submits the Annual Report as of May 1, 2017.

On June 17, 2016 by Order E-10-16, the Commission approved FEI's request for a three year medium-term fixed-price hedging strategy with pre-defined price targets and maximum hedging percentages, as outlined within the FEI 2015 Price Risk Management Application (PRM Application). In its decision, the Commission directed FEI to file an annual report providing an update on approved hedging strategies as well as providing relevant commentary on the effectiveness of enhancements to the commodity rate setting mechanism.

On February 21, 2017 FEI filed a letter with the Commission seeking clarification of Order E-10-16 with regards to the implementation plan rolled over each year during the hedging horizon. On February 28, 2017, the Commission confirmed that the hedging limits as laid out in FEI's letter were consistent with the Commission's decision.

The attached Annual Report satisfies these reporting requirements and provides some recommendations regarding FEI's price risk management tools and strategies going forward.

FEI has provided a confidential version of the Annual Report, and requests confidentiality in pursuant to Section 18 of the Commission's Rules of Practice and Procedure regarding

confidential documents, established by Order G-1-16. A public version of the Annual Report is also provided which has redacted the sensitive details of FEI's hedging strategy as FEI believes that this market sensitive information should be protected and not publicly disclosed in order to preserve and not impair FEI's ability to negotiate and obtain favorable commercial terms for any future natural gas hedging. The confidential version will be provided to all participants of the 2015 PRM Application proceeding and the stakeholders involved in the February 24, 2017 Price Risk Management Workshop conducted by FEI. FEI requests these stakeholders keep the details of the hedging strategy confidential.

If further information is required, please contact Mike Hopkins, Senior Manager, Price Risk & Resource Planning at (604) 592-7842.

Sincerely,

FORTISBC ENERGY INC.

Diane Roy

Attachments



FORTISBC ENERGY INC.

Price Risk Management Annual Report

April 27, 2017

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1. INTRODUCTION

This FortisBC Energy Inc. (FEI) Price Risk Management 2017 Annual Report (Annual Report) discusses the outcomes to date of the implemented tools and strategies discussed in FEI's 2015 Price Risk Management Application (PRM Application), which was approved by the British Columbia Utilities Commission (the Commission) under Order E-10-16 dated June 17, 2016. It satisfies the reporting requirements outlined by the Commission Panel in its decision and provides recommendations for improvements regarding FEI's price risk management tools and strategies going forward. This Annual Report does not include any requests for approval. The requests for approval relating to the recommendations are included in the FEI 2017 Price Risk Management Plan (2017 PRMP), which will be submitted separately to the Commission for review.

1.1 2015 PRICE RISK MANAGEMENT APPLICATION

On December 23, 2015 FEI submitted to the Commission the PRM Application which included the following objectives:

- Mitigate market price volatility to support rate stability; and
- Capture opportunities to provide customers with more affordable rates.

The PRM Application included requests for approval relating to specific price risk management tools and strategies for customers who receive commodity supply from FEI. These included the following:

1. Implementation of a medium-term fixed-price hedging strategy, which includes the following components:
 - a) Execute hedges when forward AECO/NIT market prices are at or below ██████████ ██████████ for up to 25% of the FEI commodity supply portfolio;
 - b) Execute hedges when forward AECO/NIT market prices are at or below ██████████ for up to 50% of the FEI commodity supply portfolio;
 - c) Maximum hedging for any term is 50% of the FEI commodity supply portfolio;
 - d) Hedges can include fixed price financial swaps or physical fixed price purchases;
 - e) Price targets apply to each winter or summer term or one-year term within the three-year horizon of April 2016 to March 2019, and
 - f) No hedging is executed if the price targets in (a) or (b) above are not reached.
2. Implementation of enhancements to FEI's quarterly commodity rate setting mechanism, which includes the following components:
 - a) Commodity rate change cap of \$1.00 per GJ, applicable to rate increases or decreases, provided the deferral account balance is maintained within a reasonable range:

- 1 i. Implementing a commodity rate change cap, plus or minus \$1.00 per GJ, would
2 be utilized for a maximum of two consecutive quarters provided that the rate
3 changes subject to the cap have been in the same direction, and
- 4 ii. The cap is removed for the third consecutive quarter if the rate change is in the
5 same direction.
- 6 b) Criteria for consideration of using a prospective period beyond the 12-month outlook to
7 determine a new effective commodity rate. A 24-month prospective period may be used
8 in specific situations to maintain the Commodity Cost Reconciliation Account (CCRA)
9 deferral account balance within a reasonable range over the full duration of the 24-
10 month period, which includes:
- 11 i. When a commodity rate change is indicated using a standard 12-month
12 prospective period;
- 13 ii. When there is a difference of \$0.75 per GJ or more between the CCRA weighted
14 average cost of gas (WACOG) for year one versus year two of the 24-month
15 prospective period, and
- 16 iii. The direction of the commodity rate change indicated using a standard 12-month
17 prospective period is opposite to the direction of the CCRA WACOG for year two
18 compared to the CCRA WACOG for year one (for example, if the indicated
19 commodity rate change was an increase, the CCRA WACOG for year two would
20 need to be lower than the CCRA WACOG for year one).
- 21 FEI noted that it was not proposing any changes to the Commission guidelines for setting gas
22 cost recovery rates and managing the gas cost reconciliation balances as set out in Letters L-5-
23 01 and L-40-11 (the Guidelines) with respect to the consideration of the full circumstances.
24 Rather it proposed some criteria to provide further clarification of when consideration be given to
25 the appropriateness of commodity rate proposals for timeframes beyond the 12-month outlook
26 since the guidelines currently do not include any specific metrics or criteria in this regard.
- 27 In terms of the hedging percentages, the FEI commodity supply portfolio included the gas
28 purchases FEI requires for its commodity portfolio and excluded any supply provided to FEI by
29 natural gas marketers per the Customer Choice Program. The commodity supply portfolio is
30 determined within the Annual Contracting Plan (ACP) each year. For simplicity, FEI defined the
31 hedging terms as including winter, summer or one-year terms and do not include hedging for
32 individual months.
- 33 In terms of the rate setting mechanism enhancements, FEI considered a band of approximately
34 +/- \$60 million a reasonable range for the commodity deferral account. Deviations falling
35 materially outside of this range can pose challenges for FEI in terms of the timing of refunding or
36 recovering significant dollar amounts from customers and can impact FEI's balance sheet and
37 potentially its credit rating and borrowing capacity.
- 38 FEI recognized that the rate setting enhancement and medium-term hedging strategies are
39 appropriate in the current gas market price environment but may not be applicable if market

1 conditions changed significantly in the future. FEI suggested that the strategies be reviewed
2 through an update report on an annual basis to discuss how the strategies have worked so far
3 and if any refinements need to be made.

4 **1.2 COMMISSION PANEL DECISION**

5 The Commission Panel (Panel) approved the PRM Application in Order E-10-16 dated June 17,
6 2016. In its decision, the Panel accepted that FEI's current portfolio of comprehensive price risk
7 management strategies and tools are working well from the perspective of managing volatility,
8 sending appropriate market signals and managing the CCRA deferral account balances within a
9 reasonable range. It also noted that the development of effective price risk management tools
10 is an iterative process and the application of these tools will continue to evolve as market
11 conditions change¹.

12 The Panel's decision to approve the three-year hedging strategy was made with consideration
13 to the low-price commodity environment which existed at the time FEI submitted its PRM
14 Application². FEI noted in the PRM Application that this low price environment, where market
15 natural gas prices are near their lowest levels in over a decade and near gas producer break-
16 even costs, provides FEI with the opportunity to help meet the price risk management objectives
17 of mitigating market price volatility to support rate stability and capturing opportunities to provide
18 customers with more affordable rates. The medium-term hedging strategy that includes locking
19 in up to half of the commodity supply portfolio with fixed price purchases or swaps, if pre-defined
20 price targets are reached, would help keep FEI's commodity rate at low and favourable levels
21 relative to historical values.

22 In its decision, the Panel denied any extension of the hedging horizon beyond the three years
23 ending with the Winter 2018/19 term. The Panel noted that its concern with extending the
24 program beyond three years is not whether capturing hedging opportunities is appropriate in the
25 current environment, but whether it is appropriate to apply a similar methodology in a higher
26 pricing environment than exists today³. The Panel states that there is no evidence on the record
27 attempting to define exactly what a "low-price market environment" is and at what price point a
28 low-price market environment ceases to exist and there is a shift from a risk view to a market
29 view. The Panel stated that, if FEI wishes to make any change to the term, the price targets or
30 the methodology as outlined in its PRM Application, it must do so by a formal application.

31 In its decision, the Panel approved FEI's proposal to keep the CCRA deferral account range at
32 +/- \$60 million after tax in keeping with FEI's recommendations⁴. However, the Panel
33 considered there to be potential benefit to examining the option of increasing the maximum
34 amount of the CCRA deferral account as a practical solution to control volatility over the longer

¹ Commission Order E-10-16 dated June 17, 2016, page 12.

² IBID, page 24.

³ IBID, page 24.

⁴ IBID, page 27.

1 term. In the event that FEI seeks to extend the hedging program, the Panel expects FEI to
2 include in its application a review of the effectiveness of the approved strategies as compared to
3 the other price risk management tools which may be available to FEI. In particular, FEI is
4 directed to include an evaluation of the option of increasing the acceptable CCRA deferral
5 account balance to +/- \$200 million to manage CCRA during periods of extreme volatility.

6 In its decision, the Panel directed FEI to file an annual report providing an update on approved
7 hedging strategies as well as providing relevant commentary on the effectiveness of
8 enhancements to the commodity rate setting mechanism. The following items should be
9 included in each annual report:

- 10 • A financial summary of any gains or costs which have resulted from hedging activities.
- 11 • A description of the impact on rate volatility of any hedging activity as compared to what
12 would have occurred had hedging not been undertaken.
- 13 • The commodity rates achieved relative to historical averages.
- 14 • An overall assessment of the effectiveness of any hedging activities undertaken and
15 comments on potential improvements or changes.
- 16 • A description of the impact on rate volatility related to the implementation of the
17 enhancements made to the commodity rate setting mechanism and comments on any
18 issues arising.

19 FEI was directed to file the annual report concurrently with the FEI's ACP which is typically filed
20 at the beginning of May each year. A copy of the report is also to be provided to all participants
21 of the PRM Application proceeding, redacted if necessary. Once it has been filed, the need for
22 further process will be assessed by the Commission and, if required, a formal process
23 determined.

24 This Annual Report satisfies these reporting requirements and provides some recommendations
25 regarding FEI's price risk management tools and strategies going forward.

26 **1.2.1 Hedging Implementation Clarification**

27 On February 21, 2017, FEI filed a letter with the Commission seeking clarification of Order E-10-
28 16. Specifically, FEI sought clarification from the Commission that the implementation plan is
29 rolled over each year during the hedging horizon such that, at the end of March 2017, year 1
30 becomes April 2017 to March 2018 and year 2 becomes April 2018 to March 2019. There would
31 no longer be a year 3 as the extension of the hedging horizon beyond March 2019 was denied
32 in the Commission's PRM Application decision. At the end of March 2018, year 1 becomes the
33 final year of the hedging horizon, April 2018 to March 2019, in which case FEI would be allowed
34 to implement hedges up to 50 percent.

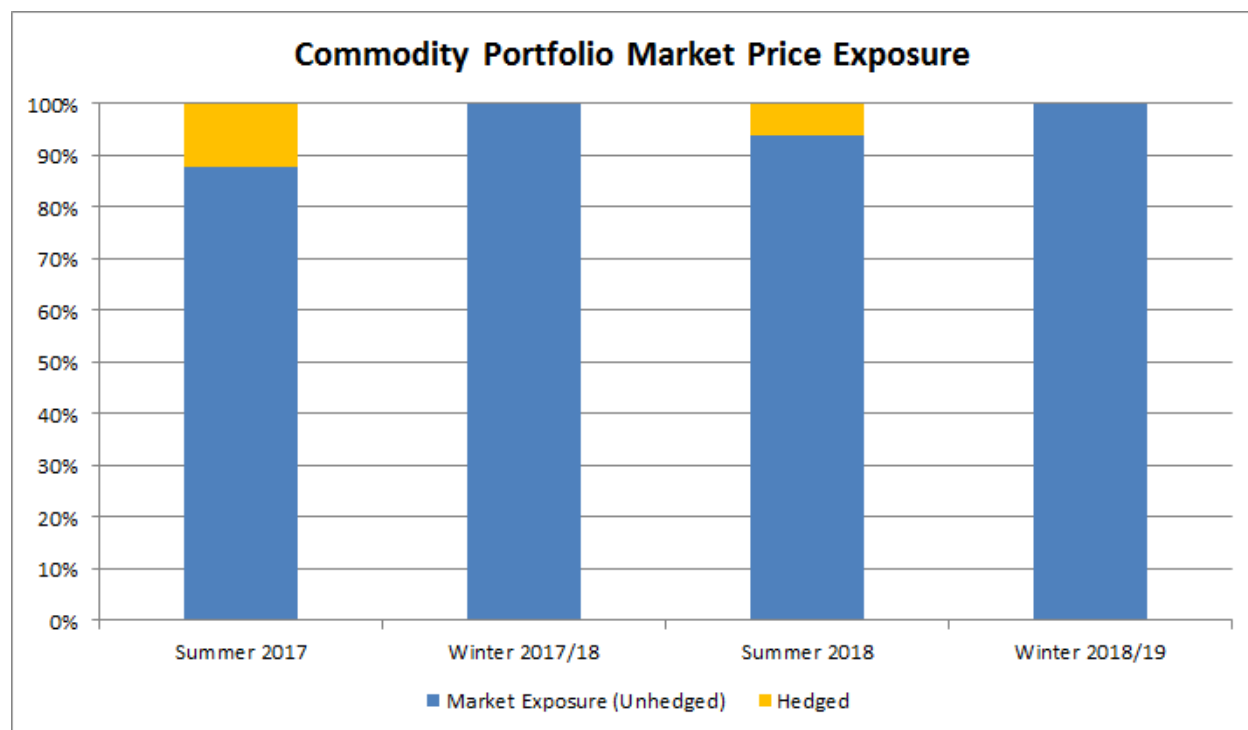
35 The Commission confirmed FEI's interpretation of the hedging implementation in a letter dated
36 February 28, 2017, clarifying that FEI could implement hedges in accordance with the following
37 limits as of March 2017:

1	[REDACTED]
2	[REDACTED]
3	[REDACTED]
4	

1 **2. ASSESSMENT OF MEDIUM-TERM HEDGING STRATEGY**

2 FEI has implemented hedges (i.e. financial fixed price swaps) for Summer 2017 and Summer
 3 2018 terms since the PRM Application was approved on June 17, 2016. Forward AECO/NIT
 4 market gas prices fell to and below the approved hedging target levels of [REDACTED]
 5 beginning in late February 2017. Market prices fell as mild weather in the eastern U.S. and
 6 Canada reduced North American gas demand, resulting in lower U.S. gas storage withdrawals
 7 than expected and improving storage balances relative to previous-year and five-year average
 8 levels. The following figure shows the current level of hedges implemented, based on
 9 percentage of the total commodity portfolio volume.

10 **Figure 1: Percentage of Hedges Implemented**

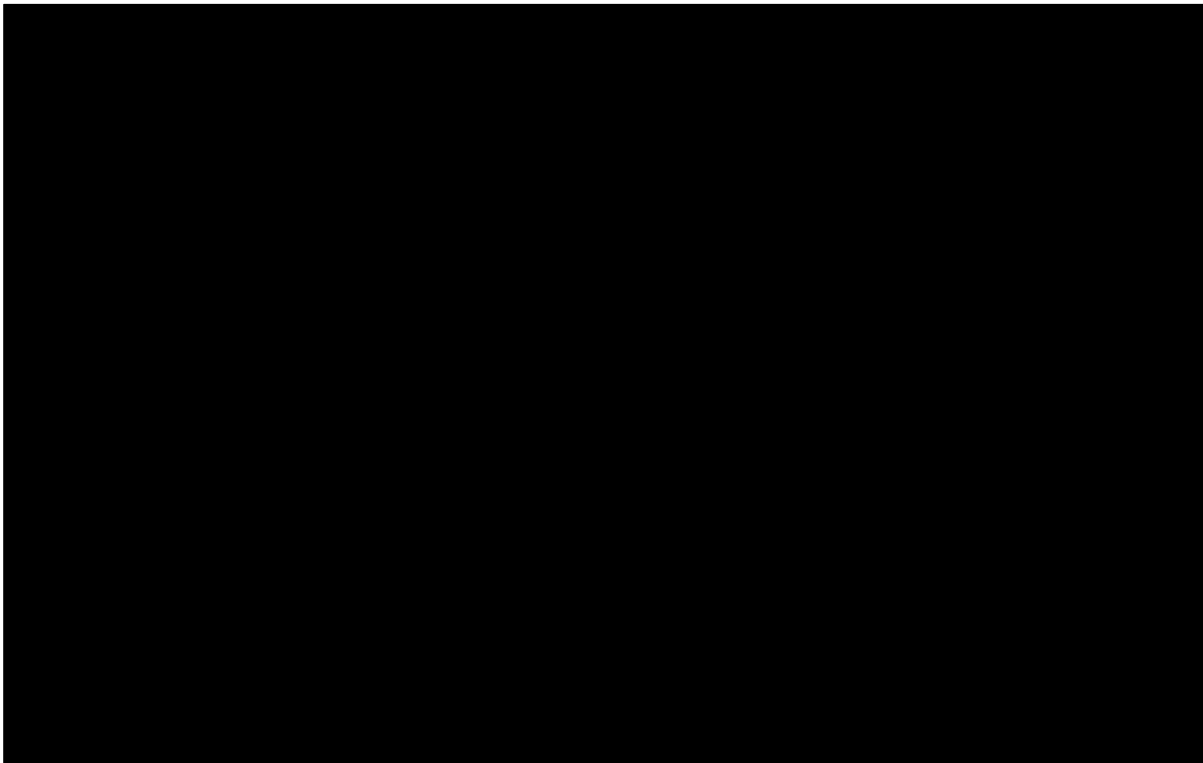


11
 12 The hedges implemented for Summer 2017 and Summer 2018 total 39,750 GJ per day and
 13 20,000 GJ per day, respectively. The total commodity portfolio volume is 330,000 GJ per day.

14 The following figure shows the lowest forward market prices for the terms within the hedging
 15 horizon out to Winter 2018/19 since June 17, 2016 relative to the hedging price targets.

1

[REDACTED]



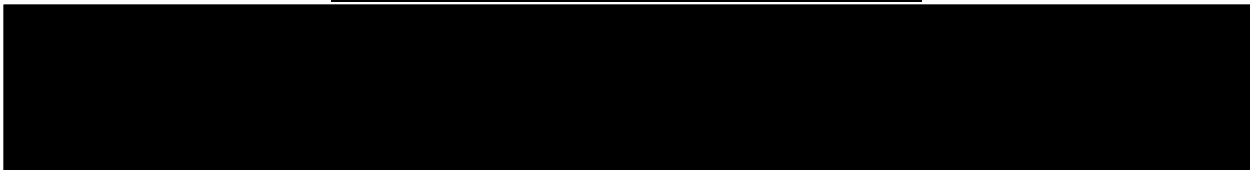
2

3 As the previous figure shows, forward market prices for Summer 2017 and Summer 2018
4 respectively fell below and reached the [REDACTED]. However, forward market
5 prices for Winter 2017/18 and Winter 2018/19 did not decrease to that level, reaching a low of
6 only [REDACTED]. As market prices are seasonal and winter prices are typically
7 higher than summer prices (although not always), FEI recommends adjusting the winter hedging
8 price targets such that the winter terms' hedging target prices are higher than those for the
9 summer terms. If the winter hedging price targets are not adjusted, FEI may end up with
10 hedges in place for summer terms but not for any winter terms, which is when market price
11 spikes may be more likely to occur.

12 The following table shows the actual incurred gains/(costs) from the implemented hedging
13 activity. This shows how the hedge prices have compared to the actual settled AECO/NIT
14 monthly index prices. As of the date of this report, only the AECO/NIT index price for the month
15 of April 2017 has settled and the table shows the actual incurred gain for the month.

16

[REDACTED]

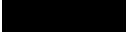


17

18 The following table shows the mark-to-market (MTM) value of the hedges in place based on the
19 forward market prices curve as of April 18, 2017 presented in Figure 4. This shows the current

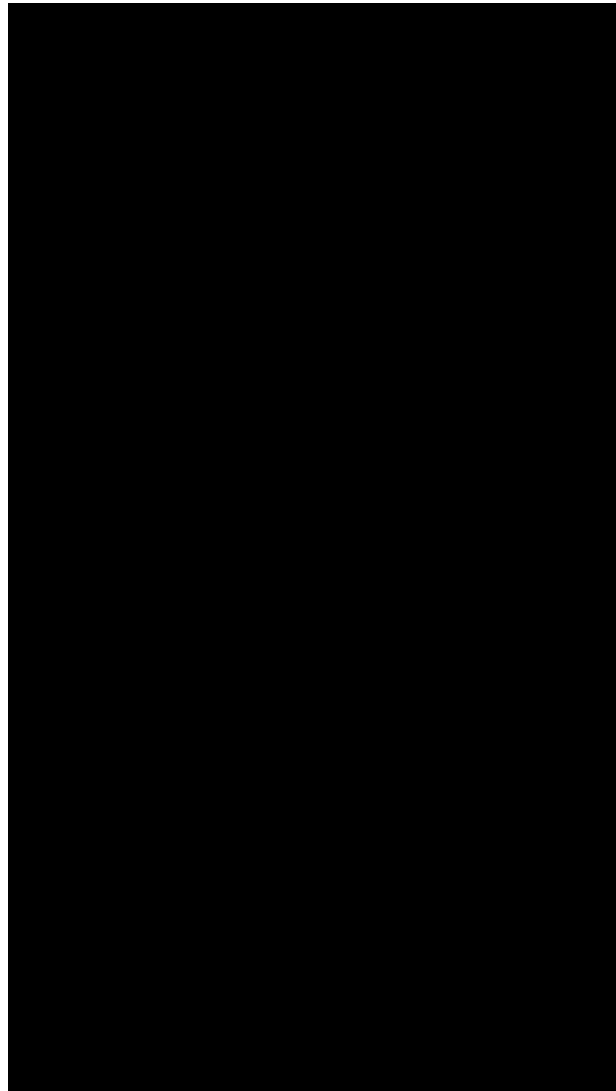
1 value of the hedges compared to forward market prices at a particular point in time. The term for
2 Summer 2017 includes the remaining months in which the prices have not yet settled (i.e. May
3 to October 2017).

4 
5 

6 It should be noted that this MTM value of about  is based on forward market prices at
7 a point in time and, because forward market prices change on a daily basis, this MTM value will
8 also change over time. While the MTM value is currently “in-the-money”, providing a benefit to
9 customers in terms of lower gas costs, it could change to “out-of-the-money” if forward market
10 prices fall below hedged prices. The objectives of the hedging strategy are to mitigate market
11 price volatility to support rate stability and capture opportunities to provide customers with more
12 affordable rates rather than “beat the market” by achieving lower hedge prices. The underlying
13 goal is to achieve these objectives at a reasonable cost for customers.

14 The following provides an assessment of the impact on FEI commodity rate volatility of the
15 hedging activity as compared to what would have occurred had hedging not been undertaken.
16 However, given that a relatively small percentage of hedging has been implemented, the
17 impacts on commodity gas costs and rates are minimal at this time. The following table shows
18 the projected gas costs, on a per unit basis, from April 2017 out to the end of 2018 based on
19 April 18, 2017 forward market prices, with and without the implemented hedges. For simplicity,
20 the projected gas costs do not include the impacts of any deferral account balances.

1

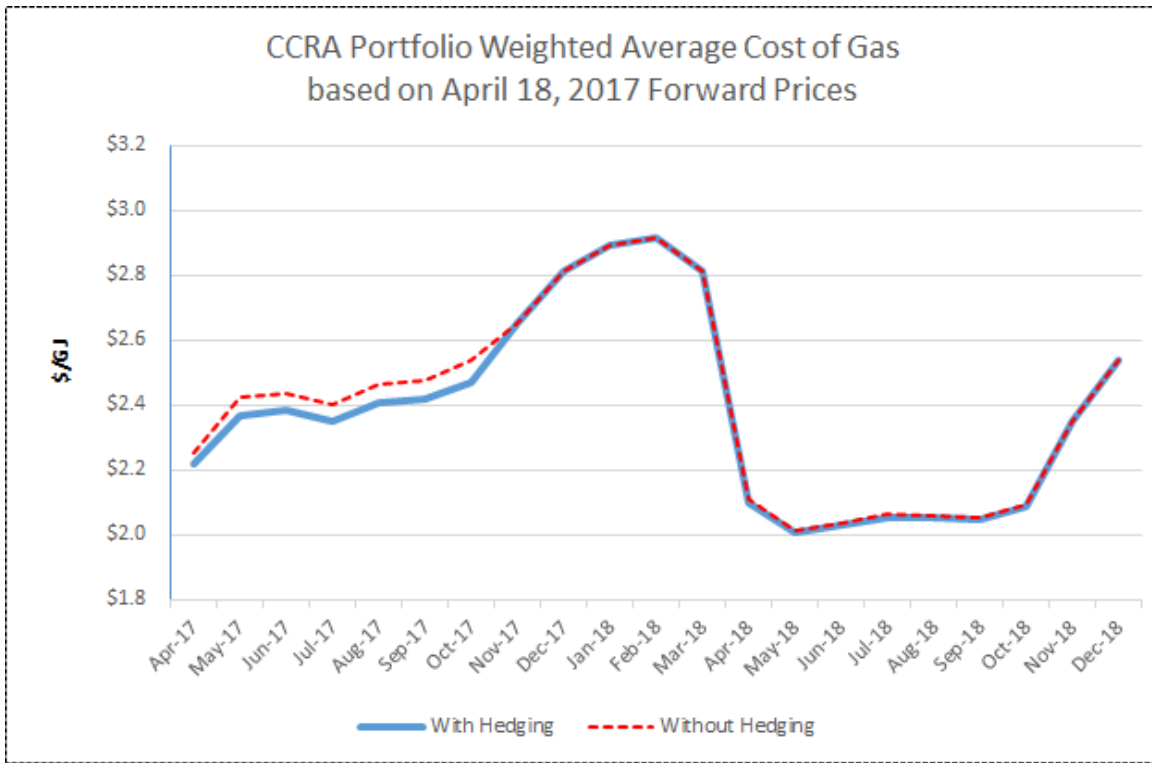


2

3 The following figure shows the results in the previous table in a graphical form.

1

Figure 3: Projected Commodity Gas Costs with and without Hedging

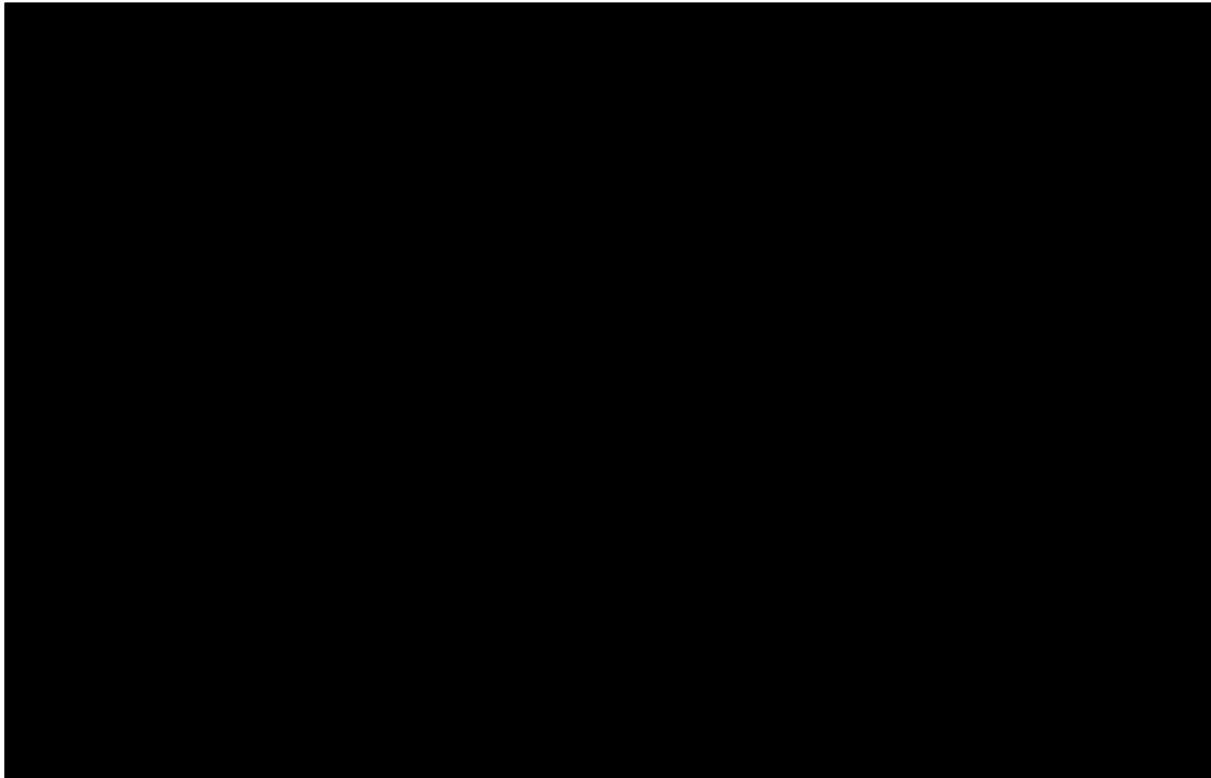
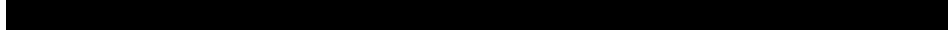


2

3 The previous table and figure show that, given the relatively small amount of hedges
 4 implemented at this point in time, there is little difference between the projected gas costs with
 5 and without hedging (only \$0.04 per GJ difference for remainder of 2017 and a \$0.01 per GJ
 6 difference for 2018). The potential impacts and benefits to customers in terms of greater
 7 commodity rate stability and helping maintain low commodity rates will improve if more hedging
 8 is implemented at the target levels.

9 The following figure shows recent forward market prices as of April 18, 2017 relative to the
 10 hedging targets.

1



2

3 The previous figure shows that the forward market prices are still above the hedging targets for
4 all terms out to Winter 2018/19. However, beyond Winter 2018/19, forward market prices are
5 trading at levels below the first hedging target for Summer 2019 and Summer 2020. At this
6 time, FEI only has approval to hedge out to Winter 2018/19 but not beyond. To capture the
7 benefit of forecast market price increases, FEI recommends extending the hedging horizon for
8 the medium-term hedging out to Summer 2020.

9 At this point in time, it is difficult to properly assess the effectiveness of the hedging program
10 given that a relatively small percentage of hedging has been implemented and for only two
11 summer terms. FEI suggests that more time is required to assess the effectiveness and impact
12 on rates and recommends that the medium-term hedging program be continued with further
13 assessments included in future annual reports.

1 3. ASSESSMENT OF COMMODITY RATE SETTING ENHANCEMENTS

2 FEI has not yet reached any of the triggers included in the approved commodity rate setting
3 enhancements. These enhancements include the \$1.00 per GJ rate change cap and the criteria
4 for consideration of using a prospective period beyond the 12-month outlook to determine a new
5 effective commodity rate. FEI's only commodity rate change since the approval of the rate
6 setting enhancements in June 2016 was the rate change effective October 1, 2016 when FEI
7 increased the commodity rate from about \$1.14 per GJ to \$2.05 per GJ in response to the
8 increased market prices and gas cost outlook. This rate change was about \$0.91 per GJ, below
9 the \$1.00 per GJ change limit.

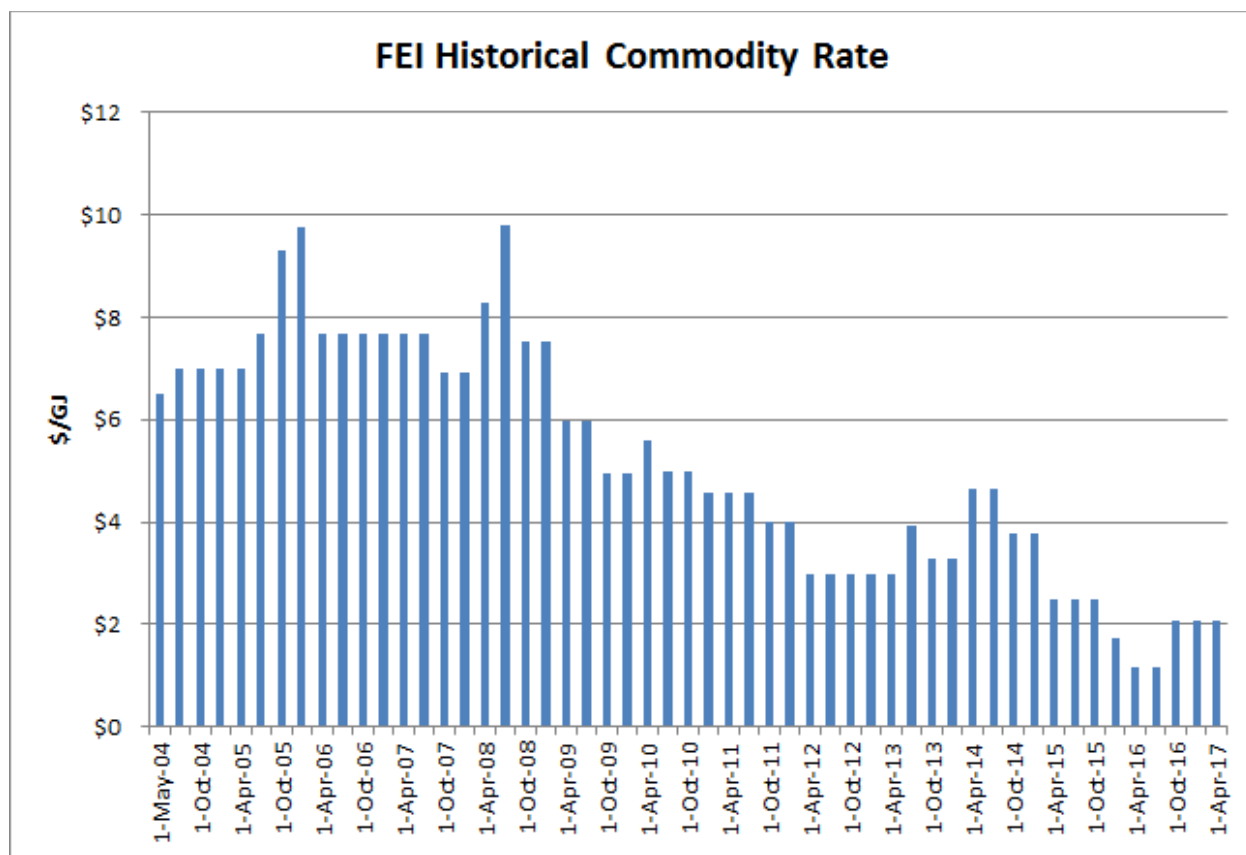
10 Furthermore, for rate setting effective October 1, 2016, the gas cost outlook for the 12-month
11 and 24-month periods did not meet the criteria for consideration of the 24-month outlook. This
12 is because there was a difference of less than \$0.75 per GJ between the CCRA WACOG for
13 year one versus year two of the 24-month prospective period. The gas cost difference between
14 year one and year two was only about \$0.13 per GJ. The direction of the commodity rate
15 change indicated using a standard 12-month prospective period was not opposite to the
16 direction of the CCRA WACOG for year two compared to the CCRA WACOG for year one.
17 Therefore, none of the criteria were met to use the 24-month outlook.

18 Despite not having used the rate change cap or 24-month outlook components of the rate
19 setting enhancements, FEI believes they are valuable tools, supported by stakeholders, in
20 meeting the objectives in the interests of customers and should be continued. Further
21 enhancements or improvements could be considered in the future after these tools have been
22 utilized and FEI is better able to assess them.

1 **4. FEI COMMODITY RATES**

2 The following figure shows FEI’s actual historical commodity rates from April 2004 until April
 3 2017.

4 **Figure 5: FEI Historical Commodity Rates**



5
 6 The average of these historical commodity rates since April 2004 is about \$5.05 per GJ.
 7 However, since 2008 when the era of shale gas began, the commodity rate has averaged about
 8 \$3.65 per GJ. The commodity rate average for the last three years is about \$2.70 per GJ. FEI’s
 9 lowest commodity rate was about \$1.14 per GJ effective April 1, 2016 to September 30, 2016,
 10 after which time it increased to \$2.05 per GJ effective October 1, 2016.

11 FEI has implemented AECO/NIT hedges at an average price of about [REDACTED] for Summer
 12 2017 and about [REDACTED] for Summer 2018. FEI’s commodity portfolio mix is 75 percent
 13 Station 2 and 25 percent AECO/NIT supply and FEI currently receives a discount to AECO/NIT
 14 on its Station 2 in the market. FEI’s average discount for Station 2 supply is about [REDACTED]
 15 for Summer 2017 and Summer 2018. Therefore, for the hedged portion of the portfolio, FEI is
 16 realizing a Station 2 price of less than [REDACTED]
 17 [REDACTED] This is helping to improve the likelihood that FEI’s commodity rate remains near or below
 18 the current \$2.05 per GJ level. This helps provide more commodity rate stability and keep gas
 19 rates more affordable, relative to recent historical levels, for customers. More hedging at or

- 1 below the approved hedging price target levels up to the maximum 50 percent of the commodity
- 2 portfolio limit in the future will further improve FEI's ability to meet these objectives.

1 5. RECOMMENDATIONS

2 FEI has several recommendations for improvements in its approved price risk management
3 tools based on the discussions and analysis provided in this Annual Report.

4 The first recommendation is to extend the hedging horizon out beyond Winter 2018/19 to the
5 three year period ending with Summer 2020 (i.e. out to the end of October 2020). This will
6 position FEI to capture any favourable market pricing opportunities in the next three years to
7 meet the price risk management objectives. As Figure 4 shows, forward market prices are
8 currently trading at low levels (relative to historical averages) for several years out and there is
9 no certainty on how long this will last. FEI may have a limited opportunity to capture low market
10 prices and keep rates low and more affordable than in the past for customers.

11 FEI's second recommendation is to adjust the hedging price targets to account for the
12 seasonality in market prices. FEI developed the hedging price targets based on average
13 historical price levels and FEI commodity rates, coal-to-gas fuel switching levels and gas
14 producer break-even costs (as discussed in the 2015 PRMP) without any difference between
15 summer and winter terms. As winter term prices typically trade at a premium to summer term
16 prices (see Figure 4), FEI recommends different hedging price targets for summer and winter
17 terms; specifically, that the summer term hedging price targets should remain at [REDACTED]
18 [REDACTED] while the winter term price targets should be adjusted to [REDACTED].
19 One-year term hedging price targets should be in between these summer and winter price
20 target levels at [REDACTED]. If the hedging targets are not adjusted, FEI may
21 miss out on opportunities to capture low market prices for winter terms, when market price
22 spikes and volatility are typically higher.

23 The third recommendation is to continue with the approved rate setting enhancements. Any
24 further refinements or improvements may come over time once they are implemented and FEI is
25 able to assess the impacts on commodity rate volatility reduction.

26 The fourth recommendation is extend the hedging strategy beyond the medium-term hedging
27 horizon to take advantage of the current low market prices further out in time. This could
28 include hedges spanning out up to ten years to capture the low market AECO/NIT or Station 2
29 forward market prices which may not remain at current low levels. This would help capture low
30 market prices and costs for customers as well as reduce the impacts of any potential future
31 market price volatility on commodity rates. While medium-term hedging achieves these
32 objectives for the medium-term, i.e. three years out, it does not achieve them over the longer
33 term.

34 The specific requests for approval relating to these recommendations will be included in FEI's
35 2017 PRMP to be submitted separately to the Commission. This 2017 PRMP will also include a
36 review of the effectiveness of other price risk management tools which may be available to FEI
37 and an evaluation of the option of increasing the acceptable CCRA deferral account balance to
38 +/- \$200 million to manage CCRA during periods of extreme volatility. FEI expects to submit
39 this 2017 PRMP by June 2017.