MINNESOTA DEPARTMENT OF COMMERCE

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February 23, 2017

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

Re: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. G011/M-17-85

Dear Mr. Wolf:

Attached are the Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

> In the Matter of the Petition of Minnesota Energy Resources Corporation For Extension of Rule Variances to Recover the Costs of Financial Instruments Through the Purchased Gas Adjustment

The petition was filed on January 24, 2017 by: Amber S. Lee

> Regulatory and Legislative Affairs Manager
> Minnesota Energy Resources Corporation
> 1995 Rahncliff Court, Suite 200
> Eagan, Minnesota 55122

The Department recommends that the Minnesota Public Utilities Commission (Commission) **approve** MERC's petition.

The Department is available to answer any questions the Commission may have. Sincerely,

/s/ LAURA B. OTIS
Rates Analyst
651-539-1828

LBO/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET NO. G011/M-17-85

I. SUMMARY OF PETITION

Pursuant to Minnesota Rules, part (Minn. R.) 7829.3200, Minnesota Energy Resources Corporation (MERC or the Company) requested that the Minnesota Public Utilities Commission (Commission) grant an extension of the variance to Minnesota Rules, parts 7825.2400, 7825.2500, and 7825.2700 (the Purchased Gas Adjustment or PGA rules) to allow MERC to continue to recover prudently incurred costs associated with financial instruments used for hedging purposes in the procurement of natural gas supplies for its Minnesota customers.

Specifically, MERC requested that the Commission approve a four-year extension to its current variance through June 30, 2021. MERC also proposed to continue all prior hedging reporting requirements, and to continue recording the cost of various financial instruments (including fixed-price, index-price, and swing contracts, as well as put options) used to hedge its gas purchase costs to Federal Energy Regulatory Commission (FERC) Account No. 804, stating that it would continue to recover those costs through the commodity portion of rates. MERC also requested that the Commission continue to cap hedging at 30 percent of total projected heating season sales volumes.

MERC also includes a discussion of the benefits of hedging for ratepayers, as required in the Commission's May 28, 2015 Order in its last[1] PGA rule variance filing.

[1] Docket No. G011/M-15-231

II. THE DEPARTMENT'S ANALYSIS

A. OVERVIEW

The cost of purchased natural gas as defined by Minn. R. 7825.2400 reflects only the cost for delivered physical natural gas; consequently, utilities must obtain a variance to these rules if it is to recover costs of hedging through the Purchased Gas Adjustment (PGA). Without recovery of the costs of hedging, utilities have little incentive to undertake hedging on behalf of ratepayers since the utility earns no return on gas costs and passes changes in the cost of gas directly to ratepayers. In fact, absent hedging cost recovery, utilities would face a disincentive for hedging activities, as hedging activities frequently cost the utility (or, rather, the utility's customers) more often than they save money. Thus, the question before the Commission is whether or not to continue to allow utilities to hedge natural gas costs.

In other recent hedging variance dockets the Department has noted, and the Commission has agreed, that the current low prices for natural gas minimize the effects of price spikes in natural gas prices. However, it should be noted that the current low prices of natural gas do not eliminate the effects of price spikes caused by factors such as glitches in supplies (*e.g.*, due to damage to natural gas infrastructure), high demand for natural gas (*e.g.*, due to weather, demand for electricity production, etc.), changes in environmental policies either domestically or worldwide, or market speculation.

The Department concludes that, so long as the costs of hedging tools are appropriate, hedging provides a sort of insurance, protecting ratepayers against price volatility in natural gas markets. Once events such as Hurricane Katrina or the TransCanada pipeline explosion in 2014 occur, it is too late to hedge against the price effects. Like insurance, hedging is not free, but it is important to have as protection against unexpected circumstances.

While the Commission could choose to deny cost recovery of hedging, such a decision would most likely result in MERC abandoning its hedging program, leaving its customers without the protection of hedging. Because there is uncertainty in all of the factors noted above, the Department concludes that it is appropriate to allow MERC to continue to recover the costs of hedging in its purchased gas adjustment so long as the costs are reasonable. The Department discusses its position below.

B. APPROPRIATENESS OF HEDGING UNDER CURRENT MARKET CONDITIONS

Since MERC's prior hedging variance was filed in March of 2015, natural gas spot prices have remained within a relatively narrow pricing window (at Henry Hub within $2.31/Dth). At the time of this docket, the price of natural gas remains relatively low. See Figure 1.[2]

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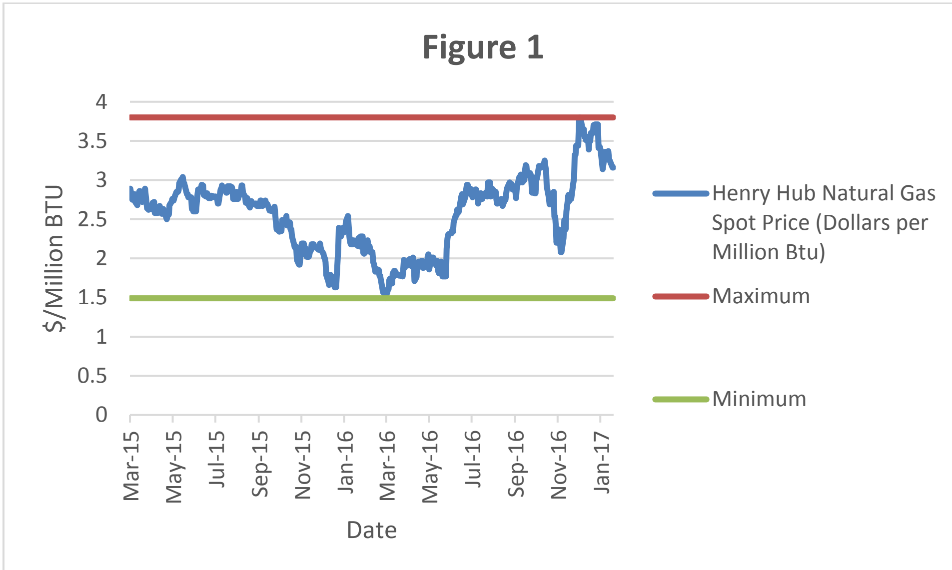
[2] Source: Energy Information Agency (EIA)



The Commission's order requiring MERC to demonstrate the ratepayer benefit of hedging is prescient given the current relatively low pricing and price volatility of natural gas.

1. MERC Discussion in Support of Hedging

MERC framed its discussion in support of hedging as a tradeoff between the lower price volatility its customers are exposed to and the overall increased gas cost resulting from hedging costs. MERC's analysis found that its hedging program resulted in a 9.7 percent reduction in winter price volatility over the period between July 2006 and July 2016 while the hedging program accounted for 3.5 percent of total gas costs over that same period. MERC provided a chart on page 5 of the petition illustrating the smoothing effect its hedging program had over the time period analyzed.

Regarding program costs, MERC pointed out that 41 percent of the hedging costs reported over the July 2006—July 2016 period result from anomalously high natural gas prices in the 2008—2009 period related to the financial crash of 2008.

MERC provided additional analysis of a shorter time period that excludes the unusual market activity of 2008—2009. This analysis covers the time period from July 2011—June 2016 and shows decreased relative hedging costs (1.5 percent of total cost of gas) paired with improved volatility reduction (17.6 percent).

MERC acknowledged that financial hedging is unlikely to provide lower costs to ratepayers over the long-term, but contends that hedging still has a benefit to ratepayers due to the decrease in price volatility.

2. Department Discussion on Hedging

The natural gas market has changed dramatically in light of developments in shale gas, which have led to some of the lowest prices in the last decade. However, despite recent stability in natural gas prices, it is the Department's position that hedging still has value for ratepayers. There is still considerable uncertainty regarding the extent to which government and/or market forces could disrupt price stability.

Increased demand from commercial and industrial customers, including electric generators, could push up pricing. Also, low natural gas pricing for the country as a whole does not take into account regional differences and constraints. This was shown in February and March of 2014 when a portion of the TransCanada Pipeline exploded in Canada and drove index pricing at Northern Natural Gas Ventura and Demarc to increase dramatically. In fact, MERC experienced net gains due to hedging during the 2013—2014 and 2014—2015 heating seasons.[3]

Hedging provides a valuable 'insurance' against natural gas market volatility caused by any number of forces. Given the numerous factors that influence gas pricing on both sides (supply and demand) resulting in continued uncertainty for MERC's ratepayers, the Department continues to conclude that hedging should be available as a tool for MERC to manage natural gas cost volatility.

3. MERC's Recent Hedging Performance

MERC provided data from its hedging program in Attachment A to the petition. Using this data, it is possible to determine both the cost of the hedging program over the last 10 years and the effect that it has had on the volatility of the gas costs paid by MERC's customers. As discussed by MERC in the petition, in recent heating seasons MERC's hedging costs have decreased alongside volatility. This is a win-win for MERC's customers, as over the last five years they have benefitted from decreased gas cost volatility even as they pay a lower price for that protection.

[3] See Attachment A to the Petition.

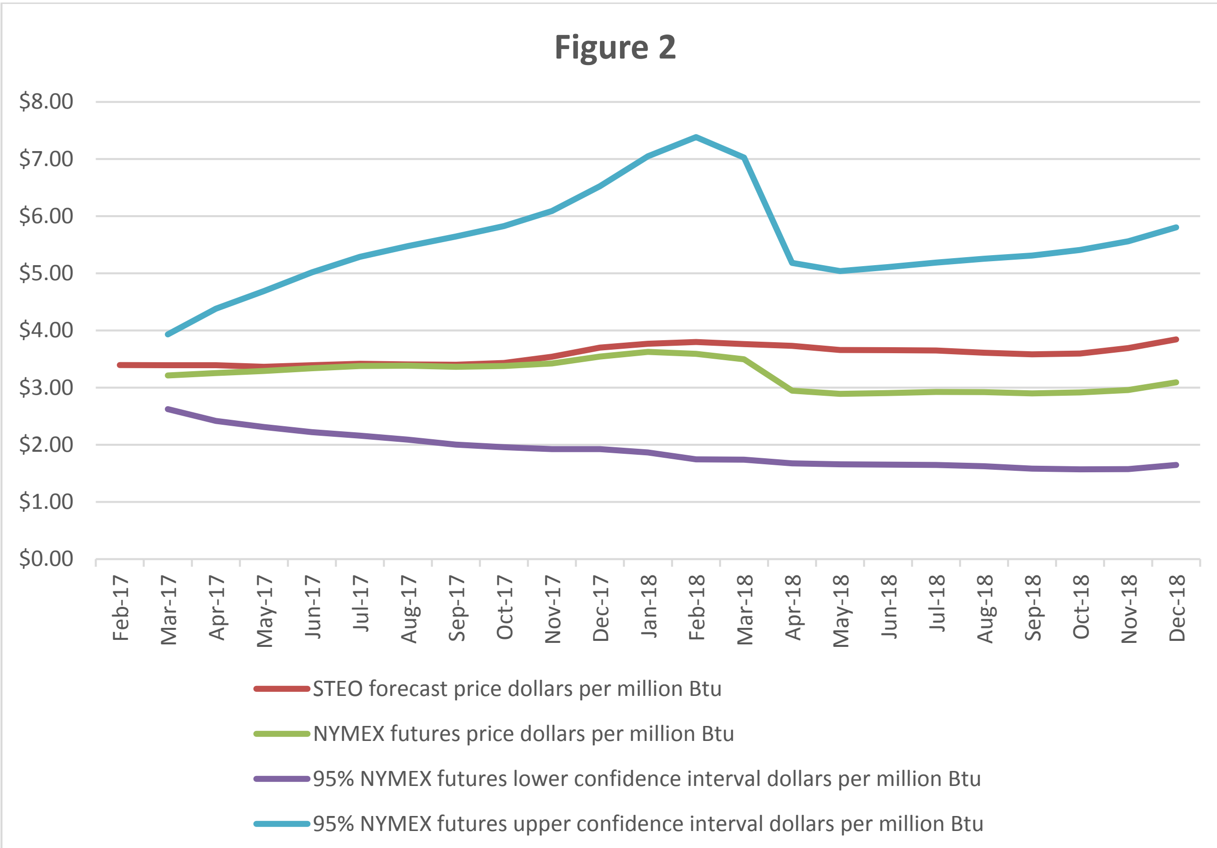
Table 1					
Date	Sales (Dth)	Total Cost	NYMEX Mkt Cost	Hedging Cost over MKT	Hedging Cost per Dth Sold
2007	29397508	$ 76,650,349.00	$ 67,541,000.00	$ 9,109,349.00	$ 0.31
2008	32914562	$ 84,646,233.99	$ 80,837,088.99	$ 3,809,145.00	$ 0.12
2009	30370392	$ 76,069,598.62	$ 54,019,569.62	$ 22,050,029.00	$ 0.73
2010	28026887	$ 54,333,126.28	$ 50,835,231.28	$ 3,497,895.00	$ 0.12
2011	29356626	$ 45,776,667.00	$ 39,994,300.00	$ 5,782,367.00	$ 0.20
2012	23851235	$ 33,187,280.00	$ 26,854,100.00	$ 6,333,180.00	$ 0.27
2013	30057410	$ 40,475,320.00	$ 39,986,000.00	$ 489,320.00	$ 0.02
2014	34321087	$ 33,921,960.00	$ 39,751,900.00	$ (5,829,940.00)	$ (0.17)
2015	31993948	$ 31,787,680.00	$ 28,349,500.00	$ 3,438,180.00	$ 0.11
2016	28458686	$ 25,381,240.00	$ 20,433,700.00	$ 4,947,540.00	$ 0.17

As a further check on the reasonableness of the cost of MERC's hedging program, the Department calculated MERC's per dekatherm cost of hedging for recent years. The result of that analysis is shown in Table 1 below.

The Department's calculations show that MERC's peak hedging cost over the period for which hedging data is available was $2.1344 per dekatherm in the 2008-2009 heating season. MERC reasonably accounted for the unusually high prices experienced in the 2008-2009 heating season by discussing the effect that the financial crisis had on commodity prices. Excluding the anomalous 2008-2009 heating season, MERC's highest seasonal per dekatherm heating cost was $0.9559 in the 2006-2007 heating season. The Department also looked at the most recent five-year period, during which MERC's highest seasonal per dekatherm heating cost was the $0.6462 average paid in the 2011-2012 season.

To put the hedging costs paid by MERC into perspective, the Department obtained natural gas price (NYMEX) forecast data from the EIA's February 2017 Short Term Energy Outlook (STEO). The STEO forecast provides a 95% confidence interval for the forecasted prices and reflects expected volatility. Figure 2 below shows the EIA's projections.

Table 2						
Month	STEO forecast price $/MMBtu	NYMEX futures price $/MMBtu	95% NYMEX futures lower CI $/MMBtu	95% NYMEX futures upper CI $/MMBtu	Lower 95% - Forecast $/MMBtu	Upper 95% - Forecast $/MMBtu
	A	B	C	D	A - C	A - D
Dec-18	3.844453	3.0924	1.647740528	5.803667264	-1.44466	2.711267
Nov-18	3.693596	2.9586	1.57422906	5.560381385	-1.38437	2.601781
Oct-18	3.596347	2.9156	1.571086671	5.410728458	-1.34451	2.495128
Sep-18	3.582813	2.9006	1.58409072	5.311236442	-1.31651	2.410636
Aug-18	3.611229	2.9218	1.62429063	5.255780635	-1.29751	2.333981
Jul-18	3.650679	2.9248	1.648414758	5.189504038	-1.27639	2.264704
Jun-18	3.655641	2.9068	1.653463475	5.110174111	-1.25334	2.203374
May-18	3.659484	2.8918	1.658924833	5.040919922	-1.23288	2.14912
Apr-18	3.732283	2.9486	1.677031031	5.184305955	-1.27157	2.235706
Mar-18	3.762361	3.4974	1.741015454	7.025673857	-1.75638	3.528274
Feb-18	3.797877	3.5906	1.745842745	7.384633238	-1.84476	3.794033
Jan-18	3.768095	3.6262	1.865510434	7.048648026	-1.76069	3.422448
Dec-17	3.701183	3.5442	1.925460813	6.523816823	-1.61874	2.979617
Nov-17	3.541833	3.4246	1.925253534	6.091605576	-1.49935	2.667006
Oct-17	3.431983	3.378	1.957977427	5.82789354	-1.42002	2.449894
Sep-17	3.401204	3.3638	2.004413584	5.64511762	-1.35939	2.281318
Aug-17	3.407878	3.3836	2.090544282	5.476444129	-1.29306	2.092844
Jul-17	3.418518	3.38	2.160326606	5.288274452	-1.21967	1.908274
Jun-17	3.392543	3.339	2.221693583	5.018208221	-1.11731	1.679208
May-17	3.365344	3.292	2.311373398	4.688668654	-0.98063	1.396669
Apr-17	3.392108	3.255	2.417204395	4.383172984	-0.8378	1.128173
Mar-17	3.391829	3.2124	2.624285445	3.932313758	-0.58811	0.719914



The Department calculated the amount prices could increase or decrease and still remain within the EIA's 95% confidence interval (see Table 2 below) and found that MERC's historical hedging costs have been within the bounds of the 95% confidence interval for the upcoming heating season. In other words, MERC's historical per dekatherm hedging costs have not exceeded the price increases that could reasonably occur in the upcoming heating season.

Based on this analysis, the Department concludes that MERC's recent hedging performance has been reasonable.

C. MERC'S PETITION

1. Extension of Variance

MERC requested a four-year extension of the hedging variances that would apply to financial positions entered into through June 30, 2021. MERC stated that a four-year variance would allow the Company to use financial instruments for the next four heating seasons and allow ample time for the Department and the Commission to review any subsequent hedging variance petition.

MERC proposed that the requested variance be conditioned on the company continuing to provide the reports required in previous hedging variance dockets.[4] MERC stated that these reports would allow the Department and the Commission to review its hedging activities and to order termination of the practice if it is determined that financial instrument cost recovery is resulting in excessive costs to ratepayers.

The Department has reviewed MERC's extension request and concludes that the request is similar to previous MERC hedging variance extension requests that have been approved by the Commission, with the exception of the length of the variance. All previous MERC hedging variance petitions have requested, and been granted, two-year extensions. However, the request is not unusual for a Minnesota natural gas utility, as other natural gas companies have requested, and been granted, four-year variances to continue their hedging programs.[5] The Department sees no reason that MERC should not be granted this longer extension as well.

The Department also agrees with MERC's assertion that continued filing of the reports required in previous hedging dockets,[6] paired with the Commission's authority to revoke the variance if it finds that costs to ratepayers are growing excessive, will protect ratepayers from the risk of hedging costs becoming too high during the variance period.

2. Accounting

MERC proposed to continue the accounting practices authorized in the previous extension, including recording all costs associated with the purchase of financial instruments for hedging purposes in FERC account 804. MERC also proposed to continue recovering these costs through the commodity portion of rates.

The Department has reviewed the accounting portion of MERC's proposal and concludes that it contains no changes from previous variance extensions granted to MERC by the Commission. The Department supports MERC's proposal to continue its existing accounting practices related to hedging.

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[4] Docket Nos. G007,011/M-03-821, G007,011/M-06-1358, G007,011/M-09-262, G007,011/M-13-207, and G011/M-15-231
[5] See Docket Nos. G008/M-15-912 and G002/M-16-88
[6] These reporting requirements are listed below in the recommendations section of these comments.

3. Permitted Financial Instruments

MERC proposed no changes to the types of financial instruments it would be allowed to use under the hedging variance. As in previous variance extension requests, MERC proposed to be allowed to use fixed-price, index-price, and swing contracts, as well as put and call options to form a price 'collar.' Consistent with previous hedging variance extensions, no other use of put options would be permitted without additional Commission approval.

The Department concludes that allowing MERC the flexibility to use put-and-call options, fixed-price, index-price, and swing contracts, and requiring Commission approval before use of put options for any other reason, remains reasonable.

4. Cap on Amount of Financial Hedging

MERC proposed that the existing cap on hedging, 30 percent of total projected heating season volumes, remain in place under the proposed extension. This 30 percent is a part of MERC's 40/30/30 hedging strategy, which calls for MERC to obtain 40 percent of its winter supply requirements at a fixed price[7], 30 percent via financial instruments, and 30 percent from the market.

The Department's review of MERC's 2016 Annual Automatic Adjustment Report (AAA) found that MERC has not changed its hedging strategy from the 2015 report. The Department reviewed the strategy in its comments on MERC's recently accepted 2015 AAA[8] and concluded that MERC had provided reasonable price protection on the hedged portion of its winter gas supplies and that the hedging program had performed as expected. Since MERC's 40/30/30 program provides price certainty for another 40 percent of MERC's winter gas by obtaining the gas at a fixed price, a total of 70 percent of MERC's winter gas supplies are insulated from price volatility, even with the 30 percent cap. The Department does not object to MERC's proposal to continue its hedging program with the 30 percent cap.

5. Reporting Requirements

MERC proposed that the requested variance be conditioned on the Company continuing to provide the reports required in previous hedging variance dockets.[4] The reporting requirements included in this proposal were required in the Commission's May 28, 2015 Order in Docket No. G-011/M-15-231 and are as follows:

[7] This includes storage volumes. See MERC's Initial Filings in Docket No. G999/AA-16-524.
[8] Docket No. G999/AA-15-612. MERC has filed a more recent AAA Report (Docket No. G999/AA-16-524), but that docket is still pending.

- Required MERC to identify separately, in the commodity portion of their monthly PGA filings, the amount of anticipated financial instrument costs and/or benefits included in the calculation of the PGA rate.

- Required MERC to include, in their annual requests for approval of changes in demand entitlements, the following:

  a. a list of all financial-instrument arrangements entered into for the upcoming heating season;
  b. the cost premium associated with each contract;
  c. the size (in Mcf) of each contract;
  d. the contract date;
  e. the contract price;
  f. an attachment that details the projected total system sales estimates for the upcoming heating season, including all supporting data and assumptions used when calculating the sales forecast, and the total number of volumes hedged using financial instruments for the upcoming heating season; and
  g. a detailed discussion of the anticipated benefits to ratepayers related to MERC's financial-instrument contracts.

- Required MERC to include data on the relative benefits of price-hedging contracts, including the average cost per dekatherm for natural gas purchased under financial instruments compared to the comparable monthly and daily spot index prices, in the companies' yearly Automatic Annual Adjustment (AAA) reports due on September 1st of each year, together with:

  a. a list of each hedging instrument entered into;
  b. the total volumes contracted for in each instrument; and
  c. the net gain or loss, including all transaction costs for each instrument in comparison to the appropriate monthly and daily spot prices.

- Required MERC to provide, in its Annual Fuel Report filed yearly on or about September 1st, a full post-mortem analysis of its hedged volumes for the preceding heating season compared to other hedging strategies and the prevailing market prices strategy.
- Required MERC, in its next request for a PGA rule variance, to demonstrate that ratepayers benefit from hedging and that there is not an undue price penalty.

Of the reporting requirements listed above, the first three have been required by Commission Order in each of MERC's previous hedging variance extension requests, which are listed in Table 3 below. The other two reporting requirements have been required in the Commission's Orders in MERC's four most recent hedging variance extension dockets.

The Commission has a long history of requiring these reports from MERC, which are analyzed by the Department when they are submitted in the relevant annual filings. The Department supports the proposal to continue requiring MERC to submit these reports.

D. EXTENSION OF CURRENTLY APPROVED PGA RULES VARIANCE

In its Order dated July 10, 2007, in Docket No. G007,011/M-06-1358, the Commission granted MERC a two-year variance to the PGA rules to allow MERC to recover, through the PGA, prudently incurred costs of directly related futures market instruments. The Commission has granted multiple two-year extensions since the original order. All related orders, including Docket No. G007,011/M-06-1358, are listed in the below table.

Table 3			
Order Date	Docket No.	Order Length	Variance Dates
10-Jul-07	G007,011/M-06-1358	Two-year variance	7/10/07– 6/30/09
30-Jun-09	G007,011/M-09-262	Two-year variance	7/1/09 – 6/30/11
17-Aug-11	G007,011/M-11-296	Two-year variance	7/1/11 – 6/30/13
21-Jun-13	G007,011/M-13-207	Two-year variance	7/1/13 – 6/30/15
28-May-15	G007,011/M-15-231	Two-year variance	7/1/15 – 6/30/17

As noted earlier, the Department concludes that financial hedging can provide appropriate insurance against price increases so long as the costs of hedging are reasonable; therefore, the Department is generally supportive of the use of appropriate hedging instruments as long as these instruments do not unreasonably increase the annual average cost of purchased gas over time.

The Department believes that price stability is an important objective, but it should not be pursued at all costs. The Department also notes that its conclusion regarding the conditions for a variance is contingent upon MERC only using financial instruments for risk hedging on behalf of ratepayers and not for speculation.

The Department concludes that MERC's currently approved variance to the PGA rules should be extended for the same reason it was granted initially. That is, it meets the rule variance conditions provided in Minn. R. 7829.3200. Specifically:

1. *Enforcement of the Rules Would Impose an Excessive Burden upon the Applicant or Others Affected by the Rules*

Enforcement of the rules may not allow MERC to take advantage of the existing financial instruments in the wholesale natural gas markets. Therefore, MERC may not be able to mitigate price volatility by taking advantage of contracts for futures, options and collars (e.g., combination of put/call options). Any price volatility in natural gas markets is passed directly to consumers through the PGA. Therefore, the Department concludes that enforcement of the rules may expose MERC's ratepayers to excessive price volatility, therefore imposing an excessive burden upon MERC's ratepayers.

2. Granting the Variance Would Not Adversely Affect the Public Interest

Based on its earlier discussion, the Department concludes that granting the variance would not adversely affect the public interest. In addition, there is nothing in the Company's proposal that would preclude the Commission from exercising its authority to disallow imprudent or unreasonable transactions. If, in the future, the Commission concludes that MERC acted in an unreasonable manner, it could rule that certain costs were imprudent and should not be recovered from ratepayers. The Company would be required to file reports detailing its hedging costs, and MERC has acknowledged that the Commission has the authority to revoke the variance if it determines that costs have become excessive. As such, the public interest is fully protected.

3. Granting the Variance Would Not Conflict With Standards Imposed by Law

The Commission has previously granted the rule variances in Docket Nos. G007,011/M-06-1358, G007,011/M-09-262, G007,011/M-11-296, G007,011/M-13-207, and G007,011/M-15-231, which determined that a variance to the PGA rules did not conflict with standards imposed by law. As such, the variance is consistent with the purpose of the PGA statute and rules and does not conflict with any other laws.

III. RECOMMENDATIONS

Based on its review and analysis of MERC's petition the Department recommends that the Commission:

1. Extend the variance to Minnesota Rules 7825.2400, 7825.2500, and 7825.2700, originally granted in Docket No. G007,G011/M-06-1358 for four years, until June 30, 2021;
2. Direct MERC to continue the accounting practices required by the existing variance;
3. Allow MERC to continue using the financial instruments allowed in previous hedging variance dockets for its hedging activities;
4. Leave the hedging cap unchanged at 30 percent of MERC's total projected heating season sales volumes;
5. Require MERC to include, in its annual requests for approval of changes in demand entitlements, the following:

   a. a list of all financial-instrument arrangements entered into for the upcoming heating season;
   b. the cost premium associated with each contract;
   c. the size (in dekatherms) of each contract;
   d. the contract date;
   e. the contract price;
   f. an attachment that details the projected total system sales estimates for the upcoming heating season, including all supporting data and assumptions used when calculating the sales forecast, and the total number of volumes hedged using financial instruments for the upcoming heating season; and
   g. a detailed discussion of the anticipated benefits to ratepayers related to MERC's financial-instrument contracts.
6. require MERC to include data on the relative benefits of price-hedging contract, including the average cost per dekatherm for natural gas purchased under financial instruments compared to the comparable monthly and daily spot index prices, in the Company's yearly Automatic Annual Adjustment (AAA) reports due on September 1 of each year, together with:
   a. a list of each hedging instrument entered into;
   b. the total volumes contracted for in each instrument; and
   c. the net gain or loss, including all transaction costs for each instrument in comparison to the appropriate monthly and daily spot prices.
7. Require MERC to provide, in its AAA report, a full post-mortem analysis of its hedged volumes for the preceding heating season compared to other hedging strategies and the prevailing market prices strategy.
8. Require MERC, in its next request for a PGA rule variance, to demonstrate that ratepayers benefit from hedging and that there is not an undue price penalty.

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