

April 16, 2015

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-15-231

Dear Mr. Wolf:

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

A petition (*Petition*) of Minnesota Energy Resources Corporation (MERC) for Extension of Rule Variances to Recover the Costs of Financial Instruments Through the Purchased Gas Adjustment.

The *Petition* was filed on March 6, 2015 by:

Amber S. Lee
Minnesota Energy Resources Corporation
1995 Rahn Cliff Court, Suite 200
Eagan, MN 55122

Based on its review of MERC's *Petition*, the Department recommends that the Commission **approve MERC's request to extend the variance** to the Purchased Gas Adjustment (PGA) rules and require various reporting requirements as detailed in these *Comments*. The Department is available to answer any questions that the Commission may have.

Sincerely,

/s/ MICHAEL N. ZAJICEK
Rates Analyst

MNZ/ja
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET No. G011/M-15-231

I. SUMMARY OF MERC'S PETITION

A. INTRODUCTION

In its June 21, 2013 *Order Granting Variance* in Docket No. G007,011/M-13-207, the Minnesota Public Utilities Commission (Commission) granted Minnesota Energy Resources Corporation (MERC or the Company) a two-year variance to Minnesota Rules parts 7825.2400, 7825.2500, and 7825.2700, the Purchased Gas Adjustment (PGA) rules, to permit MERC to use the PGA to recover the prudent costs of financial instruments used for hedging purposes in securing natural gas supplies for Minnesota ratepayers served by the Company. The current PGA variance approved in Docket No. G007,011/M-11-296 expires on June 30, 2015. The Commission also imposed certain reporting requirements, requiring MERC, in its next request for PGA rule variances, to demonstrate that ratepayers benefit from hedging and that there is not an undue price penalty.

On March 6, 2015, pursuant to Minnesota Statutes §216B.16, subdivision 7, and Minnesota Rules part 7829.3200, MERC requested that the Commission grant a two-year extension to the variance, to expire on June 30, 2017, to allow MERC to continue to recover prudently incurred costs associated with financial instruments used to manage natural gas supplies for its Minnesota ratepayers via the monthly PGA (*Petition*).¹

B. PROPOSED ACCOUNTING

MERC proposed to continue booking the costs associated with all financial instruments in its Federal Energy Regulatory Commission (FERC) Account 804. In addition, MERC stated that it will continue to recover costs associated with these financial instruments through the commodity portion of the PGA.

¹ Minnesota Rules part 7825.2400 does not specifically include financial instrument costs in the definition of the cost of purchased gas.

C. *PROPOSED REPORTING*

MERC proposed in its *Petition* to continue providing the regular reports as required by the Commission in its *Orders* in Docket Nos. G007,011/M-11-296, G007,011/M-09-262, G007,011/M-06-1358, G007,011/M-03-8221, and G007,001/M-13-207. This information allows for ongoing regulatory review.

D. *RATEPAYER BENEFIT ANALYSIS*

As noted above, in its June 21, 2013 *Order* in Docket No. G007,011/M-13-207, the Commission required MERC to provide an analysis demonstrating that ratepayers benefit from hedging and that there is not an undue price penalty. The Company provided an analysis in its initial filing that attempted to address this requirement. The analysis is similar to what was conducted in MERC's previous variance requests.

Specifically, MERC conducted a comparative analysis of its gas cost strategy, which includes fixed price purchases, storage contracts, and financial hedges, compared to market-priced gas over the previous nine heating seasons (*i.e.*, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011, 2011-2012, 2012-2013, 2013-2014, and 2014-2015). Based on MERC's comparative analysis, the Company determined that, over the nine-year period, its purchasing strategy resulted in gas cost savings for its ratepayers of approximately \$4.4 million. When hedging premiums are added, hedging resulted in extra costs to ratepayers of approximately \$26.0 million during this period.

While reviewing these data, MERC noted that the 2008-2009 heating season appeared to be an anomaly. In particular, the Company observed that gas prices during that summer were higher than during the heating season. This pricing pattern is unusual since natural gas prices are typically higher during the heating season than the summer months as a result of higher demand.

The Company stated that this unusual circumstance was likely the result of natural gas prices rising in response to historically high petroleum prices. According to the Company, the correlation between natural gas and crude oil prices began to weaken at the beginning of that winter, resulting in falling prices. (Although not noted by MERC, the drop in natural gas prices also coincided with the beginning of a deep recessionary period in 2008 and 2009. The Department discusses this issue further in its analysis below.)

Given the unusual pricing dynamics during the 2008-2009 heating season, the Company removed these data from its analysis and repeated its comparative analysis. When excluding the 2008-2009 heating season, MERC determined that its gas procurement strategy resulted in total gas cost savings of approximately \$35.6 million over market prices. When hedging premiums of approximately \$22.6 million are added to this figure it results in total cost savings for ratepayers of approximately \$13.0 million. According to the Company,

these results demonstrate that MERC's hedge strategy meets the purpose of hedging: mitigating price volatility and providing reasonably priced natural gas for MERC's customers.

The Minnesota Department of Commerce, Division of Energy Resources (Department or DOC) provides its response to MERC's analysis below.

II. DEPARTMENT ANALYSIS

A. OVERVIEW

The DOC generally supports the reasonable use of financial instruments to hedge against price volatility in both the natural gas and electric markets. However, a utility must show that the financial instruments it enters into are prudently executed and are done to hedge against price volatility, rather than for market speculation. Further, although price stability is an important policy objective, it is important that a utility enter into financial instruments that are cost effective relative to other energy purchasing strategies and that do not place an undue price penalty on ratepayers. The hedging strategy employed by MERC appears to have been very successful during the 2014 Polar Vortex, a several month period of extremely cold weather that covered most of the United States, resulting in substantial cost savings for customers.

B. EXTENSION OF CURRENTLY APPROVED VARIANCE TO PGA RULES

As discussed in MERC's *Petition*, the Commission granted MERC a two-year extension of the variance to Minnesota Rules 7825.2400, 7825.2500, and 7825.2700 in its June 21, 2013 *Order* in Docket No. G007,011/M-13-207; the Commission originally approved the variance in Docket No. G007,011/M-03-821. The approved variance allowed MERC to recover prudently incurred costs of financial instruments used for hedging purposes in securing natural gas supplies for Minnesota ratepayers. In the present docket, MERC requested an additional two-year extension to the PGA rule variance to enable the Company to continue using financial instruments to help reduce the volatility of natural gas prices for its Minnesota ratepayers. As with any requested rule variance, the utility must show that its requested variance is in the public interest and meets the conditions provided in Minnesota Rules part 7829.3200. These conditions are as follows (in the order they are discussed below):

- granting the variance would not conflict with standards imposed by law;
- enforcement of the rules would impose an excessive burden upon the applicant or others affected by the rules; and
- granting the variance would not adversely affect the public interest.

MERC provided a brief justification of each of these requirements on page 6 of its *Petition*. MERC stated that its current proposal does not conflict with standards imposed by law since the Commission has previously granted the PGA variance in Docket Nos. G007,011/M-06-1358; G007,011/M-09-262; G007,011/M-11-296; and No. G007,011/M-13-207. The Department agrees that there does not appear to be any conflict with any statutory provisions.

Regarding whether enforcing the Rule would impose an excessive burden on ratepayers and regarding effects on the public interest, a more detailed discussion is required. In its *Petition*, MERC stated, in part, that approval of its requested rule variances would allow the Company to continue the use of financial instruments that mitigate natural gas price volatility and would help provide reliable and reasonably priced natural gas to its ratepayers. MERC stated that enforcement of the rule would impose an excessive burden on MERC and its ratepayers and would harm the public since ratepayers would not benefit from the reduced price volatility associated with using financial instruments. Although not referenced in its *Petition*, the Company's hedging analysis spreadsheet, filed contemporaneous to the initial *Petition*, attempts to provide support for MERC's conclusion that enforcement of the rule would impose an excessive burden on the Company.

The Department used cost information provided by MERC in the Company's supporting spreadsheet as well as sales information from its most recent general rate case, Docket No. G011/GR-13-617, to analyze ratepayer impacts of MERC's hedging. As noted in the Company's initial filing, over the entire nine-year period that MERC has had operations in Minnesota, the Company's ratepayers were charged approximately \$26.0 million more than the market price for natural gas. Since the total market cost of natural gas was \$663,343,635 during this time and MERC's total costs with hedge premiums was \$689,363,796, MERC ratepayers were charged approximately 3.92 percent more than would have been charged if the Company had purchased gas at the market price over the same period (DOC Attachment 1).²

This additional cost figure is much lower than the 9.71 percent figure that was calculated by the Department in MERC's previous variance request. These results suggest that the "insurance premium" associated with the Company's purchasing strategy, which includes financial instruments, has decreased over the past two years. This is most likely largely due to substantial increases in the market natural gas price during the 2014 Polar Vortex and due to the January 25, 2014 TransCanada Pipeline explosion³.

² The figures in this sentence, total market cost and total MERC costs, are presented in the *Attachment* filed with the Commission on March 6, 2015. However, the general calculation is $3.92\% = (\$689,363,796 - \$663,343,635) / \$663,343,635 * 100$.

³ The explosion shut off natural gas shipments via the TransCanada Pipeline from Manitoba in the midst of the 2014 Polar Vortex.

As shown in the attached graph from the United States Energy Information Agency (EIA), natural gas prices were unusually high in the summer of 2008.⁴ Because this high summer/low winter pricing pattern was highly unusual, it is informative to examine the overall effects of MERC's hedging on ratepayers without 2008 data. When gas costs from the 2008-2009 heating season are removed from consideration, total market costs are \$584,367,611 and MERC's costs with hedge premiums are approximately \$571,414,214. These figures show that the Company's ratepayers were charged approximately 2.22 percent less than market costs (DOC Attachment 1).⁵ This figure represents a reduction of costs for ratepayers, and a significant improvement as compared to the 2.64 percent increase in costs calculated in the previous variance request.

These results suggest that hedging has become cheaper in the last two years. When reviewing the data on an annual basis, it appears that the decrease in MERC's total cost is, considering the extremely high market prices observed during the 2013-2014 heating season, most likely a direct result of the Polar Vortex and the Trans Canada Pipeline explosion that occurred (DOC Attachment 1). Specifically, MERC's total costs were approximately 28.11 percent lower than the prevailing market prices while hedging costs only amounted to 2.55 percent of MERC's total costs. These strictly hedging-related costs have generally decreased on a percentage basis since 2006, which suggests that hedging has become less expensive over the past nine years.⁶

Although the scenario that includes the 2008-2009 heating season indicates that MERC's ratepayers have been charged higher costs than the market, it is important to remember, as noted earlier in these comments, that financial hedging is analogous to insurance. The financial hedges provide a measure of security against price increases and, if done correctly, reduce price volatility. The impact of the 2013-2014 heating season is a perfect example of the usefulness of financial hedging. Due to hedging in the 2013-2014 heating season MERC's ratepayers were charged approximately \$24 million less than market costs. The Department's goal, as part of the following analysis, is to determine what rate impact the Company's hedging program may have on its ratepayers. In other words, the DOC approximates the "insurance premium" that ratepayers are charged for protection against catastrophic price increases.

⁴ This unusual summer price spike and pattern occurred as market prices for numerous commodities, from milk to natural gas, were being bid up just before significant decreases in such prices occurred and the economic downfall happened in earnest.

⁵ Calculated as $2.22\% = (\$571,414,214 - \$584,367,611) / \$584,367,611 * 100$.

⁶ The fact that hedging costs have generally decreased since 2006 is expected because gas prices have generally decreased in that time period. There is, for the most part, a direct relationship between hedging premiums and commodity prices. In other words, as the cost of gas increases, hedge premiums generally increase and vice versa.

As noted above, in the past nine heating seasons, including the anomalous 2008 heating season, MERC’s total purchasing strategy resulted in additional costs of \$26.0 million when compared to market costs, inclusive of hedge premiums, and approximately \$13.0 million less when excluding the 2008-2009 heating season. Using the Commission-approved test year sales figures for the relevant periods, it appears that MERC’s ratepayers were charged the following “hedging insurance premiums” over the past seven heating seasons:

Table 1: Calculation of MERC Ratepayer Per Unit Hedge Costs

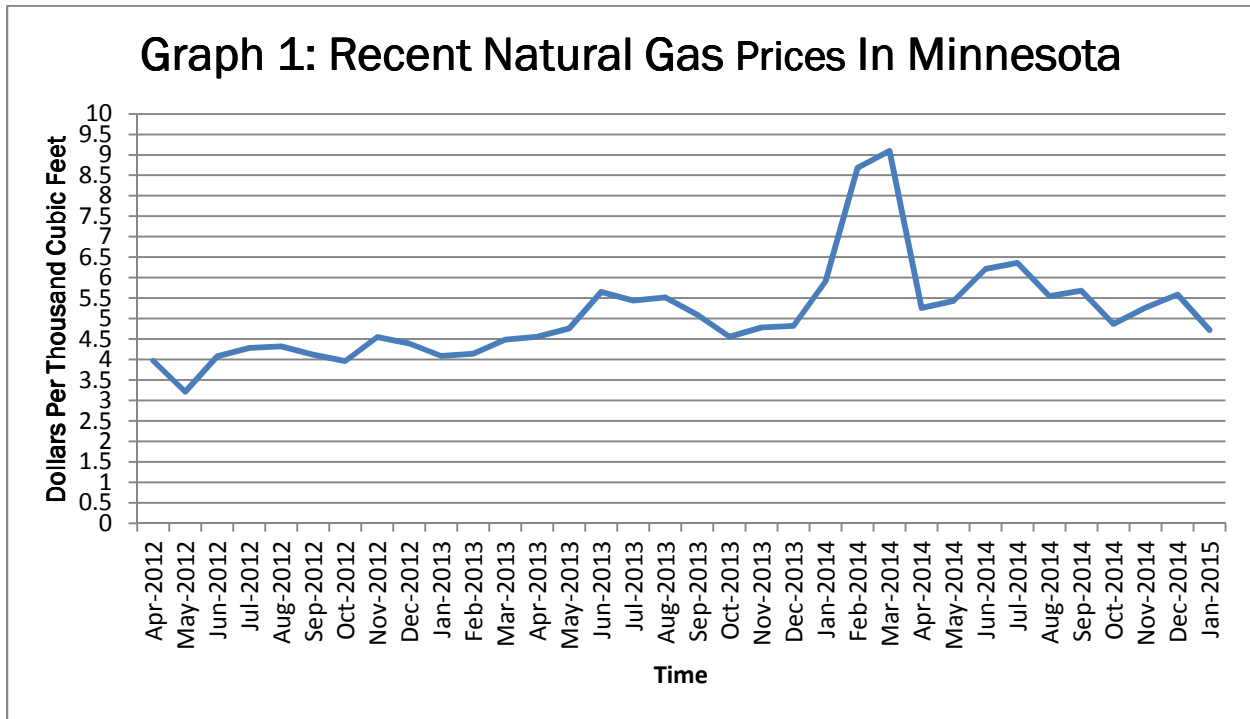
	Difference Between MERC Costs and Market Costs	Test-Year Non-Transport Sales (Dekatherms) (Attachment 1)	Cost Per Dekatherm
Nov 06-Mar07	\$6,593,782	30,332,277	\$0.21738
Nov 07-Mar08	(\$1,402,936)	30,332,277	(\$0.04625)
Nov 08-Mar09	\$38,973,558	30,332,277	\$1.28489
Nov 09-Mar10	(\$5,279,694)	30,332,277	(\$0.17406)
Nov 10-Mar11	\$3,945,634	30,332,277	\$0.13008
Nov 11-Mar12	\$10,941,456	30,332,277	\$0.36072
Nov 12-Mar13	(\$4,984,129)	30,332,277	(\$0.16432)
Nov 13-Mar14	(\$24,018,417)	30,151,672	(\$0.79659)
Nov 14-Mar15	\$1,250,907	30,151,672	\$0.04149

The Department reviewed monthly MERC PGA prices back to July 1999 and observed that, with the exceptions of 2008 and 2011, summer natural gas prices have either been less than heating season prices or approximately the same (DOC Attachment 2). It appears that, since MERC’s first heating season (2006-2007), the Company’s ratepayers have paid approximately \$0.20 per Dekatherm (\$0.12 savings per Dekatherm if the 2008-2009 heating season is removed) for protection against upside price risks. The cost per Dekatherm is relatively low, especially if we remove the 2008-2009 heating season, and since heating season gas costs on MERC’s system have, on occasion over the last 17 years, been more than \$1.00 per Dekatherm greater than summer gas costs, the relative costs incurred for price stability appear to be reasonable at this time (DOC Attachment 1).

The 2013-2014 heating season is a prime example of the benefits that can be obtained due to hedging. As stated above, the Polar Vortex and TransCanada Pipeline explosion both impacted market natural gas prices substantially. MERC’s hedging strategy resulted in substantial savings for rate payers during this time. As shown in Graph 1⁷ below Natural Gas

⁷ Data obtained from the EIA’s website: http://www.eia.gov/dnav/ng/ng_pri_sum_dcu_smn_a.htm

prices spiked during this period to a high of \$9.1 per Thousand Cubic Feet, well above the summer monthly peak price of \$5.65 per Thousand Cubic Feet.



The situation surrounding Hurricane Katrina in 2005 is another cogent example of why hedging generally benefits ratepayers. Prior to the price spikes associated with Hurricanes Katrina and Rita, natural gas prices in the late spring and early summer months were \$1.00 to \$3.00 per Dekatherm less than eventual heating season prices (DOC Attachment 2).

While MERC was not serving its customers at that time,⁸ if MERC's current hedging strategy had been in place during that time, customers would not have been as exposed as they were to market prices. Even though the accumulated costs associated with MERC's hedging costs and purchasing strategy have not been insignificant over the past seven years, the money "saved" by not hedging can easily be erased, in a short amount of time, by an unexpected event such as Hurricane Katrina.⁹

⁸ Aquila was serving customers at that time, and did not have a reasonable hedging strategy in place. Thus, the affected customers were charged high market prices for natural gas.

⁹ The Department referenced the EIA's website for an excellent presentation on natural gas hedging: http://www.eia.gov/energyexplained/index.cfm?page=natural_gas_factors_affecting_prices. For ease of reference, the EIA information is also attached to these comments.

Based on its review of the Company's proposal and the above analysis, the Department concludes that enforcement of the PGA rules would impose an excessive burden on MERC and its customers and that the public interest is not adversely affected by varying these rules.

C. REPORTING REQUIREMENTS

The Department recommends that the Commission require the Company to continue to report the information required by the Commission in its June 21, 2013 *Order* in Docket No. G007,011/M-13-207. These reporting requirements are listed in the recommendations and conclusions section of these comments.

D. ADDITIONAL COMMENTS

Given the time between when these comments are filed and the expiration of the current Commission-approved PGA variance on June 30, 2015 and the fact that MERC is not proposing any changes to the approved variance, the Department recommends that the Commission allow the Company to use financial instruments, under the terms of the current variance, until an Order is issued in this docket.

III. DOC RECOMMENDATIONS AND CONCLUSIONS

The following recommendations are consistent with the Commission's previous Orders related to MERC's PGA rules variance. Based on its review of MERC's *Petition*, the Department recommends that the Commission:

- Find that MERC's variance extension request complies with the requirements set forth in Minnesota Rules 7825.3200;
- Extend the variance to Minnesota Rules parts 7825.2400, 7825.2500, and 7825.2700 for a two-year period ending June 30, 2017 and allow the Company to use financial instruments, under the terms of the existing variance, until an Order is issued in this docket;
- Allow the variance to apply to all Commission-approved financial positions that MERC will enter into during the period of the two-year variance extension ending June 30, 2017;
- Continue to allow MERC to engage in "put" options in combination with "call" options to form a collar, but deny MERC's use of "put" options for any other reasons without specific Commission approval;

- Require 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;
- Require 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.
- Require 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.
- Require 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; and
- 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.

EIA Attachment

Natural gas prices are a function of market supply and demand. Because of limited alternatives for natural gas consumption or production in the near term, even small changes in supply or demand over a short period can result in large price movements that bring supply and demand back into balance. See the [June 12, 2012](#) and [April 11, 2014](#)¹⁰ *Today in Energy* articles for recent examples.

There are three supply side factors that may affect prices:

- Variations in the amount of natural gas being produced
- The volume of gas being imported and/or exported
- The amount of gas in storage facilities (referred to as storage levels)

Increases in supply tend to result in lower prices, and decreases in supply tend to increase prices. There are three demand side factors that may affect prices:

- The level of economic growth
- Variations in winter and summer weather
- Oil prices (the effects of oil prices on natural gas prices varies by global region)

Higher demand tends to lead to higher prices, while lower demand tends to lead to lower prices.

- a. Domestic natural gas prices driven primarily by supply

Most of the natural gas consumed in the United States comes from domestic production. U.S. dry production increased from 2006 to 2013, when it reached its highest recorded annual total. The increases in production were the result of more efficient, cost-effective drilling and completion techniques, notably in the production of natural gas from shale formations. See the [March 11, 2014](#) *Today in Energy* article. Increased natural gas supply tends to lower prices. For example, average wholesale (spot) prices for natural gas fell significantly throughout the United States in 2012 compared to 2011. A mild 2011-12 winter, high natural gas inventories, and rising natural gas production in the Marcellus and Eagle Ford basins contributed to [lower average spot natural gas prices at Henry Hub](#).

- b. Severe weather can disrupt production

Hurricanes and other severe weather can affect the supply of natural gas. For example, in the summer of 2005, hurricanes along the U.S. Gulf Coast shut down about 4% of total U.S. production between August 2005 and June 2006.

- c. Economic growth can affect natural gas demand and prices

The strength of the economy greatly influences' natural gas markets. During periods of economic growth, the increased demand for goods and services from the commercial and industrial sectors generates an increase in natural gas demand. This is particularly true in the industrial sector, which uses natural gas as both a plant fuel and as a feedstock for many products such as fertilizer and pharmaceuticals (see *Annual Energy Outlook 2014* Issues in Focus article "[Effects of lower natural gas prices on projected industrial production](#)"). The increased demand can lead to increased production and higher prices. Declining or weak economic growth tends to have the opposite effect.

¹⁰ <http://www.eia.gov/todayinenergy/detail.cfm?id=15811>

d. Winter weather strongly influences residential and commercial demand

During cold months, residential, and commercial end users consume natural gas for heating, which places upward pressure on prices as demand increases. If unexpected or severe weather occurs, the effect on prices intensifies because supply is often unable to react quickly to short-term increases in demand. The effects of weather on natural gas prices may be exacerbated if the natural gas transportation system is already operating at full capacity. Under these conditions, prices tend to increase, which reduces overall demand for natural gas. Natural gas supplies that were placed in storage during periods of lesser demand may be used to cushion the impact of high demand during inclement weather.

e. Hot summer weather can increase power plant demand for gas

Temperatures can also have an effect on prices during the cooling season. About 30% of U.S. electricity is generated by natural gas. Warmer than normal temperatures can increase the demand for air conditioning which increases the power sector's demand for natural gas and can lead to increased prices.

f. Natural gas supplies held in storage play a key role in meeting peak demand

The overall supply picture is also influenced by the level of natural gas held in underground storage fields. During the heating season, natural gas in storage is a critical supply component. Natural gas in storage helps satisfy sudden shifts in supply and demand, helps accommodate stable production rates, and helps support pipeline operations and hub services. Levels of natural gas in storage typically increase during the refill season (April through October) when demand for natural gas is low, and decrease during the heating season (November through March) when space heating demand for natural gas is high. Natural gas in storage represents a source of supply immediately available to the market. This can counteract the effects of sudden increases in demand for natural gas, or counteract supply disruptions that cause demand to exceed supply and lead to higher prices.

g. Competition with other fuels can influence natural gas prices

Large-volume gas consumers (primarily industrial consumers and the electricity generation fleet) can switch between natural gas, coal, and oil, depending on the prices of each fuel. Because of the interrelationship among these fuel markets, when prices of the other fuels fall, any shift in demand from natural gas to coal or oil reduces natural gas demand and pulls natural gas prices down. When prices of the competing fuels rise relative to natural gas prices, there may be a cutover from the competing fuels to natural gas, increasing its use and pushing natural gas prices up.

While 39% of electricity was generated from coal in 2013, the use of natural gas for electricity generation has been on the rise, generating 27% of electricity in 2013. Electricity generation using natural gas can become attractive in some areas of the country when the price of natural gas on an energy equivalent basis becomes lower than the price of coal.

MERC Price Analysis Comparing Market Costs and MERC's Purchasing Strategy

	Total Volumes Dth	Hedge Price	Market Price	Total Cost	Market Cost	Option Premium
Nov-06	2,094,022	\$ 7.9441	\$ 7.8611	\$ 16,635,203	\$ 16,461,230	\$ 1,008,050
Dec-06	2,933,371	\$ 7.8817	\$ 8.3981	\$ 23,119,820	\$ 24,634,656	\$ 1,319,950
Jan-07	3,879,743	\$ 7.4519	\$ 6.7660	\$ 28,911,394	\$ 26,250,292	\$ 1,377,600
Feb-07	3,125,703	\$ 7.4995	\$ 7.4796	\$ 23,441,290	\$ 23,378,923	\$ 1,117,000
Mar-07	1,977,916	\$ 8.0179	\$ 8.0405	\$ 15,858,816	\$ 15,903,390	\$ 433,150
Nov-07	2,379,470	\$ 6.6183	\$ 6.9327	\$ 15,748,099	\$ 16,496,089	\$ 574,530
Dec-07	3,301,424	\$ 6.9778	\$ 7.4342	\$ 23,036,604	\$ 24,543,309	\$ 799,650
Jan-08	3,425,504	\$ 6.6961	\$ 6.8895	\$ 22,937,661	\$ 23,599,879	\$ 1,345,200
Feb-08	3,426,565	\$ 7.0842	\$ 7.7968	\$ 24,274,345	\$ 26,716,226	\$ 1,224,500
Mar-08	2,162,964	\$ 8.2366	\$ 8.7103	\$ 17,815,471	\$ 18,840,043	\$ 1,036,550
Nov-08	2,325,950	\$ 7.0804	\$ 5.1538	\$ 16,468,650	\$ 11,987,569	\$ 1,006,259
Dec-08	3,231,252	\$ 7.4056	\$ 6.1875	\$ 23,929,200	\$ 19,993,463	\$ 1,452,600
Jan-09	3,603,036	\$ 7.4309	\$ 5.7758	\$ 26,773,862	\$ 20,810,347	\$ 1,885,500
Feb-09	2,773,695	\$ 6.8553	\$ 4.5814	\$ 19,014,445	\$ 12,707,498	\$ 1,832,166
Mar-09	3,422,913	\$ 6.9927	\$ 3.9373	\$ 23,935,550	\$ 13,477,147	\$ 1,651,350
Nov-09	2,246,790	\$ 4.6579	\$ 4.7393	\$ 10,465,435	\$ 10,648,136	\$ 436,264
Dec-09	3,567,851	\$ 4.2243	\$ 4.8401	\$ 15,071,707	\$ 17,268,779	\$ 881,638
Jan-10	3,325,077	\$ 5.1513	\$ 6.1481	\$ 17,128,323	\$ 20,442,743	\$ 935,710
Feb-10	3,251,807	\$ 4.6635	\$ 5.7194	\$ 15,164,962	\$ 18,598,423	\$ 855,121
Mar-10	2,325,209	\$ 4.9206	\$ 4.9630	\$ 11,441,537	\$ 11,540,060	\$ 837,750
Nov-10	2,320,191	\$ 4.0574	\$ 3.5187	\$ 9,413,828	\$ 8,164,115	\$ 320,828
Dec-10	3,190,741	\$ 4.3372	\$ 4.4683	\$ 13,838,799	\$ 14,257,330	\$ 474,527
Jan-11	3,992,468	\$ 4.2713	\$ 4.2885	\$ 17,053,113	\$ 17,121,524	\$ 663,760
Feb-11	2,774,214	\$ 4.3609	\$ 4.5556	\$ 12,098,073	\$ 12,638,110	\$ 632,650
Mar-11	2,913,406	\$ 4.3062	\$ 3.9265	\$ 12,545,766	\$ 11,439,383	\$ 524,752
Nov-11	2,369,215	\$ 4.0902	\$ 3.6834	\$ 9,690,676	\$ 8,726,733	\$ 209,720
Dec-11	3,089,990	\$ 3.9287	\$ 3.5659	\$ 12,139,593	\$ 11,018,680	\$ 317,490
Jan-12	3,859,123	\$ 3.8432	\$ 3.1567	\$ 14,831,482	\$ 12,182,110	\$ 427,300
Feb-12	2,907,104	\$ 3.5502	\$ 2.7424	\$ 10,320,828	\$ 7,972,547	\$ 395,870
Mar-12	2,126,348	\$ 3.5169	\$ 2.4981	\$ 7,478,104	\$ 5,311,927	\$ 342,390
Nov-12	2,748,282	\$ 3.0723	\$ 3.5997	\$ 8,443,442	\$ 9,893,027	\$ 190,740
Dec-12	3,760,230	\$ 3.2446	\$ 3.8437	\$ 12,200,397	\$ 14,453,104	\$ 338,070
Jan-13	4,380,987	\$ 3.1769	\$ 3.4640	\$ 13,917,889	\$ 15,175,738	\$ 455,680
Feb-13	3,651,777	\$ 3.0866	\$ 3.4325	\$ 11,271,484	\$ 12,534,758	\$ 435,130
Mar-13	2,841,185	\$ 3.2590	\$ 3.4379	\$ 9,259,469	\$ 9,767,743	\$ 327,940
Nov-13	2,067,337	\$ 3.8608	\$ 3.7262	\$ 7,981,559	\$ 7,703,380	\$ 150,760
Dec-13	2,831,949	\$ 3.8027	\$ 3.7930	\$ 10,769,017	\$ 10,741,582	\$ 241,290
Jan-14	3,298,103	\$ 4.0672	\$ 4.7863	\$ 13,414,032	\$ 15,785,822	\$ 403,910
Feb-14	2,884,247	\$ 4.4144	\$ 7.6675	\$ 12,732,280	\$ 22,114,898	\$ 421,980
Mar-14	2,757,968	\$ 5.4292	\$ 10.5544	\$ 14,973,599	\$ 29,108,612	\$ 347,450
Nov-14	2,202,306			\$ 8,895,245	\$ 8,224,727	\$ 132,690
Dec-14	2,527,022			\$ 11,536,331	\$ 12,881,189	\$ 275,180
Jan-15	3,275,029			\$ 12,960,261	\$ 11,828,394	\$ 385,510
Feb-15						
Mar-15						

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 Comparative Pricing Analysis
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	Volumes Dth	Hedge Price	Market Price	Premium Price	Option/ Premium Price	Total Cost	Market Cost	Premium Cost	Total/ Premium Cost	Hedging Premiums as Percentage of Total Costs
Nov 06-Mar 07	14,010,755	\$ 7.7060	\$ 7.6105	\$ 0.3751	\$ 8.0811	\$ 107,966,523	\$ 106,628,491	\$ 5,255,750	\$ 113,222,273	4.93%
Nov 07-Mar 08	14,695,927	\$ 7.0640	\$ 7.4984	\$ 0.3389	\$ 7.4029	\$ 103,812,180	\$ 110,195,546	\$ 4,980,430	\$ 108,792,610	4.52%
Nov 08-Mar 09	15,356,846	\$ 7.1709	\$ 5.1427	\$ 0.5097	\$ 7.6806	\$ 110,121,707	\$ 78,976,024	\$ 7,827,875	\$ 117,949,582	9.91%
Nov 09-Mar 10	14,716,734	\$ 4.7070	\$ 5.3339	\$ 0.2682	\$ 4.9752	\$ 69,271,964	\$ 78,498,141	\$ 3,946,483	\$ 73,218,447	5.03%
Nov 10-Mar 11	15,191,020	\$ 4.2755	\$ 4.1880	\$ 0.1722	\$ 4.4478	\$ 64,949,579	\$ 63,620,462	\$ 2,616,517	\$ 67,566,096	4.11%
Nov 11-Mar 12	14,351,780	\$ 3.7947	\$ 3.1503	\$ 0.1179	\$ 3.9126	\$ 54,460,683	\$ 45,211,997	\$ 1,692,770	\$ 56,153,453	3.74%
Nov 12-Mar 13	17,382,461	\$ 3.1694	\$ 3.5567	\$ 0.1005	\$ 3.2700	\$ 55,092,681	\$ 61,824,370	\$ 1,747,560	\$ 56,840,241	2.83%
Nov 13-Mar 14	13,839,604	\$ 4.3260	\$ 6.1746	\$ 0.1131	\$ 4.4391	\$ 59,870,487	\$ 85,454,294	\$ 1,565,390	\$ 61,435,877	1.83%
Nov 14-Jan 15	8,004,357	\$ 4.1717	\$ 4.1145	\$ 0.0991	\$ 4.2708	\$ 33,391,837	\$ 32,934,310	\$ 793,380	\$ 34,185,217	2.41%
Total	127,549,484	\$ 5.1661	\$ 5.2007	\$ 0.2385	\$ 5.4047	\$ 658,937,641	\$ 663,343,635	\$ 30,426,155	\$ 689,363,796	3.92%
						5,166133334	\$ 5.20	\$ 0.24	\$ 5.40	
		\$ (0.0345)		\$ 0.2385	\$ 0.2040	\$ (4,405,994)		\$ 30,426,155	\$ 26,020,161	
				\$ 5.4047					\$ 26,020,161	
						\$ (0.0345)		\$ 0.2385	\$ 0.2040	

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	Difference Total Cost and Market Cost	Premium Cost	Difference MERC Strategy and Market	Percentage Difference	Commission-approved Non-Transport Sales	Rate Impact of MERC's Strategy
Nov 06-Mar07	\$1,338,032.00	\$ 5,255,750	\$6,593,782.00	6.18%	30,332,277	\$0.21738
Nov 07-Mar08	(\$6,383,366.00)	\$ 4,980,430	(\$1,402,936.00)	-1.27%	30,332,277	(\$0.04625)
Nov 08-Mar09	\$31,145,683.00	\$ 7,827,875	\$38,973,558.00	49.35%	30,332,277	\$1.28489
Nov 09-Mar10	(\$9,226,177.00)	\$ 3,946,483	(\$5,279,694.00)	-6.73%	30,332,277	(\$0.17406)
Nov 10-Mar11	\$1,329,117.00	\$ 2,616,517	\$3,945,634.00	6.20%	30,332,277	\$0.13008
Nov 11-Mar12	\$9,248,686.00	\$ 1,692,770	\$10,941,456.00	24.20%	30,332,277	\$0.36072
Nov 12-Mar13	(\$6,731,689.00)	\$ 1,747,560	(\$4,984,129.00)	-8.06%	30,332,277	(\$0.16432)
Nov 13-Mar14	(\$25,583,807.00)	\$ 1,565,390	(\$24,018,417.00)	-28.11%	30,151,672	(\$0.79659)
Nov 14-Mar15	\$457,527.00	\$ 793,380	\$1,250,907.00	3.80%	30,151,672	\$0.04149

MERC Price Analysis Comparing Market Costs and MERC's Purchasing Strategy

	Total			Total	Market	Option
	Volumes	Hedge	Market	Total	Market	Option
	Dth	Price	Price	Cost	Cost	Premium
Nov-06	2,094,022	\$ 7.9441	\$ 7.8611	\$ 16,635,203	\$ 16,461,230	\$ 1,008,050
Dec-06	2,933,371	\$ 7.8817	\$ 8.3981	\$ 23,119,820	\$ 24,634,656	\$ 1,319,950
Jan-07	3,879,743	\$ 7.4519	\$ 6.7660	\$ 28,911,394	\$ 26,250,292	\$ 1,377,600
Feb-07	3,125,703	\$ 7.4995	\$ 7.4796	\$ 23,441,290	\$ 23,378,923	\$ 1,117,000
Mar-07	1,977,916	\$ 8.0179	\$ 8.0405	\$ 15,858,816	\$ 15,903,390	\$ 433,150
Nov-07	2,379,470	\$ 6.6183	\$ 6.9327	\$ 15,748,099	\$ 16,496,089	\$ 574,530
Dec-07	3,301,424	\$ 6.9778	\$ 7.4342	\$ 23,036,604	\$ 24,543,309	\$ 799,650
Jan-08	3,425,504	\$ 6.6961	\$ 6.8895	\$ 22,937,661	\$ 23,599,879	\$ 1,345,200
Feb-08	3,426,565	\$ 7.0842	\$ 7.7968	\$ 24,274,345	\$ 26,716,226	\$ 1,224,500
Mar-08	2,162,964	\$ 8.2366	\$ 8.7103	\$ 17,815,471	\$ 18,840,043	\$ 1,036,550
Nov-09	2,246,790	\$ 4.6579	\$ 4.7393	\$ 10,465,435	\$ 10,648,136	\$ 436,264
Dec-09	3,567,851	\$ 4.2243	\$ 4.8401	\$ 15,071,707	\$ 17,268,779	\$ 881,638
Jan-10	3,325,077	\$ 5.1513	\$ 6.1481	\$ 17,128,323	\$ 20,442,743	\$ 935,710
Feb-10	3,251,807	\$ 4.6635	\$ 5.7194	\$ 15,164,962	\$ 18,598,423	\$ 855,121
Mar-10	2,325,209	\$ 4.9206	\$ 4.9630	\$ 11,441,537	\$ 11,540,060	\$ 837,750
Nov-10	2,320,191	\$ 4.0574	\$ 3.5187	\$ 9,413,828	\$ 8,164,115	\$ 320,828
Dec-10	3,190,741	\$ 4.3372	\$ 4.4683	\$ 13,838,799	\$ 14,257,330	\$ 474,527
Jan-11	3,992,468	\$ 4.2713	\$ 4.2885	\$ 17,053,113	\$ 17,121,524	\$ 663,760
Feb-11	2,774,214	\$ 4.3609	\$ 4.5556	\$ 12,098,073	\$ 12,638,110	\$ 632,650
Mar-11	2,913,406	\$ 4.3062	\$ 3.9265	\$ 12,545,766	\$ 11,439,383	\$ 524,752
Nov-11	2,369,215	\$ 4.0902	\$ 3.6834	\$ 9,690,676	\$ 8,726,733	\$ 209,720
Dec-11	3,089,990	\$ 3.9287	\$ 3.5659	\$ 12,139,593	\$ 11,018,680	\$ 317,490
Jan-12	3,859,123	\$ 3.8432	\$ 3.1567	\$ 14,831,482	\$ 12,182,110	\$ 427,300
Feb-12	2,907,104	\$ 3.5502	\$ 2.7424	\$ 10,320,828	\$ 7,972,547	\$ 395,870
Mar-12	2,126,348	\$ 3.5169	\$ 2.4981	\$ 7,478,104	\$ 5,311,927	\$ 342,390
Nov-12	2,748,282	\$ 3.0723	\$ 3.5997	\$ 8,443,442	\$ 9,893,027	\$ 190,740
Dec-12	3,760,230	\$ 3.2446	\$ 3.8437	\$ 12,200,397	\$ 14,453,104	\$ 338,070
Jan-13	4,380,987	\$ 3.1769	\$ 3.4640	\$ 13,917,889	\$ 15,175,738	\$ 455,680
Feb-13	3,651,777	\$ 3.0866	\$ 3.4325	\$ 11,271,484	\$ 12,534,758	\$ 435,130
Mar-13	2,841,185	\$ 3.2590	\$ 3.4379	\$ 9,259,469	\$ 9,767,743	\$ 327,940
Nov-13	2,067,337	\$ 3.8608	\$ 3.7262	\$ 7,981,559	\$ 7,703,380	\$ 150,760
Dec-13	2,831,949	\$ 3.8027	\$ 3.7930	\$ 10,769,017	\$ 10,741,582	\$ 241,290
Jan-14	3,298,103	\$ 4.0672	\$ 4.7863	\$ 13,414,032	\$ 15,785,822	\$ 403,910
Feb-14	2,884,247	\$ 4.4144	\$ 7.6675	\$ 12,732,280	\$ 22,114,898	\$ 421,980
Mar-14	2,757,968	\$ 5.4292	\$ 10.5544	\$ 14,973,599	\$ 29,108,612	\$ 347,450
Nov-14	2,202,306	\$ 4.0391	\$ 3.7346	\$ 8,895,245	\$ 8,224,727	\$ 132,690
Dec-14	2,527,022	\$ 4.5652	\$ 5.0974	\$ 11,536,331	\$ 12,881,189	\$ 275,180
Jan-15	3,275,029	\$ 3.9573	\$ 3.6117	\$ 12,960,261	\$ 11,828,394	\$ 385,510
Feb-15						
Mar-15						

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	Volumes Dth	Hedge Price	Market Price	Premium Price	Option/ Premium Price	Total Cost	Market Cost	Premium Cost	Total/ Premium Cost	Hedging Premiums as Percentage of Total Costs
Nov 06-Mar07	14,010,755	\$ 7.7060	\$ 7.6105	\$ 0.3751	\$ 8.0811	\$ 107,966,523	\$ 106,628,491	\$ 5,255,750	\$ 113,222,273	4.64%
Nov 07-Mar08	14,695,927	\$ 7.0640	\$ 7.4984	\$ 0.3389	\$ 7.4029	\$ 103,812,180	\$ 110,195,546	\$ 4,980,430	\$ 108,792,610	4.58%
Nov 09-Mar10	14,716,734	\$ 4.7070	\$ 5.3339	\$ 0.2682	\$ 4.9752	\$ 69,271,964	\$ 78,498,141	\$ 3,946,483	\$ 73,218,447	5.39%
Nov 10-Mar11	15,191,020	\$ 4.2755	\$ 4.1880	\$ 0.1722	\$ 4.4478	\$ 64,949,579	\$ 63,620,462	\$ 2,616,517	\$ 67,566,096	3.87%
Nov 11-Mar12	14,351,780	\$ 3.7947	\$ 3.1503	\$ 0.1179	\$ 3.9126	\$ 54,460,683	\$ 45,211,997	\$ 1,692,770	\$ 56,153,453	3.01%
Nov 12-Mar13	17,382,461	\$ 3.1694	\$ 3.5567	\$ 0.1005	\$ 3.2700	\$ 55,092,681	\$ 61,824,370	\$ 1,747,560	\$ 56,840,241	3.07%
Nov 13-Mar14	13,839,604	\$ 4.3260	\$ 6.1746	\$ 0.1131	\$ 4.4391	\$ 59,870,487	\$ 85,454,294	\$ 1,565,390	\$ 61,435,877	2.55%
Nov14-Jan15	8,004,357	\$ 4.1717	\$ 4.1145	\$ 0.0991	\$ 4.2708	\$ 33,391,837	\$ 32,934,310	\$ 793,380	\$ 34,185,217	2.32%
Total	112,192,638	\$ 4.8917	\$ 5.2086	\$ 0.2014	\$ 5.0932	\$ 548,815,934	\$ 584,367,611	\$ 22,598,280	\$ 571,414,214	-2.22%
						4,891728582	\$ 5.21	\$ 0.20	\$ 5.09	
		\$ (0.3169)		\$ 0.2014	\$ (0.1155)	\$ (35,551,677)		\$ 22,598,280	\$ (12,953,397)	
									\$ (12,953,397)	
									\$ (0.1155)	
						\$ (0.3169)		\$ 0.2014	\$ (0.1155)	

	Difference Total Cost and Market Cost	Premium Cost	Difference MERC Strategy and Market	Percentage Difference	Commission-approved Non-Transport Sales	Rate Impact of MERC's Strategy
Nov 06-Mar07	\$ 1,338,032	\$ 5,255,750	\$6,593,782.00	6.18%	30,332,277	\$0.21738
Nov 07-Mar08	\$ (6,383,366)	\$ 4,980,430	(\$1,402,936.00)	-1.27%	30,332,277	(\$0.04625)
Nov 09-Mar10	\$ (9,226,177)	\$ 3,946,483	(\$5,279,694.00)	-6.73%	30,332,277	(\$0.17406)
Nov 10-Mar11	\$ 1,329,117	\$ 2,616,517	\$3,945,634.00	6.20%	30,332,277	\$0.13008
Nov 11-Mar12	\$ 9,248,686	\$ 1,692,770	\$10,941,456.00	24.20%	30,332,277	\$0.36072
Nov 12-Mar13	\$ (6,731,689)	\$ 1,747,560	(\$4,984,129.00)	-8.06%	30,332,277	(\$0.16432)
Nov 13-Mar14	\$ (25,583,807)	\$ 1,565,390	(\$24,018,417.00)	-28.11%	30,151,672	(\$0.79659)
Nov 14-Mar15	\$ 457,527	\$ 793,380	\$1,250,907.00	3.80%	30,151,672	\$0.04149

Total MERC PGA Costs: July 1999 through April 2013

	<u>NMU</u>	<u>Northern</u>	<u>Viking</u>	<u>Great Lakes</u>	<u>Merc Combined</u>	<u>Average</u>
Jul-99	3.2549	3.2775	2.4951	2.5153		2.8857
Aug-99	3.5944	3.6617	2.8029	2.7525		3.2029
Sep-99	3.9636	3.8645	3.1789	3.1173		3.5311
Oct-99	3.6484	3.5982	2.8133	2.7616		3.2054
Nov-99	4.0720	3.9922	3.8629	3.5273		3.8636
Dec-99	3.2724	3.2964	2.9370	2.6800		3.0465
Jan-00	3.4186	3.4103	3.1090	2.8478		3.1964
Feb-00	3.6473	3.6238	3.3605	3.0925		3.4310
Mar-00	3.6520	3.6084	3.3376	3.0664		3.4161
Apr-00	3.9399	3.8558	3.5379	3.2338		3.6419
May-00	4.1156	4.0206	3.7193	3.4232		3.8197
Jun-00	5.3208	5.3176	4.8682	4.5619		5.0171
Jul-00	5.4934	5.3779	5.1810	4.8665		5.2297
Aug-00	4.8516	4.7908	4.3746	4.0634		4.5201
Sep-00	5.7508	5.7369	5.2934	4.8872		5.4171
Oct-00	6.5027	6.6163	6.0498	5.6698		6.2097
Nov-00	5.6952	5.5499	5.4546	5.2099		5.4774
Dec-00	7.1995	6.9308	6.9596	6.8283		6.9796
Jan-01	11.4926	11.2181	10.9928	10.5160		11.0549
Feb-01	7.8600	7.6462	7.2818	7.3007		7.5222
Mar-01	6.3334	6.3950	5.9609	5.6700		6.0898
Apr-01	6.6609	6.9434	6.1869	6.0320		6.4558
May-01	5.7752	5.5392	5.6857	5.5207		5.6302
Jun-01	4.6027	4.5958	4.5136	4.1501		4.4656
Jul-01	4.2646	4.7218	3.9506	3.3357		4.0682
Aug-01	4.2056	4.6876	3.9353	3.2849		4.0284
Sep-01	3.5303	4.1243	3.0488	2.6286		3.3330
Oct-01	2.8553	3.2690	2.5761	2.0291		2.6824
Nov-01	4.3262	5.0233	4.0661	3.6919		4.2769
Dec-01	3.6310	4.0888	3.1279	2.7788		3.4066
Jan-02	3.9052	4.3490	3.4619	3.0979		3.7035
Feb-02	3.9777	4.8872	2.8363	2.4833		3.5461
Mar-02	3.9074	3.9264	3.2354	2.8696		3.4847
Apr-02	4.2549	4.3035	4.1644	3.9278		4.1627
May-02	4.0758	4.1326	4.0096	3.5335		3.9379
Jun-02	4.1453	4.0707	4.1118	3.1101		3.8595
Jul-02	3.8252	4.0199	3.4711	3.0509		3.5918
Aug-02	3.5065	3.7226	3.1980	2.7802		3.3018
Sep-02	3.9093	4.0420	3.6332	3.2114		3.6990
Oct-02	4.4532	4.3606	4.6390	4.2081		4.4152
Nov-02	4.9725	5.1762	5.1429	4.6755		4.9918
Dec-02	4.9212	5.1337	5.0007	4.6545		4.9275
Jan-03	5.2170	5.3531	5.3093	4.9652		5.2112

Feb-03	5.6303	5.7900	5.7373	5.3928		5.6376
Mar-03	7.5089	7.5973	7.7758	7.4256		7.5769
Apr-03	5.5081	5.4568	5.9212	5.5243		5.6026
May-03	5.4407	5.3949	5.8120	5.4191		5.5167
Jun-03	6.4080	6.8219	6.5511	6.1501		6.4828
Jul-03	5.8371	6.2237	5.8714	5.4816		5.8535
Aug-03	5.3869	5.7222	5.3973	5.0155		5.3805
Sep-03	5.6236	6.0139	5.6369	5.2531		5.6319
Oct-03	5.2246	5.4824	5.2970	4.9183		5.2306
Nov-03	5.6982	6.0254	5.6005	5.1660		5.6225
Dec-03	5.9432	6.1322	5.9023	5.4653		5.8608
Jan-04	6.4950	6.7645	6.5457	6.0575		6.4657
Feb-04	6.6500	6.6544	6.7863	6.3463		6.6093
Mar-04	6.4765	6.3340	6.6596	6.2209		6.4228
Apr-04	6.0430	6.2943	6.0289	5.6273		5.9984
May-04	6.6262	6.8506	6.6383	6.2339		6.5873
Jun-04	7.2725	7.5794	7.2256	6.8182		7.2239
Jul-04	6.6295	7.0254	6.5207	6.1173		6.5732
Aug-04	6.8260	7.1338	6.7787	6.3771		6.7789
Sep-04	5.7272	6.1013	5.6761	5.2995		5.7010
Oct-04	6.2143	6.3279	6.3391	5.9594		6.2102
Nov-04	7.9189	8.4013	7.9900	7.5800		7.9726
Dec-04	7.7125	7.9866	7.9311	7.5239		7.7885
Jan-05	7.2175	7.5150	7.3654	7.0121		7.2775
Feb-05	7.3335	7.5855	7.5165	7.1671		7.4007
Mar-05	7.3769	7.5533	7.6138	7.2684		7.4531
Apr-05	7.7438	7.9405	7.9665	7.6164		7.8168
May-05	7.3500	7.8139	7.3608	7.0240		7.3872
Jun-05	6.7248	7.2033	6.7271	6.3904		6.7614
Jul-05	7.3397	7.8876	7.2878	6.9510		7.3665
Aug-05	7.8886	8.3740	7.8844	7.5477		7.9237
Sep-05	10.5165	10.6790	10.7205	10.387		10.5758
Oct-05	12.9749	12.8010	13.4323	13.1047		13.0782
Nov-05	11.0347	11.4485	11.0612	10.6839		11.0571
Dec-05	10.0288	10.2442	10.1945	9.8207		10.0721
Jan-06	10.2337	10.6332	10.1587	9.8378		10.2159
Feb-06	9.3247	9.2685	9.5748	9.2565		9.3561
Mar-06	8.8179	8.6744	9.1278	8.8115		8.8579
Apr-06	7.5456	7.9442	7.4199	7.1445		7.5136
May-06	7.1845	7.5197	7.0649	6.7891		7.1396
Jun-06	6.2957	6.5229	6.2503	5.9739		6.2607
Jul-06	6.4638	6.6642	6.2763	6.0063		6.3527
Aug-06	7.5322	7.5176	7.495	7.2179		7.4407
Sep-06	7.1379	6.9341	7.2353	6.9576		7.0662
Oct-06	5.0041	5.1190	4.8565	4.5785		4.8895
Nov-06	8.2693	8.3530	8.1627	7.8832		8.1671
Dec-06	8.8608	8.3383	8.6379	8.7421		8.6448

Jan-07	7.7523	7.4738	7.8618	7.4521		7.6350
Feb-07	8.1450	7.7187	8.3708	7.9549		8.0474
Mar-07	8.6273	8.4105	8.7088	8.2867		8.5083
Apr-07	7.7437	7.0698	8.1501	7.7259		7.6724
May-07	8.4145	8.0095	8.6214	8.1942		8.3099
Jun-07	8.2681	8.1584	8.3402	7.9467		8.1784
Jul-07	7.5610	7.5734	7.9054	7.4999		7.6349
Aug-07	6.7378	6.8416	7.0796	6.7222		6.8453
Sep-07	6.1176	6.3635	6.3534	5.9927		6.2068
Oct-07	7.036	7.1572	7.3944	6.9862		7.1435
Nov-07	8.0557	8.1243	8.0965	7.8248		8.0253
Dec-07	8.0692	7.9873	8.1847	7.818		8.0148
Jan-08	8.2071	8.1966	8.2141	7.9345		8.1381
Feb-08	8.6012	8.5467	8.6967	8.3375		8.5455
Mar-08	9.1735	9.4611	9.1052	8.7182		9.1145
Apr-08	9.6862	8.8568	10.465	10.1516		9.7899
May-08	11.7027	11.215	12.239	11.9232		11.7700
Jun-08	12.2289	11.6577	12.8304	12.5138		12.3077
Jul-08	13.634	13.3466	14.0334	13.7143		13.6821
Aug-08	9.7202	9.4503	10.0885	9.7751		9.7585
Sep-08	8.727	8.2536	9.2409	8.9287		8.7876
Oct-08	7.6979	7.0695	8.2224	7.7431		7.6832
Nov-08	8.5482	7.7551	9.3691	9.3335		8.7515
Dec-08	9.0362	8.1780	9.5776	9.1129		8.9762
Jan-09	8.8677	8.3928	9.2433	8.8220		8.8315
Feb-09	8.1551	7.5411	8.1795	7.7673		7.9108
Mar-09	8.6330	7.9819	9.4732	8.7131		8.7003
Apr-09	5.4695	6.6697	4.6393	4.3016		5.2700
May-09	4.3379	3.8753	4.5033	4.1669		4.2209
Jun-09	4.4750	4.1627	4.6864	4.3483		4.4181
Jul-09	4.7156	4.5640	4.8323	4.4928		4.6512
Aug-09	4.4632	4.3437	4.5576	4.2207		4.3963
Sep-09	4.0935	3.7534	4.2950	3.9996		4.0354
Oct-09	4.7858	4.8210	4.7592	4.4631		4.7073
Nov-09	5.6679	5.6633	5.4219	5.1965		5.4874
Dec-09	5.6188	6.0356	5.3175	5.0625		5.5086
Jan-10	6.6130	6.8457	6.4181	6.1706		6.5119
Feb-10	5.7612	5.6947	5.7778	5.4778		5.6779
Mar-10	5.6991	5.6114	5.7449	5.4759		5.6328
Apr-10	4.8389	4.6036	4.9996	4.7193		4.7904
May-10	5.2650	5.1932	5.3288	5.0479		5.2087
Jun-10	4.9429	5.1226	4.8334	4.5794		4.8696
Jul-10	5.1902	5.5958	4.9456	4.6912		5.1057
Aug-10	5.1203	5.4772	4.9043	4.6518		5.0384
Sep-10	4.5026	4.7479	4.3509	4.1016		4.4258
Oct-10	4.8549	4.9648	4.7859	4.5363		4.7855
Nov-10	5.1010	5.7115	4.5986	4.5179		4.9823

Dec-10	5.6705	6.1467	5.2623	5.1737		5.5633
Jan-11	5.6243	6.0878	5.2252	5.0930		5.5076
Feb-11	5.6379	6.1582	5.2056	5.0738		5.5189
Mar-11	5.5312	6.0320	5.1153	4.9852		5.4159
Apr-11	5.5360	6.1330	5.0728	4.9917		5.4334
May-11	5.6176	6.1012	5.2233	5.1400		5.5205
Jun-11	5.5741	6.0734	5.1753	5.0902		5.4783
Jul-11	5.6643	6.0414	5.1662	5.0797		5.4879
Aug-11	5.5905	6.1333	5.1659	5.0780		5.4919
Sep-11	5.1299	5.6851	4.6953	4.6098		5.0300
Oct-11	5.0002	5.4794	4.6449	4.5642		4.9222
Nov-11	5.3329	5.9588	4.8549	4.6789		5.2064
Dec-11	5.1374	5.7898	4.6361	4.4628		5.0065
Jan-12	5.0747	5.6322	4.6230	4.4515		4.9454
Feb-12	4.7422	5.2863	4.2970	4.1303		4.6140
Mar-12	4.7660	5.3322	4.3117	4.1448		4.6387
Apr-12	4.3686	5.1893	3.8021	3.6725		4.2581
May-12	3.6777	4.6855	2.9945	2.8703		3.5570
Jun-12	3.8641	4.5904	3.3517	3.2263		3.7581
Jul-12	4.0973	4.7173	3.6502	3.5229		3.9969
Aug-12	4.4160	5.0870	3.9395	3.8104		4.3132
Sep-12	4.0895	4.6959	3.6502	3.5230		3.9897
Oct-12	4.4586	4.9650	4.0817	3.9509		4.3641
Nov-12	4.7119	5.2870	4.0326	4.0268		4.5146
Dec-12	4.7647	5.4431	4.0309	4.0114		4.5625
Jan-13	4.7933	5.0711	4.0914	4.0093		4.4913
Feb-13	4.7379	5.0209	4.0320	3.9511		4.4355
Mar-13	4.9147	5.1548	4.2377	4.1564		4.6159
Apr-13	5.2209	5.6001	4.4333	4.3819		4.9091
May-13	5.7446	5.9896	5.0438	4.9963		5.4436
Jun-13	5.7653	6.0371	5.0348	5.0167		5.4635
Jul-13					4.7661	
Aug-13					4.7303	
Sep-13					4.7474	
Oct-13					4.7846	
Nov-13					4.6712	
Dec-13					4.9062	
Jan-14					5.1386	
Feb-14					6.5193	
Mar-14					7.4803	
Apr-14					5.8207	
May-14					5.8739	
Jun-14					5.5646	
Jul-14					5.5334	
Aug-14					4.8847	
Sep-14					5.0302	
Oct-14					5.1296	

Nov-14					5.4661	
Dec-14					5.6843	
Jan-15					4.9838	
Feb-15					4.4845	
Mar-15					4.9587	
Apr-15					4.0627	

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce
Comments**

Docket No. G011/M-15-231

Dated this 17th day of April 2015

/s/Sharon Ferguson

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