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November 1, 2012

VIA ELECTRONIC FILING

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101

Re: In the Matter of the Petition of Minnesota Energy Resources Corporation (MERC)–PNG for Approval of a Change in Demand Entitlement for its Great Lakes Gas Transmission (GLGT) System;
Docket No. G011/M-12-___

Dear Dr. Haar:

In accordance with Minnesota Rule 7825.2910, subpart 2, please find the public and nonpublic versions of Minnesota Energy Resources Corporation's (MERC) request to change demand entitlement.

Please note that Attachments 5 and 9 contain financial information with independent economic value that is not generally known to, and not readily ascertainable by, competitors of MERC, who could obtain economic value from its disclosure. MERC maintains this information as secret. Accordingly this data qualifies as trade secret data as defined in Minn. Stat. § 13.37, subd. 1(b), and MERC requests that the data be treated as trade secret information.

In accordance with Minnesota Rule 7825.2910, subpart 3, a Notice of Availability has been sent to all intervenors in the Company's previous two rate cases.

Please feel free to contact me at (612) 340-2881 if you have any questions regarding this matter.

Sincerely yours,

/s/ Michael J. Ahern

Michael J. Ahern

cc: Service List

November 1, 2012

To: Service List

RE: Minnesota Energy Resources Corporation-PNG Petition for Approval of Change in Demand Entitlement

Notice of Availability

Please take notice that Minnesota Energy Resources Corporation-PNG has filed a petition with the Minnesota Public Utilities Commission for approval of a change in demand entitlement.

To obtain copies, or if you have any questions, please contact:

Gregory J. Walters
Minnesota Energy Resources Corporation
3460 Technology Drive NW
Rochester, MN 55901
507-529-5100.

Please note that this filing is also available through the eDockets system maintained by the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. You can access this document by going to eDockets through the websites of the Department of Commerce or the Public Utilities Commission or going to the eDockets homepage at:

https://www.edockets.state.mn.us/EFiling/home.jsp

Once on the eDockets homepage, this document can be accessed through the Search Documents link and by entering the date of the filing.

STATE OF MINNESOTA
BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
J. Dennis O'Brien	Commissioner
David C. Boyd	Commissioner
Phyllis A. Reha	Commissioner
Betsy Wergin	Commissioner

In the Matter of the Petition of Minnesota Energy Resources Corporation – PNG for Approval of a Change in Demand Entitlement for its Great Lakes Gas Transmission System	)))))	Docket No. _____

SUMMARY OF FILING

Pursuant to Minnesota Rule 7825.2910, subpart 2 (Filing Upon Change in Demand), Minnesota Energy Resources Corporation-PNG (MERC or the Company), hereby petitions the Minnesota Public Utilities Commission (Commission) for approval of changes in demand entitlements for MERC-PNG's customers served off of the Great Lakes Gas Transmission (GLGT) System. MERC requests that the Commission approve the requested changes to be recovered in the Purchased Gas Adjustment (PGA) effective on November 1, 2012.

STATE OF MINNESOTA
BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
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In the Matter of the Petition of Minnesota Energy Resources Corporation – PNG for Approval of a Change in Demand Entitlement for its Great Lakes Gas Transmission System	)))))	Docket No. _____

FILING UPON CHANGE IN DEMAND

Pursuant to Minnesota Rule 7825.2910, subpart 2 (Filing Upon Change in Demand), Minnesota Energy Resources Corporation-PNG (MERC or the Company), hereby petitions the Minnesota Public Utilities Commission (Commission) for approval of changes in demand entitlements for MERC-PNG's customers served off of the Great Lakes Gas Transmission (GLGT) system. MERC requests that the Commission approve the requested changes to be recovered in the Purchased Gas Adjustment (PGA) effective on November 1, 2012.

This filing includes the following attachments:

Attachment 1:	Notice of Availability.
Attachment 2:	One paragraph summary of the filing in accordance with Minn. R. 7829.1300, subp. 1.
Attachment 3:	Petition for Change in Demand with Attachments.
Attachment 4:	Affidavit of Service and Service List.

The following information is provided in accordance with Minn. R. 7829.1300:

1. Summary of Filing

Pursuant to Minn. R. 7829.1300, subp. 1, a one-paragraph summary of the filing is attached.

2. Service

Pursuant to Minn. R. 7829.1300, subp. 2, MERC has served a copy of this filing on the Department of Commerce and the Office of the Attorney General – Residential Utilities Division. The summary of the filing has been served on all parties on the attached service list. Additionally, pursuant to Minn. R. 7825.2910, subp. 3, a Notice of Availability has been sent to all intervenors in the Company's previous two rate cases.

3. General Filing Information

A. Name, Address, and Telephone Number of the Utility

Minnesota Energy Resources Corporation
2665 145th Street West
Box 455
Rosemount, MN 55068-0455
(651) 322-8901

B. Name, Address, and Telephone Number of Attorney for the Utility

Michael J. Ahern
Dorsey & Whitney LLP
50 S. Sixth Street, Suite 1500
Minneapolis, MN 55402-1498
(612) 340-2881

C. Date of the Filing and Proposed Effective Date

Date of filing: November 1, 2012
Proposed Effective Date: November 1, 2012

D. Statute Controlling Schedule for Processing the Filing

Minnesota Statutes and related rules do not provide an explicit time frame for action by the Commission. Under Minn. R. 7829.1400, initial comments are due within 30 days of filing, with reply comments due 10 days thereafter.

E. Utility Employee Responsible for the Filing

Gregory J. Walters
3460 Technology Drive NW
Rochester, MN 55901
(507) 529-5100

If additional information is required, please contact Michael J. Ahern at: (612) 340-2881.

DATED: November 1, 2012

Respectfully Submitted,

DORSEY & WHITNEY LLP

By: /s/ Michael J. Ahern
Michael J. Ahern
Suite 1500, 50 South Sixth Street
Minneapolis, MN 55402-1498
Telephone: (612) 340-2600

Attorney for Minnesota Energy Resources Corporation

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
J. Dennis O'Brien	Commissioner
David C. Boyd	Commissioner
Phyllis A. Reha	Commissioner
Betsy Wergin	Commissioner

In the Matter of the Petition of Minnesota Energy Resources Corporation – PNG for Approval of a Change in Demand Entitlement for its Great Lakes Gas Transmission System	)))))	Docket No. _____

PETITION FOR CHANGE IN DEMAND

I. INTRODUCTION

Pursuant to Minnesota Rule 7825.2910, subpart 2 (Filing Upon Change in Demand), Minnesota Energy Resources Corporation - PNG (MERC or the Company), a division of Integrys Energy Group, Inc. (TEG), hereby petitions the Minnesota Public Utilities Commission (Commission) for approval of changes in demand entitlements for MERC-PNG's customers served off of the Great Lakes Gas Transmission (GLGT or Great Lakes) system. MERC requests that the Commission approve the requested changes to be recovered in the Purchased Gas Adjustment (PGA) effective on November 1, 2012.

II. DISCUSSION

A. MERC's PNG-GLGT Design Day Requirements

MERC's 2012-2013 PNG-GLGT design day requirements increased 699 Mcf (or approximately 7.51 percent) from 9,304 Mcf to 10,003 Mcf.

Table 1: MERC's Proposed Reserve Margins
For the 2012-2013 Heating Season
GLGT PNG

	Reserve Margin 2012-2013 Heating Season	Reserve Margin 2011-2012 Heating Season	Change
GLGT-PNG	2.09%	9.08%	-6.99%

As shown in Table 1 and Attachment 3, MERC's proposed system wide reserve margin for PNG-GLGT for the 2012-2013 heating season is positive.

For the Demand Entitlement filing effective November 1, 2012, the total Design Day requirement for PNG-GLGT is 10,003 Dth as calculated in Attachment 1, page 2 and Attachment 3.

For the Demand Entitlement filing effective November 1, 2012, the total Design Day capacity for PNG-GLGT, is 10,212 Dth as calculated in Attachment 3.

The difference between the total Design Day requirement and total Design Day capacity results in a 2.09% positive reserve margin.

B. Forecast Methodology for MERC Demand Entitlement Nov. 1, 2012

Peakday

Purpose

Gather data and perform analysis used in the "Petition for Change in Demand" for Minnesota Energy Resources Corporation – PNG and Minnesota Energy Resources Corporation – NMU for "Approval of a Change in Demand Entitlement" to be sent to the Minnesota Public Utilities Commission, otherwise known as the "MERC Demand Entitlement Filings".

Background

MERC is composed of two service areas:

1. PNG - Peoples Natural Gas
2. NMU - Northern Minnesota Utility

Which are served by four pipelines:

3. VGT - Viking Gas Transmission system (serves both PNG and NMU)
4. NNG- Northern Natural Gas pipeline (serves both PNG and NMU)
5. GLGT - Great Lakes Gas Transmission pipeline (serves both PNG and NMU)
6. Centra - Centra pipeline (serves NMU)

Four Petitions for Change in Demand are filed (one for each of PGA):

A. PNG customers served off of VGT = PNG-VGT
B. PNG customers served off of GLGT = PNG-GLGT
C. PNG customers served off of NNG = PNG-NNG
D. All NMU customers - served off NNG, GLGT, VGT & Centra = NMU

Weather data is obtained from the following weather stations:

1. International Falls
2. Bemidji
3. Cloquet
4. Fargo
5. Minneapolis
6. Rochester
7. Worthington
8. Ortonville

For analytical purposes, data is subdivided, analyzed and regressed by the following demand areas:

	Demand Area (Service Area / Pipeline)	PGAC	Weather Station(s)
1	NMU-Centra	NMU	International Falls
2	NMU-GLGT *	NMU	Bemidji & Cloquet
3	NMU-NNG	NMU	Cloquet
4	NMU-VGT *	NMU	Fargo
5	NMU-GLGT&VGT*	NMU	Bemidji
6	PNG-GLGT	PNG-GLGT	Bemidji
7a	PNG-NNG – All except Ortonville	PNG-NNG	Minneapolis, Rochester, Cloquet & Worthington
7b	PNG-NNG – Ortonville Only	PNG-NNG	Ortonville
8	PNG-VGT	PNG-VGT	Fargo

* Thief River Falls is included only in NMU-GLGT&VGT

Analytical Approach

Summary

1. Obtain daily weather data for each weather station as shown in Attachment 13
2. Obtain daily total throughput volumes by pipeline
3. Perform total throughput peak day regressions
4. Subtract interruptible, transport, and joint interruptible expected peak day load volumes based on monthly billing data
5. Add back Daily Firm Capacity (DFC) customer selections
6. Apply sales forecast growth rates

Detail

The Peak Day Forecasting Team (the Team) followed a data-driven approach for the MERC Peak Day Forecast. Since the forecast is for a peak day, the best daily data available is required to provide the best estimate. Theoretically, the peak day regression should be performed using daily net firm load by service area, pipeline, and weather station. A review of the data available indicated that the two best daily data sources are the daily weather data by weather station and the daily throughput data by Town Border Station (TBS) and pipeline meter. (Some pipeline meters are dedicated to a TBS, and some are dedicated to individual customers.)

Most of the interruptible, transportation, and joint interruptible data available is from monthly billing record excerpts provided by ADS/Vertex, an external vendor that has been providing billing services to MERC-PNG and MERC-NMU.

The Team followed an approach generally consistent with the one used last year that would:

- Make the best use of the best available data; and
- Isolate the effects the monthly billing cycle data has on the Peak Day forecast so that the new process can be easily updated as better data is available.

The Peak Day Process consisted of:

I. Data Preparation

II. Regression Generation of Net Daily Metered Volumes

III. Volume Risk Adjustments

IV. Adjusting the Regression Results to a Firm peak day estimate

I. The **Data Preparation** Steps consisted of:

- Identify the coldest Adjusted Heating Degree Day (AHDD65) in the last 20 years for each weather station.
- Determine the most recent three years of December through February daily total metered throughput for each of the demand areas by weather station.
- Subtract the daily pipeline meter readings for all non-firm customers with daily pipeline meter readings available for all three December through February years from the total throughput for each demand area and weather station. Use the resulting net daily metered volumes for regressions. Examples of non-firm customer meter readings subtracted from the demand area total daily throughputs are paper mills, direct-connects, taconites, and off-system end users. (See "Adjusting the Regression Results to a Firm Peak Day Estimate" below.)
- Determine how to map the monthly billing data to the demand areas.

Each daily weather station data file was searched to find the coldest Adjusted Heating Degree Day (AHDD65) in the last 20 years. This 1-in-20 approach is consistent with prior years. The results are provided in the following table:

Station	Date	Avg. Temp	Avg. Wind	HDD65	AHDD65
Bemidji	2/1/1996	-34	8	99	107
Cloquet	2/2/1996	-31	7	96	103
Fargo	1/18/1996	-16	34	81	109
International Falls	2/2/1996	-34	8	99	107
Minneapolis	2/2/1996	-25	8	90	97
Rochester	2/2/1996	-27	10	92	101
Worthington	1/18/1996	-8	32	73	96
Ortonville	1/14/2009	-21	11	86	96

The daily throughput data was provided by pipeline and meter, with each meter on each pipeline mapped to one of the weather stations shown in the above chart. Each meter was also designated as either PNG or NMU. As noted above, some of the meters represented a TBS. Some meters were dedicated to a customer who is not a firm service customer of either PNG or NMU. For example, certain transportation, interruptible, direct-connect, and taconite customers have their own meter, but are not counted as firm service customers.

In a more nearly ideal world, the Team would have also had daily telemetered data from each interruptible, transportation, and joint interruptible customer mapped to each of the demand areas and related weather stations. This was the case for a handful of paper mills, direct-connects, taconites, and off-system end users. The rest of the interruptible, transportation, and joint interruptible data was available based on monthly billing cycle data that introduces billing lag, meter read lag (not all meters were read every month, resulting in billing cycle estimates and reversals), and other potential errors into their volumes.

Similar to the process used the prior year, the Team generated regressions of the daily throughput data available less the known daily meter readings for non-firm customers and adjusted those regressions for the estimated peak day impact of the other non-firm customers who do not have daily readings. This approach was used because it introduced much less error into the data and regressions than trying to guess how to allocate monthly billing cycle data to daily when the load factors and relative temperature sensitivity of the non-daily-metered customers was not known. Using only the daily metered data for the regressions makes the best use of the best data available and provides insights into the total daily metered load that could be active on a peak day even if supply access at the non-firm pipeline meters were shut off.

II. The **Regression Generation of Net Daily Metered Volumes** consisted of:

- For each of the Demand Areas (Service Area / Pipeline):
    1. Gather the net daily metered volumes and weather station data including AHDD65.[1]
    2. If more than one weather station is represented in a given demand area, weight each weather station's AHDD65 by the total December through February metered volumes attributable to that weather station.
    3. Add indicator variables for day-type and month. Day-type variables are used to isolate load that changes by day of the week, such as commercial or industrial customers who may change their consumption on weekends when they run fewer

[1] Temperature and weather data was obtained from Weather Bank/DTN via TherMaxx then converted to HDD65 and AHDD65 in an Excel spreadsheet by MERC – Gas Supply. Temperature and wind data is 24-hour average based on the 9am to 9am gas day.

shifts. Month indicator variables are used to isolate load that changes based on winter month, such as businesses that are open extra hours in December and resume normal operating hours in January.

4. Perform ordinary least squares linear regressions for the 3-year time frame using the AHDD65 weather variable and the significant indicator variables.
5. Summarize the Baseload and Use/AHDD65 from each regression.
6. Calculate a point estimate from each regression based on the baseload value plus the Use/AHDD65 coefficient times the coldest AHDD65 in 20 years (volume weighted if using more than one weather station in a single Demand Area).

III. Volume Risk Adjustments

Volume risk adjustments were incorporated into the forecast to provide a confidence level that the daily metered load under design conditions would not exceed the daily metered regression estimate. An appropriate volume risk adjustment was determined for each regression group by multiplying the standard error of each regression analysis (sigma) by a factor needed to attain a desired confidence level. The desired confidence level chosen was 97.5%.

IV. Adjusting the Regression Results to a Firm Peak Day Estimate consisted of:

A. Subtract interruptible, transport, and joint interruptible expected peak day load volumes based on monthly billing data

In order to determine firm peak day load, volumes contained in the daily pipeline meter readings for interruptible, joint interruptible and transportation customers needed to be isolated and removed. While it would have been ideal to have daily billing data for all customers, most

of the interruptible, transportation, and joint interruptible data was, in most cases, only available from monthly billing records[2]. An unfortunate, but unavoidable consequence was that this data was based on monthly billing cycles that introduce billing lag, meter read lag (not all meters were read every month, resulting in billing cycle estimates and reversals), and other potential errors into their volumes.

A database of volumes billed for all customers from the prior winter was obtained. The database contained detail by customer class[3], calendar month, (service) area, city, location, zip code and responsibility center. The billing database was provided by ADS/Vertex, an outside firm that has been providing billing services to MERC. Sales and Revenue Forecasting had previously adjusted the billing data to properly fit the appropriate calendar month of consumption by apportioning billed volumes, i.e., for a bill covering February 15 to March 15, volumes were split evenly between February and March.

Volumes for the interruptible, transportation and joint interruptible customer classes (INTER, TRANS and JINTER classes) needed to be mapped to the appropriate regression demand area, and were then summed. This billing data included consumption that was billed, but not included in the daily metered volumes for several large specific customers (paper mills, direct-connects, taconites, and off-system end users), and therefore needed to be removed from the gross interruptible, transportation and joint interruptible totals. Such customers were identified, mapped to the demand areas, summed and subtracted from the interruptible, transportation and joint interruptible customer classes totals. The following peak demand estimation method based

[2] Individual daily volumes were available for a handful of paper mills, direct-connects, taconites, and off-system end users.

[3] Transportation, Interruptible, Joint Interruptible, Residential, Large Commercial & Industrial and Small Commercial & Industrial.

on the highest monthly total from the prior winter was then used to calculate the amount to subtract from the results of the data regressions for each demand area:

The MERC-PNG and MERC-NMU tariff General Rules, Regulations, Terms, and Conditions Section 1.N "Maximum Daily Quantity (MDQ)" on 1st Revised Sheet No. 8.04:

N. Maximum Daily Quantity (MDQ):

The amount calculated by dividing the volumes consumed by a particular customer during the highest historical peak month of usage for that customer by twenty (20). Company will estimate a peak month for new customers. A Maximum Daily Quantity may also be established through direct measurement or other means (i.e. estimating the peak day requirements after installation of new processing equipment or more energy efficient heating systems) if approved by [the] Company.

B. Add back Daily Firm Capacity (DFC) customer selections

While interruptible, joint interruptible and transportation customer volumes were removed (as described above), in order to determine firm peak day load, daily firm capacity selections needed to be added back. The Sales and Revenue Forecasting department provided historical monthly DFC data for the "joint interruptible" customers from the prior winter that showed the volume that each customer has selected to receive as firm service from MERC each month. Based on direction from MERC Gas Supply, the Small Volume Joint Firm / Interruptible customers who were relying on MERC to provide peak day firm supply were identified and their the daily firm capacity volumes were summed by month for each demand area. The total volumes were then added back to the adjusted regression results.

C. Apply Sales Forecast Growth Rates

The throughput volumes used in the data regressions were from the last three winters and needed to be adjusted to properly forecast the next year. The Revenue Forecasting Department provided a growth rate for each demand area, which were then applied to the adjusted regression results.

Demand Area / (Service Area / Pipeline) Regression Notes

A. Interruptible, Transportation and Joint Interruptible

NMU-GLGT = Paper Mills

NMU-VGT = Lamb Weston

PNG-NNG = Taconites / Direct Connects

PNG-NNG = OSEU (End Users)

B. Daily Firm Capacity

PNG-VGT

PNG-GLGT

PNG-NNG

Daily Design Day Estimate to Actual Comparison

In the 2007 demand entitlement dockets, MERC agreed to include a daily estimate utilizing the design day model which is calculated in Attachment 10. The daily estimate is compared to actual consumption. The actual volumes are total through-put which includes

interruptible and transportation volumes that are located behind MERC citygates. This does not include any transportation volumes that are directly connected with NNG pipeline. The Design Day model only calculates firm volumes. MERC does not forecast on a daily/monthly basis utilizing the Design Day model. The Design Day model is utilized to calculate the theoretical peak day. The calculated base load natural gas usage at zero heating degree days is 379 Dth which includes interruptible and transportation volumes. Since daily volume consumption is not available for all interruptible and transportation customers, MERC is not able to determine an exact number to deduct from the 379 Dth to determine the firm base load natural gas consumption at zero (0) HDD.

Average Customer Counts

In the 2007 demand entitlement dockets, MERC agreed to include average customer counts which is provided in Attachment 11.

C. MERC's Specific GLGT Proposed Demand-Related Changes

There are two types of demand entitlement changes. The first type is design day deliverability, which, in this case, MERC is proposing no change in the firm transportation capacity actually available to MERC-PNG-GLGT customers during winter peak periods. The second type does not affect design day deliverability levels, but alters the capacity portfolio and the PGA costs recovered from customers.

1. Design Day Deliverability Changes

As shown in Attachment 6, MERC-PNG-GLGT proposes an increase of 63 Dth in design day deliverability for the upcoming heating season.

2. Other Demand Entitlement Changes

PNG-GLGT contracts and utilizes natural gas supplies from AECO Storage. To deliver the supply from storage to MERC-NMU's markets, MERC entered in an AECO/Emerson swap. MERC sells gas at the storage point (AECO) to a supplier and MERC buys an equivalent volume at Emerson/Spruce, which MERC then transports to its PNG-GLGT, PNG-VGT and NMU (GLGT, VGT and Centra) customers. The swap alleviated the need to contract for firm transport on TransCanada Pipeline (TCPL) to transport the gas from AECO to Emerson/Spruce.

D. Financial Option Units and Premiums

i. MERC entered into New York Mercantile Exchange (NYMEX) financial Call Options for the upcoming 2012-2013 winter (November through March). Please see Attachment 5.

ii. Total premium cost to enter into the financial Call Options on behalf of MERC's firm customers amounted to $46,103 for the 2012-2013 winter. Please see Attachment 5.

iii. MERC entered into 20 contracts (10,000/contract) or 200,000. Total premium per contract is approximately $0.2305. Please see Attachment 5.

iv. Please see Attachment 5 for the various contract dates.

v. Please see Attachment 5 for the various contract prices.

vi. MERC entered into 16 futures contracts (10,000/contract) or 160,000.

vii. MERC believes a diversified portfolio approach towards hedging is in the best interest of MERC's firm customers. MERC implemented a 40%

fixed price (storage and futures contracts), 30% financial call options and 30% market based prices, assuming normal weather. A dollar-cost-averaging approach is utilized in purchasing the hedging portfolio. Although this hedging strategy will most likely not provide the lowest priced supply, it does meet MERC's stated objectives of providing reliable and reasonably priced natural gas and mitigates natural gas price volatility. Please see Attachment 9, page 1 of 2.

E. Gas Supply.

The PNG-GLGT 2012-2013 Winter Portfolio Plan - Minnesota Energy Resources Corporation for GLGT gas supply purchases for the Hedging Plan is in Attachment 9, page 2. This Attachment includes the projected sales number by month for the November 2012 through March 2013 period as well as the planned physical fixed price, financial call options and storage and/or exchange volumes by month.

F. Price Volatility

MERC's hedging strategy as described in section 2.(D.)(vii.) provides the opportunity to ensure MERC customers are seventy percent (70%) hedged assuming normal winter volumes. The 70% hedged is accomplished by 40% of normal winter volumes hedged by a fixed price, which is comprised of storage and physical fixed price purchases. MERC is projecting the weighted average cost of gas (WACOG) for futures contracts of natural gas to be approximately $3.3965. Please see Attachment 12, page 1 of 3. MERC is projecting the AECO Storage for PNG-GLGT to be approximately $2.1432. This is an estimate based upon the purchases in October but since this filing is being made before the accounting is closed for October, this estimate may change.

Please see Attachment 12, page 2 of 3. The remaining 30% of the 70% is hedged by financial call options. MERC purchased call options at an average strike price of $3.6315, which means if NYMEX contract(s) settle above that price, the options are exercised and MERC customers' gas cost is capped at the average strike price. Please see Attachment 12, page 3 of 3. Since financial options are paper only MERC purchases physical index supply to back the financial call options. MERC projects the gas costs to be approximately $3.32 for 70% of normal winter volumes assuming that the NYMEX prices are above the average strike price plus the physical index basis spread. If the NYMEX prices are below the average strike price, the average natural gas cost for 70% of the normal winter volumes will be lower. The remaining 30% of normal winter volumes are purchased at index or market prices. All numbers reflected are natural gas costs only and do not include any transportation, storage, hedge premium or margin costs.

G. PGA Cost Recovery

MERC proposes to begin recovering the costs associated with the change in demand-related costs in its monthly PGA effective November 1, 2012. Rate impacts associated with this change can be found on Attachment 4, pages 1 and 2, and on page 1 of Attachment 7. MERC has also calculated the rate impact of moving the cost recovery of Storage contracts from the demand cost recovery portion of the monthly PGA to the commodity cost recovery portion of the monthly PGA. Attachment 4, pages 3 and 4, and Attachment 7, page 2, illustrate the rate impact created by this shift in cost recovery.

H. Impacts of Telemetry

Based on the requirement that all interruptible and transportation customers on MERC's system must have telemetry, this has led to some customers switching from

interruptible to firm. On the PNG-GLGT, there have been two (2) customers that switched from interruptible to firm service. The switching occurred between October 31, 2011 through December 7, 2011. Since MERC's peak day analysis is based on December through February volumes for the three previous winters, for the most part, these volumes aren't represented in MERC's design day analysis. MERC projected the impact on firm requirements by projecting peak day volumes for the customers that switched. The projected peak day was calculated by taking actual peak day and dividing the volume by twenty (20). MERC is projecting an increase in design day of 254 Mcf. Assuming the projected peak day is accurate, MERC may potentially have a negative reserve margin.

II. CONCLUSION

Based upon the foregoing, MERC respectfully requests the Minnesota Public Utilities Commission grant the demand changes requested herein effective November 1, 2012. If any further information, clarification, or substantiation is required to support this filing please advise.

DATED: November 1, 2012

Respectfully Submitted,

DORSEY & WHITNEY LLP

By s/_____
Michael J. Ahern
Suite 1500, 50 South Sixth Street
Minneapolis, MN 55402-1498
Telephone: (612) 340-2600

Attorney for Minnesota Energy Resources Corporation

AFFIDAVIT OF SERVICE

STATE OF MINNESOTA)
) ss
COUNTY OF HENNEPIN)

Amber S. Lee hereby certifies that on the 1st day of October, 2012, on behalf of Minnesota Energy Resources Corporation (MERC) she electronically filed a true and correct copy of the Petition on www.edockets.state.mn.us. Said documents were also served via U.S. mail and electronic service as designated on the attached service list.

/s/ Amber S. Lee
Amber S. Lee

Subscribed and sworn to before me
this 1st day of October, 2012.

/s/ Paula Bjorkman
Notary Public, State of Minnesota

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Ahern	ahern.michael@dorsey.com	Dorsey & Whitney, LLP	50 S 6th St Ste 1500 Minneapolis, MN 554021498	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
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Amber	Lee	lee.amber@dorsey.com	Dorsey & Whitney LLP	Suite 1500 50 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
Brian	Meloy	brian.meloy@leonard.com	Leonard, Street & Deinard	150 S 5th St Ste 2300 Minneapolis, MN 55402	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Andrew	Moratzka	apm@mcmlaw.com	Mackall, Crounse and Moore	1400 AT&T Tower 901 Marquette Ave Minneapolis, MN 55402	Paper Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List
Gregory	Walters	gjwalters@minnesotaenergyresources.com	Minnesota Energy Resources Corporation	3460 Technology Dr. NW Rochester, MN 55901	Paper Service	No	GEN_SL_Minnesota Energy Resources Corporation_General Service List

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

MINNESOTA ENERGY RESOURCES
DESIGN-DAY DEMAND SUMMARY
NOVEMBER 1, 2012

		GLGT
Design Day Requirement		10003
Total Entitlement on Peak Day(excl. Peak Shaving)		10212
Firm Peak Day Actual Sendout -Non Coincidental	(Jan. 19)	7644
Firm Annual Throughput - Minnesota		890142.5
No. of Firm Customers		6053
DPS Load Factor Calculation		0.319041

MINNESOTA ENERGY RESOURCES - PNG
MINNESOTA DESIGN DAY REQUIREMENTS
NOVEMBER 1, 2012
GLGT

Pipeline Group	Nov11-Mar Customer Count	1/20 Design DDD	Regression Factors Intercept	Slope	Regressior Total Footnote 1	Regressior Adjustmen Footnote 2	1/20 Requi Regressior Footnote 3	Nov11-Mar Customer Growth	12 Avg. Total
PEAK									
	6053	107	410	97	10756	753	10003	0	10003
Total	6053								10003
OFF PEAK									
	6053	57	410	97	5922	193	5729	0	5729
Total	6053								5729

Footnote 1 Regression Total is based on total through-put data.
Footnote 2 Regression Adjustment substracts out Interruptible, Transportation and Joint Interruptible volumes and adds Firm Joint volumes.
Footnote 3 Total equals Regression Total minus Regression Adjustment.

*All the requirments are adjusted by customer growth

MINNESOTA ENERGY RESOURCES
DESIGN-DAY DEMAND PER CUSTOMER
NOVEMBER 1, 2012

GLGT

Heating Season	No. of Firm Customers	Design Day Requirements	MMBtus /Customer /Day
12/13	6053	10003	1.652569
11/12	6041	9304	1.540142
10/11	6053	9440	1.559557
09/10	6068	10802	1.780158
08/09	5874	10299	1.75332
07/08	5816	9550	1.642022
06/07	5747	9543	1.660519
05/06	5679	9510	1.674591
04/05	5514	9449	1.713638

MINNESOTA ENERGY RESOURCES
SUMMER/WINTER USAGE - Mcf
PROJECTED 12 MONTHS ENDING JUNE 2013

GLGT

Class	Summer Apr-Oct	Winter Nov-Mar	Total
GS	246220.8	616095	862315.8
SVI	3741.2	15389.4	19130.6
SVJ	5441.8	22384.9	27826.7
Total	255403.8	653869.3	909273.1

Source: Calendar data from SUMG MERCFcst201204(4-26-12).xlsx

MINNESOTA ENERGY RESOURCES
ENTITLEMENT LEVELS
PROPOSED TO BE EFFECTIVE NOVEMBER 1, 2012
GLGT

Type of Capacity or Entitlement	Current Amount Mcf or MMBtu	Proposed Change Mcf or MMBtu	Proposed Amount Mcf or MMBtu
FT0016	3899	24	3923
FT0155(12)	1386	8	1394
FT0155(5)	1400	9	1409
FT15782	3464	22	3486
Heating Season Total	10149	63	10212
Non-Heating Season Total	8749	54	8803
Total Entitlement	10149	63	10212
Heating Season Forecasted Design Day	9304		10003
Non-Heating Season Forecasted Design Day	5547		5729
Heating Season Capacity Surplus/Shortage	845		209
Non-Heating Season Capacity Surplus/Shortage	3202		3074
Reserve Margin	0.090821		0.020894

MINNESOTA ENERGY RESOURCES - PNG
RATE IMPACT OF THE PROPOSED DEMAND CHANGE
NOVEMBER 1, 2012

All costs in $/MMBtu	Last Base Cost of Gas G007,G01 MR10-978 Feb. 11	Demand Change G011-M-11-XXX Oct .11**	Last Demand Change G011-M-12-XXX Mar. 12^	GLGT Most Recent PGA Oct. 12	Current Proposal Effective Nov.1,201	Result of Proposed Change Change from Last Rate Case	Change from Last Demand Change	Change from Last PGA %	Change from Last PGA $
1) General Service - Residential: Avg. Annual Use:				84	Mcf				
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand Cost	0.7701	0.8421	0.6791	0.7288	0.781124	0.014315	0.150234	0.071795	0.052324
Commodity Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Cost of Gas	8.0564	6.3388	5.9279	5.7255	5.844437	-0.27456	-0.01408	0.020773	0.118937
Avg Annual Cost	676.7376	532.4592	497.9436	480.942	490.9327	-0.27456	-0.01408	0.020773	9.990739
Effect of proposed commodity change on average annual bills:									5.595521
Effect of proposed demand change on average annual bills:									4.395219
2) Small Vol. Interruptible: Avg. Annual Use:				2896	Mcf				
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand Cost									
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Cost of Gas	6.6798	4.8902	4.6423	4.3902	4.456813	-0.33279	-0.03996	0.015173	0.066613
Avg Annual Cost	19344.7	14162.02	13444.1	12714.02	12906.93	-0.33279	-0.03996	0.015173	192.9122
Effect of proposed commodity change on average annual bills:									192.9122
Effect of proposed demand change on average annual bills:									0
3) Small Vol. Firm: Avg. Annual Use:				4964	Mcf				
Avg, Annual CD units:				50					
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand Cost	5.2429	3.458	3.458	3.458	3.458	-0.34044	0	0	0
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Demand Margin	1.8	1.8	1.8	1.8	1.8	0	0	0	0
Total Cost of Gas	6.6798	4.8902	4.6423	4.3902	4.456813	-0.33279	-0.03996	0.015173	0.066613
Total Demand Cost	7.0429	5.258	5.258	5.258	5.258	-0.25343	0	0	0
Avg Annual Cost	33510.67	24537.85	23307.28	22055.85	22386.52	-0.33196	-0.03951	0.014992	330.6686
Effect of proposed commodity change on average annual bills:									330.6686
Effect of proposed demand change on average annual bills:									0

Note: Average Annual Average based on PNG Annual Automatic Adjustment Report in Docket No. E,G999/AA-11-793
*As submitted in Docket No. G007,011/MR-10-978; to coincide with implementation of interim rates in Docket No. G007,011/MR-10-977
**$/Mcf rates do not include refunds/charges issued via October 2011 PGA per Docket Nos. G-007,011/M-11-154 & FERC Docket RP11-1781
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012

MINNESOTA ENERGY RESOURCES - PNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA) GLGT
Great Lakes Current Cost of Gas

41214 CURRENT

II. GREAT LAKES GAS TRANSMISSION'S RATES -- CURRENT COST OF GAS EFFECTIVE

Commodity From Schedule D	0.32457	/therm	

III. ANNUAL SALES --

Total Annual Sales	10762470	therms
Firm Annual Sales (GS-5)	8130783	therms

IV. PNG'S -- CURRENT COST OF GAS EFFECTIVE 41214 CURRENT

		Monthly Entitlemen	Months	Rate $/Dth		Contract Cost	$/therm
A. GS-5	FT Wester FT0016	3923	12	3.458	=	162789	0.020021
	FT Wester FT0155	1394	12	3.458	=	57845	0.007114
	FT Wester FT0155	1409	5	3.458	=	24362	0.002996
	FT Wester FT15782	3486	12	3.458	=	144655	0.017791
	Niska Storage (AECO	175982.2	1	0.954824	=	168032	0.020666
	AECO/Emerson Swap	175982.8	1	0.439998	=	77432	0.009523
	Total Demand Cost					635115	0.078112
	GS-5 Firm Annual Sales in therms					8130783	
	Current Demand Cost of Gas $/therm						0.078112
	Current T-17 Commodity Cost of Gas						0.32457
	Call Option Premium			46292.98	10762470		0.004301
	GS-5 Total Current Commodity Cost of Gas $/therm						0.328871
	Current Total Cost of Gas $/therm						0.406984
B. SVI-5	Current Commodity Cost of Gas $/therm						0.328871
C. SJ-5	Current Demand Cost of Gas $/therm						0.3458
	Current Commodity Cost of Gas $/therm						0.328871
D. LVI-5	Current Commodity Cost of Gas $/therm						0.328871

Rate Impacts (Illustrates FDD storage contract costs shifted from Demand costs to Commodity costs)
MINNESOTA ENERGY RESOURCES - PNG
RATE IMPACT OF THE PROPOSED DEMAND CHANGE
NOVEMBER 1, 2012

All costs in $/MMBtu	Last Base Cost of Gas G007,G01 MR10-978 Feb. 11	Demand Change G011- M-11-XXX Oct .11**	Last Demand Change G011- M-12-XXX Mar. 12^	GLGT Most Recent PGA** Oct. 12	Current Proposal Effective Nov.1,201	Result of Proposed Change Change from Last Rate Case	Change from Last Demand Change	Change from Last PGA %	Change from Last PGA $
1) General Service-Residential Avg. Annual Use:				84	Mcf				
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand Cost	0.7701	0.8421	0.6791	0.7288	0.479229	-0.37771	-0.29432	-0.34244	-0.24957
Commodity Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Cost of Gas	8.0564	6.3388	5.9279	5.7255	5.770617	-0.28372	-0.02653	0.00788	0.045117
Avg Annual Cost	676.7376	532.4592	497.9436	480.942	484.7318	-0.28372	-0.02653	0.00788	3.789807
Effect of proposed commodity change on average annual bills:									24.75374
Effect of proposed demand change on average annual bills:									-20.9639
2) Small Vol. Interruptible: Avg. Annual Use:				2896	Mcf				
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand Cost									
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Cost of Gas	6.6798	4.8902	4.6423	4.3902	4.684887	-0.29865	0.009174	0.067124	0.294687
Avg Annual Cost	19344.7	14162.02	13444.1	12714.02	13567.43	-0.29865	0.009174	0.067124	853.4147
Effect of proposed commodity change on average annual bills:									853.4147
Effect of proposed demand change on average annual bills:									0
3) Small Vol. Firm: Avg. Annual Use:				4964	Mcf				
Avg, Annual CD units:				50					
Commodity Cost	5.5117	3.7221	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand Cost	5.2429	3.458	3.458	3.458	3.458	-0.34044	0	0	0
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Demand Margin	1.8	1.8	1.8	1.8	1.8	0	0	0	0
Total Cost of Gas	6.6798	4.8902	4.6423	4.3902	4.684887	-0.29865	0.009174	0.067124	0.294687
Total Demand Cost	7.0429	5.258	5.258	5.258	5.258	-0.25343	0	0	0
Avg Annual Cost	33510.67	24537.85	23307.28	22055.85	23518.68	-0.29817	0.00907	0.066324	1462.828
Effect of proposed commodity change on average annual bills:									1462.828
Effect of proposed demand change on average annual bills:									0

Note: Average Annual Average based on PNG Annual Automatic Adjustment Report in Docket No. E,G999/AA-11-793
*As submitted in Docket No. G007,011/MR-10-978; to coincide with implementation of interim rates in Docket No. G007,011/MR-10-977
**$/Mcf rates do not include refunds/charges issued via October 2011 PGA per Docket Nos. G-007,011/M-11-154 & FERC Docket RP11-1781
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012

MINNESOTA ENERGY RESOURCES - PNG
CALCULATION OF PURCHASED GAS ADJUSTMENT (PGA) GLGT
Great Lakes Current Cost of Gas

41214 CURRENT

II. GREAT LAKES GAS TRANSMISSION'S RATES -- CURRENT COST OF GAS EFFECTIVE

Commodity From Schedule D	0.32457	/therm

III. ANNUAL SALES --

Total Annual Sales	10762470	therms
Firm Annual Sales (GS-5)	8130783	therms

IV. PNG'S -- CURRENT COST OF GAS EFFECTIVE 41214 CURRENT

			Monthly Entitlemen	Months	Rate $/Dth		Contract Cost	$/therm	
A. GS-5	FT Wester	FT0016	3923	12	3.458	=	162789	0.020021	
	FT Wester	FT0155	1394	12	3.458	=	57845	0.007114	
	FT Wester	FT0155	1409	5	3.458	=	24362	0.002996	
	FT Wester	FT15782	3486	12	3.458	=	144655	0.017791	
						=	0	0	
	Total Demand Cost						389651	0.047923	
	Niska Storage (AECO		175982.2	0	0	=	0	0	
	AECO/Emerson Swap		175982.8	0	0	=	0	0	
							0	0	
	GS-5 Firm Annual Sales in therms					8130783			0.047923
	Current Demand Cost of Gas $/therm							0.047923	
	Current T-17 Commodity Cost of Gas							0.32457	
	Call Option Premium					10762470	46292.98	0.004301	
	Niska Storage (AECO		175982.2	1	0.954824	10762470	168032	0.015613	
	AECO/Emerson Swap		175982.8	1	0.439998	10762470	77432	0.007195	
	GS-5 Total Current Commodity Cost of Gas $/therm							0.351679	0.351679
	Current Total Cost of Gas $/therm							0.399602	
B. SVI-5	Current Commodity Cost of Gas $/therm							0.351679	
C. SJ-5	Current Demand Cost of Gas $/therm							0.3458	
	Current Commodity Cost of Gas $/therm							0.351679	
D. LVI-5	Current Commodity Cost of Gas $/therm							0.351679	

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Attachment 5

MINNESOTA ENERGY RESOURCES - PNG-GLGT
Financial Options
Heating Season 2012-2013

[TRADE SECRET DATA BEGINS
Units - Gas Daily Peaker Packages (Physical)

	November Contract Date	Daily Volume	December Contract Date	Daily Volume	January Contract Date	Daily Volume	February Contract Date	Daily Volume	March Contract Date	Daily Volume	Daily Total	Term Total
											0	0

Premium - Gas Daily Peaker (Monthly Cost)

	November Option Premium	Premium Cost	December Option Premium	Premium Cost	January Option Premium	Premium Cost	February Option Premium	Premium Cost	March Option Premium	Premium Cost	Total Option Premium	Premium Cost
											0	0

Units - Futures (Daily Volume)

	November Contract Date	Daily Volume	December Contract Date	Daily Volume	January Contract Date	Daily Volume	February Contract Date	Daily Volume	March Contract Date	Daily Volume	Daily Total	Term Total
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
Total		999.9999		967.742		1290.323		1071.429		967.7419	5297.235	160000
		30000		30000		40000		30000		30000		160000

Units - Call Options (Daily Volume)

	November Contract Date	Daily Volume	December Contract Date	Daily Volume	January Contract Date	Daily Volume	February Contract Date	Daily Volume	March Contract Date	Daily Volume	Daily Total	Term Total
1												
2												
3												
4												
5												
6												
7												
Total		1000		1612.903		1612.903		1428.571		967.742	6622.12	200000
		30000		50000		50000		40000		30000		200000

Premium - Call Option (Monthly Cost)

	November Option Premium	Premium Cost	December Option Premium	Premium Cost	January Option Premium	Premium Cost	February Option Premium	Premium Cost	March Option Premium	Premium Cost	Total Option Premium	Premium Cost
1												
2												
3												
4												
5												
6												
7												
Total	0.1659	4975.826	0.191	9550	0.2373	11866.67	0.2807	11229.16	0.2827	8481.207	0.2305	46102.86

Units - Collar Floor (put)
No Puts were purchased.

TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Attachment 6
GLGT

MINNESOTA ENERGY RESOURCES - PNG

2009-10		2010-11	
G011/M-09	Quantity (Mcf)	G011/M-10	Quantity (Mcf)
FT0017	4105	FT0017	4105
FT0075	1973	FT0075	1973
FT0155	2422	FT0155	2422
FT0155	1500	FT0155	1500
FT0011	0	FT0011	0
FT8466	500	FT8466	1500
Total Desig	10500	Total Desig	11500
Total GL T	10500	Total GL T	11500
Total Trans	10500	Total Trans	11500
Total Seas	1500	Total Seas	1500
Percent Se	0.142857	Percent Se	0.130435

2011-12		2012-13		Change in
G011/M-11	Quantity (Mcf)	G011/M-12	Quantity (M	Quantity
FT0016	3899	FT0016	3923	24
FT0075	0	FT0075	0	0
FT0155	1386	FT0155	1394	8
FT0155	1400	FT0155	1409	9
FT0011	0	FT0011	0	0
FT8466	0	FT8466	0	0
FT15782	3464	FT15782	3486	22
Total Desig	10149	Total Desig	10212	63
Total GL T	10149	Total GL T	10212	63
Total Trans	10149	Total Trans	10212	63
Total Seas	1400	Total Seas	1409	9
Percent Se	0.137945	Percent Se	0.137975	3.03E-05

MINNESOTA ENERGY RESOURCES - PNG

General Se	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand C	0.7701	0.6791	0.7288	0.781124	0.014315	0.150234	0.071795	0.052324
Commodity	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Reco	8.0564	5.9279	5.7255	5.844437	-0.27456	-0.01408	0.020773	0.118937
Average Ar	84	84	84	84				
Average Ar	676.7376	497.9436	480.942	490.9327	-0.27456	-0.01408	0.020773	9.990739

Small Volu	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand Cost of Gas					0	0	0	0
Commodity	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Reco	6.6798	4.6423	4.3902	4.456813	-0.33279	-0.03996	0.015173	0.066613
Average Ar	2896	2896	2896	2896				
Average Ar	19344.7	13444.1	12714.02	12906.93	-0.33279	-0.03996	0.015173	192.9122

Small Volu	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.288713	-0.40332	-0.05339	0.020674	0.066613
Demand C	5.2429	3.458	3.458	3.458	-0.34044	0	0	0
Commodity	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Demand M	1.8	1.8	1.8	1.8	0	0	0	0
Total Comi	6.6798	4.6423	4.3902	4.456813	-0.33279	-0.03996	0.015173	0.066613
Total Dema	7.0429	5.258	5.258	5.258	-0.25343	0	0	0
Total Reco	27.4454	19.8006	19.2964	19.42963	-0.29206	-0.01874	0.006904	0.133227
Average Ar	4964	4964	4964	4964				
Average Ar	50	50	50	50				
Average Ar	33510.67	23307.28	22055.85	22386.52	-0.33196	-0.03951	0.014992	330.6686

Summary	Commodity Change ($/Mcf)	Commodity Change (%)	Demand Change ($/Mcf)	Demand Change (%)	Total Change ($/Mcf)	Total Change (%)
General Se	0.066613	0.020674	0.052324	0.071795	0.118937	0.020773
Small Volu	0.066613	0.020674	0	0	0.066613	0.015173
Small/Larg	0.066613	0	0	0	0.133227	0.006904

* Average Annual Bill amount does not include customer charges.
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012

Rate Impacts (Illustrates FDD storage contract costs shifted from Demand costs to Comm
MINNESOTA ENERGY RESOURCES - PNG

General Se	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand C	0.7701	0.6791	0.7288	0.479229	-0.37771	-0.29432	-0.34244	-0.24957
Commodity	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Reco	8.0564	5.9279	5.7255	5.770617	-0.28372	-0.02653	0.00788	0.045117
Average Ar	84	84	84	84				
Average Ar	676.7376	497.9436	480.942	484.7318	-0.28372	-0.02653	0.00788	3.789807

Small Volu	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand Cost of Gas					0	0	0	0
Commodity	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Reco	6.6798	4.6423	4.3902	4.684887	-0.29865	0.009174	0.067124	0.294687
Average Ar	2896	2896	2896	2896				
Average Ar	19344.7	13444.1	12714.02	13567.43	-0.29865	0.009174	0.067124	853.4147

Small Volu	Base Cost Change G011/MR1	Last Dema Change Mar. 12^	Most Rece PGA Oct. 12	Nov 1/12 P w/ Propose Demand C	% Change From Last Rate Case	% Change From Last Demand Fi	% Change From Last PGA	$ Change From Last PGA
Commodity	5.5117	3.4742	3.2221	3.516787	-0.36194	0.012258	0.091458	0.294687
Demand C	5.2429	3.458	3.458	3.458	-0.34044	0	0	0
Commodity	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Demand M	1.8	1.8	1.8	1.8	0	0	0	0
Total Comi	6.6798	4.6423	4.3902	4.684887	-0.29865	0.009174	0.067124	0.294687
Total Dema	7.0429	5.258	5.258	5.258	-0.25343	0	0	0
Total Reco	27.4454	19.8006	19.2964	19.88577	-0.27544	0.004302	0.030543	0.589375
Average Ar	4964	4964	4964	4964				
Average Ar	50	50	50	50				
Average Ar	33510.67	23307.28	22055.85	23518.68	-0.29817	0.00907	0.066324	1462.828

Summary	Commodity Change ($/Mcf)	Commodity Change (%)	Demand Change ($/Mcf)	Demand Change (%)	Total Change ($/Mcf)	Total Change (%)
General Se	0.294687	0.091458	-0.24957	-0.34244	0.045117	0.00788
Small Volu	0.294687	0.091458	0	0	0.294687	0.067124
Small/Larg	0.294687	0	0	0	0.589375	0.030543

* Average Annual Bill amount does not include customer charges.
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012

Attachment 8

MINNESOTA ENERGY RESOURCES - PNG
GLGT
Peoples Great Lakes -- Current Cost of Gas Effective

	Oct. 2012 Entitlemen	Nov. 2012 Entitlemen	Entitlement Change	Months	Oct. 2012 Rate	Oct. 2012 Total Annu	Nov. 2012 Total Annu	Total Annual Cost Change
T-17 Dema	3899	3923	24	12	3.458	161792.9	162788.8	995.904
FT-075- Re	0	0	0	12	3.458	0	0	0
FT-155 (12	1386	1394	8	12	3.458	57513.46	57845.42	331.968
FT-155 (5)	1400	1409	9	5	3.458	24206	24361.61	155.61
FT-8466	0	0	0	12	3.458	0	0	0
FT-15782	3464	3486	22	12	3.458	143742.1	144655.1	912.912
Niska Stora	147196	175982.2	28786.25	1	0.954824	140547.2	168032	27484.79
AECO/Eme	147197	175982.8	28785.8	1	0.439998	64767.32	77432	12664.68
						592569	635114.9	42545.86

MINNESOTA ENERGY RESOURCES - PNG
12/13 Winter Portfolio Plan - MERC GLGT-PNG Hedging Plan
[TRADE SECRET DATA BEGINS

[TRADE SECRET DATA ENDS

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

MINNESOTA ENERGY RESOURCES
GLGT WINTER PLAN (PNG)
NOVEMBER, 2012 THROUGH MARCH, 2013
[TRADE SECRET DATA BEGINS

PHYSICAL FIXED PR Deal #	Trigger Locked	Trigger Exercised	Receipt Point	Daily Volumes Nov	Dec	Jan	Feb	Mar	Monthly Total

175982.2

TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Attachment 10
GLGT

MINNESOTA ENERGY RESOURCES - PNG
Daily Total Throughput Data - July 1, 2011 through June 30, 2012

			Base	410
			Variable	97
	1	1		
Date	Bemidji Adjusted HDD	Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put
40725	0	0	594	410
40726	4.28	4.28	565	825.16
40727	0	0	542	410
40728	0	0	544	410
40729	1.07	1.07	616	513.79
40730	0	0	589	410
40731	0	0	601	410
40732	0	0	558	410
40733	0	0	524	410
40734	0	0	546	410
40735	3.27	3.27	652	727.19
40736	8.4	8.4	655	1224.8
40737	1.09	1.09	652	515.73
40738	3.33	3.33	657	733.01
40739	0	0	565	410
40740	0	0	512	410
40741	0	0	514	410
40742	0	0	537	410
40743	0	0	591	410
40744	0	0	571	410
40745	0	0	610	410
40746	0	0	611	410
40747	3.21	3.21	582	721.37
40748	0	0	573	410
40749	1.07	1.07	625	513.79
40750	0	0	617	410
40751	0	0	620	410
40752	0	0	624	410
40753	0	0	583	410
40754	0	0	546	410
40755	0	0	552	410
40756	0	0	585	410
40757	0	0	632	410
40758	0	0	595	410
40759	0	0	585	410
40760	0	0	565	410
40761	0	0	565	410
40762	0	0	578	410
40763	0	0	648	410

40764	7.7	7.7	686	1156.9
40765	0	0	644	410
40766	0	0	613	410
40767	2.06	2.06	610	609.82
40768	1.02	1.02	569	508.94
40769	0	0	564	410
40770	0	0	609	410
40771	0	0	590	410
40772	0	0	565	410
40773	0	0	613	410
40774	6.48	6.48	665	1038.56
40775	7.35	7.35	612	1122.95
40776	4.16	4.16	567	813.52
40777	0	0	650	410
40778	0	0	587	410
40779	2.24	2.24	564	627.28
40780	0	0	646	410
40781	4.36	4.36	657	832.92
40782	6.12	6.12	612	1003.64
40783	1.04	1.04	629	510.88
40784	0	0	658	410
40785	0	0	684	410
40786	0	0	683	410
40787	0	0	694	410
40788	5.2	5.2	679	914.4
40789	12.54	12.54	706	1626.38
40790	16.8	16.8	751	2039.6
40791	11.55	11.55	768	1530.35
40792	6.42	6.42	729	1032.74
40793	4.08	4.08	683	805.76
40794	0	0	697	410
40795	0	0	660	410
40796	0	0	641	410
40797	0	0	642	410
40798	10.17	10.17	789	1396.49
40799	19.04	19.04	1081	2256.88
40800	28.34	28.34	1683	3158.98
40801	23.69	23.69	1482	2707.93
40802	19.8	19.8	1280	2330.6
40803	18.24	18.24	1104	2179.28
40804	18.02	18.02	1097	2157.94
40805	8.64	8.64	876	1248.08
40806	15.26	15.26	1148	1890.22
40807	28.6	28.6	1627	3184.2
40808	24.72	24.72	1526	2807.84
40809	18.9	18.9	1196	2243.3
40810	18.72	18.72	1075	2225.84
40811	19.08	19.08	1064	2260.76
40812	14.28	14.28	1001	1795.16
40813	9.09	9.09	909	1291.73
40814	2.2	2.2	772	623.4
40815	18.08	18.08	1223	2163.76

40816	21.4	21.4	1347	2485.8
40817	14.56	14.56	1085	1822.32
40818	4.2	4.2	830	817.4
40819	0	0	781	410
40820	0	0	761	410
40821	0	0	754	410
40822	0	0	737	410
40823	0	0	715	410
40824	11.66	11.66	784	1541.02
40825	13.08	13.08	957	1678.76
40826	11	11	974	1477
40827	7.49	7.49	834	1136.53
40828	14.04	14.04	1006	1771.88
40829	23.73	23.73	1540	2711.81
40830	29	29	1778	3223
40831	25.3	25.3	1669	2864.1
40832	30	30	2079	3320
40833	27.84	27.84	2305	3110.48
40834	33.17	33.17	2913	3627.49
40835	36.4	36.4	2885	3940.8
40836	29.87	29.87	2670	3307.39
40837	26.5	26.5	2148	2980.5
40838	22.26	22.26	1728	2569.22
40839	28.62	28.62	2262	3186.14
40840	27.81	27.81	2284	3107.57
40841	27.54	27.54	2591	3081.38
40842	27.81	27.81	2510	3107.57
40843	29.58	29.58	2750	3279.26
40844	35.31	35.31	2780	3835.07
40845	32.1	32.1	2331	3523.7
40846	29.4	29.4	2398	3261.8
40847	28.34	28.34	2293	3158.98
40848	30.24	30.24	2631	3343.28
40849	34.98	34.98	3093	3803.06
40850	28.34	28.34	2725	3158.98
40851	24.36	24.36	2422	2772.92
40852	23	23	1952	2641
40853	30.42	30.42	3088	3360.74
40854	40.28	40.28	3759	4317.16
40855	34.32	34.32	3166	3739.04
40856	39.1	39.1	3627	4202.7
40857	39.96	39.96	3764	4286.12
40858	31.5	31.5	2976	3465.5
40859	27.56	27.56	2489	3083.32
40860	36.72	36.72	3450	3971.84
40861	36.38	36.38	3348	3938.86
40862	42.9	42.9	4169	4571.3
40863	56.5	56.5	5235	5890.5
40864	52.43	52.43	4756	5495.71
40865	44.94	44.94	4567	4769.18
40866	56.16	56.16	5449	5857.52
40867	53.04	53.04	5360	5554.88

40868	49.22	49.22	4373	5184.34
40869	36.38	36.38	3738	3938.86
40870	27.82	27.82	2835	3108.54
40871	27.04	27.04	2853	3032.88
40872	31.03	31.03	2981	3419.91
40873	39.9	39.9	3866	4280.3
40874	43.87	43.87	4330	4665.39
40875	41.04	41.04	4141	4390.88
40876	43.86	43.86	4060	4664.42
40877	46.01	46.01	4395	4872.97
40878	52.92	52.92	5485	5543.24
40879	41.44	41.44	4520	4429.68
40880	47.52	47.52	4825	5019.44
40881	57.24	57.24	5617	5962.28
40882	65.92	65.92	7026	6804.24
40883	56.61	56.61	5411	5901.17
40884	50.4	50.4	5293	5298.8
40885	66.6	66.6	6896	6870.2
40886	62.06	62.06	6584	6429.82
40887	45.15	45.15	4421	4789.55
40888	36.72	36.72	4066	3971.84
40889	45.32	45.32	4753	4806.04
40890	38.52	38.52	3923	4146.44
40891	41.8	41.8	4118	4464.6
40892	56.61	56.61	5982	5901.17
40893	51.5	51.5	5561	5405.5
40894	48.15	48.15	4855	5080.55
40895	35.84	35.84	3927	3886.48
40896	49.68	49.68	5207	5228.96
40897	41.04	41.04	4233	4390.88
40898	47.3	47.3	4888	4998.1
40899	47.7	47.7	4982	5036.9
40900	49.68	49.68	4862	5228.96
40901	47.46	47.46	3932	5013.62
40902	36.3	36.3	3802	3931.1
40903	39.78	39.78	4028	4268.66
40904	55.12	55.12	5494	5756.64
40905	46.2	46.2	4427	4891.4
40906	46.35	46.35	4719	4905.95
40907	45.76	45.76	4622	4848.72
40908	41.81	41.81	4326	4465.57
40909	64.13	64.13	6025	6630.61
40910	60.99	60.99	6346	6326.03
40911	49.05	49.05	5150	5167.85
40912	40.8	40.8	4327	4367.6
40913	31.32	31.32	3346	3448.04
40914	41.44	41.44	4219	4429.68
40915	43.68	43.68	4316	4646.96
40916	39.24	39.24	3802	4216.28
40917	37.1	37.1	3687	4008.7
40918	37.45	37.45	3600	4042.65
40919	65.55	65.55	6773	6768.35

40920	67.58	67.58	7160	6965.26
40921	63.24	63.24	6935	6544.28
40922	52.5	52.5	5519	5502.5
40923	51.06	51.06	4946	5362.82
40924	73.03	73.03	7028	7493.91
40925	77.04	77.04	8060	7882.88
40926	82.84	82.84	9008	8445.48
40927	81.62	81.62	8752	8327.14
40928	72.8	72.8	7941	7471.6
40929	61.05	61.05	6511	6331.85
40930	46.2	46.2	5227	4891.4
40931	55.5	55.5	5975	5793.5
40932	47.84	47.84	5284	5050.48
40933	43.29	43.29	4672	4609.13
40934	47.96	47.96	4923	5062.12
40935	49.72	49.72	5169	5232.84
40936	64.38	64.38	6124	6654.86
40937	64.2	64.2	6097	6637.4
40938	45.58	45.58	4775	4831.26
40939	40.33	40.33	4564	4322.01
40940	41.6	41.6	4213	4445.2
40941	40.4	40.4	4490	4328.8
40942	45.45	45.45	4770	4818.65
40943	48.15	48.15	4410	5080.55
40944	39.59	39.59	3905	4250.23
40945	57.2	57.2	5432	5958.4
40946	59.36	59.36	6243	6167.92
40947	50.6	50.6	5291	5318.2
40948	62.7	62.7	6625	6491.9
40949	76.16	76.16	7983	7797.52
40950	72.6	72.6	7264	7452.2
40951	53.55	53.55	5947	5604.35
40952	53.04	53.04	5569	5554.88
40953	43.26	43.26	4281	4606.22
40954	41.04	41.04	4381	4390.88
40955	42.4	42.4	4524	4522.8
40956	53	53	5111	5551
40957	48.41	48.41	4710	5105.77
40958	42.9	42.9	3800	4571.3
40959	38.5	38.5	4107	4144.5
40960	44.85	44.85	4691	4760.45
40961	52	52	4881	5454
40962	50.29	50.29	4704	5288.13
40963	68.32	68.32	6193	7037.04
40964	58.86	58.86	5182	6119.42
40965	55.5	55.5	5257	5793.5
40966	52.5	52.5	5141	5502.5
40967	45.2	45.2	4462	4794.4
40968	37.8	37.8	4220	4076.6
40969	40.28	40.28	3828	4317.16
40970	46.2	46.2	4413	4891.4
40971	65.72	65.72	5708	6784.84

40972	57.68	57.68	5361	6004.96
40973	47.3	47.3	4485	4998.1
40974	31.32	31.32	3312	3448.04
40975	51.06	51.06	5069	5362.82
40976	58.76	58.76	5812	6109.72
40977	39.6	39.6	4890	4251.2
40978	23.92	23.92	2525	2730.24
40979	20.9	20.9	2201	2437.3
40980	29.16	29.16	2967	3238.52
40981	18.87	18.87	2072	2240.39
40982	25.2	25.2	2417	2854.4
40983	21	21	2471	2447
40984	2.2	2.2	1266	623.4
40985	9.72	9.72	1056	1352.84
40986	2.28	2.28	1034	631.16
40987	7.7	7.7	1104	1156.9
40988	19.95	19.95	1838	2345.15
40989	18.72	18.72	1702	2225.84
40990	11.66	11.66	1515	1541.02
40991	11.44	11.44	1364	1519.68
40992	24.64	24.64	2415	2800.08
40993	35.52	35.52	3112	3855.44
40994	21.6	21.6	3479	2505.2
40995	24.15	24.15	2792	2752.55
40996	34.98	34.98	3260	3803.06
40997	33.17	33.17	3589	3627.49
40998	26.4	26.4	2715	2970.8
40999	16.05	16.05	1858	1966.85
41000	14.43	14.43	1586	1809.71
41001	22.68	22.68	2389	2609.96
41002	26.78	26.78	2258	3007.66
41003	23.1	23.1	2003	2650.7
41004	22.2	22.2	2131	2563.4
41005	27.84	27.84	1700	3110.48
41006	27.6	27.6	2507	3087.2
41007	42.94	42.94	2606	4575.18
41008	42.51	42.51	4284	4533.47
41009	36.05	36.05	3950	3906.85
41010	28.08	28.08	2779	3133.76
41011	23.52	23.52	1918	2691.44
41012	13.32	13.32	2401	1702.04
41013	25.76	25.76	1370	2908.72
41014	34.41	34.41	2939	3747.77
41015	30.24	30.24	3406	3343.28
41016	26.75	26.75	2060	3004.75
41017	27.04	27.04	2602	3032.88
41018	26	26	2187	2932
41019	30.8	30.8	1910	3397.6
41020	24.96	24.96	2841	2831.12
41021	19.95	19.95	2283	2345.15
41022	14.84	14.84	1709	1849.48
41023	14.43	14.43	1242	1809.71

41024	27	27	1639	3029
41025	25.76	25.76	2125	2908.72
41026	22.6	22.6	2201	2602.2
41027	17.76	17.76	1795	2132.72
41028	12.96	12.96	1487	1667.12
41029	17.28	17.28	1329	2086.16
41030	6.36	6.36	1370	1026.92
41031	10.6	10.6	1051	1438.2
41032	19.8	19.8	1159	2330.6
41033	15.12	15.12	1418	1876.64
41034	15.75	15.75	1020	1937.75
41035	17.76	17.76	1242	2132.72
41036	23.76	23.76	1265	2714.72
41037	17.51	17.51	1499	2108.47
41038	7.7	7.7	1071	1156.9
41039	19.21	19.21	833	2273.37
41040	16.2	16.2	1239	1981.4
41041	2.22	2.22	825	625.34
41042	3.12	3.12	731	712.64
41043	19.21	19.21	690	2273.37
41044	17.85	17.85	1039	2141.45
41045	0	0	836	410
41046	0	0	731	410
41047	6.78	6.78	631	1067.66
41048	15.26	15.26	764	1890.22
41049	13.52	13.52	972	1721.44
41050	0	0	745	410
41051	6.54	6.54	685	1044.38
41052	12.48	12.48	799	1620.56
41053	17.44	17.44	962	2101.68
41054	18.53	18.53	1089	2207.41
41055	9.81	9.81	942	1361.57
41056	10.9	10.9	797	1467.3
41057	23.31	23.31	928	2671.07
41058	19.57	19.57	1421	2308.29
41059	16.16	16.16	1192	1977.52
41060	13.26	13.26	954	1696.22
41061	10.4	10.4	778	1418.8
41062	8.24	8.24	638	1209.28
41063	2.12	2.12	904	615.64
41064	2.06	2.06	663	609.82
41065	0	0	657	410
41066	0	0	641	410
41067	0	0	629	410
41068	0	0	595	410
41069	0	0	534	410
41070	16.1	16.1	611	1971.7
41071	15.26	15.26	934	1890.22
41072	2.24	2.24	720	627.28
41073	2.2	2.2	621	623.4
41074	0	0	776	410
41075	2.16	2.16	682	619.52

41076	3.27	3.27	631	727.19
41077	0	0	617	410
41078	6.36	6.36	643	1026.92
41079	6.42	6.42	751	1032.74
41080	5.5	5.5	750	943.5
41081	6.24	6.24	733	1015.28
41082	4.2	4.2	665	817.4
41083	3.18	3.18	629	718.46
41084	5.3	5.3	626	924.1
41085	0	0	633	410
41086	0	0	644	410
41087	0	0	662	410
41088	0	0	652	410
41089	0	0	621	410
41090	0	0	582	410
Totals	9028.98	9028.98	918040	1025871

* Volumes include interruptible and transportation volumes except for transportation volumes that are not located behind MERC citygates.

** Design Model numbers are used to calculate firm volumes only

Attachment 11
GLGT

MINNESOTA ENERGY RESOURCES - PNG
Customer Counts by PGAC Class - July 1, 2011 through June 30, 2012

Rate Class	Tariff Rate Designatio	40725 Average Customers	40757 Average Customers	40789 Average Customers	40821 Average Customers	40853 Average Customers	40885 Average Customers	40917 Average Customers	40949 Average Customers	40982 Average Customers	41014 Average Customers	41046 Average Customers	41078 Average Customers
Residentia	MN006	4890	4829	4772	4825	4938	5030	5046	5069	5091	5077	5099	5034
Residentia	MN005	35	34	33	33	35	35	35	35	35	35	34	34
Commercia	MN052/07	449	443	440	443	445	464	461	456	466	471	507	505
Commercia	MN062/07	514	509	509	508	517	519	520	526	523	522	481	477
SV-Joint	MN2D706	5	5	5	5	5	5	3	3	3	3	3	3
SV-Interrup	MN127	5	5	5	5	5	5	5	5	5	5	5	5
Transport	MN709/83	4	3	4	4	4	4	4	4	4	4	4	4
Total		5902	5828	5768	5823	5949	6062	6074	6098	6127	6117	6133	6062

MINNESOTA ENERGY RESOURCES - PNG
Projected Fixed Cost - November 2012 through March 2013

Futures Contracts WACOG

GLGT							30								31							31
	41223							41249								40549						
Purchase Date	Financial Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Und Market		Purchase Date	Financial Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Und Market		Purchase Date	Financial Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Under) Market
41054	4239.129	2.996	12700.43	3.776	16006.95	-3306.52		41058	5915.494	3.176	18787.61	4.088	24182.54	-5394.93		41059	824.7426	3.264	2691.96	4.1895	3455.259	-763.299
41054	1630.434	2.997	4886.411	3.776	6156.519	-1270.11		41089	4225.353	3.329	14066.2	4.088	17273.24	-3207.04		05/3012/	1649.485	3.265	5385.569	4.1895	6910.518	-1524.95
41088	5869.566	3.017	17708.48	3.776	22163.48	-4455		41089	1690.142	3.331	5629.862	4.088	6909.299	-1279.44		0530/12	5360.824	3.266	17508.45	4.1895	22459.17	-4950.72
41121	4891.305	3.313	16204.89	3.776	18469.57	-2264.67		41120	5915.494	3.6	21295.78	4.088	24182.54	-2886.76		41088	824.7426	3.425	2824.743	4.1895	3455.259	-630.516
41121	652.173	3.314	2161.301	3.776	2462.605	-301.304		41143	4647.886	3.288	15282.25	4.088	19000.56	-3718.31		41088	3298.97	3.427	11305.57	4.1895	13821.04	-2515.46
41136	4565.217	2.988	13640.87	3.776	17238.26	-3597.39		41172	4225.353	3.248	13723.95	4.088	17273.24	-3549.3		41088	3298.97	3.428	11308.87	4.1895	13821.04	-2512.17
41173	4239.129	3.065	12992.93	3.776	16006.95	-3014.02		41205	3380.28	3.863	13058.02	4.088	13818.59	-760.563		41117	7010.309	3.573	25047.83	4.1895	29369.69	-4321.86
41190	3913.044	3.408	13335.65	3.776	14775.65	-1440										41144	6597.938	3.426	22604.53	4.1895	27642.06	-5037.53
																41171	5773.195	3.39	19571.13	4.1895	24186.8	-4615.67
																41207	5360.824	3.904	20928.66	4.1895	22459.17	-1530.52
Total	30000		93630.97		113280	-19649		30000			101843.7		122640	-20796.3		40000			139177.3		167580	-28402.7
WACOG			3.121033		3.776	-0.65497					3.394789		4.088	-0.69321					3.479433		4.1895	-0.71007

							28								31							
	41316							41339								Total						
Purchase Date	Physical Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Und Market		Purchase Date	Physical Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Under) Market			Financial Volume	Purchase Price	Total Cost	Indexes	Index Cost	Over/(Under) Market
41058	6600	3.34	22044	4.1825	27604.5	-5560.5		41059	2608.697	3.258	8499.133	4.0675	10610.87	-2111.74			20188.06	3.20601	64723.14	4.054878	81860.13	-17137
41089	600.0008	3.484	2090.403	4.1825	2509.503	-419.101		41059	3260.868	3.26	10630.43	4.0675	13263.58	-2633.15			11366.14	3.260474	37059.01	4.057082	46113.36	-9054.35
41089	6000	3.485	20910	4.1825	25095	-4185		41087	5869.565	3.461	20314.56	4.0675	23874.45	-3559.89			24790.1	3.310651	82071.36	4.054095	100501.4	-18430
41109	600.0008	3.526	2115.603	4.1825	2509.503	-393.901		41116	5543.479	3.612	20023.05	4.0675	22548.1	-2525.05			17775.02	3.514148	62464.07	4.00365	71164.97	-8700.91
41109	6000	3.528	21168	4.1825	25095	-3927		41145	4891.304	3.362	16444.56	4.0675	19895.38	-3450.81			19490.33	3.404851	66361.68	4.118687	80274.58	-13912.9
41138	600.0008	3.405	2043.003	4.1825	2509.503	-466.501		41170	4239.129	3.416	14480.87	4.0675	17242.66	-2761.79			16928.67	3.260596	55197.55	4.021858	68084.7	-12887.1
41138	4200	3.406	14305.2	4.1825	17566.5	-3261.3		41207	3586.957	3.882	13924.57	4.0675	14589.95	-665.381			22416.68	3.538819	79328.56	4.075166	91351.68	-12023.1
41169	3000.001	3.46	10380	4.1825	12547.51	-2167.5											13510.98	3.428336	46320.19	4.068188	54965.22	-8645.03
41204	2400	3.926	9422.402	4.1825	10038	-615.6											8173.196	3.547393	28993.53	4.187445	34224.8	-5231.27
																	5360.824	3.904	20928.66	4.1895	22459.17	-1530.52
Total	30000		104478.6		125475	-20996.4		30000			104317.2		122025	-17707.8			160000		543447.7		651000	-107552
WACOG			3.48262		4.1825	-0.69988					3.477239		4.0675	-0.59026					3.396548		4.06875	-0.6722

MINNESOTA ENERGY RESOURCES - PNG
Projected Storage Cost - November 2012 through March 2013

Month/ Year	K#118657 NNG Storage	Storage K#123780 LS Power	Storage K#123781 LS Power	Total NNG Storage	WACOG Projected K#118657 NNG WACOG	Projected K#123780 NNG WACOG	Projected K#123781 NNG WACOG	K#118657 NNG Storage Cost	K#123780 NNG Storage Cost	K#123781 NNG Storage Cost	Total NNG Storage Cost	GLGT/VGT Centra AECO Sto	GLGT/VGT Centra AECO Sto WACOG	GLGT/VGT Centra AECO Storage Cost
41219	455259	73125	19500	547884	2.8422	2.8422	2.8422	1293937	207835.9	55422.9	1557196	85290	2.1432	182793.5
41250	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431	522254.3	139267.8	3912953	231756	2.1432	496699.5
41282	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431	522254.3	139267.8	3912953	231756	2.1432	496699.5
41314	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431	522254.3	139267.8	3912953	209328	2.1432	448631.8
41343	455259	73125	19500	547884	2.8422	2.8422	2.8422	1293937	207835.9	55422.9	1557196	96379	2.1432	206559.5
Total	4342470	697500	186000	5225970	2.8422	2.8422	79.85619	12342168	1982435	528649.2	14853252	854509	2.1432	1831384
										2.8422			2.1432	

Month/ Year	NNG Storage Volume	NNG Indexes Price	NNG Indexes Cost	AECO Storage Volume	Emerson Indexes Price	Emerson Indexes Cost	Total AECO Sto Volumes	Total AECO Sto WACOG	Total AECO Sto Cost	Total Emerson WACOG	Total Emerson Cost
41219	547884	3.6435	1996215	85290	3.776	322055	85290	2.1432	182793.5	3.776	322055
41250	1376734	3.983	5483532	231756	4.088	947418.5	231756	2.1432	496699.5	4.088	947418.5
41282	1376734	4.0745	5609503	231756	4.1895	970941.8	231756	2.1432	496699.5	4.1895	970941.8
41314	1376734	4.07	5603307	209328	4.1825	875514.4	209328	2.1432	448631.8	4.1825	875514.4
41343	547884	3.99	2186057	96379	4.0675	392021.6	96379	2.1432	206559.5	4.0675	392021.6
Total	5225970	3.995165	20878614	854509	4.105224	3507951	854509	2.1432	1831384	4.105224	3507951

Max NNG Storage (Storage plan withdrawals through Ap	5225970	5619321	10/31/11 Storage Balance - NNG	5619321	1 5225970
Max AECO Storage	854509		10/31/11 Storage Balance - AEC	947820	

Month/ Year	K#118657 NNG Storage	Storage K#123780 LS Power	Storage K#123781 LS Power	Total NNG Storage	NNG PNG Volumes	NNG NMU Volumes	NNG Total Volumes	Projected K#118657 NNG WACOG	Projected K#123780 NNG WACOG	Projected K#123781 NNG WACOG	WACOG NNG PNG Cost	WACOG NNG NMU Cost	WACOG NNG Total Cost	NNG Indexes Price	NNG Index NNG PNG Cost	NNG Index NNG NMU Cost	NNG Index NNG Total Cost
41219	455259	73125	19500	547884	487213.2	60670.82	547884	2.8422	2.8422	2.8422	1384757	172438.6	1557196	3.6435	1775161	221054.1	1996215
41250	1143984	183750	49000	1376734	1224279	152454.9	1376734	2.8422	2.8422	2.8422	3479646	433307.2	3912953	3.983	4876304	607227.7	5483532
41282	1143984	183750	49000	1376734	1224279	152454.9	1376734	2.8422	2.8422	2.8422	3479646	433307.2	3912953	4.0745	4988325	621177.4	5609503
41314	1143984	183750	49000	1376734	1224279	152454.9	1376734	2.8422	2.8422	2.8422	3479646	433307.2	3912953	4.07	4982816	620491.3	5603307
41343	455259	73125	19500	547884	487213.2	60670.82	547884	2.8422	2.8422	2.8422	1384757	172438.6	1557196	3.99	1943981	242076.6	2186057
Total	4342470	697500	186000	5225970	4647264	578706.3	5225970	2.8422	2.8422	2.8422	13208453	1644799	14853252	3.995165	18566587	2312027	20878614
											2.8422	2.8422		3.995165	3.995165	3.995165	

Month/ Year	AECO Storage	GLGT PNG Volumes	GLGT NMU Volumes	VGT PNG Volumes	VGT NMU Volumes	Centra NMU Volumes	Total AECO Sto Volumes	GLGT/VGT Centra AECO Sto WACOG	GLGT PNG Cost	GLGT NMU Cost	VGT PNG Cost	VGT NMU Cost	Centra NMU Cost	Total AECO Storage Cost
41219	85290	12351.49	24049.04	12434.87	19722.89	16745.71	85304	2.1432	26471.72	51541.9	26650.42	42270.09	35889.41	182823.5
41250	231756	33192.83	64628.27	33416.9	53002.37	45001.64	229242	2.1432	71138.87	138511.3	71619.09	113594.7	96447.52	491311.5
41282	231756	33192.83	64628.27	33416.9	53002.37	45001.64	229242	2.1432	71138.87	138511.3	71619.09	113594.7	96447.52	491311.5
41314	209328	31051.33	60458.65	31260.94	49582.81	42098.27	214452	2.1432	66549.2	129575	66998.45	106265.9	90225.02	459613.5
41343	96379	13950.16	27161.74	14044.33	22275.64	18913.13	96345	2.1432	29897.99	58213.03	30099.81	47741.16	40534.61	206486.6
Total	854509	123738.6	240926	124573.9	197586.1	167760.4	854585	2.143391	265196.6	516352.5	266986.9	423466.5	359544.1	1831547
		0.144807	0.281947	0.145784	0.231228	0.196324	1.000089		2.1432	2.1432	2.1432	2.1432	2.1432	2.1432

Month/ Year	AECO Storage	GLGT PNG Volumes	GLGT NMU Volumes	VGT PNG Volumes	VGT NMU Volumes	Centra NMU Volumes	Total AECO Storage Volumes	Projected Emerson Index Price	GLGT PNG Cost	GLGT NMU Cost	VGT PNG Cost	VGT NMU Cost	Centra NMU Cost	Total AECO Cost
41219	85290	12351.49	24049.04	12434.87	19722.89	16745.71	85304	3.776	46639.24	90809.17	46954.08	74473.62	63231.8	322107.9
41250	231756	33192.83	64628.27	33416.9	53002.37	45001.64	229242	4.088	135692.3	264200.4	136608.3	216673.7	183966.7	937141.3
41282	231756	33192.83	64628.27	33416.9	53002.37	45001.64	229242	4.1895	139061.3	270760.1	140000.1	222053.4	188534.4	960409.4
41314	209328	31051.33	60458.65	31260.94	49582.81	42098.27	214452	4.1825	129872.2	252868.3	130748.9	207380.1	176076	896945.5
41343	96379	13950.16	27161.74	14044.33	22275.64	18913.13	96345	4.0675	56742.28	110480.4	57125.32	90606.18	76929.15	391883.3
Total	854509	123738.6	240926	124573.9	197586.1	167760.4	854585	4.105852	508007.3	989118.3	511436.7	811187	688738.1	3508487
		0.144807	0.281947	0.145784	0.231228	0.196324	1.000089		4.105487	4.105487	4.105487	4.105487	4.105487	4.105487

MINNESOTA ENERGY RESOURCES - PNG
Projected Call Option Costs - November 2012 through March 2013

Call/Put Options WACOG

Contract = 10000

Call/Put Options

41219

Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1	41060		16	160000	3	480000	3	480000	3.4	544000	-64000	0.267	42720	522720
2	41085		17	170000	3.25	552500	3.25	552500	3.4	578000	-25500	0.248	42160	594660
3	41114		19	190000	3.5	665000	3.4	646000	3.4	646000	0	0.209	39710	685710
4	41148		21	210000	3	630000	3	630000	3.4	714000	-84000	0.177	37170	667170
5	41180		21	210000	3.5	735000	3.4	714000	3.4	714000	0	0.068	14280	728280
6	41187		21	210000	3.5	735000	3.4	714000	3.4	714000	0	0.07	14700	728700
7				0		0	0	0	3.4	0	0		0	0
8				0		0	0	0	3.4	0	0		0	0
9				0		0	0	0	3.4	0	0		0	0
10				0		0	0	0	3.4	0	0		0	0
Total			115	1150000		3797500		3736500		3910000	-173500		190740	3927240
						3.30217		3.24913		3.4	-0.15087		0.16586	3.41499
NNG-PNG	84	0.73043	84	840000	3.30217	2773826	3.24913	2729270	3.4	2856000	-126730	0.16586	139323	2868593
NNG-NMU	10	0.08696	10	100000	3.30217	330217	3.24913	324913	3.4	340000	-15087	0.16586	16586.1	341499
GLGT-PN	3	0.02609	3	30000	3.30217	99065.2	3.24913	97473.9	3.4	102000	-4526.09	0.16586	4975.83	102450
GLGT-NM	6	0.05217	6	60000	3.30217	198130	3.24913	194948	3.4	204000	-9052.17	0.16586	9951.65	204899
VGT-PNG	3	0.02609	3	30000	3.30217	99065.2	3.24913	97473.9	3.4	102000	-4526.09	0.16586	4975.83	102450
VGT-NMU	5	0.04348	5	50000	3.30217	165109	3.24913	162457	3.4	170000	-7543.48	0.16586	8293.04	170750
Centra	4	0.03478	4	40000	3.30217	132087	3.24913	129965	3.4	136000	-6034.78	0.16586	6634.43	136600
Total	115	1	115	1150000	3.30217	3797500	3.24913	3736500	3.4	3910000	-173500	0.16586	190740	3927240

41249

Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1	41053		26	260000	3.5	910000	3.5	910000	3.803	988780	-78780	0.285	74100	984100
2	41086		28	280000	3.5	980000	3.5	980000	3.803	1064840	-84840	0.27	75600	1055600
3	41115		29	290000	3.75	1087500	3.75	1087500	3.803	1102870	-15370	0.19	55100	1142600
4	41149		31	310000	3.25	1007500	3.25	1007500	3.803	1178930	-171430	0.196	60760	1068260
5	41179		31	310000	3.75	1162500	3.75	1162500	3.803	1178930	-16430	0.141	43710	1206210
6	41204		32	320000	4	1280000	3.803	1216960	3.803	1216960	0	0.09	28800	1245760
7				0		0	0	0	3.803	0	0		0	0
8				0		0	0	0	3.803	0	0		0	0
9				0		0	0	0	3.803	0	0		0	0
10				0		0	0	0	3.803	0	0		0	0
Total			177	1770000		6427500		6364460		6731310	-366850		338070	6702530
						3.63136		3.59574		3.803	-0.20726		0.191	3.78674
NNG-PNG	130	0.73446	130	1300000	3.63136	4720763	3.59574	4674462	3.803	4943900	-269438	0.191	248300	4922762
NNG-NMU	15	0.08475	15	150000	3.63136	544703	3.59574	539361	3.803	570450	-31089	0.191	28650	568011
GLGT-PN	5	0.02825	5	50000	3.63136	181568	3.59574	179787	3.803	190150	-10363	0.191	9550	189337
GLGT-NM	9	0.05085	9	90000	3.63136	326822	3.59574	323617	3.803	342270	-18653.4	0.191	17190	340807
VGT-PNG	5	0.02825	5	50000	3.63136	181568	3.59574	179787	3.803	190150	-10363	0.191	9550	189337
VGT-NMU	7	0.03955	7	70000	3.63136	254195	3.59574	251702	3.803	266210	-14508.2	0.191	13370	265072
Centra	6	0.0339	6	60000	3.63136	217881	3.59574	215744	3.803	228180	-12435.6	0.191	11460	227204
Total	177	1	177	1770000	3.63136	6427500	3.59574	6364460	3.803	6731310	-366850	0.191	338070	6702530

41280

Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1	41053		29	290000	3.75	1087500	3.75	1087500	3.932	1140280	-52780	0.26	75400	1162900
2	41082		15	150000	3.75	562500	3.75	562500	3.932	589800	-27300	0.238	35700	598200
3	41082		16	160000	3.75	600000	3.75	600000	3.932	629120	-29120	0.24	38400	638400
4	41106		32	320000	3.5	1120000	3.5	1120000	3.932	1258240	-138240	0.33	105600	1225600
5	41150		32	320000	3.5	1120000	3.5	1120000	3.932	1258240	-138240	0.205	65600	1185600
6	41178		34	340000	3.75	1275000	3.75	1275000	3.932	1336880	-61880	0.2	68000	1343000
7	41206		34	340000	4	1360000	3.932	1336880	3.932	1336880	0	0.197	66980	1403860
8				0		0	0	0	3.932	0	0		0	0
9				0		0	0	0	3.932	0	0		0	0
10				0		0	0	0	3.932	0	0		0	0
Total	Total		192	1920000		7125000		7101880		7549440	-447560		455680	7557560
						3.71094		3.6989		3.932	-0.2331		0.23733	3.93623
NNG-PNG	140	0.72917	140	1400000	3.71094	5195313	3.6989	5178454	3.932	5504800	-326346	0.23733	332267	5510721
NNG-NMU	17	0.08854	17	170000	3.71094	630859	3.6989	628812	3.932	668440	-39627.7	0.23733	40346.7	669159
GLGT-PN	5	0.02604	5	50000	3.71094	185547	3.6989	184945	3.932	196600	-11655.2	0.23733	11866.7	196811
GLGT-NM	10	0.05208	10	100000	3.71094	371094	3.6989	369890	3.932	393200	-23310.4	0.23733	23733.3	393623
VGT-PNG	5	0.02604	5	50000	3.71094	185547	3.6989	184945	3.932	196600	-11655.2	0.23733	11866.7	196811
VGT-NMU	8	0.04167	8	80000	3.71094	296875	3.6989	295912	3.932	314560	-18648.3	0.23733	18986.7	314898
Centra	7	0.03646	7	70000	3.71094	259766	3.6989	258923	3.932	275240	-16317.3	0.23733	16613.3	275536
Total	192	1	192	1920000	3.71094	7125000	3.6989	7101880	3.932	7549440	-447560	0.23733	455680	7557560

41311

Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1	41052		23	230000	3.75	862500	3.75	862500	3.935	905050	-42550	0.325	74750	937250
2	41081		24	240000	3.5	840000	3.5	840000	3.935	944400	-104400	0.339	81360	921360
3	41103		26	260000	3.75	975000	3.75	975000	3.935	1023100	-48100	0.31	80600	1055600
4	41151		26	260000	3.5	910000	3.5	910000	3.935	1023100	-113100	0.251	65260	975260
5	41177		27	270000	3.75	1012500	3.75	1012500	3.935	1062450	-49950	0.215	58050	1070550
6	41206		29	290000	4	1160000	3.935	1141150	3.935	1141150	0	0.259	75110	1216260
7				0		0	0	0	3.935	0	0		0	0
8				0		0	0	0	3.935	0	0		0	0
9				0		0	0	0	3.935	0	0		0	0
10				0		0	0	0	3.935	0	0		0	0
Total			155	1550000		5760000		5741150		6099250	-358100		435130	6176280
						3.71613		3.70397		3.935	-0.23103		0.28073	3.9847
NNG-PNG	113	0.72903	113	1130000	3.71613	4199226	3.70397	4185484	3.935	4446550	-261066	0.28073	317224	4502707
NNG-NMU	13	0.08387	13	130000	3.71613	483097	3.70397	481516	3.935	511550	-30034.2	0.28073	36494.8	518011
GLGT-PN	4	0.02581	4	40000	3.71613	148645	3.70397	148159	3.935	157400	-9241.29	0.28073	11229.2	159388
GLGT-NM	8	0.05161	8	80000	3.71613	297290	3.70397	296317	3.935	314800	-18482.6	0.28073	22458.3	318776
VGT-PNG	4	0.02581	4	40000	3.71613	148645	3.70397	148159	3.935	157400	-9241.29	0.28073	11229.2	159388
VGT-NMU	7	0.04516	7	70000	3.71613	260129	3.70397	259278	3.935	275450	-16172.3	0.28073	19651	278929
Centra	6	0.03871	6	60000	3.71613	222968	3.70397	222238	3.935	236100	-13861.9	0.28073	16843.7	239082
Total	155	1	155	1550000	3.71613	5760000	3.70397	5741150	3.935	6099250	-358100	0.28073	435130	6176280

41339

Deal Number	Purchase Date	%	Number Contracts	Financial Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1	41052		17	170000	3.75	637500	3.75	637500	3.905	663850	-26350	0.33	56100	693600
2	41071		17	170000	3.5	595000	3.5	595000	3.905	663850	-68850	0.283	48110	643110
3	41101		19	190000	3.75	712500	3.75	712500	3.905	741950	-29450	0.29	55100	767600
4	41151		21	210000	3.5	735000	3.5	735000	3.905	820050	-85050	0.275	57750	792750
5	41176		21	210000	3.75	787500	3.75	787500	3.905	820050	-32550	0.23	48300	835800
6	41205		21	210000	4	840000	3.905	820050	3.905	820050	0	0.298	62580	882630
7				0		0	0	0	3.905	0	0		0	0
8				0		0	0	0	3.905	0	0		0	0
9				0		0	0	0	3.905	0	0		0	0
10				0		0	0	0	3.905	0	0		0	0
Total			116	1160000		4307500		4287550		4529800	-242250		327940	4615490
						3.71336		3.69616		3.905	-0.20884		0.28271	3.97887
NNG-PNG	85	0.73276	85	850000	3.71336	3156358	3.69616	3141739	3.905	3319250	-177511	0.28271	240301	3382040
NNG-NMU	10	0.08621	10	100000	3.71336	371336	3.69616	369616	3.905	390500	-20883.6	0.28271	28270.7	397887
GLGT-PN	3	0.02586	3	30000	3.71336	111401	3.69616	110885	3.905	117150	-6265.09	0.28271	8481.21	119366
GLGT-NM	6	0.05172	6	60000	3.71336	222802	3.69616	221770	3.905	234300	-12530.2	0.28271	16962.4	238732
VGT-PNG	3	0.02586	3	30000	3.71336	111401	3.69616	110885	3.905	117150	-6265.09	0.28271	8481.21	119366
VGT-NMU	5	0.0431	5	50000	3.71336	185668	3.69616	184808	3.905	195250	-10441.8	0.28271	14135.3	198944
Centra	4	0.03448	4	40000	3.71336	148534	3.69616	147847	3.905	156200	-8353.45	0.28271	11308.3	159155
Total	116	1	116	1160000	3.71336	4307500	3.69616	4287550	3.905	4529800	-242250	0.28271	327940	4615490

Total

Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settl Cost	Over/(Unc Market	Premium Per Unit	Premium Cost	Total Cost
1			111	1110000	3.58333	3977500	3.58333	3977500	3.82159	4241960	-264460	0.29105	323070	4300570
2			101	1010000	3.49505	3530000	3.49505	3530000	3.80286	3840890	-310890	0.28013	282930	3812930
3			109	1090000	3.70642	4040000	3.68899	4021000	3.80095	4143040	-122040	0.24671	268910	4289910
4			131	1310000	3.36069	4402500	3.36069	4402500	3.81246	4994320	-591820	0.24927	326540	4729040
5			132	1320000	3.64962	4817500	3.63371	4796500	3.81339	5033670	-237170	0.1742	229940	5026440
6			137	1370000	3.86131	5290000	3.77165	5167160	3.81682	5229040	-61880	0.18189	249190	5416350
7			34	340000	4	1360000	3.932	1336880	3.932	1336880	0	0.197	66980	1403860
8			0	0		0		0		0	0		0	0
9			0	0		0		0		0	0		0	0
10			0	0		0		0		0	0		0	0
Total			755	7550000		2.7E+07		2.7E+07		2.9E+07	-1588260		1747560	2.9E+07
						3.63146		3.60683		3.81719	-0.21037		0.23146	3.83829
NNG-PNG	552	0.73113	552	5520000	3.63146	2E+07	3.60683	2E+07	3.81719	2.1E+07	-1161218	0.23146	1277686	2.1E+07
NNG-NMU	65	0.08609	65	650000	3.63146	2360447	3.60683	2344437	3.81719	2481175	-136738	0.23146	150452	2494889
GLGT-PN	20	0.02649	20	200000	3.63146	726291	3.60683	721365	3.81719	763438	-42073.1	0.23146	46293	767658
GLGT-NM	39	0.05166	39	390000	3.63146	1416268	3.60683	1406662	3.81719	1488705	-82042.6	0.23146	90271.3	1496934
VGT-PNG	20	0.02649	20	200000	3.63146	726291	3.60683	721365	3.81719	763438	-42073.1	0.23146	46293	767658
VGT-NMU	32	0.04238	32	320000	3.63146	1162066	3.60683	1154184	3.81719	1221501	-67317	0.23146	74068.8	1228253
Centra	27	0.03576	27	270000	3.63146	980493	3.60683	973843	3.81719	1030642	-56798.7	0.23146	62495.5	1036339
Total	755	1	755	7550000	3.63146	2.7E+07	3.60683	2.7E+07	3.81719	2.9E+07	-1588260	0.23146	1747560	2.9E+07