

MINNESOTA ENERGY RESOURCES - Consolidated**DESIGN-DAY DEMAND SUMMARY****NOVEMBER 1, 2015**

Design Day Requirement	53,075
Total Peak Day Entitlement	55,449
Firm Peak Day Actual Sendout -Non Coincidental (Jan. 4)	45,751
Firm Annual Throughput - Minnesota	5,033,575
No. of Firm Customers	34,799
Department Load Factor Calculation	30.14%

MINNESOTA ENERGY RESOURCES - Consolidated

MINNESOTA DESIGN DAY REQUIREMENTS
NOVEMBER 1, 2015
HDD

Pipeline Group	2014/15 Customer Count	1/20 Design DDD	Regression Factors		Regression Total Footnote 1	Add Adjustment Footnote 2	1/20 Requirements Regression Load Footnote 3	Nov15-Mar16 Customer Growth	Add Contract Demand Units	Total
			Intercept	Slope						

VGT

Peak	10,900	109	632	139	14,967	1,093	16,060	-1.3%	7	15,858
Off Peak	10,900	57	632	139	8,527	1,093	9,620	-1.3%	7	9,502

GLGT

Peak	18,167	106	1,131	246	26,857	1,845	28,702	-1.3%	214	28,543
Off Peak	18,167	57	1,131	246	15,167	1,845	17,012	-1.3%	214	17,005

Centra

Peak	5,732	107	569	73	8,341	447	8,788	-1.3%	0	8,674
Off Peak	5,732	57	569	73	4,712	447	5,159	-1.3%	0	5,092

Total Consolidated

Peak	34,799	107	2,332	458	50,165	3,385	53,550	-1.3%	221	53,075
Off Peak	34,799	57	2,332	458	28,406	3,385	31,791	-1.3%	221	31,599

Footnote 1: Regression Total is based on total through-put data.

Footnote 2: Adjustment to bring to 97.5% confidence level.

Footnote 3: Total equals Regression Total plus Adjustment.

MINNESOTA ENERGY RESOURCES - Consolidated**DESIGN-DAY DEMAND PER CUSTOMER****NOVEMBER 1, 2015**

<u>Heating Season</u>	<u>No. of Firm Customers</u>	<u>Design Day Requirements</u>	<u>MMBtu /Customer /Day</u>
15/16	34,799	53,075	1.53
14/15	34,397	48,706	1.42
13/14	34,007	50,048	1.47
12/13	33,630	52,289	1.55
11/12	33,384	50,366	1.51
10/11	33,399	50,779	1.52
09/10	34,053	53,931	1.58
08/09	32,632	59,654	1.83
07/08	32,454	57,202	1.76

MINNESOTA ENERGY RESOURCES - Consolidated

SUMMER/WINTER USAGE - Mcf
PROJECTED 12 MONTHS ENDING JUNE 2016
Consolidated

<u>Class</u>	<u>Summer Apr-Oct</u>	<u>Winter Nov-Mar</u>	<u>Total</u>
GS	1,381,150	3,624,827	5,005,977
SVI	0	0	0
SVJ	9,661	17,937	27,598
LVI	0	0	0
LVJ	0	0	0
SLV	0	0	0
IS	<u>260,620</u>	<u>463,410</u>	<u>724,030</u>
Total	<u>1,651,431</u>	<u>4,106,174</u>	<u>5,757,605</u>

MINNESOTA ENERGY RESOURCES - Consolidated

ENTITLEMENT LEVELS PROPOSED TO BE EFFECTIVE NOVEMBER 1, 2015

<u>Type of Capacity or Entitlement</u>		Current Amount Mcf or MMBtu	Proposed Change Mcf or MMBtu	Proposed Amount Mcf or MMBtu
FT Western Zone	FT0016	10,130	0	10,130
FT Western Zone	FT15782	9,000	0	9,000
FT Western Zone (12)	FT17891 (12)	3,600	0	3,600
FT Western Zone (5)	FT17891 (5)	3,638	90	3,728
FT Western Zone (5)	FT18283 (5)	0	3,300	3,300
FT-A ZONE 1 - 1	AF0012	12,493	0	12,493
FT-A ZONE 1 - 1	AF0209	1,098		1,098
FT-A ZONE 1 - 1	AF0102	2,000	0	2,000
FA-A ZONE 1 - 1	AF0229	0	1,000	1,000
CENTRA FT-1		9,500	(400)	9,100
Total Entitlement		<u>51,459</u>	<u>3,990</u>	<u>55,449</u>
Forecasted Design Day-Adjusted		48,706	4,369	53,075
Capacity Surplus/Shortage		2,753	(379)	2,374
Reserve Margin		5.65%		4.47%

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

NOVEMBER 1, 2015

All costs in \$/Dth	Base Cost of Gas G011/ MR-13-732* Apr. 15	Demand Change G011- 13-669 Nov. 13	Last Demand Change G011- 14-661 Nov. 14	Most Recent PGA Effective Oct 1, 2015	Current Proposal Effective Nov. 1,2015	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:						87	Dth			
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-34.62%	-2.05%	(\$0.0654)	
Demand Cost	\$0.8077	\$0.8968	\$0.8147	\$0.7968	\$0.8006	-0.88%	-0.79%	0.48%	\$0.0038	
Commodity Margin	\$2.1806	\$1.9754	\$2.2290	\$2.1806	\$2.1806	0.00%	0.00%	0.00%	\$0.0000	
Total Cost of Gas	\$7.4246	\$6.6466	\$7.9628	\$6.1722	\$6.1106	-17.70%	-19.77%	-1.00%	(\$0.0616)	
Avg Annual Cost	\$645.94	\$578.25	\$692.76	\$536.98	\$531.62	-17.70%	-19.77%	-1.00%	(\$5.36)	
Effect of proposed commodity change on average annual bills:									(\$5.69)	
Effect of proposed demand change on average annual bills:									\$0.33	
2) Large General Service: Avg. Annual Use:						800	Dth			
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-17.09%	-2.05%	(\$0.0654)	
Demand Cost	\$0.8077	\$0.8968	\$0.8147	\$0.7968	\$0.8006	-0.88%	-10.73%	0.48%	\$0.0038	
Commodity Margin	\$1.6579	\$1.6868	\$1.9034	\$1.6579	\$1.6579	0.00%	-1.71%	0.00%	\$0.0000	
Total Cost of Gas	\$6.9019	\$6.3580	\$7.6372	\$5.6495	\$5.5879	-19.04%	-12.11%	-1.09%	(\$0.0616)	
Avg Annual Cost	\$5,521.52	\$5,086.40	\$6,109.76	\$4,519.60	\$4,470.34	-19.04%	-12.11%	-1.09%	(\$49.26)	
Effect of proposed commodity change on average annual bills:									(\$52.30)	
Effect of proposed demand change on average annual bills:									\$3.04	
3) SV Interruptible Service: Avg. Annual Use:						5,914	Dth			
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-17.09%	-2.05%	(\$0.0654)	
Commodity Margin	\$0.8490	\$1.0647	\$1.2014	\$0.8490	\$0.8490	0.00%	-20.26%	0.00%	\$0.0000	
Total Cost of Gas	\$5.2853	\$4.8391	\$6.1205	\$4.0438	\$3.9784	-24.73%	-17.79%	-1.62%	(\$0.0654)	
Avg Annual Cost	\$31,257.26	\$28,618.44	\$36,196.64	\$23,915.03	\$23,528.38	-24.73%	-17.79%	-1.62%	(\$386.65)	
Effect of proposed commodity change on average annual bills:									(\$386.65)	
4) LV Interruptible Service: Avg. Annual Use:						70,770	Dth			
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-17.09%	-2.05%	(\$0.0654)	
Commodity Margin	\$0.4553	\$0.3568	\$0.4026	\$0.4553	\$0.4553	0.00%	27.61%	0.00%	\$0.0000	
Total Cost of Gas	\$4.8916	\$4.1312	\$5.3217	\$3.6501	\$3.5847	-26.72%	-13.23%	-1.79%	(\$0.0654)	
Avg Annual Cost	\$346,178.53	\$292,365.02	\$376,616.71	\$258,317.58	\$253,690.69	-26.72%	-13.23%	-1.79%	(\$4,626.89)	
Effect of proposed commodity change on average annual bills:									(\$4,626.89)	

Note: Average Annual Average based on PNG Annual Automatic Adjustment Report in Docket No. E,G999/AA-15-612

* As Approved in Docket No. G011/MR-13-732; to coincide with implementation of final rates in Docket No. G011/GR-13-617

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

NOVEMBER 1, 2015

DEMAND									
Contract Type		Season	Monthly Entitlement		Rate (\$/Dth)	Contract Costs	Rate Case Sales (therms)	\$/therm	
			(Dth)	Months					
Viking (VGT)									
FT-A ZONE 1 - 1	AF0012	Annual	12,493	12	4.3706 \$	655,223	46,134,679		\$0.01420
FT-A ZONE 1 - 1	AF0209	Winter	1,098	3	4.3706 \$	14,397	46,134,679		\$0.00031
FT-A ZONE 1 - 1	AF0102	Annual	2,000	12	4.5607 \$	109,457	46,134,679		\$0.00237
FA-A ZONE 1 - 1	AF0229	Nov-Mar	1,000	5	4.7507 \$	23,754	46,134,679		\$0.00051
VGT Demand						\$ 802,831	46,134,679		\$0.01740
Great Lakes (GLGT)									
FT Western Zone	FT0016	Annual	10,130	12	\$3.8490 \$	467,886	46,134,679		\$0.01014
FT Western Zone	FT15782	Annual	9,000	12	\$3.8490 \$	415,693	46,134,679		\$0.00901
FT Western Zone (12)	FT17891 (12)	Annual	3,600	12	\$3.8490 \$	166,277	46,134,679		\$0.00360
FT Western Zone (5)	FT17891 (5)	Winter	3,728	5	\$3.8490 \$	71,746	46,134,679		\$0.00156
FT Western Zone (5)	FT18283 (5)	Winter	3,300	5	\$3.8490 \$	63,509	46,134,679		\$0.00138
GLGT Demand						\$ 1,185,111	46,134,679		\$0.02569
Centra									
CENTRA TRANSMISSION	(\$Cdn/103M3)				\$552.6130				
Conversion (103M3 x Rate(C\$ 103M3)		Annual	9,100	12	\$12.3678 \$	1,350,566	46,134,679		\$0.02927
CENTRA MINNESOTA PIPELINES		Annual	9,100	12	\$3.2510 \$	355,009	46,134,679		\$0.00770
Centra Demand						\$ 1,705,575	46,134,679		\$0.03697
MERC-Consolidated DEMAND - \$/therm						\$ 3,693,517			<u>\$0.08006</u>
For Joint Rate Demand					46,134,679	Annual Firm Sales in therms			
			Units Dth's	Months	Annual Dth's				
Viking (VGT)									
FT-A ZONE 1 - 1			12,493	12	149,916				
FT-A ZONE 1 - 1			1,098	3	3,294				
FT-A ZONE 1 - 1			2,000	12	24,000				
FA-A ZONE 1 - 1			1,000	5	5,000				
Great Lakes (GLGT)									
FT Western Zone			10,130	12	121,560				
FT Western Zone			9,000	12	108,000				
FT Western Zone (12)			3,600	12	43,200				
FT Western Zone (5)			3,728	5	18,640				
FT Western Zone (5)			3,300	5	16,500				
Centra									
CENTRA TRANSMISSION									
Conversion (103M3 x Rate(C\$ 103M3)			9,100	12	109,200				
CENTRA MINNESOTA PIPELINES			9,100	12	109,200				
Total Demand Cost						\$ 3,693,517			
Total Demand Weighted therms							5,993,100		
Total Joint Demand Rate \$/therm									<u>\$0.61629</u>

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

PRESENT AVERAGE COST OF GAS COMMODITY

NOVEMBER 1, 2015

WACOG	Rate	Annual Dth	Call Option Premium	Balancing Service	Total Annual Cost	System Cost/therm	Storage Comm Rate	Total Comm Rate	REFERENCE	Effective
WACOG										
GAS COST	\$2.67930									
FUEL 0.00%	\$0.00000								Sub 16th Revised Sheet No. 5B	Apr. 1, 2006
COMMODITY TRANSPORTATION	\$0.01160								Sub 16th Revised Sheet No. 5B	Apr. 1, 2006
GRI	\$0.00000								Sub 16th Revised Sheet No. 5B	Apr. 1, 2006
ACA	\$0.00140								Sub 16th Revised Sheet No. 5B	Apr. 1, 2006
WGT Commodity	\$2.69230	2,100,257	\$115,889	\$89,580	\$5,859,991	\$0.10529			WGT Commodity	
GLGT										
GAS COST	\$2.67930									
FUEL 0.748%	\$0.02019								5 Revised Sheet 4	Jun 1, 1997
COMMODITY TRANSPORTATION	\$0.00394								Contract	Jun. 1, 2004
GRI	\$0.00000								18th Revised Sheet No. 7	Oct. 1, 2005
ACA	\$0.00140								GLGT Commodity	
GLGT Commodity	\$2.70483	2,169,739	\$119,722	\$0	\$5,988,498	\$0.10760				
CENTRA										
CENTRA TRANSMISSION (SCdn/103M3)	1.062								Sheet 1 (N.E.B.)	
Conversion	\$0.02284									
Abandonment Toll	\$0.27649								N.E.B. MO-078-2014	Jan. 1, 2015
GAS COSTS	\$2.67930									
CUSTOMS FEE	\$0.00031									
CENTRA Commodity	\$2.97894	1,295,443	\$71,480	\$54,000	\$3,984,529	\$0.07159			Centra Commodity	
Consolidated WACOG w/Premium & Balancing		5,565,440	\$307,091	\$143,580	\$15,833,017	\$0.28449	\$0.02845			
	Total Annual Sales in therms	55,654,396								
									\$0.31294 Total Consolidated WACOG-\$/therm	

Balancing Service						
Pipeline	Description	Season	Monthly Entitlement (Dth)	Months	Rate (\$/Dth)	Contract Costs
WGT	Balancing Agreement	Annual	7,465	12	\$1.0000	\$89,580
GLGT	---		0	0	\$0.0000	\$0
Centra	Union Balancing	Annual	4,453	12	\$1.0106	\$54,000

Storage Service							
	Season	Monthly Entitlement (Dth)	Months	Rate (\$/Dth)	Contract Costs	Annual Sales (therms)	Rate (\$/therm)
Niska Storage (AECO)	Annual	947,820	1	\$0.6225	\$590,018	55,654,396	\$0.01060
AECO/Emerson Swap	Annual	955,255	1	\$1.04000	\$993,465	55,654,396	\$0.01785
					\$1,583,483	55,654,396	\$0.02845

Total Commodity Cost: **\$0.31294**

* Per Docket No. G-007/M-07-1402-05 dated August 6th, 2014, storage demand charges will be allocated through the commodity charge effective 11/01/2014.

MINNESOTA ENERGY RESOURCES - PNG-NNG

Financial Options Heating Season 2015-2016

Units - Gas Daily Peaker Packages (Physical)

November		December		January		February		March		Daily Total	Term Total
Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume		
N/A		N/A		N/A		N/A		N/A			

Premium - Gas Daily Peaker (Monthly Cost)

November		December		January		February		March		Option Premium	Total Premium
Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost		
N/A		N/A		N/A		N/A		N/A			

Units - Futures (Daily Volume)

	November		December		January		February		March		Daily Total	Term Total
	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume		
1	05/15/15	952	05/28/15	753	05/26/15	442	05/19/15	600	05/21/15	1,135	3,882	118,191
2	06/09/15	952	06/29/15	753	05/26/15	531	05/19/15	480	06/19/15	956	3,671	111,899
3	07/09/15	873	07/29/15	753	06/24/15	973	06/15/15	1,079	06/19/15	179	3,857	116,545
4	08/07/15	794	08/28/15	538	07/23/15	973	07/16/15	720	07/21/15	1,075	4,099	124,840
5	09/10/15	714	09/10/15	538	08/24/15	973	07/16/15	240	08/19/15	1,075	3,540	108,546
6	10/01/15	714	10/19/15	538	09/23/15	884	08/14/15	960	09/18/15	1,075	4,171	126,674
7					10/22/15	708	09/14/15	720	10/23/15	956	2,383	72,435
8							10/20/15	720			720	20,870
9												
10												
Total		5,000		3,871		5,484		5,517		6,452	26,324	800,000
		150,000		120,000		170,000		160,000		200,000		800,000
		630,000		360,000		620,000		460,000		1,080,000		3,150,000

Units - Call Options (Daily Volume)

	November		December		January		February		March		Daily Total	Term Total
	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume		
1	05/22/15	944	05/20/15	1,333	05/18/15	1,579	05/27/15	1,552	05/14/15	1,227	6,635	201,650
2	06/23/15	944	06/17/15	1,333	06/11/15	1,637	06/26/15	1,552	06/04/15	1,227	6,694	203,463
3	07/22/15	944	07/17/15	1,333	07/13/15	1,637	07/27/15	1,552	07/07/15	1,227	6,694	203,463
4	08/21/15	944	08/17/15	1,389	08/11/15	1,696	08/26/15	1,492	08/04/15	1,227	6,748	205,267
5	09/21/15	944	09/16/15	1,500	09/11/15	1,696	09/25/15	1,552	09/02/15	1,227	6,919	210,442
6	10/02/15	944	10/01/15	1,500	10/19/15	1,754	10/23/15	1,611	10/21/15	1,283	7,093	215,715
7												
Total		5,667		8,387		10,000		9,310		7,419	40,783	1,240,000
		170,000		260,000		310,000		270,000		230,000		1,240,000
		960,000		1,510,000		1,710,000		1,560,000		1,330,000		7,070,000

Premium - Call Option (Monthly Cost)

	November		December		January		February		March		Option Premium	Total Premium
	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost		
1	\$ 0.2280	\$ 6,460	\$ 0.2410	\$ 9,959	\$ 0.3770	\$ 18,453	\$ 0.3970	\$ 17,865	\$ 0.3970	\$ 15,104	\$ 0.3364	\$ 67,841
2	\$ 0.2420	\$ 6,857	\$ 0.3070	\$ 12,687	\$ 0.3000	\$ 15,228	\$ 0.3720	\$ 16,740	\$ 0.3360	\$ 12,783	\$ 0.3160	\$ 64,295
3	\$ 0.1330	\$ 3,768	\$ 0.2210	\$ 9,133	\$ 0.2480	\$ 12,589	\$ 0.3220	\$ 14,490	\$ 0.3420	\$ 13,011	\$ 0.2604	\$ 52,991
4	\$ 0.0900	\$ 2,550	\$ 0.1410	\$ 6,070	\$ 0.2790	\$ 14,668	\$ 0.2370	\$ 10,255	\$ 0.3080	\$ 11,718	\$ 0.2205	\$ 45,260
5	\$ 0.0690	\$ 1,955	\$ 0.1390	\$ 6,462	\$ 0.1730	\$ 9,095	\$ 0.2620	\$ 11,790	\$ 0.3100	\$ 11,794	\$ 0.1953	\$ 41,096
6	\$ 0.0910	\$ 2,578	\$ 0.0750	\$ 3,487	\$ 0.1420	\$ 7,723	\$ 0.2150	\$ 10,047	\$ 0.2960	\$ 11,773	\$ 0.1651	\$ 35,608
7												
Total	\$ 0.1422	\$ 24,168	\$ 0.1838	\$ 47,797	\$ 0.2508	\$ 77,756	\$ 0.3114	\$ 81,187	\$ 0.3312	\$ 76,184	\$ 0.2477	\$ 307,091
		\$ 136,480		\$ 277,590		\$ 428,910		\$ 469,080		\$ 440,540		\$ 1,752,600

Units - Collar Floor (put)

No Puts were purchased.

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

	M-11- Consolidated GS	M-12- Consolidated GS	M-13- Consolidated GS	M-14- Consolidated GS	M-15- Consolidated GS	Proposed Change
Viking Gas Transmission (VGT)						
FT-A ZONE 1 - 1	12,493	12,493	12,493	12,493	12,493	0
FT-A ZONE 1 - 1	1,098	1,098	1,098	1,098	1,098	0
FT-A ZONE 1 - 1	2,000	2,000	2,000	2,000	2,000	0
FA-A ZONE 1 - 1	0	0	1,500	0	1,000	1,000
Wadena Delivered GDD Option	0	3500	0	0	0	0
Great Lakes Gas Transmission (GLGT)						
FT Western Zone	10,130	10,130	10,130	10,130	10,130	0
FT Western Zone	9,000	9,000	9,000	9,000	9,000	0
FT Western Zone (12)	3,600	3,600	3,600	3,600	3,600	0
FT Western Zone (5)	3,638	3,638	3,638	3,638	3,728	90
FT Western Zone (5)	0	0	0	0	3,300	3,300
Centra Transmission Holding/Centra Minnesota Pipelines (CTHI/CPMI)						
Centra FT-1	9,858	9,500	9,500	9,500	9,100	-400
Total VGT Transportation	15,591	19,091	17,091	15,591	16,591	1,000
Total GLGT Transportation	26,368	26,368	26,368	26,368	29,758	3,390
Total CTHI/CPMI Transportation	9,858	9,500	9,500	9,500	9,100	-400
Total Transportation	51,817	54,959	52,959	51,459	55,449	3,990
Total Seasonal Transportation	1,098	4,598	2,598	1,098	2,098	1,000
Total Seasonal Transportation %	2.12%	8.37%	4.91%	2.13%	3.78%	-2.77%
<u>Other Entitlements not included in Peak Day Deliverability</u>						
AECO Storage	947,820	947,820	947,820	947,820	947,820	0
AECO/Emerson Swap	947,823	947,823	947,823	940,428	955,255	14,827

MINNESOTA ENERGY RESOURCES - Consolidated

Rate Impacts (Illustrates FDD storage contract costs shifted from Demand costs to Commodity costs)

Consolidated

	Base Cost of Gas Change	Demand Change	Last Demand Change	Most Recent PGA	Nov. 1, 2015 w/ Proposed Demand Changes**	% Change From Last Rate Case^^	% Change From Last Demand Filing	% Change From Last PGA	\$ Change From Last PGA
General Service-Residential	MR13-732	Nov'13	Nov'14	Oct'15					
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-36.38%	-2.05%	(\$0.0654)
Demand Cost	\$0.8077	\$0.8968	\$0.8147	\$0.7968	\$0.8006	-0.88%	-1.73%	0.48%	\$0.0038
Margin	\$2.1806	\$1.9754	\$2.2290	\$2.1806	\$2.1806	0.00%	-2.17%	0.00%	\$0.0000
Total Cost of Gas	\$7.4246	\$6.6466	\$7.9628	\$6.1722	\$6.1106	-17.70%	-23.26%	-1.00%	(\$0.0616)
Average Annual Use	87	87	87	87	87				
Average Annual Cost of Gas*	\$645.94	\$578.25	\$692.76	\$536.98	\$531.62	-17.70%	-23.26%	-1.00%	(\$5.36)

	Base Cost of Gas Change	Demand Change	Last Demand Change	Most Recent PGA	Nov. 1, 2015 w/ Proposed Demand Changes**	% Change From Last Rate Case^^	% Change From Last Demand Filing	% Change From Last PGA	\$ Change From Last PGA
Large General Service	MR13-732	Nov'13	Nov'14	Oct'15					
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-36.38%	-2.05%	(\$0.0654)
Demand Cost	\$0.8077	\$0.8968	\$0.8147	\$0.7968	\$0.8006	-0.88%	-1.73%	0.48%	\$0.0038
Margin	\$1.6579	\$1.6868	\$1.9034	\$1.6579	\$1.6579	0.00%	-12.90%	0.00%	\$0.0000
Total Cost of Gas	\$6.9019	\$6.3580	\$7.6372	\$5.6495	\$5.5879	-19.04%	-26.83%	-1.09%	(\$0.0616)
Average Annual Use	800	800	800	800	800				
Average Annual Cost of Gas*	\$5,521.52	\$5,086.40	\$6,109.76	\$4,519.60	\$4,470.34	-19.04%	-26.83%	-1.09%	(\$49.26)

	Base Cost of Gas Change	Demand Change	Last Demand Change	Most Recent PGA	Nov. 1, 2015 w/ Proposed Demand Changes**	% Change From Last Rate Case^^	% Change From Last Demand Filing	% Change From Last PGA	\$ Change From Last PGA
SV Interruptible Service	MR13-732	Nov'13	Nov'14	Oct'15					
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-36.38%	-2.05%	(\$0.0654)
Commodity Margin	\$0.8490	\$1.0647	\$1.2014	\$0.8490	\$0.8490	0.00%	-29.33%	0.00%	\$0.0000
Total Cost of Gas	\$5.2853	\$4.8391	\$6.1205	\$4.0438	\$3.9784	-24.73%	-35.00%	-1.62%	(\$0.0654)
Average Annual Use	5,914	5,914	5,914	5,914	5,914				
Average Annual Cost of Gas*	\$31,257.26	\$28,618.44	\$36,196.64	\$23,915.03	\$23,528.38	-24.73%	-35.00%	-1.62%	(\$386.65)

	Base Cost of Gas Change	Demand Change	Last Demand Change	Most Recent PGA	Nov. 1, 2015 w/ Proposed Demand Changes**	% Change From Last Rate Case^^	% Change From Last Demand Filing	% Change From Last PGA	\$ Change From Last PGA
LV Interruptible Service	MR13-732	Nov'13	Nov'14	Oct'15					
Commodity Cost	\$4.4363	\$3.7744	\$4.9191	\$3.1948	\$3.1294	-29.46%	-36.38%	-2.05%	(\$0.0654)
Commodity Margin	\$0.4553	\$0.3568	\$0.4026	\$0.4553	\$0.4553	0.00%	13.09%	0.00%	\$0.0000
Total Cost of Gas	\$4.8916	\$4.1312	\$5.3217	\$3.6501	\$3.5847	-26.72%	-32.64%	-1.79%	(\$0.0654)
Average Annual Use	70,770	70,770	70,770	70,770	70,770				
Average Annual Cost of Gas*	\$346,178.53	\$292,365.02	\$376,616.71	\$258,317.58	\$253,690.69	-26.72%	-32.64%	-1.79%	(\$4,626.89)

November Change Summary	Commodity Change \$/Mcf	Commodity Change %	Demand Change \$/Mcf	Demand Change %	Total Change \$/Mcf	Total Change %	Average Annual Change
General Service	(\$0.0654)	-2.05%	\$0.0038	0.48%	(\$0.0616)	-1.00%	(\$5.36)
Large General Service	(\$0.0654)	-2.05%	\$0.0038	0.48%	(\$0.0616)	-1.09%	(\$49.26)
SV Interruptible Service	(\$0.0654)	-2.05%			(\$0.0654)	-1.62%	(\$386.65)
LV Interruptible Service	(\$0.0654)	-2.05%			(\$0.0654)	-1.79%	(\$4,626.89)

* Average Annual Bill amount does not include customer charges.

** Commodity includes Upstream costs.

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

Change in Costs due to November,1 2015 Change in Entitlement Levels and Related Demand Costs

Consolidated

	Oct. 2015 Entitlements	Nov. 2015 Entitlements	Entitlement Change	Nov. 2015 Rate	Months	Oct. 2015 Total Annual Cost	Nov. 2015 Total Annual Cost	Total Annual Cost Change
Costs Assigned in Demand Charge								
<u>Viking Pipeline</u>								
FT-A ZONE 1 - 1	12,493	12,493	0	\$ 4.3706	12	\$655,223	\$655,223	\$0
FT-A ZONE 1 - 1	1,098	1,098	0	\$ 4.3706	3	\$14,397	\$14,397	\$0
FT-A ZONE 1 - 1	2,000	2,000	0	\$ 4.5607	12	\$109,457	\$109,457	\$0
FA-A ZONE 1 - 1	0	1,000	1,000	\$ 4.7507	5	\$0	\$23,754	\$23,754
<u>GLGTPipeline</u>								
FT Western Zone	10,130	10,130	0	\$ 3.8490	12	\$467,886	\$467,886	\$0
FT Western Zone	9,000	9,000	0	\$ 3.8490	12	\$415,693	\$415,693	\$0
FT Western Zone (12)	3,600	3,600	0	\$ 3.8490	12	\$166,277	\$166,277	\$0
FT Western Zone (5)	3,638	3,728	90	\$ 3.8490	5	\$70,013	\$71,746	\$1,733
FT Western Zone (5)	0	3,300	3,300	\$ 3.8490	5	\$0	\$63,509	\$63,509
<u>CENTRA Pipeline</u>								
CENTRA TRANSMISSION	9,500	9,100	-400	\$ 12.3678	12	\$1,409,931	\$1,350,566	-\$59,365
CENTRA MINNESOTA PIPELINES	9,500	9,100	-400	\$ 3.2510	12	\$370,614	\$355,009	-\$15,605
Total Costs Assigned to Demand Charge						\$3,679,491	\$3,693,517	\$14,026
Costs Assigned in Commodity Charge								
<u>Storage Service</u>								
Niska Storage (AECO)	947,820	947,820	0	\$ 0.6225	1	\$590,018	\$590,018	\$0
AECO/Emerson Swap	940,428	955,255	14,827	\$ 1.0400	1	\$978,045	\$993,465	\$15,420
<u>Balancing</u>								
VGT Balancing Agreement	7,465	7,465	0	\$ 1.0000	12	\$89,580	\$89,580	\$0
Union Balancing	4,453	4,453	0	\$ 1.0106	12	\$54,000	\$54,000	\$0
<u>Call Options Premium</u>								
Total Costs Assigned to Commodity Charge						\$320,916	\$307,091	-\$13,825
						\$2,032,559	\$2,034,154	\$1,595

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

GLGT

	1/20 Design Day	HDD Regression Intercept	HDD Slope	1/20 Regression Load	Customer Growth	Contract Demand Units	Total
Peak	106	1,131	246	28,702	-1.30%	214	28,543
Off Peak	57	1,131	246	17,012	-1.30%	214	17,005

VGT

	1/20 Design Day	HDD Regression Intercept	HDD Slope	1/20 Regression Load	Customer Growth	Contract Demand Units	Total
Peak	109	632	139	16,060	-1.30%	7	15,858
Off Peak	57	632	139	9,620	-1.30%	7	9,502

Centra

	1/20 Design Day	HDD Regression Intercept	HDD Slope	1/20 Regression Load	Customer Growth	Contract Demand Units	Total
Peak	107	569	73	8,788	-1.30%	0	8,674
Off Peak	57	569	73	5,159	-1.30%	0	5,092

Consolidated

	1/20 Design Day	HDD Regression Intercept	HDD Slope	1/20 Regression Load	Customer Growth	Contract Demand Units	Total
Peak		2,332	458	53,550	-1.30%	221	53,075
Off Peak		2,332	458	31,791	-1.30%	221	31,599

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

15/16 Winter Portfolio Plan - GLGT/VGT/Centra Hedging Plan

10,000 Contract Size

REVISED:

System	Purchase Month	Nov-15		Dec-15		Jan-16		Feb-16		Mar-16		Total		Percent of Requirements
		Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	
MN Requirements			567,132		872,464		1,009,129		906,038		751,413		4,106,176	4,106,176
GLGT -MN			18,904		28,144		32,553		31,243		24,239		27,014	
	70%		396,992		610,725		706,390		634,227		525,989		2,874,323	
	40%		226,853		348,986		403,652		362,415		300,565		1,642,470	
			<u>85,304</u>		<u>231,769</u>		<u>231,769</u>		<u>209,339</u>		<u>96,374</u>		<u>854,555</u>	
			141,549		117,217		171,883		153,076		204,191		787,915	
	30%		170,140		261,739		302,739		271,811		225,424		1,231,853	
Contracts	May-15	3	30,000	2	20,000	3	30,000	3	30,000	4	40,000	15	150,000	
	Jun-15	3	30,000	2	20,000	3	30,000	3	30,000	4	40,000	15	150,000	
	Jul-15	3	30,000	2	20,000	3	30,000	3	30,000	3	30,000	14	140,000	
	Aug-15	2	20,000	2	20,000	3	30,000	3	30,000	3	30,000	13	130,000	
	Sep-15	2	20,000	2	20,000	3	30,000	2	20,000	3	30,000	12	120,000	
	Oct-15	2	20,000	2	20,000	2	20,000	2	20,000	3	30,000	11	110,000	
	Total	15	150,000	12	120,000	17	170,000	16	160,000	20	200,000	80	800,000	19.48%
Call Options	May-15	3	30,000	4	40,000	5	50,000	5	50,000	4	40,000	21	210,000	
	Jun-15	3	30,000	4	40,000	5	50,000	5	50,000	4	40,000	21	210,000	
	Jul-15	3	30,000	4	40,000	5	50,000	5	50,000	4	40,000	21	210,000	
	Aug-15	3	30,000	4	40,000	5	50,000	4	40,000	4	40,000	20	200,000	
	Sep-15	3	30,000	5	50,000	5	50,000	4	40,000	4	40,000	21	210,000	
	Oct-15	2	20,000	5	50,000	6	60,000	4	40,000	3	30,000	20	200,000	
	Total	17	170,000	26	260,000	31	310,000	27	270,000	23	230,000	124	1,240,000	30.20%
Collars	May-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Jun-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Jul-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Aug-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Sep-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Oct-15	0	0	0	0	0	0	0	0	0	0	0	0	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Index (back financial)	May-15	1,777	53,310	2,043	63,333	2,580	79,980	2,472	71,688	2,311	71,641	11,183	339,952	
	Jun-15	1,778	53,340	2,043	63,333	2,580	79,980	2,472	71,688	2,312	71,672	11,185	340,013	
	Jul-15	1,778	53,340	2,043	63,333	2,581	80,011	2,471	71,659	2,312	71,672	11,185	340,015	
	Aug-15	1,778	53,340	2,043	63,333	2,581	80,011	2,471	71,659	2,312	71,672	11,185	340,015	
	Sep-15	1,778	53,340	2,043	63,333	2,581	80,011	2,471	71,659	2,312	71,672	11,185	340,015	
	Oct-15	1,778	53,340	2,043	63,333	2,581	80,011	2,471	71,659	2,312	71,672	11,185	340,015	
	Total		320,010		379,998		480,004		430,012		430,001		2,040,025	49.68%
Physical Hedges			0		0		0		0		0		0	
Storage			85,304		231,769		231,769		209,339		96,374		854,555	20.81%
Prepaid Obl			0		0		0		0		0		0	0.00%
			71.47%		70.12%		70.53%		70.57%		70.05%		70.49%	
Term Index	Aug-15	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
	Sep-15	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
	Oct-15	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Total NNG MN													800,000	19.48%
Contracts													1,240,000	30.20%
Call Options													0	0.00%
Costing Collar													854,555	20.81%
Storage													0	0.00%
Prepaid Obl													0	0.00%
Term Index													0	0.00%
Month/Daily													1,211,621	29.51%
Total													4,106,176	100.00%

NOTE:

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

**WINTER PLAN - CONSOLIDATED
NOVEMBER, 2015 THROUGH MARCH, 2016**

<u>PHYSICAL FIXED PRICE HEDGES</u>	<u>Deal #</u>	<u>Trigger Locked</u>	<u>Trigger Exercised</u>	<u>Receipt Point</u>	<u>Nov</u>	<u>Dec</u>	<u>Daily Volumes</u>			<u>Monthly Total</u>	
							<u>Jan</u>	<u>Feb</u>	<u>Mar</u>		
No Physical Fixed Price Hedges											
					-	-	-	-	-	-	-
Total Actual Fixed/Option Physical					-	-	-	-	-	-	-

<u>INDEX</u>	<u>Contract Number</u>	<u>Date</u>	<u>Receipt Point</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Total</u>
Index - Back Financial Options	23351	6/11/2015	VGT-Emerson #1	1,778	2,043	2,580	2,559	2,312	342,536
Index - Back Financial Options	26621	8/26/2015	GLGT-Emerson #1	3,556	4,086	5,162	5,120	4,624	685,192
Index - Back Financial Options	27450	9/17/2015	GLGT-Emerson #1	1,778	2,043	2,581	2,560	2,312	342,596
Index - Back Financial Options	28591	10/16/2015	GLGT-Emerson #1	1,778	2,043	2,581	2,030	2,312	327,226
Total Actual Seasonal Index				10,667	12,258	15,484	14,828	13,871	2,040,025

GAS DAILY PACKAGES
No GDD Options

STORAGE

<u>Injection Month</u>	<u>Contract #</u>	
	<u>AECO Volume Injected</u>	<u>Total Volume Injected</u>
	May - balance forward	191,115
June	184,936	184,936
July	191,103	191,103
August	191,102	191,102
Sept	93,237	93,237
Oct (est)	<u>96,327</u>	<u>96,327</u>
Total	947,820	947,820

MINNESOTA ENERGY RESOURCES - Consolidated

Daily Total Throughput Data - July 1, 2014 through June 30, 2015

Base	8,383
Variable	453

Date	28.53% Bemidji Adjusted HDD	13.34% Cloquet Adjusted HDD	35.13% Fargo Adjusted HDD	23.00% Intl. Falls Adjusted HDD	100.00% Weighted Adjusted HDD	Actual Total Through- Put *	Estimated Through- Put **
7/1/14	10	5	3	8	7	11,215	11,356
7/2/14	5	5	2	5	4	10,382	10,234
7/3/14	3	4	0	6	3	4,370	9,718
7/4/14	0	0	0	0	0	2,532	8,383
7/5/14	0	0	0	0	0	2,402	8,383
7/6/14	0	0	0	0	0	3,663	8,383
7/7/14	2	4	0	5	2	8,928	9,496
7/8/14	5	5	0	8	4	10,735	10,219
7/9/14	4	0	0	3	2	10,535	9,256
7/10/14	0	0	0	0	0	7,737	8,383
7/11/14	0	0	0	4	1	6,039	8,821
7/12/14	7	5	0	9	5	5,055	10,506
7/13/14	13	11	7	11	10	5,685	13,088
7/14/14	7	7	4	7	6	7,737	11,208
7/15/14	8	7	0	8	5	10,349	10,742
7/16/14	0	1	0	4	1	11,875	8,875
7/17/14	0	0	0	0	0	5,512	8,383
7/18/14	0	0	0	2	0	4,112	8,604
7/19/14	0	0	0	0	0	2,471	8,383
7/20/14	0	0	0	0	0	2,983	8,383
7/21/14	0	0	0	0	0	4,289	8,383
7/22/14	2	0	0	4	2	4,479	9,088
7/23/14	2	0	0	4	2	4,376	9,086
7/24/14	0	0	0	0	0	4,484	8,383
7/25/14	0	0	0	0	0	3,593	8,383
7/26/14	2	6	1	5	3	2,511	9,796
7/27/14	1	1	0	3	1	3,280	8,918
7/28/14	2	1	0	1	1	4,576	8,836
7/29/14	0	0	0	2	0	4,685	8,604
7/30/14	0	0	0	2	0	4,519	8,600
7/31/14	0	0	0	3	1	4,465	8,702
8/1/14	0	0	0	3	1	3,863	8,708
8/2/14	0	0	0	5	1	2,587	8,925
8/3/14	5	2	0	6	3	3,207	9,820
8/4/14	1	2	0	0	1	4,735	8,638
8/5/14	0	1	0	0	0	4,914	8,446
8/6/14	0	1	0	1	0	4,746	8,554
8/7/14	0	0	0	0	0	5,285	8,383
8/8/14	0	0	0	0	0	6,025	8,383
8/9/14	0	0	0	2	0	4,846	8,600
8/10/14	4	1	0	5	3	5,288	9,563
8/11/14	3	0	0	5	2	7,048	9,349
8/12/14	1	1	0	8	2	6,919	9,437
8/13/14	0	5	0	8	3	6,573	9,558
8/14/14	0	0	0	0	0	6,668	8,383
8/15/14	0	0	0	0	0	4,918	8,383
8/16/14	3	8	0	3	3	2,960	9,612
8/17/14	1	2	0	4	2	3,489	9,071
8/18/14	0	0	0	4	1	5,366	8,816
8/19/14	0	1	0	3	1	7,178	8,770
8/20/14	0	1	0	3	1	6,757	8,786
8/21/14	0	0	0	0	0	6,631	8,383
8/22/14	0	3	0	0	0	5,662	8,577
8/23/14	0	0	0	0	0	4,740	8,383
8/24/14	10	0	6	8	7	5,250	11,403
8/25/14	12	6	5	15	10	7,117	12,689
8/26/14	9	6	3	11	7	7,292	11,610
8/27/14	4	6	0	6	3	6,595	9,948
8/28/14	0	2	0	0	0	6,414	8,506
8/29/14	4	2	1	6	3	4,789	9,904
8/30/14	0	1	0	3	1	3,354	8,787
8/31/14	3	1	0	6	3	2,861	9,545
9/1/14	3	4	0	6	3	4,199	9,723
9/2/14	1	1	0	6	2	7,855	9,232
9/3/14	0	0	0	0	0	7,877	8,383
9/4/14	8	8	6	9	7	7,817	11,662

MERC

9/6/14	4	0	0	7	3	5,767	9,682
9/7/14	0	2	0	0	0	7,054	8,514
9/8/14	13	2	13	13	12	8,210	13,623
9/9/14	21	19	16	19	19	9,668	16,854
9/10/14	26	21	19	21	22	12,120	18,177
9/11/14	27	24	18	23	23	12,699	18,621
9/12/14	22	23	14	25	20	12,890	17,412
9/13/14	19	16	16	15	17	8,932	15,943
9/14/14	17	18	12	18	16	9,861	15,445
9/15/14	11	10	8	17	11	10,414	13,325
9/16/14	13	9	6	25	13	8,691	14,119
9/17/14	11	21	7	15	12	9,317	13,756
9/18/14	3	10	0	5	3	8,087	9,953
9/19/14	10	6	4	11	8	7,009	11,842
9/20/14	12	12	8	13	11	7,449	13,157
9/21/14	7	6	2	8	6	9,126	10,947
9/22/14	9	6	0	9	5	8,103	10,872
9/23/14	6	4	1	7	4	7,883	10,277
9/24/14	0	6	0	4	2	8,300	9,186
9/25/14	0	3	0	0	0	7,679	8,570
9/26/14	0	0	0	0	0	6,802	8,383
9/27/14	7	0	6	12	7	5,654	11,504
9/28/14	17	18	10	22	16	8,968	15,642
9/29/14	18	21	13	17	17	13,081	15,872
9/30/14	13	17	0	15	10	11,005	12,735
10/1/14	14	11	9	20	13	11,263	14,277
10/2/14	30	27	28	27	28	12,678	21,133
10/3/14	36	28	27	30	30	18,330	22,117
10/4/14	28	25	21	29	26	19,073	19,954
10/5/14	24	23	18	28	23	20,815	18,765
10/6/14	31	26	17	31	25	22,268	19,847
10/7/14	31	27	25	30	28	23,322	21,049
10/8/14	32	27	27	24	28	23,711	20,848
10/9/14	31	29	25	31	29	21,233	21,307
10/10/14	22	26	18	24	22	19,030	18,133
10/11/14	12	17	13	13	13	13,859	14,443
10/12/14	20	16	14	22	18	11,941	16,458
10/13/14	19	17	16	19	17	14,935	16,251
10/14/14	19	22	11	20	17	14,479	16,042
10/15/14	11	19	6	16	12	13,932	13,642
10/16/14	21	20	23	24	22	12,568	18,444
10/17/14	24	25	23	28	25	14,705	19,585
10/18/14	16	17	11	20	15	13,627	15,380
10/19/14	24	20	15	28	21	12,526	18,023
10/20/14	24	25	12	26	20	14,663	17,584
10/21/14	15	19	7	15	13	14,306	14,183
10/22/14	9	14	9	10	10	13,047	12,732
10/23/14	6	9	4	7	6	12,700	11,017
10/24/14	23	18	17	27	21	13,770	17,823
10/25/14	24	21	16	28	22	14,678	18,273
10/26/14	18	19	18	20	19	13,417	16,814
10/27/14	30	25	24	26	26	18,550	20,360
10/28/14	35	29	29	31	31	21,336	22,470
10/29/14	31	28	27	29	29	21,764	21,399
10/30/14	41	36	42	42	41	23,054	26,990
10/31/14	36	37	34	40	36	22,081	24,701
11/1/14	31	29	25	30	28	25,532	21,237
11/2/14	24	21	19	27	22	22,679	18,537
11/3/14	23	25	25	23	24	29,098	19,202
11/4/14	36	33	31	33	33	33,394	23,430
11/5/14	37	30	35	32	34	35,673	23,916
11/6/14	33	31	29	34	32	30,952	22,764
11/7/14	37	35	26	36	33	26,975	23,109
11/8/14	49	39	36	47	42	25,837	27,604
11/9/14	51	42	43	47	46	29,003	29,191
11/10/14	49	48	51	50	50	36,330	30,907
11/11/14	50	49	55	50	51	39,937	31,693
11/12/14	51	45	54	46	50	39,160	30,989
11/13/14	61	53	57	56	57	37,961	34,345
11/14/14	60	56	54	58	57	36,914	34,055
11/15/14	58	55	55	57	56	33,940	33,806
11/16/14	64	61	58	62	61	36,979	35,980
11/17/14	66	60	59	58	61	47,187	36,013
11/18/14	58	57	51	56	55	44,417	33,391
11/19/14	65	60	58	62	61	43,713	36,104
11/20/14	65	66	54	68	62	46,808	36,413
11/21/14	47	52	44	45	46	35,361	29,266

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11/22/14	37	35	31	32	34	25,491	23,576
11/23/14	43	34	44	40	41	28,277	27,152
11/24/14	65	53	58	63	60	44,912	35,731
11/25/14	53	52	56	58	55	45,024	33,209
11/26/14	77	65	75	75	75	43,976	42,146
11/27/14	74	66	67	72	70	37,513	40,032
11/28/14	55	53	50	56	53	33,795	32,378
11/29/14	62	48	60	60	59	33,532	35,086
11/30/14	78	71	75	77	76	43,012	42,675
12/1/14	74	67	73	72	72	37,328	41,180
12/2/14	55	55	55	57	55	33,635	33,366
12/3/14	59	58	54	67	59	35,285	35,147
12/4/14	48	47	46	48	47	31,926	29,783
12/5/14	53	48	51	57	52	32,273	32,152
12/6/14	52	47	50	53	51	30,169	31,417
12/7/14	44	36	39	40	40	27,225	26,717
12/8/14	54	46	53	52	52	31,978	32,021
12/9/14	52	46	51	52	51	32,355	31,461
12/10/14	45	44	41	43	43	30,570	27,866
12/11/14	40	39	37	40	39	29,040	26,014
12/12/14	36	33	34	35	35	25,728	24,111
12/13/14	28	27	27	30	28	22,498	21,012
12/14/14	30	28	33	31	31	22,565	22,465
12/15/14	49	40	61	47	51	26,670	31,669
12/16/14	59	55	62	57	59	32,376	35,076
12/17/14	55	52	55	58	55	31,818	33,415
12/18/14	55	44	52	55	52	29,052	32,127
12/19/14	44	42	40	43	42	24,852	27,549
12/20/14	40	39	38	38	39	21,991	25,875
12/21/14	36	35	34	36	35	21,745	24,354
12/22/14	33	33	29	33	32	20,496	22,768
12/23/14	35	33	38	33	35	19,775	24,386
12/24/14	37	35	41	35	38	19,436	25,498
12/25/14	41	37	43	42	41	20,732	26,980
12/26/14	52	45	56	51	53	24,541	32,179
12/27/14	63	49	58	64	59	25,960	35,315
12/28/14	75	69	75	78	75	33,057	42,367
12/29/14	79	75	75	79	77	38,741	43,201
12/30/14	75	76	72	77	75	39,621	42,134
12/31/14	58	60	52	59	57	30,259	34,009
1/1/15	65	57	56	67	61	40,754	36,133
1/2/15	50	52	49	63	53	35,121	32,335
1/3/15	80	64	83	81	79	47,499	44,282
1/4/15	91	87	83	95	89	56,901	48,485
1/5/15	79	79	75	84	79	54,223	44,050
1/6/15	86	82	79	84	83	56,369	45,769
1/7/15	80	80	75	81	78	52,733	43,827
1/8/15	78	75	74	75	76	51,660	42,601
1/9/15	78	75	72	82	76	50,688	42,996
1/10/15	71	66	66	78	70	46,422	40,194
1/11/15	78	71	74	77	75	49,155	42,568
1/12/15	77	75	80	80	78	53,834	43,803
1/13/15	66	68	67	69	67	45,537	38,794
1/14/15	51	48	51	48	50	36,919	30,969
1/15/15	53	48	41	65	51	35,696	31,496
1/16/15	52	52	43	62	51	35,792	31,539
1/17/15	42	39	42	41	41	28,983	27,055
1/18/15	43	41	41	59	46	32,334	29,161
1/19/15	41	44	33	49	40	32,465	26,724
1/20/15	42	44	41	42	42	32,264	27,472
1/21/15	57	45	55	59	55	38,248	33,408
1/22/15	48	45	43	48	46	33,119	29,187
1/23/15	35	32	31	32	33	25,225	23,120
1/24/15	42	41	41	52	44	27,595	28,294
1/25/15	44	48	42	54	46	30,924	29,256
1/26/15	39	39	33	42	37	30,522	25,306
1/27/15	39	41	39	40	39	29,869	26,270
1/28/15	46	40	43	46	44	31,193	28,364
1/29/15	65	57	58	72	63	42,498	37,002
1/30/15	54	56	49	63	55	37,535	33,203
1/31/15	73	59	73	80	73	42,448	41,474
2/1/15	74	71	74	80	75	48,833	42,293
2/2/15	63	64	57	75	63	46,359	37,101
2/3/15	66	60	64	72	66	44,331	38,125
2/4/15	73	70	71	79	73	50,277	41,480
2/5/15	54	58	53	56	55	39,739	33,145
2/6/15	55	51	41	60	51	36,206	31,266

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2/7/15	44	48	43	63	49	31,088	30,361
2/8/15	49	51	55	59	54	35,460	32,786
2/9/15	48	44	49	50	48	34,437	30,134
2/10/15	62	51	57	57	58	36,809	34,456
2/11/15	82	75	79	85	81	50,393	44,923
2/12/15	71	69	67	72	70	45,191	39,954
2/13/15	77	71	73	78	75	45,296	42,429
2/14/15	80	76	76	82	79	48,442	44,008
2/15/15	69	67	63	72	67	45,614	38,865
2/16/15	75	67	69	75	72	46,443	40,890
2/17/15	85	79	81	84	83	53,748	45,795
2/18/15	91	85	80	92	87	56,737	47,604
2/19/15	76	73	69	77	73	47,369	41,625
2/20/15	65	57	60	67	63	41,228	36,802
2/21/15	85	75	83	85	83	48,013	46,025
2/22/15	89	83	84	87	86	55,277	47,253
2/23/15	63	68	59	66	63	43,631	36,973
2/24/15	69	62	60	81	68	44,995	39,210
2/25/15	80	72	76	83	78	50,155	43,935
2/26/15	76	72	74	78	75	50,622	42,521
2/27/15	63	62	65	66	64	43,002	37,466
2/28/15	58	60	59	58	59	38,100	34,993
3/1/15	64	59	58	66	62	40,620	36,315
3/2/15	57	51	52	55	54	35,877	32,711
3/3/15	71	64	71	70	70	45,892	40,082
3/4/15	82	79	74	83	79	52,358	44,234
3/5/15	65	67	60	67	64	42,983	37,398
3/6/15	47	44	39	47	44	30,150	28,180
3/7/15	41	40	33	47	39	26,854	26,215
3/8/15	32	31	28	33	31	22,922	22,238
3/9/15	26	24	21	26	24	20,449	19,228
3/10/15	29	22	23	31	26	20,262	20,339
3/11/15	24	24	15	27	22	20,798	18,134
3/12/15	19	26	18	24	21	17,880	17,712
3/13/15	28	21	27	31	28	20,803	20,931
3/14/15	11	21	6	20	13	14,680	14,094
3/15/15	15	13	8	15	12	13,227	13,998
3/16/15	40	37	38	38	38	26,312	25,714
3/17/15	36	33	29	39	34	25,419	23,676
3/18/15	29	29	28	35	30	23,110	22,030
3/19/15	28	28	30	31	29	22,438	21,721
3/20/15	48	37	45	47	45	27,444	28,897
3/21/15	41	41	35	48	40	27,557	26,654
3/22/15	34	37	32	36	34	24,661	23,778
3/23/15	33	35	36	30	34	25,820	23,574
3/24/15	30	28	36	25	31	23,700	22,228
3/25/15	46	41	38	46	42	30,463	27,618
3/26/15	50	48	46	51	49	31,467	30,519
3/27/15	41	43	31	41	38	27,781	25,538
3/28/15	29	29	22	29	27	20,984	20,525
3/29/15	31	30	21	33	28	21,640	20,916
3/30/15	26	28	20	24	24	21,626	19,169
3/31/15	17	24	8	26	17	15,879	15,962
4/1/15	15	19	13	16	15	15,608	15,190
4/2/15	42	28	37	40	38	24,977	25,610
4/3/15	40	35	34	44	38	25,529	25,574
4/4/15	38	35	33	44	37	23,291	25,128
4/5/15	35	36	31	38	34	23,833	23,962
4/6/15	35	37	29	34	33	27,364	23,422
4/7/15	29	33	26	33	29	28,138	21,726
4/8/15	24	28	19	24	23	22,598	18,743
4/9/15	27	26	21	28	25	20,121	19,780
4/10/15	19	20	9	20	16	17,718	15,602
4/11/15	12	1	12	7	9	9,200	12,494
4/12/15	23	17	20	23	21	11,914	17,785
4/13/15	17	15	8	21	14	15,460	14,900
4/14/15	10	13	1	12	8	11,523	11,896
4/15/15	15	8	9	19	13	11,798	14,228
4/16/15	16	11	12	19	15	13,119	14,993
4/17/15	19	24	11	22	17	12,195	16,277
4/18/15	29	28	22	28	26	10,962	20,143
4/19/15	40	33	34	37	36	19,861	24,749
4/20/15	39	39	33	42	38	28,039	25,560
4/21/15	37	33	31	37	34	28,880	24,009
4/22/15	35	29	32	35	33	25,899	23,248
4/23/15	27	34	20	35	27	19,834	20,638
4/24/15	22	29	13	21	19	19,993	17,173

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4/25/15	22	26	12	23	19	13,520	16,976
4/26/15	18	17	10	20	15	12,968	15,281
4/27/15	19	19	11	23	17	12,037	16,145
4/28/15	17	17	11	24	16	14,093	15,822
4/29/15	8	20	2	15	9	12,400	12,522
4/30/15	7	17	2	12	8	10,498	11,889
5/1/15	1	5	0	4	2	8,145	9,293
5/2/15	15	5	8	14	11	5,568	13,448
5/3/15	18	15	12	18	15	8,224	15,241
5/4/15	14	16	1	15	10	9,631	12,904
5/5/15	4	15	2	10	6	8,243	11,247
5/6/15	11	11	9	11	10	8,584	13,119
5/7/15	28	20	29	28	27	11,851	20,701
5/8/15	27	22	26	24	25	13,850	19,757
5/9/15	25	30	24	23	25	11,726	19,574
5/10/15	31	30	29	31	30	17,508	22,027
5/11/15	26	26	22	27	25	22,185	19,539
5/12/15	25	26	12	28	21	18,192	17,912
5/13/15	16	24	9	15	14	18,290	14,945
5/14/15	15	15	11	15	13	16,615	14,482
5/15/15	14	16	5	12	10	11,793	13,134
5/16/15	6	13	14	10	10	8,198	13,137
5/17/15	32	28	35	32	32	12,746	23,044
5/18/15	25	23	22	23	24	22,631	19,047
5/19/15	19	20	12	17	16	16,014	15,665
5/20/15	15	11	8	17	12	11,047	13,952
5/21/15	12	12	6	12	10	10,058	13,037
5/22/15	7	2	4	2	4	6,620	10,376
5/23/15	9	7	4	4	6	5,282	11,123
5/24/15	10	13	6	6	8	5,224	12,172
5/25/15	7	7	2	5	5	9,565	10,623
5/26/15	0	0	0	3	1	9,128	8,714
5/27/15	0	15	0	8	4	8,396	10,180
5/28/15	17	10	15	17	15	7,830	15,162
5/29/15	21	18	20	24	21	11,565	17,836
5/30/15	14	23	13	18	16	8,586	15,563
5/31/15	12	17	1	15	10	9,258	12,750
6/1/15	1	10	0	5	3	9,191	9,654
6/2/15	4	10	2	4	4	8,514	10,350
6/3/15	1	4	0	6	2	8,675	9,444
6/4/15	2	12	0	7	4	7,484	10,148
6/5/15	7	15	0	7	6	6,721	10,922
6/6/15	1	2	0	0	1	5,797	8,648
6/7/15	1	0	0	6	2	8,225	9,176
6/8/15	0	0	0	2	0	7,462	8,608
6/9/15	5	5	0	5	3	6,255	9,960
6/10/15	1	4	0	4	2	6,497	9,197
6/11/15	1	4	0	2	1	6,389	8,982
6/12/15	0	6	0	0	1	5,549	8,764
6/13/15	6	1	1	3	3	4,712	9,753
6/14/15	12	2	4	13	8	5,750	12,129
6/15/15	16	12	12	13	13	7,745	14,397
6/16/15	6	6	4	6	6	8,647	10,889
6/17/15	9	8	3	12	7	7,870	11,744
6/18/15	4	7	0	14	5	7,329	10,803
6/19/15	3	3	0	7	3	5,365	9,752
6/20/15	0	0	0	3	1	4,768	8,708
6/21/15	6	1	0	4	3	5,980	9,615
6/22/15	1	0	0	4	1	8,434	8,964
6/23/15	0	0	0	0	0	8,024	8,383
6/24/15	2	1	0	0	1	8,239	8,710
6/25/15	0	0	0	1	0	8,110	8,488
6/26/15	0	1	0	0	0	6,757	8,446
6/27/15	0	0	0	0	0	4,855	8,383
6/28/15	0	0	0	0	0	5,593	8,383
6/29/15	3	8	0	6	3	6,747	9,936
6/30/15	7	14	0	15	7	6,954	11,730
Totals	10,566	10,065	9,298	11,076	10,171	7,506,785	7,667,155

* Volumes include interruptible and transportation volumes except for paper mills located off GLGT and Lamb Weston off of VGT.

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

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MINNESOTA ENERGY RESOURCES - Consolidated

Customer Counts by PGAC Class - July 1, 2014 through June 30, 2015

Rate Class	Tariff Rate Designation	Jul-14 Average Customers	Aug-14 Average Customers	Sep-14 Average Customers	Oct-14 Average Customers	Nov-14 Average Customers	Dec-14 Average Customers	Jan-15 Average Customers	Feb-15 Average Customers	Mar-15 Average Customers	Apr-15 Average Customers	May-15 Average Customers	Jun-15 Average Customers	Annual Average Customers
GS- Residential (w/ Heat)	3H801/3HS01	28,020	27,826	27,847	28,259	28,983	29,259	29,354	29,390	29,381	29,356	29,248	28,935	28,822
GS-Residential (w/o Heat)	3R801/3RS01	111	110	110	112	116	116	115	116	116	115	116	116	114
GS-C&I <1,500 therms/yr (Small)	3C805 / 3CS05 3I805 / 3IS05 3C806 / 3CS06	2,607	2,593	2,592	2,599	2,641	2,651	2,674	2,675	2,677	2,672	2,667	2,114	2,597
GS-C&I >1,500 therms/yr (Large)	3C810 / 3CS10 3I810 / 3IS10 3C812 / 3CS12 3IS12	2,508	2,506	2,508	2,520	2,572	2,590	2,601	2,602	2,601	2,599	2,594	3,127	2,611
Small Volume Interruptible (SVI)	3D820 / 3DS20 3J820 / 3JS20 3DS22	73	72	73	72	72	73	74	74	74	74	75	78	74
Small Volume Interruptible w/Joint (SVJ)	3DS30 / 3D830	5	5	5	5	5	5	5	5	5	5	5	5	5
Large Volume Interruptible (LVI)	3D840 / 3DS40 3J840 / 3JS40 3D842	7	6	8	8	7	7	7	6	6	6	6	6	7
Large Volume Interruptible w/Joint (LVJ)	3D850 / 3J850	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		33,331	33,118	33,143	33,575	34,396	34,701	34,830	34,868	34,860	34,827	34,711	34,381	34,228

MINNESOTA ENERGY RESOURCES - CONSOLIDATED
Projected Fixed Cost - November 2015 through March 2016

Futures Contracts WACOG

10,000														30														31														31														Jan-16													
10,000														30														31														31														Jan-16													
10,000														30														31														31														Jan-16													
Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	LDS Settle	LDS Settle Cost	Over/Under Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	LDS Settle	LDS Settle Cost	Over/Under Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	LDS Settle	LDS Settle Cost	Over/Under Market	Premium Per Unit	Premium Cost	Total Cost																															
1	05/15/15	22717	12	120,000	\$ 3,1940	\$ 383,280	\$ 2,5180	\$ 302,160	\$ 81,120	\$ -	\$ -	\$ 383,280	1	05/28/15	23070	7	70,000	\$ 3,0630	\$ 214,410	\$ 2,7320	\$ 191,240	\$ 23,170	\$ -	\$ -	\$ 214,410	1	05/26/15	23008	5	50,000	\$ 3,2740	\$ 163,700	\$ 2,8740	\$ 143,700	\$ 20,000	\$ -	\$ -	\$ 163,700																															
2	06/09/15	23300	12	120,000	\$ 3,0360	\$ 364,320	\$ 2,5180	\$ 302,160	\$ 62,160	\$ -	\$ -	\$ 364,320	2	06/29/15	23795	7	70,000	\$ 3,1160	\$ 218,120	\$ 2,7320	\$ 191,240	\$ 26,880	\$ -	\$ -	\$ 218,120	2	06/26/15	23009	6	60,000	\$ 3,2750	\$ 196,500	\$ 2,8740	\$ 172,440	\$ 24,060	\$ -	\$ -	\$ 196,500																															
3	06/15/15	23626	11	110,000	\$ 2,8840	\$ 317,240	\$ 2,5180	\$ 279,980	\$ 37,260	\$ -	\$ -	\$ 317,240	3	07/29/15	25966	7	70,000	\$ 3,1650	\$ 221,550	\$ 2,7320	\$ 191,240	\$ 30,310	\$ -	\$ -	\$ 221,550	3	06/24/15	23647	11	110,000	\$ 3,2670	\$ 359,270	\$ 2,8740	\$ 316,140	\$ 42,130	\$ -	\$ -	\$ 359,270																															
4	08/07/15	25481	10	100,000	\$ 2,9250	\$ 292,500	\$ 2,5180	\$ 251,800	\$ 40,700	\$ -	\$ -	\$ 292,500	4	08/28/15	26777	5	50,000	\$ 2,9390	\$ 146,950	\$ 2,7320	\$ 136,600	\$ 10,350	\$ -	\$ -	\$ 146,950	4	07/23/15	24760	11	110,000	\$ 3,2390	\$ 359,290	\$ 2,8740	\$ 316,140	\$ 40,150	\$ -	\$ -	\$ 359,290																															
5	09/10/15	27162	9	90,000	\$ 2,7590	\$ 248,310	\$ 2,5180	\$ 226,620	\$ 21,690	\$ -	\$ -	\$ 248,310	5	09/28/15	27763	5	50,000	\$ 2,8370	\$ 141,850	\$ 2,7320	\$ 136,600	\$ 5,250	\$ -	\$ -	\$ 141,850	5	08/24/15	26432	11	110,000	\$ 2,9980	\$ 329,780	\$ 2,8740	\$ 316,140	\$ 13,640	\$ -	\$ -	\$ 329,780																															
6	10/01/15	27964	9	90,000	\$ 2,4330	\$ 218,970	\$ 2,5180	\$ 226,620	\$ 7,650	\$ -	\$ -	\$ 218,970	6	10/19/15	28664	6	60,000	\$ 2,6570	\$ 132,850	\$ 2,7320	\$ 136,600	\$ (3,750)	\$ -	\$ -	\$ 132,850	6	09/23/15	27649	10	100,000	\$ 2,9070	\$ 290,700	\$ 2,8740	\$ 289,700	\$ 3,300	\$ -	\$ -	\$ 290,700																															
7													7													7	10/22/15	28903	8	80,000	\$ 2,7210	\$ 217,680	\$ 2,8740	\$ 229,920	\$ (12,240)	\$ -	\$ -	\$ 217,680																															
8													8													8																																											
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14													14													14																																											
15													15													15																																											
Total			63	630,000	\$ 1,824,620	\$ 2,8962	\$ 1,824,620	\$ 1,586,340	\$ 238,280	\$ -	\$ -	\$ 1,824,620	Total			36	360,000	\$ 1,075,730	\$ 2,9881	\$ 983,520	\$ 92,210	\$ -	\$ -	\$ 1,075,730	Total			62	620,000	\$ 1,912,920	\$ 3,0854	\$ 1,912,920	\$ 1,781,880	\$ 131,040	\$ -	\$ -	\$ 1,912,920																																
NGC	44	69.84%	44	440,000	\$ 2,8962	\$ 1,274,336	\$ 2,5180	\$ 1,107,930	\$ 166,418	\$ -	\$ -	\$ 1,274,336	NGC	21	58.33%	21	210,000	\$ 2,8981	\$ 627,208	\$ 2,7320	\$ 573,720	\$ 53,788	\$ -	\$ -	\$ 627,508	NGC	41	86.13%	41	410,000	\$ 3,0854	\$ 1,264,895	\$ 2,8740	\$ 1,178,340	\$ 86,555	\$ -	\$ -	\$ 1,264,895																															
NGC-ABL	4	6.35%	4	40,000	\$ 2,8962	\$ 115,848	\$ 2,5180	\$ 100,720	\$ 15,128	\$ -	\$ -	\$ 115,848	NGC-ABL	3	8.33%	3	30,000	\$ 2,8981	\$ 89,644	\$ 2,7320	\$ 81,960	\$ 7,684	\$ -	\$ -	\$ 89,644	NGC-ABL	4	6.45%	4	40,000	\$ 3,0854	\$ 123,414	\$ 2,8740	\$ 114,960	\$ 8,454	\$ -	\$ -	\$ 123,414																															
Other-Cons	15	23.81%	15	150,000	\$ 2,8962	\$ 434,433	\$ 2,5180	\$ 377,700	\$ 56,733	\$ -	\$ -	\$ 434,433	Other-Cons	12	33.33%	12	120,000	\$ 2,9881	\$ 358,577	\$ 2,7320	\$ 327,840	\$ 30,737	\$ -	\$ -	\$ 358,577	Other-Cons	17	27.42%	17	170,000	\$ 3,0854	\$ 524,510	\$ 2,8740	\$ 488,580	\$ 35,930	\$ -	\$ -	\$ 524,510																															
Total	63	100.0%	63	630,000	\$ 2,8962	\$ 1,824,620	\$ 2,5180	\$ 1,586,340	\$ 238,280	\$ -	\$ -	\$ 1,824,620	Total	36	100.0%	36	360,000	\$ 2,9881	\$ 1,075,730	\$ 2,7320	\$ 983,520	\$ 92,210	\$ -	\$ -	\$ 1,075,730	Total	62	100.0%	62	620,000	\$ 3,0854	\$ 1,912,920	\$ 2,8740	\$ 1,781,880	\$ 131,040	\$ -	\$ -	\$ 1,912,920																															

90.48%

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

Projected Storage Cost - November 2015 through March 2016

Month/ Year	K#118657 NNG Storage	Storage K#125915 LS Power	Storage K#125916 LS Power	Total NNG Storage	WACOG Projected K#118657 NNG WACOG	WACOG Projected K#125915 K#125916 NNG WACOG	K#118657 NNG Storage Cost	K#125915 NNG Storage Cost	K#125916 NNG Storage Cost	Total NNG Storage Cost	AECO Storage GLGT/VGT Centra Emerson	AECO Storage GLGT/VGT Centra Emerson WACOG	AECO Storage GLGT/VGT Centra Emerson Cost	NNG-ABL K#22335 NNG Storage	NNG-ABL K#22335 NNG Projected WACOG	NNG-ABL K#22335 NNG Projected Cost
Nov-15	455,259	14,625	63,375	533,259	\$ 2.8092	\$ 2.8092	\$ 1,278,932	\$ 41,085	\$ 178,036	\$ 1,498,053	85,304	\$ 2.1997	\$ 187,639	34,125	\$ 2.7361	\$ 93,370
Dec-15	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 3,213,726	\$ 103,240	\$ 447,372	\$ 3,764,337	231,769	\$ 2.1997	\$ 509,812	85,750	\$ 2.7361	\$ 234,623
Jan-16	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 3,213,726	\$ 103,240	\$ 447,372	\$ 3,764,337	231,769	\$ 2.1997	\$ 509,812	85,750	\$ 2.7361	\$ 234,623
Feb-16	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 3,213,726	\$ 103,240	\$ 447,372	\$ 3,764,337	209,339	\$ 2.1997	\$ 460,474	85,750	\$ 2.7361	\$ 234,623
Mar-16	455,259	14,625	63,375	533,259	\$ 2.8092	\$ 2.8092	\$ 1,278,932	\$ 41,085	\$ 178,036	\$ 1,498,053	96,374	\$ 2.1997	\$ 211,990	34,125	\$ 2.7361	\$ 93,370
Total	4,342,470	139,500	604,500	5,086,470	\$ 2.8092	\$ 2.8092	\$ 12,199,043	\$ 391,889	\$ 1,698,186	\$ 14,289,118	854,555	\$ 2.1997	\$ 1,879,727	325,500	\$ 2.7361	\$ 890,609

Month/ Year	NNG Storage Volume	NNG Indexes Price	NNG Indexes Cost
Nov-15	533,259	\$ 2.6255	\$ 1,400,072
Dec-15	1,339,984	\$ 2.9545	\$ 3,958,983
Jan-16	1,339,984	\$ 3.3265	\$ 4,457,457
Feb-16	1,339,984	\$ 3.3410	\$ 4,476,887
Mar-16	533,259	\$ 3.0370	\$ 1,619,508
Total	5,086,470	\$ 3.1285	\$ 15,912,905

1,623,787

Month/ Year	AECO Storage Volume	Total AECO Market WACOG	Total AECO Market Cost
Nov-15	85,304	\$ 2.6955	\$ 229,937
Dec-15	231,769	\$ 3.0495	\$ 706,780
Jan-16	231,769	\$ 3.2415	\$ 751,279
Feb-16	209,339	\$ 3.2485	\$ 680,038
Mar-16	96,374	\$ 3.2995	\$ 317,986
Total	854,555	\$ 3.1432	\$ 2,686,019

\$ 806,292

Month/ Year	NNG-ABL Storage Volume	NNG-ABL Indexes Price	NNG-ABL Indexes Cost
Nov-15	34,125	\$ 2.6155	\$ 89,254
Dec-15	85,750	\$ 2.8620	\$ 245,417
Jan-16	85,750	\$ 3.1340	\$ 268,741
Feb-16	85,750	\$ 3.1360	\$ 268,912
Mar-16	34,125	\$ 2.9370	\$ 100,225
Total	325,500	\$ 2.9879	\$ 972,548

\$ 81,939

Max NNG-MERC Storage (Storage plan withdrawals through Apr 16)	5,086,470	5,469,321	09/30/15 Storage Balance - NNG-MERC	4,425,788	80.92%	4,115,984
Max AECO Storage (Storage plan withdrawals through Apr 16)	854,555	947,820	09/30/15 Storage Balance - AECO	851,544	89.84%	767,753
Max NNG-ABL Storage (Storage plan withdrawals through Apr 16)	325,500	350,000	09/30/15 Storage Balance - NNG-ABL	280,329	80.09%	260,706

Month/ Year	K#118657 NNG Storage	Storage K#125915 LS Power	Storage K#125916 LS Power	Total NNG Storage	Projected K#118657 NNG WACOG	Projected K#125915 NNG WACOG	Projected K#125916 NNG WACOG	WACOG NNG Cost	Projected NNG Indexes Price	Projected NNG Index Cost	Additional Storage (Savings)/ Cost
Nov-15	455,259	14,625	63,375	533,259	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 1,498,053	\$ 2.6255	\$ 1,400,072	\$ 97,981
Dec-15	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 3,764,337	\$ 2.9545	\$ 3,958,983	\$ (194,645)
Jan-16	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 3,764,337	\$ 3.3265	\$ 4,457,457	\$ (693,119)
Feb-16	1,143,984	36,750	159,250	1,339,984	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 3,764,337	\$ 3.3410	\$ 4,476,887	\$ (712,549)
Mar-16	455,259	14,625	63,375	533,259	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 1,498,053	\$ 3.0370	\$ 1,619,508	\$ (121,455)
Total	4,342,470	139,500	604,500	5,086,470	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 14,289,118	\$ 3.1285	\$ 15,912,905	\$ (1,623,787)

Month/ Year	AECO Storage	AECO Storage Other WACOG	Total AECO Cost	Projected Emerson Index Price	Projected Emerson Index Cost	Additional Storage (Savings)/ Cost
Nov-15	85,304	\$ 2.1997	\$ 187,639	\$ 2.6955	\$ 229,937	\$ (42,297)
Dec-15	231,769	\$ 2.1997	\$ 509,812	\$ 3.0495	\$ 706,780	\$ (196,967)
Jan-16	231,769	\$ 2.1997	\$ 509,812	\$ 3.2415	\$ 751,279	\$ (241,467)
Feb-16	209,339	\$ 2.1997	\$ 460,474	\$ 3.2485	\$ 680,038	\$ (219,564)
Mar-16	96,374	\$ 2.1997	\$ 211,990	\$ 3.2995	\$ 317,986	\$ (105,996)
Total	854,555	\$ 2.1997	\$ 1,879,727	\$ 3.1432	\$ 2,686,019	\$ (806,292)

Month/ Year	NNG-ABL K#22335 NNG Storage	K#22335 NNG Projected WACOG	K#22335 NNG Projected Cost	NNG-ABL Indexes Price	NNG-ABL Indexes Cost	Additional Storage (Savings)/ Cost
Nov-15	34,125	\$ 2.7361	\$ 93,370	\$ 2.6155	\$ 89,254	\$ 4,116
Dec-15	85,750	\$ 2.7361	\$ 234,623	\$ 2.8620	\$ 245,417	\$ (10,794)
Jan-16	85,750	\$ 2.7361	\$ 234,623	\$ 3.1340	\$ 268,741	\$ (34,118)
Feb-16	85,750	\$ 2.7361	\$ 234,623	\$ 3.1360	\$ 268,912	\$ (34,289)
Mar-16	34,125	\$ 2.7361	\$ 93,370	\$ 2.9370	\$ 100,225	\$ (6,855)
Total	325,500	\$ 2.7361	\$ 890,609	\$ 2.9879	\$ 972,548	\$ (81,939)

MINNESOTA ENERGY RESOURCES - CONSOLIDATED
Projected Call Option Costs - November 2015 through March 2016

Call/Put Options WACOG

Contract = 10,000

Deal Number	Purchase Date	%	Nov-15										Dec-15										Jan-16																						
			Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	
1	05/22/15		16	160,000	\$ 3,250.00	\$ 520,000	\$ 2,518.00	\$ 402,880		\$ 2,518.00	\$ 402,880	\$ -	\$ 0.2280	\$ 36,480	\$ 439,360	1	05/20/15		24	240,000	\$ 3,500.00	\$ 840,000	\$ 2,730.00	\$ 655,680	\$ 2,730.00	\$ 655,680	\$ -	\$ 0.2410	\$ 57,840	\$ 713,520	1	05/18/15		27	270,000	\$ 3,500.00	\$ 945,000	\$ 2,874.00	\$ 775,980	\$ 2,874.00	\$ 775,980	\$ -	\$ 0.3770	\$ 101,790	\$ 877,770
2	06/23/15		16	160,000	\$ 3,000.00	\$ 480,000	\$ 2,518.00	\$ 402,880		\$ 2,518.00	\$ 402,880	\$ -	\$ 0.2420	\$ 38,720	\$ 441,600	2	06/17/15		24	240,000	\$ 3,250.00	\$ 780,000	\$ 2,730.00	\$ 655,680	\$ 2,730.00	\$ 655,680	\$ -	\$ 0.3070	\$ 73,680	\$ 729,360	2	06/11/15		28	280,000	\$ 3,500.00	\$ 980,000	\$ 2,874.00	\$ 804,720	\$ 2,874.00	\$ 804,720	\$ -	\$ 0.3000	\$ 84,000	\$ 888,720
3	07/22/15		16	160,000	\$ 3,250.00	\$ 520,000	\$ 2,518.00	\$ 402,880		\$ 2,518.00	\$ 402,880	\$ -	\$ 0.1330	\$ 21,280	\$ 424,160	3	07/17/15		24	240,000	\$ 3,250.00	\$ 780,000	\$ 2,730.00	\$ 655,680	\$ 2,730.00	\$ 655,680	\$ -	\$ 0.2210	\$ 53,040	\$ 708,720	3	07/13/15		28	280,000	\$ 3,500.00	\$ 980,000	\$ 2,874.00	\$ 804,720	\$ 2,874.00	\$ 804,720	\$ -	\$ 0.2480	\$ 69,440	\$ 874,160
4	08/21/15		16	160,000	\$ 3,000.00	\$ 480,000	\$ 2,518.00	\$ 402,880		\$ 2,518.00	\$ 402,880	\$ -	\$ 0.0900	\$ 14,400	\$ 417,280	4	08/11/15		25	250,000	\$ 3,250.00	\$ 812,500	\$ 2,730.00	\$ 683,000	\$ 2,730.00	\$ 683,000	\$ -	\$ 0.1410	\$ 35,250	\$ 718,250	4	08/11/15		29	290,000	\$ 3,250.00	\$ 942,500	\$ 2,874.00	\$ 833,460	\$ 2,874.00	\$ 833,460	\$ -	\$ 0.2730	\$ 80,910	\$ 914,370
5	09/21/15		16	160,000	\$ 2,750.00	\$ 440,000	\$ 2,518.00	\$ 402,880		\$ 2,518.00	\$ 402,880	\$ -	\$ 0.0890	\$ 11,040	\$ 413,920	5	09/16/15		27	270,000	\$ 3,000.00	\$ 810,000	\$ 2,730.00	\$ 737,640	\$ 2,730.00	\$ 737,640	\$ -	\$ 0.1930	\$ 47,590	\$ 775,170	5	09/11/15		29	290,000	\$ 3,250.00	\$ 945,500	\$ 2,874.00	\$ 833,460	\$ 2,874.00	\$ 833,460	\$ -	\$ 0.1730	\$ 50,170	\$ 883,630
6	10/02/15		16	160,000	\$ 2,500.00	\$ 400,000	\$ 2,500.00	\$ 400,000		\$ 2,518.00	\$ 402,880	\$ (2,880)	\$ 0.0910	\$ 14,560	\$ 414,560	6	10/01/15		27	270,000	\$ 2,750.00	\$ 742,500	\$ 2,730.00	\$ 737,640	\$ 2,730.00	\$ 737,640	\$ -	\$ 0.0750	\$ 20,250	\$ 757,890	6	10/19/15		30	300,000	\$ 3,000.00	\$ 900,000	\$ 2,874.00	\$ 862,200	\$ 2,874.00	\$ 862,200	\$ -	\$ 0.1420	\$ 42,600	\$ 904,800
Total			96	960,000	\$ 2,840,000	\$ 2,518.00	\$ 2,414,400	\$ 2,417,280	\$ (2,880)	\$ 2,518.00	\$ 2,417,280	\$ (2,880)	\$ 136,480	\$ 2,550,880	Total			151	1,510,000	\$ 4,765,000	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ -	\$ 0.1838	\$ 277,590	\$ 4,402,910	Total			171	1,710,000	\$ 5,690,000	\$ 5,690,000	\$ 4,914,540	\$ 4,914,540	\$ 4,914,540	\$ -	\$ 0.2508	\$ 428,910	\$ 5,343,450		
NNG	73	76.04%	73	730,000	\$ 2,958.33	\$ 2,159,583	\$ 2,518.00	\$ 1,835,850	\$ 2,518.00	\$ 1,835,140	\$ (718)	\$ 0.1422	\$ 103,782	\$ 1,939,732	NNG	117	77.48%	117	1,170,000	\$ 3,155.66	\$ 3,692,086	\$ 2,730.00	\$ 3,196,440	\$ 2,730.00	\$ 3,196,440	\$ -	\$ 0.1838	\$ 215,086	\$ 3,411,526	NNG	131	76.61%	131	1,310,000	\$ 3,327.56	\$ 4,359,006	\$ 2,874.00	\$ 3,764,940	\$ 2,874.00	\$ 3,764,940	\$ -	\$ 0.2508	\$ 328,580	\$ 4,093,520	
NNG-ABL	6	6.25%	6	60,000	\$ 2,958.33	\$ 177,500	\$ 2,518.00	\$ 150,900	\$ 2,518.00	\$ 151,080	\$ (180)	\$ 0.1422	\$ 8,530	\$ 159,430	NNG-ABL	8	5.30%	8	80,000	\$ 3,155.66	\$ 252,450	\$ 2,730.00	\$ 216,560	\$ 2,730.00	\$ 216,560	\$ -	\$ 0.1838	\$ 14,707	\$ 233,267	NNG-ABL	9	5.26%	9	90,000	\$ 3,327.56	\$ 299,474	\$ 2,874.00	\$ 258,650	\$ 2,874.00	\$ 258,650	\$ -	\$ 0.2508	\$ 22,574	\$ 281,224	
Other-Cons	17	17.71%	17	170,000	\$ 2,958.33	\$ 502,917	\$ 2,518.00	\$ 427,550	\$ 2,518.00	\$ 428,060	\$ (510)	\$ 0.1422	\$ 24,168	\$ 451,718	Other-Cons	26	17.22%	26	260,000	\$ 3,155.66	\$ 820,464	\$ 2,730.00	\$ 710,320	\$ 2,730.00	\$ 710,320	\$ -	\$ 0.1838	\$ 47,797	\$ 758,117	Other-Cons	31	18.13%	31	310,000	\$ 3,327.56	\$ 1,031,520	\$ 2,874.00	\$ 890,940	\$ 2,874.00	\$ 890,940	\$ -	\$ 0.2508	\$ 77,756	\$ 968,696	
Total	96	100.0%	96	960,000	\$ 2,958.33	\$ 2,840,000	\$ 2,518.00	\$ 2,414,400	\$ 2,417,280	\$ (2,880)	\$ 0.1422	\$ 136,480	\$ 2,550,880	Total	151	100.0%	151	1,510,000	\$ 3,155.66	\$ 4,765,000	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ 4,125,320	\$ -	\$ 0.1838	\$ 277,590	\$ 4,402,910	Total	171	100.0%	171	1,710,000	\$ 3,327.56	\$ 5,690,000	\$ 5,690,000	\$ 4,914,540	\$ 4,914,540	\$ 4,914,540	\$ -	\$ 0.2508	\$ 428,910	\$ 5,343,450	

Deal Number	Purchase Date	%	Feb-16										Mar-16										Total																						
			Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	
1	05/27/15		26	260,000	\$ 3,250.00	\$ 845,000	\$ 2,881.00	\$ 748,060	\$ 2,881.00	\$ 749,060	\$ -	\$ 0.3970	\$ 103,220	\$ 853,280	1	06/11/15		22	220,000	\$ 3,500.00	\$ 770,000	\$ 2,850.00	\$ 627,440	\$ 2,850.00	\$ 627,440	\$ -	\$ 0.3970	\$ 87,340	\$ 714,780	1			116	1,160,000	\$ 3,408.75	\$ 3,920,000	\$ 2,792.25	\$ 3,211,040	\$ 2,792.25	\$ 3,211,040	\$ -	\$ 0.3382	\$ 386,670	\$ 3,597,710	
2	06/26/15		26	260,000	\$ 3,250.00	\$ 845,000	\$ 2,881.00	\$ 749,060	\$ 2,881.00	\$ 749,060	\$ -	\$ 0.3720	\$ 94,720	\$ 845,780	2	06/04/15		22	220,000	\$ 3,250.00	\$ 715,000	\$ 2,850.00	\$ 627,440	\$ 2,850.00	\$ 627,440	\$ -	\$ 0.3360	\$ 67,360	\$ 701,380	2			116	1,160,000	\$ 3,275.90	\$ 3,800,000	\$ 2,792.25	\$ 3,239,790	\$ 2,792.25	\$ 3,239,790	\$ -	\$ 0.3164	\$ 367,040	\$ 3,606,820	
3	07/27/15		26	260,000	\$ 3,250.00	\$ 845,000	\$ 2,881.00	\$ 749,060	\$ 2,881.00	\$ 749,060	\$ -	\$ 0.3220	\$ 83,720	\$ 832,780	3	07/07/15		22	220,000	\$ 3,250.00	\$ 715,000	\$ 2,850.00	\$ 627,440	\$ 2,850.00	\$ 627,440	\$ -	\$ 0.3420	\$ 75,240	\$ 702,680	3			116	1,160,000	\$ 3,310.35	\$ 3,840,000	\$ 2,792.25	\$ 3,239,790	\$ 2,792.25	\$ 3,239,790	\$ -	\$ 0.2610	\$ 302,720	\$ 3,542,500	
4	08/26/15		25	250,000	\$ 3,250.00	\$ 812,500	\$ 2,881.00	\$ 720,250	\$ 2,881.00	\$ 720,250	\$ -	\$ 0.2370	\$ 59,250	\$ 779,500	4	08/04/15		22	220,000	\$ 3,250.00	\$ 715,000	\$ 2,850.00	\$ 627,440	\$ 2,850.00	\$ 627,440	\$ -	\$ 0.3080	\$ 67,760	\$ 695,200	4			117	1,170,000	\$ 3,215.95	\$ 3,762,500	\$ 2,792.25	\$ 3,267,030	\$ 2,792.25	\$ 3,267,030	\$ -	\$ 0.2201	\$ 257,570	\$ 3,524,600	
5	09/25/15		26	260,000	\$ 3,000.00	\$ 780,000	\$ 2,881.00	\$ 749,060	\$ 2,881.00	\$ 749,060	\$ -	\$ 0.2620	\$ 68,120	\$ 817,180	5	09/02/15		22	220,000	\$ 3,000.00	\$ 660,000	\$ 2,850.00	\$ 627,440	\$ 2,850.00	\$ 627,440	\$ -	\$ 0.3100	\$ 68,200	\$ 695,640	5			120	1,200,000	\$ 3,027.71	\$ 3,632,500	\$ 2,792.25	\$ 3,350,480	\$ 2,792.25	\$ 3,350,480	\$ -	\$ 0.1959	\$ 235,860	\$ 3,586,340	
6	10/23/15		27	270,000	\$ 2,750.00	\$ 742,500	\$ 2,750.00	\$ 742,500	\$ 2,881.00	\$ 777,870	\$ (35,370)	\$ 0.2150	\$ 58,050	\$ 800,550	6	10/21/15		23	230,000	\$ 2,750.00	\$ 632,500	\$ 2,750.00	\$ 632,500	\$ 2,850.00	\$ 655,960	\$ (23,460)	\$ 0.2960	\$ 68,080	\$ 700,580	6			123	1,230,000	\$ 2,778.55	\$ 3,417,500	\$ 2,743.8	\$ 3,374,840	\$ 2,743.8	\$ 3,374,840	\$ (61,710)	\$ 0.1655	\$ 203,540	\$ 3,578,380	
Total			156	1,560,000	\$ 4,870,000	\$ 3,121.8	\$ 4,458,990	\$ 4,494,360	\$ (35,370)	\$ 3,121.8	\$ 4,458,990	\$ (0.0227)	\$ 469,080	\$ 4,928,070	Total			133	1,330,000	\$ 4,207,500	\$ 3,163.55	\$ 2,834.4	\$ 2,834.4	\$ 2,834.4	\$ 2,834.4	\$ 2,834.4	\$ -	\$ 0.3164	\$ 1,047	\$ 3,166	Total			707	7,070,000	\$ 3,164.4	\$ 22,372,500	\$ 2,784.0	\$ 19,682,950	\$ 2,792.25	\$ 19,744,660	\$ (61,710)	\$ 0.2479	\$ 1,752,600	\$ 21,435,550
NNG	121	77.56%	121	1,210,000	\$ 3,121.8	\$ 3,777,372	\$ 2,858.3	\$ 3,458,576	\$ 2,881.0	\$ 3,486,010	\$ (27,434)	\$ 0.3007	\$ 363,838	\$ 3,822,413	NNG	103	77.44%	103	1,030,000	\$ 3,163.55	\$ 3,258,440	\$ 2,834.4	\$ 2,919,392	\$ 2,850.0	\$ 2,937,560	\$ (18,168)	\$ 0.3312	\$ 341,170	\$ 3,260,562	NNG	545	77.09%	545	5,450,000	\$ 3,164.5	\$ 17,246,487	\$ 2,784.0	\$ 15,175,297	\$ 2,792.25	\$ 15,223,090	\$ (47,793)	\$ 0.2482	\$ 1,352,456	\$ 16,527,753	
NNG-ABL	8	5.13%	8	80,000	\$ 3,121.8	\$ 249,744	\$ 2,858.3	\$ 226,668	\$ 2,881.0	\$ 230,480	\$ (1,814)	\$ 0.3007	\$ 24,055	\$ 252,722	NNG-ABL	7	5.26%	7	70,000	\$ 3,163.55	\$ 221,447	\$ 2,834.4	\$ 196,405	\$ 2,850.0	\$ 199,640	\$ (1,235)	\$ 0.3312	\$ 23,188	\$ 221,592	NNG-ABL	38	5.37%	38	380,000	\$ 3,159.6	\$ 1,200,615	\$ 2,784.0	\$ 1,058,191	\$ 2,784.0	\$ 1,058,420	\$ (3,229)	\$ 0.2449	\$ 93,053</		