PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

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

		NNG
Design Day Requirement		200785
Total Peak Day Entitlement		208007.3
Firm Peak Day Actual Sendout -Non Coincidental	(Jan. 19)	149138
Firm Annual Throughput - Minnesota		20842512
No. of Firm Customers		158939
Department Load Factor Calculation		0.382885

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

Pipeline Group	Nov11-Mar 12 Avg. Customer Count	Zone Total Customer Count	1/20 Design DDD	Regression Factors Intercept	Slope	Regression Total Footnote 1	Regression Adjustment Footnote 2	1/20 Requirements Regression Load Footnote 3	Nov11-Mar 12 Avg. Customer Growth	Total *
PEAK										
PNG	158939	158939	99.24698892	33793	2120	244224	43439	200785	0	200785
Total	158939	158939								200785
OFF PEAK										
PNG	158939	158939	55	33793	2120	150410	24073	126337	0	126337
Total	158939	158939								126337

* Adjusted for customer growth

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 adjustment to achieve 97.5% confidence level confidence level that actual demand under design conditions will not exceed estimate.
Footnote 3: Total equals Regression Total minus Regression Adjustment.

*55 is the 30 yr unadjusted heating degree days from NOAA, not adjusted for windspeed.

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

Heating Season	No. of Firm Customers	NNG Design Day Requirements	MMBtus /Customer /Day
12/13	158939	200785	1.263283
11/12	157442	211182	1.341332
10/11	158298	194598	1.229314
09/10	157670	203360	1.289782
08/09	156973	225397	1.435897
07/08	155910	202263	1.297306
06/07	149049	200484	1.345088

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

Class	Summer Apr-Oct	Winter Nov-Mar	Total
GS	4072685	16741827	20814513
SVI	223693.3	920169.9	1143863
SVJ	5464	22535	27999
LVI	151701.3	610022.5	761723.8
LVJ	0	0	0
SLV	0	0	0
Total	4453544	18294555	22748099

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

Attachment 3
NNG

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

Type of Capacity or Entitlement	Current Amount Mcf or MMBtu	Proposed Change Mcf or MMBtu	Proposed Amount Mcf or MMBtu
TF-12 Base & Variable	67694	-718.239	66975.76
TF5	29011	-307.357	28703.64
TFX - 12	29029	-308.461	28720.54
TFX - 5	81057	-859.671	80197.33
TFX- (Apr) Offpeak*	1798	-19.4732	1778.527
TFX- (Oct) Offpeak*	1798	-19.4732	1778.527
Bison	44940	-476.831	44463.17
NBPL	44940	-476.831	44463.17
Northwest Gas (Windom)	2500	0	2500
Northwestern Energy (Ortonville)	910	0	910
NNG Zone Delivery Call Option	11235	-11235	0
LSP Peaking Service	0	0	0
Heating Season Total	221436	-13428.7	208007.3
Non-Heating Season Total	101931	-1046.17	100884.8
Heating Season Forecasted Design Day-Adjusted	211182	-10397	200785
Non-Heating Season Forecasted Design Day	130844	-4507	126337
Heating Season Capacity Surplus/Shortage	10254	-3031.73	7222.272
Non-Heating Season Capacity Surplus/Shortage	-28913	3460.827	-25452.2

*Not included in Heating Season Total entitlement

0.048555

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

All costs in $/MMBtu	Last Base Cost of Gas G007, G011/ MR10-978* Feb. 11	Last Demand Change G011- M-11- Nov .11	Last Demand Change G011- M-12- May 12^	Most Recent PGA Oct. 2012	Current Proposal Effective Nov.1,2012	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		86		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.465133784	-2.262366216	0.662833784	0.131620059	0.403033784
Demand Cost	1.6893	1.7414	1.8832	1.9029	1.8818	0.1925	-0.0014	-0.011088339	-0.0211
Commodity Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Cost of Gas	9.1914	7.7406	6.4601	6.7396	7.121533784	-2.069866216	0.661433784	0.056670097	0.381933784
Avg Annual Cost	790.4604	665.6916	555.5686	579.6056	612.4519054	-178.0084946	56.88330542	0.056670097	32.84630542
Effect of proposed commodity change on average annual bills:									34.66090542
Effect of proposed demand change on average annual bills:									-1.8146
2) Small Vol. Interruptible: Avg. Annual Use:		4371		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.465133784	-2.262366216	0.662833784	0.131620059	0.403033784
Demand Cost	0								
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Cost of Gas	6.8956	5.3927	3.9704	4.2302	4.633233784	-2.262366216	0.662833784	0.09527535	0.403033784
Avg Annual Cost	30140.6676	23571.4917	17354.6184	18490.2042	20251.86487	-9888.80273	2897.24647	0.09527535	1761.66067
Effect of proposed commodity change on average annual bills:									1761.66067
Effect of proposed demand change on average annual bills:									0
3) Large Vol. Interruptible: Avg. Annual Use:		11202		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.465133784	-2.262366216	0.662833784	0.131620059	0.403033784
Demand Cost									
Commodity Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Total Cost of Gas	6.0523	4.5494	3.1271	3.3869	3.789933784	-2.262366216	0.662833784	0.11899784	0.403033784
Avg Annual Cost	67797.8646	50962.3788	35029.7742	37940.0538	42454.83825	-25343.02635	7425.064048	0.11899784	4514.784448
Effect of proposed commodity change on average annual bills:									4514.784448
Effect of proposed demand change on average annual bills:									0
4) Small Vol. Firm: Avg. Annual Use:		4800		Mcf					
		25		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.465133784	-2.262366216	0.662833784	0.131620059	0.403033784
Demand Cost	19.6334	10.8163	10.8163	10.8884	19.3628	-0.2706	8.5465	0.778296168	8.4744
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	6.8956	5.3927	3.9704	4.2302	4.633233784	-2.262366216	0.662833784	0.09527535	0.403033784
Total Demand Cost	21.4334	12.6163	12.6163	12.6884	21.1628	-0.2706	8.5465	0.667885628	8.4744
Avg Annual Cost	33634.715	26200.3675	19373.3275	20622.17	22768.59216	-10866.12284	3395.264663	0.104083235	2146.422163
Effect of proposed commodity change on average annual bills:									1934.562163
Effect of proposed demand change on average annual bills:									211.86
5) Large Vol. Firm: Avg. Annual Use:		14841		Mcf					
		75		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.465133784	-2.262366216	0.662833784	0.131620059	0.403033784
Demand Cost	19.6334	10.8163	10.8163	10.8884	19.3628	-0.2706	8.5465	0.778296168	8.4744
Commodity Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Demand Margin	0.14	1.4	1.4	1.4	1.4	1.26	0	0	0
Total Cost of Gas	6.0523	4.5494	3.1271	3.3869	3.789933784	-2.262366216	0.662833784	0.11899784	0.403033784
Total Demand Cost	19.7734	12.2163	12.2163	12.2884	20.7628	0.9894	8.5465	0.689625989	8.4744
Avg Annual Cost	91305.1893	68433.8679	47325.5136	51186.6129	57803.61729	-10834.62284	10478.10369	0.129272167	6617.004387
Effect of proposed commodity change on average annual bills:									5981.424387
Effect of proposed demand change on average annual bills:									635.58

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 Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012 & revised demand costs per Dockets G011/M-12-558 and G011/M-12-559

BY
HIDA

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

	Tariff-Summer(7)	Tariff-Winter(5)	Wt. Annual	GRI	Total
IV. NORTHERN NATURAL GAS COMPANY'S RATES -- CURRENT COST OF GAS EFFECTIVE (NNG)					41214
TF-12B	5.683	10.23	7.5776	0	7.5776
TF-12V	5.683	13.866	9.0926	0	9.0926
TF-5		15.153	15.153	0	15.153
TFX	5.683	15.153	9.6288	0	9.6288
TF-12B Discount	5.683	7.6	6.4818	0	6.4818
Gas Cost					3.4052

V. ANNUAL SALES -- As approved in Docket No. G007,011/MR-08-836

Total Northern Annual Sales	213137630

VI. PNG'S CURRENT COST OF GAS EFFECTIVE: 41214

		Contract #(s)		Months			Rate/CCF	
A. GS	TF12B (Max Rate)	112495	36719	12	7.5776 =	3338903	0.018677418	
	TF12V (Max Rate)	112495	25820	12	9.0926 =	2817251	0.01575936	
	TF5 (Max Rate)	112495	27941	5	15.153 =	2116950	0.011841961	
	TF12B (Discount-Winter)	112495	4437	12	6.4818 =	345117	0.001930543	
	TF5 (Discount-Winter)	112495	763	5	7.6 =	28994	0.000162189	
	TFX5 (Discount)	112561	5336	5	4.56 =	121661	0.000680557	
	TFX12 (Max Rate)	112486	9624	12	9.6288 =	1112011	0.006220455	
	TFX Apr (Max Rate)	112486	1779	1	5.683 =	10110	5.65541E-05	
	TFX Oct (Max Rate)	112486	1779	1	5.683 =	10110	5.65541E-05	
	TFX5 (Max Rate)	112486	50819	5	15.153 =	3850302	0.021538122	
	TFX5 (Discount)	112486	1800	5	7.6 =	68400	0.000382621	
	TFX12 (Discount)	111866	1141	12	4.864 =	66598	0.000372541	
	TFX12 (Discount)	111866	7355	12	5.472 =	482959	0.002701614	
	TFX12 (Discount)	111866	10601	12	2.2192 =	282309	0.001579202	
	TFX5 (Discount)	111866	337	5	4.864 =	8196	4.58474E-05	
	TFX5 (Discount)	111866	2174	5	5.472 =	59481	0.000332729	
	TFX5 (Discount)	111866	19732	5	15.1392 =	1493633	0.008355202	
	SMS	112521	20168	12	2.18 =	527595	0.002951302	
	Bison	FT0003	44463	12	17.48 =	9326559	0.05217164	
	NBPL	T8673F	44463	12	6.992 =	3730624	0.020868658	
	Windom		2500	12	0 =	0	0	
	Northwestern Energy		910	12	8 =	87360	0.000488681	
	NNG Zone GDD Call Option		0	3	0 =	0	0	
FDD:	Storage Reservation	118657	67083	12	1.714 =	1379763.14	0.007718228	
	Storage Cycle Volume	118657	773538	5	0.3567 =	1379605.02	0.007717343	
	Storage Reservation	118657	4935	12	3.3157 =	196355.75	0.00109839	
	Storage Cycle Volume	118657	56913	5	0.6901 =	196378.31	0.001098516	
	Storage Reservation	123780	11568	12	1.714 =	237931	0.001330957	
	Storage Cycle Volume	123780	133390	5	0.3567 =	237901	0.001330789	
	Storage Reservation	123781	3085	12	1.714 =	63452	0.000354943	
	Storage Cycle Volume	123781	35571	5	0.3567 =	63441	0.000354881	
	Total Demand Cost					33639950.22	0.188177801	
								0.188177801
	Demand Sales Volume adjusted per MN Rule 7825.2400 Subp. 3					178766837.1		
	GS-1 Demand Current Cost of Gas/Ccf						0.18818	
	GS-1 Commodity Current Cost of Gas/Ccf						0.346513378	
	Total GS-1 Current Cost of Gas/Ccf						0.534693378	

B. GS-1, SVI, LVI, SJ-1, LJ-1, SLV-Commodity

	Annual Sales (Dth)		Rate ($/Dth)	Commodity Cost	Rate Case Sales (therm)	Rate ($/therm)
CD-1 Commodity	21313763	x	3.4052	72577625.77	213137630	0.34052
Call Option Premium				1277414.466	213137630	0.005993378
GS-1, SVI-1, SJ-1, LJ-1, SLV Commodity Current Cost of Gas/therm				73855040.23	213137630	0.346513378
CURRENT FIRM TRANSPORTATION COST OF GAS (CCF)						0.75776
C. JOINT RATE DEMAND CALCULATION (SEE SCHEDULE C)			1.93628			1.93628

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

NNG

COSTS ASSIGNED IN COMMODITY:

COSTS ASSIGNED IN JOINT RATE:

	Units	Contract #	Month	Cost/Unit		Cost	$/Ccf
TF12B (Max Rate)	36719	112495	12	7.5776	=	3338903	0.192183449
TF12V (Max Rate)	25820	112495	12	9.0926	=	2817251	0.162157755
TF5 (Max Rate)	27941	112495	5	15.153	=	2116950	0.121849228
TF12B (Discount-Winter)	4437	112495	12	6.4818	=	345117	0.019864541
TF5 (Discount-Winter)	763	112495	5	7.6	=	28994	0.001668862
TFX5 (Discount)	5336	112561	5	4.56	=	121661	0.007002668
TFX12 (Max Rate)	9624	112486	12	9.6288	=	1112011	0.064006085
TFX Apr (Max Rate)	1779	112486	1	5.683	=	10110	0.00058192
TFX Oct (Max Rate)	1779	112486	1	5.683	=	10110	0.00058192
TFX5 (Max Rate)	50819	112486	5	15.153	=	3850302	0.221618993
TFX5 (Discount)	1800	112486	5	7.6	=	68400	0.003937026
TFX12 (Discount)	1141	111866	12	4.864	=	66598	0.003833305
TFX12 (Discount)	7355	111866	12	5.472	=	482959	0.027798569
TFX12 (Discount)	10601	111866	12	2.2192	=	282309	0.016249384
TFX5 (Discount)	337	111866	5	4.864	=	8196	0.000471752
TFX5 (Discount)	2174	111866	5	5.472	=	59481	0.003423659
TFX5 (Discount)	19732	111866	5	15.1392	=	1493633	0.085971812
SMS	20168	112521	12	2.18	=	527595	0.030367767
Bison	44463	FT0003	12	17.48	=	9326559	0.536826101
NBPL	44463	T8673F	12	6.992	=	3730624	0.214730463
Windom	2500		12	0	=	0	0
Northwestern Energy	910		12	8	=	87360	0.005028342
NNG Zone GDD Call Option	0		3	0	=	0	0
Storage Reservation	67083	118657	12	1.714	=	1379763	0.079417585
Storage Cycle Volume	773538	118657	5	0.3567	=	1379605	0.079408491
Storage Reservation	4935	118657	12	3.3157	=	196356	0.011302027
Storage Cycle Volume	56913	118657	5	0.6901	=	196378	0.011303294
Storage Reservation	11568	123780	12	1.714	=	237931	0.013695037
Storage Cycle Volume	133390	123780	5	0.3567	=	237901	0.01369331
Storage Reservation	3085	123781	12	1.714	=	63452	0.003652225
Storage Cycle Volume	35571	123781	5	0.3567	=	63441	0.003651592
				TOTAL		33639950	
				Annualized Entitlement		17373520	
				Demand Component		1.93628	1.936277162

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

All costs in $/MMBtu	Last Base Cost of Gas G011-MR10-978* Feb. 11	Demand Change G011-M-11- Nov .11	Last Demand Change G011-M-12- May 12^	Most Recent PGA Oct. 2012	Current Proposal Effective Nov.1,2012	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 U		86		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.641302913	-2.086197087	0.839002913	0.189152188	0.579202913
Demand Cost	1.6893	1.7414	1.8832	1.9029	1.666850714	-0.022449286	-0.216349286	-0.124047131	-0.236049286
Commodity Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Cost of Gas	9.1914	7.7406	6.4601	6.7396	7.082753627	-2.108646373	0.622653627	0.050916023	0.343153627
Avg Annual Cost	790.4604	665.6916	555.5686	579.6056	609.1168119	-181.3435881	53.54821193	0.050916023	29.51121193
Effect of proposed commodity change on average annual bills:									49.81145056
Effect of proposed demand change on average annual bills:									-20.30023862
2) Small Vol. Interruptible: Avg. Annual Use:		4371		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.641302913	-2.086197087	0.839002913	0.189152188	0.579202913
Demand Cost									
Commodity Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Cost of Gas	6.8956	5.3927	3.9704	4.2302	4.809402913	-2.086197087	0.839002913	0.136920929	0.579202913
Avg Annual Cost	30140.6676	23571.4917	17354.6184	18490.2042	21021.90013	-9118.767465	3667.281735	0.136920929	2531.695935
Effect of proposed commodity change on average annual bills:									2531.695935
Effect of proposed demand change on average annual bills:									0
3) Large Vol. Interruptible: Avg. Annual Use:		11202		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.641302913	-2.086197087	0.839002913	0.189152188	0.579202913
Demand Cost									
Commodity Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Total Cost of Gas	6.0523	4.5494	3.1271	3.3869	3.966102913	-2.086197087	0.839002913	0.1710127	0.579202913
Avg Annual Cost	67797.8646	50962.3788	35029.7742	37940.0538	44428.28484	-23369.57976	9398.510637	0.1710127	6488.231037
Effect of proposed commodity change on average annual bills:									6488.231037
Effect of proposed demand change on average annual bills:									0
4) Small Vol. Firm: Avg. Annual Use:		4800		Mcf					
		25		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.641302913	-2.086197087	0.839002913	0.189152188	0.579202913
Demand Cost	19.6334	10.8163	10.8163	10.8884	17.2015	-2.4319	6.3852	0.579800522	6.3131
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	6.8956	5.3927	3.9704	4.2302	4.809402913	-2.086197087	0.839002913	0.136920929	0.579202913
Total Demand Cost	21.4334	12.6163	12.6163	12.6884	19.0015	-2.4319	6.3852	0.497548942	6.3131
Avg Annual Cost	33634.715	26200.3675	19373.3275	20622.17	23560.17148	-10074.54352	4186.843985	0.142468105	2938.001485
Effect of proposed commodity change on average annual bills:									2780.173985
Effect of proposed demand change on average annual bills:									157.8275
5) Large Vol. Firm: Avg. Annual Use:		14841		Mcf					
		75		Mcf					
Commodity Cost	5.7275	4.2246	2.8023	3.0621	3.641302913	-2.086197087	0.839002913	0.189152188	0.579202913
Demand Cost	19.6334	10.8163	10.8163	10.8884	17.2015	-2.4319	6.3852	0.579800522	6.3131
Commodity Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Demand Margin	0.14	1.4	1.4	1.4	1.4	1.26	0	0	0
Total Cost of Gas	6.0523	4.5494	3.1271	3.3869	3.966102913	-2.086197087	0.839002913	0.1710127	0.579202913
Total Demand Cost	19.7734	12.2163	12.2163	12.2884	18.6015	-1.1719	6.3852	0.51374467	6.3131
Avg Annual Cost	91305.1893	68433.8679	47325.5136	51186.6129	60256.04584	-10043.04352	12930.53224	0.17718369	9069.432939
Effect of proposed commodity change on average annual bills:									8595.950439
Effect of proposed demand change on average annual bills:									473.4825

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 Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012 & revised demand costs per Dockets G011/M-12-558 and G011/M-12-559

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

NNG

IV. NORTHERN NATURAL GAS COMPANY'S RATES -- CURRENT COST OF GAS EFFECTIVE 41214

	Tariff-Summer(7)	Tariff-Winter(5)	Wt. Annual	GRI	Total
TF-12B	5.683	10.23	7.5776	0	7.5776
TF-12V	5.683	13.866	9.0926	0	9.0926
TF-5		15.153	15.153	0	15.153
TFX	5.683	15.153	9.6288	0	9.6288
TF-12B Discount	5.683	7.6	6.4818	0	6.4818
Gas Cost					3.4052

V. ANNUAL SALES -- RATE CASE 2008 TOTAL 213137630

VI. PNG'S CURRENT COST OF GAS EFFECTIVE: 41214

		Contract #(s)		Months			Rate/CCF
A. GS	TF12B (Max Rate)	112495	36719	12	7.5776 =	3338903	0.018677418
	TF12V (Max Rate)	112495	25820	12	9.0926 =	2817251	0.01575936
	TF5 (Max Rate)	112495	27941	5	15.153 =	2116950	0.011841961
	TF12B (Discount-Winter)	112495	4437	12	6.4818 =	345117	0.001930543
	TF5 (Discount-Winter)	112495	763	5	7.6 =	28994	0.000162189
	TFX5 (Discount)	112561	5336	5	4.56 =	121661	0.000680557
	TFX12 (Max Rate)	112486	9624	12	9.6288 =	1112011	0.006220455
	TFX Apr (Max Rate)	112486	1779	1	5.683 =	10110	5.65541E-05
	TFX Oct (Max Rate)	112486	1779	1	5.683 =	10110	5.65541E-05
	TFX5 (Max Rate)	112486	50819	5	15.153 =	3850302	0.021538122
	TFX5 (Discount)	112486	1800	5	7.6 =	68400	0.000382621
	TFX12 (Discount)	111866	1141	12	4.864 =	66598	0.000372541
	TFX12 (Discount)	111866	7355	12	5.472 =	482959	0.002701614
	TFX12 (Discount)	111866	10601	12	2.2192 =	282309	0.001579202
	TFX5 (Discount)	111866	337	5	4.864 =	8196	4.58474E-05
	TFX5 (Discount)	111866	2174	5	5.472 =	59481	0.000332729
	TFX5 (Discount)	111866	19732	5	15.1392 =	1493633	0.008355202
	SMS	112521	20168	12	2.18 =	527595	0.002951302
	Bison	FT0003	44463	12	17.48 =	9326559	0.05217164
	NBPL	T8673F	44463	12	6.992 =	3730624	0.020868658
	Windom		2500	12	0 =	0	0
	Northwestern Energy		910	12	8 =	87360	0.000488681
	NNG Zone GDD Call Option		0	3	0 =	0	0
	Total Demand Cost					29885123	0.166685071
	Rate Case 2008 volume in Ccf					178766837.1	
	GS-1 Demand Current Cost of Gas/Ccf						0.167173753
	GS-1 Commodity Current Cost of Gas/Ccf						0.364130291
	Total GS-1 Current Cost of Gas/Ccf						0.531304044

B. GS-1, SVI, LVI, SJ-1, LJ-1, SLV-Commodity

			Monthly Entitlement (Dth)	Months	Rate ($/Dth)	Contract Costs	Contract Costs	Rate ($/therm)
FDD:	Storage Reservation	118657	67083	12	1.714	=	1379763.144	0.006473578
	Storage Cycle Volume	118657	773538	5	0.3567	=	1379605.023	0.006472836
	Storage Reservation	118657	4935	12	3.3157	=	196355.754	0.000921263
	Storage Cycle Volume	118657	56913	5	0.6901	=	196378.3065	0.000921369
	Storage Reservation	123780	11568	12	1.714	=	237930.624	0.001116324
	Storage Cycle Volume	123780	133390	5	0.3567	=	237901.065	0.001116185
	Storage Reservation	123781	3085	12	1.714	=	63452.28	0.000297706
	Storage Cycle Volume	123781	35571	5	0.3567	=	63440.8785	0.000297652
	Firm Deferred Delivery Storage Contracts						3754827.075	0.017616913

	Annual Sales (Dth)		Rate ($/Dth)	Commodity Cost	Rate Case Sales (therm)	Rate ($/therm)
CD-1 Commodity	21313763	x	3.4052	72577625.77	213137630	0.34052
Call Option Premium				1277414.466	213137630	0.005993378
GS-1, SVI-1, SJ-1, LJ-1, SLV Commodity Current Cost of Gas/therm				77609867.31	213137630	0.364130291
CURRENT FIRM TRANSPORTATION COST OF GAS (CCF)						0.75776

C. JOINT RATE DEMAND CALCULATION (SEE SCHEDULE C)	1.72015	1.72015

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

NNG

COSTS ASSIGNED IN JOINT RATE:

	Units	Contract #	Month	Cost/Unit	Cost	$/Ccf	
TF12B (Max Rate)	36719	112495	12	7.5776 =	3338902.733	0.192183434	
TF12V (Max Rate)	25820	112495	12	9.0926 =	2817251.184	0.162157766	
TF5 (Max Rate)	27941	112495	5	15.153 =	2116949.865	0.12184922	
TF12B (Discount-Winter)	4437	112495	12	6.4818 =	345116.9592	0.019864539	
TF5 (Discount-Winter)	763	112495	5	7.6 =	28994	0.001668862	
TFX5 (Discount)	5336	112561	5	4.56 =	121660.8	0.007002657	
TFX12 (Max Rate)	9624	112486	12	9.6288 =	1112010.854	0.064006077	
TFX Apr (Max Rate)	1779	112486	1	5.683 =	10110.057	0.000581923	
TFX Oct (Max Rate)	1779	112486	1	5.683 =	10110.057	0.000581923	
TFX5 (Max Rate)	50819	112486	5	15.153 =	3850301.535	0.221618966	
TFX5 (Discount)	1800	112486	5	7.6 =	68400	0.003937026	
TFX12 (Discount)	1141	111866	12	4.864 =	66597.888	0.003833298	
TFX12 (Discount)	7355	111866	12	5.472 =	482958.72	0.027798553	
TFX12 (Discount)	10601	111866	12	2.2192 =	282308.8704	0.016249377	
TFX5 (Discount)	337	111866	5	4.864 =	8195.84	0.000471743	
TFX5 (Discount)	2174	111866	5	5.472 =	59480.64	0.003423638	
TFX5 (Discount)	19732	111866	5	15.1392 =	1493633.472	0.085971839	
SMS	20168	112521	12	2.18 =	527594.88	0.03036776	
Bison	44463	FT0003	12	17.48 =	9326558.88	0.536826094	
NBPL	44463	T8673F	12	6.992 =	3730623.552	0.214730438	
Windom	2500		12	0 =	0	0	
Northwestern Energy	910		12	8 =	87360	0.005028342	
NNG Zone GDD Call Option	0		3	0 =	0	0	
Storage Reservation	67083	118657	0	1.714 =	0	0	
Storage Cycle Volume	773538	118657	0	0.3567 =	0	0	
Storage Reservation	4935	118657	0	3.3157 =	0	0	
Storage Cycle Volume	56913	118657	0	0.6901 =	0	0	
Storage Reservation	11568	123780	0	1.714 =	0	0	
Storage Cycle Volume	133390	123780	0	0.3567 =	0	0	
Storage Reservation	3085	123781	0	1.714 =	0	0	
Storage Cycle Volume	35571	123781	0	0.3567 =	0	0	
				TOTAL	29885120.79		
				Annualized Entitlement	17373520		
				Demand Component	1.72015	1.720153474	1.720153474

MINNESOTA ENERGY RESOURCES
NNG Entitlement Allocation
Heating Season 2012-2013

	Total Entitlement Levels	PNG GS	NMU GS	Total
1 Design Day	225788	200785	25003	225788
2 Customer Requirements moving to Transp	0	0	0	0
3 Adjusted Design Day	225883	200785	25003	225788
		0.88926338	0.11073662	1
5 Total Design Day Capacity	232575	207097.272	25477.7279	232575
6 Less: Windom	-2500	-2500	0	-2500
7 Less: Northwestern Energy	-910	-910	0	-910
8 Less: LS Power	0	0	0	0
9 Less: Chisago Delivery to Viking	0	0	0	0
10 Less: Contract Demand Units	-95	-95	0	-95
	229070	203592.272	25477.7279	229070
Direct Assigned Entitlement				
11 TF12B (112495)	46281	41155.9985	5125.00152	46281
12 TF12V (112495)	29035	25819.7622	3215.23777	29035
13 TF5 (112495)	32278	28703.6434	3574.35663	32278
14 TFX12 (112486)	10822	9623.6083	1198.3917	10822
15 TFX April Only (112486)	2000	1778.52676	221.47324	2000
16 TFX October Only (112486)	2000	1778.52676	221.47324	2000
17 TFX5 (112486)	59171	52618.6034	6552.39655	59171
18 TFX12 (111866)	21475	19096.9311	2378.06892	21475
19 TFX5 (111866)	25013	22243.1449	2769.85508	25013
20 TFX5 (112561)	6000	5335.58028	664.419721	6000
21 Bison (FT 0003) *	50000	44463.169	5536.83101	50000
22 NBPL (T6873F) *	50000	44463.169	5536.83101	50000
23 Total Winter Allocated Entitlement	230075	204597.272	25477.7279	230075
24 Northwest Gas (Windom)	2500	2500	0	2500
25 Northwestern Energy (Ortonville)	910	910	0	910
26 NNG Zone Delivery Call Option	0	0	0	0
27 LS Power	0	0	0	0
28 Total Design Day Capacity	233485	208007.272	25477.7279	233485
29 Contract Demand				0
30 Total Design Day Capacity	233485	208007.272	25477.7279	233485
		0.89088067	0.10911933	1
Other Entitlements not included in Peak Day Deliverability: allocation based on design day % on line 19				
31 Storage				
32 Storage MSQ - 118657	4669321	4152256.17	517064.826	4669321
33 Storage MSQ - 123780	750000	666947.535	83052.4651	750000
34 Storage MSQ - 123781	200000	177852.676	22147.324	200000
35 SMS	22680	20168.4935	2511.50655	22680
36 Total Entitlement	233485	208007.272	25477.7279	233485
37 Design Day	225883	200785	25003	225788
38 Reserve Margin	7602	7222.27211	474.727891	7697
	0.03365459	0.03597018	0.01898684	0.0340895

* Bison/NBPL does not add incremental capacity but is utilized to deliver Rockies supply to NNG.
Volume is not included in Total Design Day capacity.

0 41277.6592

PEOPLES NATURAL GAS
Storage Unit Allocation
Heating Season 2012-2013

NGPL Storage Contract	
Storage Quantity -MMBtu:	1000000
Service days:	75
Per day quantity:	13333
Tariff Rate:	3.07
Annualized (X12):	36.84
Annual cost (13,333xtariff):	491187.72
Storage Quantity:	1000000

41277.6592		0	
		Reservation	Capacity
	Factors(1)		
Iowa	#REF!	#REF!	#REF!
Minnesota	#REF!	#REF!	#REF!
Nebraska	#REF!	#REF!	#REF!
Total		127205	7334080

(1) Allocation based on NNG 2000-2001 allocators on Attachment 5, Page 1 of 3, line 6
in Docket No. G011/M-00-1449

Attachment 6
NNG

MINNESOTA ENERGY RESOURCES - PNG
CALCULATION OF DESIGN DAY REQUIREMENTS
2012-2013

State	1/20 Design DDD	11/12 Customer Counts*	Regression Factors Intercept	Slope	Regression Total	Adjustment Total *	1/20 Requirements Regression Load	Nov10-Mar11 Customer Growth	Total
MERC - Peak Day									
PNG	99.24698892	158939	33793	2120	244224	43439	200785	0	200785
NMU	103	17998	2082	244	27258	2255	25003	0	25003
TOTAL		176937	35875	2364	271482	45694	225788		225788
MERC - Non-Peak Day									
PNG	55	158939	33793	2120	150410	24073	126337	0	126337
NMU	55	17998	2082	244	15525	860	14665	0	14665
TOTAL		176937	35875	2364	165935	24933	141002		141002

* Adjustment to remove interruptible and transportation volumes and add adjustment to achieve 97.5% confidence level that actual demand under design conditions will not exceed estimate.

Attachment 7

MINNESOTA ENERGY RESOURCES-PNG/NMU CAPACITY RESOURCE ANALYSIS
2013-2012 VS. 2012-2011

	2012-2013 Proposed				2011-2012				Difference			
	NNG Winter	NNG PNG	NNG NMU	NNG Total	NNG Winter	NNG PNG	NNG NMU	NNG Total	Winter	PNG	NMU	Total
TF12(base)	46281	41156	5125.002	46281	47170	42396	4774	47170	-889	-1240	351.0015	-889
TF12(variable)	29035	25819.76	3215.238	29035	28146	25298	2848	28146	889	521.7622	367.2378	889
TF12	75316	66975.76	8340.239	75316	75316	67694	7622	75316	0	-718.239	718.2393	1.82E-12
Peak Capacity	0			0	0			0	0			0
TF5	32278	28703.64	3574.357	32278	32278	29011	3267	32278	0	-307.357	307.3566	-9.1E-13
TF Total	107594	95679.4	11914.6	107594	107594	96705	10889	107594	0	-1025.6	1025.596	9.09E-13
TFX12	32297	28720.54	3576.461	32297	32297	29029	3268	32297	0	-308.461	308.4606	0
TFX5	90184	80197.33	9986.671	90184	90184	81057	9127	90184	0	-859.671	859.6714	9.09E-12
TFX Total	122481	108917.9	13563.13	122481	122481	110086	12395	122481	0	-1168.13	1168.132	9.09E-12
NNG Total	230075	204597.3	25477.73	230075	230075	206791	23284	230075	0	-2193.73	2193.728	1E-11
Bison	50000	44463.17	5536.831	50000	50000	44940	5411	50351	0	-476.831	125.831	-351
NBPL	50000	44463.17	5536.831	50000	50000	44940	5411	50351	0	-476.831	125.831	-351
Windom	2500	2500	0	2500	2500	2500	0	2500	0	0	0	0
Ortonville	910	910	0	910	910	910	0	910	0	0	0	
NNG Zone GDD Call Option	0	0	0	0	12500	11235	1265	12500	-12500	-11235	-1265	
LSP Peaking	0	0	0	0	0	0	0	0	0	0	0	0
									0			
Total	233485	208007.3	25477.73	233485	245985	221436	24549	245985	-12500	-13428.7	928.7279	1E-11

	NNG-Total			NNG-PNG			NNG-NMU	
	EF	TOTAL		EF	TOTAL		EF	TOTAL
Design Day	225788	225788	Design Day	200785	200785	Design Day	25003	25003
Capacity	233485	233485	Capacity	208007.3	208007.3	Capacity	25477.73	25477.73
Reserve Margin	7697	7697	Reserve Margin	7222.272	7222.272	Reserve Margin	474.7279	474.7279
	0.034089	0.034089		0.03597	0.03597		0.018987	0.018987

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

Attachment 8

MINNESOTA ENERGY RESOURCES - PNG-NNG
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
No Gas Daily Peaker Packages											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
No Gas Daily Peaker Packages											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		21000		14516.13		20322.58		10000		20967.74	86806.45	2640000
		630000		450000		630000		280000		650000		2640000

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		28000		41935.48		45161.29		40357.14		27419.35	182873.3	5520000
		840000		1300000		1400000		1130000		850000		5520000

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	139323.1	0.191	248300	0.2373	332266.7	0.2807	317223.8	0.2827	240300.9	0.2314	1277414

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

TRADE SECRET DATA ENDS]

PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

12/13 Winter Portfolio Plan - MERC NNG-PNG Hedging Plan
[TRADE SECRET DATA BEGINS

NOTE:

TRADE SECRET DATA ENDS]

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

PHYSICAL FIXED PR	Trigger	Trigger		Daily Volumes					Monthly
				Nov	Dec	Jan	Feb	Mar	Total
Deal #	Locked	Exercised	Receipt Point						
Total			4997056						

TRADE SECRET DATA ENDS]
PUBLIC DOCUMENT - TRADE SECRET DATA HAS BEEN EXCISED

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Attachment 10
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MINNESOTA ENERGY RESOURCES - PNG

As Proposed 08-	M-08-1331 Peoples Mn GS	M-09- Peoples Mn GS	M-10- Peoples Mn GS	M-11- Peoples Mn GS	M-12- Peoples Mn GS	Proposed Change
Design Day	225397	203360	194598	211182	200785	-10397
Customer Requirements moving to Transportation 2005-6						
Adjusted Design Day						
Design Day Percentages	0.3056	0.315	0.3592	0.3331	0.382885459	0.049785459
Total Design Day Capacity (includes non-recallable capacity)	233785	238064	233627	221436	208007.2721	-13428.72789
Less: Windom	2500	2500	2500	2500	2500	0
Less: Northwestern Energy	0	0	0	910	910	0
Less: LS Power	26323	26375	25951	0	0	0
Less: TF12B	7000	7000	0	0	0	0
Less: TF5						
Less: TFX(5)						
Total Design Day Capacity	197962	202189	205176	218026	204597.2721	-13428.72789
Factors for All Winter Capacity	1	1	1	1	1	
Allocated Entitlements in PGA						
TF12B	29906	35221	34875	42396	41155.99848	-1240.001519
TF12V	32690	24583	32290	25298	25819.76223	521.7622327
TF5	26827	29619	28785	29011	28703.64337	-307.3566266
TFX12	29246	31199	28802	29029	28720.53938	-308.4606224
TFX(5)	79293	81567	80424	81057	80197.32864	-859.6713554
TFX(5) (12-V)	0	0	0	0	0	0
TFX (October Only)	0	0	1784	1798	1778.52676	-19.47324038
TFX (April Only)	0	0	1784	1798	1778.52676	-19.47324038
NNG Zone Delivery Call Option	0	0	0	11235	0	-11235
LS Power	26323	26375	25951	0	0	0
Bison *	0	0	44589	44940	44463.16899	-476.8310096
NBPL *	0	0	44589	44940	44463.16899	-476.8310096
Peak Capacity	224285	228564	231127	218026	204597.2721	-13428.72789
Total Allocated Entitlements in PGA	224285	228564	323873	311502	297080.6636	-14421.33639

* Bison/NBPL does not add incremental capacity but is utilized to deliver Rockies supply to NNG. Volume is not included in Peak Capacity.

Direct Assigned Entitlements in PGA						
Windom	2500	2500	2500	2500	2500	0
Northwestern Energy	0	0	0	910	910	0
LS Power	26323	0	0	0	0	0
TFX (October Only)	2000	2000	0	0	0	0
TFX (April Only)	2000	2000	0	0	0	0
TFX(5)	0	0	0	0	0	0
TFX(7)	0	0	0	0	0	0
TFX(5)	0	0	0	0	0	0
Total Direct Assignments	32823	6500	2500	3410	3410	0
Total Capacity before Peak Shaving	257108	235064	233627	221436	208007.2721	-13428.72789
LP Peak Shaving	0	0	0	0		0
Total Design Day Capacity	253108	231064	233627	221436	208007.2721	-13428.72789
Total Transp. (with TFX Offpeak less LSP)	226785	204689	207676	221436	208007.2721	-13428.72789
Total Annual Transportation	94342	93503	98467	100133	99106.30009	-1026.699909
Total Seasonal Transportation	158766	137561	135160	110068	108900.972	-1167.027982
Total Percent Seasonal	0.627265831	0.595337223	0.578529023	0.497064615	0.523544061	0.026479447
LS Power as % of Total DD Capacity	0.103999083	0.114145864	0.111078771	0	0	0
Reserve Margin	0.122943074	0.136231314	0.200562185	0.048555275	0.035970178	-0.012585097
Direct Assigned Demand Not in PGA						
TF-12-B Contract Demand	0	0	0	0	0	0
Total Design Day Capacity w/ contract demand	233785	238064	233627	221436	208007.2721	-12191
Factors	0.3056	0.315	0.3592	0.3331	0.382885459	-0.0261
Other Entitlements not included in Peak Day Deliverability						
Field TF (TFF) (NMU direct assigned)	0	0	0	0	0	0
TFX Offpeak Old Oct. (60,000)	0	0	0	0	0	0
TFX Offpeak Old Oct. (35,000)	0	0	0	0	0	0
TFX Offpeak New Oct. (14,600)	0	0	0	0	0	0
TFX Offpeak New Apr. (39,600)	0	0	0	0	0	0
TFX Oct	2000	2000	1784	1798	1778.52676	-19.47324038
TFX Apr	1798	2000	1784	1798	1778.52676	-19.47324038
TFX Apr-Oct	0	0	0	0	0	0
TFX May-Sept	0	0	0	0	0	0
FDD Storage reservation	76476	76628	78409	84483	86671	2188
FDD Storage capacity	4409251	4417893	4520719	4870885	4997056.385	126171.3847
Nexen PSO	0	0	0	0	0	0
Tenaska PSO New	0	0	0	0	0	0
NGPL	0	0	0	0	0	0
SMS	20537	20577	20226	20385	20168.49345	-216.506546
SBA	0	0	0	0	0	0

MINNESOTA ENERGY RESOURCES - PNG
Rate Impacts
NNG

1) General Service Residential: Avg. Annual Use: 86 Mcf

Recovery	Base Cost of Gas Change G011/MR10-97	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Change	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.465133784	-0.395000649	0.236532057	0.131620059	0.403033784
Demand Rate	1.6893	1.7414	1.8832	1.9029	1.8818	0.113952525	-0.000743415	-0.011088339	-0.0211
Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Recovery	9.1914	7.7406	6.4601	6.7396	7.121533784	-0.225195968	0.102387546	0.056670097	0.381933784
Avg. Annual Bill*	790.4604	665.6916	555.5686	579.6056	612.4519054	-0.225195968	0.102387546	0.056670097	32.84630542
Effect of proposed commodity change on average annual bills:									34.66090542
Effect of proposed demand change on average annual bills:									-1.8146

2) Small Volume Interruptible: Avg. Annual Use: 4371 Mcf

Recovery	Base Cost of Gas Change G011/MR10-97	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Change	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.465133784	-0.395000649	0.236532057	0.131620059	0.403033784
Demand Rate									0
Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Recovery	6.8956	5.3927	3.9704	4.2302	4.633233784	-0.328088378	0.16694383	0.09527535	0.403033784
Avg. Annual Bill*	30140.6676	23571.4917	17354.6184	18490.2042	20251.86487	-0.328088378	0.16694383	0.09527535	1761.66067
Effect of proposed commodity change on average annual bills:									1761.66067
Effect of proposed demand change on average annual bills:									0

3) Large Volume Interruptible: Avg. Annual Use: 11202 Mcf

Recovery	Base Cost of Gas Change G011/MR10-97	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Change	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.465133784	-0.395000649	0.236532057	0.131620059	0.403033784
Demand Rate									0
Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Total Recovery	6.0523	4.5494	3.1271	3.3869	3.789933784	-0.373802722	0.211964371	0.11899784	0.403033784
Avg. Annual Bill*	67797.8646	50962.3788	35029.7742	37940.0538	42454.83825	-0.373802722	0.211964371	0.11899784	4514.784448
Effect of proposed commodity change on average annual bills:									4514.784448
Effect of proposed demand change on average annual bills:									0

4) Small Volume Firm: Avg. Annual Use: 4800 Mcf
Avg. Annual CD Volumes: 25 Mcf

Recovery	Base Cost of Gas Change G011/MR10-97	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Change	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.465133784	-0.395000649	0.236532057	0.131620059	0.403033784
Demand Rate	19.6334	10.8163	10.8163	10.8884	19.3628	-0.013782636	0.790150051	0.778296168	8.4744
Comm. Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
SV Dem. Margin	1.8	1.8	1.8	1.8	1.8	0	0	0	0
Total Commodity Cost	6.8956	5.3927	3.9704	4.2302	4.633233784	-0.328088378	0.16694383	0.09527535	0.403033784
Total Demand Cost	21.4334	12.6163	12.6163	12.6884	21.1628	-0.012625155	0.677417309	0.667885628	8.4744
Avg. Annual Bill*	33634.715	26200.3675	19373.3275	20622.17	22768.59216	-0.32306273	0.175254595	0.104083235	2146.422163
Effect of proposed commodity change on average annual bills:									1934.562163
Effect of proposed demand change on average annual bills:									211.86

5) Large Volume Firm: Avg. Annual Use: 14841 Mcf
Avg. Annual CD Units: 75 Mcf

Recovery	Base Cost of G Change G011/MR10-97	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Chang	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.465133784	-0.395000649	0.236532057	0.131620059	0.403033784
Demand Rate	19.6334	10.8163	10.8163	10.8884	19.3628	-0.013782636	0.790150051	0.778296168	8.4744
Comm. Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
LV Dem. Margin	0.14	1.4	1.4	1.4	1.4	9	0	0	0
Total Commodity Cost	6.0523	4.5494	3.1271	3.3869	3.789933784	-0.373802722	0.211964371	0.11899784	0.403033784
Total Demand Cost	19.7734	12.2163	12.2163	12.2884	20.7628	0.050036918	0.699598078	0.689625989	8.4744
Avg. Annual Bill*	91305.1893	68433.8679	47325.5136	51186.6129	57803.61729	-0.366918598	0.221404965	0.129272167	6617.004387
Effect of proposed commodity change on average annual bills:									5981.424387
Effect of proposed demand change on average annual bills:									635.58

* Average Annual Bill amount does not include customer charges.
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012 & revised demand costs per Dockets G011/M-12-558 and G011/M-12-559

Customer Class	Commodity Change ($/Mcf)	Commodity Change (Percent)		Commodity Change (Percent)	Demand Change ($/Mcf)	Demand Change (Percent)	Total Change ($/Mcf)			Total Change (Percent)
All Firm	0.403033784	0.131620059		0.403033784	-0.0211	-0.011088339	0.381933784			0.056670097
Sm Vol Inter. Service	0.403033784	0.131620059		0.403033784	0	0	0.403033784			0.09527535
Lrg Vol Inter. Service	0.403033784	0.131620059		0.403033784	0	0	0.403033784			0.11899784
Sm Vol Joint Service	0.403033784	0.131620059		0.403033784	8.4744	0.778296168	0.403033784	***		0.09527535
Lrg Vol Joint Service	0.403033784	0.131620059		0.403033784	8.4744	0.778296168	0.403033784	***		0.11899784

*** Joint total change includes only commodity change since not all joint customers purchase CD units.

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

1) General Service Residential: Avg. Annual Use: 86 Mcf

Recovery	Base Cost of Gas Change G011/MR10-978	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Changes**	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.641302913	-0.36424218	0.299397964	0.189152188	0.579202913
Demand Rate	1.6893	1.7414	1.8832	1.9029	1.666850714	-0.013289106	-0.114883861	-0.124047131	-0.236049286
Margin	1.7746	1.7746	1.7746	1.7746	1.7746	0	0	0	0
Total Recovery	9.1914	7.7406	6.4601	6.7396	7.082753627	-0.229415146	0.096384518	0.050916023	0.343153627
Avg. Annual Bill*	790.4604	665.6916	555.5686	579.6056	609.1168119	-0.229415146	0.096384518	0.050916023	29.51121193
Effect of proposed commodity change on average annual bills:									49.81145056
Effect of proposed demand change on average annual bills:									-20.30023862

2) Small Volume Interruptible: Avg. Annual Use: 4371 Mcf

Recovery	Base Cost of Gas Change G011/MR10-978	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Changes	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.641302913	-0.36424218	0.299397964	0.189152188	0.579202913
Demand Rate									
Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
Total Recovery	6.8956	5.3927	3.9704	4.2302	4.809402913	-0.302540328	0.211314455	0.136920929	0.579202913
Avg. Annual Bill*	30140.6676	23571.4917	17354.6184	18490.2042	21021.90013	-0.302540328	0.211314455	0.136920929	2531.695935
Effect of proposed commodity change on average annual bills:									2531.695935
Effect of proposed demand change on average annual bills:									0

3) Large Volume Interruptible: Avg. Annual Use: 11202 Mcf

Recovery	Base Cost of Gas Change G011/MR10-978	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Changes**	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.641302913	-0.36424218	0.299397964	0.189152188	0.579202913
Demand Rate									
Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
Total Recovery	6.0523	4.5494	3.1271	3.3869	3.966102913	-0.344694924	0.268300634	0.1710127	0.579202913
Avg. Annual Bill*	67797.8646	50962.3788	35029.7742	37940.0538	44428.28484	-0.344694924	0.268300634	0.1710127	6488.231037
Effect of proposed commodity change on average annual bills:									6488.231037
Effect of proposed demand change on average annual bills:									0

4) Small Volume Firm: Avg. Annual Use: 4800 Mcf
Avg. Annual CD Volumes: 25 Mcf

Recovery	Base Cost of Gas Change G011/MR10-978	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Changes**	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.641302913	-0.36424218	0.299397964	0.189152188	0.579202913
Demand Rate	19.6334	10.8163	10.8163	10.8884	17.2015	-0.123865454	0.590331259	0.579800522	6.3131
Comm. Margin	1.1681	1.1681	1.1681	1.1681	1.1681	0	0	0	0
SV Dem. Margin	1.8	1.8	1.8	1.8	1.8	0	0	0	0
Total Commodity Cost	6.8956	5.3927	3.9704	4.2302	4.809402913	-0.302540328	0.211314455	0.136920929	0.579202913
Total Demand Cost	21.4334	12.6163	12.6163	12.6884	19.0015	-0.1134631	0.506107179	0.497548942	6.3131
Avg. Annual Bill*	33634.715	26200.3675	19373.3275	20622.17	23560.17148	-0.299528137	0.216113829	0.142468105	2938.001485
Effect of proposed commodity change on average annual bills:									2780.173985
Effect of proposed demand change on average annual bills:									157.8275

5) Large Volume Firm: Avg. Annual Use: 14841 Mcf
Avg. Annual CD Units: 75 Mcf

Recovery	Base Cost of Gas Change G011/MR10-978	Demand Change Nov .11	Last Demand Change May 12^	Most Recent PGA Oct. 2012	Nov1/12 PGA w/ Proposed Demand Changes**	% Change From Last Rate Case	% Change From Last Demand Filing	% Change From Last PGA	$ Change From Last PGA
Commodity Rate	5.7275	4.2246	2.8023	3.0621	3.641302913	-0.36424218	0.299397964	0.189152188	0.579202913
Demand Rate	19.6334	10.8163	10.8163	10.8884	17.2015	-0.123865454	0.590331259	0.579800522	6.3131
Comm. Margin	0.3248	0.3248	0.3248	0.3248	0.3248	0	0	0	0
LV Dem. Margin	0.14	1.4	1.4	1.4	1.4	9	0	0	0
Total Commodity Cost	6.0523	4.5494	3.1271	3.3869	3.966102913	-0.344694924	0.268300634	0.1710127	0.579202913
Total Demand Cost	19.7734	12.2163	12.2163	12.2884	18.6015	-0.059266489	0.522678716	0.51374467	6.3131
Avg. Annual Bill*	91305.1893	68433.8679	47325.5136	51186.6129	60256.04584	-0.340058913	0.273225397	0.17718369	9069.432939
Effect of proposed commodity change on average annual bills:									8595.950439
Effect of proposed demand change on average annual bills:									473.4825

* Average Annual Bill amount does not include customer charges.
^$/Mcf Demand Cost rate reflects adjustment to Annual Demand Volumes made on March 1, 2012 &
revised demand costs per Dockets G011/M-12-558 and G011/M-12-559

Customer Class	Commodity Change ($/Mcf)	Commodity Change (Percent)		Commodity Change (Percent)	Demand Change ($/Mcf)	Demand Change (Percent)	Total Change ($/Mcf)		Total Change (Percent)
All Firm	0.579202913	0.189152188		0.579202913	-0.236049286	-0.124047131	0.343153627		0.050916023
Sm Vol Inter. Service	0.579202913	0.189152188		0.579202913	0	0	0.579202913		0.136920929
Lrg Vol Inter. Service	0.579202913	0.189152188		0.579202913	0	0	0.579202913		0.1710127
Sm Vol Joint Service	0.579202913	0.189152188		0.579202913	6.3131	0.579800522	0.579202913	***	0.136920929
Lrg Vol Joint Service	0.579202913	0.189152188		0.579202913	6.3131	0.579800522	0.579202913	***	0.1710127

*** Joint total change includes only commodity change since not all joint customers purchase CD units.

Attachment 12

MINNESOTA ENERGY RESOURCES - PNG
Change in Costs due to November 1, 2012 Change in Entitlement Levels and Related Demand Costs2
NNG

		41183	41214	Entitlement		41183	41183	Entitlement	Entitlement
	Contract	PGA	Entitlement	Change	Months	Rate/MCF	Total Cost	Total Cost	Change
TF-12-B (Max Rate)	112495	37959	36719	-1240	12	7.5776	3451657	3338903	-112754
TF-12-B (Discount)	112495	4437	4437	0	12	6.4818	345117	345117	0
TF-12-V (Max Rate)	112495	25298	25820	522	12	9.0926	2760295	2817251	56956
TF-5 (Max Rate)	112495	28248	27941	-307	5	15.153	2140210	2116950	-23260
TF-5 (Discount)	112495	763	763	0	5	7.6	28994	28994	0
TFX-12 (Max Rate)	112486	9727	9624	-103	12	9.6288	1123912	1112011	-11901
TFX-12 (Discount)	111866	1153	1141	-12	12	4.864	67298	66598	-700
TFX-12 (Discount)	111866	7434	7355	-79	12	5.472	488146	482959	-5187
TFX-12 (Discount)	111866	10715	10601	-114	12	2.2192	285345	282309	-3036
TFX-5 (Max Rate)	112486	51383	50819	-564	5	15.153	3893033	3850302	-42731
TFX-5 (Discount)	112486	1800	1800	0	5	7.6	68400	68400	0
TFX-5 (Discount)	111866	341	337	-4	5	4.864	8293	8196	-97
TFX-5 (Discount)	111866	2198	2174	-24	5	5.472	60137	59481	-656
TFX-5 (Discount)	111866	19943	19732	-211	5	15.1392	1509605	1493633	-15972
TFX-5 (Discount)	112561	5393	5336	-57	5	4.56	122960	121661	-1299
TFX Oct (Max Rate)	112486	1798	1779	-19	1	5.683	10218	10110	-108
TFX Apr (Max Rate)	112486	1798	1779	-19	1	5.683	10218	10110	-108
SMS Charge		20385	20168	-217	12	2.18	533272	527595	-5677
WINDOM		2500	2500	0	12	0	0	0	0
Northwestern Energy		910	910	0	12	8	87360	87360	0
NNG Zone GDD Call Option		11235	0	-11235	3	0.91	30671.55	0	-30671.55
Bison		44940	44463	-477	12	17.48	9426614	9326559	-100055
NBPL		44940	44463	-477	12	6.992	3770646	3730624	-40022
FDD: Storage Reservation		74039	81736	7697	12	1.714	1522834.152	1681146	158311.848
FDD: Storage Reservation		4988	4935	-53	12	3.3157	198464.5392	196356	-2108.5392
FDD: Storage Cycle Volume		853738	942499	88761	5	0.3567	1522641.723	1680947	158305.277
FDD: Storage Cycle Volume		57523	56913	-610	5	0.6901	198483.1115	196378	-2105.1115
Total Demand Cost							33664825.08	33639950	-24875.0757

Costs Assigned In Commodity:	41183	41214	Entitlement		41183	41183	Entitlement	Entitlement
Upstream	PGA	Entitlement	Change	Months	Rate/MCF	Total Cost	Total Cost	Change
Great Lakes	0	0	0	12	3.458	0	0	0
			0				0	0
Surcharges:			0				0	0
			0				0	0
Storage			0				0	0
FDD Withdrawal	4870885	4819203.709	-51681.29128	1	0	0	0	0
FDD Injection	4870885	4819203.709	-51681.29128	1	0	0	0	0
							0	0
							0	0
Producer Demand Payments/Option Premium						2672469	1277414.466	-1395054.534
Total Commodity Costs						2672469	1277414.466	-1395054.534

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through- Put *	Estimated Through- Put **
40725	0	0	0	0	0	31281	28416.73
40726	0	0	0	0	0	27629	28416.73
40727	0	0	0	0	0	27603	28416.73
40728	0	0	0	0	0	28334	28416.73
40729	0	0	0	0	0	34794	28416.73
40730	0	0	0	0	0	34312	28416.73
40731	0	0	0	0	0	34197	28416.73
40732	0	0	0	0	0	31295	28416.73
40733	0	0	0	0	0	28993	28416.73
40734	0	0	0	0	0	32234	28416.73
40735	0	0	0	0	0	41246	28416.73
40736	6.36	0	2.12	0	1.311833	33683	31272.2
40737	6.36	0	0	0	0.223713	33187	28903.69
40738	7.42	0	0	0	0.260999	34103	28984.85
40739	0	0	0	0	0	31321	28416.73
40740	0	0	0	0	0	29198	28416.73
40741	0	0	0	0	0	31521	28416.73
40742	0	0	0	0	0	49549	28416.73
40743	0	0	0	0	0	46506	28416.73
40744	0	0	0	0	0	47541	28416.73
40745	0	0	0	0	0	50971	28416.73
40746	0	0	0	0	0	37014	28416.73
40747	11.99	0	0	0	0.421748	31677	29334.75
40748	0	0	0	0	0	30892	28416.73
40749	0	0	0	0	0	43759	28416.73
40750	0	0	0	0	0	43485	28416.73
40751	0	0	0	0	0	39208	28416.73
40752	0	0	0	0	0	41684	28416.73
40753	0	0	0	0	0	37970	28416.73
40754	0	0	0	0	0	34090	28416.73
40755	0	0	0	0	0	33152	28416.73
40756	0	0	0	0	0	42442	28416.73
40757	0	0	0	0	0	43981	28416.73
40758	0	0	0	0	0	42417	28416.73
40759	0	0	0	0	0	40148	28416.73
40760	0	0	0	0	0	38950	28416.73
40761	0	0	0	0	0	33515	28416.73
40762	1.02	0	0	0	0.035879	32945	28494.83
40763	0	0	0	0	0	42420	28416.73

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40764	6.54	0	2.24	3.3	1.82911	38137	32398.15
40765	0	0	0	1.06	0.144338	36780	28730.91
40766	0	0	0	0	0	36604	28416.73
40767	0	0	0	0	0	33978	28416.73
40768	0	0	0	1.07	0.1457	31114	28733.87
40769	0	0	0	0	0	32320	28416.73
40770	0	0	0	0	0	39264	28416.73
40771	0	0	0	0	0	39382	28416.73
40772	0	0	0	0	0	39976	28416.73
40773	0	0	0	0	0	37741	28416.73
40774	4.32	0	0	0	0.151956	37169	28747.49
40775	2.14	0	1.07	3.12	1.049311	31817	30700.77
40776	4.12	0	0	0	0.144921	33048	28732.18
40777	0	0	0	0	0	36168	28416.73
40778	0	0	0	0	0	36590	28416.73
40779	2.2	0	0	0	0.077385	37117	28585.17
40780	0	0	0	0	0	39164	28416.73
40781	0	0	0	0	0	33638	28416.73
40782	2.08	0	0	0	0.073164	29385	28575.99
40783	5.05	0	1.04	4.16	1.277887	32615	31198.31
40784	0	0	0	0	0	37661	28416.73
40785	0	0	0	0	0	37409	28416.73
40786	3.18	0	0	0	0.111857	38863	28660.21
40787	0	0	0	0	0	57085	28416.73
40788	3.12	0	0	0	0.109746	51738	28655.61
40789	1.09	0	3.27	4.52	2.332193	43821	33493.22
40790	16.96	5.4	11.99	11.88	10.0714	43903	50339.15
40791	13.13	4.2	10.5	8.56	8.341368	47456	46573.39
40792	7.21	2.12	8.32	5.4	5.927909	52358	41320.01
40793	0	0	2.12	4.12	1.649132	57708	32006.4
40794	0	0	0	0	0	53783	28416.73
40795	0	0	0	0	0	50679	28416.73
40796	0	0	0	0	0	47191	28416.73
40797	0	0	0	0	0	46514	28416.73
40798	2.24	0	0	0	0.078792	51456	28588.24
40799	16.5	8.8	9.99	9.9	9.831416	57668	49816.77
40800	28.34	18.53	23.1	24.84	22.0799	45718	76478.06
40801	22.44	14.56	16.8	18.02	16.45803	44718	64240.93
40802	17.68	12.1	15.26	17.76	14.6889	42466	60390.06

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40803	16.96	6.72	9.04	11.2	8.880997	34593	47748
40804	14.7	9.36	10.8	12.72	10.74446	37458	51804.19
40805	6.3	1.06	4.24	0	2.732158	38319	34363.82
40806	8.48	2.34	2.36	8.54	3.410481	39634	35840.32
40807	20.9	13.56	14.69	17.1	14.88021	44670	60806.48
40808	21.63	13.52	15.75	20.8	15.94115	47741	63115.83
40809	16.32	15.45	14.56	15.45	15.0238	45319	61119.03
40810	19.19	11.44	11.55	16.8	12.49893	40131	55623.14
40811	13.65	5.45	9.81	11.77	8.836848	37186	47651.9
40812	5.4	2.24	10.08	3.33	6.523566	42630	42616.58
40813	6.18	3.09	5.35	4.24	4.515261	40022	38245.1
40814	0	0	0	0	0	37840	28416.73
40815	14.82	9.52	10.8	11.9	10.68749	39917	51680.18
40816	24.96	14.04	18.36	16.2	16.93553	44362	65280.31
40817	18.9	11.77	16.96	8.88	14.29111	42680	59524.19
40818	7.21	0	4.28	1.12	2.60289	37773	34082.44
40819	10.3	0	1.07	0	0.911495	39484	30400.78
40820	3.12	0	0	0	0.109746	38745	28655.61
40821	10.7	0	0	0	0.376373	37284	29235.98
40822	4.24	0	0	0	0.149142	34942	28741.37
40823	0	0	0	0	0	32548	28416.73
40824	0	0	0	0	0	29458	28416.73
40825	9.63	0	0	0	0.338735	31698	29154.06
40826	7.28	0	2.18	6.78	2.298209	37037	33419.24
40827	2.1	0	0	2.22	0.37616	37040	29235.52
40828	6.18	4.2	3.27	11.88	4.838081	40505	38947.78
40829	18.53	12.21	14.69	12.65	13.76511	49864	58379.26
40830	22.23	17.4	19.04	19.72	18.72756	53802	69181.01
40831	20.34	13.44	15.68	16.2	15.20824	44242	61520.51
40832	22.42	17.55	19.72	23.94	19.7052	52017	71309.04
40833	21.66	15.82	20.52	23	19.41545	62063	70678.34
40834	27.25	24.86	25.99	32.48	26.56166	73843	86233.49
40835	28.89	25.53	26.45	32.48	27.06676	76478	87332.94
40836	29.96	22.68	27.12	27.25	25.83725	72355	84656.68
40837	24.38	18.02	19.62	17.28	18.96417	55980	69696.04
40838	19.76	12.48	19.08	13.2	16.22166	48742	63726.41
40839	26.5	17.85	14.43	14.43	15.93321	52862	63098.54
40840	23.1	13.91	10.8	10.9	12.22714	53474	55031.55
40841	29.68	17.76	18.4	21.66	19.03883	64431	69858.55

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40842	25.5	20.8	25.68	30.8	24.83173	69775	82467.96
40843	27.81	21.84	26.75	26.16	25.15837	71534	83178.95
40844	28.62	23.32	26.4	28	25.72455	70526	84411.35
40845	26.78	24.84	23.98	26.88	24.74462	58423	82278.33
40846	22.88	24.38	27.12	31.92	26.76029	65152	86665.85
40847	23.32	24.38	24.42	23.52	24.24614	67517	81193.3
40848	23.32	15.9	13.32	22.23	15.69872	60362	62588.14
40849	32.86	26.16	29.97	36.16	29.71289	77149	93092.77
40850	26.25	24.24	29.4	29.96	27.73802	79851	88794.09
40851	24.61	24.64	28.75	28.8	27.31492	71174	87873.11
40852	21.8	18.88	21.96	21.08	20.86313	58420	73829.51
40853	25.3	22.8	24.57	32.2	25.07639	66280	83000.52
40854	34.24	24.38	19.44	25.92	22.401	78765	77176.99
40855	31.31	24.38	26.88	33	27.08069	85690	87363.27
40856	32.19	26.22	28.56	35.4	28.88105	91535	91282.12
40857	37.45	32.7	36.96	35.03	35.37086	99661	105408.5
40858	29.68	25.44	28.25	21.47	26.49083	79632	86079.31
40859	29.68	14.3	17.4	19.55	17.14699	57662	65740.59
40860	30.24	23.76	24.42	28	24.90404	71948	82625.36
40861	29.16	23.76	24.42	25.99	24.59235	75610	81946.91
40862	36.63	31.05	31.32	38.28	32.36935	87397	98875.1
40863	45.51	42.94	43.32	46.74	43.74288	112791	123631.9
40864	46.01	39.24	42.55	36.8	40.84479	104397	117323.6
40865	37.1	25.92	28	30.78	28.04262	80876	89457.11
40866	50.6	45.2	39.55	54.72	43.78632	106861	123726.4
40867	51.5	44.72	42	47.7	43.96819	114296	124122.3
40868	42.84	36.04	34.24	35.64	35.30085	98313	105256.1
40869	35.36	29.87	28.62	31.32	29.61897	87267	92888.35
40870	27.5	22.68	25.52	28.75	25.13375	73847	83125.37
40871	28.62	16.2	18.15	15.34	17.52063	52578	66553.89
40872	28.34	18.36	17.92	24.15	19.27362	55795	70369.63
40873	36.16	30.16	32.4	40.64	32.9478	81422	100134.2
40874	39.96	37.8	37.74	45.1	38.83921	102126	112958
40875	40.33	35.97	39.55	37.29	38.14059	118181	111437.4
40876	38.48	34.32	40.7	38.5	38.31013	127366	111806.4
40877	40.28	31.8	31.36	32.77	32.00453	111544	98080.99
40878	54.06	44.94	48.4	53.11	48.14918	137828	133223.1
40879	48.16	43.29	46	46.8	45.3302	120762	127087
40880	41.04	38.16	37.4	42.18	38.41862	109670	112042.5

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40881	50.76	44.94	47.73	57.24	48.25159	122525	133446
40882	61.8	50.76	51.06	66.49	53.44423	150370	144748.8
40883	57.2	54	58.83	66.12	58.24198	159496	155192.1
40884	47.3	45.36	49.5	45.78	47.61034	137575	132050.2
40885	60.5	55	59.4	62.72	58.50304	149104	155760.3
40886	60.99	56.71	66	60.48	62.14212	157779	163681.5
40887	48.6	44.94	57.12	50.74	52.11007	123209	141844.7
40888	32.4	31.9	37.76	39.27	35.92887	98430	106623.1
40889	33.99	27.54	30.74	34.65	30.37748	96227	94539.39
40890	33.6	29.96	31.32	33.48	31.26539	94220	96472.1
40891	36.75	32.7	33.9	35.96	33.90228	103574	102211.8
40892	51.52	44.8	47.56	49.5	47.09297	136228	130924
40893	55.08	43.86	42.23	42.8	43.27371	122637	122610.6
40894	45.58	38.52	45.1	37.74	42.0394	109559	119923.9
40895	39.2	29.7	32.48	32.48	31.83958	88064	97721.95
40896	46.44	40.66	42.51	46.87	42.65845	128633	121271.4
40897	43.6	41.34	43.87	44.46	43.1429	133518	122325.9
40898	46.87	40.66	36.96	44.85	39.5499	120528	114505
40899	49.82	43.87	49.5	46.74	47.35977	133442	131504.7
40900	45.15	39.59	46.33	41.81	43.54727	122424	123206.1
40901	43.6	34.41	37.12	33.93	36.05884	89760	106906
40902	37.06	33.79	37.62	33.64	35.8504	93985	106452.3
40903	37.12	26.68	31.98	32.4	30.54641	88866	94907.09
40904	54.06	40.33	41.07	42.9	41.54272	114124	118842.8
40905	46.8	35.64	36.96	30.78	36.04829	99415	106883
40906	44.72	34.98	36.3	30.74	35.42276	102547	105521.5
40907	43.86	36.04	37.45	33.9	36.74737	101272	108404.7
40908	39.96	33.9	37.76	42.7	37.29264	95916	109591.6
40909	54.28	52.03	54.61	56.25	54.00799	135676	145975.9
40910	64.2	54.5	57	59.36	56.78613	150671	152023.1
40911	58.3	47.52	50.6	45.24	49.16958	133575	135444.1
40912	38.48	33.99	36.3	38.85	35.99535	109661	106767.8
40913	31.36	28.62	24.64	23.31	25.95054	88489	84903.26
40914	38.76	33.06	34.2	34.72	34.07166	92788	102580.5
40915	43.05	37.44	39.96	38.52	39.07782	104110	113477.4
40916	39.24	34.56	36.96	39.9	36.68359	101444	108265.9
40917	32.1	28.62	31.08	31.36	30.37814	98674	94540.82
40918	29.12	23.92	25.53	25.76	25.17981	89335	83225.63
40919	50.6	48.38	47.58	60.48	49.69511	149062	136588.1

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through- Put *	Estimated Through- Put **
40920	69	59.8	63.07	73.2	63.62663	176257	166912.8
40921	60.18	57.2	62.06	58.85	60.02396	161997	159070.9
40922	53.04	51.94	55.08	42.56	52.31309	132854	142286.6
40923	41.73	38.5	42.92	38.28	40.85229	106396	117339.9
40924	59.89	47.88	47.15	62.22	49.88042	132257	136991.4
40925	68.48	61.6	66.67	67.85	65.2953	172765	170545
40926	71.68	65.55	70.18	66.64	68.29046	180187	177064.6
40927	79.18	72.45	72.76	72.76	72.88805	193052	187072.2
40928	69.01	60.18	72.45	69.96	68.12007	181803	176693.7
40929	59.4	60.95	69.6	64.26	65.78593	152162	171613
40930	46.8	46.2	42.94	44.07	44.25783	127018	124752.7
40931	51.52	50.85	50.31	51.3	50.65768	139933	138683.3
40932	46.2	47.25	45.15	44.52	45.76347	134017	128030.1
40933	40.33	39.96	42.55	42.55	41.65504	121611	119087.3
40934	43.2	37.45	42.18	42.18	40.72407	112502	117060.8
40935	48.6	42.56	46.02	48.38	45.34085	125539	127110.2
40936	59.36	49.5	50.16	47.88	49.96499	121664	137175.5
40937	58.8	49.68	50.85	42.94	49.68354	128012	136562.9
40938	45.15	31.5	33.6	28.5	32.64949	97924	99484.87
40939	34.56	30.52	31.92	30.8	31.4188	96554	96806.04
40940	35.36	35.36	36.75	29.96	35.33813	103699	105337.2
40941	32.64	33.6	27.56	29.96	29.97047	100160	93653.44
40942	40.56	38.52	40.7	42.92	40.30981	111040	116159.1
40943	37.06	36.04	34.1	37.4	35.26533	99415	105178.8
40944	38.88	39.59	40.7	39.96	40.18513	112540	115887.7
40945	47.96	32.19	33.3	36.48	33.89859	101646	102203.8
40946	53.5	46.64	49.05	56.61	49.47586	138538	136110.8
40947	47.96	43.87	45.78	50.6	45.91061	131167	128350.4
40948	55.37	47.88	48.38	56.4	49.56024	123137	136294.5
40949	70.68	64.4	64.26	73.78	65.8263	168861	171700.8
40950	66.67	58.83	61.36	60.48	60.62901	155014	160387.9
40951	50.29	46.64	46.2	51.98	47.26969	129540	131308.7
40952	44.72	40.95	41.42	45.36	41.92434	124543	119673.5
40953	36.05	39.22	43.29	43.6	41.7939	118267	119389.5
40954	36.04	36.4	36.75	39.96	37.05174	106336	109067.2
40955	36.75	33.17	36.63	40.68	36.09444	109694	106983.5
40956	47.7	38.15	39.55	44.4	40.05554	104538	115605.6
40957	44.29	38.11	40.56	39.96	39.83679	104876	115129.5
40958	36.75	32.7	36.63	38.28	35.6194	100433	105949.5

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40959	33.17	30.78	36	38.94	34.65444	107085	103849
40960	39.55	41.44	40.25	38.08	40.30521	112943	116149.1
40961	41.6	35.7	34.98	32.86	35.15127	105293	104930.5
40962	46.8	34.24	35.52	46.4	36.99458	107462	108942.8
40963	53.76	52.44	55.2	58.65	54.74864	137508	147588.1
40964	46.2	48.84	48.59	51.04	48.91839	116478	134897.4
40965	50.4	39.1	39.68	54.18	41.84858	119775	119508.5
40966	45.32	40.66	41.8	49.95	42.67404	120275	121305.3
40967	43.32	37.95	37.76	36.63	37.86163	116980	110830.1
40968	40.25	35.64	36.16	38	36.39041	109970	107627.7
40969	34.34	33.28	32.24	37	33.29004	102644	100879.2
40970	37.1	42.94	42.12	47.6	42.94824	112710	121902.2
40971	48.15	52.8	53.58	51.06	52.79985	130858	143346.2
40972	56.1	46.2	46.01	51.84	47.2187	123805	131197.7
40973	47.7	41.44	44.03	42.12	43.08214	116220	122193.6
40974	34.32	18.19	16.52	22.04	18.42447	68518	68521.27
40975	43.29	32.48	28.56	40.95	32.00159	108508	98074.59
40976	53.11	43.32	43.29	40.25	43.23093	118347	122517.5
40977	37.8	32.19	32.48	34.51	32.85209	104613	99925.87
40978	21.6	8.96	17.85	14.4	14.70828	56529	60432.25
40979	16.96	11	12.54	16.95	12.81027	55487	56300.84
40980	25.68	21.2	20.16	20.16	20.68217	70792	73435.62
40981	16.96	7.7	7.98	6.9	8.0605	53432	45962.02
40982	14.98	7.42	8.64	17.6	9.698295	47783	49527.01
40983	24.96	9.36	5.35	9.63	7.887307	48029	45585.03
40984	13.65	0	0	0	0.480139	36584	29461.85
40985	3.18	0	0	0	0.111857	31461	28660.21
40986	5.3	0	0	0	0.186428	34114	28822.53
40987	1.07	0	0	3.36	0.495162	39630	29494.55
40988	10.3	5.3	2.16	14.04	5.054334	43856	39418.5
40989	17.34	5.35	1.07	7.7	3.894973	44550	36894.92
40990	19.44	1.07	0	11.66	2.608991	42906	34095.72
40991	20.8	3.15	2.14	10.5	4.253277	38658	37674.84
40992	16.8	13.08	8.8	11.2	10.75809	38216	51833.85
40993	29.97	20.52	16.8	18.56	18.67617	51761	69069.15
40994	22.6	14.64	13.86	11.52	14.0948	86383	59096.89
40995	16.38	11.7	9.6	14.95	11.22931	52556	52859.57
40996	28.89	19.62	19.8	16.8	19.65447	62037	71198.61
40997	31.61	17.92	17.1	7.77	16.59856	55739	64546.82

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
40998	29.68	20.52	18.7	11.1	18.62536	59742	68958.55
40999	22.88	13.08	14.43	6.78	13.25976	58447	57279.26
41000	21.47	5.9	7.26	0	6.342323	46991	42222.06
41001	15.12	7.98	4.64	1.22	5.596352	44052	40598.31
41002	23.32	15.12	15.26	16.8	15.70905	55583	62610.63
41003	28.34	15.4	17.6	15.4	16.98435	53047	65386.55
41004	23.32	17.6	22.2	17.25	20.11456	57236	72200.09
41005	23.54	16.5	20.34	21.42	19.38851	50989	70619.7
41006	21.28	17.76	19.38	17.25	18.64586	60382	69003.17
41007	35.84	29.64	28.32	26.22	28.71488	56349	90920.41
41008	38.85	32.48	34.72	35.03	34.201	80324	102862.1
41009	26.25	26	26.5	30.74	26.91086	88680	86993.6
41010	27.3	18.19	20.52	22.8	20.33408	72122	72677.93
41011	23.76	17.7	18.3	14.52	17.7881	53706	67136.1
41012	6.66	6.48	4.52	8.96	5.818031	57795	41080.84
41013	20.7	4.4	0	12.76	3.853355	35579	36804.33
41014	38.85	28.75	23.8	30	26.73482	44089	86610.41
41015	29.68	20.52	21.09	18.24	20.8243	79031	73744.98
41016	28.08	11.3	9.44	13.8	11.27599	51202	52961.17
41017	29.96	23.98	26.45	29	26.14167	51929	85319.31
41018	26.25	20.71	23.31	22.68	22.50761	79745	77409.04
41019	31.61	21.09	23.1	15.34	21.70874	57933	75670.13
41020	28.62	18.02	17.28	24.15	18.84775	60360	69442.63
41021	18.54	15.6	17.44	16.35	16.74995	59282	64876.34
41022	12.6	4.28	6.36	0	5.057446	51492	39425.27
41023	21.2	3.3	4.44	0	4.065399	41432	37265.88
41024	26.16	16.65	18.08	14.95	17.487	44727	66480.67
41025	28.6	16.95	20.88	22.68	20.15716	54677	72292.82
41026	28	22.8	25.52	27.6	25.03259	61204	82905.18
41027	19.26	16.5	20.9	20.9	19.45458	65069	70763.52
41028	14.7	11.77	14.84	8.8	13.04436	53082	56810.4
41029	16.8	3.39	7.02	0	5.263236	49851	39873.21
41030	0	0	0	0	0	42197	28416.73
41031	10.9	0	0	0	0.383408	39281	29251.29
41032	23.73	1.13	4.52	0	3.51105	39159	36059.23
41033	23.31	8.88	5.65	5.8	7.310335	36031	44329.14
41034	21.6	7.56	6.6	5.7	7.307851	36477	44323.73
41035	14.04	7.77	7.84	11.6	8.547999	40065	47023.16
41036	14.42	11.66	13.44	17.25	13.43187	42955	57653.89

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
41037	14.84	9.45	9.63	12.84	10.19359	47665	50605.12
41038	11.77	5.4	7.7	2.2	6.368834	44038	42279.77
41039	11.88	4.44	1.17	10.71	3.877102	39079	36856.02
41040	12.84	5.2	7.42	9.63	7.211407	36096	44113.8
41041	2.2	3.21	5.25	7.49	4.804331	34963	38874.32
41042	0	0	0	0	0	35648	28416.73
41043	12.21	1.12	0	5.8	1.572501	46125	31839.59
41044	15.45	7.28	6.36	8.56	7.269472	41608	44240.19
41045	8.64	0	0	0	0.303912	40733	29078.26
41046	0	0	0	0	0	38467	28416.73
41047	0	0	0	0	0	34726	28416.73
41048	19.62	8.8	4.52	9.28	7.049184	31320	43760.69
41049	10.3	4.16	6.36	4.36	5.532389	38184	40459.08
41050	7.42	0	0	0	0.260999	43080	28984.85
41051	5.3	0	0	0	0.186428	38810	28822.53
41052	9.54	4.32	0	7.77	2.756093	35784	34415.92
41053	11	4.2	3.15	9.63	4.639655	39658	38515.87
41054	17.44	3.3	2.32	0	2.845021	34608	34609.49
41055	19.8	0	0	0	0.696465	30477	29932.73
41056	7.42	0	0	2.28	0.571462	28159	29660.63
41057	14.43	9.04	9.44	12.87	9.956422	33390	50088.87
41058	19.76	11.88	10.8	18.53	12.50837	41562	55643.7
41059	15.3	8.4	11.77	12.21	10.89121	42873	52123.62
41060	13.26	5.2	7.49	10.9	7.435043	41766	44600.59
41061	8.64	0	3.24	3.3	2.416242	34625	33676.16
41062	3.12	0	0	0	0.109746	30646	28655.61
41063	3.09	0	0	0	0.108691	31527	28653.32
41064	6.3	0	0	0	0.221603	39354	28899.09
41065	4.16	0	0	0	0.146328	40867	28735.24
41066	0	0	0	0	0	36472	28416.73
41067	0	0	0	0	0	39771	28416.73
41068	0	0	0	0	0	33043	28416.73
41069	0	0	0	0	0	29060	28416.73
41070	4.56	0	0	2.34	0.479031	31331	29459.44
41071	10.7	5.45	5.5	7.49	5.938115	39437	41342.22
41072	6.42	0	3.33	0	1.934993	37324	32628.63
41073	6.42	0	0	0	0.225824	37711	28908.28
41074	0	0	0	0	0	38188	28416.73
41075	2.08	0	0	0	0.073164	37623	28575.99

Attachment 13

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

Base	28416.73
Variable	2176.7

Date	0.035175 Cloquet Adjusted HDD	0.315393 Minneapolis Adjusted HDD	0.513264 Rochester Adjusted HDD	0.136168 Worthington Adjusted HDD	1 Weighted Adjusted HDD	Actual Total Through-Put *	Estimated Through-Put **
41076	0	0	0	0	0	29411	28416.73
41077	0	0	0	0	0	32661	28416.73
41078	2.16	0	0	0	0.075978	40450	28582.11
41079	0	0	0	0	0	41660	28416.73
41080	2.18	0	0	0	0.076682	36585	28583.64
41081	0	0	0	0	0	36323	28416.73
41082	4.12	0	0	0	0.144921	33375	28732.18
41083	2.1	0	0	0	0.073868	29953	28577.52
41084	5.15	0	0	0	0.181151	31448	28811.04
41085	2.1	0	0	0	0.073868	36876	28577.52
41086	0	0	0	0	0	36097	28416.73
41087	0	0	0	0	0	40751	28416.73
41088	0	0	0	0	0	55066	28416.73
41089	0	0	0	0	0	47294	28416.73
41090	0	0	0	0	0	31019	28416.73
Totals	8265.67	6429.59	6807.87	7172.98	6789.558	24981017	25179353

* 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
NNG

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

Rate Class	Tariff Rate Designation	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
Residential w/ Heat	MN001/007/008	143144	141933	142179	142324	142942	143730	144320	144315	144403	144580	144641	144757
Residential w/o Heat	MN002/009010	923	905	909	901	918	926	904	933	945	943	937	925
Commercial-SV	MN050/053/054/070/076/078	6418	6316	6313	6308	6338	6435	6526	6461	6503	6491	7407	7355
Commercial-LV	MN756/060/063/064/765/071/077	7599	7525	7523	7523	7512	7631	7654	7642	7647	7661	6687	6673
SV-Joint	MN704	1	3	3	0	3	2	2	2	3	3	1	3
SV-Interruptible	MN125/128	282	288	286	287	279	280	267	268	261	254	244	262
LV-Interruptible	MN200/201/207/720/721	46	41	48	45	47	51	43	50	43	44	63	42
Transport	MN790	0	0	0	0	1	0	1	1	1	1	1	1
Transport	MN709/714/789	9	9	9	9	11	12	12	12	12	12	11	8
Transport	MN718	1	0	1	1	1	1	1	1	1	1	1	1
Transport	MN702/707/82L	3	2	3	3	2	2	3	3	3	3	3	3
Transport	MN700/774/81L	2	2	2	2	2	1	1	1	1	1	1	2
Transport	MN701/706/722/80L	22	23	23	23	25	25	37	23	23	23	21	21
Transport	MN/705/739	12	11	9	9	7	9	9	9	9	9	9	9
Transport	MN/712	1	1	1	1	1	1	1	1	1	1	1	1
Transport	MN/715	0	0	0	0	0	1	1	1	1	1	1	0
Transport	MN/717	0	0	0	0	0	0	0	0	0	0	0	0
Transport	MN/719	0	0	0	0	0	0	0	0	0	0	0	0
Transport	MN/735	1	1	1	1	2	2	0	1	1	1	1	1
Total		158464	157060	157310	157437	158091	159109	159782	159724	159858	160029	160030	160064

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

Futures Contracts WACOG

NNG-PNG
Futures

41223						30
Purchase Date	Financial Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
41054	89021.74	2.996	266709.1	3.6435	324350.706	-57641.576
41054	34239.13	2.997	102614.7	3.6435	124750.2665	-22135.5969
41088	123260.9	3.017	371878	3.6435	449100.9835	-77222.93568
41121	102717.4	3.313	340302.7	3.6435	374250.8105	-33948.0974
41121	13695.65	3.314	45387.39	3.6435	49900.10442	-4512.717005
41136	95869.57	2.988	286458.3	3.6435	349300.7637	-62842.50051
41173	89021.74	3.065	272851.6	3.6435	324350.706	-51499.07601
41190	82173.91	3.408	280048.7	3.6435	299400.6484	-19351.95628
Total	630000		1966251		2295404.989	-329154.4558
WACOG			3.121033		3.6435	-0.522467393

41249						31
Purchase Date	Financial Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
41058	88732.39	3.176	281814.1	3.983	353421.1265	-71607.0422
41089	63380.28	3.329	210993	3.983	252443.66	-41450.7039
41089	25352.11	3.331	84447.89	3.983	100977.4665	-16529.57774
41120	88732.39	3.6	319436.6	3.983	353421.1265	-33984.50702
41143	69718.31	3.288	229233.8	3.983	277688.0236	-48454.22455
41172	63380.28	3.248	205859.2	3.983	252443.66	-46584.50668
41205	50704.23	3.863	195870.4	3.983	201954.933	-6084.507144
Total	450000		1527655		1792349.996	-264695.0692
WACOG			3.394789		3.983	-0.588211266

41280						31
Purchase Date	Financial Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
41059	12989.69	3.264	42398.35	4.0745	52926.4972	-10528.1448
05/3012/	25979.38	3.265	84822.68	4.0745	105852.9944	-21030.3102
0530/12	84432.99	3.266	275758.1	4.0745	344022.2129	-68264.0714
41088	12989.69	3.425	44489.69	4.0745	52926.4972	-8436.8045
41088	51958.76	3.427	178062.7	4.0745	211705.9762	-33643.2985
41088	51958.76	3.428	178114.6	4.0745	211705.9762	-33591.3397
41117	110412.4	3.573	394503.4	4.0745	449875.2073	-55371.8043
41144	103917.5	3.426	356021.4	4.0745	423411.965	-67390.5165
41171	90927.84	3.39	308245.4	4.0745	370485.4678	-62240.1037
41207	84432.99	3.904	329626.4	4.0745	344022.2129	-14395.8246
					0	0
					0	0
					0	0
					0	0
					0	0
					0	0
					0	0
Total	630000		2192043		2566935.007	-374892.218
WACOG			3.479433		4.0745	-0.59506701

41316						28
Purchase Date	Physical Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
41058	61600	3.34	205744	4.07	250712	-44968
41089	5600	3.484	19510.4	4.07	22792	-3281.6
41089	56000	3.485	195160	4.07	227920	-32760
41109	5600	3.526	19745.6	4.07	22792	-3046.4
41109	56000	3.528	197568	4.07	227920	-30352
41138	5600	3.405	19068	4.07	22792	-3724
41138	39200	3.406	133515.2	4.07	159544	-26028.8
41169	28000	3.46	96880	4.07	113960	-17080
41204	22400	3.926	87942.4	4.07	91168	-3225.6
Total	280000		975133.6		1139600	-164466.4
WACOG			3.48262		4.07	-0.58738

40974						31
Purchase Date	Physical Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
41059	56521.74	3.258	184147.8	3.99	225521.7382	-41373.91287
41059	70652.17	3.26	230326.1	3.99	281902.1759	-51576.08731
41087	127173.9	3.461	440148.9	3.99	507423.9141	-67275.00014
41116	120108.7	3.612	433832.6	3.99	479233.7014	-45401.0875
41145	105978.3	3.362	356298.9	3.99	422853.2638	-66554.34828
41170	91847.83	3.416	313752.2	3.99	366472.8261	-52720.65218
41207	77717.39	3.882	301698.9	3.99	310092.3885	-8393.478185
Total	650000		2260205		2593500.008	-333294.5665
WACOG			3.477239		3.99	-0.51276087

Total						
	Financial Volume	Purchase Price	Total Cost	NNG Indexes	NNG Indexes Cost	Over/(Under) Market
	308865.6	3.175535	980813.4	3.907629	1206932.068	-226118.676
	199851	3.243751	648266.8	3.941643	787741.0968	-139474.298
	416219.9	3.285266	1367393	3.914865	1629444.577	-262051.585
	330148.2	3.506932	1157807	3.884995	1282624.136	-124816.896
	297351	3.38506	1006551	4.002231	1190067.368	-183516.588
	308656.4	3.250385	1003252	3.896615	1202715.226	-199462.999
	367055.7	3.537445	1298440	3.938958	1445817.235	-147377.666
	214091.4	3.423538	732950.1	3.908482	836772.6134	-103822.473
	113327.8	3.495944	396187.8	4.073611	461653.4678	-65465.7037
	84432.99	3.904	329626.4	4.0745	344022.2129	-14395.8246
Total	2640000		8921287		10387790	-1466502.71
WACOG			3.379275		3.93476894	-0.55549345

Note: Projected index price and index cost is based on the NYMEX and basis as of October 29, 2012.

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 Storage	GLGT/VGT Centra AECO Storage WACOG	GLGT/VGT Centra AECO Storage Cost
41219	455259	73125	19500	547884	2.8422	2.8422	2.8422	1293937.13	207835.875	55422.9	1557195.905	85290	2.1432	182793.528
41250	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431.325	522254.25	139267.8	3912953.375	231756	2.1432	496699.4592
41282	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431.325	522254.25	139267.8	3912953.375	231756	2.1432	496699.4592
41314	1143984	183750	49000	1376734	2.8422	2.8422	2.8422	3251431.325	522254.25	139267.8	3912953.375	209328	2.1432	448631.7696
41343	455259	73125	19500	547884	2.8422	2.8422	2.8422	1293937.13	207835.875	55422.9	1557195.905	96379	2.1432	206559.4728
Total	4342470	697500	186000	5225970	2.8422	2.8422	79.85619319	12342168.23	1982434.5	528649.2	14853251.93	854509	2.1432	1831383.689
										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 Storage Volumes	Total AECO Storage WACOG	Total AECO Storage Cost	Total Emerson WACOG	Total Emerson Cost
41219	547884	3.6435	1996215.354	85290	3.776	322055.04	85290	2.1432	182793.528	3.776	322055.04
41250	1376734	3.983	5483531.522	231756	4.088	947418.528	231756	2.1432	496699.4592	4.088	947418.528
41282	1376734	4.0745	5609502.683	231756	4.1895	970941.762	231756	2.1432	496699.4592	4.1895	970941.762
41314	1376734	4.07	5603307.38	209328	4.1825	875514.36	209328	2.1432	448631.7696	4.1825	875514.36
41343	547884	3.99	2186057.16	96379	4.0675	392021.5825	96379	2.1432	206559.4728	4.0675	392021.5825
Total	5225970	3.995165318	20878614.1	854509	4.105224489	3507951.273	854509	2.1432	1831383.689	4.105224489	3507951.273

Max NNG Storage (Storage plan withdrawals through Apr 12)	5225970	5619321	10/31/11 Storage Balance - NNG (estimate)	5619321	1	5225970
Max AECO Storage	854509		10/31/11 Storage Balance - AECO (estimate)	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	487213.1776	60670.82242	547884	2.8422	2.8422	2.8422	1384757.293	172438.6115	1557195.905	3.6435	1775161.213	221054.1415	1996215.354
41250	1143984	183750	49000	1376734	1224279.13	152454.8701	1376734	2.8422	2.8422	2.8422	3479646.143	433307.2317	3912953.375	3.983	4876303.775	607227.7475	5483531.522
41282	1143984	183750	49000	1376734	1224279.13	152454.8701	1376734	2.8422	2.8422	2.8422	3479646.143	433307.2317	3912953.375	4.0745	4988325.315	621177.3681	5609502.683
41314	1143984	183750	49000	1376734	1224279.13	152454.8701	1376734	2.8422	2.8422	2.8422	3479646.143	433307.2317	3912953.375	4.07	4982816.059	620491.3212	5603307.38
41343	455259	73125	19500	547884	487213.1776	60670.82242	547884	2.8422	2.8422	2.8422	1384757.293	172438.6115	1557195.905	3.99	1943980.579	242076.5814	2186057.16
Total	4342470	697500	186000	5225970	4647263.745	578706.255	5225970	2.8422	2.8422	2.8422	13208453.02	1644798.918	14853251.93	3.995165318	18566586.94	2312027.16	20878614.1
											2.8422	2.8422		3.995165318	3.995165318	3.995165318	

Month/ Year	AECO Storage	GLGT PNG Volumes	GLGT NMU Volumes	VGT PNG Volumes	VGT NMU Volumes	Centra NMU Volumes	Total AECO Storage Volumes	GLGT/VGT Centra AECO Storage WACOG	GLGT PNG Cost	GLGT NMU Cost	VGT PNG Cost	VGT NMU Cost	Centra NMU Cost	Total AECO Storage Cost
41219	85290	12351.49254	24049.03935	12434.87233	19722.88587	16745.70991	85304	2.1432	26471.71881	51541.90114	26650.41838	42270.089	35889.40548	182823.5328
41250	231756	33192.82627	64628.26923	33416.89725	53002.36569	45001.64156	229242	2.1432	71138.86526	138511.3066	71619.09419	113594.6701	96447.51818	491311.4544
41282	231756	33192.82627	64628.26923	33416.89725	53002.36569	45001.64156	229242	2.1432	71138.86526	138511.3066	71619.09419	113594.6701	96447.51818	491311.4544
41314	209328	31051.32558	60458.64891	31260.94018	49582.81347	42098.27185	214452	2.1432	66549.20099	129574.9763	66998.447	106265.8858	90225.01623	459613.5264
41343	96379	13950.16117	27161.73563	14044.33291	22275.64287	18913.12742	96345	2.1432	29897.98542	58213.0318	30099.8143	47741.15779	40534.61468	206486.604
Total	854509	123738.6318	240925.9624	124573.9399	197586.0736	167760.3923	854585	2.143390616	265196.6357	516352.5225	266986.8681	423466.4729	359544.0728	1831546.572
		0.144806704	0.281946665	0.145784234	0.23122761	0.196323728	1.00008894		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	12351.49254	24049.03935	12434.87233	19722.88587	16745.70991	85304	3.776	46639.23582	90809.17259	46954.07793	74473.61704	63231.80062	322107.904
41250	231756	33192.82627	64628.26923	33416.89725	53002.36569	45001.64156	229242	4.088	135692.2738	264200.3646	136608.276	216673.6709	183966.7107	937141.296
41282	231756	33192.82627	64628.26923	33416.89725	53002.36569	45001.64156	229242	4.1895	139061.3457	270760.134	140000.091	222053.411	188534.3773	960409.359
41314	209328	31051.32558	60458.64891	31260.94018	49582.81347	42098.27185	214452	4.1825	129872.1693	252868.2991	130748.8823	207380.1173	176076.022	896945.49
41343	96379	13950.16117	27161.73563	14044.33291	22275.64287	18913.12742	96345	4.0675	56742.28056	110480.3597	57125.32413	90606.17736	76929.14578	391883.2875
Total	854509	123738.6318	240925.9624	124573.9399	197586.0736	167760.3923	854585	4.105851824	508007.3051	989118.3299	511436.6514	811186.9937	688738.0564	3508487.337
		0.144806704	0.281946665	0.145784234	0.23122761	0.196323728	1.00008894		4.105486682	4.105486682	4.105486682	4.105486682	4.105486682	4.105486682

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 Settle Cost	Over/(Under) 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
						3.302174		3.24913		3.4	-0.150869565		0.165861	3.414991
NNG-PNG	84	0.730435	84	840000	3.302174	2773826	3.24913	2729270	3.4	2856000	-126730.4348	0.165861	139323.1	2868593
NNG-NMU	10	0.086957	10	100000	3.302174	330217.4	3.24913	324913	3.4	340000	-15086.95652	0.165861	16586.09	341499.1
GLGT-PNG	3	0.026087	3	30000	3.302174	99065.22	3.24913	97473.91	3.4	102000	-4526.086957	0.165861	4975.826	102449.7
GLGT-NMU	6	0.052174	6	60000	3.302174	198130.4	3.24913	194947.8	3.4	204000	-9052.173913	0.165861	9951.652	204899.5
VGT-PNG	3	0.026087	3	30000	3.302174	99065.22	3.24913	97473.91	3.4	102000	-4526.086957	0.165861	4975.826	102449.7
VGT-NMU	5	0.043478	5	50000	3.302174	165108.7	3.24913	162456.5	3.4	170000	-7543.478261	0.165861	8293.043	170749.6
Centra	4	0.034783	4	40000	3.302174	132087	3.24913	129965.2	3.4	136000	-6034.782609	0.165861	6634.435	136599.7
Total	115	1	115	1150000	3.302174	3797500	3.24913	3736500	3.4	3910000	-173500	0.165861	190740	3927240

41249

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	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
						3.631356		3.59574		3.803	-0.207259887		0.191	3.78674
NNG-PNG	130	0.734463	130	1300000	3.631356	4720763	3.59574	4674462	3.803	4943900	-269437.8531	0.191	248300	4922762
NNG-NMU	15	0.084746	15	150000	3.631356	544703.4	3.59574	539361	3.803	570450	-31088.98305	0.191	28650	568011
GLGT-PNG	5	0.028249	5	50000	3.631356	181567.8	3.59574	179787	3.803	190150	-10362.99435	0.191	9550	189337
GLGT-NMU	9	0.050847	9	90000	3.631356	326822	3.59574	323616.6	3.803	342270	-18653.38983	0.191	17190	340806.6
VGT-PNG	5	0.028249	5	50000	3.631356	181567.8	3.59574	179787	3.803	190150	-10362.99435	0.191	9550	189337
VGT-NMU	7	0.039548	7	70000	3.631356	254194.9	3.59574	251701.8	3.803	266210	-14508.19209	0.191	13370	265071.8
Centra	6	0.033898	6	60000	3.631356	217881.4	3.59574	215744.4	3.803	228180	-12435.59322	0.191	11460	227204.4
Total	177	1	177	1770000	3.631356	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 Settle Cost	Over/(Under) 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
						3.710938		3.698896		3.932	-0.233104167		0.237333	3.936229
NNG-PNG	140	0.729167	140	1400000	3.710938	5195313	3.698896	5178454	3.932	5504800	-326345.8333	0.237333	332266.7	5510721
NNG-NMU	17	0.088542	17	170000	3.710938	630859.4	3.698896	628812.3	3.932	668440	-39627.70833	0.237333	40346.67	669159
GLGT-PNG	5	0.026042	5	50000	3.710938	185546.9	3.698896	184944.8	3.932	196600	-11655.20833	0.237333	11866.67	196811.5
GLGT-NMU	10	0.052083	10	100000	3.710938	371093.8	3.698896	369889.6	3.932	393200	-23310.41667	0.237333	23733.33	393622.9
VGT-PNG	5	0.026042	5	50000	3.710938	185546.9	3.698896	184944.8	3.932	196600	-11655.20833	0.237333	11866.67	196811.5
VGT-NMU	8	0.041667	8	80000	3.710938	296875	3.698896	295911.7	3.932	314560	-18648.33333	0.237333	18986.67	314898.3
Centra	7	0.036458	7	70000	3.710938	259765.6	3.698896	258922.7	3.932	275240	-16317.29167	0.237333	16613.33	275536
Total	192	1	192	1920000	3.710938	7125000	3.698896	7101880	3.932	7549440	-447560	0.237333	455680	7557560

41311

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	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
						3.716129		3.703968		3.935	-0.231032258		0.280729	3.984697
NNG-PNG	113	0.729032	113	1130000	3.716129	4199226	3.703968	4185484	3.935	4446550	-261066.4516	0.280729	317223.8	4502707
NNG-NMU	13	0.083871	13	130000	3.716129	483096.8	3.703968	481515.8	3.935	511550	-30034.19355	0.280729	36494.77	518010.6
GLGT-PNG	4	0.025806	4	40000	3.716129	148645.2	3.703968	148158.7	3.935	157400	-9241.290323	0.280729	11229.16	159387.9
GLGT-NMU	8	0.051613	8	80000	3.716129	297290.3	3.703968	296317.4	3.935	314800	-18482.58065	0.280729	22458.32	318775.7
VGT-PNG	4	0.025806	4	40000	3.716129	148645.2	3.703968	148158.7	3.935	157400	-9241.290323	0.280729	11229.16	159387.9
VGT-NMU	7	0.045161	7	70000	3.716129	260129	3.703968	259277.7	3.935	275450	-16172.25806	0.280729	19651.03	278928.8
Centra	6	0.03871	6	60000	3.716129	222967.7	3.703968	222238.1	3.935	236100	-13861.93548	0.280729	16843.74	239081.8
Total	155	1	155	1550000	3.716129	5760000	3.703968	5741150	3.935	6099250	-358100	0.280729	435130	6176280

41339

Deal Number	Purchase Date	%	Number Contracts	Financial 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	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
						3.713362		3.696164		3.905	-0.208836207		0.282707	3.978871
NNG-PNG	85	0.732759	85	850000	3.713362	3156358	3.696164	3141739	3.905	3319250	-177510.7759	0.282707	240300.9	3382040
NNG-NMU	10	0.086207	10	100000	3.713362	371336.2	3.696164	369616.4	3.905	390500	-20883.62069	0.282707	28270.69	397887.1
GLGT-PNG	3	0.025862	3	30000	3.713362	111400.9	3.696164	110884.9	3.905	117150	-6265.086207	0.282707	8481.207	119366.1
GLGT-NMU	6	0.051724	6	60000	3.713362	222801.7	3.696164	221769.8	3.905	234300	-12530.17241	0.282707	16962.41	238732.2
VGT-PNG	3	0.025862	3	30000	3.713362	111400.9	3.696164	110884.9	3.905	117150	-6265.086207	0.282707	8481.207	119366.1
VGT-NMU	5	0.043103	5	50000	3.713362	185668.1	3.696164	184808.2	3.905	195250	-10441.81034	0.282707	14135.34	198943.5
Centra	4	0.034483	4	40000	3.713362	148534.5	3.696164	147846.6	3.905	156200	-8353.448276	0.282707	11308.28	159154.8
Total	116	1	116	1160000	3.713362	4307500	3.696164	4287550	3.905	4529800	-242250	0.282707	327940	4615490

Total

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			111	1110000	3.583333	3977500	3.583333	3977500	3.821586	4241960	-264460	0.291054	323070	4300570
2			101	1010000	3.49505	3530000	3.49505	3530000	3.802861	3840890	-310890	0.280129	282930	3812930
3			109	1090000	3.706422	4040000	3.688991	4021000	3.800954	4143040	-122040	0.246706	268910	4289910
4			131	1310000	3.360687	4402500	3.360687	4402500	3.812458	4994320	-591820	0.249267	326540	4729040
5			132	1320000	3.649621	4817500	3.633712	4796500	3.813386	5033670	-237170	0.174197	229940	5026440
6			137	1370000	3.861314	5290000	3.77165	5167160	3.816818	5229040	-61880	0.181891	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		27417500		27231540		28819800	-1588260		1747560	28979100
						3.631457		3.606826		3.8171921	-0.210365563		0.231465	3.838291
NNG-PNG	552	0.731126	552	5520000	3.631457	20045642	3.606826	19909682	3.817192	21070900	-1161217.907	0.231465	1277686	21187368
NNG-NMU	65	0.086093	65	650000	3.631457	2360447	3.606826	2344437	3.817192	2481174.8	-136737.6159	0.231465	150452.2	2494889
GLGT-PNG	20	0.02649	20	200000	3.631457	726291.4	3.606826	721365.3	3.817192	763438.41	-42073.11258	0.231465	46292.98	767658.3
GLGT-NMU	39	0.051656	39	390000	3.631457	1416268	3.606826	1406662	3.817192	1488704.9	-82042.56954	0.231465	90271.31	1496934
VGT-PNG	20	0.02649	20	200000	3.631457	726291.4	3.606826	721365.3	3.817192	763438.41	-42073.11258	0.231465	46292.98	767658.3
VGT-NMU	32	0.042384	32	320000	3.631457	1162066	3.606826	1154184	3.817192	1221501.5	-67316.98013	0.231465	74068.77	1228253
Centra	27	0.035762	27	270000	3.631457	980493.4	3.606826	973843.2	3.817192	1030641.9	-56798.70199	0.231465	62495.52	1036339
Total	755	1	755	7550000	3.631457	27417500	3.606826	27231540	3.817192	28819800	-1588260	0.231465	1747560	28979100

AFFIDAVIT OF SERVICE

STATE OF MINNESOTA)
) ss
COUNTY OF HENNEPIN)

Amber S. Lee hereby certifies that on the 4th day of January, 2013, on behalf of Minnesota Energy Resources Corporation (MERC) she electronically filed a true and correct copy of the supporting spreadsheets 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 4th day of January, 2013.

/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	OFF_SL_12-1193_12-1193
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	Yes	OFF_SL_12-1193_12-1193
Michael	Bradley	bradleym@moss-barnett.com	Moss & Barnett	4800 Wells Fargo Ctr 90 S 7th St Minneapolis, MN 55402-4129	Electronic Service	No	OFF_SL_12-1193_12-1193
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_12-1193_12-1193
Daryll	Fuentes	N/A	USG	550 W. Adams Street Chicago, IL 60661	Paper Service	No	OFF_SL_12-1193_12-1193
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_12-1193_12-1193
Richard	Haubensak	RICHARD.HAUBENSAK@CONSTELLATION.COM	Constellation New Energy Gas	Suite 200 12120 Port Grace Boulevard La Vista, NE 68128	Paper Service	No	OFF_SL_12-1193_12-1193
Amber	Lee	lee.amber@dorsey.com	Dorsey & Whitney LLP	Suite 1500 50 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	OFF_SL_12-1193_12-1193
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	Yes	OFF_SL_12-1193_12-1193
Brian	Meloy	brian.meloy@leonard.com	Leonard, Street & Deinard	150 S 5th St Ste 2300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_12-1193_12-1193

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	Electronic Service	No	OFF_SL_12-1193_12-1193
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_12-1193_12-1193
Gregory	Walters	gjwalters@minnesotaenergyresources.com	Minnesota Energy Resources Corporation	3460 Technology Dr. NW Rochester, MN 55901	Paper Service	No	OFF_SL_12-1193_12-1193