

MINNESOTA ENERGY RESOURCES - Consolidated
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DESIGN-DAY DEMAND SUMMARY

November 1, 2018

Design Day Requirement		56,470
Total Peak Day Entitlement		57,949
2017/18 Firm Peak Day Actual Sendout	12/30/2017	46,438
Firm Annual Throughput - Minnesota		4,825,697
No. of Firm Customers		35,653
Department Load Factor Calculation		28.47%

MINNESOTA ENERGY RESOURCES - Consolidated

MINNESOTA DESIGN DAY REQUIREMENTS

November 1, 2018

HDD

Pipeline Group	2017/18 Customer Count	1/20 Design DDD	Regression Factors		Regression Total	Add Adjustment	1/20 Requirements Regression Load	Estimated Contract Demand Units	Total
			Intercept	Slope					

VGT									
Peak		109	65	119	16,122	1,018	17,140	7	17,147
Off Peak		57	65	119	8,963	1,018	9,981	7	9,988

GLGT									
Peak		107	500	222	28,107	1,976	30,083	103	30,186
Off Peak		57	500	222	15,600	1,976	17,576	103	17,679

Centra									
Peak		107	144	67	8,663	474	9,137	0	9,137
Off Peak		57	144	67	4,685	474	5,159	0	5,159

Total Consolidated									
Peak	35,653	107	709	408	52,892	3,468	56,360	110	56,470
Off Peak	35,653	57	709	408	29,248	3,468	32,716	110	32,826

MINNESOTA ENERGY RESOURCES - Consolidated

DESIGN-DAY DEMAND PER CUSTOMER

November 1, 2018

<u>Heating Season</u>	<u>No. of Firm Customers</u>	<u>Design Day Requirements</u>	<u>MMBtu /Customer /Day</u>
18/19	35,653	56,470	1.58
17/18	35,965	56,266	1.56
16/17	35,499	55,528	1.56
15/16	34,799	53,075	1.53
14/15	34,397	48,706	1.42
13/14	34,007	50,048	1.47
12/13	33,630	52,289	1.55
11/12	33,384	50,366	1.51
10/11	33,399	50,779	1.52
09/10	34,053	53,931	1.58

MINNESOTA ENERGY RESOURCES - Consolidated

SUMMER/WINTER USAGE - Dth
PROJECTED 12 MONTHS ENDING JUNE 2019
Consolidated

<u>Class</u>	<u>Summer Apr-Oct</u>	<u>Winter Nov-Mar</u>	<u>Total</u>
GS	1,296,215	3,505,000	4,801,214
SVI	140,899	324,638	465,537
SVJ	8,548	15,935	24,483
LVI	171,057	210,141	381,197
LVJ	0	0	0
SLV	0	0	0
IS	<u>0</u>	<u>0</u>	<u>0</u>
Total	<u>1,616,718</u>	<u>4,055,714</u>	<u>5,672,431</u>

MINNESOTA ENERGY RESOURCES - Consolidated

ENTITLEMENT LEVELS

November 1, 2018

<u>Capacity Type</u>		<i>Summer</i>			<i>April/October</i>			<i>Winter</i>		
		<u>2017/18</u> <u>MMBtu</u>	<u>Change</u> <u>MMBtu</u>	<u>Proposed</u> <u>MMBtu</u>	<u>2017/18</u> <u>MMBtu</u>	<u>Change</u> <u>MMBtu</u>	<u>Proposed</u> <u>MMBtu</u>	<u>2017/18</u> <u>MMBtu</u>	<u>Change</u> <u>MMBtu</u>	<u>Proposed</u> <u>MMBtu</u>
FT Western Zone	FT19131	10,130	0	10,130	10,130	0	10,130	10,130	(10,130)	0
FT Western Zone	FT18528	12,600	0	12,600	12,600	0	12,600	12,600	0	12,600
FT Western Zone	FT18528 (5)	0	0	0	0	0	0	3,728	0	3,728
FT Western Zone (5)	FT19129 (5)	0	0	0	0	0	0	4,900	10,130	15,030
FT-A ZONE 1 - 1	AF0012	14,493	0	14,493	14,493	0	14,493	15,591	0	15,591
FT-A ZONE 1 - 1	AF0321	0	0	0	0	0	0	1,500	0	1,500
CENTRA FT-1		9,500	0	9,500	9,500	0	9,500	9,500	0	9,500
Total Entitlement		46,723	0	46,723	46,723	0	46,723	57,949	0	57,949
Forecasted Design Day-Adjusted					32,814	12	32,826	56,266	204	56,470
Capacity Surplus/Shortage					13,909	(12)	13,897	1,683	(204)	1,479
Reserve Margin					42.39%	-0.05%	42.34%	2.99%	-0.37%	2.62%

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

RATE IMPACT OF THE PROPOSED DEMAND CHANGE
NOVEMBER 1, 2018

All costs in \$/Dth	Base Cost of Gas G011/MR-17-564 Jan 1, 2018	Demand Charge Oct 1, 2017	Demand Charge Demand Filing Nov 1, 2017	Most Recent PGA Jul 1, 2018	Proposed Effective Nov 1, 2018	Result of Proposed Change			
						Change from Last Rate Case	Change from Nov 1, 2017 Demand Filing	Change from Last PGA %	Change from Last PGA \$

1) General Service Residential Avg. Annual Use:						86	Dth		
Commodity Cost	\$3.1575	\$2.6791	\$2.9088	\$2.7926	\$3.3554	6.27%	25.24%	20.15%	\$0.5628
Demand Cost	\$0.7415	\$0.7996	\$0.7345	\$0.6908	\$0.7387	-0.38%	-7.62%	6.93%	\$0.0479
Commodity Margin	\$2.6284	\$2.4116	\$2.4116	\$2.5727	\$2.5727	-2.12%	6.68%	0.00%	\$0.0000
Total Cost of Gas	\$6.5274	\$5.8903	\$6.0549	\$6.0561	\$6.6668	2.14%	13.18%	10.08%	\$0.6107
Avg Annual Cost	\$561.36	\$506.57	\$520.72	\$520.82	\$573.35	2.14%	13.18%	10.08%	\$52.52
Effect of proposed commodity change on average annual bills:									\$48.40
Effect of proposed demand change on average annual bills:									\$4.12

2) Large General Service: Avg. Annual Use:						624	Dth		
Commodity Cost	\$3.1575	\$2.6791	\$2.9088	\$2.7926	\$3.3554	6.27%	25.24%	20.15%	\$0.5628
Demand Cost	\$0.7415	\$0.7996	\$0.7345	\$0.6908	\$0.7387	-0.38%	-7.62%	6.93%	\$0.0479
Commodity Margin	\$1.8403	\$1.6885	\$1.6885	\$1.8013	\$1.8013	-2.12%	6.68%	0.00%	\$0.0000
Total Cost of Gas	\$5.7393	\$5.1672	\$5.3318	\$5.2847	\$5.8954	2.72%	14.09%	11.56%	\$0.6107
Avg Annual Cost	\$3,578.45	\$3,221.75	\$3,324.38	\$3,295.01	\$3,675.79	2.72%	14.09%	11.56%	\$380.78
Effect of proposed commodity change on average annual bills:									\$350.92
Effect of proposed demand change on average annual bills:									\$29.87

3) SV Interruptible Service: Avg. Annual Use:						7,637	Dth		
Commodity Cost	\$3.1575	\$2.6791	\$2.9088	\$2.8259	\$3.3554	6.27%	25.24%	18.74%	\$0.5295
Commodity Margin	\$1.0616	\$0.9740	\$0.9740	\$1.0391	\$1.0391	-2.12%	6.68%	0.00%	\$0.0000
Total Cost of Gas	\$4.2191	\$3.6531	\$3.8828	\$3.8650	\$4.3945	4.16%	20.30%	13.70%	\$0.5295
Avg Annual Cost	\$32,222.53	\$27,899.82	\$29,654.11	\$29,518.16	\$33,562.27	4.16%	20.30%	13.70%	\$4,044.11
Effect of proposed commodity change on average annual bills:									\$4,044.11

4) LV Interruptible Service: Avg. Annual Use:						71,526	Dth		
Commodity Cost	\$3.1575	\$2.6791	\$2.9088	\$2.8259	\$3.3554	6.27%	25.24%	18.74%	\$0.5295
Commodity Margin	\$0.5808	\$0.5329	\$0.5329	\$0.5685	\$0.5685	-2.12%	6.68%	0.00%	\$0.0000
Total Cost of Gas	\$3.7383	\$3.2120	\$3.4417	\$3.3944	\$3.9239	4.97%	22.16%	15.60%	\$0.5295
Avg Annual Cost	\$267,386.77	\$229,742.48	\$246,172.07	\$242,788.87	\$280,663.54	4.97%	22.16%	15.60%	\$37,874.67
Effect of proposed commodity change on average annual bills:									\$37,874.67

Note: Average Annual Average based on Consolidated Annual Automatic Adjustment Report in Docket No. E,G999/AA-17-493

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

RATE IMPACT OF THE PROPOSED DEMAND CHANGE

NOVEMBER 1, 2018

DEMAND								
Contract Type		Season	Monthly Entitlement (Dth)	Months	Rate (\$/Dth)	Contract Costs	Rate Case Sales (therms)	\$/therm
Viking (VGT)								
FT-A ZONE 1 - 1	AF0012	Annual	14,493	12	4.3706	\$ 760,117	48,386,934	\$0.01571
FT-A ZONE 1 - 1	AF0012	Winter	1,098	3	4.3706	\$ 14,397	48,386,934	\$0.00030
FT-A ZONE 1 - 1	AF0321	Winter	1,500	3	4.3706	\$ 19,668	48,386,934	\$0.00041
VGT Demand						\$ 794,182	48,386,934	\$0.01641
Great Lakes (GLGT)								
FT Western Zone	FT19131	Summer	10,130	7	\$2.8100	\$ 199,257	48,386,934	\$0.00412
FT Western Zone	FT18528	Annual	12,600	12	\$2.8100	\$ 424,872	48,386,934	\$0.00878
FT Western Zone	FT18528 (5)	Winter	3,728	5	\$2.8100	\$ 52,378	48,386,934	\$0.00108
FT Western Zone	FT19129 (5)	Winter	15,030	5	\$6.1000	\$ 458,415	48,386,934	\$0.00947
GLGT Demand						\$ 1,134,922	48,386,934	\$0.02346
Centra								
CENTRA TRANSMISSION		Annual	9,500	12	\$11.1338	\$ 1,269,253	48,386,934	\$0.02623
CENTRA MINNESOTA PIPELINES		Annual	9,500	12	\$3.2990	\$ 376,086	48,386,934	\$0.00777
Centra Demand						\$ 1,645,339	48,386,934	\$0.03400
MERC-Consolidated DEMAND - \$/therm						\$ 3,574,443		\$0.07387
FOR JOINT RATE DEMAND				48,386,934		Annual Firm Sales in therms		
MERC-Consolidated Firm (GS) Sales as filed in Docket No. G011/MR-17-564								
Viking (VGT)								
FT-A ZONE 1 - 1		Annual	14,493	12	173,916			
FT-A ZONE 1 - 1		Winter	1,098	3	3,294			
FT-A ZONE 1 - 1		Winter	1,500	3	4,500			
Great Lakes (GLGT)								
FT Western Zone		Summer	10,130	7	70,910			
FT Western Zone		Annual	12,600	12	151,200			
FT Western Zone		Winter	3,728	5	18,640			
FT Western Zone		Winter	15,030	5	75,150			
Centra								
CENTRA TRANSMISSION		Annual	9,500	12	114,000			
CENTRA MINNESOTA PIPELINES		Annual	9,500	12	114,000			
Total Demand Cost		\$	3,574,443					
Total Demand Weighted Vol in therms			6,116,100					
Total Joint Demand Rate \$/therm				\$0.58443 /therm				

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

RATE IMPACT OF THE PROPOSED DEMAND CHANGE

PRESENT AVERAGE COST OF GAS COMMODITY

NOVEMBER 1, 2018

WACOG		Rate	Annual Dth	Call Option Premium	Physical Forward Start Premium	Balancing Service	Total Annual Cost	System Cost/therm	Storage Comm Rate	Total Comm Rate	REFERENCE	Effective
VGT												
GAS COST		\$3.12825										
FUEL	1.49%	\$0.01765										
COMMODITY TRANSPORTATION		\$0.01160										
GRI		\$0.00000										
ACA		\$0.00130										
VGT Commodity		\$3.15880	2,184,765	\$13,241	\$52,700	\$89,580	\$7,056,756	\$0.12189				
GLGT												
GAS COST		\$3.12825										
FUEL	1.383%	\$0.02536										
COMMODITY TRANSPORTATION		\$0.00288										
GRI		\$0.00000										
ACA		\$0.00130										
GLGT Commodity		\$3.15779	2,257,043	\$16,691	\$18,785	\$0	\$7,162,744	\$0.12372				
CENTRA												
CENTRA TRANSMISSION (\$Cdn/103M3)		1.062										
Conversion		\$0.02260										
Abandonment Toll		\$0.27454										
GAS COSTS		\$3.12825										
CUSTOMS FEE		\$0.00030										
CENTRA Commodity		\$3.42569	1,347,568	\$6,883	\$0	\$54,000	\$4,677,236	\$0.08079				
Consolidated WACOG w/Premium & Balancing			5,789,376	\$36,814	\$71,485	\$143,580	\$18,896,736	\$0.32640	\$0.00914			
Total Annual Sales in therms			57,893,760									
										\$0.33554 Total Consolidated WACOG-\$/therm		

Balancing Service							
Pipeline	Description	Season	Monthly Entitlement (Dth)	Months	Rate (\$/Dth)	Contract Costs	
VGT	Balancing Agreement	Annual	7,465	12	\$1.0000	\$89,580	
GLGT	---		0	0	\$0.0000	\$0	
Centra	Union Balancing	Annual	10,000	12	\$0.4500	\$54,000	

Storage Service							
	Season	Monthly Entitlement (Dth)	Months	Rate (\$/Dth)	Contract Costs	Annual Sales (therms)	Rate (\$/therm)
ANR Pipeline Storage	Annual	756,100	1	\$ 0.7000	\$529,270	57,893,760	\$0.00914
					\$529,270	57,893,760	\$0.00914

Total Commodity Cost:

\$0.33554

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

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

Financial Options Heating Season 2018-2019

Units - Gas Daily Peaker Packages (Physical)

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

Premium - Gas Daily Peaker (Monthly Cost)

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

Units - Futures (Dth)

	November		December		January		February		March		Term Total
	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	
1	05/03/18	260	05/15/18	558	05/17/18	551	05/08/18	514	05/10/18	113	60,603
2	05/03/18	52	06/12/18	502	06/13/18	501	06/07/18	457	05/10/18	339	55,690
3	06/05/18	313	07/17/18	502	01/00/00	-	06/07/18	57	06/11/18	395	37,672
4	07/05/18	313	01/00/00	-	01/00/00	-	07/10/18	457	07/12/18	395	34,397
5	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	-
6	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	-
7									01/00/00	-	-
8											-
9											-
10											-
Total		938		1,563		1,051		1,486		1,242	188,362

Units - Call Options (Dth)

	November		December		January		February		March		Term Total
	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	Contract Date	Daily Volume	
1	05/03/18	621	05/10/18	1,005	05/08/18	576	05/15/18	1,071	05/17/18	790	122,132
2	06/05/18	621	06/11/18	1,005	05/17/18	524	06/12/18	1,012	06/13/18	790	118,842
3	07/05/18	621	07/12/18	949	06/07/18	1,048	07/17/18	1,012	01/00/00	-	108,850
4	01/00/00	-	01/00/00	-	07/10/18	995	01/00/00	-	01/00/00	-	30,855
5	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	-
6	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	01/00/00	-	-
7											-
8											-
Total		1,862		2,959		3,143		3,095		1,581	380,679

Premium - Call Option (Monthly Cost)

	November		December		January		February		March		Option Premium	Total Premium
	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost	Option Premium	Premium Cost		
1	\$ 0.0950	\$ 1,768	\$ 0.0900	\$ 2,804	\$ 0.0950	\$ 1,697	\$ 0.0930	\$ 2,790	\$ 0.0980	\$ 2,401	\$ 0.0938	\$ 11,460
2	\$ 0.1000	\$ 1,862	\$ 0.1000	\$ 3,115	\$ 0.0980	\$ 1,591	\$ 0.0970	\$ 2,748	\$ 0.1000	\$ 2,450	\$ 0.0990	\$ 11,767
3	\$ 0.1000	\$ 1,862	\$ 0.0970	\$ 2,854	\$ 0.0990	\$ 3,215	\$ 0.0940	\$ 2,663	\$ -	\$ -	\$ 0.0973	\$ 10,594
4	\$ -	\$ -	\$ -	\$ -	\$ 0.0970	\$ 2,993	\$ -	\$ -	\$ -	\$ -	\$ 0.0970	\$ 2,993
5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#DIV/0!	\$ -
6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	#DIV/0!	\$ -
7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 0.0983	\$ 5,492	\$ 0.0956	\$ 8,773	\$ 0.0975	\$ 9,497	\$ 0.0946	\$ 8,202	\$ 0.0990	\$ 4,851	\$ 0.0967	\$ 36,814

Units - Collar Floor (put)

No Puts were purchased.

MINNESOTA ENERGY RESOURCES - CONSOLIDATED
18/19 Winter Portfolio Plan - MERC Hedging Plan

10000 Contract Size

System	Purchase Month	Nov-18		Dec-18		Jan-19		Feb-19		Mar-19		Total		Percent of Requirements
		Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	Number Contracts	Contract Volume	
MN Requirements			586,442		906,950		994,551		853,214		714,557		4,055,714	4,055,714
Daily Average			19,548		29,256		32,082		30,472		23,050		26,682	
10%	Futures		58,644		90,695		99,455		85,321		71,456		405,571	
20%	Call		117,288		181,390		198,910		170,643		142,911		811,143	
0%	Storage		0		0		0		0		0		0	
70%	Index		410,509		634,865		696,185		597,250		500,190		2,839,000	
Contracts	May-18	1	10,000	2	20,000	2	20,000	2	20,000	2	20,000	9	90,000	
	Jun-18	1	10,000	2	20,000	2	20,000	2	20,000	1	10,000	8	80,000	
	Jul-18	1	10,000	2	20,000	2	20,000	1	10,000	1	10,000	7	70,000	
	Aug-18	1	10,000	1	10,000	1	10,000	1	10,000	1	10,000	5	50,000	
	Sep-18	1	10,000	1	10,000	1	10,000	1	10,000	1	10,000	5	50,000	
Call Options	Oct-18	0	0	1	10,000	1	10,000	1	10,000	1	10,000	4	40,000	
	Total	5	50,000	9	90,000	9	90,000	8	80,000	7	70,000	38	380,000	9.37%
	May-18	2	20,000	3	30,000	4	40,000	3	30,000	3	30,000	15	150,000	
	Jun-18	2	20,000	3	30,000	3	30,000	3	30,000	3	30,000	14	140,000	
	Jul-18	2	20,000	3	30,000	3	30,000	3	30,000	2	20,000	13	130,000	
Collars	Aug-18	2	20,000	3	30,000	3	30,000	3	30,000	2	20,000	13	130,000	
	Sep-18	2	20,000	3	30,000	3	30,000	3	30,000	2	20,000	13	130,000	
	Oct-18	1	10,000	3	30,000	3	30,000	2	20,000	2	20,000	11	110,000	
	Total	11	110,000	18	180,000	19	190,000	17	170,000	14	140,000	79	790,000	19.48%
	May-18	0	0	0	0	0	0	0	0	0	0	0	0	
Index (back financial)	Jun-18	0	0	0	0	0	0	0	0	0	0	0	0	
	Jul-18	0	0	0	0	0	0	0	0	0	0	0	0	
	Aug-18	0	0	0	0	0	0	0	0	0	0	0	0	
	Sep-18	0	0	0	0	0	0	0	0	0	0	0	0	
	Oct-18	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Total	Total	0	0	0	0	0	0	0	0	0	0	0	0	
Physical Hedges			160,000		270,000		280,000		250,000		210,000		1,170,000	28.85%
Storage			96,000		189,100		189,100		196,000		85,900		756,100	18.64%
Prepaid Obl			0		0		0		0		0		0	0.00%
Term Index	Aug-18	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
	Sep-18	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
	Oct-18	0	0	0	0	0	0	0	0	0	0	0	0	0.00%
Total NNG MN														
Contracts													380,000	9.37%
Call Options													790,000	19.48%
Costing Collar													0	0.00%
Storage													756,100	18.64%
Prepaid Obl													0	0.00%
Term Index													0	0.00%
Month/Daily													2,129,614	52.51%
Total													4,055,714	100.00%

NOTE:

**WINTER PLAN - CONSOLIDATED
NOVEMBER 2018 THROUGH MARCH 2019**

No Physical Fixed Price Hedges

Total Actual Fixed/Option Physical

GAS DAILY PACKAGES

STORAGE

	Contract #	
Injection	ANR	Total
Month	Volume	Volume
	<u>Injected</u>	<u>Injected</u>
May - balance forward	209,962	209,962
June	103,260	103,260
July	106,702	106,702
August	106,702	106,702
Sept	122,772	122,772
Oct	106,702	<u>106,702</u>
Total	756,100	756,100

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

	2014-2015 Consolidated GS	2015-2016 Consolidated GS	2016-2017 Consolidated GS	2017-2018 Consolidated GS	2018-2019 Consolidated GS	Proposed Change
Viking Gas Transmission (VGT)						
FT-A ZONE 1 - 1	14,493	14,493	14,493	14,493	14,493	0
FT-A ZONE 1 - 1 Winter Only	1,098	1,098	1,098	1,098	1,098	0
FA-A ZONE 1 - 1 Winter Only	1,000	0	0	1,500	1,500	0
Great Lakes Gas Transmission (GLGT)						
FT Western Zone- Summer Only	10,130	10,130	10,130	10,130	10,130	0
FT Western Zone- Annual	12,600	12,600	12,600	12,600	12,600	0
FT Western Zone- Winter Only	3,728	3,728	3,728	3,728	3,728	0
FT Western Zone- Winter Only*	13,430	13,480	13,480	15,030	15,030	0
Centra Transmission Holding/Centra Minnesota Pipelines (CTHI/CPMI)						
Centra FT-1	9,100	9,500	9,500	9,500	9,500	0
Total VGT Transportation	15,591	15,591	15,591	17,091	17,091	0
Total GLGT Transportation	26,458	29,808	29,808	31,358	31,358	0
Total CTHI/CPMI Transportation	9,100	9,500	9,500	9,500	9,500	0
Total Transportation	51,149	54,899	54,899	57,949	57,949	0
Total Seasonal Transportation	9,126	8,176	8,176	11,226	11,226	0
Total Seasonal Transportation %	17.84%	14.89%	14.89%	19.37%	19.37%	0.00%
<u>Other Entitlements not included in Peak Day Deliverability</u>						
AECO Storage	947,820	947,820	947,820	0	0	0
AECO/Emerson Swap	940,428	955,255	758,254	0	0	0
ANR Storage	0	0	0	0	756,100	756,100

MINNESOTA ENERGY RESOURCES - CONSOLIDATED

Change in Costs due to November 1, 2018 Change in Entitlement Levels and Related Demand Costs

	2017/18 Entitlements	2018/19 Entitlements	Entitlement Change	2018/19 Rate	Months	2017/18 Total Annual Cost	2018/19 Total Annual Cost	Total Annual Cost Change
Costs Assigned in Demand Charge								
<u>Viking Pipeline</u>								
FT-A ZONE 1 - 1AF0012	14,493	14,493	0	\$ 4.3706	12	\$760,117	\$760,117	\$0
FT-A ZONE 1 - 1AF0012	1,098	1,098	0	\$ 4.3706	3	\$14,397	\$14,397	\$0
FT-A ZONE 1 - 1AF0321	0	1,500	1,500	\$ 4.3706	3	\$19,668	\$19,668	\$0
<u>GLGTPipeline</u>								
FT Western ZoneFT19131	10,130	10,130	0	\$ 2.8100	7	\$467,884	\$199,257	-\$268,627
FT Western ZoneFT18528	12,600	12,600	0	\$ 2.8100	12	\$581,969	\$424,872	-\$157,097
FT Western ZoneFT18528 (5)	3,728	3,728	0	\$ 2.8100	5	\$71,745	\$52,378	-\$19,367
FT Western ZoneFT19129 (5)	3,350	15,030	11,680	\$ 6.1000	5	\$94,301	\$458,415	\$364,114
<u>CENTRA Pipeline</u>								
CENTRA TRANSMISSION	9,100	9,500	400	\$ 11.1338	12	\$1,269,253	\$1,269,253	\$0
CENTRA MINNESOTA PIPELINES	9,100	9,500	400	\$ 3.2990	12	\$376,086	\$376,086	\$0
Total Costs Assigned to Demand Charge						\$3,655,420	\$3,574,443	-\$80,977
Costs Assigned in Commodity Charge								
<u>Storage Service</u>								
Niska Storage (AECO)	947,820	0	-947,820	\$ -	0	\$244,998	\$0	-\$244,998
Niska Storage Assignment	947,820	0	-947,820	\$ -	0	-\$147,798	\$0	\$147,798
ANR Pipeline Storage	0	756,100	756,100	\$ 0.7000	12	\$309,772	\$6,351,240	\$6,041,468
<u>Balancing</u>								
VGT Balancing Agreement	7,465	7,465	0	\$ 1.0000	12	\$89,580	\$89,580	\$0
Union Balancing	4,453	10,000	5,547	\$ 0.4500	12	\$54,000	\$54,000	\$0
<u>Physical Forward Start Premium</u>								
						\$71,485	\$71,485	\$0
<u>Call Options Premium</u>								
						\$152,271	\$36,814	-\$115,457
Total Costs Assigned to Commodity Charge						\$774,308	\$6,603,119	\$5,828,811

MINNESOTA ENERGY RESOURCES - Consolidated

Daily Total Throughput Data - July 1, 2017 through June 30, 2018

Design Day:

Base	709
Variable	408

Date	28.53% Bemidji Adjusted HDD	13.34% Cloquet Adjusted HDD	35.13% Fargo Adjusted HDD	23.00% Intl. Falls Adjusted HDD	100.00% Weighted Adjusted HDD	Actual Total Through- Put *	Estimated Firm Through- Put **
7/1/17	7	4	3	11	6	20,904	3,160
7/2/17	6	5	0	8	4	14,745	2,472
7/3/17	0	2	0	0	0	9,665	796
7/4/17	0	0	0	0	0	9,921	709
7/5/17	0	0	0	0	0	15,195	709
7/6/17	0	0	0	0	0	18,682	709
7/7/17	4	4	0	5	3	20,046	1,782
7/8/17	0	0	0	1	0	16,160	756
7/9/17	0	2	0	0	0	17,541	823
7/10/17	0	0	0	1	0	23,004	803
7/11/17	0	0	0	3	1	22,091	1,028
7/12/17	8	11	4	12	8	23,459	3,856
7/13/17	13	11	7	11	10	19,890	4,844
7/14/17	0	0	0	0	0	14,223	709
7/15/17	4	0	0	4	2	12,315	1,592
7/16/17	0	8	0	1	1	13,036	1,164
7/17/17	0	0	0	0	0	20,250	709
7/18/17	1	2	0	4	1	18,934	1,248
7/19/17	0	0	0	2	0	18,539	850
7/20/17	0	0	0	0	0	17,232	709
7/21/17	0	0	0	0	0	12,509	709
7/22/17	0	1	0	0	0	12,673	736
7/23/17	2	5	0	1	2	13,540	1,330
7/24/17	0	0	0	0	0	16,651	709
7/25/17	0	0	0	0	0	16,003	709
7/26/17	0	0	0	1	0	17,324	756
7/27/17	0	0	0	0	0	19,274	709
7/28/17	0	0	0	0	0	13,003	709
7/29/17	0	0	0	0	0	11,973	709
7/30/17	0	0	0	0	0	12,629	709
7/31/17	0	0	0	0	0	17,383	709
8/1/17	0	0	0	2	0	19,038	859
8/2/17	2	5	0	5	2	19,780	1,679
8/3/17	8	14	5	7	7	19,619	3,760
8/4/17	5	4	0	7	4	14,343	2,177
8/5/17	5	5	0	7	4	12,365	2,170
8/6/17	6	6	0	6	4	14,245	2,308
8/7/17	0	0	0	0	0	19,907	709
8/8/17	0	0	0	0	0	19,176	709
8/9/17	0	0	0	0	0	18,067	709
8/10/17	5	7	1	6	4	17,297	2,365
8/11/17	4	5	0	6	3	12,951	2,014
8/12/17	0	1	0	2	0	13,004	877
8/13/17	9	2	3	2	4	12,641	2,379
8/14/17	5	5	0	3	3	17,067	1,804
8/15/17	0	0	0	0	0	16,869	709
8/16/17	3	3	1	0	1	17,881	1,262
8/17/17	4	7	0	7	3	18,314	2,132
8/18/17	0	1	0	1	0	13,910	830
8/19/17	0	0	0	0	0	13,645	709
8/20/17	5	0	0	6	3	14,916	1,859
8/21/17	8	5	3	5	5	19,545	2,845
8/22/17	8	7	4	9	7	20,899	3,381
8/23/17	12	10	0	16	8	22,558	4,137
8/24/17	4	10	0	12	5	22,044	2,902
8/25/17	1	5	0	4	2	16,025	1,429
8/26/17	5	6	3	5	5	14,866	2,563
8/27/17	12	5	3	11	8	16,354	3,777
8/28/17	0	2	0	1	0	20,826	838
8/29/17	0	0	0	0	0	20,287	709
8/30/17	4	4	0	5	3	20,543	1,871
8/31/17	6	11	0	8	5	21,380	2,704
9/1/17	2	7	2	4	3	15,026	1,852
9/2/17	4	0	0	5	2	11,590	1,581
9/3/17	0	0	0	0	0	10,329	709

Minnesota Energy Resources Corporation
2018-2019 Demand Entitlement

9/4/17	10	10	5	8	8	12,408	3,957
9/5/17	17	16	14	18	16	20,929	7,281
9/6/17	12	14	6	13	11	22,385	5,069
9/7/17	13	19	1	18	11	22,503	5,130
9/8/17	12	12	3	14	9	22,734	4,403
9/9/17	2	6	0	5	3	18,195	1,815
9/10/17	0	0	0	0	0	17,287	709
9/11/17	4	3	0	6	3	24,929	1,825
9/12/17	0	0	0	0	0	24,570	709
9/13/17	0	0	0	0	0	23,100	709
9/14/17	3	0	0	7	2	25,327	1,633
9/15/17	10	7	11	13	11	24,134	5,091
9/16/17	15	4	17	15	14	22,913	6,591
9/17/17	19	16	10	22	16	25,769	7,340
9/18/17	6	12	1	10	6	26,103	3,036
9/19/17	3	2	0	2	2	22,594	1,351
9/20/17	11	10	2	13	8	22,477	3,940
9/21/17	1	4	0	2	1	24,550	1,208
9/22/17	0	0	0	0	0	18,380	709
9/23/17	9	0	9	8	7	19,292	3,757
9/24/17	6	0	14	4	7	20,896	3,756
9/25/17	15	11	15	13	14	24,126	6,499
9/26/17	19	15	16	19	17	24,857	7,846
9/27/17	12	13	6	16	11	23,886	5,217
9/28/17	19	11	14	13	15	24,082	6,676
9/29/17	18	20	12	21	17	18,914	7,563
9/30/17	10	11	5	11	8	16,174	4,138
10/1/17	11	9	8	10	9	17,742	4,501
10/2/17	12	8	11	11	11	22,277	5,043
10/3/17	17	13	14	19	16	24,722	7,179
10/4/17	21	18	14	23	18	25,166	8,251
10/5/17	22	21	16	22	20	26,361	8,684
10/6/17	21	17	13	23	18	21,240	8,158
10/7/17	9	11	3	12	8	21,710	3,911
10/8/17	21	11	17	20	18	27,398	8,095
10/9/17	33	29	27	33	30	41,356	13,068
10/10/17	23	25	18	24	22	37,045	9,582
10/11/17	20	19	17	20	18	32,758	8,237
10/12/17	18	15	17	17	17	29,405	7,483
10/13/17	27	24	19	27	24	26,348	10,434
10/14/17	30	21	27	27	27	21,381	11,760
10/15/17	30	25	24	27	26	23,550	11,411
10/16/17	18	16	12	20	16	25,355	7,359
10/17/17	10	9	7	10	9	21,582	4,239
10/18/17	21	12	17	15	17	25,295	7,698
10/19/17	11	10	6	12	10	22,243	4,622
10/20/17	2	1	0	0	1	13,288	1,037
10/21/17	15	11	15	12	14	17,305	6,304
10/22/17	16	14	14	15	15	19,222	6,733
10/23/17	31	21	25	26	26	31,229	11,450
10/24/17	30	28	27	28	28	33,668	12,173
10/25/17	23	22	16	26	21	30,001	9,253
10/26/17	32	28	38	36	35	38,557	14,850
10/27/17	41	39	46	38	42	35,843	17,716
10/28/17	39	40	37	38	38	32,385	16,262
10/29/17	32	35	27	34	31	32,662	13,457
10/30/17	46	38	48	43	45	44,016	19,040
10/31/17	45	43	45	47	45	42,444	19,056
11/1/17	39	39	35	39	37	65,521	15,953
11/2/17	43	37	40	39	40	68,041	17,061
11/3/17	41	39	38	43	40	56,490	17,201
11/4/17	40	34	38	40	39	51,050	16,503
11/5/17	52	48	50	51	51	61,337	21,371
11/6/17	52	48	52	56	52	75,547	22,058
11/7/17	53	46	48	54	51	79,535	21,326
11/8/17	57	50	56	56	55	80,101	23,305
11/9/17	70	66	59	70	66	85,936	27,467
11/10/17	58	55	54	58	56	72,897	23,701
11/11/17	46	39	40	41	42	58,932	17,733
11/12/17	44	43	38	45	42	62,868	17,883
11/13/17	37	37	28	40	34	59,284	14,755
11/14/17	35	31	33	33	33	64,276	14,222
11/15/17	47	44	46	46	46	82,010	19,423
11/16/17	44	41	42	44	43	95,711	18,129
11/17/17	43	39	42	43	42	75,855	17,866
11/18/17	56	53	52	58	54	89,108	22,835
11/19/17	44	46	35	52	43	83,566	18,117

Minnesota Energy Resources Corporation
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11/20/17	43	42	36	43	40	91,788	17,214	MERC-Consolidated
11/21/17	60	53	55	59	57	101,768	24,006	
11/22/17	51	50	44	53	49	85,412	20,574	
11/23/17	37	38	29	35	34	56,396	14,535	
11/24/17	41	36	31	43	37	57,389	15,918	
11/25/17	44	44	39	48	43	65,923	18,373	
11/26/17	35	30	32	42	35	57,185	15,009	
11/27/17	28	25	24	32	27	63,659	11,825	
11/28/17	45	40	37	47	42	77,872	17,735	
11/29/17	37	40	29	41	35	71,015	15,136	
11/30/17	38	33	31	38	35	61,636	14,955	
12/1/17	38	34	36	37	36	52,241	15,569	
12/2/17	35	32	30	34	33	48,221	14,034	
12/3/17	36	30	33	33	34	46,222	14,392	
12/4/17	53	45	52	48	51	68,040	21,358	
12/5/17	67	60	57	66	62	86,672	26,061	
12/6/17	68	62	62	66	65	97,276	27,127	
12/7/17	56	55	52	56	54	84,703	22,867	
12/8/17	52	54	48	56	52	87,026	21,746	
12/9/17	52	53	47	55	51	85,092	21,522	
12/10/17	46	49	42	56	47	82,810	19,957	
12/11/17	61	57	57	63	59	104,847	24,903	
12/12/17	55	58	41	61	52	96,709	21,812	
12/13/17	54	53	47	53	51	95,623	21,665	
12/14/17	59	55	46	59	54	86,659	22,546	
12/15/17	57	54	44	63	53	76,025	22,453	
12/16/17	47	48	40	57	47	67,236	20,005	
12/17/17	40	45	41	41	41	62,402	17,604	
12/18/17	42	39	38	40	40	72,277	16,893	
12/19/17	63	56	48	66	57	92,832	24,097	
12/20/17	66	59	64	68	65	105,952	27,185	
12/21/17	69	53	71	69	67	97,451	28,173	
12/22/17	63	55	61	62	61	80,667	25,538	
12/23/17	61	54	62	73	63	74,933	26,437	
12/24/17	81	70	80	84	80	88,321	33,364	
12/25/17	90	88	84	92	88	106,889	36,741	
12/26/17	90	85	83	92	87	120,485	36,398	
12/27/17	83	78	76	88	81	113,309	33,784	
12/28/17	75	77	72	78	75	105,879	31,206	
12/29/17	91	84	86	86	87	110,194	36,276	
12/30/17	94	91	91	92	92	115,852	38,219	
12/31/17	91	89	87	89	89	113,454	36,988	
1/1/18	80	79	84	81	81	67,671	33,865	
1/2/18	76	70	71	76	73	70,169	30,525	
1/3/18	84	79	74	86	80	76,640	33,346	
1/4/18	83	79	76	84	80	78,551	33,398	
1/5/18	81	80	81	84	82	72,792	33,998	
1/6/18	72	72	66	67	69	60,538	28,734	
1/7/18	49	48	42	48	46	47,761	19,572	
1/8/18	52	48	40	62	49	50,884	20,881	
1/9/18	42	41	35	49	41	45,547	17,442	
1/10/18	54	44	61	52	55	51,705	23,046	
1/11/18	88	79	86	86	86	73,769	35,664	
1/12/18	86	82	79	85	83	71,249	34,457	
1/13/18	82	76	77	81	79	67,666	33,013	
1/14/18	71	72	76	69	73	63,362	30,305	
1/15/18	82	71	90	75	82	72,892	34,099	
1/16/18	71	66	78	71	73	67,270	30,374	
1/17/18	46	55	51	45	49	52,680	20,651	
1/18/18	39	36	42	41	40	46,401	17,097	
1/19/18	38	34	36	33	36	42,224	15,287	
1/20/18	45	33	40	42	41	41,606	17,489	
1/21/18	49	40	45	45	45	43,818	19,231	
1/22/18	49	57	46	60	51	52,880	21,592	
1/23/18	49	56	45	59	51	54,336	21,407	
1/24/18	46	48	47	47	47	51,187	19,812	
1/25/18	46	45	44	45	45	49,973	19,151	
1/26/18	46	34	48	42	44	42,870	18,697	
1/27/18	61	53	63	62	61	53,050	25,591	
1/28/18	70	64	72	76	71	60,344	29,831	
1/29/18	72	69	63	81	71	66,863	29,479	
1/30/18	57	56	53	65	57	60,349	24,135	
1/31/18	75	69	67	76	71	69,978	29,856	
2/1/18	82	77	73	83	78	74,346	32,723	
2/2/18	68	69	62	75	68	61,386	28,298	
2/3/18	80	73	80	85	80	64,341	33,407	
2/4/18	84	76	79	83	81	64,913	33,631	

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2/5/18	79	71	75	83	78	69,645	32,345
2/6/18	73	70	71	75	73	67,703	30,291
2/7/18	74	66	72	73	72	69,716	30,120
2/8/18	76	71	75	80	76	71,428	31,596
2/9/18	76	70	75	76	75	63,926	31,182
2/10/18	66	66	71	67	68	59,682	28,542
2/11/18	78	69	73	78	75	61,859	31,239
2/12/18	73	67	72	74	72	69,208	30,092
2/13/18	52	51	53	52	52	54,161	22,115
2/14/18	35	38	48	36	40	43,044	16,954
2/15/18	67	61	74	69	69	58,895	28,797
2/16/18	61	64	57	61	60	52,113	25,145
2/17/18	57	51	53	65	56	48,921	23,729
2/18/18	60	54	64	63	61	52,782	25,761
2/19/18	63	58	69	63	64	60,948	26,968
2/20/18	68	62	70	71	69	62,205	28,698
2/21/18	65	61	66	68	65	63,408	27,341
2/22/18	53	52	54	50	53	50,359	22,179
2/23/18	61	52	64	58	60	48,121	25,132
2/24/18	59	50	60	52	57	45,505	23,774
2/25/18	51	50	51	51	51	46,671	21,388
2/26/18	40	37	50	39	43	45,808	18,205
2/27/18	44	36	52	52	48	49,611	20,094
2/28/18	45	45	50	44	46	46,419	19,641
3/1/18	51	41	46	48	47	48,273	19,966
3/2/18	40	34	42	39	40	41,634	16,861
3/3/18	35	36	30	32	33	33,901	14,066
3/4/18	39	35	36	35	36	36,093	15,554
3/5/18	47	43	43	49	45	43,968	19,135
3/6/18	54	54	58	55	56	48,401	23,429
3/7/18	56	54	57	56	56	52,370	23,526
3/8/18	55	49	54	52	53	47,543	22,458
3/9/18	50	48	48	52	49	47,340	20,822
3/10/18	42	38	37	41	39	42,484	16,755
3/11/18	49	40	48	44	46	50,876	19,629
3/12/18	51	42	50	52	49	57,490	20,905
3/13/18	45	42	49	44	46	53,256	19,284
3/14/18	41	37	48	43	44	48,890	18,482
3/15/18	45	45	43	52	46	50,833	19,504
3/16/18	43	41	43	41	42	39,774	17,980
3/17/18	36	33	42	38	38	35,242	16,260
3/18/18	34	36	31	34	33	36,883	14,251
3/19/18	40	47	33	41	39	44,624	16,568
3/20/18	43	48	37	41	41	44,490	17,447
3/21/18	38	44	32	42	38	42,455	16,119
3/22/18	40	40	31	36	36	41,278	15,255
3/23/18	41	43	37	41	40	40,280	16,931
3/24/18	39	44	38	40	39	39,341	16,815
3/25/18	36	37	37	35	36	38,522	15,417
3/26/18	37	36	37	37	37	41,380	15,723
3/27/18	29	30	31	30	30	36,518	13,011
3/28/18	42	35	40	44	41	44,199	17,297
3/29/18	50	42	48	56	50	42,103	20,948
3/30/18	52	45	57	57	54	40,815	22,686
3/31/18	61	60	62	59	61	46,674	25,613
4/1/18	54	51	53	49	52	45,086	22,060
4/2/18	50	43	57	56	53	46,920	22,222
4/3/18	57	52	60	60	58	54,307	24,379
4/4/18	48	47	50	52	49	49,723	20,878
4/5/18	56	49	57	53	55	48,732	23,004
4/6/18	61	57	60	61	60	48,206	25,282
4/7/18	58	55	52	57	55	44,061	23,239
4/8/18	42	42	45	46	44	42,329	18,713
4/9/18	42	40	41	46	42	44,692	17,918
4/10/18	40	38	35	41	38	44,792	16,217
4/11/18	30	26	31	32	30	36,398	13,084
4/12/18	37	34	34	37	36	38,066	15,195
4/13/18	42	40	40	43	41	36,869	17,476
4/14/18	44	50	40	44	43	41,093	18,383
4/15/18	43	47	43	43	43	42,361	18,450
4/16/18	39	44	37	39	39	41,946	16,622
4/17/18	31	33	30	30	30	33,968	13,109
4/18/18	32	35	27	33	31	33,083	13,296
4/19/18	26	23	22	27	25	26,754	10,716
4/20/18	25	25	23	23	24	24,353	10,465
4/21/18	21	24	18	19	20	28,938	8,818
4/22/18	14	20	13	12	14	27,359	6,444

Minnesota Energy Resources Corporation
2018-2019 Demand Entitlement
MERC-Consolidated

4/23/18	14	16	12	19	15	29,318	6,643
4/24/18	30	26	26	34	29	34,528	12,536
4/25/18	18	19	15	16	16	29,789	7,435
4/26/18	24	23	16	22	21	29,059	9,101
4/27/18	28	32	28	33	30	27,628	12,851
4/28/18	22	28	16	22	21	23,865	9,122
4/29/18	7	14	4	8	7	17,994	3,564
4/30/18	9	7	8	3	7	19,502	3,600
5/1/18	26	16	28	26	25	29,538	10,973
5/2/18	14	17	10	19	14	27,158	6,457
5/3/18	14	11	9	16	12	22,328	5,643
5/4/18	14	11	0	17	9	17,372	4,504
5/5/18	12	11	3	18	10	16,898	4,852
5/6/18	8	16	1	16	9	18,947	4,187
5/7/18	0	0	0	0	0	21,442	709
5/8/18	16	17	8	18	14	26,739	6,304
5/9/18	24	25	17	20	21	32,274	9,126
5/10/18	29	23	24	29	27	30,241	11,523
5/11/18	21	26	9	21	17	23,428	7,779
5/12/18	12	19	6	12	11	19,649	5,070
5/13/18	5	1	1	7	3	18,635	2,009
5/14/18	12	2	0	13	7	24,717	3,443
5/15/18	0	13	0	1	2	22,001	1,480
5/16/18	1	1	0	9	3	23,159	1,752
5/17/18	20	23	8	18	16	22,730	7,097
5/18/18	6	12	8	11	8	18,103	4,150
5/19/18	20	24	13	21	18	17,958	8,244
5/20/18	13	13	7	10	10	17,719	4,896
5/21/18	7	4	2	8	5	22,526	2,829
5/22/18	4	4	0	3	2	20,300	1,568
5/23/18	0	0	0	0	0	21,053	709
5/24/18	0	0	0	0	0	20,055	709
5/25/18	0	0	0	0	0	14,421	709
5/26/18	0	0	0	0	0	13,229	709
5/27/18	0	0	0	0	0	10,640	709
5/28/18	0	0	0	0	0	11,785	709
5/29/18	0	2	0	0	0	19,298	796
5/30/18	0	5	0	0	1	19,946	959
5/31/18	3	6	0	6	3	20,194	1,897
6/1/18	12	20	0	13	9		4,349
6/2/18	15	21	8	14	13		5,978
6/3/18	10	12	3	13	8		4,171
6/4/18	4	9	0	13	5		2,856
6/5/18	1	11	0	6	3		1,996
6/6/18	10	5	3	11	7		3,560
6/7/18	4	9	0	2	3		1,801
6/8/18	0	6	0	0	1		1,057
6/9/18	0	12	0	4	3		1,735
6/10/18	0	8	0	0	1		1,123
6/11/18	8	8	8	1	6		3,287
6/12/18	6	3	4	7	5		2,865
6/13/18	0	0	0	3	1		1,000
6/14/18	0	2	0	0	0		796
6/15/18	0	2	0	0	0		796
6/16/18	0	0	0	0	0		709
6/17/18	2	0	0	3	1		1,197
6/18/18	1	0	0	3	1		1,058
6/19/18	1	0	0	1	1		919
6/20/18	0	0	0	0	0		709
6/21/18	0	6	0	0	1		1,052
6/22/18	0	3	0	0	0		845
6/23/18	0	3	0	0	0		856
6/24/18	1	13	0	5	3		1,941
6/25/18	0	10	0	1	1		1,284
6/26/18	0	10	0	0	1		1,232
6/27/18	0	0	0	2	0		859
6/28/18	0	0	0	0	0		709
6/29/18	0	0	0	0	0		709
6/30/18	0	0	0	0	0		709
Totals	10,917	10,422	9,996	11,205	10,594	13,975,857	4,580,946

* Volumes include interruptible and transportation volumes

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

MINNESOTA ENERGY RESOURCES - Consolidated

Customer Counts by PGAC Class - July 1, 2017 through June 30, 2018

Tariff Rate Class	Rate Designation	Jul-17 Average Customers	Aug-17 Average Customers	Sep-17 Average Customers	Oct-17 Average Customers	Nov-17 Average Customers	Dec-17 Average Customers	Jan-18 Average Customers	Feb-18 Average Customers	Mar-18 Average Customers	Apr-18 Average Customers	May-18 Average Customers	Jun-18 Average Customers	Annual Average Customers
GS- Residential	MERC000002	30,102	30,016	30,231	30,211	30,298	30,416	30,441	30,449	30,407	30,409	30,485	30,278	30,312
GS-C&I <1,500 therms/yr (Small)	MERC000006	2,099	2,065	2,070	2,088	2,111	2,138	2,122	2,234	2,352	2,346	2,359	2,338	2,194
GS-C&I >1,500 therms/yr (Large)	MERC000010	3,242	3,155	3,226	3,276	3,234	3,219	3,243	3,152	3,007	3,015	3,002	2,996	3,147
Small Volume Interruptible (SVI)	MERC000017	72	70	77	73	74	68	73	72	70	70	70	68	71
Small Volume Interruptible w/Joint (SVJ)	MERC000021	5	4	4	4	10	4	3	4	4	4	4	4	5
Large Volume Interruptible (LVI)	MERC000024	7	6	6	20	19	-10	5	5	5	5	5	5	7
Total		35,527	35,316	35,614	35,672	35,746	35,835	35,887	35,916	35,845	35,849	35,925	35,689	35,735

Projected Fixed Cost - November 2018 through March 2019

Futures Contracts WACOG

[illegible]

*Prices from 7/13/18 NYMEX market

MINNESOTA ENERGY RESOURCES - Consolidated

Projected Storage Cost - November 2018 through March 2019

Month/ Year	K#118657 NNG Storage (Dth)	LS Power K#132024 NNG Storage (Dth)	LS Power K#133736 NNG Storage (Dth)	Total NNG Storage (Dth)	Projected NNG WACOG	K#118657 NNG Storage Cost	K#132024 NNG Storage Cost	K#132112 NNG Storage Cost	Total NNG Storage Cost	ANR Storage GLGT/VGT (Dth)	ANR Storage GLGT/VGT WACOG	ANR Storage GLGT/VGT Cost
Nov-18	489,384	48,750	97,500	635,634	\$ 2.5162	\$ 1,231,399	\$ 122,666	\$ 245,332	\$ 1,599,396	96,000	\$ 2.6747	\$ 256,772
Dec-18	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 3,094,284	\$ 308,237	\$ 616,475	\$ 4,018,996	189,100	\$ 2.6747	\$ 505,787
Jan-19	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 3,094,284	\$ 308,237	\$ 616,475	\$ 4,018,996	189,100	\$ 2.6747	\$ 505,787
Feb-19	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 3,094,284	\$ 308,237	\$ 616,475	\$ 4,018,996	196,000	\$ 2.6747	\$ 524,243
Mar-19	489,384	48,750	97,500	635,634	\$ 2.5162	\$ 1,231,399	\$ 122,666	\$ 245,332	\$ 1,599,396	85,900	\$ 2.6747	\$ 229,757
Total	4,667,969	465,000	930,000	6,062,969		\$ 11,745,649	\$ 1,170,044	\$ 2,340,087	\$ 15,255,780	756,100		\$ 2,022,346

Month/ Year	NNG Storage Volume (Dth)	NNG Index Price	NNG Index Cost
Nov-18	635,634	\$ 2.5820	\$ 1,641,206
Dec-18	1,597,234	\$ 3.0570	\$ 4,882,743
Jan-19	1,597,234	\$ 3.3465	\$ 5,345,142
Feb-19	1,597,234	\$ 3.3320	\$ 5,321,983
Mar-19	635,634	\$ 2.6325	\$ 1,673,306
Total	6,062,969	\$ 3.1114	\$ 18,864,381
			\$ 3,608,601

Month/ Year	ANR Storage Volume (Dth)	Emerson Index Price	Emerson Market Cost
Nov-18	96,000	\$ 2.4845	\$ 238,512
Dec-18	189,100	\$ 2.6945	\$ 509,530
Jan-19	189,100	\$ 2.9065	\$ 549,619
Feb-19	196,000	\$ 2.8770	\$ 563,892
Mar-19	85,900	\$ 2.6700	\$ 229,353
Total	756,100		\$ 2,090,906
			\$ 68,560

Max NNG-MERC Storage (Storage plan withdrawals through Apr 19)	6,062,969	6,519,321	06/30/18 Storage Balance - NNG-MERC	1,464,079	22.46%	1,361,593
Max ANR Storage (Storage plan withdrawals through Apr 19)	756,100	756,100	06/30/18 Storage Balance - ANR	313,222	41.43%	313,222

Month/ Year	K#118657 NNG Storage (Dth)	LS Power K#132024 NNG Storage (Dth)	LS Power K#132112 NNG Storage (Dth)	Total NNG Storage (Dth)	Projected K#118657 NNG WACOG	Projected K#132024 NNG WACOG	Projected K#132112 NNG WACOG	WACOG NNG Cost	Projected NNG Indexes Price	Projected NNG Index Cost	Projected Storage (Savings)/ Cost
Nov-18	489,384	48,750	97,500	635,634	\$ 2.5162	\$ 2.5162	\$ 2.5162	\$ 1,599,396	\$ 2.5820	\$ 1,641,206	\$ (41,810)
Dec-18	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 2.5162	\$ 2.5162	\$ 4,018,996	\$ 3.0570	\$ 4,882,743	\$ (863,748)
Jan-19	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 2.5162	\$ 2.5162	\$ 4,018,996	\$ 3.3465	\$ 5,345,142	\$ (1,326,147)
Feb-19	1,229,734	122,500	245,000	1,597,234	\$ 2.5162	\$ 2.5162	\$ 2.5162	\$ 4,018,996	\$ 3.3320	\$ 5,321,983	\$ (1,302,987)
Mar-19	489,384	48,750	97,500	635,634	\$ 2.5162	\$ 2.5162	\$ 2.5162	\$ 1,599,396	\$ 2.6325	\$ 1,673,306	\$ (73,910)
Total	4,667,969	465,000	930,000	6,062,969	\$ 2.8092	\$ 2.8092	\$ 2.8092	\$ 15,255,780	\$ 3.1285	\$ 18,864,381	\$ (3,608,601)

*Indexes and projected WACOG based on 7/13/18 market prices

MINNESOTA ENERGY RESOURCES - Consolidated
Projected Call Option Costs - November 2018 through March 2019

Call/Put Options WACOG

Call/Put Options 10,000 Dth/contract

Nov-18															Dec-18															Jan-19															
Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle*	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle*	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	Trade Number	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle*	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	
1	05/03/18	64479	11	110,000	\$ 3,0000	\$ 330,000	\$ 2,7920	\$ 307,120	\$ 2,7920	\$ 307,120	\$ -	\$ 0.0950	\$ 10,450	\$ 317,570	1	05/10/18	64773	18	180,000	\$ 3,2000	\$ 576,000	\$ 2,9120	\$ 524,160	\$ 2,9120	\$ 524,160	\$ -	\$ 0.0900	\$ 16,200	\$ 540,360	1	05/08/18	64615	11	110,000	\$ 3,3500	\$ 369,500	\$ 2,9990	\$ 329,890	\$ 2,9990	\$ 329,890	\$ -	\$ 0.0950	\$ 10,450	\$ 340,340	
2	06/05/18	65973	11	110,000	\$ 3,1000	\$ 341,000	\$ 2,7920	\$ 307,120	\$ 2,7920	\$ 307,120	\$ -	\$ 0.1000	\$ 11,000	\$ 318,120	2	06/11/18	66008	18	180,000	\$ 3,3700	\$ 606,600	\$ 2,9120	\$ 524,160	\$ 2,9120	\$ 524,160	\$ -	\$ 0.1000	\$ 18,000	\$ 542,160	2	05/17/18	65198	10	100,000	\$ 3,6000	\$ 360,000	\$ 2,9990	\$ 299,900	\$ 2,9990	\$ 299,900	\$ -	\$ 0.0980	\$ 9,800	\$ 309,700	
3	07/05/18	66730	11	110,000	\$ 2,9800	\$ 327,800	\$ 2,7920	\$ 307,120	\$ 2,7920	\$ 307,120	\$ -	\$ 0.1000	\$ 11,000	\$ 318,120	3	07/12/18	66970	17	170,000	\$ 3,2000	\$ 544,000	\$ 2,9120	\$ 495,040	\$ 2,9120	\$ 495,040	\$ -	\$ 0.0970	\$ 16,490	\$ 511,530	3	06/07/18	65942	20	200,000	\$ 3,7000	\$ 740,000	\$ 2,9990	\$ 599,800	\$ 2,9990	\$ 599,800	\$ -	\$ 0.0990	\$ 19,800	\$ 619,600	
4	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	4	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	4	07/10/18	66845	19	190,000	\$ 3,5000	\$ 665,000	\$ 2,9990	\$ 569,810	\$ 2,9990	\$ 569,810	\$ -	\$ 0.0970	\$ 18,430	\$ 588,240			
5	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	5	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	5	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
6	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	6	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	6	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
7	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	7	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	7	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
8	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	8	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	8	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
9	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	9	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	9	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
10	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	10	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	10	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
11	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	11	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	11	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
12	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	12	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	12	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
13	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	13	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	13	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
14	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	14	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	14	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
15	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,7920	\$ -	\$ -	\$ -	\$ -	15	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9120	\$ -	\$ -	\$ -	15	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,9990	\$ -	\$ -	\$ -					
Total	-	-	33	330,000	\$ 998,800	\$ 3,0267	\$ 829,772	\$ 765,438	\$ 2,7920	\$ 765,438	\$ -	\$ 0.0983	\$ 26,958	\$ 792,396	Total	-	-	53	530,000	\$ 1,726,600	\$ 3,2577	\$ 1,427,765	\$ 2,9120	\$ 1,276,240	\$ 2,9120	\$ 1,276,240	\$ -	\$ 0.0956	\$ 41,917	\$ 1,318,157	Total	Total	60	600,000	\$ 2,155,500	\$ 3,5925	\$ 1,805,462	\$ 2,9990	\$ 1,507,190	\$ 2,9990	\$ 1,507,190	\$ -	\$ 0.0975	\$ 48,983	\$ 1,556,173
NNG	54	83.08%	27	274,154	\$ 3,0267	\$ 829,772	\$ 2,7920	\$ 765,438	\$ 2,7920	\$ 765,438	\$ -	\$ 0.0983	\$ 26,958	\$ 792,396	NNG	86	82.69%	44	438,269	\$ 3,2577	\$ 1,427,765	\$ 2,9120	\$ 1,276,240	\$ 2,9120	\$ 1,276,240	\$ -	\$ 0.0956	\$ 41,917	\$ 1,318,157	NNG	98	83.76%	50,2564	502,564	\$ 3,5925	\$ 1,805,462	\$ 2,9990	\$ 1,507,190	\$ 2,9990	\$ 1,507,190	\$ -	\$ 0.0975	\$ 48,983	\$ 1,556,173	
Other-Cons	11	16.92%	6	55,846	\$ 3,0267	\$ 169,028	\$ 2,7920	\$ 155,922	\$ 2,7920	\$ 155,922	\$ -	\$ 0.0983	\$ 5,492	\$ 161,414	Other-Cons	18	17.31%	9	91,731	\$ 3,2577	\$ 298,835	\$ 2,9120	\$ 267,120	\$ 2,9120	\$ 267,120	\$ -	\$ 0.0956	\$ 8,773	\$ 275,893	Other-Cons	19	16.24%	9,74359	97,436	\$ 3,5925	\$ 350,038	\$ 2,9990	\$ 292,210	\$ 2,9990	\$ 292,210	\$ -	\$ 0.0975	\$ 9,497	\$ 301,707	
Total	65	100.0%	33	330,000	\$ 3,0267	\$ 998,800	\$ 2,7920	\$ 921,360	\$ 2,7920	\$ 921,360	\$ -	\$ 0.0983	\$ 32,450	\$ 953,810	Total	104	100.0%	53	530,000	\$ 3,2577	\$ 1,726,600	\$ 2,9120	\$ 1,543,360	\$ 2,9120	\$ 1,543,360	\$ -	\$ 0.0956	\$ 50,690	\$ 1,594,050	Total	117	100.0%	60	600,000	\$ 3,5925	\$ 2,155,500	\$ 2,9990	\$ 1,799,400	\$ 2,9990	\$ 1,799,400	\$ -	\$ 0.0975	\$ 58,480	\$ 1,857,880	

Deal Number	Purchase Date	Trade Number	Feb-19													Mar-19													Total															
			Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle*	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost	Deal Number	Purchase Date	Trade Number	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	Deal Number	Purchase Date	%	Number Contracts	Physical Volume	Strike Price	Strike Cost	Option Price	Option Cost	Pent Settle*	Pent Settle Cost	Over/(Under) Market	Premium Per Unit	Premium Cost	Total Cost
1	05/15/18	65030	18	180,000	\$ 4,1500	\$ 747,000	\$ 2,9670	\$ 534,060	\$ 2,9670	\$ 534,060	\$ -	\$ 0.0930	\$ 16,740	\$ 550,800	1	05/17/18	65169	14	140,000	\$ 4,0500	\$ 567,000	\$ 2,8750	\$ 402,500	\$ 2,8750	\$ 402,500	\$ -	\$ 0.0980	\$ 13,720	\$ 416,220	1	-	-	72	720,000	\$ 3,6257	\$ 2,610,500	\$ 2,9135	\$ 2,097,730	\$ 2,9135	\$ 2,097,730	\$ -	\$ 0.0938	\$ 67,560	\$ 2,165,290
2	06/12/18	66049	17	170,000	\$ 4,1500	\$ 705,500	\$ 2,9670	\$ 504,390	\$ 2,9670	\$ 504,390	\$ -	\$ 0.0970	\$ 16,490	\$ 520,880	2	06/13/18	66145	14	140,000	\$ 4,3000	\$ 602,000	\$ 2,8750	\$ 402,500	\$ 2,8750	\$ 402,500	\$ -	\$ 0.1000	\$ 14,000	\$ 416,500	2	-	-	70	700,000	\$ 3,7359	\$ 2,615,100	\$ 2,9115	\$ 2,038,070	\$ 2,9115	\$ 2,038,070	\$ -	\$ 0.0990	\$ 69,290	\$ 2,107,360
3	07/17/18	67113	17	170,000	\$ 3,7500	\$ 637,500	\$ 2,9670	\$ 504,390	\$ 2,9670	\$ 504,390	\$ -	\$ 0.0940	\$ 15,980	\$ 520,370	3	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	3	-	-	65	650,000	\$ 3,4605	\$ 2,240,300	\$ 2,9328	\$ 1,906,350	\$ 2,9328	\$ 1,906,350	\$ -	\$ 0.0975	\$ 63,270	\$ 1,969,620		
4	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	4	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	4	-	-	19	190,000	\$ 3,5000	\$ 665,000	\$ 2,9990	\$ 569,810	\$ 2,9990	\$ 569,810	\$ -	\$ 0.0970	\$ 18,430	\$ 588,240			
5	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	5	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	5	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
6	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	6	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	6	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
7	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	7	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	7	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
8	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	8	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	8	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
9	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	9	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	9	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
10	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	10	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	10	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
11	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	11	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	11	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
12	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	12	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	12	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
13	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	13	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	13	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
14	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	14	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	14	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
15	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	15	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ 2,8750	\$ -	\$ -	\$ -	15	-	-	0	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Total	-	-	52	520,000	\$ 2,090,000	\$ 4,0192	\$ 1,542,840	\$ 2,9670	\$ 1,542,840	\$ 2,9670	\$ -	\$ 49,210	\$ 1,592,050	Total	-	-	28	280,000	\$ 1,169,000	\$ 4,1750	\$ 805,000	\$ 2,8750	\$ 805,000	\$ 2,8750	\$ -	\$ 27,720	\$ 832,720	Total	-	-	226	2,260,000	\$ 8,139,900	\$ 3,6017	\$ 6,611,960	\$ 2,9256	\$ 6,611,960	\$ -	\$ 218,550	\$ 6,830,510				
NNG	85	17	83.33%	43	433,333	\$ 4,0192	\$ 1,741,667	\$ 2,9670	\$ 1,285,700	\$ 2,9670	\$ -	\$ 0.0946	\$ 1,326,708	NNG	66	82.50%	23	5	231,000	\$ 4,1750	\$ 964,425	\$ 2,8750	\$ 664,125	\$ 2,8750	\$ 664,125	\$ -	\$ 0.0990	\$ 22,869	\$ 686,994	NNG	389	83.12%	187,931	1,879,321	\$ 3,6019	\$ 6,769,091	\$ 2,9259	\$ 5,498,692	\$ 2,9259	\$ 5,498,692	\$ -	\$ 0.0967	\$ 181,736	\$ 5,680,428
Other-Cons	17	16.67%	9	86,667	\$ 348,333	\$ 2,9670	\$ 257,140	\$ 2,9670	\$ 257,140	\$ 2,9670	\$ -	\$ 0.0946	\$ 8,202	\$ 265,342	Other-Cons	14	17.50%	5	49,000	\$ 204,575	\$ 2,8750	\$ 140,875	\$ 2,8750	\$ 140,875	\$ -	\$ 0.0990	\$ 4,851	\$ 145,726	Other-Cons	79	16.88%	38,076	380,679	\$ 3,6010	\$ 1,370,809	\$ 2,9244	\$ 1,113,268	\$ 2,9244	\$ 1,113,268	\$ -	\$ 0.0967	\$ 36,814	\$ 1,150,082	
Total	102	100.0%	52	520,000	\$ 4,0192	\$ 2,090,000	\$ 2,9670	\$ 1,542,840	\$ 2,9670	\$ 1,542,840	\$ -	\$ 0.0946	\$ 49,210	\$ 1,592,050	Total	80	100.0%	28	280,000	\$ 4,1750	\$ 1,169,000	\$ 2,8750	\$ 805,000	\$ 2,8750	\$ 805,000	\$ -	\$ 0.0990	\$ 27,720	\$ 832,720	Total	468	83.1%	226	2,260,000	\$ 3,6017	\$ 8,139,900	\$ 2,9256	\$ 6,611,960	\$ 2,9256	\$ 6,611,960	\$ -	\$ 0.0967	\$ 218,550	\$ 6,830,510