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Minneapolis, MN 55459-0038

**PUBLIC DOCUMENT**  
**Trade Secret Information has been Excised**

May 1, 2019

Mr. Daniel Wolf  
Executive Secretary  
Minnesota Public Utilities Commission 350  
Metro Square Building  
121 East Seventh Place, Suite 350  
St. Paul, MN 55101-2147

**Re: CenterPoint Energy 's Request for Change in Demand Units  
Docket No. G008/M-19-278**

Dear Mr. Wolf:

Pursuant to Minn. Rule 7825.2910, Subp. 2, CenterPoint Energy Resources Corp. d/b/a/ CenterPoint Energy Minnesota Gas ("CenterPoint Energy" or the "Company") submits a Request for a Change in Demand Units (Request). CenterPoint Energy requests approval to implement two demand cost changes – one effective May 1, 2019 and the second effective on November 1, 2019 both of which use the same design day estimate.

First, the Company requests to implement two new storage contracts, reflect a summer capacity release credit, and correct its Viking Pipeline entitlement expenses effective May 1, 2019. Changes will increase demand costs about \$1.4 million annually, and the estimated per-unit charge should increase by \$0.00125 per therm from April 1, 2019 rates.

Second, the Company plans to implement a change in demand rate effective on November 1, 2019, which reflects the addition of demand units and change of per-unit discount rate under the renegotiated long-term agreement with Northern Natural Gas ("Northern" or "NNG") that includes requested growth on our distribution system. These changes will increase demand costs by approximately \$24.2 million and the per-unit charge is estimated to increase by about \$0.02307 per therm from April 1, 2019 rates. (Please note that the increase may be updated in November). The additional capacity will increase available entitlements by 4.7% and increase the current estimated of reserve margin to 3.7%. The annual effect on a residential heating customer using 890 therms (2017 Rate Case residential use-per-customer) is an increase of about \$20.50 annually.

**CenterPoint Energy has designated information in this document trade secret. Specifically, Exhibit A, pages 1-3; Exhibit B3; and Exhibits C1, C2, C3, and C4.** The information meets the definition of trade secret in Minn. Stat. § 13.37, subd.1(b), as follows: (1) the information was supplied by CenterPoint Energy, the affected organization; (2) CenterPoint Energy has taken all reasonable efforts to maintain the secrecy of the information, including protecting it from disclosure in this document; and (3) the protected information contains gas supply contract information which derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by other persons who can obtain economic value from its disclosure or use.

Feel free to contact me at 612-321-5078 if you have any questions.

Sincerely,

/s/ \_\_\_\_\_

Marie Doyle

Regulatory Analyst

Regulatory Services

[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

**ADDITIONAL INFORMATION**  
**Minn. Rule 7829.1300, Subp. 3**  
**CenterPoint Energy**

A. The name, address, and telephone number of the utility:

CenterPoint Energy Resources Corp., d/b/a/ CenterPoint Energy Minnesota Gas  
505 Nicollet Mall  
P.O. Box 59038  
Minneapolis, MN 55459-0038  
(612) 372-4664

B. The name, address, and telephone number of the attorney for the utility:

Steven Clay  
CenterPoint Energy  
505 Nicollet Mall  
P.O. Box 59038  
Minneapolis, MN 55459-0038  
(612) 321-4606  
[Steven.Clay@CenterPointEnergy.com](mailto:Steven.Clay@CenterPointEnergy.com)

C. The date of the filing and the date the proposed rate or service change will go into effect:

Date Filed:	May 1, 2019
Effective Date:	Storage Contract Changes on May 1, 2019 NING Contract changes on November 1, 2019

D. The statute that the utility believes controls the time frame for processing the filing:

CenterPoint Energy is unaware of any statute that controls the time frame for processing this filing.

E. The signature and title of the utility employee responsible for the filing:

\_\_\_\_\_/s/\_\_\_\_\_  
Marie Doyle  
Regulatory Analyst  
(612) 321-5078  
[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

**SUMMARY OF MISCELLANEOUS TARIFF FILING**

**Minn. Rule 7829.1300, Subp. 1**

**CenterPoint Energy**

**Filing Upon a Change in Demand**

**Minn. Rule 7829.1300, Subp. 2**

A filing for a change in demand is required when there is an increase or decrease in demand, a redistribution of demand percentages among classes, or if one form of demand is exchanged for another. CenterPoint Energy has renegotiated its long-term storage contract with Natural Gas Pipeline (NGPL) effective May 1, 2019. In addition, the Company has renegotiated a three-year storage contract with BP Canada, reflected a correction to its Viking entitlement costs, and added a 2019 summer capacity release agreement. As previously discussed in Docket G-008/M-18-462, effective November 1, 2019, the Company will increase its Northern Natural Gas transportation capacity to meet growth in both residential and commercial/industrial needs beginning in 2019 and going forward. The per-unit demand costs will increase on May 1, 2019 by \$0.00125, and again on November 1 by \$0.02307 per therm from April 1, 2019 rates and the annual effect on a residential heating customer using 890 therms (2017 Rate Case residential use-per- customer) is a combined increase of about \$20.50.

**Filing Upon a Change in Demand**  
**Minn. Rule 7829.1300, Subp. 2**  
**CenterPoint Energy**  
**May 2019**

**7825.2910 FILING BY GAS UTILITIES**

**Subp.2. Filing upon a change in demand.** *Gas utilities shall file for a change in demand to increase or decrease demand, to redistribute demand percentages among classes, or to exchange one form of demand for another. A filing must contain:*

**A. A description of the factors contributing to the need for changing demand.**

**May 1, 2019 Proposed Demand Changes**

CenterPoint Energy proposes several changes to its demand portfolio and corresponding demand rate, as detailed below.

1. Viking Demand Unit Charges - As noted by letter on April 24, 2019, CenterPoint Energy discovered that it had not used the correct number of months of service for one of its Viking Pipeline contracts. With this filing, the Company corrects the number of months of service from 5 to 12, as noted on Exhibit A, Page 1 of 3.
2. Viking Pipeline Summer Capacity Release – CenterPoint Energy holds a total of 76,809 Dth/day of year-round Viking capacity from Zone 1 to 1 market area. During the summer months, when loads are minimal, and when the full contracted capacity is not needed, the Company will seek bids to release remaining excess Viking capacity. For Summer 2019, there is planned maintenance (pigging) required on the Minnesota Intrastate Pipeline Company (MIPC) system that requires the Company to flow up to 40,000 Dth/day at South Cambridge; therefore, we released 35,711 Dth/day of our total 76,809 Dth/day capacity to Tenaska Marketing Ventures. The credit of \$276,832 is reflected on Exhibit A, Page 1 of 3.
3. BP Canada Marketer Storage Contract – As part of its supply portfolio, CenterPoint Energy relies on various storage contract arrangements. A shorter-term winter storage contract with Tenaska was due to expire, and an RFP was issued to 12 large suppliers in July 2018. BP Canada and Tenaska were the two bids received. After review of both bids, it was clear that BP Canada had the favorable bid by providing the most operational flexibility and reasonable pricing, and the contract was replaced at an additional annual cost of about \$2.4 million. As noted in the accompanying exhibits, the allocation of the total contract cost between demand and commodity expense is proposed to be split based on the contracted annual volume between baseload and swing supplies, which assigns 50.05% to demand costs, as shown on Exhibit A, Page 1 of 3. This allocation is the same as the prior contract's split (which was approved on May 8, 2017 in Docket No. G-008/M-16-571), shown in Exhibit C1.
4. Natural Gas Pipeline (NGPL) Storage Contract -

Due to the lack of alternative storage service of the size and type required at a comparable cost without extensive additional upstream transportation and/or other cost, NGPL was deemed to be the most economical storage option to serve our customers.

CenterPoint Energy has entered into a long-term agreement with NGPL that provide for storage capacity of 15.8 Bcf of gas, detailed in Exhibit C2. The new agreement begins

May 1, 2019 and expires April 30, 2034. CenterPoint Energy has the same maximum firm daily withdrawal rights for storage of up to 210,986 Dth/day as its previous contract, and a corresponding level of transportation rights which allow for moving the gas to and from interconnects with Northern and other supply points. This contract reserves the use of firm capacity on Northern for moving the storage gas to its system during winter months to ensure the reliability of this supply source during peak load periods. Maximum firm daily injection rights under the agreements are 105,493 Dths/day. This storage service will provide much needed flexibility to meet daily load swings on CenterPoint Energy's system and will provide a natural hedge against price increases in winter months during years when summer-winter differentials are favorable. The total annual storage & transportation will increase \$2.7M for 2019, but result in a net increase longer-term of only \$869,000 per year after February 2020. At that point, all facilities fees will be complete from a previous agreement that paid for the build out of the Glenwood/Mills interconnect between NNG and NGPL. Although the total demand cost with the new agreement will have a slight annual increase, the agreed upon fixed negotiated rates with NGPL will still represent a 34% discount to tariff on the annual transportation cost and a 12% discount on the annual storage cost.

NGPL storage service accomplishes the following:

- Rate Control – Discounted and stable rates for storage and transportation
- Supply Cost Savings – Supply access at Midcontinent receipt points
- Flexibility – Storage balancing for varying load patterns
- Simplified Structure – Collapsed 6 storage agreements to 2 storage agreements and reduced total transportation capacity to align with storage withdrawals (270,000 Dth/day to 212,000 Dth/day)
- Alignment – Supports the new NNG contracts that extended until 2034.
- Necessity – Storage is currently not available on NNG; this upstream storage is critical to supporting customer demand on NNG

5. CenterPoint Energy proposed change to the Demand/Commodity Cost allocation of the NGPL contract expense:

Traditionally, demand costs are those that are fixed in nature and not subject to change based on volumes used. In its February 28, 2012 Order in the Company's G-008/M-07-561 and G-008/M-11-1078 Requests for Changes in Demand Units, the Commission required the Company to assign part of the demand-assigned portion of the NGPL storage contract to Small Volume Dual Fuel customers in the form of a winter commodity surcharge<sup>1</sup>. The total NGPL contract charges were split 65.69% to Firm/Small Dual Fuel and 34.31% to commodity, thereby 34.31% of the contract costs were recovered from all Sales service customers as a commodity-based cost.

CenterPoint Energy proposes to change the allocation of the new NGPL contract to streamline cost assignment and to recognize that Small Volume Dual Fuel customers are expected to curtail during times of system or supply constraint. The Company proposes to change the Demand/Commodity allocation split to 50/50%, reflecting equal responsibility of storage costs, shifting more of the total contract to the commodity cost recovery side, as shown in Exhibit C3. Despite an initial storage cost increase of about \$2.7 million for the total cost of the NGPL contract, this allocation proposal will assign about \$1.3 million less

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<sup>1</sup> Order Approving Changes in Demand Entitlements and Setting Further Requirements, Dockets G-008/M-07-561 and G-008/M-11-1078, February 28, 2012, page 4, Ordering Point 6, Compliance filing made March 23, 2012 detailing cost allocation.

to Demand Costs, assigning the remaining expenses to the commodity costs. The Small Volume Dual Fuel customers that have been assigned a portion of the demand costs will still be billed their portion of commodity costs, which will be larger than under the old allocation method. By assigning the total contract cost 50% to commodity and 50% to demand, the secondary demand allocation will end, streamlining the administration of the storage contract. Additionally, as discussed in Docket G-008/GR-17-285, and G-008/M-17-533, a number of customers that previously took Dual Fuel service have elected to take firm service. Customers that have remained on Dual Fuel service are subject to curtailment to a greater degree and the change to the allocation will reflect that.

#### Customer impact of May 1 changes

CenterPoint Energy estimates an increase in the average annual residential cost due to the changes noted above of \$1.11 ( $(\$0.08722 / \text{therm} - \$0.08597 / \text{therm}) * 890$  average residential therms/year = \$1.11).

#### **November 1, 2019 Proposed Demand Changes**

1. NNG Pipeline Entitlement: As discussed in the 2018-19 Demand Entitlement filing (Docket No. G-008/M-18-462) CenterPoint's 2019-2020 Heating season will reflect the addition of CenterPoint Energy's first growth election under its new NNG demand contract. The Company will add 50,688 DT/day winter entitlement units, with a corresponding increase to summer entitlement of 30,412. Growth elections include a sizeable increase to a variety of Town Border Stations (TBSs) in the Company's outstate service area of over 14,600 DT/day to help support supply deliverability to areas of Greater Minnesota. The additional capacity will increase available entitlement and reserve margin. The contracted discount rate will be updated, and the market support credits will also change on November 1. The Company proposes to zero-out the summer capacity release credit on November 1. Overall, annual demand costs would increase \$24.2 million, at an estimated average \$20.53 per residential customer. Detailed changes are shown in Exhibit A, Page 2 of 3.
2. Propane Peaking- CenterPoint Energy's River Plant output estimate has been reduced from 36,000 DT/day to 27,000 DT/Day for the 2019-2020 and 2020 -2021 heating seasons because of distribution system replacement work. This work will take place over the next two years and will reduce the natural gas flow at this location, limiting the capacity to add propane-air to the system there. This change does not change demand expenses but will impact the capacity available on design day.
3. Additional Changes To-Be-Determined before November 1  
The Company expects to recontract for new annual seasonal swing / supply reservation before it files its November 1, 2019 final changes. In addition, review of the heating season's results and potential alternative supply options may necessitate further updates to November's demand portfolio.

**B. The Utility's Design Day demand by customer class and the change in Design Day demand, if any, necessitating the demand revision.**

Design Day Model:

CenterPoint Energy's Design Day Estimate for 2019-2020

	<b>Current Year 2019-2020</b>	<b>Prior Year 2018-2019</b>
<b>Requirements</b>		
Calculated Design Day	1,399,000	1,373,000
<u>Physical Reserve</u>	<u>36,000</u>	<u>36,000</u>
Total Requirements	1,435,000	1,409,000
<b>Supply</b>		
Pipeline Entitlement (inc Waterville UG)	1,230,284	1,179,596
Liquefied Natural Gas (LNG)	72,000	72,000
<u>Propane</u>	<u>149,000</u>	<u>158,000</u>
Net Supply	1,451,284	1,409,596
<b>Reserve Margin Range</b>		
Available Capacity Net Requirements	52,284	36,596
As a Percentage of Total Requirements	3.7%	2.6%
Available including Physical Reserve	16,284	596
(Reserve / Design Day)	1.1%	0.0%

CenterPoint Energy's Design Day modeling process was completed this year by adding the results of two models together, as described below. The estimation methodology used by CenterPoint Energy is the same as approved in the last several demand entitlement requests. The latest approval was made on March 21, 2018, for the 2017-2018 Heating season in Docket No. G-008/M-17-533, and the 2018-2019 Heating Season request (G-008/M-18-482) remains under review.

(1) Traditional Design Day Model:

CenterPoint Energy's traditional firm Design Day forecasting dataset includes daily firm usage data from all winter days for the past six heating seasons (November 2013 – March 2019), includes the monthly count of firm customers, and includes both HDDs and the square of the HDDs as independent variables to account for the non-linear relationships between HDD and usage. The model estimates the expected use-per customer ("UPC") at various levels of HDD. This model uses many observations, which reflect recent customer use patterns. There is a good fit, as the actual observations (high R squared of 0.9778) and the coefficients are consistent with expectations and are statistically significant. (See Exhibit B1 Traditional for model specifications and statistical test results, and Exhibit B5 for the traditional firm daily data set.)

To account for the limited observations available at extremely cold temperatures, CenterPoint Energy calculates the UPC level from the model at the upper level of the 95% confidence



interval. This limits the likelihood of the actual UPC being above the estimate to a 2.5% chance, which CenterPoint Energy believes is necessary in Minnesota's cold climate. CenterPoint Energy has been using this model since it introduced it on August 1, 2012 in the Demand Entitlement filing for the 2012-2013 Heating season, Docket No. G-008/M-12-864. CenterPoint Energy's estimated Design Day for the traditional firm 2019-2020 heating season is 1,388,000, assuming 90 HDDs. CenterPoint Energy's "traditional" daily dataset includes the data for customers migrated to firm service beginning in 2016 as part of the traditional model, since those customer elections have moved the volumes to firm service.

(2) Customer Migration Design Day Model

As discussed in its 2017 Rate Case, CenterPoint Energy has reviewed its Dual Fuel programs as part of an assessment of potential service reliability issues related to our Dual Fuel customers and the impacts of our Dual Fuel programs on firm service customer classes. As a result of these efforts, the Company has moved a number of Dual Fuel customers to firm tariff offerings – either sales or transportation service. Customers electing sales service have now been incorporated into the traditional model found above.

There is a remaining group of customers who plan to migrate November 1, 2019 with the addition of available entitlement. To account for these customers' requirements for firm service, the Company produced a second model and database to include the usage of these customers in the firm sales forecast. Because the customers were served under Dual Fuel tariffs, the Company had daily use history available to use for modeling. We provide a second model for the soon-to-be converted customers that used daily sales data for the same six-year historical period. CenterPoint Energy estimates that this group of customers will need 11,000 DT of entitlement on Design Day, from the model at the upper level of the 95% confidence interval. Because the customer count (of customers that move from Dual Fuel to firm service) is the same (147 customers) for the whole period, the regression was modeled directly on the combined group usage, instead of the UPC.

The Company used expected service elections to estimate sales service requirements: either Sales Service or Transportation Service. The Design Day estimate for customers expected to use the Company's entitlement under Sales Service was added to the traditional forecast. Model results are shown in Exhibit B1 – Migrate, and the data set in Exhibit B6.

We added the model estimates from the two models together (the traditional UPC and the Dual Fuel conversion) to reach the total design day estimate for the upcoming winter season 2019-2020.

Traditional	1,388,000
New conversions	<u>11,000</u>
Total	1,399,000

CenterPoint Energy uses the regression modeling to be sure we have enough capacity to delivery gas when the temperature is approaching a Design Day scenario. We are extremely cautious about the Design Day estimate. It is critically important that we have the capacity to serve firm customers if a Design Day occurs; using a 95% confidence Interval upper limit is responsible, if not necessary, to assure sufficient capacity. By using the 95% confidence level, the likelihood that the actual UPC will be above the estimate is only 2.5%. Therefore, CenterPoint Energy estimates it has a 3.7% reserve margin.

Exhibit B details CenterPoint Energy's design day models, along with related data requested annually by the Department of Commerce (DOC) to complete its analysis. The Company worked with the Department of Commerce on model enhancements and has included a number of alternative models it reviewed to complete its analysis in Exhibit B7.

Cost Estimates:

Exhibit A, Page 1 contains the Annual Demand Cost Estimate that the Company will make effective May 1, 2019 reflecting updated expenses.

Exhibit A, Page 2 contains the Annual Demand Cost Estimate that the Company will make effective November 1, 2019, reflecting updated entitlement expense. Prior to implementation, CenterPoint Energy plans to update yet-to-be-contracted expenses when they become final.

Exhibit A, Page 3 shows the current (April 1, 2019) Annual Demand Cost Estimate, provided for comparison purposes as requested in previous demand filings.

Note: Exhibit A, pages 1-3; Exhibit B3; and Exhibits C1, C2, C3, and C4 are trade secret because they contain details on contracted units and rates, and disclosure of this information would adversely affect our ability to negotiate future contracts with capacity suppliers. A public version is supplied in the public document that summarizes available capacity, removing detailed information that is be trade secret.

**C. A summary of the levels of winter versus summer usage for all customer classes. 12 months ended March 2019 (in Dekatherms) –**

Throughput in Dekatherms (Dth)			
Class	Winter	Summer	Total
SALES SERVICE			
<b>Small Firm</b>	93,306,885	30,950,131	124,257,016
<b>Large Firm</b>	625,564	472,079	1,097,643
<b>Small Dual Fuel</b>	5,702,838	3,060,881	8,763,719
<b>Large Dual Fuel</b>	4,243,951	4,586,366	8,830,317
subtotal	<u>103,879,238</u>	<u>39,069,457</u>	<u>142,948,695</u>
TRANSPORT			
<b>Small Firm</b>	2,110,600	952,321	3,062,921
<b>Large Firm</b>	11,519,302	16,776,812	28,296,114
<b>Small Dual Fuel</b>	658,057	480,375	1,138,432
<b>Large Dual Fuel</b>	12,533,260	15,229,284	27,762,544
subtotal	<u>26,821,219</u>	<u>33,438,792</u>	<u>60,260,011</u>

**D. A description of Design Day gas supply from all sources under the new level, allocation, or form of demand.**

Exhibits A and B contain the detailed pipeline entitlements and other demand costs required. ~~S-~~

**Filing Upon a Change in Demand**  
**Minn. Rule 7829.1300, Subp. 2**

**CenterPoint Energy Summary of Exhibits**

- EXHIBIT A**      Page 1 of 3    \*Annual Demand Cost Estimate - Proposed May 1, 2019  
Page 2 of 3    \*Annual Demand Cost Estimate - Proposed November 1, 2019  
Page 3 of 3    \*Annual Demand Cost Estimate - Effective April 1, 2019
- EXHIBIT B**      Additional Information Request from the Department of Commerce Additional information pursuant to the Department's request to all utilities concerning demand entitlement changes dated October 1, 1993.
- B1                  Design Day Study Model Specification – Traditional  
Design Day Study Model Specification – Migration
- B2                  Heating Degree Day (HDD) data for the most recent 12-month period  
Historical and Projected Design Day and Peak Day requirements
- B3                  \*Demand Profile
- B4                  Historic gas price change comparisons (two pages)
- B5                  Firm Design Day Data – Traditional
- B6                  Migration Firm Sales Design Day Data
- B7                  Alternate models reviewed
- EXHIBIT C**      C1                  \*BP Canada Marketer Storage – Cost and Allocation  
C2                  \*NGPL Contract Details  
C3                  \*NGPL Demand/Commodity allocation
- EXHIBIT D**      Intervenor Notification Filing Requirements pursuant to Minn. Rule 7825.2910,  
Subp. 3.

\* - indicates NON-PUBLIC document

Effective: May 1, 2019

Trade Secret Information has been Excised

**Demand Summary**

Rows marked with an "X" are considered Trade Secret

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								
X								
X								
X								
X								
X								
X								
X								
							<b>Total NNG Demand Bill</b>	<b>\$70,588,463</b>

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								
X								
							<b>Total Viking Demand Bill</b>	<b>\$4,028,417</b>

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								

**SUPPLY DEMAND**

	Allocation
X	
X	
X	
X	
X	
X	
X	
X	
X	
X	
X	

Plus: Propane Costs	\$326,040
<b>Annual Estimated Demand Expense</b>	<b>\$96,768,468</b>

Divided by: Annual Demand Volume	1,109,443,970
Rate	\$0.08722
Rate Before Adj Nov-18	\$0.08597
New Annual Cost (Therms: 890)	\$77.63
Change in Annual Bill	\$1.11

**Footnotes:**  
A Corrected months of entitlement contracted for.  
B New NGPL Contract - New Allocation proposed  
C New BP Canada Contract - replaces Tenaska  
D Summer 2019 - 5 month Capacity Release on Viking

Effective: November 1, 2019

Trade Secret Information has been Excised

**Demand Summary**

Rows marked with an "X" are considered

Trade Secret  
X  
X  
X  
X  
X  
X  
X  
X  
X  
X

Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
<b>Total NNG Demand Bill</b>							<b>\$94,515,756</b>

X  
X  
X

Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
<b>Total Viking Demand Bill</b>							<b>\$4,028,417</b>

X  
X

Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
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**SUPPLY DEMAND**

X  
X  
X  
X  
X  
X  
X  
  
X  
X  
X

Allocation

Plus: Propane Costs \$326,040  
**Annual Estimated Demand Expense** **\$120,972,592**

Divided by: Annual Demand Volume 1,109,443,970

Rate \$0.10904  
Rate Before Adj Nov-18 \$0.08597  
New Annual Cost (Therms: 890) \$97.05  
Change in Annual Bill \$20.53

**Footnotes:**

- A NNG CONTRACT - Grown Election and Rates\_ new levels of Entitlement Discounted/Non-discounted
- B New Discount rates per Contract
- C Corrected Term\_ 12 months
- D NOT YET UPDATED: Value from winter 2018/2019, to be updated by supplement in November 2019
- E NGPL - New Contract - proposed change to allocation between Demand and Commodity
- F New BP Canada Contract - replaces Tenaska
- G Zero-out Summer Viking Capacity Release credit

Effective: April 1, 2019

Trade Secret Information has been Excised

**Demand Summary**

Rows marked  
with an "X" are  
considered  
Trade Secret

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								
X								
X								
X								
X								
X								
X								
X								
							<b>Total NNG Demand Bill</b>	<b><u>\$70,588,463</u></b>

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								
X								
							<b>Total Viking Demand Bill</b>	<b><u>\$3,416,533</u></b>

	Pipeline	Contract Type	Season	Rate Type	(DTH)	RATE	Number of Mo.	Annual Cost
X								
X								

**SUPPLY DEMAND**

	Allocation
X	
X	
X	
X	
X	
X	
X	
X	
X	
X	
X	

Plus: Propane Costs \$326,040  
**Annual Estimated Demand Expense** **\$95,373,796**

Divided by: Annual Demand Volume 1,109,443,970  
 Rate \$0.08597  
 Rate Before Adj  
 New Annual Cost (Therms: 890) \$76.51  
 Change in Annual Bill \$76.51

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.988854893
R Square	0.977834
<b>Adjusted R Square</b>	<b>0.97778496</b>
Standard Error	0.036304921
Observations	907

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	52.56264851	26.28132425	19939.5908	0
Residual	904	1.191514779	0.001318047		
Total	906	53.75416329			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<b>Intercept</b>	<b>0.043777035</b>	0.007716465	5.673198536	<b>1.88646E-08</b>	0.028632766	0.058921304	0.028632766	0.058921304
<b>HDDs</b>	<b>0.01511633</b>	0.000381878	39.58420169	<b>1.378E-199</b>	0.01436686	0.0158658	0.01436686	0.0158658
<b>HDDs^2</b>	<b>1.19482E-05</b>	4.40788E-06	2.710643695	<b>0.006842531</b>	3.29732E-06	2.0599E-05	3.29732E-06	2.0599E-05

<u>Year</u>	<u>HDDs</u>	<u>Customer #</u>	<u>UPC @ DD</u>	<u>Volume @ DD</u>	<u>UPC @ 95% CI UL</u>	<u>Volume @ 95% CI UL</u>	<u>Diff</u>
2020	90	881,417	1.501	1,323,000	1.575	1,388,000	65,000
2021	90	893,200	1.501	1,341,000	1.575	1,407,000	66,000
2022	90	905,149	1.501	1,359,000	1.575	1,426,000	67,000
2023	90	917,255	1.501	1,377,000	1.575	1,445,000	68,000
2024	90	929,083	1.501	1,395,000	1.575	1,463,000	68,000

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.829331938
R Square	0.687791464
<b>Adjusted R Square</b>	<b>0.687446482</b>
Standard Error	852.8620662
Observations	907

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1450167553	1450167553	1993.703574	5.5057E-231
Residual	905	658273202	727373.7039		
Total	906	2108440755			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
<b>Intercept</b>	<b>1762.115952</b>	81.2478502	21.6881548	<b>2.53127E-84</b>	1602.659837	1921.572067	1602.659837	1921.572067
<b>HDDs</b>	<b>84.72152472</b>	1.89741998	44.65090788	<b>5.5057E-231</b>	80.99766965	88.44537978	80.99766965	88.44537978

<u>Year</u>	<u>HDDs</u>	<u>Usage @ DD</u>	<u>Usage @ 95% CI UL</u>
2020	90	9,387	11,072
2021	90	9,387	11,072
2022	90	9,387	11,072
2023	90	9,387	11,072
2024	90	9,387	11,072



**CENTERPOINT ENERGY MINNESOTA GAS**  
**Demand Entitlement: 2019-2020**

**Exhibit B2**  
**DOC Required Information**

**ADDITIONAL INFORMATION REQUESTED FROM THE DOC**

**1 Provide Heating Degree Day (HDD) data for the most recent 12 month period, ending March 31 or October 30.**

		Peak Season (Nov-Mar)	Off Peak (Apr-Oct)	Total Actual
Total Heating Degree Day (April 2018 - March 2019)	Actual	6,446	1,593	8,039
	Normal (10 yr) (2009-2018)	5,920	1,312	7,232
Total Annual Firm Sales (In Dekatherms (April 2018 - March 2019))				125,354,659
Average Annual Firm Customers (April 2018 - March 2019)				862,704
Use per Firm Customer				145.3
Projected Peak Day HDD (Typical) (-12 degrees F.)				77
Projected Design Day HDD (-25 degrees F.)				90

**2 Historical and Projected Design Day and Peak Day Requirements**

Heating Season	Firm Sales Customers (January)	Design Day Dekatherms	Total Requirements plus Peak Shaving	Firm Peak Day Sendout
2019/2020 P	884,564	1,399,000	1,478,099	NA
2018/2019	868,105	1,373,000	1,409,596	1,253,519
2017/2018	858,548	1,357,000	1,409,596	1,089,622
2016/2017	847,780	1,328,000	1,369,470	978,931
2015/2016	839,291	1,317,000	1,343,566	994,146
2014/2015	830,377	1,290,000	1,344,418	959,990

P = projected

	Pipeline	Contract Type	Season	Rate Type	FINAL Nov 2017 17-533	Filed July 2018/ FINAL Nov18 18-462	Filed May 2019 for 11 2019 19-278	Change from "FINAL Nov18"
	[TRADE SECRET DATA BEGINS...							
(1)	Northern Natural							
(2)	Northern Natural							
(3)	Northern Natural							
(4)	Northern Natural							
(5)	Northern Natural							
(6)	Northern Natural							
(7)	Northern Natural							
(8)	<u>Northern Natural</u>							_____
(9)	Northern Natural							
(10)	Northern Natural							
(11)	<u>Northern Natural</u>							_____
(12)	Northern Natural							
(13)	Northern Natural							
(14)	Northern Natural							
(15)	Northern Natural							
(16)	Northern Natural							
(17)	Northern Natural							
(18)	<u>Northern Natural</u>							_____
(19)	<u>Northern Natural</u>							_____
(20)	Northern Natural							
(21)	Northern Natural							
(22)	Northern Natural							A
(23)	Northern Natural							A
(24)	Northern Natural							A
(25)	Northern Natural							A
(26)	Northern Natural							C
(27)	Northern Natural							
(28)	Northern Natural							
(29)	Northern Natural							
(30)	Northern Natural							
(31)	Northern Natural							
(32)	Northern Natural							
(33)	Northern Natural							
(34)	Northern Natural							
(35)	Northern Natural							
(36)	Northern Natural							
(37)	Northern Natural							
(38)	Northern Natural							
(39)	Northern Natural							
(40)	Northern Natural							_____
(41)								
(42)								
(43)								...TRADE SECRET DATA ENDS ]
(44)				Total NNG Demand Winter	1,079,602	1,129,602	1,180,290	50,688
(45)				Total NNG Demand Summer	606,428	677,762	708,174	30,412
(46)				Total	1,686,030	1,807,364	1,888,464	81,100
(47)								
(48)								
(49)								
(50)								
(51)								
(52)								
(53)	Northern Natural	Waterville			50,000	50,000	50,000	0
(54)	Northern Natural	Backhaul	Winter		50,000	50,000	50,000	0
(55)	Northern Natural	SMS			30,000	30,000	30,000	0
(56)								
(57)								[TRADE SECRET DATA BEGINS...
(58)	VIKING PIPELINE							
(59)	VIKING PIPELINE							

	Pipeline	Contract Type	Season	Rate Type	FINAL Nov 2017 17-533	Filed July 2018/ FINAL Nov18 18-462	Filed May 2019 for 11 2019 19-278	Change from "FINAL Nov18"	
	[TRADE SECRET DATA BEGINS...								
(60)	VIKING PIPELINE								C
(61)							...TRADE SECRET DATA ENDS ]		
(62)				Total Viking Demand	76,809	76,809	76,809	0	
(63)									
(64)	Trailblazer	FTS Backhaul	Winter	Discounted	100,000	100,000	100,000	0	
(65)									
(66)	[TRADE SECRET DATA BEGINS...								
(67)	Seasonal Reservation *								
(68)	Storage NGPL								E
(69)	Storage Tennaska								
(70)	Storage BP Canada								F
(71)	Storage NNG								
(72)	* seasonal reservation included peaking service last year								
(73)							...TRADE SECRET DATA ENDS ]		
(74)	Waterville - Underground (Medford)				50,000	50,000	50,000	0	
(75)	Peaking Service *				0	0	0	0	
(76)	LNG Peak Shaving				72,000	72,000	72,000	0	
(77)	Propane Peak Shaving				158,000	158,000	149,000	(9,000)	H
(78)									
(79)	NNG/Viking Overlap				0	0	0		
(80)									
(81)	Total Capacity (Lns 44+62+74+75+76+77+79)				1,436,411	1,486,411	1,528,099	41,688	
(82)	Total Peak-Shaving Capacity/On-line Storage				230,000	230,000	221,000	(9,000)	
(83)	Total Annual Transportation (12 month)				683,237	754,571	784,983	30,412	
(84)	Total Seasonal Transportation (Adj for NNG/Viking overlap)				1,156,411	1,206,411	1,257,099	50,688	
(85)	Peak Shaving as % of Total Capacity				16.0%	15.5%	14.5%		
(86)	Annual Transportation as % of Total Capacity				47.6%	50.8%	51.4%		
(87)	Seasonal Transportation as % of Total Capacity				80.5%	81.2%	82.3%		
(88)	Annual and Seasonal Transportation as % of Total Transportation				62.9%	61.5%	61.6%		
(89)									
(90)	Design Day				1,357,000	1,373,000	1,399,000	26,000	
(91)	Physical Res				36,000	36,000	36,000	0	
(92)	Total				1,393,000	1,409,000	1,435,000	26,000	
(93)									
(94)	Pipeline				1,156,411	1,206,411	1,257,099	50,688	
(95)	Peaking				230,000	230,000	221,000	(9,000)	
(96)	Net Supply				1,386,411	1,436,411	1,478,099	41,688	
(97)									
(98)	Avail Net Cap				(6,589)	27,411	43,099	15,688	
(99)	%				-0.5%	1.9%	2.9%		
(100)									
(101)	Avail incl Physical				29,411	63,411	79,099	15,688	
(102)	%				2.1%	4.4%	5.4%		

**Footnotes:**

- A NNG CONTRACT - Grown Election and Rates\_ new levels of Entitlement Discounted/Non-discounted
- B New Discount rates per Contract
- C Corrected Term\_ 12 months
- D NOT YET UPDATED: Value from winter 2018/2019, to be updated by supplement in November 2019
- E NGPL - New Contract - proposed change to allocation between Demand and Commodity
- F New BP Canada Contract - replaces Tenaska
- G Zero-out Summer Viking Capacity Release credit
- H Propane Deliverability - decreased by 9,000 due to distribution system work affecting flow-by
- I Updated Design Day

CenterPoint Energy Minnesota Gas  
Demand Entitlement: 2018-2019

Exhibit B4 for May 2019  
Historic Price Change Comparison

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	May 2019 PGA (AA-19-279)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From		Change (\$) From Most Recent PGA
							Most Recent PGA	Change (\$) From Most Recent PGA	
<b>Residential</b>									
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.2067	-31.95%	-36.14%	-16.10%		(\$0.4236)
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$0.8722	<b>9.24%</b>	<b>1.45%</b>	<b>1.45%</b>		<b>\$0.0125</b>
Commodity Margin (2) (3) (5)	\$2.2201	\$2.1477	\$2.1477	\$2.1477	-3.26%	0.00%	0.00%		\$0.0000
Total Cost of Gas	\$6.2611	\$6.4630	\$5.6377	\$5.2266	-16.52%	-19.13%	-7.29%		(\$0.4111)
Average Annual Usage (Dk)	100	100	100	100					
Average Annual Total Cost of Gas	\$626.11	\$646.30	\$563.77	\$522.66	-16.52%	-19.13%	-7.29%		(\$41.11)
Average Annual Total Demand Cost of Gas									<b>\$1.25</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	May 2019 PGA (AA-19-279)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From		Change (\$) From Most Recent PGA
							Most Recent PGA	Change (\$) From Most Recent PGA	
<b>Commercial/Industrial Firm - A</b>									
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.2067	-31.95%	-36.14%	-16.10%		(\$0.4236)
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$0.8722	<b>9.24%</b>	<b>1.45%</b>	<b>1.45%</b>		<b>\$0.0125</b>
Commodity Margin (2) (3) (5)	\$2.2211	\$2.1649	\$2.1649	\$2.1649	-2.53%	0.00%	0.00%		\$0.0000
Total Cost of Gas	\$6.2621	\$6.4802	\$5.6549	\$5.2438	-16.26%	-19.08%	-7.27%		(\$0.4111)
Average Annual Usage (Dk)	80	80	80	80					
Average Annual Total Cost of Gas	\$500.97	\$518.42	\$452.39	\$419.50	-16.26%	-19.08%	-7.27%		(\$32.89)
Average Annual Total Demand Cost of Gas									<b>\$1.00</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	May 2019 PGA (AA-19-279)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From		Change (\$) From Most Recent PGA
							Most Recent PGA	Change (\$) From Most Recent PGA	
<b>Commercial/Industrial Firm - B</b>									
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.2067	-31.95%	-36.14%	-16.10%		(\$0.4236)
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$0.8722	<b>9.24%</b>	<b>1.45%</b>	<b>1.45%</b>		<b>\$0.0125</b>
Commodity Margin (2) (3) (5)	\$1.8293	\$1.7529	\$1.7181	\$1.7529	-4.18%	0.00%	2.03%		\$0.0348
Total Cost of Gas	\$5.8703	\$6.0682	\$5.2081	\$4.8318	-17.69%	-20.38%	-7.23%		(\$0.3763)
Average Annual Usage (Dk)	2,860	2,860	2,860	2,860					
Average Annual Total Cost of Gas	\$16,789.06	\$17,355.05	\$14,895.17	\$13,818.95	-17.69%	-20.38%	-7.23%		(\$1,076.22)
Average Annual Total Demand Cost of Gas									<b>\$35.75</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	May 2019 PGA (AA-19-279)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From		Change (\$) From Most Recent PGA
							Most Recent PGA	Change (\$) From Most Recent PGA	
<b>Commercial/Industrial Firm - C</b>									
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.2067	-31.95%	-36.14%	-16.10%		(\$0.4236)
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$0.8722	<b>9.24%</b>	<b>1.45%</b>	<b>1.45%</b>		<b>\$0.0125</b>
Commodity Margin (2) (3) (5)	\$1.6982	\$1.5795	\$1.5795	\$1.5795	-6.99%	0.00%	0.00%		\$0.0000
Total Cost of Gas	\$5.7392	\$5.8948	\$5.0695	\$4.6584	-18.83%	-20.97%	-8.11%		(\$0.4111)
Average Annual Usage (Dk)	14,300	14,300	14,300	14,300					
Average Annual Total Cost of Gas	\$82,070.56	\$84,295.64	\$72,493.85	\$66,615.12	-18.83%	-20.97%	-8.11%		(\$5,878.73)
Average Annual Total Demand Cost of Gas									<b>\$178.75</b>

	Commodity Change (\$/Dk)	Commodity Change (Percent)	Demand Change (\$/Dk)	Demand Change (Percent)	Total Change (\$/Dk)	Total Change (Percent)
Summary Change from most recent PGA						
Customer Class						
Residential	-\$0.4236	-16.10%	\$0.0125	1.45%	(\$41.11)	-7.29%
Commercial/Industrial Firm A	-\$0.4236	-16.10%	\$0.0125	1.45%	(\$32.89)	-7.27%
Commercial/Industrial Firm B	-\$0.4236	-16.10%	\$0.0125	1.45%	(\$1,076.22)	-7.23%
Commercial/Industrial Firm C	-\$0.4236	-16.10%	\$0.0125	1.45%	(\$5,878.73)	-8.11%

- (1) Does not include Demand Smoothing Adjustment
- (2) Does not reflect Decoupling, GAP, Interim or GCR Factors.
- (3) 2017 Rate Case - tariff value for Last Rate Case and Last Demand Change. Reflect base rate plus CCRA (\$0.0441/DT)
- (4) Actual WACOG for historical timeframes / 2017 Rate Case Base value in Settlement for Nov. 2018
- (5) Actual Billed for historical (Base+CCRA) / 2017 Rate Case Base settled tariff value and proposed CCRA (\$0.0441/DT)- Nov 2018

CenterPoint Energy Minnesota Gas  
Demand Entitlement: 2018-2019

Exhibit B4 for November 2019  
Historic Price Change Comparison

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	November 2019 PGA (AA-19-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Residential</b>								
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.6303	-18.88%	-23.88%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$1.0904	<b>36.57%</b>	<b>26.83%</b>	<b>26.83%</b>	<b>\$0.2307</b>
Commodity Margin (2) (3) (5)	\$2.2201	\$2.1477	\$2.1477	\$2.1477	-3.26%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.2611	\$6.4630	\$5.6377	\$5.8684	-6.27%	-9.20%	4.09%	\$0.2307
Average Annual Usage (Dk)	100	100	100	100				
Average Annual Total Cost of Gas	\$626.11	\$646.30	\$563.77	\$586.84	-6.27%	-9.20%	4.09%	\$23.07
Average Annual Total Demand Cost of Gas								<b>\$23.07</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	November 2019 PGA (AA-19-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - A</b>								
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.6303	-18.88%	-23.88%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$1.0904	<b>36.57%</b>	<b>26.83%</b>	<b>26.83%</b>	<b>\$0.2307</b>
Commodity Margin (2) (3) (5)	\$2.2211	\$2.1649	\$2.1649	\$2.1649	-2.53%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$6.2621	\$6.4802	\$5.6549	\$5.8856	-6.01%	-9.18%	4.08%	\$0.2307
Average Annual Usage (Dk)	80	80	80	80				
Average Annual Total Cost of Gas	\$500.97	\$518.42	\$452.39	\$470.85	-6.01%	-9.18%	4.08%	\$18.46
Average Annual Total Demand Cost of Gas								<b>\$18.46</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	November 2019 PGA (AA-19-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - B</b>								
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.6303	-18.88%	-23.88%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$1.0904	<b>36.57%</b>	<b>26.83%</b>	<b>26.83%</b>	<b>\$0.2307</b>
Commodity Margin (2) (3) (5)	\$1.8293	\$1.7529	\$1.7181	\$1.7529	-4.18%	0.00%	2.03%	\$0.0348
Total Cost of Gas	\$5.8703	\$6.0682	\$5.2081	\$5.4736	-6.76%	-9.80%	5.10%	\$0.2655
Average Annual Usage (Dk)	2,860	2,860	2,860	2,860				
Average Annual Total Cost of Gas	\$16,789.06	\$17,355.05	\$14,895.17	\$15,654.50	-6.76%	-9.80%	5.10%	\$759.33
Average Annual Total Demand Cost of Gas								<b>\$659.80</b>

	Last Rate Case (G008/MR-17- 591 and GR- 17-285)	Last Demand Change (G008/M-18- 462)	April 1, 2019	November 2019 PGA (AA-19-xxx)	Change From Last Rate Case	Change From Last Demand Change	Percent Change (%) From Most Recent PGA	Change (\$) From Most Recent PGA
<b>Commercial/Industrial Firm - C</b>								
Commodity Cost of Gas (WACOG) (4)	\$3.2426	\$3.4556	\$2.6303	\$2.6303	-18.88%	-23.88%	0.00%	\$0.0000
Demand Cost of Gas (1)	\$0.7984	\$0.8597	\$0.8597	\$1.0904	<b>36.57%</b>	<b>26.83%</b>	<b>26.83%</b>	<b>\$0.2307</b>
Commodity Margin (2) (3) (5)	\$1.6982	\$1.5795	\$1.5795	\$1.5795	-6.99%	0.00%	0.00%	\$0.0000
Total Cost of Gas	\$5.7392	\$5.8948	\$5.0695	\$5.3002	-7.65%	-10.09%	4.55%	\$0.2307
Average Annual Usage (Dk)	14,300	14,300	14,300	14,300				
Average Annual Total Cost of Gas	\$82,070.56	\$84,295.64	\$72,493.85	\$75,792.86	-7.65%	-10.09%	4.55%	\$3,299.01
Average Annual Total Demand Cost of Gas								<b>\$3,299.01</b>

Summary	Commodity Change	Commodity Change	Demand Change	Demand Change	Total Change	Total Change		
Change from most recent PGA	(\$/Dk)	(Percent)	(\$/Dk)	(Percent)	(\$/Dk)	(Percent)		
Customer Class								
Residential	\$0.0000	0.00%	\$0.2307	26.83%	\$23.07	4.09%		
Commercial/Industrial Firm A	\$0.0000	0.00%	\$0.2307	26.83%	\$18.46	4.08%		
Commercial/Industrial Firm B	\$0.0000	0.00%	\$0.2307	26.83%	\$759.33	5.10%		
Commercial/Industrial Firm C	\$0.0000	0.00%	\$0.2307	26.83%	\$3,299.01	4.55%		

- (1) Does not include Demand Smoothing Adjustment
- (2) Does not reflect Decoupling, GAP, Interim or GCR Factors.
- (3) 2015 Rate Case - tariff value for Last Rate Case and Last Demand Change. Reflect base rate plus CCRA (\$0.1553/DT)
- (4) Actual WACOG for historical timeframes / 2017 Rate Case Base value in Settlement for Nov. 2018
- (5) Actual Billed for historical (Base+CCRA) / 2017 Rate Case Base settled tariff value and proposed CCRA (\$0.0441/DT)- Nov 2018

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
11/01/13	266,778	42.3	818,965	0.326	22.7	515
11/02/13	295,655	42.3	818,965	0.361	22.7	515
11/03/13	242,938	49.2	818,965	0.297	15.8	250
11/04/13	321,807	39.9	818,965	0.393	25.1	630
11/05/13	360,894	36.6	818,965	0.441	28.4	807
11/06/13	379,982	32.9	818,965	0.464	32.1	1030
11/07/13	431,903	29.7	818,965	0.527	35.3	1246
11/08/13	348,327	42.8	818,965	0.425	22.2	493
11/09/13	353,809	38.6	818,965	0.432	26.4	697
11/10/13	364,001	35.8	818,965	0.444	29.2	853
11/11/13	571,621	19.0	818,965	0.698	46.0	2116
11/12/13	531,139	24.8	818,965	0.649	40.2	1616
11/13/13	329,292	42.1	818,965	0.402	22.9	524
11/14/13	324,968	40.3	818,965	0.397	24.7	610
11/15/13	256,005	47.0	818,965	0.313	18.0	324
11/16/13	271,652	45.3	818,965	0.332	19.7	388
11/17/13	389,068	36.0	818,965	0.475	29.0	841
11/18/13	463,373	28.9	818,965	0.566	36.1	1303
11/19/13	351,503	43.2	818,965	0.429	21.8	475
11/20/13	341,341	38.8	818,965	0.417	26.2	686
11/21/13	520,723	25.3	818,965	0.636	39.7	1576
11/22/13	586,260	19.3	818,965	0.716	45.7	2088
11/23/13	676,858	12.7	818,965	0.826	52.3	2735
11/24/13	543,529	28.3	818,965	0.664	36.7	1347
11/25/13	472,269	31.8	818,965	0.577	33.2	1102
11/26/13	647,066	16.5	818,965	0.790	48.5	2352
11/27/13	577,731	22.4	818,965	0.705	42.6	1815
11/28/13	577,058	20.2	818,965	0.705	44.8	2007
11/29/13	516,204	28.4	818,965	0.630	36.6	1340
11/30/13	437,235	31.7	818,965	0.534	33.3	1109
12/01/13	461,903	30.5	820,755	0.563	34.5	1190
12/02/13	420,906	35.1	820,755	0.513	29.9	894
12/03/13	433,084	32.9	820,755	0.528	32.1	1030
12/04/13	582,767	19.6	820,755	0.710	45.4	2061
12/05/13	803,649	2.0	820,755	0.979	63.0	3969
12/06/13	883,432	(3.7)	820,755	1.076	68.7	4720
12/07/13	867,326	(0.4)	820,755	1.057	65.4	4277
12/08/13	761,978	8.3	820,755	0.928	56.7	3215
12/09/13	845,233	1.8	820,755	1.030	63.2	3994
12/10/13	822,581	3.2	820,755	1.002	61.8	3819
12/11/13	866,205	1.3	820,755	1.055	63.7	4058
12/12/13	673,916	16.3	820,755	0.821	48.7	2372
12/13/13	710,491	12.8	820,755	0.866	52.2	2725
12/14/13	762,835	5.8	820,755	0.929	59.2	3505
12/15/13	814,989	2.4	820,755	0.993	62.6	3919
12/16/13	684,099	20.2	820,755	0.834	44.8	2007
12/17/13	640,937	17.4	820,755	0.781	47.6	2266
12/18/13	538,341	27.1	820,755	0.656	37.9	1436
12/19/13	668,073	17.3	820,755	0.814	47.7	2275
12/20/13	628,668	18.4	820,755	0.766	46.6	2172
12/21/13	615,132	19.0	820,755	0.749	46.0	2116
12/22/13	733,805	9.0	820,755	0.894	56.0	3136
12/23/13	922,486	(4.4)	820,755	1.124	69.4	4816
12/24/13	785,365	9.3	820,755	0.957	55.7	3102
12/25/13	628,353	16.8	820,755	0.766	48.2	2323
12/26/13	585,057	21.7	820,755	0.713	43.3	1875
12/27/13	471,527	31.3	820,755	0.575	33.7	1136
12/28/13	527,819	24.5	820,755	0.643	40.5	1640
12/29/13	911,697	(7.0)	820,755	1.111	72.0	5184
12/30/13	921,588	(2.7)	820,755	1.123	67.7	4583
12/31/13	944,803	(5.0)	820,755	1.151	70.0	4900
01/01/14	910,942	(1.9)	821,662	1.109	66.9	4476
01/02/14	922,233	(2.7)	821,662	1.122	67.7	4583
01/03/14	688,932	22.5	821,662	0.838	42.5	1806
01/04/14	800,045	2.8	821,662	0.974	62.2	3869

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs^2
01/05/14	1,066,086	(14.5)	821,662	1.297	79.5	6320
01/06/14	1,108,043	(13.8)	821,662	1.349	78.8	6209
01/07/14	929,217	(2.6)	821,662	1.131	67.6	4570
01/08/14	917,401	(1.4)	821,662	1.117	66.4	4409
01/09/14	710,785	17.4	821,662	0.865	47.6	2266
01/10/14	540,333	28.3	821,662	0.658	36.7	1347
01/11/14	531,750	27.3	821,662	0.647	37.7	1421
01/12/14	455,088	34.8	821,662	0.554	30.2	912
01/13/14	496,231	26.9	821,662	0.604	38.1	1452
01/14/14	703,009	10.8	821,662	0.856	54.2	2938
01/15/14	644,158	21.8	821,662	0.784	43.2	1866
01/16/14	771,944	9.0	821,662	0.939	56.0	3136
01/17/14	725,770	9.9	821,662	0.883	55.1	3036
01/18/14	605,646	20.3	821,662	0.737	44.7	1998
01/19/14	469,901	31.6	821,662	0.572	33.4	1116
01/20/14	825,199	0.9	821,662	1.004	64.1	4109
01/21/14	878,454	1.5	821,662	1.069	63.5	4032
01/22/14	958,721	(5.8)	821,662	1.167	70.8	5013
01/23/14	922,153	1.7	821,662	1.122	63.3	4007
01/24/14	637,191	21.9	821,662	0.775	43.1	1858
01/25/14	756,146	6.3	821,662	0.920	58.7	3446
01/26/14	915,204	(1.8)	821,662	1.114	66.8	4462
01/27/14	1,034,289	(11.3)	821,662	1.259	76.3	5822
01/28/14	954,713	(3.5)	821,662	1.162	68.5	4692
01/29/14	636,679	23.8	821,662	0.775	41.2	1697
01/30/14	783,055	3.2	821,662	0.953	61.8	3819
01/31/14	783,533	4.3	821,662	0.954	60.7	3684
02/01/14	757,577	6.2	822,393	0.921	58.8	3457
02/02/14	783,383	4.6	822,393	0.953	60.4	3648
02/03/14	763,761	7.8	822,393	0.929	57.2	3272
02/04/14	831,139	3.5	822,393	1.011	61.5	3782
02/05/14	922,621	(2.6)	822,393	1.122	67.6	4570
02/06/14	895,152	(0.8)	822,393	1.088	65.8	4330
02/07/14	819,155	5.0	822,393	0.996	60.0	3600
02/08/14	777,793	7.4	822,393	0.946	57.6	3318
02/09/14	881,361	(2.7)	822,393	1.072	67.7	4583
02/10/14	898,092	(2.0)	822,393	1.092	67.0	4489
02/11/14	763,812	11.3	822,393	0.929	53.7	2884
02/12/14	614,028	20.4	822,393	0.747	44.6	1989
02/13/14	729,321	10.6	822,393	0.887	54.4	2959
02/14/14	742,364	7.5	822,393	0.903	57.5	3306
02/15/14	694,539	14.8	822,393	0.845	50.2	2520
02/16/14	635,279	19.0	822,393	0.772	46.0	2116
02/17/14	565,905	22.9	822,393	0.688	42.1	1772
02/18/14	449,760	31.5	822,393	0.547	33.5	1122
02/19/14	418,375	34.4	822,393	0.509	30.6	936
02/20/14	564,438	21.8	822,393	0.686	43.2	1866
02/21/14	696,965	11.0	822,393	0.847	54.0	2916
02/22/14	705,787	8.6	822,393	0.858	56.4	3181
02/23/14	731,679	8.3	822,393	0.890	56.7	3215
02/24/14	780,564	5.0	822,393	0.949	60.0	3600
02/25/14	880,636	(2.4)	822,393	1.071	67.4	4543
02/26/14	876,215	(3.2)	822,393	1.065	68.2	4651
02/27/14	903,396	(5.0)	822,393	1.098	70.0	4900
02/28/14	814,940	6.5	822,393	0.991	58.5	3422
03/01/14	950,005	(6.3)	822,619	1.155	71.3	5084
03/02/14	911,249	(3.8)	822,619	1.108	68.8	4733
03/03/14	810,868	6.7	822,619	0.986	58.3	3399
03/04/14	669,847	16.0	822,619	0.814	49.0	2401
03/05/14	613,090	18.0	822,619	0.745	47.0	2209
03/06/14	577,708	24.3	822,619	0.702	40.7	1656
03/07/14	553,074	25.2	822,619	0.672	39.8	1584
03/08/14	511,348	22.9	822,619	0.622	42.1	1772
03/09/14	403,169	38.0	822,619	0.490	27.0	729
03/10/14	299,860	44.0	822,619	0.365	21.0	441

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03/11/14	441,538	32.3	822,619	0.537	32.7	1069
03/12/14	495,046	24.8	822,619	0.602	40.2	1616
03/13/14	315,297	42.7	822,619	0.383	22.3	497
03/14/14	428,338	31.3	822,619	0.521	33.7	1136
03/15/14	537,835	22.5	822,619	0.654	42.5	1806
03/16/14	542,786	22.6	822,619	0.660	42.4	1798
03/17/14	461,035	31.5	822,619	0.560	33.5	1122
03/18/14	465,504	30.7	822,619	0.566	34.3	1176
03/19/14	474,021	29.8	822,619	0.576	35.2	1239
03/20/14	360,472	35.7	822,619	0.438	29.3	858
03/21/14	506,408	27.0	822,619	0.616	38.0	1444
03/22/14	633,892	15.1	822,619	0.771	49.9	2490
03/23/14	590,178	21.0	822,619	0.717	44.0	1936
03/24/14	586,645	21.6	822,619	0.713	43.4	1884
03/25/14	615,936	18.6	822,619	0.749	46.4	2153
03/26/14	425,035	36.9	822,619	0.517	28.1	790
03/27/14	449,745	32.6	822,619	0.547	32.4	1050
03/28/14	439,453	30.5	822,619	0.534	34.5	1190
03/29/14	342,531	38.4	822,619	0.416	26.6	708
03/30/14	231,441	50.6	822,619	0.281	14.4	207
03/31/14	335,807	39.3	822,619	0.408	25.7	660
11/01/14	374,758	36.5	827,837	0.453	28.5	812
11/02/14	236,923	47.9	827,837	0.286	17.1	292
11/03/14	240,115	47.7	827,837	0.290	17.3	299
11/04/14	275,389	41.9	827,837	0.333	23.1	534
11/05/14	334,060	36.8	827,837	0.404	28.2	795
11/06/14	348,978	35.8	827,837	0.422	29.2	853
11/07/14	342,674	40.5	827,837	0.414	24.5	600
11/08/14	329,298	38.5	827,837	0.398	26.5	702
11/09/14	402,562	32.0	827,837	0.486	33.0	1089
11/10/14	520,094	26.0	827,837	0.628	39.0	1521
11/11/14	566,622	20.3	827,837	0.684	44.7	1998
11/12/14	573,481	21.0	827,837	0.693	44.0	1936
11/13/14	598,881	17.2	827,837	0.723	47.8	2285
11/14/14	626,840	13.3	827,837	0.757	51.7	2673
11/15/14	597,942	18.0	827,837	0.722	47.0	2209
11/16/14	673,971	10.8	827,837	0.814	54.2	2938
11/17/14	730,733	10.5	827,837	0.883	54.5	2970
11/18/14	659,062	16.5	827,837	0.796	48.5	2352
11/19/14	641,338	17.6	827,837	0.775	47.4	2247
11/20/14	696,868	10.6	827,837	0.842	54.4	2959
11/21/14	529,346	30.3	827,837	0.639	34.7	1204
11/22/14	380,530	40.0	827,837	0.460	25.0	625
11/23/14	393,964	35.6	827,837	0.476	29.4	864
11/24/14	666,054	15.9	827,837	0.805	49.1	2411
11/25/14	586,472	22.3	827,837	0.708	42.7	1823
11/26/14	645,890	14.1	827,837	0.780	50.9	2591
11/27/14	705,400	7.9	827,837	0.852	57.1	3260
11/28/14	589,053	21.9	827,837	0.712	43.1	1858
11/29/14	506,351	24.8	827,837	0.612	40.2	1616
11/30/14	775,152	6.8	827,837	0.936	58.2	3387
12/01/14	807,597	6.0	829,685	0.973	59.0	3481
12/02/14	682,019	17.8	829,685	0.822	47.2	2228
12/03/14	638,655	17.8	829,685	0.770	47.2	2228
12/04/14	511,923	29.0	829,685	0.617	36.0	1296
12/05/14	510,137	26.8	829,685	0.615	38.2	1459
12/06/14	510,948	26.3	829,685	0.616	38.7	1498
12/07/14	468,577	33.6	829,685	0.565	31.4	986
12/08/14	570,947	23.2	829,685	0.688	41.8	1747
12/09/14	591,011	21.3	829,685	0.712	43.7	1910
12/10/14	530,160	26.9	829,685	0.639	38.1	1452
12/11/14	478,912	31.1	829,685	0.577	33.9	1149
12/12/14	409,539	35.9	829,685	0.494	29.1	847
12/13/14	290,742	45.8	829,685	0.350	19.2	369
12/14/14	264,842	48.3	829,685	0.319	16.7	279



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12/15/14	415,340	33.9	829,685	0.501	31.1	967
12/16/14	652,532	16.4	829,685	0.786	48.6	2362
12/17/14	667,039	15.5	829,685	0.804	49.5	2450
12/18/14	609,595	20.5	829,685	0.735	44.5	1980
12/19/14	512,998	28.4	829,685	0.618	36.6	1340
12/20/14	469,514	31.6	829,685	0.566	33.4	1116
12/21/14	419,896	36.5	829,685	0.506	28.5	812
12/22/14	417,142	35.3	829,685	0.503	29.7	882
12/23/14	422,954	34.9	829,685	0.510	30.1	906
12/24/14	421,782	32.5	829,685	0.508	32.5	1056
12/25/14	423,761	32.7	829,685	0.511	32.3	1043
12/26/14	492,110	28.3	829,685	0.593	36.7	1347
12/27/14	603,281	15.2	829,685	0.727	49.8	2480
12/28/14	677,387	12.7	829,685	0.816	52.3	2735
12/29/14	872,203	0.7	829,685	1.051	64.3	4134
12/30/14	958,911	(2.4)	829,685	1.156	67.4	4543
12/31/14	792,491	11.7	829,685	0.955	53.3	2841
01/01/15	631,999	18.6	821,662	0.769	46.4	2153
01/02/15	599,220	24.1	830,818	0.721	40.9	1673
01/03/15	676,876	15.6	830,818	0.815	49.4	2440
01/04/15	969,648	(5.9)	830,818	1.167	70.9	5027
01/05/15	964,152	(2.8)	830,818	1.160	67.8	4597
01/06/15	959,790	(0.4)	830,818	1.155	65.4	4277
01/07/15	969,706	(2.4)	830,818	1.167	67.4	4543
01/08/15	898,663	5.1	830,818	1.082	59.9	3588
01/09/15	895,252	0.7	830,818	1.078	64.3	4134
01/10/15	787,687	9.8	830,818	0.948	55.2	3047
01/11/15	800,140	6.7	830,818	0.963	58.3	3399
01/12/15	931,262	(2.5)	830,818	1.121	67.5	4556
01/13/15	773,732	13.4	830,818	0.931	51.6	2663
01/14/15	604,255	22.5	830,818	0.727	42.5	1806
01/15/15	519,717	29.2	830,818	0.626	35.8	1282
01/16/15	526,587	28.1	830,818	0.634	36.9	1362
01/17/15	476,724	32.9	830,818	0.574	32.1	1030
01/18/15	464,796	30.5	830,818	0.559	34.5	1190
01/19/15	452,655	32.4	830,818	0.545	32.6	1063
01/20/15	502,737	29.0	830,818	0.605	36.0	1296
01/21/15	537,236	26.6	830,818	0.647	38.4	1475
01/22/15	553,634	26.7	830,818	0.666	38.3	1467
01/23/15	437,123	32.6	830,818	0.526	32.4	1050
01/24/15	411,242	33.5	830,818	0.495	31.5	992
01/25/15	533,191	24.6	830,818	0.642	40.4	1632
01/26/15	405,246	37.1	830,818	0.488	27.9	778
01/27/15	467,493	30.9	830,818	0.563	34.1	1163
01/28/15	496,635	30.6	830,818	0.598	34.4	1183
01/29/15	625,445	19.9	830,818	0.753	45.1	2034
01/30/15	572,300	23.0	830,818	0.689	42.0	1764
01/31/15	605,272	22.4	830,818	0.729	42.6	1815
02/01/15	778,515	8.6	831,587	0.936	56.4	3181
02/02/15	766,263	9.5	831,587	0.921	55.5	3080
02/03/15	717,895	13.5	831,587	0.863	51.5	2652
02/04/15	812,952	3.7	831,587	0.978	61.3	3758
02/05/15	717,242	14.8	831,587	0.862	50.2	2520
02/06/15	543,664	23.8	831,587	0.654	41.2	1697
02/07/15	466,562	30.8	831,587	0.561	34.2	1170
02/08/15	549,938	25.2	831,587	0.661	39.8	1584
02/09/15	512,329	25.6	831,587	0.616	39.4	1552
02/10/15	595,090	24.5	831,587	0.716	40.5	1640
02/11/15	789,912	6.5	831,587	0.950	58.5	3422
02/12/15	785,492	8.4	831,587	0.945	56.6	3204
02/13/15	706,305	14.8	831,587	0.849	50.2	2520
02/14/15	857,219	1.3	831,587	1.031	63.7	4058
02/15/15	824,324	7.5	831,587	0.991	57.5	3306
02/16/15	764,428	11.0	831,587	0.919	54.0	2916
02/17/15	892,056	0.8	831,587	1.073	64.2	4122

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02/18/15	980,568	(4.5)	831,587	1.179	69.5	4830
02/19/15	818,481	5.5	831,587	0.984	59.5	3540
02/20/15	652,502	20.8	831,587	0.785	44.2	1954
02/21/15	778,702	5.8	831,587	0.936	59.2	3505
02/22/15	965,018	(6.0)	831,587	1.160	71.0	5041
02/23/15	724,360	20.0	831,587	0.871	45.0	2025
02/24/15	635,207	18.7	831,587	0.764	46.3	2144
02/25/15	800,638	7.1	831,587	0.963	57.9	3352
02/26/15	848,927	2.8	831,587	1.021	62.2	3869
02/27/15	790,836	6.7	831,587	0.951	58.3	3399
02/28/15	699,528	15.5	831,587	0.841	49.5	2450
03/01/15	641,520	19.5	831,703	0.771	45.5	2070
03/02/15	584,035	22.1	831,703	0.702	42.9	1840
03/03/15	706,812	12.7	831,703	0.850	52.3	2735
03/04/15	861,137	1.8	831,703	1.035	63.2	3994
03/05/15	742,127	10.7	831,703	0.892	54.3	2948
03/06/15	481,871	31.8	831,703	0.579	33.2	1102
03/07/15	389,983	35.9	831,703	0.469	29.1	847
03/08/15	363,864	39.5	831,703	0.437	25.5	650
03/09/15	306,549	46.8	831,703	0.369	18.2	331
03/10/15	269,751	46.4	831,703	0.324	18.6	346
03/11/15	259,275	46.0	831,703	0.312	19.0	361
03/12/15	218,359	53.5	831,703	0.263	11.5	132
03/13/15	237,669	46.7	831,703	0.286	18.3	335
03/14/15	224,240	50.3	831,703	0.270	14.7	216
03/15/15	177,644	58.2	831,703	0.214	6.8	46
03/16/15	298,995	42.7	831,703	0.359	22.3	497
03/17/15	364,253	37.0	831,703	0.438	28.0	784
03/18/15	362,344	40.0	831,703	0.436	25.0	625
03/19/15	320,681	42.3	831,703	0.386	22.7	515
03/20/15	307,991	41.1	831,703	0.370	23.9	571
03/21/15	403,390	33.2	831,703	0.485	31.8	1011
03/22/15	467,353	31.0	831,703	0.562	34.0	1156
03/23/15	461,434	28.5	831,703	0.555	36.5	1332
03/24/15	429,116	33.0	831,703	0.516	32.0	1024
03/25/15	469,896	33.5	831,703	0.565	31.5	992
03/26/15	500,113	28.1	831,703	0.601	36.9	1362
03/27/15	446,398	27.8	831,703	0.537	37.2	1384
03/28/15	367,583	36.7	831,703	0.442	28.3	801
03/29/15	329,303	44.0	831,703	0.396	21.0	441
03/30/15	277,443	44.5	831,703	0.334	20.5	420
03/31/15	186,064	54.0	831,703	0.224	11.0	121
11/01/15	191,653	50.7	836,216	0.229	14.3	204
11/02/15	143,608	56.5	836,216	0.172	8.5	72
11/03/15	113,290	57.6	836,216	0.135	7.4	55
11/04/15	119,595	60.4	836,216	0.143	4.6	21
11/05/15	189,235	48.6	836,216	0.226	16.4	269
11/06/15	283,113	40.7	836,216	0.339	24.3	590
11/07/15	265,430	44.8	836,216	0.317	20.2	408
11/08/15	208,280	51.0	836,216	0.249	14.0	196
11/09/15	190,101	49.3	836,216	0.227	15.7	246
11/10/15	187,941	50.5	836,216	0.225	14.5	210
11/11/15	247,641	46.1	836,216	0.296	18.9	357
11/12/15	359,006	37.4	836,216	0.429	27.6	762
11/13/15	333,187	37.6	836,216	0.398	27.4	751
11/14/15	245,234	47.4	836,216	0.293	17.6	310
11/15/15	178,197	53.7	836,216	0.213	11.3	128
11/16/15	225,936	48.8	836,216	0.270	16.2	262
11/17/15	187,866	53.7	836,216	0.225	11.3	128
11/18/15	307,568	40.3	836,216	0.368	24.7	610
11/19/15	494,380	30.3	836,216	0.591	34.7	1204
11/20/15	519,047	24.5	836,216	0.621	40.5	1640
11/21/15	523,213	22.3	836,216	0.626	42.7	1823
11/22/15	470,379	28.6	836,216	0.563	36.4	1325
11/23/15	385,841	35.5	836,216	0.461	29.5	870

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
11/24/15	357,820	39.3	836,216	0.428	25.7	660
11/25/15	319,460	41.6	836,216	0.382	23.4	548
11/26/15	489,474	25.6	836,216	0.585	39.4	1552
11/27/15	563,878	20.1	836,216	0.674	44.9	2016
11/28/15	518,456	24.0	836,216	0.620	41.0	1681
11/29/15	461,215	30.7	836,216	0.552	34.3	1176
11/30/15	448,299	33.0	836,216	0.536	32.0	1024
12/01/15	453,219	29.5	838,202	0.541	35.5	1260
12/02/15	458,460	30.4	838,202	0.547	34.6	1197
12/03/15	483,284	28.2	838,202	0.577	36.8	1354
12/04/15	376,598	39.1	838,202	0.449	25.9	671
12/05/15	336,213	41.1	838,202	0.401	23.9	571
12/06/15	412,594	33.8	838,202	0.492	31.2	973
12/07/15	383,512	37.3	838,202	0.458	27.7	767
12/08/15	391,109	36.8	838,202	0.467	28.2	795
12/09/15	335,345	42.7	838,202	0.400	22.3	497
12/10/15	342,602	41.0	838,202	0.409	24.0	576
12/11/15	372,177	36.8	838,202	0.444	28.2	795
12/12/15	351,184	39.6	838,202	0.419	25.4	645
12/13/15	377,462	38.5	838,202	0.450	26.5	702
12/14/15	448,097	33.2	838,202	0.535	31.8	1011
12/15/15	446,657	34.2	838,202	0.533	30.8	949
12/16/15	499,611	29.6	838,202	0.596	35.4	1253
12/17/15	616,723	20.8	838,202	0.736	44.2	1954
12/18/15	712,442	13.1	838,202	0.850	51.9	2694
12/19/15	577,479	25.3	838,202	0.689	39.7	1576
12/20/15	444,108	34.4	838,202	0.530	30.6	936
12/21/15	469,144	31.3	838,202	0.560	33.7	1136
12/22/15	458,031	33.7	838,202	0.546	31.3	980
12/23/15	482,231	29.4	838,202	0.575	35.6	1267
12/24/15	522,664	25.7	838,202	0.624	39.3	1544
12/25/15	484,827	28.4	838,202	0.578	36.6	1340
12/26/15	518,479	27.1	838,202	0.619	37.9	1436
12/27/15	654,354	15.6	838,202	0.781	49.4	2440
12/28/15	652,274	21.7	838,202	0.778	43.3	1875
12/29/15	577,738	22.7	838,202	0.689	42.3	1789
12/30/15	608,494	18.7	838,202	0.726	46.3	2144
12/31/15	655,934	16.6	838,202	0.783	48.4	2343
01/01/16	583,988	21.3	839,732	0.695	43.7	1910
01/02/16	534,466	26.5	839,732	0.636	38.5	1482
01/03/16	588,963	21.3	839,732	0.701	43.7	1910
01/04/16	613,020	20.9	839,732	0.730	44.1	1945
01/05/16	540,851	26.4	839,732	0.644	38.6	1490
01/06/16	487,862	30.8	839,732	0.581	34.2	1170
01/07/16	454,809	32.6	839,732	0.542	32.4	1050
01/08/16	558,915	22.8	839,732	0.666	42.2	1781
01/09/16	888,242	(2.3)	839,732	1.058	67.3	4529
01/10/16	939,851	(5.3)	839,732	1.119	70.3	4942
01/11/16	893,009	0.9	839,732	1.063	64.1	4109
01/12/16	907,790	(1.4)	839,732	1.081	66.4	4409
01/13/16	685,506	17.6	839,732	0.816	47.4	2247
01/14/16	600,413	23.5	839,732	0.715	41.5	1722
01/15/16	722,522	12.6	839,732	0.860	52.4	2746
01/16/16	974,240	(6.7)	839,732	1.160	71.7	5141
01/17/16	1,014,273	(8.2)	839,732	1.208	73.2	5358
01/18/16	978,961	(2.8)	839,732	1.166	67.8	4597
01/19/16	842,636	7.2	839,732	1.003	57.8	3341
01/20/16	662,279	20.3	839,732	0.789	44.7	1998
01/21/16	634,864	20.9	839,732	0.756	44.1	1945
01/22/16	630,390	20.6	839,732	0.751	44.4	1971
01/23/16	605,636	22.8	839,732	0.721	42.2	1781
01/24/16	519,734	28.5	839,732	0.619	36.5	1332
01/25/16	548,335	26.9	839,732	0.653	38.1	1452
01/26/16	608,687	22.1	839,732	0.725	42.9	1840
01/27/16	497,126	36.0	839,732	0.592	29.0	841

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
01/28/16	559,940	24.7	839,732	0.667	40.3	1624
01/29/16	492,751	31.0	839,732	0.587	34.0	1156
01/30/16	417,561	36.7	839,732	0.497	28.3	801
01/31/16	445,192	31.9	839,732	0.530	33.1	1096
02/01/16	501,778	29.7	840,121	0.597	35.3	1246
02/02/16	593,047	24.7	840,121	0.706	40.3	1624
02/03/16	645,355	15.3	840,121	0.768	49.7	2470
02/04/16	668,218	16.4	840,121	0.795	48.6	2362
02/05/16	583,598	24.8	840,121	0.695	40.2	1616
02/06/16	463,052	34.3	840,121	0.551	30.7	942
02/07/16	575,891	24.3	840,121	0.685	40.7	1656
02/08/16	771,094	11.9	840,121	0.918	53.1	2820
02/09/16	775,960	9.7	840,121	0.924	55.3	3058
02/10/16	793,682	8.5	840,121	0.945	56.5	3192
02/11/16	735,380	13.0	840,121	0.875	52.0	2704
02/12/16	852,384	2.5	840,121	1.015	62.5	3906
02/13/16	779,330	7.8	840,121	0.928	57.2	3272
02/14/16	686,947	18.0	840,121	0.818	47.0	2209
02/15/16	498,129	30.3	840,121	0.593	34.7	1204
02/16/16	553,705	24.4	840,121	0.659	40.6	1648
02/17/16	550,403	26.9	840,121	0.655	38.1	1452
02/18/16	445,727	37.4	840,121	0.531	27.6	762
02/19/16	391,650	40.3	840,121	0.466	24.7	610
02/20/16	437,183	33.4	840,121	0.520	31.6	999
02/21/16	470,148	31.7	840,121	0.560	33.3	1109
02/22/16	454,637	33.0	840,121	0.541	32.0	1024
02/23/16	443,957	35.7	840,121	0.528	29.3	858
02/24/16	467,098	32.7	840,121	0.556	32.3	1043
02/25/16	499,566	28.7	840,121	0.595	36.3	1318
02/26/16	392,104	36.2	840,121	0.467	28.8	829
02/27/16	267,728	47.0	840,121	0.319	18.0	324
02/28/16	479,157	32.8	840,121	0.570	32.2	1037
02/29/16	585,268	20.6	840,121	0.697	44.4	1971
03/01/16	618,170	18.7	840,263	0.736	46.3	2144
03/02/16	514,918	26.4	840,263	0.613	38.6	1490
03/03/16	483,841	30.9	840,263	0.576	34.1	1163
03/04/16	473,067	33.1	840,263	0.563	31.9	1018
03/05/16	430,083	33.2	840,263	0.512	31.8	1011
03/06/16	269,751	48.0	840,263	0.321	17.0	289
03/07/16	168,034	58.2	840,263	0.200	6.8	46
03/08/16	215,502	49.3	840,263	0.256	15.7	246
03/09/16	374,575	37.5	840,263	0.446	27.5	756
03/10/16	359,837	39.2	840,263	0.428	25.8	666
03/11/16	189,417	55.8	840,263	0.225	9.2	85
03/12/16	142,396	56.8	840,263	0.169	8.2	67
03/13/16	216,724	51.4	840,263	0.258	13.6	185
03/14/16	181,729	53.6	840,263	0.216	11.4	130
03/15/16	247,063	48.1	840,263	0.294	16.9	286
03/16/16	352,057	41.0	840,263	0.419	24.0	576
03/17/16	404,888	36.0	840,263	0.482	29.0	841
03/18/16	446,825	32.0	840,263	0.532	33.0	1089
03/19/16	424,805	33.7	840,263	0.506	31.3	980
03/20/16	395,378	35.3	840,263	0.471	29.7	882
03/21/16	310,213	44.3	840,263	0.369	20.7	428
03/22/16	313,616	41.8	840,263	0.373	23.2	538
03/23/16	479,322	30.7	840,263	0.570	34.3	1176
03/24/16	375,305	36.2	840,263	0.447	28.8	829
03/25/16	312,525	42.4	840,263	0.372	22.6	511
03/26/16	302,160	44.3	840,263	0.360	20.7	428
03/27/16	379,715	36.2	840,263	0.452	28.8	829
03/28/16	242,290	48.1	840,263	0.288	16.9	286
03/29/16	202,392	52.5	840,263	0.241	12.5	156
03/30/16	288,505	44.3	840,263	0.343	20.7	428
03/31/16	296,515	42.5	840,263	0.353	22.5	506
11/01/16	180,304	51.1	844,472	0.214	13.9	193

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
11/02/16	191,550	52.1	844,472	0.227	12.9	166
11/03/16	177,541	52.3	844,472	0.210	12.7	161
11/04/16	160,642	55.0	844,472	0.190	10.0	100
11/05/16	139,733	57.5	844,472	0.165	7.5	56
11/06/16	135,920	56.2	844,472	0.161	8.8	77
11/07/16	167,660	54.3	844,472	0.199	10.7	114
11/08/16	220,915	47.0	844,472	0.262	18.0	324
11/09/16	196,192	51.7	844,472	0.232	13.3	177
11/10/16	179,614	53.0	844,472	0.213	12.0	144
11/11/16	283,163	40.8	844,472	0.335	24.2	586
11/12/16	247,230	46.9	844,472	0.293	18.1	328
11/13/16	199,324	50.8	844,472	0.236	14.2	202
11/14/16	277,274	43.8	844,472	0.328	21.2	449
11/15/16	249,513	52.8	844,472	0.295	12.2	149
11/16/16	194,934	49.1	844,472	0.231	15.9	253
11/17/16	219,358	50.8	844,472	0.260	14.2	202
11/18/16	424,481	34.0	844,472	0.503	31.0	961
11/19/16	488,210	22.6	844,472	0.578	42.4	1798
11/20/16	501,635	23.2	844,472	0.594	41.8	1747
11/21/16	428,780	34.5	844,472	0.508	30.5	930
11/22/16	440,722	34.7	844,472	0.522	30.3	918
11/23/16	408,904	34.5	844,472	0.484	30.5	930
11/24/16	387,160	34.7	844,472	0.458	30.3	918
11/25/16	425,879	33.2	844,472	0.504	31.8	1011
11/26/16	374,873	36.7	844,472	0.444	28.3	801
11/27/16	361,093	42.6	844,472	0.428	22.4	502
11/28/16	315,229	43.1	844,472	0.373	21.9	480
11/29/16	392,888	36.5	844,472	0.465	28.5	812
11/30/16	387,876	36.8	844,472	0.459	28.2	795
12/01/16	421,824	34.3	846,632	0.498	30.7	942
12/02/16	459,081	31.0	846,632	0.542	34.0	1156
12/03/16	441,122	31.1	846,632	0.521	33.9	1149
12/04/16	442,680	33.7	846,632	0.523	31.3	980
12/05/16	453,576	34.7	846,632	0.536	30.3	918
12/06/16	663,143	19.8	846,632	0.783	45.2	2043
12/07/16	706,910	17.7	846,632	0.835	47.3	2237
12/08/16	682,081	19.2	846,632	0.806	45.8	2098
12/09/16	737,206	11.5	846,632	0.871	53.5	2862
12/10/16	761,983	12.7	846,632	0.900	52.3	2735
12/11/16	689,474	14.0	846,632	0.814	51.0	2601
12/12/16	828,340	0.8	846,632	0.978	64.2	4122
12/13/16	833,809	6.7	846,632	0.985	58.3	3399
12/14/16	925,988	(0.7)	846,632	1.094	65.7	4316
12/15/16	876,808	2.4	846,632	1.036	62.6	3919
12/16/16	764,350	10.3	846,632	0.903	54.7	2992
12/17/16	942,578	(5.5)	846,632	1.113	70.5	4970
12/18/16	968,388	(3.5)	846,632	1.144	68.5	4692
12/19/16	668,287	22.9	846,632	0.789	42.1	1772
12/20/16	516,822	30.2	846,632	0.610	34.8	1211
12/21/16	493,318	32.1	846,632	0.583	32.9	1082
12/22/16	480,305	33.0	846,632	0.567	32.0	1024
12/23/16	451,957	34.0	846,632	0.534	31.0	961
12/24/16	442,820	33.5	846,632	0.523	31.5	992
12/25/16	489,994	34.0	846,632	0.579	31.0	961
12/26/16	689,874	19.3	846,632	0.815	45.7	2088
12/27/16	613,726	21.7	846,632	0.725	43.3	1875
12/28/16	503,568	31.6	846,632	0.595	33.4	1116
12/29/16	586,308	25.6	846,632	0.693	39.4	1552
12/30/16	554,055	27.7	846,632	0.654	37.3	1391
12/31/16	560,706	24.0	846,632	0.662	41.0	1681
01/01/17	519,089	28.5	848,094	0.612	36.5	1332
01/02/17	523,311	30.8	848,094	0.617	34.2	1170
01/03/17	863,817	5.0	848,094	1.019	60.0	3600
01/04/17	959,516	(1.0)	848,094	1.131	66.0	4356
01/05/17	999,430	(4.5)	848,094	1.178	69.5	4830

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01/06/17	927,915	0.7	848,094	1.094	64.3	4134
01/07/17	908,528	2.0	848,094	1.071	63.0	3969
01/08/17	790,860	13.8	848,094	0.933	51.2	2621
01/09/17	646,371	24.7	848,094	0.762	40.3	1624
01/10/17	771,630	11.4	848,094	0.910	53.6	2873
01/11/17	824,873	6.4	848,094	0.973	58.6	3434
01/12/17	904,737	1.2	848,094	1.067	63.8	4070
01/13/17	871,778	5.0	848,094	1.028	60.0	3600
01/14/17	735,004	12.5	848,094	0.867	52.5	2756
01/15/17	628,439	21.5	848,094	0.741	43.5	1892
01/16/17	557,819	21.5	848,094	0.658	43.5	1892
01/17/17	517,895	31.0	848,094	0.611	34.0	1156
01/18/17	439,022	34.4	848,094	0.518	30.6	936
01/19/17	404,180	35.5	848,094	0.477	29.5	870
01/20/17	423,304	35.3	848,094	0.499	29.7	882
01/21/17	411,780	36.3	848,094	0.486	28.7	824
01/22/17	425,487	36.1	848,094	0.502	28.9	835
01/23/17	467,369	33.4	848,094	0.551	31.6	999
01/24/17	493,957	31.8	848,094	0.582	33.2	1102
01/25/17	540,147	29.2	848,094	0.637	35.8	1282
01/26/17	585,083	24.6	848,094	0.690	40.4	1632
01/27/17	554,392	25.6	848,094	0.654	39.4	1552
01/28/17	576,976	25.8	848,094	0.680	39.2	1537
01/29/17	585,925	22.5	848,094	0.691	42.5	1806
01/30/17	475,041	39.3	848,094	0.560	25.7	660
01/31/17	512,122	30.8	848,094	0.604	34.2	1170
02/01/17	737,137	12.8	848,493	0.869	52.2	2725
02/02/17	779,997	11.8	848,493	0.919	53.2	2830
02/03/17	683,698	18.3	848,493	0.806	46.7	2181
02/04/17	551,031	29.4	848,493	0.649	35.6	1267
02/05/17	597,838	21.7	848,493	0.705	43.3	1875
02/06/17	529,442	30.1	848,493	0.624	34.9	1218
02/07/17	725,081	15.3	848,493	0.855	49.7	2470
02/08/17	817,639	7.8	848,493	0.964	57.2	3272
02/09/17	681,617	18.3	848,493	0.803	46.7	2181
02/10/17	397,663	39.8	848,493	0.469	25.2	635
02/11/17	392,369	38.1	848,493	0.462	26.9	724
02/12/17	469,995	33.1	848,493	0.554	31.9	1018
02/13/17	401,141	38.6	848,493	0.473	26.4	697
02/14/17	481,890	31.3	848,493	0.568	33.7	1136
02/15/17	478,034	29.8	848,493	0.563	35.2	1239
02/16/17	417,908	34.6	848,493	0.493	30.4	924
02/17/17	268,428	47.3	848,493	0.316	17.7	313
02/18/17	282,704	45.1	848,493	0.333	19.9	396
02/19/17	233,635	51.6	848,493	0.275	13.4	180
02/20/17	306,643	45.5	848,493	0.361	19.5	380
02/21/17	256,933	48.5	848,493	0.303	16.5	272
02/22/17	309,265	43.5	848,493	0.364	21.5	462
02/23/17	491,472	30.7	848,493	0.579	34.3	1176
02/24/17	626,739	21.8	848,493	0.739	43.2	1866
02/25/17	538,074	26.7	848,493	0.634	38.3	1467
02/26/17	485,854	30.2	848,493	0.573	34.8	1211
02/27/17	401,059	38.6	848,493	0.473	26.4	697
02/28/17	425,395	35.7	848,493	0.501	29.3	858
03/01/17	540,789	26.7	848,523	0.637	38.3	1467
03/02/17	592,751	21.5	848,523	0.699	43.5	1892
03/03/17	544,261	26.0	848,523	0.641	39.0	1521
03/04/17	409,126	37.4	848,523	0.482	27.6	762
03/05/17	238,030	51.9	848,523	0.281	13.1	172
03/06/17	296,713	46.9	848,523	0.350	18.1	328
03/07/17	463,077	37.4	848,523	0.546	27.6	762
03/08/17	522,057	28.2	848,523	0.615	36.8	1354
03/09/17	635,391	20.0	848,523	0.749	45.0	2025
03/10/17	713,319	12.6	848,523	0.841	52.4	2746
03/11/17	658,050	16.0	848,523	0.776	49.0	2401

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
03/12/17	691,910	18.6	848,523	0.815	46.4	2153
03/13/17	634,800	18.4	848,523	0.748	46.6	2172
03/14/17	602,366	20.1	848,523	0.710	44.9	2016
03/15/17	529,207	24.5	848,523	0.624	40.5	1640
03/16/17	444,717	34.7	848,523	0.524	30.3	918
03/17/17	450,146	36.2	848,523	0.531	28.8	829
03/18/17	413,565	34.1	848,523	0.487	30.9	955
03/19/17	333,512	44.3	848,523	0.393	20.7	428
03/20/17	322,240	43.7	848,523	0.380	21.3	454
03/21/17	471,753	28.7	848,523	0.556	36.3	1318
03/22/17	432,197	35.8	848,523	0.509	29.2	853
03/23/17	407,829	38.7	848,523	0.481	26.3	692
03/24/17	371,710	40.1	848,523	0.438	24.9	620
03/25/17	371,051	39.3	848,523	0.437	25.7	660
03/26/17	362,567	39.9	848,523	0.427	25.1	630
03/27/17	253,000	46.4	848,523	0.298	18.6	346
03/28/17	210,525	52.4	848,523	0.248	12.6	159
03/29/17	298,717	44.6	848,523	0.352	20.4	416
03/30/17	332,497	42.1	848,523	0.392	22.9	524
03/31/17	263,499	45.9	848,523	0.311	19.1	365
11/01/17	437,964	34.8	855,492	0.512	30.2	912
11/02/17	427,487	35.5	855,492	0.500	29.5	870
11/03/17	442,491	33.3	855,492	0.517	31.7	1005
11/04/17	376,428	40.1	855,492	0.440	24.9	620
11/05/17	505,969	28.0	855,492	0.591	37.0	1369
11/06/17	499,768	29.7	855,492	0.584	35.3	1246
11/07/17	477,514	30.3	855,492	0.558	34.7	1204
11/08/17	459,403	32.0	855,492	0.537	33.0	1089
11/09/17	683,102	15.8	855,492	0.798	49.2	2421
11/10/17	636,930	24.5	855,492	0.745	40.5	1640
11/11/17	445,068	33.6	855,492	0.520	31.4	986
11/12/17	495,747	30.4	855,492	0.579	34.6	1197
11/13/17	392,819	40.3	855,492	0.459	24.7	610
11/14/17	345,102	43.4	855,492	0.403	21.6	467
11/15/17	509,484	30.3	855,492	0.596	34.7	1204
11/16/17	496,386	33.2	855,492	0.580	31.8	1011
11/17/17	416,569	36.4	855,492	0.487	28.6	818
11/18/17	533,224	25.7	855,492	0.623	39.3	1544
11/19/17	466,922	33.7	855,492	0.546	31.3	980
11/20/17	439,160	39.2	855,492	0.513	25.8	666
11/21/17	610,128	21.4	855,492	0.713	43.6	1901
11/22/17	569,873	26.7	855,492	0.666	38.3	1467
11/23/17	347,762	43.3	855,492	0.407	21.7	471
11/24/17	314,746	45.4	855,492	0.368	19.6	384
11/25/17	439,821	32.7	855,492	0.514	32.3	1043
11/26/17	377,934	40.8	855,492	0.442	24.2	586
11/27/17	271,931	51.9	855,492	0.318	13.1	172
11/28/17	396,180	39.2	855,492	0.463	25.8	666
11/29/17	394,664	41.0	855,492	0.461	24.0	576
11/30/17	399,061	37.7	855,492	0.466	27.3	745
12/01/17	390,562	40.6	857,318	0.456	24.4	595
12/02/17	396,436	36.7	857,318	0.462	28.3	801
12/03/17	313,951	48.0	857,318	0.366	17.0	289
12/04/17	407,755	37.3	857,318	0.476	27.7	767
12/05/17	674,668	18.5	857,318	0.787	46.5	2162
12/06/17	720,028	15.5	857,318	0.840	49.5	2450
12/07/17	662,426	18.5	857,318	0.773	46.5	2162
12/08/17	563,982	26.6	857,318	0.658	38.4	1475
12/09/17	593,960	22.0	857,318	0.693	43.0	1849
12/10/17	541,895	27.0	857,318	0.632	38.0	1444
12/11/17	630,970	20.7	857,318	0.736	44.3	1962
12/12/17	617,074	22.1	857,318	0.720	42.9	1840
12/13/17	633,762	21.4	857,318	0.739	43.6	1901
12/14/17	626,270	22.3	857,318	0.730	42.7	1823
12/15/17	528,463	27.3	857,318	0.616	37.7	1421

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs^2
12/16/17	538,383	27.8	857,318	0.628	37.2	1384
12/17/17	536,741	27.0	857,318	0.626	38.0	1444
12/18/17	451,707	36.5	857,318	0.527	28.5	812
12/19/17	532,399	27.0	857,318	0.621	38.0	1444
12/20/17	660,515	19.3	857,318	0.770	45.7	2088
12/21/17	645,782	21.2	857,318	0.753	43.8	1918
12/22/17	636,829	18.5	857,318	0.743	46.5	2162
12/23/17	650,028	17.8	857,318	0.758	47.2	2228
12/24/17	740,670	11.3	857,318	0.864	53.7	2884
12/25/17	964,933	(4.3)	857,318	1.126	69.3	4802
12/26/17	1,021,106	(4.0)	857,318	1.191	69.0	4761
12/27/17	927,298	2.4	857,318	1.082	62.6	3919
12/28/17	885,639	6.2	857,318	1.033	58.8	3457
12/29/17	1,000,543	(3.5)	857,318	1.167	68.5	4692
12/30/17	1,070,222	(9.3)	857,318	1.248	74.3	5520
12/31/17	1,089,622	(10.6)	857,318	1.271	75.6	5715
01/01/18	1,037,333	(6.1)	858,503	1.208	71.1	5055
01/02/18	911,185	7.4	858,503	1.061	57.6	3318
01/03/18	934,447	0.3	858,503	1.088	64.7	4186
01/04/18	997,636	(3.5)	858,503	1.162	68.5	4692
01/05/18	1,008,716	(4.2)	858,503	1.175	69.2	4789
01/06/18	858,219	9.2	858,503	1.000	55.8	3114
01/07/18	613,260	26.3	858,503	0.714	38.7	1498
01/08/18	526,838	30.3	858,503	0.614	34.7	1204
01/09/18	461,537	37.0	858,503	0.538	28.0	784
01/10/18	512,550	32.4	858,503	0.597	32.6	1063
01/11/18	936,836	2.7	858,503	1.091	62.3	3881
01/12/18	992,200	(4.0)	858,503	1.156	69.0	4761
01/13/18	979,670	(2.4)	858,503	1.141	67.4	4543
01/14/18	860,180	10.7	858,503	1.002	54.3	2948
01/15/18	955,968	2.1	858,503	1.114	62.9	3956
01/16/18	914,386	2.5	858,503	1.065	62.5	3906
01/17/18	680,441	22.8	858,503	0.793	42.2	1781
01/18/18	501,640	33.5	858,503	0.584	31.5	992
01/19/18	455,608	34.9	858,503	0.531	30.1	906
01/20/18	438,242	35.7	858,503	0.510	29.3	858
01/21/18	472,845	35.5	858,503	0.551	29.5	870
01/22/18	606,510	23.5	858,503	0.706	41.5	1722
01/23/18	610,828	19.8	858,503	0.712	45.2	2043
01/24/18	601,729	24.4	858,503	0.701	40.6	1648
01/25/18	573,298	28.1	858,503	0.668	36.9	1362
01/26/18	454,042	36.5	858,503	0.529	28.5	812
01/27/18	584,363	24.0	858,503	0.681	41.0	1681
01/28/18	744,122	14.0	858,503	0.867	51.0	2601
01/29/18	800,963	8.8	858,503	0.933	56.2	3158
01/30/18	683,980	23.8	858,503	0.797	41.2	1697
01/31/18	699,254	15.2	858,503	0.815	49.8	2480
02/01/18	943,623	(0.8)	859,341	1.098	65.8	4330
02/02/18	812,418	9.2	859,341	0.945	55.8	3114
02/03/18	807,595	9.4	859,341	0.940	55.6	3091
02/04/18	922,119	(0.9)	859,341	1.073	65.9	4343
02/05/18	891,698	4.4	859,341	1.038	60.6	3672
02/06/18	848,808	5.4	859,341	0.988	59.6	3552
02/07/18	800,909	8.8	859,341	0.932	56.2	3158
02/08/18	789,983	10.3	859,341	0.919	54.7	2992
02/09/18	827,046	6.0	859,341	0.962	59.0	3481
02/10/18	825,606	5.0	859,341	0.961	60.0	3600
02/11/18	804,087	9.4	859,341	0.936	55.6	3091
02/12/18	831,397	8.4	859,341	0.967	56.6	3204
02/13/18	652,871	24.0	859,341	0.760	41.0	1681
02/14/18	464,694	34.6	859,341	0.541	30.4	924
02/15/18	639,836	21.6	859,341	0.745	43.4	1884
02/16/18	696,363	17.4	859,341	0.810	47.6	2266
02/17/18	574,418	26.6	859,341	0.668	38.4	1475
02/18/18	555,036	31.8	859,341	0.646	33.2	1102



Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
02/19/18	696,864	21.3	859,341	0.811	43.7	1910
02/20/18	767,532	12.5	859,341	0.893	52.5	2756
02/21/18	751,416	13.1	859,341	0.874	51.9	2694
02/22/18	617,598	26.0	859,341	0.719	39.0	1521
02/23/18	599,226	20.8	859,341	0.697	44.2	1954
02/24/18	628,269	22.8	859,341	0.731	42.2	1781
02/25/18	596,679	21.8	859,341	0.694	43.2	1866
02/26/18	469,295	33.1	859,341	0.546	31.9	1018
02/27/18	441,810	36.8	859,341	0.514	28.2	795
02/28/18	428,960	36.3	859,341	0.499	28.7	824
03/01/18	489,467	29.4	859,933	0.569	35.6	1267
03/02/18	456,603	35.1	859,933	0.531	29.9	894
03/03/18	385,927	39.8	859,933	0.449	25.2	635
03/04/18	443,056	37.8	859,933	0.515	27.2	740
03/05/18	565,653	30.8	859,933	0.658	34.2	1170
03/06/18	582,976	24.9	859,933	0.678	40.1	1608
03/07/18	603,805	20.6	859,933	0.702	44.4	1971
03/08/18	555,873	23.3	859,933	0.646	41.7	1739
03/09/18	485,904	27.4	859,933	0.565	37.6	1414
03/10/18	455,596	32.3	859,933	0.530	32.7	1069
03/11/18	506,725	31.4	859,933	0.589	33.6	1129
03/12/18	475,321	31.6	859,933	0.553	33.4	1116
03/13/18	482,782	29.6	859,933	0.561	35.4	1253
03/14/18	405,380	36.0	859,933	0.471	29.0	841
03/15/18	464,473	31.1	859,933	0.540	33.9	1149
03/16/18	455,616	32.9	859,933	0.530	32.1	1030
03/17/18	373,245	38.1	859,933	0.434	26.9	724
03/18/18	407,584	38.3	859,933	0.474	26.7	713
03/19/18	426,418	36.0	859,933	0.496	29.0	841
03/20/18	521,619	27.1	859,933	0.607	37.9	1436
03/21/18	441,959	34.1	859,933	0.514	30.9	955
03/22/18	428,758	35.6	859,933	0.499	29.4	864
03/23/18	445,743	37.2	859,933	0.518	27.8	773
03/24/18	452,978	33.7	859,933	0.527	31.3	980
03/25/18	396,823	37.9	859,933	0.461	27.1	734
03/26/18	462,568	34.4	859,933	0.538	30.6	936
03/27/18	382,213	37.2	859,933	0.444	27.8	773
03/28/18	399,779	37.8	859,933	0.465	27.2	740
03/29/18	442,167	32.4	859,933	0.514	32.6	1063
03/30/18	453,445	33.8	859,933	0.527	31.2	973
03/31/18	603,098	19.0	859,933	0.701	46.0	2116
11/01/18	286,847	42.5	865,830	0.331	22.5	506
11/02/18	312,333	40.6	865,830	0.361	24.4	595
11/03/18	342,878	41.2	865,830	0.396	23.8	566
11/04/18	369,657	37.2	865,830	0.427	27.8	773
11/05/18	322,588	42.7	865,830	0.373	22.3	497
11/06/18	461,448	33.4	865,830	0.533	31.6	999
11/07/18	538,248	27.8	865,830	0.622	37.2	1384
11/08/18	566,759	24.0	865,830	0.655	41.0	1681
11/09/18	665,564	17.3	865,830	0.769	47.7	2275
11/10/18	622,047	21.2	865,830	0.718	43.8	1918
11/11/18	605,262	24.3	865,830	0.699	40.7	1656
11/12/18	694,974	15.7	865,830	0.803	49.3	2430
11/13/18	659,474	17.9	865,830	0.762	47.1	2218
11/14/18	474,764	34.0	865,830	0.548	31.0	961
11/15/18	422,447	35.8	865,830	0.488	29.2	853
11/16/18	523,658	28.0	865,830	0.605	37.0	1369
11/17/18	633,888	18.7	865,830	0.732	46.3	2144
11/18/18	588,518	23.2	865,830	0.680	41.8	1747
11/19/18	636,297	22.3	865,830	0.735	42.7	1823
11/20/18	582,541	26.5	865,830	0.673	38.5	1482
11/21/18	560,048	26.5	865,830	0.647	38.5	1482
11/22/18	468,601	35.9	865,830	0.541	29.1	847
11/23/18	368,993	41.4	865,830	0.426	23.6	557
11/24/18	483,158	29.4	865,830	0.558	35.6	1267

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
11/25/18	624,238	21.6	865,830	0.721	43.4	1884
11/26/18	703,016	17.4	865,830	0.812	47.6	2266
11/27/18	671,283	20.5	865,830	0.775	44.5	1980
11/28/18	605,222	25.3	865,830	0.699	39.7	1576
11/29/18	521,274	30.8	865,830	0.602	34.2	1170
11/30/18	513,409	29.4	865,830	0.593	35.6	1267
12/01/18	527,214	32.6	866,896	0.608	32.4	1050
12/02/18	556,687	29.6	866,896	0.642	35.4	1253
12/03/18	592,203	24.9	866,896	0.683	40.1	1608
12/04/18	629,452	23.3	866,896	0.726	41.7	1739
12/05/18	607,610	24.0	866,896	0.701	41.0	1681
12/06/18	726,713	13.6	866,896	0.838	51.4	2642
12/07/18	694,890	16.9	866,896	0.802	48.1	2314
12/08/18	651,159	21.9	866,896	0.751	43.1	1858
12/09/18	628,830	20.8	866,896	0.725	44.2	1954
12/10/18	669,604	18.3	866,896	0.772	46.7	2181
12/11/18	599,806	23.5	866,896	0.692	41.5	1722
12/12/18	567,275	26.0	866,896	0.654	39.0	1521
12/13/18	540,359	27.5	866,896	0.623	37.5	1406
12/14/18	499,824	29.3	866,896	0.577	35.7	1274
12/15/18	440,813	35.4	866,896	0.508	29.6	876
12/16/18	455,919	34.7	866,896	0.526	30.3	918
12/17/18	500,567	30.1	866,896	0.577	34.9	1218
12/18/18	424,311	38.1	866,896	0.489	26.9	724
12/19/18	424,941	36.8	866,896	0.490	28.2	795
12/20/18	533,382	30.3	866,896	0.615	34.7	1204
12/21/18	578,642	24.4	866,896	0.667	40.6	1648
12/22/18	535,683	28.8	866,896	0.618	36.2	1310
12/23/18	643,442	22.1	866,896	0.742	42.9	1840
12/24/18	599,602	22.0	866,896	0.692	43.0	1849
12/25/18	562,345	25.8	866,896	0.649	39.2	1537
12/26/18	535,852	33.4	866,896	0.618	31.6	999
12/27/18	507,881	33.4	866,896	0.586	31.6	999
12/28/18	729,440	16.1	866,896	0.841	48.9	2391
12/29/18	734,000	14.1	866,896	0.847	50.9	2591
12/30/18	540,129	29.3	866,896	0.623	35.7	1274
12/31/18	729,673	18.3	866,896	0.842	46.7	2181
01/01/19	875,919	4.9	868,055	1.009	60.1	3612
01/02/19	691,184	21.2	868,055	0.796	43.8	1918
01/03/19	498,929	33.9	868,055	0.575	31.1	967
01/04/19	427,207	36.0	868,055	0.492	29.0	841
01/05/19	450,719	35.0	868,055	0.519	30.0	900
01/06/19	499,757	35.0	868,055	0.576	30.0	900
01/07/19	464,972	36.3	868,055	0.536	28.7	824
01/08/19	763,669	15.7	868,055	0.880	49.3	2430
01/09/19	790,994	12.2	868,055	0.911	52.8	2788
01/10/19	674,870	20.0	868,055	0.777	45.0	2025
01/11/19	574,122	25.8	868,055	0.661	39.2	1537
01/12/19	554,424	28.8	868,055	0.639	36.2	1310
01/13/19	504,925	33.2	868,055	0.582	31.8	1011
01/14/19	542,919	29.5	868,055	0.625	35.5	1260
01/15/19	653,167	23.2	868,055	0.752	41.8	1747
01/16/19	708,630	16.9	868,055	0.816	48.1	2314
01/17/19	722,258	15.9	868,055	0.832	49.1	2411
01/18/19	886,340	7.1	868,055	1.021	57.9	3352
01/19/19	907,630	(0.8)	868,055	1.046	65.8	4330
01/20/19	901,606	2.6	868,055	1.039	62.4	3894
01/21/19	848,747	13.0	868,055	0.978	52.0	2704
01/22/19	753,951	16.7	868,055	0.869	48.3	2333
01/23/19	686,654	19.5	868,055	0.791	45.5	2070
01/24/19	991,438	(3.6)	868,055	1.142	68.6	4706
01/25/19	978,168	(1.5)	868,055	1.127	66.5	4422
01/26/19	954,672	1.1	868,055	1.100	63.9	4083
01/27/19	936,749	2.0	868,055	1.079	63.0	3969
01/28/19	924,364	2.8	868,055	1.065	62.2	3869

Date	Firm Throughput	Temperature	Firm Customer	UPC	HDD	HDDs*2
01/29/19	1,253,519	(18.5)	868,055	1.444	83.5	6972
01/30/19	1,243,182	(19.9)	868,055	1.432	84.9	7208
01/31/19	1,075,390	(7.0)	868,055	1.239	72.0	5184
02/01/19	786,328	12.5	868,532	0.905	52.5	2756
02/02/19	498,154	34.4	868,532	0.574	30.6	936
02/03/19	514,714	33.0	868,532	0.593	32.0	1024
02/04/19	867,616	8.0	868,532	0.999	57.0	3254
02/05/19	851,782	9.6	868,532	0.981	55.4	3069
02/06/19	706,492	18.9	868,532	0.813	46.1	2125
02/07/19	892,282	4.8	868,532	1.027	60.2	3624
02/08/19	1,023,411	(7.5)	868,532	1.178	72.5	5256
02/09/19	928,745	3.3	868,532	1.069	61.7	3807
02/10/19	771,312	15.4	868,532	0.888	49.6	2460
02/11/19	659,478	22.7	868,532	0.759	42.3	1789
02/12/19	717,998	16.0	868,532	0.827	49.0	2401
02/13/19	687,867	15.2	868,532	0.792	49.8	2480
02/14/19	835,990	8.6	868,532	0.963	56.4	3181
02/15/19	823,014	4.6	868,532	0.948	60.4	3648
02/16/19	717,138	16.5	868,532	0.826	48.5	2352
02/17/19	718,810	17.6	868,532	0.828	47.4	2247
02/18/19	762,819	11.0	868,532	0.878	54.0	2916
02/19/19	707,930	15.6	868,532	0.815	49.4	2440
02/20/19	676,228	19.5	868,532	0.779	45.5	2070
02/21/19	682,671	14.0	868,532	0.786	51.0	2601
02/22/19	580,947	24.4	868,532	0.669	40.6	1648
02/23/19	574,295	28.1	868,532	0.661	36.9	1362
02/24/19	850,804	5.6	868,532	0.980	59.4	3528
02/25/19	933,759	(0.5)	868,532	1.075	65.5	4290
02/26/19	867,949	6.1	868,532	0.999	58.9	3469
02/27/19	843,214	4.9	868,532	0.971	60.1	3612
02/28/19	749,796	12.7	868,532	0.863	52.3	2735
03/01/19	749,468	12.7	868,615	0.863	52.3	2735
03/02/19	818,400	5.5	868,615	0.942	59.5	3540
03/03/19	981,649	(6.4)	868,615	1.130	71.4	5098
03/04/19	895,226	3.8	868,615	1.031	61.2	3745
03/05/19	809,329	9.9	868,615	0.932	55.1	3036
03/06/19	736,190	13.2	868,615	0.848	51.8	2683
03/07/19	672,948	16.0	868,615	0.775	49.0	2401
03/08/19	513,870	28.8	868,615	0.592	36.2	1310
03/09/19	504,836	32.4	868,615	0.581	32.6	1063
03/10/19	601,528	22.1	868,615	0.693	42.9	1840
03/11/19	567,383	22.4	868,615	0.653	42.6	1815
03/12/19	502,820	35.2	868,615	0.579	29.8	888
03/13/19	434,120	39.0	868,615	0.500	26.0	676
03/14/19	486,103	36.0	868,615	0.560	29.0	841
03/15/19	526,390	30.5	868,615	0.606	34.5	1190
03/16/19	497,887	27.9	868,615	0.573	37.1	1376
03/17/19	485,262	31.3	868,615	0.559	33.7	1136
03/18/19	443,203	33.4	868,615	0.510	31.6	999
03/19/19	368,305	38.5	868,615	0.424	26.5	702
03/20/19	382,999	38.5	868,615	0.441	26.5	702
03/21/19	358,607	40.7	868,615	0.413	24.3	590
03/22/19	358,672	38.6	868,615	0.413	26.4	697
03/23/19	304,391	44.7	868,615	0.350	20.3	412
03/24/19	383,242	39.1	868,615	0.441	25.9	671
03/25/19	423,786	36.7	868,615	0.488	28.3	801
03/26/19	321,540	46.6	868,615	0.370	18.4	339
03/27/19	248,157	50.6	868,615	0.286	14.4	207
03/28/19	351,483	42.1	868,615	0.405	22.9	524
03/29/19	363,053	38.9	868,615	0.418	26.1	681
03/30/19	480,836	29.6	868,615	0.554	35.4	1253
03/31/19	451,318	32.5	868,615	0.520	32.5	1056

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
11/01/13	6,953	3,795	3,158	604	4,399	42.3	22.7	515
11/02/13	5,938	3,392	2,546	617	4,009	42.3	22.7	515
11/03/13	5,939	3,307	2,632	552	3,859	49.2	15.8	250
11/04/13	7,539	3,363	4,176	697	4,060	39.9	25.1	630
11/05/13	8,340	3,657	4,683	768	4,425	36.6	28.4	807
11/06/13	8,867	3,925	4,942	808	4,733	32.9	32.1	1030
11/07/13	9,018	4,102	4,916	877	4,979	29.7	35.3	1246
11/08/13	7,148	3,688	3,460	766	4,454	42.8	22.2	493
11/09/13	5,748	3,145	2,603	784	3,929	38.6	26.4	697
11/10/13	6,879	3,429	3,450	753	4,182	35.8	29.2	853
11/11/13	11,340	5,368	5,972	1,108	6,476	19.0	46.0	2116
11/12/13	10,737	5,254	5,483	1,061	6,315	24.8	40.2	1616
11/13/13	9,144	4,515	4,629	770	5,285	42.1	22.9	524
11/14/13	8,843	4,335	4,508	710	5,045	40.3	24.7	610
11/15/13	7,059	3,326	3,733	652	3,978	47.0	18.0	324
11/16/13	5,466	2,970	2,496	694	3,664	45.3	19.7	388
11/17/13	6,901	3,801	3,100	868	4,669	36.0	29.0	841
11/18/13	9,273	4,509	4,764	1,026	5,535	28.9	36.1	1303
11/19/13	8,488	3,944	4,544	816	4,760	43.2	21.8	475
11/20/13	8,933	4,258	4,675	821	5,079	38.8	26.2	686
11/21/13	10,523	5,177	5,346	1,091	6,268	25.3	39.7	1576
11/22/13	10,296	5,136	5,160	1,163	6,299	19.3	45.7	2088
11/23/13	9,848	5,259	4,589	1,291	6,550	12.7	52.3	2735
11/24/13	8,732	4,694	4,038	1,049	5,743	28.3	36.7	1347
11/25/13	10,008	4,927	5,081	956	5,883	31.8	33.2	1102
11/26/13	11,697	5,748	5,949	1,284	7,032	16.5	48.5	2352
11/27/13	10,018	5,308	4,710	1,148	6,456	22.4	42.6	1815
11/28/13	8,249	4,871	3,378	1,180	6,051	20.2	44.8	2007
11/29/13	7,046	3,795	3,251	1,076	4,871	28.4	36.6	1340
11/30/13	6,703	3,554	3,149	915	4,469	31.7	33.3	1109
12/01/13	7,356	3,749	3,607	899	4,648	30.5	34.5	1190
12/02/13	8,681	3,943	4,738	914	4,857	35.1	29.9	894
12/03/13	9,517	4,724	4,793	940	5,664	32.9	32.1	1030
12/04/13	11,542	5,846	5,696	1,185	7,031	19.6	45.4	2061
12/05/13	13,890	7,355	6,535	1,507	8,862	2.0	63.0	3969
12/06/13	12,591	6,567	6,024	1,583	8,150	(3.7)	68.7	4720
12/07/13	11,485	6,744	4,741	1,509	8,253	(0.4)	65.4	4277
12/08/13	11,986	7,097	4,889	1,386	8,483	8.3	56.7	3215
12/09/13	13,684	7,052	6,632	1,546	8,598	1.8	63.2	3994
12/10/13	13,438	6,867	6,571	1,514	8,381	3.2	61.8	3819
12/11/13	13,814	7,011	6,803	1,532	8,543	1.3	63.7	4058
12/12/13	12,111	6,062	6,049	1,360	7,422	16.3	48.7	2372
12/13/13	11,170	5,750	5,420	1,419	7,169	12.8	52.2	2725
12/14/13	10,283	5,652	4,631	1,453	7,105	5.8	59.2	3505
12/15/13	11,682	6,492	5,190	1,487	7,979	2.4	62.6	3919
12/16/13	11,737	5,826	5,911	1,349	7,175	20.2	44.8	2007
12/17/13	11,944	5,888	6,056	1,288	7,176	17.4	47.6	2266
12/18/13	11,132	5,539	5,593	1,122	6,661	27.1	37.9	1436
12/19/13	12,067	6,063	6,004	1,360	7,423	17.3	47.7	2275
12/20/13	10,922	5,974	4,948	1,353	7,327	18.4	46.6	2172
12/21/13	9,192	5,113	4,079	1,310	6,423	19.0	46.0	2116
12/22/13	10,869	6,205	4,664	1,397	7,602	9.0	56.0	3136
12/23/13	11,992	6,492	5,500	1,689	8,181	(4.4)	69.4	4816
12/24/13	9,245	5,576	3,669	1,457	7,033	9.3	55.7	3102
12/25/13	8,496	4,877	3,619	1,275	6,152	16.8	48.2	2323
12/26/13	9,917	5,024	4,893	1,236	6,260	21.7	43.3	1875
12/27/13	8,648	4,568	4,080	1,086	5,654	31.3	33.7	1136
12/28/13	7,333	3,913	3,420	1,092	5,005	24.5	40.5	1640
12/29/13	9,577	5,001	4,576	1,548	6,549	(7.0)	72.0	5184
12/30/13	11,377	5,978	5,399	1,682	7,660	(2.7)	67.7	4583
12/31/13	11,105	6,309	4,796	1,720	8,029	(5.0)	70.0	4900
01/01/14	10,792	5,732	5,060	1,640	7,372	(1.9)	66.9	4476
01/02/14	12,607	6,143	6,464	1,672	7,815	(2.7)	67.7	4583
01/03/14	10,095	5,020	5,075	1,392	6,412	22.5	42.5	1806
01/04/14	9,277	5,152	4,125	1,394	6,546	2.8	62.2	3869
01/05/14	10,958	6,269	4,689	1,525	7,794	(14.5)	79.5	6320

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
01/06/14	13,224	6,904	6,320	1,618	8,522	(13.8)	78.8	6209
01/07/14	12,935	6,656	6,279	1,536	8,192	(2.6)	67.6	4570
01/08/14	13,643	6,741	6,902	1,619	8,360	(1.4)	66.4	4409
01/09/14	12,113	5,988	6,125	1,362	7,350	17.4	47.6	2266
01/10/14	9,585	4,805	4,780	1,150	5,955	28.3	36.7	1347
01/11/14	8,252	4,544	3,708	1,116	5,660	27.3	37.7	1421
01/12/14	7,685	3,747	3,938	1,022	4,769	34.8	30.2	912
01/13/14	9,961	4,446	5,515	1,136	5,582	26.9	38.1	1452
01/14/14	12,117	5,688	6,429	1,403	7,091	10.8	54.2	2938
01/15/14	11,491	5,620	5,871	1,375	6,995	21.8	43.2	1866
01/16/14	12,788	6,458	6,330	1,551	8,009	9.0	56.0	3136
01/17/14	11,001	5,738	5,263	1,495	7,233	9.9	55.1	3036
01/18/14	8,439	4,588	3,851	1,294	5,882	20.3	44.7	1998
01/19/14	8,096	4,344	3,752	1,059	5,403	31.6	33.4	1116
01/20/14	13,024	6,579	6,445	1,546	8,125	0.9	64.1	4109
01/21/14	12,994	6,576	6,418	1,627	8,203	1.5	63.5	4032
01/22/14	14,163	7,159	7,004	1,789	8,948	(5.8)	70.8	5013
01/23/14	13,512	6,797	6,715	1,783	8,580	1.7	63.3	4007
01/24/14	10,251	5,450	4,801	1,459	6,909	21.9	43.1	1858
01/25/14	9,412	5,096	4,316	1,570	6,666	6.3	58.7	3446
01/26/14	10,528	5,890	4,638	1,606	7,496	(1.8)	66.8	4462
01/27/14	13,153	6,340	6,813	1,636	7,976	(11.3)	76.3	5822
01/28/14	12,322	5,771	6,551	1,719	7,490	(3.5)	68.5	4692
01/29/14	11,912	5,951	5,961	1,367	7,318	23.8	41.2	1697
01/30/14	13,343	6,534	6,809	1,541	8,075	3.2	61.8	3819
01/31/14	12,593	6,558	6,035	1,540	8,098	4.3	60.7	3684
02/01/14	10,786	5,999	4,787	1,490	7,489	6.2	58.8	3457
02/02/14	11,186	6,193	4,993	1,529	7,722	4.6	60.4	3648
02/03/14	12,633	5,930	6,703	1,461	7,391	7.8	57.2	3272
02/04/14	12,871	6,197	6,674	1,551	7,748	3.5	61.5	3782
02/05/14	13,762	6,682	7,080	1,630	8,312	(2.6)	67.6	4570
02/06/14	14,404	7,439	6,965	1,630	9,069	(0.8)	65.8	4330
02/07/14	12,178	6,518	5,660	1,551	8,069	5.0	60.0	3600
02/08/14	9,658	5,171	4,487	1,426	6,597	7.4	57.6	3318
02/09/14	11,822	6,136	5,686	1,618	7,754	(2.7)	67.7	4583
02/10/14	14,245	6,917	7,328	1,730	8,647	(2.0)	67.0	4489
02/11/14	12,719	6,175	6,544	1,577	7,752	11.3	53.7	2884
02/12/14	11,233	5,280	5,953	1,331	6,611	20.4	44.6	1989
02/13/14	11,668	5,514	6,154	1,547	7,061	10.6	54.4	2959
02/14/14	13,087	7,582	5,505	1,589	9,171	7.5	57.5	3306
02/15/14	10,769	6,715	4,054	1,398	8,113	14.8	50.2	2520
02/16/14	11,297	6,941	4,356	1,352	8,293	19.0	46.0	2116
02/17/14	10,316	4,901	5,415	1,231	6,132	22.9	42.1	1772
02/18/14	10,300	4,958	5,342	1,104	6,062	31.5	33.5	1122
02/19/14	9,482	4,693	4,789	1,022	5,715	34.4	30.6	936
02/20/14	10,183	4,835	5,348	1,176	6,011	21.8	43.2	1866
02/21/14	10,780	5,727	5,053	1,417	7,144	11.0	54.0	2916
02/22/14	9,155	5,033	4,122	1,435	6,468	8.6	56.4	3181
02/23/14	9,771	5,131	4,640	1,415	6,546	8.3	56.7	3215
02/24/14	12,679	6,382	6,297	1,469	7,851	5.0	60.0	3600
02/25/14	13,502	6,714	6,788	1,656	8,370	(2.4)	67.4	4543
02/26/14	12,888	6,545	6,343	1,636	8,181	(3.2)	68.2	4651
02/27/14	14,669	7,974	6,695	1,673	9,647	(5.0)	70.0	4900
02/28/14	11,236	5,791	5,445	1,563	7,354	6.5	58.5	3422
03/01/14	9,205	4,627	4,578	1,598	6,225	(6.3)	71.3	5084
03/02/14	9,761	4,770	4,991	1,465	6,235	(3.8)	68.8	4733
03/03/14	11,513	5,668	5,845	1,502	7,170	6.7	58.3	3399
03/04/14	11,307	5,439	5,868	1,353	6,792	16.0	49.0	2401
03/05/14	11,277	5,377	5,900	1,309	6,686	18.0	47.0	2209
03/06/14	10,081	4,725	5,356	1,209	5,934	24.3	40.7	1656
03/07/14	9,508	4,880	4,628	1,170	6,050	25.2	39.8	1584
03/08/14	7,682	4,121	3,561	1,091	5,212	22.9	42.1	1772
03/09/14	7,515	3,920	3,595	923	4,843	38.0	27.0	729
03/10/14	8,774	3,880	4,894	828	4,708	44.0	21.0	441
03/11/14	9,909	4,765	5,144	998	5,763	32.3	32.7	1069
03/12/14	9,869	4,431	5,438	1,072	5,503	24.8	40.2	1616

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
03/13/14	8,235	3,445	4,790	747	4,192	42.7	22.3	497
03/14/14	8,319	3,922	4,397	927	4,849	31.3	33.7	1136
03/15/14	7,805	3,985	3,820	1,075	5,060	22.5	42.5	1806
03/16/14	8,189	3,907	4,282	1,083	4,990	22.6	42.4	1798
03/17/14	8,553	3,974	4,579	954	4,928	31.5	33.5	1122
03/18/14	9,184	4,355	4,829	939	5,294	30.7	34.3	1176
03/19/14	8,999	4,237	4,762	962	5,199	29.8	35.2	1239
03/20/14	8,193	3,758	4,435	802	4,560	35.7	29.3	858
03/21/14	9,107	4,554	4,553	994	5,548	27.0	38.0	1444
03/22/14	8,247	4,273	3,974	1,232	5,505	15.1	49.9	2490
03/23/14	8,172	4,170	4,002	1,129	5,299	21.0	44.0	1936
03/24/14	10,225	4,768	5,457	1,113	5,881	21.6	43.4	1884
03/25/14	10,565	5,072	5,493	1,173	6,245	18.6	46.4	2153
03/26/14	8,982	4,160	4,822	874	5,034	36.9	28.1	790
03/27/14	9,112	4,244	4,868	909	5,153	32.6	32.4	1050
03/28/14	8,172	3,844	4,328	929	4,773	30.5	34.5	1190
03/29/14	5,904	2,872	3,032	759	3,631	38.4	26.6	708
03/30/14	5,379	2,517	2,862	563	3,080	50.6	14.4	207
03/31/14	8,320	3,677	4,643	759	4,436	39.3	25.7	660
11/01/14	6,197	2,844	3,353	506	3,350	36.5	28.5	812
11/02/14	5,340	2,437	2,903	368	2,805	47.9	17.1	292
11/03/14	7,165	2,963	4,202	399	3,362	47.7	17.3	299
11/04/14	7,483	3,174	4,309	414	3,588	41.9	23.1	534
11/05/14	7,994	3,288	4,706	496	3,784	36.8	28.2	795
11/06/14	8,523	3,456	5,067	551	4,007	35.8	29.2	853
11/07/14	6,907	3,132	3,775	549	3,681	40.5	24.5	600
11/08/14	5,718	2,895	2,823	520	3,415	38.5	26.5	702
11/09/14	6,937	3,349	3,588	588	3,937	32.0	33.0	1089
11/10/14	9,564	4,435	5,129	804	5,239	26.0	39.0	1521
11/11/14	10,126	4,723	5,403	851	5,574	20.3	44.7	1998
11/12/14	10,853	4,673	6,180	884	5,557	21.0	44.0	1936
11/13/14	14,649	8,005	6,644	930	8,935	17.2	47.8	2285
11/14/14	13,416	7,837	5,579	978	8,815	13.3	51.7	2673
11/15/14	11,236	7,338	3,898	889	8,227	18.0	47.0	2209
11/16/14	12,491	7,832	4,659	982	8,814	10.8	54.2	2938
11/17/14	14,885	8,473	6,412	1,081	9,554	10.5	54.5	2970
11/18/14	14,500	8,194	6,306	978	9,172	16.5	48.5	2352
11/19/14	14,389	8,238	6,151	967	9,205	17.6	47.4	2247
11/20/14	12,767	6,103	6,664	1,100	7,203	10.6	54.4	2959
11/21/14	9,164	4,265	4,899	872	5,137	30.3	34.7	1204
11/22/14	6,985	3,235	3,750	666	3,901	40.0	25.0	625
11/23/14	7,934	3,669	4,265	666	4,335	35.6	29.4	864
11/24/14	11,791	5,151	6,640	1,047	6,198	15.9	49.1	2411
11/25/14	11,126	4,784	6,342	967	5,751	22.3	42.7	1823
11/26/14	10,461	4,894	5,567	1,053	5,947	14.1	50.9	2591
11/27/14	9,207	4,733	4,474	1,099	5,832	7.9	57.1	3260
11/28/14	7,849	4,197	3,652	992	5,189	21.9	43.1	1858
11/29/14	7,761	3,951	3,810	930	4,881	24.8	40.2	1616
11/30/14	10,195	5,200	4,995	1,189	6,389	6.8	58.2	3387
12/01/14	13,158	5,844	7,314	1,258	7,102	6.0	59.0	3481
12/02/14	11,960	5,275	6,685	1,072	6,347	17.8	47.2	2228
12/03/14	11,835	5,127	6,708	1,043	6,170	17.8	47.2	2228
12/04/14	10,516	4,333	6,183	902	5,235	29.0	36.0	1296
12/05/14	9,049	4,041	5,008	875	4,916	26.8	38.2	1459
12/06/14	7,952	3,633	4,319	864	4,497	26.3	38.7	1498
12/07/14	7,898	3,733	4,165	801	4,534	33.6	31.4	986
12/08/14	11,267	4,869	6,398	968	5,837	23.2	41.8	1747
12/09/14	11,086	4,809	6,277	980	5,789	21.3	43.7	1910
12/10/14	10,981	4,587	6,394	884	5,471	26.9	38.1	1452
12/11/14	10,300	4,348	5,952	835	5,183	31.1	33.9	1149
12/12/14	8,600	3,669	4,931	771	4,440	35.9	29.1	847
12/13/14	6,506	2,846	3,660	632	3,478	45.8	19.2	369
12/14/14	6,616	3,094	3,522	580	3,674	48.3	16.7	279
12/15/14	10,171	4,404	5,767	811	5,215	33.9	31.1	967
12/16/14	12,064	5,321	6,743	1,142	6,463	16.4	48.6	2362
12/17/14	12,480	5,307	7,173	1,241	6,548	15.5	49.5	2450

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
12/18/14	11,401	4,863	6,538	1,140	6,003	20.5	44.5	1980
12/19/14	9,208	4,104	5,104	1,033	5,137	28.4	36.6	1340
12/20/14	7,867	3,687	4,180	961	4,648	31.6	33.4	1116
12/21/14	7,750	3,673	4,077	879	4,552	36.5	28.5	812
12/22/14	9,313	3,899	5,414	877	4,776	35.3	29.7	882
12/23/14	8,379	3,761	4,618	865	4,626	34.9	30.1	906
12/24/14	6,733	3,273	3,460	835	4,108	32.5	32.5	1056
12/25/14	6,640	3,282	3,358	845	4,127	32.7	32.3	1043
12/26/14	7,766	3,721	4,045	965	4,686	28.3	36.7	1347
12/27/14	8,225	3,748	4,477	1,059	4,807	15.2	49.8	2480
12/28/14	9,775	4,690	5,085	1,147	5,837	12.7	52.3	2735
12/29/14	13,440	6,053	7,387	1,347	7,400	0.7	64.3	4134
12/30/14	13,080	6,211	6,869	1,422	7,633	(2.4)	67.4	4543
12/31/14	10,291	5,187	5,104	1,308	6,495	11.7	53.3	2841
01/01/15	8,845	4,478	4,367	1,116	5,594	18.6	46.4	2153
01/02/15	8,661	4,330	4,331	1,048	5,378	24.1	40.9	1673
01/03/15	8,645	4,583	4,062	1,131	5,714	15.6	49.4	2440
01/04/15	10,278	4,753	5,525	1,366	6,119	(5.9)	70.9	5027
01/05/15	13,066	5,403	7,663	1,533	6,936	(2.8)	67.8	4597
01/06/15	13,968	6,365	7,603	1,534	7,899	(0.4)	65.4	4277
01/07/15	14,255	6,491	7,764	1,566	8,057	(2.4)	67.4	4543
01/08/15	13,276	6,170	7,106	1,474	7,644	5.1	59.9	3588
01/09/15	12,497	5,896	6,601	1,526	7,422	0.7	64.3	4134
01/10/15	9,728	5,048	4,680	1,374	6,422	9.8	55.2	3047
01/11/15	10,776	5,404	5,372	1,374	6,778	6.7	58.3	3399
01/12/15	14,398	6,406	7,992	1,611	8,017	(2.5)	67.5	4556
01/13/15	13,162	5,899	7,263	1,411	7,310	13.4	51.6	2663
01/14/15	11,712	5,170	6,542	1,140	6,310	22.5	42.5	1806
01/15/15	10,551	4,456	6,095	990	5,446	29.2	35.8	1282
01/16/15	9,243	4,146	5,097	993	5,139	28.1	36.9	1362
01/17/15	7,196	3,663	3,533	948	4,611	32.9	32.1	1030
01/18/15	7,946	3,931	4,015	940	4,871	30.5	34.5	1190
01/19/15	9,465	4,214	5,251	905	5,119	32.4	32.6	1063
01/20/15	9,955	4,466	5,489	930	5,396	29.0	36.0	1296
01/21/15	10,846	4,718	6,128	913	5,631	26.6	38.4	1475
01/22/15	10,521	4,605	5,916	937	5,542	26.7	38.3	1467
01/23/15	8,227	3,694	4,533	859	4,553	32.6	32.4	1050
01/24/15	6,681	3,381	3,300	831	4,212	33.5	31.5	992
01/25/15	8,102	3,987	4,115	989	4,976	24.6	40.4	1632
01/26/15	9,433	3,827	5,606	829	4,656	37.1	27.9	778
01/27/15	9,448	3,826	5,622	847	4,673	30.9	34.1	1163
01/28/15	10,270	4,209	6,061	896	5,105	30.6	34.4	1183
01/29/15	11,715	4,990	6,725	1,113	6,103	19.9	45.1	2034
01/30/15	10,020	4,282	5,738	1,069	5,351	23.0	42.0	1764
01/31/15	8,560	4,211	4,349	1,061	5,272	22.4	42.6	1815
02/01/15	10,441	5,187	5,254	1,294	6,481	8.6	56.4	3181
02/02/15	12,088	5,129	6,959	1,351	6,480	9.5	55.5	3080
02/03/15	11,954	5,221	6,733	1,220	6,441	13.5	51.5	2652
02/04/15	13,229	5,882	7,347	1,366	7,248	3.7	61.3	3758
02/05/15	11,895	5,255	6,640	1,251	6,506	14.8	50.2	2520
02/06/15	10,678	4,184	6,494	1,025	5,209	23.8	41.2	1697
02/07/15	7,600	3,545	4,055	850	4,395	30.8	34.2	1170
02/08/15	9,150	4,142	5,008	964	5,106	25.2	39.8	1584
02/09/15	11,162	4,468	6,694	965	5,433	25.6	39.4	1552
02/10/15	11,535	4,774	6,761	1,059	5,833	24.5	40.5	1640
02/11/15	13,116	5,775	7,341	1,389	7,164	6.5	58.5	3422
02/12/15	12,355	5,647	6,708	1,363	7,010	8.4	56.6	3204
02/13/15	10,536	4,929	5,607	1,252	6,181	14.8	50.2	2520
02/14/15	10,316	5,198	5,118	1,385	6,583	1.3	63.7	4058
02/15/15	10,584	5,206	5,378	1,309	6,515	7.5	57.5	3306
02/16/15	12,266	5,611	6,655	1,247	6,858	11.0	54.0	2916
02/17/15	13,932	6,283	7,649	1,436	7,719	0.8	64.2	4122
02/18/15	14,495	6,560	7,935	1,549	8,109	(4.5)	69.5	4830
02/19/15	13,154	5,889	7,265	1,332	7,221	5.5	59.5	3540
02/20/15	10,624	4,737	5,887	1,112	5,849	20.8	44.2	1954
02/21/15	10,695	5,190	5,505	1,263	6,453	5.8	59.2	3505

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
02/22/15	12,557	6,142	6,415	1,437	7,579	(6.0)	71.0	5041
02/23/15	11,973	5,366	6,607	1,197	6,563	20.0	45.0	2025
02/24/15	11,924	5,199	6,725	1,093	6,292	18.7	46.3	2144
02/25/15	13,453	6,040	7,413	1,256	7,296	7.1	57.9	3352
02/26/15	13,137	6,133	7,004	1,416	7,549	2.8	62.2	3869
02/27/15	11,318	5,429	5,889	1,346	6,775	6.7	58.3	3399
02/28/15	9,115	4,678	4,437	1,159	5,837	15.5	49.5	2450
03/01/15	9,808	4,810	4,998	1,073	5,883	19.5	45.5	2070
03/02/15	11,266	4,883	6,383	1,031	5,914	22.1	42.9	1840
03/03/15	12,354	5,467	6,887	1,201	6,668	12.7	52.3	2735
03/04/15	13,742	6,038	7,704	1,405	7,443	1.8	63.2	3994
03/05/15	12,247	5,341	6,906	1,260	6,601	10.7	54.3	2948
03/06/15	8,751	3,888	4,863	895	4,783	31.8	33.2	1102
03/07/15	6,507	3,171	3,336	771	3,942	35.9	29.1	847
03/08/15	6,547	3,033	3,514	683	3,716	39.5	25.5	650
03/09/15	9,837	3,542	6,295	608	4,150	46.8	18.2	331
03/10/15	9,834	3,489	6,345	539	4,028	46.4	18.6	346
03/11/15	8,746	3,237	5,509	512	3,749	46.0	19.0	361
03/12/15	7,654	3,086	4,568	446	3,532	53.5	11.5	132
03/13/15	7,090	2,915	4,175	444	3,359	46.7	18.3	335
03/14/15	5,189	2,415	2,774	382	2,797	50.3	14.7	216
03/15/15	5,386	2,383	3,003	311	2,694	58.2	6.8	46
03/16/15	7,859	3,264	4,595	488	3,752	42.7	22.3	497
03/17/15	8,516	3,665	4,851	595	4,260	37.0	28.0	784
03/18/15	8,477	3,577	4,900	582	4,159	40.0	25.0	625
03/19/15	8,079	3,369	4,710	564	3,933	42.3	22.7	515
03/20/15	7,382	3,090	4,292	541	3,631	41.1	23.9	571
03/21/15	6,417	3,115	3,302	626	3,741	33.2	31.8	1011
03/22/15	7,273	3,479	3,794	700	4,179	31.0	34.0	1156
03/23/15	9,406	4,106	5,300	723	4,829	28.5	36.5	1332
03/24/15	9,303	3,891	5,412	714	4,605	33.0	32.0	1024
03/25/15	9,629	4,109	5,520	747	4,856	33.5	31.5	992
03/26/15	9,725	4,173	5,552	803	4,976	28.1	36.9	1362
03/27/15	8,802	3,896	4,906	737	4,633	27.8	37.2	1384
03/28/15	6,361	3,159	3,202	606	3,765	36.7	28.3	801
03/29/15	6,367	3,064	3,303	577	3,641	44.0	21.0	441
03/30/15	7,778	3,152	4,626	505	3,657	44.5	20.5	420
03/31/15	7,031	2,619	4,412	374	2,993	54.0	11.0	121
11/01/15	5,218	2,527	2,691	335	2,862	50.7	14.3	204
11/02/15	7,053	2,703	4,350	296	2,999	56.5	8.5	72
11/03/15	5,977	2,418	3,559	270	2,688	57.6	7.4	55
11/04/15	6,306	2,609	3,697	303	2,912	60.4	4.6	21
11/05/15	6,676	2,804	3,872	394	3,198	48.6	16.4	269
11/06/15	6,459	2,642	3,817	476	3,118	40.7	24.3	590
11/07/15	5,475	2,440	3,035	446	2,886	44.8	20.2	408
11/08/15	5,381	2,558	2,823	394	2,952	51.0	14.0	196
11/09/15	6,944	2,815	4,129	386	3,201	49.3	15.7	246
11/10/15	7,252	2,959	4,293	348	3,307	50.5	14.5	210
11/11/15	7,433	2,998	4,435	401	3,399	46.1	18.9	357
11/12/15	8,035	3,225	4,810	539	3,764	37.4	27.6	762
11/13/15	7,172	2,867	4,305	524	3,391	37.6	27.4	751
11/14/15	5,257	2,052	3,205	396	2,448	47.4	17.6	310
11/15/15	5,145	1,966	3,179	313	2,279	53.7	11.3	128
11/16/15	6,920	2,587	4,333	379	2,966	48.8	16.2	262
11/17/15	6,666	2,615	4,051	346	2,961	53.7	11.3	128
11/18/15	8,227	3,166	5,061	477	3,643	40.3	24.7	610
11/19/15	9,581	3,743	5,838	728	4,471	30.3	34.7	1204
11/20/15	9,377	3,772	5,605	816	4,588	24.5	40.5	1640
11/21/15	7,774	3,532	4,242	849	4,381	22.3	42.7	1823
11/22/15	7,793	3,381	4,412	755	4,136	28.6	36.4	1325
11/23/15	8,934	3,450	5,484	685	4,135	35.5	29.5	870
11/24/15	8,914	3,308	5,606	671	3,979	39.3	25.7	660
11/25/15	7,238	2,895	4,343	623	3,518	41.6	23.4	548
11/26/15	6,935	3,153	3,782	833	3,986	25.6	39.4	1552
11/27/15	7,665	3,577	4,088	1,008	4,585	20.1	44.9	2016
11/28/15	6,960	3,201	3,759	927	4,128	24.0	41.0	1681



Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
11/29/15	7,244	3,193	4,051	808	4,001	30.7	34.3	1176
11/30/15	9,174	3,756	5,418	828	4,584	33.0	32.0	1024
12/01/15	9,367	3,834	5,533	820	4,654	29.5	35.5	1260
12/02/15	9,479	3,950	5,529	847	4,797	30.4	34.6	1197
12/03/15	9,434	3,924	5,510	908	4,832	28.2	36.8	1354
12/04/15	7,686	3,154	4,532	759	3,913	39.1	25.9	671
12/05/15	6,162	2,645	3,517	672	3,317	41.1	23.9	571
12/06/15	7,338	3,185	4,153	751	3,936	33.8	31.2	973
12/07/15	8,736	3,636	5,100	810	4,446	37.3	27.7	767
12/08/15	8,640	3,556	5,084	778	4,334	36.8	28.2	795
12/09/15	8,052	3,305	4,747	637	3,942	42.7	22.3	497
12/10/15	8,063	3,252	4,811	704	3,956	41.0	24.0	576
12/11/15	7,541	3,138	4,403	798	3,936	36.8	28.2	795
12/12/15	5,868	2,613	3,255	724	3,337	39.6	25.4	645
12/13/15	6,967	3,304	3,663	732	4,036	38.5	26.5	702
12/14/15	9,746	4,216	5,530	839	5,055	33.2	31.8	1011
12/15/15	9,749	4,378	5,371	838	5,216	34.2	30.8	949
12/16/15	10,587	4,436	6,151	916	5,352	29.6	35.4	1253
12/17/15	11,435	5,073	6,362	1,063	6,136	20.8	44.2	1954
12/18/15	11,423	5,041	6,382	1,249	6,290	13.1	51.9	2694
12/19/15	9,265	4,174	5,091	999	5,173	25.3	39.7	1576
12/20/15	8,877	3,816	5,061	831	4,647	34.4	30.6	936
12/21/15	9,605	3,834	5,771	879	4,713	31.3	33.7	1136
12/22/15	9,233	3,650	5,583	902	4,552	33.7	31.3	980
12/23/15	9,132	4,012	5,120	985	4,997	29.4	35.6	1267
12/24/15	7,337	3,418	3,919	941	4,359	25.7	39.3	1544
12/25/15	6,858	3,205	3,653	897	4,102	28.4	36.6	1340
12/26/15	7,550	3,498	4,052	919	4,417	27.1	37.9	1436
12/27/15	9,239	4,345	4,894	1,069	5,414	15.6	49.4	2440
12/28/15	11,045	4,468	6,577	1,157	5,625	21.7	43.3	1875
12/29/15	9,423	4,124	5,299	1,007	5,131	22.7	42.3	1789
12/30/15	9,762	4,172	5,590	1,045	5,217	18.7	46.3	2144
12/31/15	9,428	4,255	5,173	1,145	5,400	16.6	48.4	2343
01/01/16	8,332	4,026	4,306	1,017	5,043	21.3	43.7	1910
01/02/16	7,655	3,808	3,847	931	4,739	26.5	38.5	1482
01/03/16	8,997	4,254	4,743	962	5,216	21.3	43.7	1910
01/04/16	10,914	4,581	6,333	1,035	5,616	20.9	44.1	1945
01/05/16	10,438	4,095	6,343	933	5,028	26.4	38.6	1490
01/06/16	9,313	3,860	5,453	854	4,714	30.8	34.2	1170
01/07/16	8,828	3,700	5,128	843	4,543	32.6	32.4	1050
01/08/16	9,453	4,058	5,395	971	5,029	22.8	42.2	1781
01/09/16	10,292	4,839	5,453	1,290	6,129	(2.3)	67.3	4529
01/10/16	11,394	5,435	5,959	1,335	6,770	(5.3)	70.3	4942
01/11/16	13,676	5,937	7,739	1,383	7,320	0.9	64.1	4109
01/12/16	13,971	6,141	7,830	1,414	7,555	(1.4)	66.4	4409
01/13/16	11,717	4,994	6,723	1,155	6,149	17.6	47.4	2247
01/14/16	11,065	4,905	6,160	1,025	5,930	23.5	41.5	1722
01/15/16	11,308	5,029	6,279	1,190	6,219	12.6	52.4	2746
01/16/16	11,213	5,425	5,788	1,490	6,915	(6.7)	71.7	5141
01/17/16	12,365	5,890	6,475	1,625	7,515	(8.2)	73.2	5358
01/18/16	14,282	6,169	8,113	1,569	7,738	(2.8)	67.8	4597
01/19/16	13,024	5,644	7,380	1,422	7,066	7.2	57.8	3341
01/20/16	11,415	4,893	6,522	1,215	6,108	20.3	44.7	1998
01/21/16	11,189	4,850	6,339	1,158	6,008	20.9	44.1	1945
01/22/16	10,516	4,839	5,677	1,172	6,011	20.6	44.4	1971
01/23/16	9,215	4,267	4,948	1,130	5,397	22.8	42.2	1781
01/24/16	9,197	3,908	5,289	1,015	4,923	28.5	36.5	1332
01/25/16	9,974	3,929	6,045	1,048	4,977	26.9	38.1	1452
01/26/16	10,730	4,758	5,972	1,055	5,813	22.1	42.9	1840
01/27/16	9,382	4,096	5,286	885	4,981	36.0	29.0	841
01/28/16	10,074	4,305	5,769	995	5,300	24.7	40.3	1624
01/29/16	8,636	3,453	5,183	956	4,409	31.0	34.0	1156
01/30/16	6,145	2,812	3,333	901	3,713	36.7	28.3	801
01/31/16	7,231	3,260	3,971	900	4,160	31.9	33.1	1096
02/01/16	9,656	4,073	5,583	906	4,979	29.7	35.3	1246
02/02/16	9,815	4,428	5,387	983	5,411	24.7	40.3	1624

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs^2
02/03/16	10,799	4,686	6,113	1,063	5,749	15.3	49.7	2470
02/04/16	10,822	4,712	6,110	1,038	5,750	16.4	48.6	2362
02/05/16	9,157	3,842	5,315	946	4,788	24.8	40.2	1616
02/06/16	6,630	3,043	3,587	805	3,848	34.3	30.7	942
02/07/16	8,176	3,886	4,290	944	4,830	24.3	40.7	1656
02/08/16	11,514	5,255	6,259	1,171	6,426	11.9	53.1	2820
02/09/16	12,134	5,342	6,792	1,193	6,535	9.7	55.3	3058
02/10/16	12,787	5,388	7,399	1,241	6,629	8.5	56.5	3192
02/11/16	11,371	5,083	6,288	1,226	6,309	13.0	52.0	2704
02/12/16	11,539	5,352	6,187	1,442	6,794	2.5	62.5	3906
02/13/16	9,361	4,648	4,713	1,344	5,992	7.8	57.2	3272
02/14/16	8,812	4,397	4,415	1,136	5,533	18.0	47.0	2209
02/15/16	9,092	3,949	5,143	841	4,790	30.3	34.7	1204
02/16/16	10,236	4,319	5,917	932	5,251	24.4	40.6	1648
02/17/16	9,624	4,110	5,514	893	5,003	26.9	38.1	1452
02/18/16	8,830	3,810	5,020	776	4,586	37.4	27.6	762
02/19/16	7,383	3,316	4,067	746	4,062	40.3	24.7	610
02/20/16	6,717	3,209	3,508	798	4,007	33.4	31.6	999
02/21/16	7,752	3,792	3,960	825	4,617	31.7	33.3	1109
02/22/16	9,446	3,757	5,689	788	4,545	33.0	32.0	1024
02/23/16	9,456	3,797	5,659	757	4,554	35.7	29.3	858
02/24/16	9,249	3,982	5,267	811	4,793	32.7	32.3	1043
02/25/16	9,854	4,355	5,499	872	5,227	28.7	36.3	1318
02/26/16	7,500	3,476	4,024	764	4,240	36.2	28.8	829
02/27/16	5,154	2,728	2,426	580	3,308	47.0	18.0	324
02/28/16	7,412	3,774	3,638	848	4,622	32.8	32.2	1037
02/29/16	10,225	4,529	5,696	1,037	5,566	20.6	44.4	1971
03/01/16	10,766	4,612	6,154	1,046	5,658	18.7	46.3	2144
03/02/16	9,866	4,218	5,648	906	5,124	26.4	38.6	1490
03/03/16	9,147	3,799	5,348	863	4,662	30.9	34.1	1163
03/04/16	7,621	3,244	4,377	780	4,024	33.1	31.9	1018
03/05/16	6,452	2,720	3,732	701	3,421	33.2	31.8	1011
03/06/16	5,482	2,284	3,198	509	2,793	48.0	17.0	289
03/07/16	6,565	2,438	4,127	359	2,797	58.2	6.8	46
03/08/16	7,267	2,606	4,661	411	3,017	49.3	15.7	246
03/09/16	8,544	3,298	5,246	597	3,895	37.5	27.5	756
03/10/16	7,868	3,116	4,752	659	3,775	39.2	25.8	666
03/11/16	5,970	2,178	3,792	430	2,608	55.8	9.2	85
03/12/16	4,116	1,683	2,433	366	2,049	56.8	8.2	67
03/13/16	5,259	2,183	3,076	458	2,641	51.4	13.6	185
03/14/16	6,715	2,578	4,137	408	2,986	53.6	11.4	130
03/15/16	7,351	2,772	4,579	460	3,232	48.1	16.9	286
03/16/16	8,386	3,305	5,081	604	3,909	41.0	24.0	576
03/17/16	8,669	3,468	5,201	660	4,128	36.0	29.0	841
03/18/16	7,938	3,325	4,613	712	4,037	32.0	33.0	1089
03/19/16	6,746	2,989	3,757	706	3,695	33.7	31.3	980
03/20/16	7,476	3,126	4,350	662	3,788	35.3	29.7	882
03/21/16	7,759	3,154	4,605	529	3,683	44.3	20.7	428
03/22/16	7,727	3,076	4,651	551	3,627	41.8	23.2	538
03/23/16	8,932	3,639	5,293	724	4,363	30.7	34.3	1176
03/24/16	7,662	3,058	4,604	673	3,731	36.2	28.8	829
03/25/16	6,124	2,637	3,487	561	3,198	42.4	22.6	511
03/26/16	5,281	2,351	2,930	515	2,866	44.3	20.7	428
03/27/16	5,909	2,595	3,314	579	3,174	36.2	28.8	829
03/28/16	6,963	2,724	4,239	418	3,142	48.1	16.9	286
03/29/16	6,765	2,409	4,356	359	2,768	52.5	12.5	156
03/30/16	7,300	2,705	4,595	478	3,183	44.3	20.7	428
03/31/16	7,399	2,703	4,696	517	3,220	42.5	22.5	506
11/01/16	7,460	2,612	4,848	374	2,986	51.1	13.9	193
11/02/16	7,064	2,588	4,476	379	2,967	52.1	12.9	166
11/03/16	7,129	2,545	4,584	382	2,927	52.3	12.7	161
11/04/16	5,340	2,021	3,319	353	2,374	55.0	10.0	100
11/05/16	4,077	1,708	2,369	386	2,094	57.5	7.5	56
11/06/16	4,630	1,946	2,684	371	2,317	56.2	8.8	77
11/07/16	10,144	5,568	4,576	412	5,980	54.3	10.7	114
11/08/16	10,393	5,785	4,608	471	6,256	47.0	18.0	324

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
11/09/16	9,742	5,353	4,389	410	5,763	51.7	13.3	177
11/10/16	9,592	5,327	4,265	383	5,710	53.0	12.0	144
11/11/16	9,776	5,605	4,171	545	6,150	40.8	24.2	586
11/12/16	7,949	5,148	2,801	488	5,636	46.9	18.1	328
11/13/16	8,072	5,165	2,907	411	5,576	50.8	14.2	202
11/14/16	10,482	5,433	5,049	524	5,957	43.8	21.2	449
11/15/16	10,691	5,672	5,019	463	6,135	52.8	12.2	149
11/16/16	10,484	5,533	4,951	373	5,906	49.1	15.9	253
11/17/16	10,412	5,580	4,832	384	5,964	50.8	14.2	202
11/18/16	10,976	6,045	4,931	698	6,743	34.0	31.0	961
11/19/16	10,222	6,106	4,116	777	6,883	22.6	42.4	1798
11/20/16	11,032	6,441	4,591	779	7,220	23.2	41.8	1747
11/21/16	12,550	6,709	5,841	735	7,444	34.5	30.5	930
11/22/16	9,821	3,943	5,878	765	4,708	34.7	30.3	918
11/23/16	7,414	2,794	4,620	689	3,483	34.5	30.5	930
11/24/16	5,326	2,280	3,046	677	2,957	34.7	30.3	918
11/25/16	5,328	2,242	3,086	775	3,017	33.2	31.8	1011
11/26/16	5,060	1,988	3,072	718	2,706	36.7	28.3	801
11/27/16	5,733	2,198	3,535	717	2,915	42.6	22.4	502
11/28/16	8,065	2,977	5,088	714	3,691	43.1	21.9	480
11/29/16	8,505	3,191	5,314	758	3,949	36.5	28.5	812
11/30/16	8,686	3,362	5,324	772	4,134	36.8	28.2	795
12/01/16	8,776	3,467	5,309	826	4,293	34.3	30.7	942
12/02/16	8,189	3,312	4,877	877	4,189	31.0	34.0	1156
12/03/16	6,404	2,918	3,486	856	3,774	31.1	33.9	1149
12/04/16	7,620	3,269	4,351	790	4,059	33.7	31.3	980
12/05/16	9,984	3,910	6,074	832	4,742	34.7	30.3	918
12/06/16	11,417	4,718	6,699	1,053	5,771	19.8	45.2	2043
12/07/16	11,928	4,911	7,017	1,108	6,019	17.7	47.3	2237
12/08/16	11,980	4,769	7,211	1,067	5,836	19.2	45.8	2098
12/09/16	11,405	4,437	6,968	1,121	5,558	11.5	53.5	2862
12/10/16	8,586	3,951	4,635	1,119	5,070	12.7	52.3	2735
12/11/16	9,742	4,125	5,617	1,110	5,235	14.0	51.0	2601
12/12/16	13,064	5,244	7,820	1,300	6,544	0.8	64.2	4122
12/13/16	13,349	5,499	7,850	1,303	6,802	6.7	58.3	3399
12/14/16	13,879	6,076	7,803	1,450	7,526	(0.7)	65.7	4316
12/15/16	13,014	5,601	7,413	1,408	7,009	2.4	62.6	3919
12/16/16	10,700	4,968	5,732	1,285	6,253	10.3	54.7	2992
12/17/16	10,162	5,336	4,826	1,446	6,782	(5.5)	70.5	4970
12/18/16	11,019	5,599	5,420	1,541	7,140	(3.5)	68.5	4692
12/19/16	10,636	4,554	6,082	1,236	5,790	22.9	42.1	1772
12/20/16	9,884	3,984	5,900	994	4,978	30.2	34.8	1211
12/21/16	9,147	3,803	5,344	958	4,761	32.1	32.9	1082
12/22/16	8,222	3,555	4,667	978	4,533	33.0	32.0	1024
12/23/16	6,600	3,040	3,560	968	4,008	34.0	31.0	961
12/24/16	5,726	2,847	2,879	869	3,716	33.5	31.5	992
12/25/16	6,098	2,970	3,128	909	3,879	34.0	31.0	961
12/26/16	7,916	3,441	4,475	1,175	4,616	19.3	45.7	2088
12/27/16	8,854	3,434	5,420	998	4,432	21.7	43.3	1875
12/28/16	8,425	3,350	5,075	953	4,303	31.6	33.4	1116
12/29/16	8,344	3,274	5,070	1,051	4,325	25.6	39.4	1552
12/30/16	6,707	2,898	3,809	969	3,867	27.7	37.3	1391
12/31/16	6,737	3,137	3,600	1,085	4,222	24.0	41.0	1681
01/01/17	6,296	3,066	3,230	1,028	4,094	28.5	36.5	1332
01/02/17	7,417	3,467	3,950	982	4,449	30.8	34.2	1170
01/03/17	11,908	4,748	7,160	1,327	6,075	5.0	60.0	3600
01/04/17	13,470	5,863	7,607	1,401	7,264	(1.0)	66.0	4356
01/05/17	13,479	5,856	7,623	1,524	7,380	(4.5)	69.5	4830
01/06/17	11,622	5,190	6,432	1,499	6,689	0.7	64.3	4134
01/07/17	10,152	4,866	5,286	1,448	6,314	2.0	63.0	3969
01/08/17	9,769	4,672	5,097	1,302	5,974	13.8	51.2	2621
01/09/17	10,418	4,515	5,903	1,051	5,566	24.7	40.3	1624
01/10/17	11,808	5,132	6,676	1,225	6,357	11.4	53.6	2873
01/11/17	12,638	5,360	7,278	1,323	6,683	6.4	58.6	3434
01/12/17	12,560	5,117	7,443	1,417	6,534	1.2	63.8	4070
01/13/17	10,819	4,605	6,214	1,379	5,984	5.0	60.0	3600

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
01/14/17	8,617	4,004	4,613	1,256	5,260	12.5	52.5	2756
01/15/17	8,521	4,023	4,498	1,064	5,087	21.5	43.5	1892
01/16/17	9,716	4,028	5,688	958	4,986	21.5	43.5	1892
01/17/17	9,579	3,963	5,616	899	4,862	31.0	34.0	1156
01/18/17	9,073	3,541	5,532	817	4,358	34.4	30.6	936
01/19/17	8,121	3,075	5,046	806	3,881	35.5	29.5	870
01/20/17	6,530	2,619	3,911	871	3,490	35.3	29.7	882
01/21/17	5,434	2,655	2,779	851	3,506	36.3	28.7	824
01/22/17	6,323	3,082	3,241	895	3,977	36.1	28.9	835
01/23/17	8,831	3,729	5,102	954	4,683	33.4	31.6	999
01/24/17	9,147	3,924	5,223	903	4,827	31.8	33.2	1102
01/25/17	9,727	4,126	5,601	932	5,058	29.2	35.8	1282
01/26/17	9,988	4,205	5,783	1,091	5,296	24.6	40.4	1632
01/27/17	8,110	3,550	4,560	1,062	4,612	25.6	39.4	1552
01/28/17	6,689	3,315	3,374	1,057	4,372	25.8	39.2	1537
01/29/17	7,554	3,659	3,895	1,093	4,752	22.5	42.5	1806
01/30/17	8,597	3,733	4,864	949	4,682	39.3	25.7	660
01/31/17	9,018	3,592	5,426	919	4,511	30.8	34.2	1170
02/01/17	11,521	4,546	6,975	1,177	5,723	12.8	52.2	2725
02/02/17	11,175	4,426	6,749	1,247	5,673	11.8	53.2	2830
02/03/17	9,734	3,644	6,090	1,151	4,795	18.3	46.7	2181
02/04/17	7,307	2,914	4,393	941	3,855	29.4	35.6	1267
02/05/17	8,404	3,469	4,935	1,064	4,533	21.7	43.3	1875
02/06/17	9,304	3,621	5,683	956	4,577	30.1	34.9	1218
02/07/17	11,159	4,551	6,608	1,156	5,707	15.3	49.7	2470
02/08/17	12,320	5,331	6,989	1,285	6,616	7.8	57.2	3272
02/09/17	11,059	4,640	6,419	1,165	5,805	18.3	46.7	2181
02/10/17	7,770	3,053	4,717	774	3,827	39.8	25.2	635
02/11/17	6,327	2,678	3,649	757	3,435	38.1	26.9	724
02/12/17	6,721	3,085	3,636	872	3,957	33.1	31.9	1018
02/13/17	7,997	3,193	4,804	816	4,009	38.6	26.4	697
02/14/17	8,821	3,595	5,226	895	4,490	31.3	33.7	1136
02/15/17	8,954	3,540	5,414	856	4,396	29.8	35.2	1239
02/16/17	7,761	3,070	4,691	797	3,867	34.6	30.4	924
02/17/17	6,136	2,386	3,750	660	3,046	47.3	17.7	313
02/18/17	4,810	2,067	2,743	651	2,718	45.1	19.9	396
02/19/17	4,740	1,895	2,845	584	2,479	51.6	13.4	180
02/20/17	7,629	2,835	4,794	658	3,493	45.5	19.5	380
02/21/17	7,344	2,539	4,805	586	3,125	48.5	16.5	272
02/22/17	8,405	2,887	5,518	660	3,547	43.5	21.5	462
02/23/17	9,979	3,632	6,347	893	4,525	30.7	34.3	1176
02/24/17	9,673	3,781	5,892	1,020	4,801	21.8	43.2	1866
02/25/17	7,663	3,147	4,516	896	4,043	26.7	38.3	1467
02/26/17	8,099	3,394	4,705	817	4,211	30.2	34.8	1211
02/27/17	9,000	3,483	5,517	745	4,228	38.6	26.4	697
02/28/17	8,878	3,404	5,474	739	4,143	35.7	29.3	858
03/01/17	9,703	3,601	6,102	895	4,496	26.7	38.3	1467
03/02/17	10,165	3,918	6,247	987	4,905	21.5	43.5	1892
03/03/17	8,419	3,221	5,198	907	4,128	26.0	39.0	1521
03/04/17	6,209	2,719	3,490	821	3,540	37.4	27.6	762
03/05/17	5,221	2,048	3,173	531	2,579	51.9	13.1	172
03/06/17	8,098	2,874	5,224	607	3,481	46.9	18.1	328
03/07/17	9,598	3,608	5,990	819	4,427	37.4	27.6	762
03/08/17	11,030	3,816	7,214	920	4,736	28.2	36.8	1354
03/09/17	11,204	4,229	6,975	1,016	5,245	20.0	45.0	2025
03/10/17	10,342	4,207	6,135	1,092	5,299	12.6	52.4	2746
03/11/17	8,161	3,579	4,582	1,003	4,582	16.0	49.0	2401
03/12/17	9,076	3,958	5,118	1,055	5,013	18.6	46.4	2153
03/13/17	11,305	4,371	6,934	1,000	5,371	18.4	46.6	2172
03/14/17	11,157	4,167	6,990	937	5,104	20.1	44.9	2016
03/15/17	10,251	3,793	6,458	841	4,634	24.5	40.5	1640
03/16/17	8,534	3,135	5,399	731	3,866	34.7	30.3	918
03/17/17	7,646	3,021	4,625	735	3,756	36.2	28.8	829
03/18/17	6,037	2,668	3,369	749	3,417	34.1	30.9	955
03/19/17	5,719	2,442	3,277	631	3,073	44.3	20.7	428
03/20/17	8,126	2,759	5,367	579	3,338	43.7	21.3	454

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
03/21/17	10,133	3,656	6,477	788	4,444	28.7	36.3	1318
03/22/17	9,722	3,436	6,286	720	4,156	35.8	29.2	853
03/23/17	8,731	2,984	5,747	689	3,673	38.7	26.3	692
03/24/17	7,340	2,483	4,857	640	3,123	40.1	24.9	620
03/25/17	5,233	2,061	3,172	627	2,688	39.3	25.7	660
03/26/17	6,133	2,670	3,463	611	3,281	39.9	25.1	630
03/27/17	7,413	2,897	4,516	460	3,357	46.4	18.6	346
03/28/17	6,986	2,626	4,360	358	2,984	52.4	12.6	159
03/29/17	7,537	2,967	4,570	459	3,426	44.6	20.4	416
03/30/17	7,583	2,873	4,710	509	3,382	42.1	22.9	524
03/31/17	6,018	2,280	3,738	439	2,719	45.9	19.1	365
11/01/17	8,813	3,264	5,549	674	3,938	34.8	30.2	912
11/02/17	8,785	3,161	5,624	667	3,828	35.5	29.5	870
11/03/17	7,419	2,903	4,516	701	3,604	33.3	31.7	1005
11/04/17	5,477	2,321	3,156	636	2,957	40.1	24.9	620
11/05/17	7,213	3,090	4,123	760	3,850	28.0	37.0	1369
11/06/17	9,942	3,363	6,579	774	4,137	29.7	35.3	1246
11/07/17	9,485	3,316	6,169	734	4,050	30.3	34.7	1204
11/08/17	8,850	3,384	5,466	732	4,116	32.0	33.0	1089
11/09/17	10,664	4,158	6,506	997	5,155	15.8	49.2	2421
11/10/17	9,125	3,538	5,587	946	4,484	24.5	40.5	1640
11/11/17	6,187	2,439	3,748	776	3,215	33.6	31.4	986
11/12/17	6,662	2,880	3,782	814	3,694	30.4	34.6	1197
11/13/17	7,837	2,881	4,956	676	3,557	40.3	24.7	610
11/14/17	7,531	2,716	4,815	609	3,325	43.4	21.6	467
11/15/17	9,119	3,361	5,758	793	4,154	30.3	34.7	1204
11/16/17	8,671	3,148	5,523	751	3,899	33.2	31.8	1011
11/17/17	7,264	2,613	4,651	702	3,315	36.4	28.6	818
11/18/17	7,324	2,849	4,475	851	3,700	25.7	39.3	1544
11/19/17	6,614	2,727	3,887	747	3,474	33.7	31.3	980
11/20/17	8,344	3,133	5,211	745	3,878	39.2	25.8	666
11/21/17	9,843	3,868	5,975	944	4,812	21.4	43.6	1901
11/22/17	8,465	3,293	5,172	864	4,157	26.7	38.3	1467
11/23/17	4,513	1,862	2,651	641	2,503	43.3	21.7	471
11/24/17	4,489	1,787	2,702	599	2,386	45.4	19.6	384
11/25/17	5,435	2,255	3,180	704	2,959	32.7	32.3	1043
11/26/17	5,418	2,279	3,139	634	2,913	40.8	24.2	586
11/27/17	6,842	2,423	4,419	531	2,954	51.9	13.1	172
11/28/17	8,008	2,871	5,137	646	3,517	39.2	25.8	666
11/29/17	7,642	2,876	4,766	688	3,564	41.0	24.0	576
11/30/17	7,931	2,777	5,154	696	3,473	37.7	27.3	745
12/01/17	7,041	2,450	4,591	670	3,120	40.6	24.4	595
12/02/17	6,001	2,058	3,943	697	2,755	36.7	28.3	801
12/03/17	6,157	2,056	4,101	598	2,654	48.0	17.0	289
12/04/17	8,478	3,154	5,324	717	3,871	37.3	27.7	767
12/05/17	10,699	4,214	6,485	1,051	5,265	18.5	46.5	2162
12/06/17	11,198	4,346	6,852	1,113	5,459	15.5	49.5	2450
12/07/17	10,740	3,992	6,748	1,102	5,094	18.5	46.5	2162
12/08/17	8,311	3,259	5,052	1,011	4,270	26.6	38.4	1475
12/09/17	7,202	3,052	4,150	1,070	4,122	22.0	43.0	1849
12/10/17	7,061	2,945	4,116	960	3,905	27.0	38.0	1444
12/11/17	10,362	3,746	6,616	1,044	4,790	20.7	44.3	1962
12/12/17	9,599	3,667	5,932	1,024	4,691	22.1	42.9	1840
12/13/17	9,737	3,758	5,979	1,062	4,820	21.4	43.6	1901
12/14/17	9,514	3,685	5,829	1,050	4,735	22.3	42.7	1823
12/15/17	7,805	3,159	4,646	908	4,067	27.3	37.7	1421
12/16/17	6,744	2,871	3,873	916	3,787	27.8	37.2	1384
12/17/17	7,359	3,161	4,198	933	4,094	27.0	38.0	1444
12/18/17	8,253	3,171	5,082	820	3,991	36.5	28.5	812
12/19/17	9,617	3,916	5,701	899	4,815	27.0	38.0	1444
12/20/17	10,541	4,429	6,112	1,026	5,455	19.3	45.7	2088
12/21/17	10,070	4,319	5,751	1,045	5,364	21.2	43.8	1918
12/22/17	8,191	3,645	4,546	1,076	4,721	18.5	46.5	2162
12/23/17	6,773	3,206	3,567	1,106	4,312	17.8	47.2	2228
12/24/17	7,474	3,469	4,005	1,164	4,633	11.3	53.7	2884
12/25/17	9,756	4,140	5,616	1,407	5,547	(4.3)	69.3	4802

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
12/26/17	11,835	5,184	6,651	1,463	6,647	(4.0)	69.0	4761
12/27/17	12,490	5,122	7,368	1,487	6,609	2.4	62.6	3919
12/28/17	11,366	4,676	6,690	1,485	6,161	6.2	58.8	3457
12/29/17	11,138	4,836	6,302	1,544	6,380	(3.5)	68.5	4692
12/30/17	10,479	4,845	5,634	1,536	6,381	(9.3)	74.3	5520
12/31/17	9,989	4,784	5,205	1,564	6,348	(10.6)	75.6	5715
01/01/18	10,710	4,872	5,838	1,572	6,444	(6.1)	71.1	5055
01/02/18	11,958	4,908	7,050	1,462	6,370	7.4	57.6	3318
01/03/18	12,576	5,003	7,573	1,550	6,553	0.3	64.7	4186
01/04/18	13,096	5,367	7,729	1,608	6,975	(3.5)	68.5	4692
01/05/18	12,034	5,110	6,924	1,635	6,745	(4.2)	69.2	4789
01/06/18	9,082	4,085	4,997	1,464	5,549	9.2	55.8	3114
01/07/18	7,612	3,416	4,196	1,216	4,632	26.3	38.7	1498
01/08/18	9,386	3,684	5,702	1,071	4,755	30.3	34.7	1204
01/09/18	8,645	3,432	5,213	892	4,324	37.0	28.0	784
01/10/18	9,365	3,830	5,535	873	4,703	32.4	32.6	1063
01/11/18	13,022	5,795	7,227	1,393	7,188	2.7	62.3	3881
01/12/18	12,399	5,635	6,764	1,542	7,177	(4.0)	69.0	4761
01/13/18	10,549	5,109	5,440	1,495	6,604	(2.4)	67.4	4543
01/14/18	9,831	4,995	4,836	1,380	6,375	10.7	54.3	2948
01/15/18	13,262	6,098	7,164	1,543	7,641	2.1	62.9	3956
01/16/18	12,908	5,827	7,081	1,470	7,297	2.5	62.5	3906
01/17/18	10,501	4,513	5,988	1,156	5,669	22.8	42.2	1781
01/18/18	8,777	3,552	5,225	895	4,447	33.5	31.5	992
01/19/18	7,141	2,875	4,266	860	3,735	34.9	30.1	906
01/20/18	6,821	2,737	4,084	798	3,535	35.7	29.3	858
01/21/18	6,735	3,261	3,474	848	4,109	35.5	29.5	870
01/22/18	8,674	3,708	4,966	1,034	4,742	23.5	41.5	1722
01/23/18	9,249	3,625	5,624	1,049	4,674	19.8	45.2	2043
01/24/18	9,325	3,525	5,800	1,004	4,529	24.4	40.6	1648
01/25/18	9,430	3,709	5,721	994	4,703	28.1	36.9	1362
01/26/18	7,932	3,204	4,728	885	4,089	36.5	28.5	812
01/27/18	7,957	3,543	4,414	1,002	4,545	24.0	41.0	1681
01/28/18	9,324	4,402	4,922	1,211	5,613	14.0	51.0	2601
01/29/18	13,335	6,250	7,085	1,284	7,534	8.8	56.2	3158
01/30/18	13,976	7,549	6,427	1,122	8,671	23.8	41.2	1697
01/31/18	14,913	8,020	6,893	1,150	9,170	15.2	49.8	2480
02/01/18	17,130	9,107	8,023	1,453	10,560	(0.8)	65.8	4330
02/02/18	14,866	8,209	6,657	1,353	9,562	9.2	55.8	3114
02/03/18	13,237	7,967	5,270	1,320	9,287	9.4	55.6	3091
02/04/18	14,563	8,544	6,019	1,435	9,979	(0.9)	65.9	4343
02/05/18	16,621	8,584	8,037	1,377	9,961	4.4	60.6	3672
02/06/18	15,718	7,899	7,819	1,313	9,212	5.4	59.6	3552
02/07/18	16,490	8,423	8,067	1,298	9,721	8.8	56.2	3158
02/08/18	13,176	5,314	7,862	1,293	6,607	10.3	54.7	2992
02/09/18	12,256	5,114	7,142	1,296	6,410	6.0	59.0	3481
02/10/18	9,883	4,179	5,704	1,293	5,472	5.0	60.0	3600
02/11/18	11,301	4,283	7,018	1,269	5,552	9.4	55.6	3091
02/12/18	13,600	5,137	8,463	1,300	6,437	8.4	56.6	3204
02/13/18	11,343	4,482	6,861	1,048	5,530	24.0	41.0	1681
02/14/18	9,693	3,715	5,978	858	4,573	34.6	30.4	924
02/15/18	11,799	4,506	7,293	1,041	5,547	21.6	43.4	1884
02/16/18	10,409	4,258	6,151	1,118	5,376	17.4	47.6	2266
02/17/18	7,940	3,504	4,436	1,003	4,507	26.6	38.4	1475
02/18/18	8,045	3,665	4,380	986	4,651	31.8	33.2	1102
02/19/18	11,535	4,798	6,737	1,138	5,936	21.3	43.7	1910
02/20/18	12,820	4,985	7,835	1,199	6,184	12.5	52.5	2756
02/21/18	13,052	5,115	7,937	1,179	6,294	13.1	51.9	2694
02/22/18	10,613	4,048	6,565	1,002	5,050	26.0	39.0	1521
02/23/18	9,720	4,030	5,690	1,029	5,059	20.8	44.2	1954
02/24/18	8,775	3,572	5,203	1,028	4,600	22.8	42.2	1781
02/25/18	8,747	3,906	4,841	973	4,879	21.8	43.2	1866
02/26/18	11,537	3,905	7,632	838	4,743	33.1	31.9	1018
02/27/18	9,641	3,804	5,837	786	4,590	36.8	28.2	795
02/28/18	9,174	3,501	5,673	763	4,264	36.3	28.7	824
03/01/18	10,314	3,834	6,480	853	4,687	29.4	35.6	1267

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
03/02/18	8,446	3,257	5,189	805	4,062	35.1	29.9	894
03/03/18	6,244	2,695	3,549	736	3,431	39.8	25.2	635
03/04/18	6,759	3,095	3,664	822	3,917	37.8	27.2	740
03/05/18	10,104	3,970	6,134	962	4,932	30.8	34.2	1170
03/06/18	10,915	4,254	6,661	979	5,233	24.9	40.1	1608
03/07/18	10,925	4,439	6,486	1,040	5,479	20.6	44.4	1971
03/08/18	10,388	4,243	6,145	910	5,153	23.3	41.7	1739
03/09/18	8,508	3,445	5,063	796	4,241	27.4	37.6	1414
03/10/18	6,341	2,887	3,454	725	3,612	32.3	32.7	1069
03/11/18	7,321	3,305	4,016	775	4,080	31.4	33.6	1129
03/12/18	10,576	3,950	6,626	772	4,722	31.6	33.4	1116
03/13/18	9,955	4,023	5,932	766	4,789	29.6	35.4	1253
03/14/18	8,853	3,544	5,309	696	4,240	36.0	29.0	841
03/15/18	9,323	3,894	5,429	759	4,653	31.1	33.9	1149
03/16/18	7,998	3,314	4,684	748	4,062	32.9	32.1	1030
03/17/18	5,958	2,709	3,249	685	3,394	38.1	26.9	724
03/18/18	6,313	2,904	3,409	734	3,638	38.3	26.7	713
03/19/18	8,696	3,611	5,085	779	4,390	36.0	29.0	841
03/20/18	10,234	3,883	6,351	782	4,665	27.1	37.9	1436
03/21/18	8,877	3,639	5,238	693	4,332	34.1	30.9	955
03/22/18	8,560	3,461	5,099	689	4,150	35.6	29.4	864
03/23/18	7,690	3,269	4,421	716	3,985	37.2	27.8	773
03/24/18	6,143	2,901	3,242	734	3,635	33.7	31.3	980
03/25/18	7,039	2,983	4,056	663	3,646	37.9	27.1	734
03/26/18	8,993	3,802	5,191	693	4,495	34.4	30.6	936
03/27/18	9,035	3,410	5,625	618	4,028	37.2	27.8	773
03/28/18	8,623	3,426	5,197	631	4,057	37.8	27.2	740
03/29/18	8,387	3,482	4,905	710	4,192	32.4	32.6	1063
03/30/18	7,055	3,199	3,856	688	3,887	33.8	31.2	973
03/31/18	7,229	3,630	3,599	903	4,533	19.0	46.0	2116
11/01/18	7,633	2,619	5,014	462	3,081	42.5	22.5	506
11/02/18	6,524	2,215	4,309	468	2,683	40.6	24.4	595
11/03/18	5,383	1,945	3,438	511	2,456	41.2	23.8	566
11/04/18	6,130	2,400	3,730	531	2,931	37.2	27.8	773
11/05/18	7,931	2,806	5,125	542	3,348	42.7	22.3	497
11/06/18	9,021	3,321	5,700	643	3,964	33.4	31.6	999
11/07/18	10,281	3,787	6,494	698	4,485	27.8	37.2	1384
11/08/18	10,204	3,770	6,434	712	4,482	24.0	41.0	1681
11/09/18	9,604	3,541	6,063	867	4,408	17.3	47.7	2275
11/10/18	7,521	3,063	4,458	814	3,877	21.2	43.8	1918
11/11/18	8,057	3,410	4,647	790	4,200	24.3	40.7	1656
11/12/18	11,034	4,432	6,602	927	5,359	15.7	49.3	2430
11/13/18	10,498	4,163	6,335	865	5,028	17.9	47.1	2218
11/14/18	9,256	3,657	5,599	681	4,338	34.0	31.0	961
11/15/18	8,765	3,248	5,517	629	3,877	35.8	29.2	853
11/16/18	8,476	3,192	5,284	740	3,932	28.0	37.0	1369
11/17/18	8,299	3,400	4,899	862	4,262	18.7	46.3	2144
11/18/18	7,884	3,318	4,566	833	4,151	23.2	41.8	1747
11/19/18	11,325	4,486	6,839	909	5,395	22.3	42.7	1823
11/20/18	10,332	4,005	6,327	833	4,838	26.5	38.5	1482
11/21/18	9,106	3,463	5,643	819	4,282	26.5	38.5	1482
11/22/18	6,093	2,591	3,502	747	3,338	35.9	29.1	847
11/23/18	5,459	2,331	3,128	699	3,030	41.4	23.6	557
11/24/18	6,346	2,728	3,618	772	3,500	29.4	35.6	1267
11/25/18	8,285	3,554	4,731	890	4,444	21.6	43.4	1884
11/26/18	10,929	4,545	6,384	1,048	5,593	17.4	47.6	2266
11/27/18	10,811	4,286	6,525	1,020	5,306	20.5	44.5	1980
11/28/18	9,883	3,924	5,959	903	4,827	25.3	39.7	1576
11/29/18	9,018	3,482	5,536	794	4,276	30.8	34.2	1170
11/30/18	7,871	3,075	4,796	789	3,864	29.4	35.6	1267
12/01/18	6,336	2,732	3,604	816	3,548	32.6	32.4	1050
12/02/18	7,262	3,098	4,164	846	3,944	29.6	35.4	1253
12/03/18	9,386	3,834	5,552	913	4,747	24.9	40.1	1608
12/04/18	9,843	3,897	5,946	936	4,833	23.3	41.7	1739
12/05/18	9,958	3,983	5,975	928	4,911	24.0	41.0	1681
12/06/18	11,081	4,472	6,609	1,098	5,570	13.6	51.4	2642

Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs*2
12/07/18	9,602	3,826	5,776	1,048	4,874	16.9	48.1	2314
12/08/18	7,896	3,256	4,640	958	4,214	21.9	43.1	1858
12/09/18	8,249	3,534	4,715	976	4,510	20.8	44.2	1954
12/10/18	10,564	4,369	6,195	1,014	5,383	18.3	46.7	2181
12/11/18	9,900	3,886	6,014	943	4,829	23.5	41.5	1722
12/12/18	9,748	3,865	5,883	902	4,767	26.0	39.0	1521
12/13/18	9,681	3,700	5,981	860	4,560	27.5	37.5	1406
12/14/18	7,669	2,958	4,711	845	3,803	29.3	35.7	1274
12/15/18	6,080	2,429	3,651	766	3,195	35.4	29.6	876
12/16/18	7,063	2,888	4,175	788	3,676	34.7	30.3	918
12/17/18	9,422	3,510	5,912	865	4,375	30.1	34.9	1218
12/18/18	8,521	3,249	5,272	780	4,029	38.1	26.9	724
12/19/18	8,612	3,263	5,349	767	4,030	36.8	28.2	795
12/20/18	9,471	3,700	5,771	903	4,603	30.3	34.7	1204
12/21/18	8,446	3,409	5,037	943	4,352	24.4	40.6	1648
12/22/18	6,295	2,791	3,504	895	3,686	28.8	36.2	1310
12/23/18	7,027	3,279	3,748	1,024	4,303	22.1	42.9	1840
12/24/18	6,448	3,074	3,374	912	3,986	22.0	43.0	1849
12/25/18	6,909	3,073	3,836	888	3,961	25.8	39.2	1537
12/26/18	8,822	3,494	5,328	842	4,336	33.4	31.6	999
12/27/18	8,502	3,419	5,083	832	4,251	33.4	31.6	999
12/28/18	9,787	4,122	5,665	1,090	5,212	16.1	48.9	2391
12/29/18	7,915	3,556	4,359	1,088	4,644	14.1	50.9	2591
12/30/18	6,700	3,133	3,567	861	3,994	29.3	35.7	1274
12/31/18	8,820	4,072	4,748	1,090	5,162	18.3	46.7	2181
01/01/19	9,744	4,486	5,258	1,250	5,736	4.9	60.1	3612
01/02/19	10,354	4,219	6,135	1,075	5,294	21.2	43.8	1918
01/03/19	8,905	3,405	5,500	853	4,258	33.9	31.1	967
01/04/19	7,480	2,843	4,637	780	3,623	36.0	29.0	841
01/05/19	5,993	2,597	3,396	787	3,384	35.0	30.0	900
01/06/19	7,011	2,872	4,139	836	3,708	35.0	30.0	900
01/07/19	9,138	3,528	5,610	797	4,325	36.3	28.7	824
01/08/19	12,098	5,304	6,794	1,204	6,508	15.7	49.3	2430
01/09/19	12,460	5,223	7,237	1,284	6,507	12.2	52.8	2788
01/10/19	11,100	4,437	6,663	1,170	5,607	20.0	45.0	2025
01/11/19	9,429	3,757	5,672	1,083	4,840	25.8	39.2	1537
01/12/19	7,604	3,294	4,310	1,002	4,296	28.8	36.2	1310
01/13/19	7,851	3,147	4,704	918	4,065	33.2	31.8	1011
01/14/19	10,324	4,059	6,265	899	4,958	29.5	35.5	1260
01/15/19	11,305	4,549	6,756	983	5,532	23.2	41.8	1747
01/16/19	11,990	4,977	7,013	1,066	6,043	16.9	48.1	2314
01/17/19	11,887	4,741	7,146	1,127	5,868	15.9	49.1	2411
01/18/19	11,994	5,150	6,844	1,331	6,481	7.1	57.9	3352
01/19/19	10,908	5,010	5,898	1,348	6,358	(0.8)	65.8	4330
01/20/19	11,067	5,024	6,043	1,325	6,349	2.6	62.4	3894
01/21/19	12,645	5,438	7,207	1,334	6,772	13.0	52.0	2704
01/22/19	12,311	5,158	7,153	1,226	6,384	16.7	48.3	2333
01/23/19	12,263	5,152	7,111	1,148	6,300	19.5	45.5	2070
01/24/19	15,334	6,012	9,322	1,473	7,485	(3.6)	68.6	4706
01/25/19	12,684	5,458	7,226	1,512	6,970	(1.5)	66.5	4422
01/26/19	11,604	5,072	6,532	1,473	6,545	1.1	63.9	4083
01/27/19	11,447	5,263	6,184	1,484	6,747	2.0	63.0	3969
01/28/19	12,986	5,366	7,620	1,512	6,878	2.8	62.2	3869
01/29/19	13,674	6,325	7,349	1,745	8,070	(18.5)	83.5	6972
01/30/19	12,730	5,910	6,820	1,698	7,608	(19.9)	84.9	7208
01/31/19	12,969	5,811	7,158	1,565	7,376	(7.0)	72.0	5184
02/01/19	11,073	4,688	6,385	1,310	5,998	12.5	52.5	2756
02/02/19	6,876	3,101	3,775	914	4,015	34.4	30.6	936
02/03/19	7,960	3,517	4,443	906	4,423	33.0	32.0	1024
02/04/19	12,617	5,304	7,313	1,238	6,542	8.0	57.0	3249
02/05/19	12,426	5,280	7,146	1,246	6,526	9.6	55.4	3069
02/06/19	12,070	4,713	7,357	1,124	5,837	18.9	46.1	2125
02/07/19	11,959	4,908	7,051	1,274	6,182	4.8	60.2	3624
02/08/19	12,112	4,805	7,307	1,481	6,286	(7.5)	72.5	5256
02/09/19	8,770	3,796	4,974	1,337	5,133	3.3	61.7	3807
02/10/19	8,853	3,536	5,317	1,178	4,714	15.4	49.6	2460



Date	DUAL FUEL STATUS QUO	Convert to Firm	DD OVER 150	Additional Firm Election	Proposed FS Volumes (Column C + E)	Temperature	HDD	HDDs^2
02/11/19	10,019	3,770	6,249	1,081	4,851	22.7	42.3	1789
02/12/19	10,699	4,212	6,487	1,145	5,357	16.0	49.0	2401
02/13/19	10,829	4,317	6,512	1,119	5,436	15.2	49.8	2480
02/14/19	12,339	5,239	7,100	1,280	6,519	8.6	56.4	3181
02/15/19	12,464	4,961	7,503	1,315	6,276	4.6	60.4	3648
02/16/19	8,522	3,981	4,541	1,120	5,101	16.5	48.5	2352
02/17/19	9,540	4,409	5,131	1,109	5,518	17.6	47.4	2247
02/18/19	12,436	5,357	7,079	1,194	6,551	11.0	54.0	2916
02/19/19	11,430	4,685	6,745	1,151	5,836	15.6	49.4	2440
02/20/19	10,790	4,232	6,558	1,101	5,333	19.5	45.5	2070
02/21/19	11,445	4,173	7,272	1,159	5,332	14.0	51.0	2601
02/22/19	9,099	3,581	5,518	1,023	4,604	24.4	40.6	1648
02/23/19	6,886	3,128	3,758	985	4,113	28.1	36.9	1362
02/24/19	10,119	4,167	5,952	1,329	5,496	5.6	59.4	3528
02/25/19	12,927	5,180	7,747	1,379	6,559	(0.5)	65.5	4290
02/26/19	12,882	5,371	7,511	1,312	6,683	6.1	58.9	3469
02/27/19	13,003	5,406	7,597	1,241	6,647	4.9	60.1	3612
02/28/19	11,882	4,883	6,999	1,162	6,045	12.7	52.3	2735
03/01/19	10,720	4,214	6,506	1,194	5,408	12.7	52.3	2735
03/02/19	9,563	4,142	5,421	1,214	5,356	5.5	59.5	3540
03/03/19	10,986	4,627	6,359	1,422	6,049	(6.4)	71.4	5098
03/04/19	12,825	5,445	7,380	1,346	6,791	3.8	61.2	3745
03/05/19	13,091	5,253	7,838	1,267	6,520	9.9	55.1	3036
03/06/19	11,923	5,009	6,914	1,150	6,159	13.2	51.8	2683
03/07/19	11,456	4,535	6,921	1,031	5,566	16.0	49.0	2401
03/08/19	8,840	3,490	5,350	843	4,333	28.8	36.2	1310
03/09/19	6,818	2,519	4,299	802	3,321	32.4	32.6	1063
03/10/19	8,154	3,212	4,942	949	4,161	22.1	42.9	1840
03/11/19	10,236	4,042	6,194	909	4,951	22.4	42.6	1815
03/12/19	9,230	3,708	5,522	848	4,556	35.2	29.8	888
03/13/19	9,015	3,345	5,670	713	4,058	39.0	26.0	676
03/14/19	8,942	3,581	5,361	740	4,321	36.0	29.0	841
03/15/19	8,069	3,278	4,791	873	4,151	30.5	34.5	1190
03/16/19	6,751	2,896	3,855	847	3,743	27.9	37.1	1376
03/17/19	7,078	3,061	4,017	760	3,821	31.3	33.7	1136
03/18/19	8,733	3,132	5,601	718	3,850	33.4	31.6	999
03/19/19	8,041	2,814	5,227	634	3,448	38.5	26.5	702
03/20/19	7,917	2,740	5,177	615	3,355	38.5	26.5	702
03/21/19	7,654	2,682	4,972	605	3,287	40.7	24.3	590
03/22/19	6,897	2,528	4,369	628	3,156	38.6	26.4	697
03/23/19	4,691	2,056	2,635	513	2,569	44.7	20.3	412
03/24/19	6,046	2,605	3,441	580	3,185	39.1	25.9	671
03/25/19	8,730	3,463	5,267	620	4,083	36.7	28.3	801
03/26/19	7,715	2,895	4,820	513	3,408	46.6	18.4	339
03/27/19	7,367	2,636	4,731	415	3,051	50.6	14.4	207
03/28/19	8,376	3,051	5,325	534	3,585	42.1	22.9	524
03/29/19	7,190	2,738	4,452	582	3,320	38.9	26.1	681
03/30/19	6,343	2,769	3,574	713	3,482	29.6	35.4	1253
03/31/19	6,504	2,826	3,678	630	3,456	32.5	32.5	1056

2019 Design Day Model Comparison: CNP vs. DOC vs. NEW

<b>CNP Model</b>	<u>Firm Customer</u>		<u>PFS</u>	<u>Total</u>
Model Fit	1,323,000		9,400	1,332,400
Upper 95th Percentile	1,388,000		11,000	1,399,000
<b>DOC Model (Approx.) Firm</b>	<u>Base</u>	<u>Jan</u>	<u>Jan &amp; Tue</u>	<u>Jan &amp; Tue &amp; HS 17-18</u>
Model Fit	1,309,000	1,344,000	1,350,000	1,352,000
Upper 95th Percentile	1,364,000	1,399,000	1,405,000	1,406,000
<b>New Model Approach Firm</b>	<u>Base</u>	<u>Jan</u>	<u>Jan &amp; WeekDay</u>	
Model Fit	1,289,000	1,323,000	1,330,000	
Upper 95th Percentile	1,348,000	1,381,000	1,389,000	

**PUBLIC INFORMATION**

**Trade Secret Information has been Excised**

Docket No. G-008/M-19-278

Exhibit C1

**BP Canada - Marketer Storage Service Demand Allocation**

Contract Term: May 2019 - March 2022

	Annual \$\$	% Alloc
[Trade Secret Data Begins...		
		49.95%
		50.05%
		<b>Year</b>
		<b>Term</b>
...Trade Secret Data Ends ]		

**PUBLIC INFORMATION**

**Trade Secret Information has been Excised**

Docket No. G-008/M-19-278

Exhibit C2

**Natural Gas Pipeline (NGPL) - NSS Storage Demand Allocation**

Contract Term: May 2019 - April 2034

[Trade Secret Data Begins...

...Trade Secret Data Ends ]

**CenterPoint Energy Minnesota Gas  
NGPL Storage Costs - Assigned to Demand**

**Docket No. G-008/M-19-258  
NON-PUBLIC DATA  
Contains Trade Secret Information  
Exhibit C3**

**EFFECTIVE MAY 1, 2019  
Proposed Change to NGPL Allocation**

	Demand	Commodity	Total
	[ TS Data begins...		
Current Contract- Allocation	\$14,350,289	\$7,493,627	\$21,843,916
New Contract - New Allocation	\$12,256,773	\$12,256,773	\$24,873,546
Change	(\$2,093,516)	\$4,763,146	\$3,029,630
			..TS Data ends ]

**ALLOCATION OF COSTS TO RATE CLASSES**

	RC 2017 Annual	RC 2017/18 Winter	Demand	Commodity	Total
			[ Trades Secret Data begins...		
SV - Firm	110,578,301	78,840,750			
LV - Firm	365,385	218,081			
SV - Dual Fuel	6,857,356	4,487,270			
LV - Dual Fuel	7,156,285	3,183,532			
Total	124,957,327	86,729,633			
					..Trade Secret Data ends ]

**RATE:**

	Annual	Winter	Demand	Commodity	Total
			[ Trades Secret Data begins...		
SV - Firm	110,578,301	78,840,750			
LV - Firm (MDQ=2648.7)	365,385	218,081			
SV - Dual Fuel	6,857,356	4,487,270			
LV - Dual Fuel	7,156,285	3,183,532			
Total	124,957,327	86,729,633			
					..Trade Secret Data ends ]

**NGPL Annual Bill Impact:**

	UPC-annual	UPC-Winter	Demand	Commodity	Total
			[ Trades Secret Data begins...		
Residential	89.0	64.5			
Com-A	81.2	62.2			
C/I-B	293.9	220.3			
C/I-C	1,697.5	1,150.0			
LV-Firm	45,673.1	27,260.1			
SV-A	4,402.6	3,174.2			
SV-B	17,702.7	11,802.7			
LVDF	71,538.8	32,968.4			
					..Trade Secret Data ends ]

**Change from Current Contract and Current Allocation  
Method**

	Demand	Commodity	Total
	[ Trades Secret Data begins...		
Residential			
Com-A			
C/I-B			
C/I-C			
LV-Firm			
SV-A			
SV-B			
LVDF			
			..Trade Secret Data ends ]

## EXHIBIT D

May 1, 2019

Re: CenterPoint Energy's Request for Change in Demand Units

PLEASE TAKE NOTICE that on May 1, 2019, CenterPoint Energy filed its request for Changes in Demand Units to be effective May 1, 2019 and November 1, 2019 with the Minnesota Public Utilities Commission (MPUC). True and correct copies will be on file at the Commission offices (Metro Square, Suite 350, 121 7<sup>th</sup> Place East, St. Paul, Minnesota, 55101-2147) during regular business hours or from CenterPoint Energy by contacting Marie Doyle.

This Notice is required per Minn. Rule 7825.2910, Subp. 3. Service list consists of interveners in the Company's previous two general rate cases.

If you have any questions, please contact Marie Doyle at (612) 321-5078.

CenterPoint Energy contact information:

Mail:

Marie Doyle  
CenterPoint Energy  
505 Nicollet Mall  
PO Box 59038  
Minneapolis, MN 55459-0038

Email:

[Marie.Doyle@CenterPointEnergy.com](mailto:Marie.Doyle@CenterPointEnergy.com)

Phone:

612-321-5078



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
David	Aafedt	daafedt@winthrop.com	Winthrop & Weinstine, P.A.	Suite 3500, 225 South Sixth Street  Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_19-278_M-19-278
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street  Bismarck, ND 585014092	Electronic Service	No	OFF_SL_19-278_M-19-278
Kristine	Anderson	kanderson@greatermngas.com	Greater Minnesota Gas, Inc.	202 S. Main Street  Le Sueur, MN 56058	Electronic Service	No	OFF_SL_19-278_M-19-278
Kenneth	Baker	Ken.Baker@walmart.com	Wal-Mart Stores, Inc.	2001 SE 10th St.  Bentonville, AR 72716-5530	Electronic Service	No	OFF_SL_19-278_M-19-278
Carolyn	Berninger	cberninger@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206  St. Paul, MN 55101	Electronic Service	No	OFF_SL_19-278_M-19-278
James J.	Bertrand	james.bertrand@stinson.com	Stinson Leonard Street LLP	50 S 6th St Ste 2600  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-278_M-19-278
Brenda A.	Bjorklund	brenda.bjorklund@centerpointenergy.com	CenterPoint Energy	505 Nicollet Mall  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-278_M-19-278
Lizzie	Brodeen Kuo	lbrodeen-kuo@kennedy-graven.com	Kennedy & Graven	470 US Bank Plaza 200 S Sixth St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-278_M-19-278
C. Ian	Brown	office@gasworkerslocal340.com	United Association	Gas Workers Local 340 312 Central Ave SW Minneapolis, MN 55414	Electronic Service	No	OFF_SL_19-278_M-19-278
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