

# Gazifère Inc.

## 2017 Contract Demand Forecast

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### Overview

This report summarizes the 2017 peak day demand (“PDD”) forecast for Gazifère and the methodology used. The forecast for peak firm demand in 2017 is 1,246.4 10<sup>3</sup>m<sup>3</sup> using the same methodology that has been in place from previous years.

### Determination of Peak Day Demand

Peak day demand for the 2015-2016 heating season occurred on February 13, 2016 wherein firm volumes peaked at 1,313.2 10<sup>3</sup>m<sup>3</sup>. Balance point degree days on this day were recorded at 41.1 degree days.

Comparatively, the peak day for the 2014-2015 heating season occurred on January 7, 2015 with volumes of 1,294.6 10<sup>3</sup>m<sup>3</sup>. Corresponding balance point degree days were recorded at 38.9.

### Methodology

Contract demand is forecast by using a regression estimation of time-series variables. The regression model was estimated using actual data for the years 2000 to 2016 (assuming peak day firm volumes for 2016 has already occurred). The estimated equation used to forecast peak firm demand is as follows:

$$LN(PDFV_t) = c + LN(PDD_t) + LN(TOT\_UNLOCKS_t) + DUM$$

Where:

LN( )	=	Natural logarithm of the variable
PDFV	=	Peak Day Firm Volumes
C	=	Constant
PDD	=	Peak Day Balance Point Degree Days
TOT_UNLOCKS	=	Total Gazifère unlocks for peak day month
DUM	=	Dummy variable to account for above-average peak consumption in certain years

To generate the forecast for 2017, peak day balance point degree days for 2017 were estimated by taking a five-year average of peak day balance point degree days from 2012-2016, which is calculated to be 38.2. Historically, the peak day occurs in January, as such the 2017 peak day is also expected to occur in January; January 2017 unlocks are thus included in the model and forecast as 42,153.

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Using the coefficients determined through the regression model, the 2017 forecast of peak day firm volumes is  $1,246.4 \times 10^3 \text{m}^3$ .

Model results and diagnostic tests follow herein:

Dependent Variable: LOG(PDFV)

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.95	0.475	18.84	0.00
LOG(PDD)	0.85	0.085	10.01	0.00
LOG(TOT_UNLOCKS)	0.18	0.052	3.54	0.00
DUM1	0.06	0.014	3.95	0.00
R-squared	0.97	Mean dependent var		13.90
Adjusted R-squared	0.96	S.D. dependent var		0.13
S.E. of regression	0.02	Akaike info criterion		-4.45
Sum squared resid	0.01	Schwarz criterion		-4.25
Log likelihood	41.79	Hannan-Quinn criter.		-4.43
F-statistic	158.43	Durbin-Watson stat		2.27
Prob(F-statistic)	0.00			