Docket No. DG 20-105 Exhibit 35



#### STATE OF NEW HAMPSHIRE BEFORE THE PUBLIC UTILITIES COMMISSION

Docket No. DG 20-105

Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities Distribution Service Rate Case

#### **DIRECT TESTIMONY**

OF

#### **MATTHEW J. DECOURCEY**

July 31, 2020

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#### 1 I. INTRODUCTION AND BACKGROUND

### 2 Q. Please state your full name, position, business address, and professional

#### 3 qualifications.

4 A. My name is Matthew DeCourcey. I am a Managing Director at FTI Consulting, Inc.

5 ("FTI"), 200 State Street, 9<sup>th</sup> Floor, Boston, Massachusetts. My professional

6 qualifications and experience are included as Attachment MJD-1.

#### 7 Q. Please describe FTI's Power & Utilities practice.

8 A. FTI is a worldwide consulting firm dedicated to helping organizations manage change,

9 mitigate risk, and resolve disputes. Our Power & Utilities practice brings these services

10 to firms in regulated and competitive energy industries. The services we provide our

11 utility clients include expert testimony, regulatory advice, support for strategic decision-

12 making, and advice regarding investments and capital allocation. Our team is comprised

13 of former utility executives, regulators, investors, and financial analysts that combine

14 hundreds of years of experience in the regulated energy space.

15 Q. What is your responsibility in connection with this proceeding?

16 A. I am responsible for preparing the Marginal Cost Study ("MCS") for Liberty Utilities

- 17 (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities ("EnergyNorth" or "the
- 18 Company") and for designing proposed rates for each of the Company's customer
- 19 classes.

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How is your testimony organized? 1 **Q**. My testimony is organized into three sections. This section, Section I, includes 2 A. introductory material and describes the scope of my testimony. Section II describes the 3 MCS that I prepared and its results. Section III discusses the development of the 4 proposed customer class revenue targets, the proposed rates for each class, and describes 5 bill impacts. 6 7 II. MARGINAL COST OF SERVICE STUDY A. Overview and Summary of the MCS 8 Please explain the concept of marginal costs and their applicability to natural gas **Q**. 9 10 utilities. 11 A. Marginal costs are defined as the change in total cost that results from increasing the 12 output of a good or service by one unit. In the context of a gas utility, this means the 13 added cost to serve one additional dekatherm ("dth") of demand or one additional 14 customer. When a utility such as EnergyNorth is required to serve new demand or a new customer, it incurs a number of costs, including the cost of new infrastructure, increased 15 16 Operations and Maintenance ("O&M") expenses and other administrative and operational costs. The MCS measures the degree to which each of those costs increases when an 17 additional increment of demand or a new customer is added to the system. In addition to 18 19 these costs, a utility would also need to procure gas supply to meet the needs of incremental demand or new customers; however, for purposes of this proceeding, that 20 cost is excluded from the MCS because EnergyNorth's gas supply costs are recovered 21 through the Company's Cost of Gas mechanism. 22

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#### 1 Q. How are the results of the MCS used in the ratemaking process?

The MCS establishes the marginal cost of a new customer or new increment of demand 2 A. for each of EnergyNorth's rate classes. Marginal costs are then translated into revenue 3 requirements, which reflect the annual levelized costs of incurring the marginal costs, 4 inclusive of capital returns, taxes, depreciation, and other factors that are typically 5 accounted for in utility ratemaking; annual levelized costs are equivalent to the 6 Company's revenue requirement for each marginal cost incurred. The annualized 7 levelized costs are, in turn, used to allocate the Company's revenue requirement, which is 8 described in the joint testimony of Company witnesses David Simek and Kenneth 9 Sosnick, to establish rates for each rate class. I discuss the development of the 10 Company's rates in Section III of my testimony. 11

## Q. Please briefly explain the economic theory underlying marginal cost analysis and its applicability to utility ratemaking.

It is an established principle in economics that when prices for goods or services are 14 A. 15 equal to the marginal costs to provide those goods or services, consumers will make 16 decisions about their consumption that tend to optimize the allocation of resources. Thus, 17 using marginal costs to establish EnergyNorth's distribution rates will help encourage consumers to make efficient decisions regarding their gas consumption. The New 18 19 Hampshire Public Utilities Commission ("Commission") has recognized the 20 appropriateness of using marginal costs for purposes of utility ratemaking in numerous proceedings, including the case in which the Company's gas distribution rates were last 21 adjusted, Docket No. DG 17-048. 22

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#### B. MCS Methodology

1

#### 2 Q. Please explain your approach to conducting the MCS.

3 A. In conducting the MCS, I used data provided by the Company and approaches and methods that are generally consistent with the MCS EnergyNorth filed in Docket No. DG 4 17-048. The study was conducted in three parts. First, I analyzed the relationships 5 between EnergyNorth's costs, its peak day demand, and its customer count. Some of 6 7 EnergyNorth's costs increase primarily as a function of new demand, which I have categorized as capacity-related expenses. Other costs increase primarily as a function of 8 new customers, which I have categorized as customer-related expenses. I also calculated 9 a number of "loading factors," which account for relatively small costs whose causal 10 relationships to other cost drivers are difficult to determine statistically. The results of 11 these analyses indicate the initial marginal costs that EnergyNorth would incur to serve 12 incremental demand and/or new customers. Second, I calculated Fixed Carrying Charge 13 Rates ("FCCRs") to convert the initial marginal costs into the levelized, annual payment 14 15 that the Company would require to recover its initial investment. Third, I summarized my findings and estimated the total marginal costs per dth of peak day demand and per 16 customer for each of the Company's rate classes. 17

## Table 1 below identifies each category of marginal costs that I analyzed and identifies the attachment to my testimony associated with each aspect of my analysis.

Table 1.	Summary	of MCS	Analyses
10010 10	$\sim$ units of $j$	0111100	

Margir	Marginal Cost Category Attachment			
Capaci	ty-Related Marginal Costs			
1	Addition of production plant used in lieu of mains	MCOS-1		
	reinforcement			
2	Costs of mains reinforcements to meet incremental demand	MCOS-2		
3	Costs of mains extensions to meet incremental demand	MCOS-2		
4	Costs of distribution O&M to meet incremental demand	MCOS-2		
5	Costs of production O&M to meet incremental demand	MCOS-2		
Custon	ner-Related Marginal Costs			
6	Costs to new plant additions (meters and services) to serve	MCOS-3		
	incremental customers			
7	Costs of O&M to serve incremental customers	MCOS-3		
8	Costs of Accounting and Marketing to serve	MCOS-3		
	incremental customers			
Loadin	g and Adjustment Factors			
9	Plant-related A&G loading factor	MCOS-4		
10	Non-plant-related A&G loading factor	MCOS-4		
11	MS and prepayments loading factor	MCOS-4		
12	General plant loading factor	MCOS-4		
13	Bad debt expense adjustment factor	MCOS-4		
Leveliz	red Annual Marginal Costs	MCOS-5		
Summa	ary of results	MCOS-6		

1

1	Q.	Please summarize the method you used to estimate the capacity- and customer-
2		related marginal costs shown above.
3	A.	My estimate of the marginal cost to add production plant in lieu of mains reinforcement,
4		listed above as Item 1, is based on an analysis of engineering data provided by the
5		Company, as I explain in detail later in my testimony. To estimate the marginal costs
6		associated with Items 2 through 8, I first conducted regression analyses using data the
7		Company provided. If the resulting regression equation that I estimated to parameterize
8		the driver of each cost category was sufficiently robust, it was used to estimate the
9		marginal cost. If it was not, I based the marginal cost for each category on historical
10		actual cost rates, as I explain in more detail below.
11	Q.	Please explain the general approach that you used in conducting the regression
12		analyses.
	<b>Q.</b> A.	
12 13		analyses. The Company provided annual cost data for the period 1989 to present for each of the
12 13 14		analyses. The Company provided annual cost data for the period 1989 to present for each of the cost categories listed as Items 2 through 8 in Table 1. I adjusted expense data using a
12 13 14 15		analyses. The Company provided annual cost data for the period 1989 to present for each of the cost categories listed as Items 2 through 8 in Table 1. I adjusted expense data using a general inflation index and adjusted the plant cost data using the most recent version of
12 13 14 15 16		analyses. The Company provided annual cost data for the period 1989 to present for each of the cost categories listed as Items 2 through 8 in Table 1. I adjusted expense data using a general inflation index and adjusted the plant cost data using the most recent version of the Handy Whitman Index. <sup>1</sup> EnergyNorth also provided annual peak day consumption
12 13 14 15 16 17		analyses. The Company provided annual cost data for the period 1989 to present for each of the cost categories listed as Items 2 through 8 in Table 1. I adjusted expense data using a general inflation index and adjusted the plant cost data using the most recent version of the Handy Whitman Index. <sup>1</sup> EnergyNorth also provided annual peak day consumption and annual customer counts for the same period. For each of the capacity-related

<sup>&</sup>lt;sup>1</sup> The Handy Whitman Index calculates cost trends for specific sectors, which allows for the estimation of industryspecific inflation calculations. To develop the calculations described in my testimony I used Bulletin No. 191, the most recent available, of the Handy-Whitman Index of Public Utility Costs.

1		indicates the slope of the regression line found to be the best fit in the data. The
2		coefficient indicates the rate at which the cost variable would increase for every unit
3		change in the independent variable, either demand, in which case the rate of change in
4		costs is expressed on a \$/peak day dth basis, or customer count, in which case the rate of
5		change is expressed on a \$/customer basis.
6		More formally, the regression equations can be summarized as follows:
7		<i>Cost Variable</i> = <i>a</i> + <i>b</i> * <i>Cost Driver Variable</i>
8		where the Cost Variable is the cost data provided by the Company for each category
9		identified in Items 2-8 in Table 1. The Cost Driver Variable is the Company data for
10		either demand (for capacity-related marginal costs) or customer count (for customer-
11		related marginal costs). $a$ is the y-axis intercept of a line that is fit to the data available
12		using regression analysis; that line is often referred to as being defined by the regression
13		line. $b$ is the coefficient that represents the slope of the regression line, which is the rate
14		at which the Cost Variable increases with each unit of the Cost Driver Variable; thus, for
15		purposes of the MCS, b indicates the unit marginal cost for each of the cost categories
16		shown above for which I was able to estimate a sufficiently robust relationship using
17		linear regression.
18	Q.	Is regression analysis a widely accepted method for conducting marginal cost
19		studies?
20	A.	Yes, the method I used is widely accepted. Regression analysis is used in New
21		Hampshire and elsewhere for marginal cost studies for gas and electric utilities and was

1	also used in Docket No. DG 17-048, the last rate case where the Company's distribution
2	rates were adjusted. Additionally, the use of historical cost rates in instances in which a
3	sufficiently robust relationship between cost and driver variables cannot be found using
4	regression is also common practice in New Hampshire and other jurisdictions.

How did you determine which of the regressions satisfactorily capture the

5

6

Q.

#### relationship between the cost and driver variables?

7 There were three primary criteria I utilized to confirm that the regression equations I have A. identified adequately capture the relationship between the cost variable and the cost 8 9 driver variable. *First*, I reviewed the R-squared statistic, which is sometimes referred to as the coefficient of determination. R-squared is the square of the coefficient of 10 correlation between the Cost Variable and the Cost Driver Variable and is a statistical 11 12 measure of how closely the data fit the regression line. Second, I confirmed that each of the regression coefficients – the b or slope variables – had the expected sign. In this case, 13 that means that all of the coefficients should be positive, indicating that as peak demand 14 15 increased, expense would as well. *Third*, I reviewed the t-statistic and p-value for each 16 regression, both of which are measures of the explanatory power of the b coefficient.

17

#### Q. Did you reject any regressions?

A. Yes, I did. In several instances I rejected the results of the regression analysis because
the equation indicated a coefficient with a negative sign, a low R-squared value, or both.
As I describe in detail below, in each of those instances I based my estimate of the

- marginal cost for that cost category on long-run cost rates that I calculated using the data
   provided by the Company.
- 3

#### 1. Capacity-Related Marginal Costs

## 4 Q. Please summarize the capacity-related marginal costs that you estimated using 5 regression analysis.

I estimated five types of marginal costs that the Company would incur for each additional 6 A. increment of design day demand, each of which are listed in Table 1: (Item 1) marginal 7 costs associated with the addition of new production plant that the Company could install 8 9 in lieu of reinforcing its network of distribution mains; (Item 2) marginal costs of investing to reinforce mains to meet each increment of new demand; (Item 3) marginal 10 costs of extending mains to meet each increment of new demand; (Item 4) marginal 11 12 distribution O&M costs associated with serving each increment of new demand; and (Item 5) marginal production O&M costs associated with serving each increment of new 13 14 demand.

Q. How did you estimate Item 1, the marginal cost of new production in lieu of mains
 reinforcement to serve incremental demand?

A. EnergyNorth owns Liquid Propane ("LP") and Liquefied Natural Gas ("LNG") facilities
in its service territory, which it uses to maintain pressure when its system is at or near
peak demand conditions. I asked the Company to develop an estimate of the costs of
hypothetical additions to expand the capacity of its LP and LNG facilities and also to
determine how much of that new capacity would be used to maintain system pressure.

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1		Upon review of its engineering data, the Company determined that the cost estimates and
2		allocation to pressure support used for the MCS in Docket No. DG 17-048 were still
3		current. Those costs indicated that LNG was the preferred alternative; that in 2016 it
4		would have cost \$6,417,870 to increase its LNG capacity by 10,000 dth; and that 8.73%
5		of that capacity would be used to maintain pressure during peak conditions. I therefore
6		increased the capital expense amount by approximately 6.2% to account for three years of
7		inflation between 2016 and 2019. I determined this rate by reviewing the U.S. Bureau of
8		Economic Analysis's Gross Domestic Product Implicit Deflator, which was most recently
9		published in May 2020. The result is a marginal unit cost estimate for production plant to
10		maintain pressure support of \$59.52/dth of incremental design day demand. My
11		calculations are shown in Attachment MCOS-1.
	0	
12	Q.	How did you estimate Item 2, the marginal cost of mains reinforcement to serve
13		incremental demand?
14	А.	Mains reinforcement costs are the costs that the Company incurs for reinforcing its

15 system to maintain operations to meet incremental demand. I asked the Company to

16 prepare an engineering study that forecasted system reinforcement projects that

17 EnergyNorth expects to install over the period 2021 to 2030 in response to growing

- 18 demand and the expected costs of those projects. I then developed a regression analysis
- 19 to estimate the statistical relationship between the cost of those reinforcement costs and
- 20 demand. As shown in Attachment MCOS-2 at page 1, I found that the marginal cost of
- 21 mains reinforcement is \$1,261.97/dth of incremental design day demand.

1	Q.	How did you estimate Item 3, the marginal cost of mains extensions to meet
2		incremental demand?
3	А.	The marginal cost for mains extension is the cost that EnergyNorth will incur to extend
4		its network for each dth by which demand grows. The Company provided me with data
5		for the period 1989–2019 that included the costs of new mains and peak day demand for
6		each year. Using this data, I conducted regression analysis to estimate the relationship
7		between those two variables and determined that the marginal cost of mains extensions is
8		\$1,090.65/dth of incremental design day demand, as shown in Attachment MCOS-2 at
9		page 2.
10	0	Harry did your active sta Itam 4 the manningle asst of distribution OPM to some
10	Q.	How did you estimate Item 4, the marginal cost of distribution O&M to serve
11		incremental demand?
12	A.	The Company provided me with data for O&M related to distribution operations for the
13		period 1989–2019. I conducted regression analysis to estimate the relationship between
14		those cost data and peak day demand, which indicated that the Company's marginal cost
15		of distribution O&M is \$46.87/dth of incremental design day demand, as shown in
16		Attachment MCOS-2 at page 3.
17	Q.	How did you estimate Item 5, the marginal cost of production O&M to meet
18		incremental demand?
19	A.	Production O&M costs are those costs that EnergyNorth incurs for the operation and
20		maintenance of its LNG and LP facilities. To estimate that cost, I first ran a regression to
21		determine the relationship between design day demand and total production related

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1	expenses using data provided by the Company. However, the resulting equation had a
2	negative sign and low R-squared value, so I rejected it and instead estimated the marginal
3	cost using EnergyNorth's historical average production cost, which I determined to be
4	\$13.21/dth of incremental design day demand. Because that estimate is total production
5	cost, it must be allocated to the distribution function, since the objective is to determine
6	the marginal cost of pressure support. To do so, I utilized the same rate, 8.73%, that was
7	used to allocate the cost of new production in lieu of mains to the pressure support
8	function. The resulting estimate of the marginal cost for production O&M is \$1.15/dth of
9	incremental design day demand, as shown in Attachment MCOS-2 at page 4.

10

#### 2. Customer-Related Marginal Costs

#### 11 Q. Please explain the concept of customer-driven marginal costs.

A. For some cost categories, the Company's costs are driven more by the number of its customers than by customers' total consumption. For example, EnergyNorth's cost of meters is driven entirely by its customer count – a meter must be installed for each new customer regardless of consumption. For each of the customer-driven cost categories, the marginal cost is equal to the Company's additional expense in that category that results from a single new customer. Accordingly, each of the customer-driven marginal costs are expressed on a \$/customer basis.

19 Q. Please summarize the customer-related marginal costs that you estimated.

A. I estimated three types of marginal costs that the Company would incur for each new
customer: (Item 6 from Table 1) the costs of new plant additions for each incremental

1		customer; (Item 7) O&M costs associated with the new plant additions for each
2		incremental customer; and (Item 8) Accounting and Marketing costs the Company will
3		incur for each new customer.
4	Q.	How did you estimate Item 6, the marginal cost of plant additions to serve
5		incremental customers?
6	A.	Customer-driven marginal costs of plant additions are the costs of installing a meter and
7		service for new customers. The Company provided me with its current costs by rate
8		class, which are shown below. Additional detail is provided in Attachment MCOS-3 at
9		page 1:

#### 10 Table 2. Marginal Costs of Customer-Related Plant Additions

	<b>R-1</b>	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54
Service	\$4,063	\$4,063	\$3,796	\$6,346	\$10,913	\$11,894	\$6,583	\$39,407	\$9,647
Meter	<u>\$440</u>	<u>\$440</u>	<u>\$1,077</u>	<u>\$2,750</u>	<u>\$9,333</u>	<u>\$3,483</u>	<u>\$2,750</u>	<u>\$3,995</u>	<u>\$11,904</u>
Total	\$4,503	\$4,503	\$4,873	\$9,097	\$20,245	\$15,376	\$9,333	\$43,403	\$21,552

11

#### 12 Q. How did you estimate Item 7, the marginal cost of O&M to serve incremental

#### 13 customers?

A. Customer-driven O&M expense is the expense that the Company incurs to operate and
 maintain its meters and services; as such, it is separate from the Company's distribution
 O&M discussed above. To estimate the marginal cost of customer-related O&M, I first

- 17 developed regressions based on historical data for customer-related O&M and annual
- 18 customer count which the Company provided. Because the resulting regression equation
- 19 had an extremely low R-squared value, I rejected it and instead based my estimate of the

6	incremental customers for each rate class is shown below:
5	shown at page 3 of Attachment MCOS-3. The resulting marginal cost for O&M to serve
4	marginal costs for each class based on the contribution of each class to total costs, as
3	O&M is likely to vary by rate class, I conducted additional analysis to weight the
2	\$66.45/customer, as shown at page 2 of Attachment MCOS-3. Because customer-related
1	marginal cost on the Company's long-run average O&M cost per customer, which is

7

Table 3. Weighted Customer-Related Marginal O&M Cost by Class

	Class weighted marginal cost per
Class	customer
R1	\$62.26
R-3, R-4	\$62.26
G-41	\$67.38
G-42	\$125.77
G-43	\$279.92
G-51	\$212.60
G-52	\$129.04
G-53	\$600.10
G-54	\$297.99

8

9 Q. How did you estimate Item 8, marginal Accounting and Marketing costs to serve
 10 incremental customers?

A. The Company provided historical data for Accounting and Marketing expenses for the
 period 1989 to present. I prepared a regression analysis to determine the statistical

- 13 relationship between those expenses and annual customer count. Because that analysis
- 14 showed a very weak relationship, as measured by the correlation value, between customer
- 15 count and Accounting and Marketing expense and also a negative coefficient, I chose to

1		base my estimate of the marginal cost for that category of \$65.88/customer using the
2		Company's actual long-run average rate. My calculations are shown at page 4 of
3		Attachment MCOS-3.
4		3. Loading and Adjustment Factors
5	Q.	Please identify the loading factors you estimated.
6	А.	The loading factors I calculate are for (a) plant-related administrative and general
7		("A&G") expense, (b) non-plant-related A&G expense, (c) materials and supplies
8		("M&S") and prepayments, and (d) general plant.
9	Q.	What is the relevance of the loading factors to the MCS?
10	А.	Each of the loading factors define relatively small costs that the Company will incur as a
11		result of increasing demand and/or customer count that should be included in its marginal
12		cost but that are difficult to estimate directly using the statistical approaches described
13		above. I therefore based my estimates of the loading factors on the historical relationship
14		between these cost categories and other costs from data that was provided by the
15		Company. For example, I compiled the Company's total utility plant cost and its plant-
16		related A&G expense for each year for the period 1989 through the present and
17		determined that, on average, plant-related A&G expense was approximately 0.61% of the
18		total utility plant cost. I conducted similar analyses for each of the other loading factors,
19		including comparisons of non-plant A&G expense to adjusted O&M, M&S and
20		prepayments to total utility plant, and general plant to total utility plant. My calculations

are provided at pages 1–4 of Attachment MCOS-4 and are summarized in Table 4,

- 2 below:
- 3

Table 4.	Summary	of Loading	Factors
----------	---------	------------	---------

Category	Loading Factor	Unit	
Plant-related A&G expense	\$0.0061	/\$ of utility plant	
Non-plant related A&G expense	\$0.6616	/\$ of adjusted O&M	
M&S and prepayments	\$0.0131	/\$ of utility plant	
General Plant	\$0.0549	/\$ of utility plant	

4

#### 5 Q. Did you calculate any other adjustment factors?

- A. Yes, using data provided by the Company, I calculated a percentage-based estimate of
  bad debt expense per customer class, as shown at page 5 of Attachment MCOS-4.
- 8

#### 4. Levelized Marginal Costs

#### 9 Q. Please explain the relevance of the levelized marginal costs.

- 10 A. Each of the marginal costs for investments in infrastructure described earlier in my
- 11 testimony are the initial costs that will be incurred by the Company to place services,
- 12 meters, and plant into service to serve new demand or customers. These costs must be
- 13 converted into levelized, annual costs that include recovery of the Company's authorized
- 14 return and other factors in order to establish marginal costs that reflect EnergyNorth's

15 cost of service.

#### 16 Q. How did you convert the initial marginal costs into levelized marginal costs?

- 17 A. I calculated FCCRs for each type of investment that the Company would incur to meet
- 18 new demand or to serve new customers: (a) production plant, (b) mains, (c) services, and

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1		(d) meters. For each, I calculated an Engineer's FCCR and an Economist's FCCR, which
2		are the annual revenue requirements, expressed as a percentage of the initial capital
3		investment, for each type of investment, inclusive of the Company's required returns,
4		taxes, depreciation, and other factors that are reflected in utility ratemaking for capital
5		investment. The only difference between the two rates is that the Engineer's FCCR is
6		expressed in nominal dollars while the Economist's FCCR is expressed in constant
7		dollars that account for the value of inflation; the Present Value ("PV") of the income
8		streams that underlie the FCCR calculations are the same for both. For purposes of
9		marginal cost analyses, it is generally accepted that use of the Economist's FCCR is most
10		appropriate, which is consistent with the Company's MCS in Docket No. DG 17-048.
11		The inputs that I used to conduct the levelized cost analysis are shown at pages 1–2 of
12		Attachment MCOS-5, the detailed calculation of the four FCCRs are shown at pages 3–6
13		of Attachment MCOS-5, and the Economist's and Engineer's FCCRs are shown at page 7
14		of Attachment MCOS-5.
15		C. <u>MCS Results</u>
16	Q.	Please identify the schedules you have prepared to summarize the results of the
17		Marginal Cost Study.
10	٨	Attachment MCOS_6 page 1 shows the calculation of capacity-related marginal costs

A. Attachment MCOS-6, page 1, shows the calculation of capacity-related marginal costs
 inclusive of loading factors and adjustments. Attachment MCOS-6, page 2, shows the
 calculation of customer-related marginal costs, including all loading factors and
 adjustments. Attachment MCOS-6, page 3, summarizes the cost estimates.

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#### 1 Q. Please summarize the results of the MCS.

2 A. The results of the MCS are summarized in Table 5, below.

3

Class	Customer -related	Capacity- related	Total	Share
R-1	\$2,403	\$176	\$2,579	2.0%
R3, R-4	\$53,177	\$25,674	\$78,851	61.6%
G-41	\$6,620	\$11,246	\$17,866	14.0%
G-42	\$1,746	\$13,608	\$15,354	12.0%
G-43	\$154	\$3,900	\$4,054	3.2%
G-51	\$2,620	\$815	\$3,434	2.7%
G-52	\$494	\$1,863	\$2,357	1.8%
G-53	\$182	\$1,998	\$2,180	1.7%
G-54	\$79	\$1,152	\$1,230	1.0%

#### Table 5. Marginal Costs by Rate Class (\$,000)

4

#### 5 III. <u>RATE DESIGN</u>

#### 6 Q. What is the purpose of this section of your testimony?

A. In this section of my testimony I describe the analysis I undertook to develop proposed
rates for each of the Company's rate classes. I also discuss an issue with the decoupling
mechanism approved in the Company's last rate case that I believe merits an adjustment
by the Commission.

#### 11 Q. How is this section of your testimony organized?

12 A. In this section of my testimony I summarize at a high level my approach to undertaking

13 the rate design. I also describe the billing and revenue data that the Company provided

- 14 me and describe in detail my calculation of the proposed distribution rates. Additionally,
- 15 I explain the analyses that I undertook to calculate the changes to other pass-through

charges allowed by the Company's tariff. Finally, I describe the analysis of bill impacts
 by customer class that I conducted.

3

#### A. <u>Rate Design Overview</u>

#### 4 Q. Please summarize at a high level your approach to developing proposed rates.

The objective of the rate design analysis is to identify a set of rates that allows the 5 A. Company to recover its allowed revenue requirement given normal throughput volumes, 6 that adheres to principles related to rate continuity that I describe in more detail below, 7 and that reflect the Company's marginal cost to serve customers in each class. To do so, 8 9 I calculated the revenues that the Company would earn at current rates, assuming that throughput is the same as was observed in the test year, subject to certain adjustments I 10 describe later in this section of my testimony.<sup>2</sup> When I determined that those revenues 11 12 would be less than the Company's requirements, I calculated the increase, expressed on a percentage basis, that would eliminate any revenue shortfall. The required increase and 13 the results of the MCS were used to determine how much to increase rates in each class. 14 15 After I had calculated the proposed rates, I confirmed that they would generate revenues 16 that would meet the Company's revenue requirement.

<sup>&</sup>lt;sup>2</sup> The test year is 2019.

1	Q.	Have there been any significant, recent changes to the Company's rate design?
2	А.	In August 2016, the Company received permission from the Commission to offer a new
3		set of rates to customers initiating service under the Managed Expansion Program
4		("MEP"). <sup>3</sup>

#### 5 Q. Please summarize the MEP and the relevant rates.

Previously, new customers who required the construction of new facilities, often in the 6 A. form of mains extensions, were frequently required to make an upfront payment for the 7 costs of those facilities, referred to as a Contribution in Aid of Construction ("CIAC"), as 8 9 a condition of starting service. The Company found that in some cases, developers were opting for propane service to avoid having to pay the CIAC.<sup>4</sup> The MEP was designed as 10 an alternative to the CIAC and imposes a premium of 30% on both customer and 11 12 volumetric charges on the rates for the class of which the customer would otherwise be a part. For example, a C&I customer initiating service who meets all the criteria of the G-13 41 rate class could be assigned to the G-44 class, in which case the customer would 14 15 receive service subject to all the same terms as a G-41 customer except for the higher 16 rate. The value proposition for such customers is the avoidance of the CIAC. The 17 premium embedded in the MEP rate is designed to generate approximately the same amount of revenue, over time, that would have been recovered on an upfront basis via the 18 CIAC. New customers assigned to a MEP rate class receive service under that tariff for 19 20 10 years, after which they revert to the applicable non-MEP tariff. There is a MEP

<sup>&</sup>lt;sup>3</sup> Commission Order No. 25,933, issued August 4, 2016.

<sup>&</sup>lt;sup>4</sup> *Id.* at p. 3.

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1	variant for each of the rate classes that have typically been in use for the Company
2	(herein referred to as the "standard" rate classes for simplicity). Table 6 shows the
3	Company's standard rate class and equivalent MEP rate class for each type of customer.

4

#### Table 6. Standard and MEP Rate Classes

Туре	Description	Standard Rate Class	Equivalent MEP Rate Class
Residential	Non-Heating	R-1	R-5
	Heating	R-3	R-6
	Heating (Low Income)	R-4	<b>R-7</b>
C&I	Low Annual Use, High Winter Use	G-41	G-44
	Medium Annual Use, High Winter Use	G-42	G-45
	High Annual Use, High Winter Use	G-43	G-46
	Low Annual Use, Low Winter Use	G-51	G-55
	Medium Annual Use, Low Winter Use	G-52	G-56
	High Annual Use, Low Winter Use	G-53	G-57
	High Annual Use, Load Factor > 90%	G-54	G-58

5

### 6 Q. Aside from the MEP rate classes, are rates for any other class a function of some

#### 7 related class?

8 A. Yes. Rate class R-4 is provided under the Residential Low Income Assistance Program

9 ("RLIAP"). Each component of the R-4 distribution rates is set at 60% of R-3 rates.

- 10 There is also an equivalent MEP rate, such that R-7 rates are set at a discount to R-6 rates
- 11 (or, alternatively a 30% premium to the R-4 rates). Customers are eligible for service
- 12 under one of the RLIAP rates if they receive food stamps, disability or old age assistance,

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1	participate in a fuel assistance program, or receive some other support program. <sup>5</sup> The
2	RLIAP discount applies only to distribution rates, not the cost of gas.

#### 3 Q. Have there been any other notable changes to the Company's ratemaking?

A. Yes. This is the first proceeding in which the Company is proposing a single set of
distribution rates for all its customers, including the Keene service territory. Previously,
Keene customers had received service under a separate set of rates. All of the volume,
revenue, and related data discussed in the remainder of my testimony includes the Keene
customers.

### 9 Q. Are you proposing any adjustments to reflect the impact of the Concord Steam 10 acquisition?

11 A. No. In previous proceedings, the Company had included adjustments in its calculation of 12 rates that reflected certain aspects of its 2017 acquisition of Concord Steam, many of 13 whose customers have chosen to take service from EnergyNorth after the transaction and 14 subsequent closure of Concord Steam's plant. Those customers that did so have been 15 fully integrated into EnergyNorth's systems. As such, an adjustment is no longer 16 required.

<sup>&</sup>lt;sup>5</sup> A detailed listing of programs that define the RLIAP eligibility criteria is available on the Commission's website at: <u>https://www.puc.nh.gov/consumer/gasassistanceprogram.htm#:~:text=The%20Gas%20Residential%20Low%20Income,delivery%20portion%20of%20their%20bill</u>

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1

#### **B. Billing and Revenue Data**

#### 2 Q. What data did you use to develop the rates you are proposing?

A. In addition to the MCS results, I used the output of the Cost of Service and Functional
Cost of Service Studies (collectively the "COS Studies") that Messrs. Simek and Sosnick
describe in their joint testimony. I also used information from Company rates already
approved by the Commission. Finally, I utilized billing data from the test year and gas
cost data for the 2019/20 winter that were provided to me by the Company.

#### 8 Q. Has the test year data that the Company provided been validated?

9 A. Yes. Included with my testimony as Attachment RATES-1 is a revenue proof that
10 validates the billing data I used. The proof contains data from the Company's billing
11 system showing customer count, sales, and revenues by month and by rate class for the
12 test year that indicate that the Company earned \$86,453,445 over that period.<sup>6</sup> It also
13 includes a re-calculation of revenues for the same period based on actual rates in effect

14 which, indicating earnings of \$86,454,281, a difference of roughly 0.001%.<sup>7,8</sup>

# Q. Were the billing determinants shown in RATES-1 adjusted in any way before you used them in your rate design calculations?

A. Yes, four adjustments were made: (a) a calendarization adjustment; (b) an adjustment to
separate sales volumes into usage blocks; (c) a weather normalization adjustment; and (d)

<sup>&</sup>lt;sup>6</sup> p. 2, ln. 25

<sup>&</sup>lt;sup>7</sup> ln. 50

<sup>&</sup>lt;sup>8</sup> p 3, ln. 50

1		an adjustment to correct for changes that occurred to the Company's customer base over
2		the course of the test year.
3	Q.	Please explain the calendarization adjustment.
4	А.	The calendarization adjustment accounts for differences between the billing cycles that
5		EnergyNorth uses and calendar months. It was calculated by the Company and provided
6		to me. Adjustments to monthly customer counts and sales volumes are shown on p. $1-2$
7		and p. 3–4, respectively, of Attachment RATES-2.
8	Q.	Please explain the block rate structure EnergyNorth uses to set rates for some of its
9		customers.
10	А.	The Company's tariffs define volumetric charges for several classes of C&I customers
11		using what is referred to as a block rate structure. Each month, customers in those classes
12		are charged a rate for all usage up to a pre-defined limit. If usage exceeds that limit, a
13		different rate is applied for consumption for the remainder of the month. EnergyNorth
14		refers to the two quantities as the "headblock" and "tailblock" volumes, respectively. For
15		all classes that use this structure, the tailblock rate is lower than the headblock rate, a
16		design sometimes referred to as a "declining block structure." Table 7 shows the size of
17		the headblock for each of the rate classes that use the block rate structure. Note that in
18		some instances, the size of the headblock differs by season.

Standard Rate Class	Equivalent MEP Rate Class	Summer Headlock Size	Winter Headblock Size
G-41	G-44	20	100
G-42	G-45	400	1,000
G-51	G-55	100	100
G-52	G-56	1,000	1,000

#### Table 7. EnergyNorth Customer Classes Using Block Rate Structures (therms)

2

1

3 No changes are being proposed to the structure or sizes of any of the blocks.

4 Additionally, as I explain below, the rates I propose maintain the pricing relationships

5 embedded in the current tariff between headblock and tailblock volumes as well as the

6 relationships between summer and winter volumes.

#### 7 Q. Please explain the adjustment that was made to the determinants to determine

#### 8 headblock and tailblock volumes.

9 A. The Company maintains billing data from actual (un-calendarized) sales that shows the 10 percentage, each month, of sales that fall into each of the headblock and tailblock for

- customers in each of the classes shown in Table 7. Those percentages were applied to the
- 12 calendarized data to show usage by block. The adjustment is shown on p. 4 of
- 13 Attachment RATES-2 at Lines 26–47. The resulting headblock and tailblock volumes by
- 14 month and by rate class are shown at p. 5 of the same attachment.

#### 15 Q. Please explain the weather normalization adjustment.

16 A. The purpose of using billing determinants from a test year is to define the quantity of

17 sales likely to occur in subsequent years. Although the historical data are indicative of

18 future volumes for obvious reasons, in some years, weather will be colder than normal,

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which tends to increase throughput, while in some years it will be warmer, which has the 1 opposite effect. In order to project annual sales, on average, moving forward, 2 adjustments need to be made to correct for the particular weather outcomes that affected 3 test year volumes. To do so, the Company analyzed weather data on a month by month 4 basis for all winter months to determine the degree to which temperatures during the test 5 year diverged from long-run averages. Because weather variances primarily impact 6 7 heating demand and because there is little heating demand during the non-winter months, weather normalization of summer sales volumes is unnecessary. The results of the 8 temperature analysis were input into models of the relationships between weather and 9 volumes that the Company maintains to develop a counterfactual estimate of what sales 10 would have been had the weather been normal – which is to say completely consistent 11 with historical average temperatures – each winter month during the test year. The 12 resulting adjustment is calculated separately for each rate class and for each month of the 13 test period and is shown at p. 6 of RATES-2. The normalized volumes that result from 14 applying the adjustment are shown at page 7-8. As the adjustment data indicate, January 15 and November during the test year were colder than normal, so an adjustment was made 16 to normalize the sales volumes by reducing actuals for those months. February, March, 17 April, and December were warmer than normal, so an adjustment was made to increase 18 actual sales for those months. For the entire test period, the normalization adjustment 19 reduced volumes by 1,789,257 therms, or about 1% of throughput. The weather 20 normalization applied to each class is shown in Table 8. 21

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	Non- Normalized	Adjustment	Normalized
R-1	730,007	(4,929)	725,078
R-3	58,627,344	(724,476)	57,902,868
R-4	4,592,696	(55,270)	4,537,425
R-5	15,553	0	15,553
R-6	165,208	0	165,208
R-7	1,767	0	1,767
G-41	24,966,957	(327,756)	24,639,201
G-42	35,010,164	(445,124)	34,565,040
G-43	11,283,618	(120,548)	11,163,070
G-44	10,101	0	10,101
G-45	133,489	0	133,489
G-51	4,129,466	(18,262)	4,111,204
G-52	9,564,929	(46,454)	9,518,475
G-53	10,522,907	(46,438)	10,476,470
G-54	18,002,982	0	18,002,982
G-55	3,525	0	3,525
G-58	278,754	<u>0</u>	278,754
Total	178,039,468	(1,789,257)	176,250,211

#### Table 8. Weather Normalization Adjustment by Class (therms)

2

1

Rate classes G-45, G-56, and G-57, each of which are MEP rates, are excluded because
no sales were recorded for those classes during the test year.

Q. Is the weather normalization adjustment necessary given that the Company's rates
 are decoupled?

A. Yes. Rate decoupling adjusts revenues the Company earns on a per-customer basis to
enable it to recover its revenue requirement despite changes in weather, customer
consumption patterns, economic conditions, and other factors that could otherwise affect
throughput and revenues. This fact notwithstanding, it is still important to establish rates

1		that reflect the Company's operational and financial reality to the greatest extent possible
2		in order to provide customers with information they need to make efficient consumption
3		and investment decisions and promote transparency.
4	Q.	Please summarize the End of Year ("EOY") Adjustments.
5	А.	Over the course of any year, including the test year, the Company gains and loses
6		customers. The EOY Adjustments recognizes this effect by annualizing the billing units
7		and revenues of new customers present at the end of the test year while removing the
8		billing units and revenues of customers who terminate service during the year. The
9		Company provided me with separate adjustments to customer bill counts, sales volumes,
10		and revenues, which were calculated using data from its billing system.
11	Q.	Please describe the adjustments to customer bill counts.
11 12	<b>Q.</b> A.	<b>Please describe the adjustments to customer bill counts.</b> For each of the non-MEP classes, the Company identified each customer who had been
12		For each of the non-MEP classes, the Company identified each customer who had been
12 13		For each of the non-MEP classes, the Company identified each customer who had been added during the test year and determined how long they had taken service, from which it
12 13 14		For each of the non-MEP classes, the Company identified each customer who had been added during the test year and determined how long they had taken service, from which it calculated how many bills such customers had received during the year (an amount which
12 13 14 15		For each of the non-MEP classes, the Company identified each customer who had been added during the test year and determined how long they had taken service, from which it calculated how many bills such customers had received during the year (an amount which includes fractions of months). Based on this information, an adjustment was made to the
12 13 14 15 16		For each of the non-MEP classes, the Company identified each customer who had been added during the test year and determined how long they had taken service, from which it calculated how many bills such customers had received during the year (an amount which includes fractions of months). Based on this information, an adjustment was made to the monthly bill count for each customer class that effectively adds new customers to the bill
12 13 14 15 16 17		For each of the non-MEP classes, the Company identified each customer who had been added during the test year and determined how long they had taken service, from which it calculated how many bills such customers had received during the year (an amount which includes fractions of months). Based on this information, an adjustment was made to the monthly bill count for each customer class that effectively adds new customers to the bill count as if it had been there all year. Using the same approach, a similar adjustment was

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**Q**. Can you provide an example? 1

Yes. Assume that a customer began taking service from EnergyNorth on September 1. 2 A. Without an adjustment, it would contribute to the customer bill count, sales volumes, and 3 revenues for September, October, November, and December only. The bill count 4 adjustment increases the bill count by one customer for each of the eight months that 5 precede September. The example is simplified in the sense that there may be slight 6 7 variances in the number of bills issued per month based on the number of days in each month since the Company's billing periods are each 30 days rather than a calendar 8 9 month.

#### What is the net impact on customer bill count from the adjustment? 10 Q.

A. Because more customers began taking service than terminated service during the year, 11

12 there was an aggregate increase, which is shown by month below for residential and C&I

customers. Note that the adjustment is largest in January and smallest in December since 13

14 it is intended to reconcile against EOY effects.

15

#### Table 9. EOY Customer Bill Count Adjustment

	Residential	C&I	Total
January	936.1	148.4	1,084.5
February	754.2	115.1	869.4
March	782.4	126.4	908.7
April	738.5	122.4	861.0
May	746.1	141.2	887.3
June	674.5	151.1	825.7
July	703.3	173.8	877.1
August	683.2	179.5	862.7
September	500.7	168.8	669.6
October	330.2	122.7	452.9

	Residential	C&I	Total
November	165.2	49.4	214.6
December	(8.6)	14.3	5.7

1

7

#### 2 Q. Were sales volumes also adjusted?

A. Yes. The Company calculated average headblock and tailblock usage per customer bill for each class, which was applied to the changes in customer bill count shown above to generate the adjustment to volumes. The volumetric adjustment for residential and C&I customers that results is shown in Table 10.

	Residential	C&I		Teta1
	Headblock	Headblock	Tailblock	Total
January	131,310.2	82,034.4	113,384.4	326,728.9
February	99,225.7	59,135.8	96,311.3	254,672.7
March	84,235.1	68,534.3	87,444.0	240,213.5
April	41,673.9	41,930.5	38,544.5	122,149.0
May	25,373.2	17,096.5	24,185.1	66,654.8
June	13,149.3	5,138.1	16,015.0	34,302.3
July	9,770.4	18,396.2	11,464.4	39,631.0
August	9,611.0	18,751.0	10,722.5	39,084.4
September	9,336.1	20,989.1	13,435.9	43,761.1
October	12,677.5	18,572.6	21,968.7	53,218.7
November	12,300.3	8,794.8	19,498.0	40,593.1
December	(409.2)	4,115.3	7,797.6	11,503.7

#### Table 10. EOY Volumetric Adjustment (therms)

8

#### 9 Q. Do these adjustments increase the Company's test year revenues assumed for

#### 10 ratemaking purposes?

11 A. Yes. Revenues from customer charges are increased based on the adjustment to customer

12 bill count and the currently effective customer charges while revenues from volumetric

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1	sales are increased based on the adjustment to sales quantities and the volumetric rates
2	currently in effect. Note that these calculations are conducted on a class-by-class basis,
3	despite the adjustments being aggregated for simplicity above in Table 9 and Table 10.
4	The net effect is an increase in the Company's revenues for ratemaking purposes of
5	approximately \$756,000. The result is summarized below while detailed calculations
6	showing the derivation of that amount are provided in the Workpaper entitled "RATES-5
7	WP – EOY Adjustment," which is included in Attachment RATES-5 to this testimony.

8

	Residential	C&I	Total
January	\$93,481	\$73,593	\$167,074
February	\$71,832	\$57,429	\$129,261
March	\$63,491	\$58,164	\$121,655
April	\$37,205	\$37,522	\$74,727
May	\$27,184	\$25,479	\$52,663
June	\$18,736	\$19,936	\$38,672
July	\$16,952	\$21,615	\$38,567
August	\$16,352	\$21,103	\$37,455
September	\$13,146	\$21,381	\$34,527
October	\$12,302	\$20,533	\$32,835
November	\$9,898	\$12,590	\$22,488
December	<u>\$582</u>	<u>\$5,065</u>	<u>\$5,647</u>
Total	\$381,160	\$374,410	\$755,571

Table 11. Revenue Impact of EOY Adjustments

9

## 10 Q. Where are the EOY Adjustments reflected and how does it affect the rate

11 calculations?

12 A. As I explain later in my testimony, the rate calculations shown in Attachment RATES-5

13 are based on the shortfall between revenues at current rates and the Company's revenue

1		requirement. The adjustment to revenues, which is shown at Line 9 of RATES-5,
2		reduces that shortfall. The increases to customer bill count and sales volumes are also
3		accounted for when rates are calculated. In both respects, inclusion of the adjustment
4		puts downward pressure on the proposed rates.
5		C. <u>Rate Calculations</u>
6	Q.	Please summarize the steps you undertook to develop the rates you are proposing.
7	A.	Summarized at a high level, my approach consisted of eight steps. First, I determined the
8		target amount of revenue the Company would be required to recover through its
9		distribution rates. That amount is based on the COS Studies, the results of which I
10		adjusted for a number of factors. Second, I compared the Company's total marginal cost
11		of service, whose calculation I describe in Section II, to the Company's revenue target.
12		Since the marginal cost of service is greater than the amount to be recovered, I applied an
13		adjustment using the Equiproportional Method ("EPM") to achieve consistency between
14		the MCS and the COS Studies. Third, I calculated the amount of revenue the Company
15		would generate given test year billing determinants and the distribution rates currently in
16		effect. Since those revenues are insufficient to recover the revenue requirement, I also
17		calculated the increase in revenues that would be required to achieve the revenue target.
18		Fourth, I increased the customer charge for each rate classes by a factor equal to the total
19		required revenue increase, expressed on a percentage basis. I also calculated the amount
20		of revenue the Company would generate from the new customer charge rates. Fifth, I
21		adjusted the expected revenue for certain classes to limit the potential for inconsistent bill
22		impacts and to promote rate continuity objectives. Sixth, I determined how much the

1		Company would be required to recover from rates for each class based on current rates,
2		the results of the MCS, and additional adjustments I applied. In doing so, I established
3		for each class a total revenue target and the revenue required from volumetric sales.
4		Seventh, I calculated the volumetric rates that would recover each class revenue target.
5		Eight, I validated that the rates that resulted would allow the Company to generate
6		revenues equal to the revenue target for each class and to the Company's overall
7		requirement. All of the calculations I undertook to do so are shown in Attachment
8		RATES-5 and its associated workpapers.
9	Q.	How much revenue are your proposed rates designed to recover?
9 10	<b>Q.</b> A.	How much revenue are your proposed rates designed to recover? The proposed rates are designed to recover revenue of \$103,936,008. That amount is
10		The proposed rates are designed to recover revenue of \$103,936,008. That amount is
10 11		The proposed rates are designed to recover revenue of \$103,936,008. That amount is established by the COS Studies, reduced by non-delivery revenues, increased by the step
10 11 12		The proposed rates are designed to recover revenue of \$103,936,008. That amount is established by the COS Studies, reduced by non-delivery revenues, increased by the step adjustment described by Messrs. Simek and Sosnick in their testimony, and increased by
10 11 12 13		The proposed rates are designed to recover revenue of \$103,936,008. That amount is established by the COS Studies, reduced by non-delivery revenues, increased by the step adjustment described by Messrs. Simek and Sosnick in their testimony, and increased by the amount required to recover the discount the Company provides to its RLIAP

16

## Table 12. Calculation of Total Rate Recovery Amount

Line Item	Amount	Reference
Delivery revenue requirement	\$97,277,247	COS Studies
Non-delivery revenues	(\$1,197,776)	RR-EN-2-1
RLIAP recovery	\$2,175,896	RATES-5
Step adjustment	\$5,680,641	RR-EN-1
Total	\$103,936,008	

17

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**Q**. 1

#### Please explain the RLIAP recovery amount.

2	А.	The Company recovers the discount it provides to RLIAP customers through sales to
3		other customers. To calculate the value of that discount, I calculated the difference
4		between the revenues from the RLIAP customers and the amount their payments would
5		be under the corresponding non-RLIAP rates (R-3 rates for the R-4 customers and R-6
6		rates for the small handful of those customers taking service under R-7). The result
7		indicates that the total value of the discount to RLIAP customers is \$2,175,896. Detail
8		supporting my calculation of that amount is provided in the workpaper labelled "RATES-
9		5 WP – RLIAP", which is attached to RATES-5.

Q. Is the amount the Company must recover from rates the same as its marginal cost of 10 service? 11

No. The Company's total marginal cost is approximately \$128 million, based on the 12 A. results of the MCS that are shown above in Table 5. That amount is roughly 18.7% 13 greater than the revenues the Company will recover under the proposed rates. To 14 15 reconcile the difference, I applied an EPM adjustment factor to my estimate of the 16 Company's marginal cost to serve each rate class so that its total marginal cost would 17 match the Company-wide revenue target. As I explain below, differences remained between the Company's marginal cost to serve specific rate classes and the corresponding 18 19 revenue targets for each class. Calculation of the EPM adjustment is shown below in 20 Table 13 and also at Lines 67–76 of RATES-5.

Customer-related marginal costs	\$67,473,706	а
Capacity-related marginal costs	\$60,430,869	b
Total marginal costs	\$127,904,576	c=a+b
Recovery amount	\$103,936,008	d
EPM adjustment factor	-18.7%	e=(d-c)/c

#### Table 13. Calculation of the EPM Adjustment Factor to the MCS

2

1

#### 3 Q. Please explain the EPM adjustment factor and how you applied it.

A. Simply put, it is the adjustment to the marginal cost of service estimate that is required
for the total marginal cost of service to match the amount to be recovered in rates. The
adjustment is "equiproportional" in the sense that it is applied uniformly to the calculated
marginal cost of providing service to each rate class. In this instance, proportionality is
achieved by making the adjustment to both customer-related and capacity-related
marginal costs on the basis of a single factor, the percentage differential shown above.

#### 10 Q. Would the Company generate sufficient revenue at current rates?

- 11 A. No. Using the determinants I described previously and the distribution rates the
- 12 Commission approved in June 2020 in Docket No. DG 20-049, I found that the Company
- 13 would earn approximately \$88.8 million per year at current rates.<sup>9</sup> My calculations are
- 14 summarized below and shown in detail in the workpaper labelled "RATES-5 WP –
- 15 Determinants", which is attached to RATES-5, and at Lines 3–8 of RATES-5.

<sup>9</sup> Commission Order No. 26,374, issued June 30, 2020.

Table 14.    Revenue at Current	Rates
---------------------------------	-------

	Winter	Summer	Total
Customer revenues	\$13,506,098	\$13,499,124	\$27,005,223
Volumetric revenues	\$50,918,418	\$10,847,346	\$61,765,764
Total	\$64,424,516	\$24,346,470	\$88,770,986

1

Based on these results I concluded that distribution revenues would need to increase by
16.1%, on average (the "System-Wide Increase"), in order for the Company to achieve its
revenue target, as shown at Lines 88–89 of RATES-5.

# 6 Q. Did you use this result as the basis for the estimation of class-specific revenue

#### 7 targets?

A. Yes. I determined how much revenue would be generated by each class of customers at
current rates, which is shown at Line 82 of RATES-5, and aggregated those revenues by
customer class type, as shown at Line 83. Multiplying those results by 16.1% yielded the
preliminary revenue target for each class grouping, which is shown at Line 89. As
indicated, the total of the preliminary revenue targets for all the class groupings is equal
to the Company-wide revenue target, \$103.9 million.

14 Q. Did you make any additional adjustments?

A. Yes. In the course of conducting my analysis, it became clear that for certain rate classes, using these preliminary revenue targets without adjustment would create inconsistent bill impacts that conflicted with rate continuity objectives. For that reason, I reduced the targets for the residential classes and for one of the C&I (G-51) classes, including all the derivative classes (e.g. RLIAP and MEP variants). This adjustment is designed to

<sup>2</sup> 

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promote consistency across the rate classes. This adjustment and the resulting 1 preliminary class revenue targets are shown at Lines 91–96 of RATES-5. Because the 2 adjustment is revenue-neutral, the total of the revenue targets for each of the class 3 groupings remains the same, \$103.9 million, after the adjustment is applied, as shown at 4 Line 96. 5

6

#### Q. Why did you group the rate classes?

7 For two reasons. The first is that each of the MEP rates are a function of their A. corresponding standard rate. The same is true for the RLIAP rates, which are each a 8 9 function of R-3 rates. Attempting to calculate changes to these rates separately could lead to unintended inconsistencies or changes in the relationship between the rates. The 10 second reason for grouping the classes in this manner is that the marginal cost to serve 11 12 each customer class is the same. In the case of the MEP rates, the only difference in costs compared to the equivalent non-MEP rates is the upfront interconnection costs that had 13 14 historically been offset by the CIAC but that are now paid for via the premium added to 15 the MEP rates. In the case of the RLIAP rates, there is no meaningful difference in the 16 cost to serve customers R-4 and/or R-7 customers and the cost to serve customers in the 17 corresponding, non-RLIAP classes.

#### Q. What did you do next? 18

A. I increased the existing customer charges by 16.1% as shown at Lines 98–100 of 19 RATES-5. The increased rates generate approximately \$31.6 million in revenues, 20

meaning that the Company must recover approximately \$72.3 million in volumetric
 revenues; see Lines 106–107 for details.

#### 3 Q. Did you increase the volumetric rates by the same amount?

A. No, I did not. Although the system-wide increase and the adjustments I made for
consistency described above were important inputs to my calculation of the volumetric
rates, they were not the only factors. The revenue requirement that I calculated also
accounted for the results of the MCS, from which I then developed volumetric rates.

# 8 Q. How did you account for the results of the MCS when calculating your volumetric 9 rates?

A. I had previously calculated the increase in the revenue target for each class grouping, 10 based on the System-Wide Increase, which is shown at Line 111 of RATES-5. I also 11 calculated the increase in each class grouping revenue target implied by the results of the 12 MCS, which is shown at Line 85. In order to move the Company's ratemaking inputs 13 14 towards convergence with the MCS results, I adjusted the change implied by the System-Wide Increase based on the results of the MCS, subject to the constraint that only a 15% 15 variance in the change to the total revenue target for each class grouping was allowed. . 16 In all cases, the constraint bound, which is to say that the increase to the class grouping 17 revenue requirement was either increased or decreased by 15%. Line 115 shows the 18 preliminary result for each grouping. 19

1	Q.	Why is it necessary to limit the adjustment to the revenue targets to less than the
2		amount implied in the MCS?
3	А.	To balance the competing interests of efficient rate design and rate continuity. As I
4		explain previously in my testimony, the theory that pricing utility services at their
5		marginal costs helps customers make more efficient decisions regarding their
6		consumption of those services is well established. On the other hand, rate continuity is
7		an important policy priority. A limited change that moves rates towards convergence
8		with the utility's marginal cost of service without resulting in dramatic impacts to
9		customer costs may accomplish both objectives.
10	Q.	What did you do next?
11	А.	The net effect of making the constrained adjustment to each class grouping was to create
12		a set of revenue targets that would have resulted in the slight under-recovery shown at
13		Line 118 of RATES-5. I therefore applied the adjustment shown at Line 119 to the target
14		for each grouping in order to maintain revenue neutrality, the result of which was the new
15		set of revenue targets that are shown at Line 120. From each of these I deducted the
16		revenues expected from customer charges. The remaining amount, shown at Line 121, is
17		the amount to be recovered by each grouping from gas sales at the applicable volumetric
18		charges.
19	Q.	How did you calculate the volumetric rates?
20	А.	From the rates in the Company's currently effective tariff, I calculated the ratios of winter
21		to summer and of headblock to tailblock rates for each class, which are shown at Lines

1		127–132 of RATES-5. I have assumed that those rations will not change. As a result,
2		there is only a single set of rates for each class grouping that will simultaneously
3		maintain those ratios, maintain the relationships between base and derivative rates (e.g.
4		MEP rates 30% higher than standard rates and RLIAP rates 60% lower), and generate
5		exactly the amount of revenue required to meet the revenue target. I used a "goal seek"
6		algorithm to identify those rates, which are shown at Lines 135–139. <sup>10</sup>
7	0	Did you validate whether your proposed rates generate the enpropriate emount of
7	Q.	Did you validate whether your proposed rates generate the appropriate amount of
7 8	Q.	Did you validate whether your proposed rates generate the appropriate amount of revenue?
	<b>Q.</b> A.	
8		revenue?
8		revenue? Yes. Lines 146–148 and Lines 162–165 demonstrate that these rates result in
8		revenue? Yes. Lines 146–148 and Lines 162–165 demonstrate that these rates result in

13

Table 15.	Proposed	Distribution	Rates
	1 I Upuscu	Distribution	Itaics

Class	Customer Charge (\$/month)	Winter Headblock (\$/therm)	Winter Tailblock (\$/therm)	Summer Headblock (\$/therm)	Summer Tailblock (\$/therm)
R-1	\$17.99	\$0.4137		\$0.4137	
R-5	\$23.39	\$0.5378		\$0.5378	
R-3	\$17.99	\$0.6520		\$0.6520	
R-6	\$23.39	\$0.8476		\$0.8476	
R-4	\$7.20	\$0.2608		\$0.2608	

<sup>&</sup>lt;sup>10</sup> Specifically, for each rate class, I defined each of the volumetric rates as a function of the winter headblock rate, based on the ratios described above. The goal seek function then automatically tested different inputs to the winter headblock rate until it converged on a solution that resulted in revenues equal to the revenue requirement for each class grouping. The algorithm is a standard element of Microsoft Excel and the electronic version of RATES-5 that I have submitted with this testimony includes a macro to quickly execute the goal seek function in the same manner as I did, which will allow participants in this proceeding to replicate my calculations.

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	Customer	Winter	Winter	Summer	Summer	
Class	Charge	Headblock	Tailblock	Headblock	Tailblock	
	(\$/month)	(\$/therm)	(\$/therm)	(\$/therm)	(\$/therm)	
<b>R-7</b>	\$9.36	\$0.3390		\$0.3390		
G-41	\$66.71	\$0.5433	\$0.3650	\$0.5433	\$0.3650	
G-44	\$86.72	\$0.7063	\$0.4745	\$0.7063	\$0.4745	
G-42	\$200.14	\$0.4999	\$0.3331	\$0.4999	\$0.3331	
G-45	\$260.18	\$0.6498	\$0.4330	\$0.6498	\$0.4330	
G-43	\$858.91	\$0.3126		\$0.1429		
G-46	\$1,116.58	\$0.4064		\$0.1858		
G-51	\$66.71	\$0.3408	\$0.2216	\$0.3408	\$0.2216	
G-55	\$86.72	\$0.4430	\$0.2881	\$0.4430	\$0.2881	
G-52	\$200.14	\$0.2926	\$0.1948	\$0.2120	\$0.1205	
G-56	\$260.18	\$0.3804	\$0.2533	\$0.2756	\$0.1566	
G-53	\$883.94	\$0.2092		\$0.1003		
G-57	\$1,149.12	\$0.2720		\$0.1305		
G-54	\$883.94	\$0.0900		\$0.0488		
G-58	\$1,149.12	\$0.1170		\$0.0634		

1

#### 2

#### D. Other Rate Changes

#### 3 Q. Are you proposing any other changes to rates?

4 A. Yes, I have calculated changes to charges that the Company uses to pass through to

5 customers, specifically the charges associated with the Local Distribution Adjustment

6 Clause ("LDAC") and the Cost of Gas ("COG") Clause that are described in the

7 EnergyNorth tariff.

#### 8 Q. What is the LDAC?

- 9 A. The LDAC allows the Company to recover a number of costs and expenses it incurs in
- 10 the course of doing business. Among them is the cost of providing discounts to RLIAP

1		customers. <sup>11</sup> Using the same information I used to calculate proposed distribution rates, I
2		also calculated the change to the Company's cost to provide the RLIAP discount. The
3		LDAC charge I propose is simply the existing LDAC increased by that amount.
4	Q.	Please explain how you calculated the increase in the RLIAP cost.
5	A.	As I explain above, the calculations shown in the "RATES-5 WP – RLIAP" workpaper
6		indicates that the value of the RLIAP discount at current rates is roughly \$2.2 million.
7		The Company recovers the RLIAP discount from all customers on a volumetric basis.
8		Based on total test year volumes, the current value of the RLIAP is \$0.0123/therm
9		(RATES-5 at Line 12). To measure the change that arises when distribution rates are
10		increased, I re-calculated the value of the RLIAP discount using the rates I am proposing
11		and determined that it increases to \$2.6 million, or \$0.0141/therm (Lines 156–157). The
12		difference of \$0.0019/therm (Line 159) is the basis for the increase in the LDAC.
13		Current and proposed LDAC rates are provided in Attachment RATES-4 and
14		summarized below. <sup>12</sup>

15

 Table 16. Proposed LDAC Charge Update (\$/therm)

	Current	Proposed
Residential	\$0.0310	\$0.0329
C&I	\$0.0478	\$0.0497

16

<sup>&</sup>lt;sup>11</sup> See Section 17 at p. 32 of the EnergyNorth tariff for a detailed description of the LDAC.

<sup>&</sup>lt;sup>12</sup> All customers, including those served under the MEP and RLIAP classes, pay the same LDAC charge, no discounting or premiums are applied. This is also true for the COG charge.

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#### 1 Q. Please explain your calculation of the increase in the COG charge.

Section 16 of the EnergyNorth tariff allows it to recover certain costs of service, 2 A. including costs incurred for Liquid Propane ("LP") and/or Liquefied Natural Gas 3 ("LNG") storage, the cost of bad debt, allowable working capital from demand- and 4 commodity-related costs, and other administrative and general expenses through a COG 5 charge that varies by season. Costs are recovered volumetrically based on Company 6 7 sales volumes (transportation-only customers are excluded). LP and LNG storage costs are recovered through winter sales, all other costs are recovered based on annual sales. 8 Costs for each category were calculated by Messrs. Simek and Sosnick and are described 9 in the COS Studies. To calculate the change in the COG charge that arises from those 10 costs, I reviewed data provided to me by the Company that details sales and 11 transportation volumes for the 12 months ending June 2020, from which I was able to 12 determine the relative contributions of sales and transportation service for each rate class 13 for that period. I then applied those proportions to the test year volumes to estimate test 14 year sales by rate class. My calculations are shown in the workpaper labelled "WP – 15 RATES-6", which is provided with Attachment RATES-6. Using those data, I calculated 16 that the COG charge would increase by \$0.0023/therm for summer sales and decrease by 17 \$0.0019/therm for winter sales, as shown in RATES-6. The change in the COG provides 18 the basis for the proposed COG charge. Separate charges are applied to residential, high 19 load-factor, and low load-factor C&I customers. The proposed COG charge for each 20 class is simply the seasonal charge adjusted by the amounts I calculated in RATES-6. 21 22 The revised COG charges that result are shown below.

	Current	Proposed							
Residential									
<i>R-1, R-5, R-3, R-6, R-4, R-7</i>									
Winter	\$0.2679	\$0.2660							
Summer	\$0.3715	\$0.3738							
C&I Low Loa	id Factor								
G-41, G-44, C	G-42, G-45, G-43, G-40	5							
Winter	\$0.2734	\$0.2715							
Summer	\$0.3786	\$0.3809							
C&I High Loa	ad Factor								
G-51, G-55, C	G-52, G-56, G-53, G-52	7, G-54, G-58							
Winter	\$0.2734	\$0.2715							
Summer	\$0.3786	\$0.3809							

## Table 17. Proposed COG Charge Update (\$/therm)

2

3

1

#### E. <u>Rate and Bill Impacts</u>

#### 4 Q. Have you calculated the impacts on average bills?

- 5 A. Yes, bill impacts by season for each non-MEP rate class are provided in Attachment
- 6 RATES-8. Annual impacts are summarized below.
- 7

## Table 18. Average Bill Impacts

R-1	9.9%
R-3	9.5%
R-4	6.2%
G-41	8.7%
G-42	7.6%
G-43	6.6%
G-51	8.8%
G-52	6.8%
G-53	5.7%
G-54	4.3%

8

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1 Q. What is the basis for these bill impact estimates?

Bill impacts were calculated based on the proposed distribution rates as well as the 2 A. proposed LDAC and COG adders shown in Table 16 and Table 17. Using that data I 3 calculated average bills at the proposed rates based on the calculations of average 4 customer usage for each class shown in the workpaper entitled "RATES-8 WP". Next, I 5 developed estimates of average monthly bills, which were then aggregated on a seasonal 6 7 and annual basis. Those results were compared to the same calculation conducted at the rates currently in effect, the only exception to which was my use of the Company's 8 average actual COG rates for Winter 2019/20 rather than the Winter COG rate in effect at 9 the end of the Winter period. 10

#### 11 Q. Have you provided this information in any other format?

- A. Yes. Attachment RATES-7 conducts similar comparisons at various usage levels for
  customers in each of the non-MEP Classes.
- 14

#### F. Decoupling Issue

- Q. Earlier in your testimony you indicate that you have identified a problem with the
   Company's decoupling mechanism; please explain the issue.
- 17 A. The Company's decoupling mechanism establishes an earnings target that is based on a
- 18 revenue per customer amount. Each year, the Company reports its customer count, from
- 19 which the allowed earnings is calculated. That amount is then reconciled with the
- 20 Company's actual earnings over the same period. The problem arises in the
- 21 determination of the customer count. At present, actual customer counts are extracted

1	from EnergyNorth's billing system, including customers who started or stopped service.
2	All of the new and departed customers are identified, and adjustment is made that is
3	conceptually similar to the EOY Adjustment I describe above, whereby the year's
4	customer count is adjusted for customers who received service for only part of the year.
5	The result is to effectively re-compute the Company's allowed revenues as if any
6	customer who received service during the year, for no matter how long, received service
7	for the entire year.

8

#### Q. Why is this problematic?

9 A. Because, when the Company experiences growth, such adjustments artificially inflate revenues for no clear reason. Applying certain adjustments like the EOY Adjustment to 10 billing determinants for ratemaking purposes may be reasonable insofar as doing so 11 12 captures prospective impacts from changes that occurred during a test year which may affect the entirety of future years. Such adjustments are forward-looking since their 13 intent is to develop assumptions that are expected to provide a just and reasonable basis 14 15 for calculating rates in the future. The decoupling true-up, on the other hand, is intended 16 to be backward-looking. Its purpose is to determine how much revenue the Company 17 actually earned in a given year and reconcile those earnings to an amount based on its 18 number of customers during the year.

#### 19 Q. What are some of the risks that arise from this circumstance?

A. During periods of growth, the Company may be less able to achieve its authorized returns
 since its revenues could be overstated for decoupling purposes. EnergyNorth may also

- have less incentive to grow its customer base if doing so creates unintended impacts on
   earnings.
- 3

## Q. Do you recommend a solution?

A. The reconciliation should be based on unadjusted actuals. Doing so would inherently 4 recognize, among other things, that customers who received service for only a portion of 5 a year only contributed to the Company's earnings for that same portion of that year. The 6 data from EnergyNorth's billing systems that is currently used for the annualization 7 adjustment can instead be used to generate a customer count that includes fractional 8 9 customers whose contribution to the total count is a function of how long they took service for the year. For example, a customer who received service for exactly half the 10 year would count as 0.5 customers. 11

#### 12 Q. How do you recommend that the Company proceed?

A. I recommend that the Commission direct the Company and the parties to this proceeding
 to discuss revisions to the decoupling mechanism that avoids this distortion with the aim
 of developing an acceptable modification to the decoupling mechanism that can be filed
 with the Commission.

17 **Q.** Does this conclude your testimony?

18 A. Yes, it does.

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# Matthew DeCourcey

#### Managing Director

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Education

MBA in Finance, University of Massachusetts at Amherst

B.A. in Political Science, University of Massachusetts at Boston Matthew DeCourcey is a Managing Director in the Power and Utilities practice, where he provides advisory services to utilities, investors, regulators, and infrastructure developers in jurisdictions throughout North America. His practice focuses on the utility ratemaking and regulatory strategy, analysis of gas and power markets, market design, investment advisory, and policy analysis.

#### **PROFESSIONAL EXPERIENCE**

- FTI Consulting, Managing Director, Boston MA, March 2018 Present
- *Concentric Energy Advisors*, Project Manager and Principal, Marlborough MA, January 2016 February 2018
- Levitan & Associates, Senior Consultant, Boston MA, October 2004 December 2015

#### SELECTED ENGAGEMENTS

Engagements listed below comprise a representative sampling of recent consulting projects Mr. DeCourcey has undertaken that relate to utility rate making, energy markets, and policy. They include assignments undertaken while at FTI and at previous employers.

*Spire Missouri*. Provided advisory services to Spire Missouri, an LDC subsidiary of Spire Energy, in the most recent rate case for Mississippi River Transmission ("MRT"), on which Spire is a shipper (RP18-923). Analyzed system flows to determine the appropriateness of proposed tariff designs on MRT, analyzed market conditions to estimate the commercial outlook for MRT capacity, and supported negotiations.

*Emera Energy*. Advised Emera regarding a taxation dispute related to the crossborder shipments of natural gas between Canada and the U.S.

*District of Columbia Office of People's Counsel.* Currently representing OPC in Pepco's ongoing rate case in the District (FC 1156). Responsible for the analysis of Pepco's proposed Multi-Year Rate Plan ("MRP"), including the identification of key flaws, inconsistencies with Commission precedent, and development of alternative MRP formulations.

Jacksonville Electric Authority. Served as a regulatory advisor for its proposed privatization. The FTI team, along with JEA's financial and legal advisors, was responsible for evaluation of the risks, opportunities, and requirements of JEA and the NewCo as they relate to approval by the Florida Public Service Commission ("FPSC"), including the FPSC's approval of the transaction, ratemaking for the NewCo, the transition from regulatory to IOU accounting, and related advisory.

*Municipal Light & Power.* Advisory services for the municipal utility serving Anchorage, AK, in its rate case (U-17-008) before the Regulatory Commission in

Alaska on matters related to the prudence of its investment in new generation. Managed a consulting team that conducted research of prudence issues and standards in Alaska and other jurisdictions, drafted testimony, managed discovery, and developed analyses related to current and expected operational benefits used to rationalize the investment.

Maryland of Office of People's Council ("OPC"). Advised OPC regarding a request for a change in rates filed at the FERC by the Exelon companies serving Maryland. Analyzed the companies' proposal regarding rate changes attributable to the Tax Cuts and Jobs Act and its effect on Accumulated Deferred Income Taxes and related matters.

Atmos Pipeline Texas ("APT"). Advised APT on its general rate case before the Texas Railroad Commission. Prepared testimony, conducted analyses of captive customers, and evaluated APT's competitiveness in support of a recommendation on the high end of the zone of reasonableness on ROE.

*Equinor.* Represented Equinor in multiple proceedings before the Federal Energy Regulatory Commission ("FERC") regarding proposed changes to the New York Independent System ("NYISO") market mitigation rules (ER16-1404, ER20-1710).

*NYISO*. Assisted with the development of the first estimate of the Net Cost of New Entry ("Net CONE") used to establish the demand curves used in NYISO's Installed Capacity ("ICAP") spot auction. Recommendations were accepted at the FERC.

Industrial Power Consumers Association of Alberta. Advised IPCAA, a consortium of industrial consumers, regarding proposals to implement a capacity market mechanism in Alberta. Conducted comparative reviews of proposed market designs, analyzed economic impacts, and proposed improvements. FTI's findings were presented in an expert report filed with the Alberta Utilities Commission.

Atlantic Wind Connection. On behalf of the developers of the New Jersey Energy Link project, conducted modeling to quantify market benefits to customers deriving from relieve of capacity price congestion, and environmental benefits associated with providing access to offshore wind.

*Millennium Pipeline*. Developed an expert report estimating the gas and electric market benefits of the Eastern System Upgrade ("ESU"). Analyzed markets via simulation to determine ESU's impacts on delivered gas and electric prices in Eastern New York.

Connecticut Department of Energy and Environmental Protection ("DEEP"). Working as a contractor to DEEP, advised the two Connecticut EDCs (United Illuminating and Connecticut Light & Power) on their procurement of energy from wholesale suppliers for purposes of Standard Offer supply. Assisted with the design of the "laddering" strategy in place to reduce rate shock while tracking market conditions, negotiated with suppliers, designed and executed a sealed bid auction scheme, and conducted price benchmarking to analyze the competitiveness of offers.

*Industrial Power Consumers Association of Alberta*. Advised a group of industrial consumers of electricity on matters related to the implementation of a capacity market in Alberta. Analyzed proposed market rules, identified potential

weaknesses, and assisted in the development of an expert report filed with the provincial regulator.

Independent System Operator of New England. Conducted studies to support the triennial Net CONE reset. Developed financial and simulation models to determine the levelized net cost, inclusive of energy and ancillaries revenues, to develop various types of generation technologies. Recommendations and related tariff revisions were accepted by the FERC and are currently in effect.

*Millennium Pipeline.* Developed an expert report estimating the gas and electric market benefits of the Eastern System Upgrade ("ESU"). Analyzed markets via simulation to determine ESU's impacts on delivered gas and electric prices in Eastern New York. Expert report submitted to the FERC in support of CPCN application.

*Eastern Interconnect Planning Collaborative*. EIPC is a consortium of the six ISOs that comprise the North American Eastern Interconnect. As part of a major study on gas-electric interdependence issues funded by the U.S. Department of Energy and administered by EIPC, conducted simulation modeling to analyze gas deliverability under peak demand conditions and quantify generation at risk arising from gas pipeline constraints.

*Mitsubishi Heavy Industries.* Analyzed gas and electric markets in California to support MHI in arbitration proceedings regarding the failure of the San Onofre Nuclear Generation Station ("SONGS"). Developed a market outlook to parameterize the damages associated with lost production and conducted diligence and rebuttal on the claimant's own market outlook.

*Maryland Public Service Commission.* Advised Maryland's state regulator to evaluate long-term options for the state's energy future. Developed long-run economic outlooks of various conventional and renewable generation options as well as demand-side measures to quantify the impact of achieving renewable policy mandates on ratepayers.

*Multinational Energy Company*. Advised a major institutional investor regarding the purchase of U.S. utilities in the U.S. Developed a study to compare regulatory environments on a state-by-state basis and estimated the regulatory advantage in each jurisdiction.

*EnergyFairness.* On behalf of an advocacy group representing the interests of regulated utilities, provided advisory and advocacy related to a proposed Florida ballot initiative to deregulate the electric market in that state. Conducted analyses, supported outreach, and delivered presentations regarding the risks and costs of the proposed measure to a joint committee of the Florida legislature.

#### **RECENT PUBLICATIONS AND MEMBERSHIPS**

Member, Energy Bar Association, Renewables and Natural Gas Committees Member, Global Association of Risk Professionals

"Renewable Portfolio Standards– Recent Experience and Auction Design Options." Selected for presentation at the Center for Research in Regulated Industries Annual Conference, with David Salant, May 2020 (pending delay) "PJM Market Fundamentals, Operations, and Value Dynamics." *EUCI Course*, with Kenneth Sosnick, January 2020.

"U.S. Observations and Experiences in Natural Gas Infrastructure Investment." *Working Paper of the US-India Strategic Partnership Forum*, with Kenneth Sosnick, et al, December 2019

"Developing the Generation Fleet of the Future." *PowerGen University*, with Keith Paul, November 2019

"Investing in Infrastructure Projects." *Workshop at the 23<sup>rd</sup> Platts Mexican Energy Conference*, with Dino Barajas, November 2019

"It's Time for Electric Utilities to Re-Energize Their Cybersecurity Efforts." *FTI Journal*, with Jordan Rae Kelly, November 2019

"A Roadmap for Developing the Public Utility of the Future." Working Paper of the American Public Power Association, April 2019

#### Incremental Production Cost Support Summary (LNG Facility)

Line	Description	Total	Units	]
1	Cost of incremental LNG capacity	6,417,840	\$, 2016	[1]
2	Incremental capacity	10,000	dth	[2]
3	Unit cost of incremental capacity	641.78	\$/dth	[3]
4	Year of pressure support analysis	2016		[4]
5	Base year of MCS study	2019		[5]
6	Period adjustment	1.062		[6]
7	Current-year unit cost of incremental capacity	681.48	\$/dth	[7]
8	Percentage related to pressure support	8.73%		[8]
9	Marginal cost of production plant for distribution function (\$/dth)	59.52	\$/dth	[9]

[1] Source: Company data

[2] Source: Company data

[3] Equals [1]/[2]

[6] Source: U.S. Bureau of Economic Analysis, Gross Domestic Product Implicit Price Deflator

[7] Equals [3]\*[6]

[8] Source: Company data

[9] Equals [7]\*[8]

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#### Liberty Utilities (EnergyNorth Natural Gas) Corp. Marginal Cost Study

#### Marginal Capacity-Related Distribution Plant Costs for Reinforcements

		Design Day Demand	Dummy Variable:	Incremental Design Day	Reinforcement Cost	Cumulative
Line No.	Year	(Dth)	2022 - 2030	Demand (Dth)	(Constant \$)	Total
	[1]	[2]		[3]	[4]	[5]
1	2020	168,699	0	0	\$0	\$0
2	2021	170,932	0	2,232	\$3,950,000	\$3,950,000
3	2022	173,377	1	2,445	\$4,700,000	\$8,650,000
4	2023	181,097	1	7,720	\$10,400,000	\$19,050,000
5	2024	184,065	1	2,967	\$2,880,000	\$21,930,000
6	2025	186,987	1	2,923	\$3,900,000	\$25,830,000
7	2026	189,963	1	2,975	\$3,420,000	\$29,250,000
8	2027	192,968	1	3,006	\$3,420,000	\$32,670,000
9	2028	196,015	1	3,047	\$3,420,000	\$36,090,000
10	2029	199,042	1	3,027	\$3,420,000	\$39,510,000
11	2030	202,065	1	3,023	\$3,420,000	\$42,930,000
12						
13	Total (2021 - 2030)			33,366	\$42,930,000	
14						
15	REGRESSION RESUL	.TS			Col. [5] vs. Col. [2]	
16	Slope				1,261.973	
17	Y Intercept				(211,012,698.480)	
18	R <sup>2</sup>				0.995	
19	t-stat				0.000	
20	p-value				1,195.043	
21						
22	Regression Estimate	2		[Line 16]	\$1,261.97	
23						
24	ASSUMED MARG	GINAL COSTS FOR REINF	ORCEMENT			
25	\$s per Design Da	iy Therm			\$1,261.97	

NOTES: 1

Forecast used to develop marginal distribution investment taken from engineer's estimates (company data).

#### SUMMARY OUTPUT

Regression	Statistics							
Multiple R	0.997535661							
R Square	0.995077395							
Adjusted R Square	0.994530439							
Standard Error	1069689.807							
Observations	11							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	2.08171E+15	2.08171E+15	1819.3004	1.06791E-11			
Residual	9	1.02981E+13	1.14424E+12					
Total	10	2.09201E+15						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-211012698.5	5510464.544	-38.29308706	2.80489E-11	-223478235.3	-198547161.6	-223478235.3	-198547161.6
X Variable 1	1261.972627	29.58678171	42.65325779	1.06791E-11	1195.042677	1328.902578	1195.042677	1328.902578

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Marginal Capacity Related Distribution Plant Costs for Mains Extensions

										Cost of Mains	
Line No.	Year	Design Day Demand (Dth)	Dummy Variable: 2009 -2019	Interaction Variable: Col [2] x Col [3]	Dummy Variable: 2001 - 2003	Incremental Design Day Demand (Dth)	Cost of Mains Installed (\$)	Handy-Whitman Cost	Conversion Factor (\$2019)	Installed (\$2019)	Cumulative Total
SHE NO.	[1]	(Dth) [2]	[3]	[4]	2001 - 2003	(Dth) [6]	[7]	[8]	(\$2019)	[10]	[11]
1	1989	94,340	0	0	0	0	\$2,102,827	280	2.15	\$4,528,588	\$4,528,588
2	1990	95,525	ō	0	0	1,185	\$1,724,250	289	2.09	\$3,600,771	\$8,129,360
3	1991	97,891	ō	ō	0	2,366	\$1,341,529	297	2.03	\$2,723,710	\$10,853,070
4	1992	101,018	0	0	0	3,127	\$1,489,922	302	2.00	\$2,977,375	\$13,830,445
5	1993	101,899	0	0	0	882	\$1,018,848	310	1.95	\$1,981,824	\$15,812,269
6	1994	104,535	0	0	0	2,635	\$975,268	316	1.91	\$1,863,983	\$17,676,252
7	1995	107,163	0	0	0	2,628	\$667,884	322	1.87	\$1,250,727	\$18,926,979
8	1996	112,323	0	0	0	5,160	\$1,138,184	330	1.83	\$2,082,929	\$21,009,907
9	1997	118,475	0	0	0	6,152	\$4,396,282	337	1.79	\$7,866,344	\$28,876,252
10	1998	119,650	0	0	0	1,176	\$1,792,794	344	1.75	\$3,144,887	\$32,021,138
11 12	1999 2000	127,994 123.296	0	0	0	8,344 -4,698	\$2,415,815	351	1.72	\$4,156,167	\$36,177,305
12	2000	123,296	0	0	1	-4,098 -2,876	\$3,440,754 \$8,588,507	358	1.64	\$5,795,459 \$14,120,980	\$41,972,764 \$56,093,744
13	2002	117,163	0	0	1	-3,257	\$5,787,927	374	1.61	\$9,325,638	\$65,419,383
14	2002	129,188	0	0	1	12.025	\$6,335,289	381	1.51	\$10.033.300	\$75,452,683
16	2004	135,096	ő	0	0	5,908	\$2,804,933	397	1.52	\$4,260,389	\$79,713,072
17	2005	138,566	ő	0	0	3,470	\$1,761,281	422	1.43	\$2,519,698	\$82,232,770
18	2006	142.066	ō	0	0	3.500	\$1,531,679	443	1.36	\$2.083.705	\$84,316,475
19	2007	146,269	0	0	0	4,203	\$2,092,072	467	1.29	\$2,699,721	\$87,016,196
20	2008	148,760	o	0	0	2,491	\$1,779,635	492	1.23	\$2,183,357	\$89,199,553
21	2009	147,487	1	147,487	0	-1,273	\$5,177,230	512	1.18	\$6,097,401	\$95,296,954
22	2010	150,439	1	150,439	0	2,952	\$1,853,067	505	1.19	\$2,213,768	\$97,510,722
23	2011	145,478	1	145,478	0	-4,961	\$1,419,065	522	1.16	\$1,640,050	\$99,150,773
24	2012	149,203	1	149,203	0	3,725	\$3,379,136	541	1.11	\$3,766,393	\$102,917,166
25	2013	154,471	1	154,471	0	5,268	\$2,245,707	545	1.11	\$2,486,981	\$105,404,147
26	2014	160,216	1	160,216	0	5,745	\$2,424,524	551	1.10	\$2,655,746	\$108,059,893
27	2015	158,060	1	158,060	0	-2,157	\$2,684,371	559	1.08	\$2,896,959	\$110,956,852
28 29	2016 2017	163,606 169,976	1	163,606 169,976	0	5,546 6,370	\$2,246,935 \$4,426,087	567 575	1.06	\$2,391,707 \$4,643,637	\$113,348,558 \$117,992,195
29	2017	173.822	1	109,976	0	3.846	\$4,426,087	575	1.03		\$127,571,550
30	2018	173,822	1	173,822	0	5,742	\$8,477,001	603	1.03	\$9,579,355 \$8,477,001	\$136,048,551
32	2019	175,504	1	1/9,304	0	3,742	\$8,477,001	003	1.00	58,477,001	\$150,040,551
	Total (1989 - 2019)	4 133 957				85 224	\$96,796,320			\$136,048,551	
34	Total (2009 - 2019)	1,752,320				30,804	\$43,610,640			\$46,848,998	
	Total (2014 - 2019)	1,005,243				25,093	\$29,536,436			\$30,644,404	
36											
37											
38	REGRESSION RESULTS					Col. [11] vs. Col. [2] to Col [5]					
39	Slope for the period	2009 and beyond				1,090.652					
40	Y Intercept					(153,632,473.80)					
41	R <sup>2</sup>					0.975					
42	t-stat					17.374					
43	p-value					0.000					
44											
45	Regression Estimate				[Line 37]	\$1,090.65					
46	Incremental Average Co	st									
47 48	1989 - 2019 2009 - 2019				[Line 33], Col [10] / Col [6]	\$1,596.37					
48	2009 - 2019 2014 - 2019				[Line 34], Col [10] / Col [6]	\$1,520.88 \$1,221.25					
49 50	2014 - 2019				[Line 35], Col [10] / Col [6]	\$1,221.25					
51	MARGINAL COSTS FC	DR MANINE ADDITIONE									
52	\$s per Design Day Th					\$1,090.65					
52	23 per besign buy m	ern.				91,050.05					
NOTES:											
	Source: Company data.										
-	·····										
	SUMMARY OUTPUT										
	Regression										
	Multiple R	0.987425289									
	R Square	0.975008702									
	Adjusted R Square	0.971163887									
	Standard Error	7014710.273									
	Observations	31									
	ANOVA										
	Barran alan	df 4	55	MS 1.24782F+16	F	Significance F 2 02855F-20					
	Regression Residual	4 26	4.99129E+16 1.27936E+15			2.02855E-20					
	Total	26	1.2/936E+15 5.11922E+16								
	Tutal	30	5.11922E+16								
	-	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%		
	Intercept	-153632473.8	11248002.62			-176753074.3	-130511873.3		-130511873.3		
	X Variable 1	-153632473.8 1629.907125	93.81073488			-1/6/530/4.3 1437.076397	-1305118/3.3 1822.737852		1822.737852		
		90276727.76	33141817.26			22152746.73	158400708.8		158400708.8		
	X Variable 2										
	X Variable 2 X Variable 3	-539.2555105	216.6126968			-984.5092855	-94.00173548		-94.00173548		
				-2.489491699	0.019515686			-984.5092855	-94.00173548 29078249.41		

Marginal Capacity-Related Distribution O&M Expense

ine No.	Year	Design Day Demand (Dth)	Capacity-Related O&M Expense (\$)	GDP Implicit Price Deflator	Conversion Factor (\$2019)	Capacity-Related O&M Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	94,340	\$1,945,026	61.37	1.83	\$3,560,503
2	1990	95,525	\$1,893,462	63.67	1.76	\$3,340,785
3	1991	97,891	\$1,918,550	65.82	1.71	\$3,274,506
4	1992	101,018	\$2,040,158	67.32	1.67	\$3,404,580
5	1993	101,899	\$2,151,230	68.92	1.63	\$3,506,770
6	1994	104,535	\$2,529,506	70.39	1.60	\$4,037,247
7	1995	107,163	\$2,598,141	71.86	1.56	\$4,061,537
8	1996	112,323	\$2,558,264	73.18	1.54	\$3,927,350
9	1997	118,475	\$2,645,969	74.44	1.51	\$3,993,101
10	1998	119,650	\$2,768,391	75.28	1.49	\$4,131,372
11	1999	127,994	\$2,626,392	76.37	1.47	\$3,863,710
12	2000	123,296	\$2,781,957	78.07	1.44	\$4,003,044
13	2001	120,420	\$2,518,609	79.79	1.41	\$3,546,140
14	2002	117,163	\$2,241,570	81.05	1.39	\$3,106,982
15	2003	129,188	\$3,479,902	82.55	1.36	\$4,735,729
16	2004	135,096	\$3,370,059	84.77	1.33	\$4,466,035
17	2005	138,566	\$3,675,620	87.41	1.29	\$4,723,763
18	2006	142,066	\$4,093,085	90.06	1.25	\$5,105,554
19	2007	146,269	\$4,154,511	92.48	1.21	\$5,046,643
20	2008	148,760	\$4,431,308	94.29	1.19	\$5,279,760
21	2009	147,487	\$4,882,340	95.00	1.18	\$5,773,431
22	2010	150,439	\$5,316,649	96.11	1.17	\$6,214,788
23	2011	145,478	\$4,976,899	98.12	1.15	\$5,698,551
24	2012	149,203	\$3,277,420	100.00	1.12	\$3,681,966
25	2013	154,471	\$4,743,594	101.75	1.10	\$5,237,330
26	2014	160,216	\$7,930,472	103.63	1.08	\$8,596,987
27	2015	158,060	\$7,395,141	104.72	1.07	\$7,933,734
28	2016	163,606	\$6,414,281	105.80	1.06	\$6,811,028
29 30	2017	169,976	\$5,679,124	107.79	1.04	\$5,919,024
30 31	2018 2019	173,822	\$6,515,569	110.41 112.34	1.02 1.00	\$6,629,295
32	2019	179,564	\$6,384,488	112.54	1.00	\$6,384,488
32	Total (1989 - 2019)	4 122 057	\$119,937,688			\$149,995,733
33	Total (2009 - 2019)	4,133,957 1,752,320	\$63,515,978			\$68,880,622
35	Total (2014 - 2019)	1,005,243	\$40,319,075			\$42,274,556
35	10tal (2014 - 2019)	1,003,243	\$40,515,075			\$42,274,330
30	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				46.871	
39	Y Intercept				(1,411,780.50)	
40	R <sup>2</sup>				0.678	
40 41	t-stat				7.817	
41	p-value				0.000	
42	p-value				0.000	
43	Regression Estimate			[Line 38]	\$46.87	
45	Average Cost			[Line 50]	Ş40.07	
45	1989 - 2019			[Line 33], Col [6] / Col [2]	\$36.28	
40	2009 - 2019			[Line 34], Col [6] / Col [2]	\$39.31	
48	2014 - 2019			[Line 35], Col [6] / Col [2]	\$42.05	
49	_01. 2010			[	ý 12100	
50	ASSUMED MARGINA	AL COSTS FOR CAPACITY-	RELATED O&M			
51	\$s per Design Day T				\$46.87	
				:		=
NOTES:						
1	Source: Company data.					

SUMMARY OUTPUT

Regression Statistics							
Multiple R	0.823507575						
R Square	0.678164726						
Adjusted R Square	0.667066958						
Standard Error	813266.6835						
Observations	31						

ANOVA

	df	SS	MS	F	Significance F	
Regression	1	4.04171E+13	4.04171E+13	61.10820858	1.27524E-08	
Residual	29	1.91807E+13	6.61403E+11			
Total	30	5.95978E+13				

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	.ower 95.0%J	pper 95.0%
Intercept	-1411780.495	812799.2309	-1.736936308	0.09301097	-3074141.575	250580.584	9 -3074142	250580.6
X Variable 1	46.87057	5.995845851	7.817173951	1.27524E-08	34.60768833	59.1334516	5 34.60769	59.13345

Marginal Capacity-Related Production Expense

			Capacity-Related			Capacity-Related	1
		Design Day Demand	Production		Conversion Factor	Production Expense	
Line No.	Year	(Dth)	Expense (\$)	GDP Implicit Price Deflator	(\$2019)	(\$2019)	
	[1]	[2]	[3]	[4]	[5]	[6]	
1	1989	94,340	\$1,544,027	61.37	1.83	\$2,826,447	
2	1990	95,525	\$1,752,291	63.67	1.76	\$3,091,706	
3	1991	97,891	\$1,620,490	65.82	1.71	\$2,765,789	
4	1992	101,018	\$1,467,204	67.32	1.67	\$2,448,444	
5	1993	101,899	\$1,566,459	68.92	1.63	\$2,553,522	
6	1994	104,535	\$1,714,538	70.39	1.60	\$2,736,509	
7	1995	107,163	\$1,647,159	71.86	1.56	\$2,574,917	
8	1996	112,323	\$1,722,081	73.18	1.54	\$2,643,673	
9	1997	118,475	\$1,784,059	74.44	1.51	\$2,692,370	
10	1998	119,650	\$1,760,381	75.28	1.49	\$2,627,081	
11	1999	127,994	\$1,591,292	76.37	1.47	\$2,340,965	
12	2000	123,296	\$679,438	78.07	1.44	\$977,664	
13	2001	120,420	\$575,485	79.79	1.41	\$810,269	
14	2002	117,163	\$845,341	81.05	1.39	\$1,171,705	
15	2003	129,188	\$545,839	82.55	1.36	\$742,821	
16	2004	135,096	\$591,437	84.77	1.33	\$783,778	
17	2005	138,566	\$699,365	87.41	1.29	\$898,796	
18	2006	142,066	\$768,391	90.06	1.25	\$958,461	
19	2007	146,269	\$757,630	92.48	1.21	\$920,322	
20	2008	148,760	\$812,189	94.29	1.19	\$967,697	
21	2009	147,487	\$693,185	95.00	1.18	\$819,700	
22	2010	150,439	\$592,199	96.11	1.17	\$692,239	
23	2011	145,478	\$472,046	98.12	1.15	\$540,493	
24	2012	149,203	(\$69,221)		1.12	(\$77,765)	
25	2013 2014	154,471	\$1,412,098	101.75	1.10	\$1,559,076	
26 27		160,216	\$2,057,282	103.63	1.08	\$2,230,186	
27	2015 2016	158,060 163,606	\$1,818,960	104.72 105.80	1.07 1.06	\$1,951,436	
28	2018	169,976	\$1,666,705 \$2,656,076	107.79	1.00	\$1,769,797 \$2,768,275	
30	2017	173,822	\$2,971,810	110.41	1.04	\$3,023,682	
31	2018	179,564	\$1,796,152	112.34	1.02	\$1,796,152	
32	2015	175,504	J1,750,152	112.34	1.00	\$1,750,152	
33	Total (1989 - 2019)	4,133,957	\$40,512,388			\$54,606,207	
34	Total (2000 - 2019)	2,953,145	\$22,342,407			\$25,304,784	
35	Total (2014 - 2019)	1,005,243	\$12,966,985			\$13,539,527	
36		,,					
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]		
38	Slope				(13.394)		
39	Y Intercept				3,547,617.18		
40	R <sup>2</sup>				0.128		
41	t-stat				(2.065)		
42	p-value				0.048		
43							
44	<b>Regression Estimate</b>			[Line 38]	(\$13.39)		
45	Average Cost						
46	1989-2019			[Line 33], Col [6] / Col [2]	\$13.21	-	
47							
48		AL COSTS FOR CAPACITY	-RELATED PRODUC	TION			
49	\$s per Design Day T	herm			\$13.21	<b>.</b> [	

NOTES:

1

Source: Company data. GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database. 2

3 Regression results show negative coefficient, low  $R^2$  value, so average cost estimate used.

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0.358017477							
R Square	0.128176514							
Adjusted R Square	0.098113635							
Standard Error	879835.6324							
Observations	31							

ANOVA

	df	SS	MS	F	Significance F	
Regression	1	3.30051E+12	3.30051E+12	4.263614085	0.047980153	
Residual	29	2.24492E+13	7.74111E+11			
Total	30	2.57497E+13				
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	3547617.185	879329.917	4.034455233	0.000364302	1749185.573	5346048.79
K Variable 1	-13.39392825	6.486628474	-2.064852073	0.047980153	-26.66057309	-0.1272834

Lower 95.0%

1749185.573 -26.66057309

Upper 95.0% 5346048.796 -0.127283422

#### Services and Meters Plant Investment Costs

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54
1	Service Costs									
2	Representative Cost	\$5,346	\$5,346	\$4,995	\$6,346	\$10,913	\$15,649	\$6,583	\$39,407	\$9,647
3	Services per Customer	0.76	0.76	0.76	1.00	1.00	0.76	1.00	1.00	1.00
4	Average Service Cost Per Customer	\$4,063	\$4,063	\$3,796	\$6,346	\$10,913	\$11,894	\$6,583	\$39,407	\$9,647
5	Meter Costs									
6	Installed Cost per Customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904
7	Meters per Customer	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8	Average Meter Cost per Customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904

[1] Source: Company data

[2] Source: Company data

[3] Equals [1]\*[2]

[4] Source: Company data

[5] Source: Company data

[6] Equals [4]\*[5]

Marginal Customer-Related O&M Expense

			Customer-Related	GDP Implicit Price		Customer-Related O&N
Line No.	Year	Annual Customers	O&M Expense (\$)	Deflator	(\$2019)	Expense (\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	58,809	\$3,265,009	61.37	1.83	\$5,976,824
2	1990	60,216	\$3,297,919	63.67	1.76	\$5,818,781
3	1991	60,958	\$3,391,122	65.82	1.71	\$5,787,835
4	1992	61,725	\$3,502,421	67.32	1.67	\$5,844,777
5	1993	62,566	\$3,522,064	68.92	1.63	\$5,741,400
6	1994	64,044	\$3,720,493	70.39	1.60	\$5,938,137
7	1995	65,385	\$3,736,123	71.86	1.56	\$5,840,486
8	1996	66,464	\$3,391,523	73.18	1.54	\$5,206,537
9	1997	67,928	\$3,405,043	74.44	1.51	\$5,138,640
10	1998	69,588	\$3,507,511	75.28	1.49	\$5,234,387
11	1999	71,291	\$3,481,936	76.37	1.47	\$5,122,309
12	2000	73,106	\$2,984,429	78.07	1.44	\$4,294,386
13	2001	74,959	\$3,275,394	79.79	1.41	\$4,611,674
14	2002	74,721	\$2,439,210	81.05	1.39	\$3,380,926
15	2003	78,438	\$2,340,691	82.55	1.36	\$3,185,399
16	2004	80,221	\$2,348,327	84.77	1.33	\$3,112,025
17	2005	81,735	\$2,621,664	87.41	1.29	\$3,369,259
18	2006	82,474	\$2,750,067	90.06	1.25	\$3,430,326
19	2007	83,637	\$3,087,832	92.48	1.21	\$3,750,906
20	2008	83,943	\$3,445,440	94.29	1.19	\$4,105,130
21	2009	84,346	\$3,828,174	95.00	1.18	\$4,526,866
22	2010	84,420	\$4,444,691	96.11	1.17	\$5,195,529
23	2011	85,286	\$4,037,750	98.12	1.15	\$4,623,226
24	2012	85,862	\$3,209,604	100.00	1.12	\$3,605,778
25	2012	86,972	\$3,817,221	101.75	1.10	\$4,214,536
26	2014	87,754	\$6,271,678	103.63	1.08	\$6,798,779
27	2015	90,335	\$5,696,782	104.72	1.07	\$6,111,683
28	2015	90,867	\$5,706,842	105.80	1.06	\$6,059,831
29	2010	93,291	\$7,314,420	107.79	1.00	\$7,623,398
30	2017	94,965	\$8,073,464	110.41	1.04	\$8,214,384
31	2010	96,597	\$7,803,263	112.34	1.02	\$7,803,263
32	2015	50,557	\$7,805,205	112.34	1.00	J7,003,203
33	Total (1989 - 2019)		\$123,718,105			\$159,667,416
33	Total (2009 - 2019)		\$60,203,888			\$64,777,272
34	Total (2014 - 2019)		\$40,866,448			\$42,611,338
36	10(8) (2014 - 2015)		940,800,448			J42,011,330
30	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope	,			12.554	
39						
	Y Intercept				4,177,475.84	
40	R <sup>2</sup>				0.011	
41	t-stat				0.567	
42	p-value				0.575	
43						
44	Regression Estimate		I	Line 38]	\$12.55	
45	Average Cost					
46	1989 - 2019				\$66.45	
47	2009 - 2019				\$66.05	
48	2014 - 2019				\$76.94	
49	Current Average Cost	per Customer			\$80.78	
50						
51	ASSUMED MARGIN	AL COSTS FOR CUSTO	MER-RELATED O&M			
52	\$s per Customer				\$66.45	

NOTES:

1 2 3

Source: Company data. GDP implicit price deflator obtained from Bureau of Economic Analysis/FRED database.

Regression results show extremely low R<sup>2</sup> value, so average cost estimate used.

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0.104743591							
R Square	0.01097122							
Adjusted R Square	-0.023133221							
Standard Error	1379106.995							
Observations	31							

	df	SS	MS	F	Significance F
Regression	1	6.11843E+11	6.11843E+11	0.321694758	0.574955508
Residual	29	5.51561E+13	1.90194E+12		
Total	30	5.5768E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0% Ipper 95.0%
Intercept	4177475.84	1733440.165	2.409933682	0.022525612	632192.6313	7722759.048	632192.6313 7722759
X Variable 1	12.55384836	22.1337442	0.567181415	0.574955508	-32.71474136	57.82243808	-32.71474136 57.82244

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## Liberty Utilities (EnergyNorth Natural Gas) Corp. Marginal Cost Study

#### Class Weighting of Services and Meter Plant Expense

Line	Description	R1	R-3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	Total	1
1	Test year customers	3,549	79,448	9,349	1,423	58	1,319	394	34	28	95,602	[1]
2	Meters cost per customer	\$440	\$440	\$1,077	\$2,750	\$9,333	\$3,483	\$2,750	\$3,995	\$11,904		[2]
3	Services cost per customer	\$4,063	\$4,063	\$3,796	\$6,346	\$10,913	\$11,894	\$6,583	\$39,407	\$9,647		[3]
4	Services and meters per customer total	\$4,503	\$4,503	\$4,873	\$9,097	\$20,245	\$15,376	\$9,333	\$43,403	\$21,552		[4]
5	Total cost	\$15,979,776	\$357,739,395	\$45,555,875	\$12,942,386	\$1,180,127	\$20,280,736	\$3,673,679	\$1,494,249	\$599,082	\$459,445,305	[5]
6	Average cost per customer										\$4,806	[6]
7	Relative weight per customer	0.94	0.94	1.01	1.89	4.21	3.20	1.94	9.03	4.48		[7]
8	System average marginal cost per customer	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45	\$66.45		[8]
9	Class weighted marginal cost per customer	\$62.26	\$62.26	\$67.38	\$125.77	\$279.92	\$212.60	\$129.04	\$600.10	\$297.99		[9]

Source: Company data
 MCOS-3, p. 1, ln 8
 MCOS-3, p. 1, ln 4
 Equals [2]+[3]
 Equals [1]\*[4]

[5] Equals [1]<sup>7</sup>[4] [6] Equals  $\sum_{[5]} / \sum_{[1]}$ [7] Equals [3]/[6] [8] MCOS-3, p. 2, ln 52 [9] Equals [7]\*[8]

Marginal Customer-Related Accounting & Marketing Expense

			Customer-Related			Customer-Related
			Accounting &			Accounting &
			Marketing Expense	GDP Implicit Price	Conversion Factor	Marketing Expense
ine No.	Year	Annual Customers	(\$)	Deflator	(\$2019)	(\$2019)
	[1]	[2]	[3]	[4]	[5]	[6]
1	1989	58,809	\$2,864,392	61.37	1.83	\$5,243,46
2	1990	60,216	\$3,442,112	63.67	1.76	\$6,073,19
3	1991	60,958	\$3,565,057	65.82	1.71	\$6,084,70
4	1992	61,725	\$3,740,667	67.32	1.67	\$6,242,35
5	1993	62,566	\$4,032,636	68.92	1.63	\$6,573,69
6	1994	64,044	\$3,935,631	70.39	1.60	\$6,281,51
7	1995	65,385	\$3,677,860	71.86	1.56	\$5,749,40
8	1996	66,464	\$3,695,729	73.18	1.54	\$5,673,54
9	1997	67,928	\$3,390,219	74.44	1.51	\$5,116,26
10	1998	69,588	\$3,377,588	75.28	1.49	\$5,040,49
11	1999	71,291	\$3,319,897	76.37	1.47	\$4,883,93
12	2000	73,106	\$3,042,687	78.07	1.44	\$4,378,21
13	2001	74,959	\$1,318,450	79.79	1.41	\$1,856,34
14	2002	74,721	\$1,114,892	81.05	1.39	\$1,545,32
15	2003	78,438	\$2,340,981	82.55	1.36	\$3,185,79
16	2004	80,221	\$3,171,337	84.77	1.33	\$4,202,68
17	2005	81,735	\$3,204,083	87.41	1.29	\$4,117,76
18	2006	82,474	\$4,130,827	90.06	1.25	\$5,152,63
19	2007	83,637	\$3,990,833	92.48	1.21	\$4,847,81
20	2008	83,943	\$3,927,632	94.29	1.19	\$4,679,64
21	2009	84,346	\$4,317,533	95.00	1.18	\$5,105,53
22	2010	84,420	\$4,816,133	96.11	1.17	\$5,629,71
23	2011	85,286	\$7,556,567	98.12	1.15	\$8,652,27
24	2012	85,862	\$9,647,965	100.00	1.12	\$10,838,85
25	2013	86,972	\$3,519,219	101.75	1.10	\$3,885,51
26	2014	87,754	\$5,036,775	103.63	1.08	\$5,460,090
27	2015	90,335	\$5,637,886	104.72	1.07	\$6,048,49
28	2016	90,867	\$4,737,995	105.80	1.06	\$5,031,05
29	2017	93,291	\$3,544,533	107.79	1.04	\$3,694,262
30	2018	94,965	\$3,005,303	110.41	1.02	\$3,057,759
31	2019	96,597	\$3,977,788	112.34	1.00	\$3,977,788
32						
33	Total (1989 - 2019)		\$121,081,206			\$158,310,142
34	Total (2009 - 2019)		\$55,797,696			\$61,381,35
35	Total (2014 - 2019)		\$25,940,280			\$27,269,454
36					0 1 (0) 0 1 (0)	
37	REGRESSION RESULTS				Col. [6] vs. Col. [2]	
38	Slope				(23.662)	
39	Y Intercept				6,940,889.07	
40	R <sup>2</sup>				0.023	
41	t-stat				(0.834)	
42	p-value				0.411	
43					14	
44	Regression Estimate		[	Line 38]	(\$23.66)	
45	Average Cost					
46	1989 - 2019				\$65.88	
47	2009 - 2019				\$62.59	
48	2014 - 2019				\$49.24	
49	Current Average Cost	per Customer			\$41.18	
50						
51		AL COSTS FOR CUSTO	MER-RELATED O&M		4	
52	\$s per Customer				\$65.88	
NOTES:						
1	Source: Company data					
2			reau of Economic Analy			

SUMMARY OUTPUT

Regression Statistics							
Multiple R	0.153116387						
R Square	0.023444628						
Adjusted R Square	-0.010229695						
Standard Error	1766940.628						
Observations	31						

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.17364E+12	2.17364E+12	0.69621675	0.410878792
Residual	29	9.05403E+13	3.12208E+12		
Total	30	9.27139E+13			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	ower 95.0%/pper 95.0%
Intercept	6940889.069	2220919.672	3.125231929	0.004013654	2398598.324	11483179.81	2398598 11483180
X Variable 1	-23.66198178	28.35821443	-0.834396039	0.410878792	-81.66104253	34.33707896	-81.661 34.33708

#### Plant-Related A&G Marginal Loading Factor

	Р	lant Related A&G		
ine No.	Year	Expense (\$)	Total Utility Plant (\$)	Loading Factor
	[1]	[2]	[3]	[4]
1	1989	\$1,364,240	\$90,119,098	1.51%
2	1990	\$1,429,254	\$99,467,339	1.44%
3	1991	\$1,427,802	\$106,202,255	1.34%
4	1992	\$1,435,822	\$112,423,806	1.28%
5	1993	\$1,445,997	\$118,656,821	1.22%
6	1994	\$1,342,813	\$124,120,097	1.08%
7	1995	\$1,200,572	\$129,472,654	0.93%
8	1996	\$1,405,850	\$135,806,318	1.04%
9	1997	\$1,422,193	\$145,866,429	0.97%
10	1998	\$1,311,090	\$156,424,246	0.84%
11	1999	\$1,624,095	\$166,682,099	0.97%
12	2000	\$2,209,040	\$174,018,261	1.27%
13	2001	\$1,000,753	\$189,363,169	0.53%
14	2002	\$1,127,386	\$202,252,941	0.56%
15	2003	\$413,762	\$227,692,187	0.18%
16	2004	\$401,446	\$239,474,276	0.17%
17	2005	\$686,615	\$242,115,491	0.28%
18	2006	\$696,565	\$263,405,595	0.26%
19	2007	\$705 <i>,</i> 896	\$280,967,870	0.25%
20	2008	\$734,523	\$298,931,548	0.25%
21	2009	\$756,942	\$318,900,861	0.24%
22	2010	\$1,218,997	\$328,222,369	0.37%
23	2011	\$388,947	\$338,986,146	0.11%
24	2012	\$689,718	\$339,610,905	0.20%
25	2013	\$1,071,232	\$360,914,157	0.30%
26	2014	\$1,132,042	\$379,562,429	0.30%
27	2015	\$1,135,511	\$426,165,148	0.27%
28	2016	\$850,423	\$453,429,242	0.19%
29	2017	\$776,521	\$485,723,431	0.16%
30	2018	\$939,134	\$595,016,259	0.16%
31	2019	\$1,039,393	\$665,854,695	0.16%
32				
33	Average Loading Factor			Col [2] / Col [3]
34	1989 - 2019			0.61%
35	2009 - 2019			0.22%
36	2014 - 2019			0.20%
37	Current			0.16%
38				
39	MARGINAL LOADING	ACTOR FOR PLANT A	&G	
40	%			0.61%

NOTES:

#### Non-Plant Related A&G Marginal Loading Factor

		-Plant Related A&G		
Line No.	Year	Expense (\$)	Adjusted O&M (\$)	Loading Factor
	[1]	[2]	[3]	[4]
1	1989	\$5,909,986	\$8,789,813	67.24%
2	1990	\$5,916,868	\$9,468,756	62.49%
3	1991	\$6,262,331	\$9,604,565	65.20%
4	1992	\$6,307,455	\$9,919,580	63.59%
5	1993	\$6,311,505	\$10,375,088	60.83%
6	1994	\$6,463,160	\$10,955,356	59.00%
7	1995	\$5,625,812	\$10,756,889	52.30%
8	1996	\$5,708,347	\$10,442,201	54.67%
9	1997	\$5,543,252	\$10,255,675	54.05%
10	1998	\$5,620,410	\$10,423,880	53.92%
11	1999	\$6,187,199	\$10,155,876	60.92%
12	2000	\$6,308,523	\$9,150,670	68.94%
13	2001	\$11,088,012	\$7,533,407	147.18%
14	2002	\$4,904,823	\$6,352,629	77.21%
15	2003	\$4,376,775	\$8,615,202	50.80%
16	2004	\$5,713,357	\$9,367,067	60.99%
17	2005	\$4,218,671	\$10,090,659	41.81%
18	2006	\$5,464,787	\$11,466,986	47.66%
19	2007	\$5,829,666	\$11,734,639	49.68%
20	2008	\$7,666,805	\$12,318,347	62.24%
21	2009	\$7,997,073	\$13,469,376	59.37%
22	2010	\$9,072,506	\$14,925,410	60.79%
23	2011	\$6,668,773	\$16,907,246	39.44%
24	2012	\$14,901,222	\$16,624,967	89.63%
25	2013	\$13,527,831	\$12,972,812	104.28%
26	2014	\$9,650,588	\$20,243,503	47.67%
27	2015	\$11,452,287	\$19,797,077	57.85%
28	2016	\$11,771,039	\$17,879,185	65.84%
29	2017	\$16,019,761	\$18,922,068	84.66%
30	2018	\$17,481,590	\$20,052,772	87.18%
31	2019	\$16,834,917	\$17,994,219	93.56%
32				
33	Average Loading Factor		_	Col [2] / Col [3]
34	1989 - 2019			66.16%
35	2009 - 2019			71.84%
36	2014 - 2019			72.79%
37	Current			93.56%
38				
39	MARGINAL LOADING	FACTOR FOR NON-PLA	ANT A&G	
40	%			66.16%

#### NOTES:

		Materials & Supplies		
ine No.		and Prepayments (\$)	Total Utility Plant (\$)	Loading Factor
	[1]	[2]	[3]	[4]
1	1989	\$3,629,263	\$90,119,098	4.03%
2	1990	\$2,814,685	\$99,467,339	2.83%
3	1991	\$2,978,851	\$106,202,255	2.80%
4	1992	\$2,903,000	\$112,423,806	2.58%
5	1993	\$2,911,222	\$118,656,821	2.45%
6	1994	\$2,603,364	\$124,120,097	2.10%
7	1995	\$2,653,717	\$129,472,654	2.05%
8	1996	\$2,551,060	\$135,806,318	1.88%
9	1997	\$2,737,535	\$145,866,429	1.88%
10	1998	\$2,351,916	\$156,424,246	1.50%
11	1999	\$2,472,925	\$166,682,099	1.48%
12	2000	\$1,694,816	\$174,018,261	0.97%
13	2001	\$1,423,213	\$189,363,169	0.75%
14	2002	\$688,197	\$202,252,941	0.34%
15	2003	\$12,491	\$227,692,187	0.01%
16	2004	\$89,880	\$239,474,276	0.04%
17	2005	\$464,721	\$242,115,491	0.19%
18	2006	\$570,708	\$263,405,595	0.22%
19	2007	\$556,729	\$280,967,870	0.20%
20	2008	\$338,049	\$298,931,548	0.11%
21	2009	\$356,896	\$318,900,861	0.11%
22	2010	\$46,167	\$328,222,369	0.01%
23	2011	\$2,715,050	\$338,986,146	0.80%
24	2012	\$3,479,465	\$339,610,905	1.02%
25	2013	\$2,870,074	\$360,914,157	0.80%
26	2014	\$4,730,829	\$379,562,429	1.25%
27	2015	\$6,132,549	\$426,165,148	1.44%
28	2016	\$6,861,095	\$453,429,242	1.51%
29	2017	\$8,629,234	\$485,723,431	1.78%
30	2018	\$11,010,586	\$595,016,259	1.85%
31	2019	\$11,753,766	\$665,854,695	1.77%
32				
33	Average Loading Facto	r		Col [2] / Col [3]
34	1989 - 2019		_	1.31%
35	2009 - 2019			1.12%
36	2014 - 2019			1.60%
37	Current			1.77%
38				
39	MARGINAL LOADIN	G FACTOR FOR MATERIA	ALS & SUPPLIES AND PREPA	YMENTS
40	%			1.31%

#### Materials & Supplies and Prepayments Marginal Loading Factor

NOTES:

#### General Plant Marginal Loading Factor

				Total Utility Plant Less	
ne No.	Year	General Plant (\$)	Total Utility Plant (\$)	General Plant (\$)	Loading Factor
	[1]	[2]	[3]	[4]	[5]
1	1989	\$5,933,582	\$90,119,098	\$84,185,516	7.05%
2	1990	\$6,503,724	\$99,467,339	\$92,963,615	7.00%
3	1991	\$6,849,445	\$106,202,255	\$99,352,810	6.89%
4	1992	\$7,659,250	\$112,423,806	\$104,764,556	7.31%
5	1993	\$7,970,207	\$118,656,821	\$110,686,614	7.20%
6	1994	\$8,384,740	\$124,120,097	\$115,735,357	7.24%
7	1995	\$8,221,795	\$129,472,654	\$121,250,859	6.78%
8	1996	\$8,870,155	\$135,806,318	\$126,936,163	6.99%
9	1997	\$9,203,222	\$145,866,429	\$136,663,207	6.73%
10	1998	\$9,478,301	\$156,424,246	\$146,945,945	6.45%
11	1999	\$11,244,509	\$166,682,099	\$155,437,590	7.23%
12	2000	\$7,255,965	\$174,018,261	\$166,762,296	4.35%
13	2001	\$8,348,042	\$189,363,169	\$181,015,127	4.61%
14	2002	\$11,173,887	\$202,252,941	\$191,079,054	5.85%
15	2003	\$11,582,178	\$227,692,187	\$216,110,009	5.36%
16	2004	\$10,499,392	\$239,474,276	\$228,974,884	4.59%
17	2005	\$10,220,042	\$242,115,491	\$231,895,449	4.41%
18	2006	\$11,333,343	\$263,405,595	\$252,072,252	4.50%
19	2007	\$12,089,175	\$280,967,870	\$268,878,695	4.50%
20	2008	\$15,097,758	\$298,931,548	\$283,833,790	5.32%
21	2009	\$16,049,203	\$318,900,861	\$302,851,658	5.30%
22	2010	\$16,060,707	\$328,222,369	\$312,161,662	5.14%
23	2011	\$16,195,189	\$338,986,146	\$322,790,957	5.02%
24	2012	\$8,811,783	\$339,610,905	\$330,799,122	2.66%
25	2013	\$9,473,843	\$360,914,157	\$351,440,314	2.70%
26	2014	\$10,590,671	\$379,562,429	\$368,971,758	2.87%
27	2015	\$18,670,190	\$426,165,148	\$407,494,958	4.58%
28	2016	\$23,326,152	\$453,429,242	\$430,103,090	5.42%
29	2017	\$24,927,246	\$485,723,431	\$460,796,185	5.41%
30	2018	\$29,522,360	\$595,016,259	\$565,493,899	5.22%
31	2019	\$35,197,100	\$665,854,695	\$630,657,595	5.58%
32					
33	Average Loading Facto	r		Col [2] / Col [4]	
34	1989 - 2019			5.49%	
35	2009 - 2019			4.54%	
36	2014 - 2019			4.85%	
37	Current Average Cost p	per Customer		5.29%	
38					
39	MARGINAL LOADIN	G FACTOR FOR GENERA	AL PLANT		
40	%			5.49%	

#### NOTES:

#### **Class Weighted Bad Debt Expense**

				Adjusted Bad	Total	
				Debt	Normalized	
		Gross Bad	Percent of	Accounts	Distribution	Bad Debt Expense
Line No.	Rate Class	Debt Expense	Total	Expense	Revenues	Percentage
		[1]	[2]	[3]	[4]	[5]
1	R-1	\$54,638	2.33%	\$39,236	\$895,559	4.38%
2	R-3 <i>,</i> R-4	\$2,072,985	88.57%	\$1,488,642	\$46,836,151	3.18%
3	G-41	\$168,920	7.22%	\$121,304	\$14,691,765	0.83%
4	G-42	\$28,979	1.24%	\$20,810	\$13,862,372	0.15%
5	G-43	\$0	0.00%	\$0	\$2,979,914	0.00%
6	G-51	\$13,411	0.57%	\$9,631	\$1,687,389	0.57%
7	G-52	\$1,597	0.07%	\$1,147	\$2,248,398	0.05%
8	G-53	\$0	0.00%	\$0	\$1,703,104	0.00%
9	G-54	\$0	0.00%	\$0	\$1,105,561	0.00%
10	Total	\$2,340,529	100.00%	\$1,680,770	\$86,010,213	1.95%

[1] Company data

[2] Col [1] Line (n) / Col [1] Line 10

[3] Col [2] Line (n) x Col [3] Line 10

[4] Company data.

[5] Col [3] / Col [4]

### **Carrying Charges Inputs**

Line	Description	Peaking plant	Distribution	Services	Meters	
1	Plant data					7
2	Capitalized cost	\$1,000	\$1,000	\$1,000	\$1,000	
3	Book life	35	59	45	29	[1]
4	Salvage value	0%	-15%	-60%	0%	[2]
5	MACRS life	20	20	20	20	[3]
6	Capital structure					
7	Long-term debt ratio	49.85%	49.85%	49.85%	49.85%	[4]
8	Short-term debt ratio	0.00%	0.00%	0.00%	0.00%	[5]
9	Preferred ratio	0.00%	0.00%	0.00%	0.00%	[6]
10	Common ratio	50.15%	50.15%	50.15%	50.15%	[7]
11	Other	0.00%	0.00%	0.00%	0.00%	[8]
12	Cost of capital					
13	Long-term debt cost	4.42%	4.42%	4.42%	4.42%	[9]
14	Short-term debt cost	0.00%	0.00%	0.00%	0.00%	
15	Preferred cost	0.00%	0.00%	0.00%	0.00%	[10]
16	Common cost	10.51%	10.51%	10.51%	10.51%	[11]
17	Other	0.00%	0.00%	0.00%	0.00%	[12]
18	WACC	7.47%	7.47%	7.47%	7.47%	[13]
19	After tax WACC	6.88%	6.88%	6.88%	6.88%	[14]
20	Tax affected cost of capital	9.43%	9.43%	9.43%	9.43%	[15]
21	Tax info					
22	Tax rate	27.08%	27.08%	27.08%	27.08%	[16]
23	Property tax rate	2.58%	2.58%	2.58%	2.58%	[17]
24	Property insurance rate	0.18%	0.18%	0.18%	0.18%	[18]
25	Misc data					
26	Inflation rate	2.14%	2.14%	2.14%	2.14%	[19]
27	Constant \$ disc rate	4.73%	4.73%	4.73%	4.73%	[20]
28	Property tax escalation rate	2.14%	2.14%	2.14%	2.14%	[21]

[1] MCOS-5 Page 2 [2] MCOS-5 Page 2 [3] MCOS-5 Page 2 [4] Direct testimony of John Cochrane [5] Direct testimony of John Cochrane [6] Direct testimony of John Cochrane [7] Direct testimony of John Cochrane [8] Direct testimony of John Cochrane [9] Direct testimony of John Cochrane [10] Direct testimony of John Cochrane [11] Direct testimony of John Cochrane [12] Direct testimony of John Cochrane [13] Line 7 x Line 13 + Line 8 x Line 14 + Line 9 x Line 15 + Line 10 x Line 16 + Line 11 x Line 17 [14] (1 - Line 22) \* Line 20 [15] Line 19 / (1 - Line 22) [16] Revenue Requirements RR-1 [17] Revenue Requirements Step-EN [18] Revenue Requirements Step-EN [20] Line 19 - Line 26

[21] Line 26

r			[ ^ ]	[0]	[6]	٦ I
			[A]	[B]	[C]	
				Average Service	Net Salvage	
Line	Account	Description	Balance	Life	Value	
1		Production Plant				
2	361	Structures and Improvements	\$96,980	35.0	0%	[1]
3	361.5	Other Equipment	<u>\$0</u>	<u>35.0</u>	<u>0%</u>	[2]
4		Production Plant Total	\$96,980	35.0	0%	[3]
5		Distribution				
6	366.2	Structures and Improvements	\$252,675	35.0	0%	[4]
7	366.3	Structures and Improvements	\$353,851	35.0	0%	[5]
8	367.0	Mains	\$239,064,768	60.0	-15%	[6]
9	369.0	Measuring and Regulation Stat	\$4,881,531	35.0	0%	[7]
10	387	Other Equipment	<u>\$1,044,334</u>	<u>19.0</u>	<u>0%</u>	[8]
		Distribution Total	\$245,597,159	59.3	-15%	[9]
11		Services				
12	380	Services	\$185,013,119	45.0	-60%	[10]
13	380.1	Services - Stub	<u>\$2,225,746</u>	<u>45.0</u>	-60%	[11]
		Services Total	\$187,238,865	45.0	-60%	[12]
14		Meters				
15	381.0	Meters	\$13,396,339	32.0	0%	[13]
16	381.1	Meters-Instrument	\$276,522	32.0	0%	[14]
17	381.2	Meters - ERTs	\$6,038,019	15.0	0%	[15]
18	382	Meter Installation	<u>\$18,597,177</u>	<u>32.0</u>	<u>0%</u>	[16]
19		Meters Total	\$38,308,057	29.3	0%	[17]

### **Development of Plant Service Lives and Net Salvage**

[1] Source: Company data

[2] Source: Company data

[3] Col A Equals [1]+[2], Cols B,C = Weighted Average of Lines [1] to [2]

[4] Source: Company data

[5] Source: Company data

[6] Source: Company data

[7] Source: Company data

[8] Source: Company data

[9] Col A Equals ∑ lines [4] to [8], Cols B, C Equal Weighted Average of Lines [4] to [8]

[10] Source: Company data

[11] Source: Company data

[12] Col A Equals [10]+[11], Cols B,C Equal Weighted Average of Lines [10] to [11]

[13] Source: Company data

[14] Source: Company data

[15] Source: Company data

[16] Source: Company data

[17] Col A =  $\sum$  lines [13] to [16], Cols B, C = Weighted Average of Lines [13] to [16]

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### Liberty Utilities (EnergyNorth Natural Gas) Corp. Marginal Cost Study

Development of Revenue Requirements Stream Peaker Plant

Year	PV Factor	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
0	1.00	1000														
1	0.94	969.01	21.35	0.00	51.07	37.50	3.75%	28.57	2.42	61.11	16.55	25.80	1.80	147.56	14.76%	138.07
2	0.88	928.63	20.46	0.00	48.95	72.19	7.22%	28.57	11.81	23.50	6.36	26.35	1.84	144.35	14.43%	126.37
3	0.82	889.71	19.60	0.00	46.89	66.77	6.68%	28.57	10.34	26.11	7.07	26.92	1.88	141.28	14.13%	115.72
4	0.77	852.15	18.78	0.00	44.91	61.77	6.18%	28.57	8.99	28.40	7.69	27.50	1.92	138.36	13.84%	106.04
5	0.72	815.85	17.98	0.00	43.00	57.13	5.71%	28.57	7.73	30.41	8.24	28.09	1.96	135.56	13.56%	97.21
6	0.67	780.70	17.20	0.00	41.15	52.85	5.29%	28.57	6.57	32.15	8.71	28.69	2.00	132.89	13.29%	89.16
7	0.63	746.63	16.45	0.00	39.35	48.88	4.89%	28.57	5.50	33.66	9.11	29.30	2.04	130.34	13.03%	81.82
8	0.59	713.55	15.72	0.00	37.61	45.22	4.52%	28.57	4.51	34.93	9.46	29.93	2.09	127.89	12.79%	75.12
9	0.55	680.63	15.00	0.00	35.87	44.62	4.46%	28.57	4.35	33.15	8.98	30.57	2.13	125.47	12.55%	68.96
10	0.51	647.72	14.27	0.00	34.14	44.61	4.46%	28.57	4.34	30.78	8.34	31.23	2.18	123.07	12.31%	63.28
11	0.48	614.80	13.55	0.00	32.40	44.62	4.46%	28.57	4.35	28.39	7.69	31.90	2.23	120.68	12.07%	58.06
12	0.45	581.88	12.82	0.00	30.67	44.61	4.46%	28.57	4.34	26.02	7.05	32.58	2.27	118.31	11.83%	53.26
13	0.42	548.97	12.10	0.00	28.93	44.62	4.46%	28.57	4.35	23.63	6.40	33.28	2.32	115.95	11.59%	48.84
14	0.39	516.05	11.37	0.00	27.20	44.61	4.46%	28.57	4.34	21.26	5.76	33.99	2.37	113.61	11.36%	44.77
15	0.37	483.13	10.65	0.00	25.46	44.62	4.46%	28.57	4.35	18.87	5.11	34.72	2.42	111.28	11.13%	41.03
16	0.35	450.22	9.92	0.00	23.73	44.61	4.46%	28.57	4.34	16.50	4.47	35.47	2.47	108.98	10.90%	37.60
17	0.32	417.30	9.19	0.00	22.00	44.62	4.46%	28.57	4.35	14.11	3.82	36.23	2.53	106.68	10.67%	34.44
18	0.30	384.39	8.47	0.00	20.26	44.61	4.46%	28.57	4.34	11.75	3.18	37.00	2.58	104.41	10.44%	31.54
19	0.28	351.47	7.74	0.00	18.53	44.62	4.46%	28.57	4.35	9.36	2.53	37.80	2.64	102.16	10.22%	28.87
20	0.26	318.56	7.02	0.00	16.79	44.61	4.46%	28.57	4.34	6.99	1.89	38.61	2.69	99.92	9.99%	26.42
21	0.25	291.68	6.43	0.00	15.37	22.31	2.23%	28.57	(1.70)	27.34	7.40	39.44	2.75	98.27	9.83%	24.31
22	0.23	270.85	5.97	0.00	14.28	0.00		28.57	(7.74)	48.15	13.04	40.28	2.81	97.21	9.72%	22.50
23	0.22	250.01	5.51	0.00	13.18	0.00		28.57	(7.74)	46.64	12.63	41.15	2.87	96.17	9.62%	20.83
24	0.20	229.18	5.05	0.00	12.08	0.00		28.57	(7.74)	45.14	12.22	42.03	2.93	95.15	9.51%	19.28
25	0.19	208.34	4.59	0.00	10.98	0.00		28.57	(7.74)	43.63	11.82	42.93	3.00	94.15	9.41%	17.85
26	0.18	187.51	4.13	0.00	9.88	0.00		28.57	(7.74)	42.12	11.41	43.85	3.06	93.17	9.32%	16.53
27 28	0.17	166.67	3.67	0.00	8.79	0.00		28.57	(7.74)	40.62	11.00	44.79	3.12	92.21	9.22%	15.31 14.17
28	0.16	145.84 125.01	3.21	0.00	7.69 6.59	0.00		28.57	(7.74)	39.11	10.59	45.75	3.19	91.27	9.13% 9.04%	
29 30	0.15 0.14		2.75 2.30	0.00	5.49	0.00		28.57 28.57	(7.74) (7.74)	37.61 36.10	10.18 9.78	46.73 47.73	3.26 3.33	90.35 89.46	9.04% 8.95%	13.13
30	0.14	104.17 83.34	2.30	0.00	4.39	0.00		28.57	(7.74)	36.10	9.78	47.73	3.33	89.46	8.86%	12.16 11.27
31	0.13	83.34 62.50	1.84	0.00	4.39	0.00		28.57	(7.74)	34.60 33.09	9.37	48.76	3.40 3.47	88.59 87.74	8.86%	11.27
32	0.12	41.67	0.92	0.00	2.20	0.00		28.57	(7.74)	33.09	8.55	49.80 50.87	3.47	87.74 86.92	8.77%	9.68
33	0.11	20.83	0.92	0.00	1.10	0.00		28.57	(7.74)	31.58	8.55	50.87	3.55	86.92	8.61%	9.68
34 35	0.10	20.83	0.46	0.00	1.10	0.00		28.57	(7.74)	30.08 28.57	8.14 7.74	53.08	3.63	85.35	8.61% 8.54%	8.97 8.32
35	0.10	0.00	0.00	0.00	0.00	0.00		28.57	(7.74)	28.57	1.14	53.08	3.70	85.35	8.54%	8.32
Total			327.84		784.23	1,000.00		1,000.00	0.00	1,075.47	291.24	1,325.11	92.45	3,820.87	382.09%	1,591.33
PV			175.85		420.67	549.02		374.93	47.14	402.80	109.08	433.42	30.24	1,591.33	159.13%	
	payment curren		13.40		32.06	41.84		28.57	3.59	30.70	8.31	33.03	2.30	121.27	12.13%	
Levelized	payment consta	ant Ş	10.38		24.83	32.41		22.13	2.78	23.78	6.44	25.58	1.78	93.94	9.39%	

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Development of Revenue Requirements Stream Capacity-Related Distribution

		Interest on	Return on Preferred	Return on Common	Tax	Tax Depreciation	Book	Deferred	Taxable			Property	Revenue	% of Original Investment	PV of Revenue
Year	Rate Base	Debt	Equity	Equity	Depreciation	Rate	Depreciation	Taxes	Income	Income Taxes	Property Tax	Insurance	Requirement	Revenue	Requirement
0	1000.00 975.68	21.50	0.00	51.43	37.50	3.75%	19.42	4.90	52.45	14.20	25.80	1.80	139.05	13.90%	130.10
2	941.97	20.76	0.00	49.65	72.19	7.22%	19.42	14.29	15.32	4.15	26.35	1.84	136.46	13.65%	119.46
3	909.72	20.04	0.00	47.95	66.77	6.68%	19.42	12.82	18.41	4.99	26.92	1.88	134.02	13.40%	109.78
4	878.83	19.36	0.00	46.32	61.77	6.18%	19.42	11.47	21.18	5.73	27.50	1.92	131.72	13.17%	100.95
5	849.20	18.71	0.00	44.76	57.13	5.71%	19.42	10.21	23.68	6.41	28.09	1.96	129.56	12.96%	92.91
6	820.72	18.08	0.00	43.26	52.85	5.29%	19.42	9.05	25.90	7.01	28.69	2.00	127.52	12.75%	85.56
7	793.32 766.91	17.48 16.90	0.00	41.81 40.42	48.88 45.22	4.89% 4.52%	19.42 19.42	7.98 6.99	27.89 29.64	7.55 8.03	29.30 29.93	2.04	125.59 123.77	12.56% 12.38%	78.84 72.70
8	740.66	16.90	0.00	40.42	45.22	4.52%	19.42	6.82	29.64	7.67	29.93	2.09	123.77	12.38%	67.04
10	714.42	15.74	0.00	37.66	44.61	4.46%	19.42	6.82	26.45	7.16	31.23	2.18	120.21	12.02%	61.81
11	688.17	15.16	0.00	36.27	44.62	4.46%	19.42	6.82	24.55	6.65	31.90	2.23	118.45	11.85%	56.99
12	661.93	14.58	0.00	34.89	44.61	4.46%	19.42	6.82	22.66	6.14	32.58	2.27	116.71	11.67%	52.54
13	635.68	14.01	0.00	33.51	44.62	4.46%	19.42	6.82	20.75	5.62	33.28	2.32	114.98	11.50%	48.43
14	609.44	13.43	0.00	32.12	44.61	4.46%	19.42	6.82	18.86	5.11	33.99	2.37	113.27	11.33%	44.64
15	583.19	12.85	0.00	30.74	44.62	4.46%	19.42	6.82	16.96	4.59	34.72	2.42	111.57	11.16%	41.14
16 17	556.95 530.70	12.27 11.69	0.00	29.36 27.97	44.61 44.62	4.46% 4.46%	19.42 19.42	6.82 6.82	15.07 13.16	4.08 3.56	35.47 36.23	2.47 2.53	109.89 108.23	10.99% 10.82%	37.91 34.94
17	530.70	11.69	0.00	26.59	44.62	4.46%	19.42	6.82	13.16	3.55	36.23	2.53	108.23	10.82%	34.94
19	478.21	10.54	0.00	25.21	44.61	4.46%	19.42	6.82	9.37	2.54	37.80	2.58	104.96	10.50%	29.66
20	451.96	9.96	0.00	23.82	44.61	4.46%	19.42	6.82	7.48	2.03	38.61	2.69	103.35	10.34%	27.33
21	431.76	9.51	0.00	22.76	22.31	2.23%	19.42	0.78	28.32	7.67	39.44	2.75	102.33	10.23%	25.32
22	417.59	9.20	0.00	22.01	0.00		19.42	(5.26)	49.61	13.43	40.28	2.81	101.90	10.19%	23.59
23	403.43	8.89	0.00	21.26	0.00		19.42	(5.26)	48.58	13.16	41.15	2.87	101.49	10.15%	21.98
24 25	389.27 375.10	8.58 8.26	0.00	20.52 19.77	0.00		19.42 19.42	(5.26) (5.26)	47.56 46.54	12.88 12.60	42.03 42.93	2.93 3.00	101.10 100.73	10.11% 10.07%	20.49 19.10
25	3/5.10 360.94	8.26	0.00	19.77	0.00		19.42	(5.26)	46.54	12.60	42.93	3.00	100.73	10.07%	19.10
20	346.77	7.64	0.00	18.28	0.00		19.42	(5.26)	44.49	12.05	43.85	3.12	100.05	10.00%	16.61
28	332.61	7.33	0.00	17.53	0.00		19.42	(5.26)	43.47	11.77	45.75	3.19	99.74	9.97%	15.49
29	318.45	7.02	0.00	16.78	0.00		19.42	(5.26)	42.44	11.49	46.73	3.26	99.45	9.95%	14.45
30	304.28	6.70	0.00	16.04	0.00		19.42	(5.26)	41.42	11.22	47.73	3.33	99.19	9.92%	13.49
31	290.12	6.39	0.00	15.29	0.00		19.42	(5.26)	40.39	10.94	48.76	3.40	98.95	9.89%	12.59
32	275.95	6.08	0.00	14.54	0.00		19.42	(5.26)	39.37	10.66	49.80	3.47	98.73	9.87%	11.75
33 34	261.79	5.77	0.00	13.80	0.00		19.42	(5.26)	38.35	10.38	50.87	3.55	98.53	9.85%	10.97
34	247.63 233.46	5.46 5.14	0.00	13.05 12.31	0.00		19.42 19.42	(5.26) (5.26)	37.32 36.30	10.11 9.83	51.96 53.08	3.63 3.70	98.37 98.22	9.84% 9.82%	10.25 9.58
36	219.30	4.83	0.00	11.56	0.00		19.42	(5.26)	35.28	9.55	54.21	3.78	98.10	9.81%	8.95
37	205.14	4.52	0.00	10.81	0.00		19.42	(5.26)	34.25	9.28	55.38	3.86	98.01	9.80%	8.37
38	190.97	4.21	0.00	10.07	0.00		19.42	(5.26)	33.23	9.00	56.56	3.95	97.95	9.79%	7.82
39	176.81	3.90	0.00	9.32	0.00		19.42	(5.26)	32.20	8.72	57.78	4.03	97.91	9.79%	7.32
40	162.64	3.58	0.00	8.57	0.00		19.42	(5.26)	31.18	8.44	59.02	4.12	97.90	9.79%	6.84
41	148.48	3.27	0.00	7.83	0.00		19.42	(5.26)	30.16	8.17	60.28	4.21	97.91	9.79%	6.40
42 43	134.32	2.96 2.65	0.00	7.08	0.00		19.42 19.42	(5.26)	29.13	7.89	61.57	4.30 4.39	97.96 98.04	9.80% 9.80%	6.00 5.61
43	120.15 105.99	2.65	0.00	5.59	0.00		19.42	(5.26) (5.26)	28.11 27.08	7.61	62.89 64.24	4.39	98.04 98.15	9.80%	5.61
44	91.82	2.54	0.00	4.84	0.00		19.42	(5.26)	26.06	7.06	65.62	4.48	98.15	9.81%	4.93
46	77.66	1.71	0.00	4.09	0.00		19.42	(5.26)	25.04	6.78	67.03	4.68	98.45	9.85%	4.62
47	63.50	1.40	0.00	3.35	0.00		19.42	(5.26)	24.01	6.50	68.46	4.78	98.65	9.87%	4.33
48	49.33	1.09	0.00	2.60	0.00		19.42	(5.26)	22.99	6.23	69.93	4.88	98.89	9.89%	4.06
49	35.17	0.77	0.00	1.85	0.00		19.42	(5.26)	21.97	5.95	71.43	4.98	99.16	9.92%	3.81
50	21.00	0.46	0.00	1.11	0.00		19.42	(5.26)	20.94	5.67	72.96	5.09	99.46	9.95%	3.58
51 52	6.84 (7.32)	0.15 (0.16)	0.00	0.36	0.00		19.42 19.42	(5.26)	19.92 18.89	5.39 5.12	74.53	5.20 5.31	99.80 24.04	9.98% 2.40%	3.36
52	(7.32) (21.49)	(0.16) (0.47)	0.00	(0.39) (1.13)	0.00		19.42	(5.26)	18.89	4.84	0.00	5.31	24.04	2.40%	0.76
54	(35.65)	(0.47)	0.00	(1.13)	0.00		19.42	(5.26)	16.85	4.56	0.00	5.54	21.60	2.16%	0.60
55	(49.82)	(1.10)	0.00	(2.63)	0.00		19.42	(5.26)	15.82	4.28	0.00	5.66	20.39	2.04%	0.53
56	(63.98)	(1.41)	0.00	(3.37)	0.00		19.42	(5.26)	14.80	4.01	0.00	5.78	19.17	1.92%	0.46
57	(78.14)	(1.72)	0.00	(4.12)	0.00		19.42	(5.26)	13.78	3.73	0.00	5.91	17.96	1.80%	0.41
58	(92.31)	(2.03)	0.00	(4.87)	0.00		19.42	(5.26)	12.75	3.45	0.00	6.03	16.75	1.68%	0.35
59	(146.01)	(3.22)	0.00	(7.70)	146.01		19.42	34.28	-137.14	(37.14)	0.00	6.16	11.81	1.18%	0.23
Total		449.39		1075.01	1146.01		1146.01	0.00	1,474.23	399.22	2,347.02	209.56	5,626.22	562.62%	1,663.62
PV		201.00		480.82	551.90		276.85	74.48	384.33	104.08	490.99	35.40	1,663.62	166.36%	
Levelized payme		14.10		33.73	38.72		19.42	5.23	26.96	7.30	34.45	2.48	116.72	11.67%	
Levelized payme	ent constant \$	10.18		24.35	27.95		14.02	3.77	19.46	5.27	24.86	1.79	84.24	8.42%	

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Development of Revenue Requirements Stream Services

0         1000.00           1         963.92           2         918.44           3         874.43           4         3           5         790.38           6         750.14           7         710.98           8         672.81           9         634.80           10         596.79           11         558.78           12         520.77           13         422.76           14         444.75           15         406.74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         184.80           23         122.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (	Rate Base	Interest on Debt	Return on Preferred Equity	Return on Common Equity	Tax Depreciation	Tax Depreciation Rate	Book Depreciation	Deferred Taxes	Taxable Income	Income Taxes	Property Tax	Property Insurance	Revenue Requirement	% of Original Investment Revenue	PV of Revenue Requirement
2         918.44           3         874.43           4         831.78           5         790.38           6         750.14           7         710.98           8         672.81           9         634.80           10         556.79           11         482.76           14         442.75           15         406.74           16         388.73           17         330.72           18         292.72           19         254.71           20         216.70           21         158.80           23         152.80           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           30         (48.61)           31         (174.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.03)           39         (230.10)           38 <td></td>															
3         874.43           4         831.78           5         790.38           6         750.14           7         710.98           8         672.81           9         634.80           10         556.79           11         558.78           12         520.77           13         482.76           14         444.75           16         368.73           17         30.72           18         292.72           19         254.71           20         216.70           21         184.73           22         158.80           23         24           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (224.18)           37         (230.10)           38         (258.74)           33		21.24	0.00	50.81	37.50	3.75%	35.56	0.53	67.73	18.34	25.80	1.80	154.07	15.41%	144.15
4         831.78           5         790.38           6         750.14           7         70.98           6         672.81           9         634.80           10         596.79           11         558.78           12         520.77           13         482.76           14         444.75           15         406.74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         134.73           22         158.80           23         132.28           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (126.39)           34         (125.32)           35         (178.25)           36         (230.10)           38         (256.03)           39		20.24	0.00	48.41	72.19	7.22%	35.56	9.92	29.75	8.06	26.35	1.84	150.37	15.04%	131.64
5         790.38           6         750.14           7         710.98           8         672.81           9         634.80           10         596.79           11         558.78           12         550.77           13         442.76           14         444.75           15         406.74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (26.69)           30         (48.61)           31         (126.39)           34         (125.32)           35         (178.25)           36         (204.18)           37         (230.10)           38<(256.03)		19.27 18.33	0.00	46.09 43.84	66.77	6.68% 6.18%	35.56	8.45	31.99 33.91	8.66	26.92 27.50	1.88 1.92	146.82 143.42	14.68% 14.34%	120.27 109.92
6         750.14           7         710.99           8         672.81           9         634.80           10         596.79           11         558.78           12         520.77           13         482.76           14         444.75           15         406.74           16         368.73           17         330.72           19         254.71           20         216.70           21         184.73           22         158.80           23         122.83           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.03)           39         (228.91)           33         (126.33) <td< td=""><td></td><td>17.42</td><td>0.00</td><td>43.84</td><td>61.77 57.13</td><td>5.71%</td><td>35.56 35.56</td><td>7.10 5.84</td><td></td><td>9.18 9.63</td><td>27.50</td><td>1.92</td><td></td><td>14.54%</td><td>109.92</td></td<>		17.42	0.00	43.84	61.77 57.13	5.71%	35.56 35.56	7.10 5.84		9.18 9.63	27.50	1.92		14.54%	109.92
7         70.098           8         672.81           9         634.80           10         596.79           11         587.78           12         520.77           13         482.76           14         444.75           15         406.74           16         320.72           19         224.71           20         216.70           21         158.80           23         122.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         22.69           30         (48.61)           31         (174.54)           32         (120.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.03)           39         (228.96)           37         (230.10)           38         (266.03)           39         (226.93)           36         (236.03)		17.42	0.00	41.66 39.54	57.13	5.71%	35.56	5.84 4.68	35.56 36.93	9.63	28.09	2.00	140.15 136.99	14.01%	91.91
8         672.81           9         634.80           10         596.79           11         558.78           12         520.77           13         482.76           14         444.75           15         466.74           16         368.73           17         30.72           18         292.72           19         254.71           20         216.70           21         184.73           22         158.80           23         122.81           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.03)           39         (221.96)           30         (307.88)           41         (333.81)		15.67	0.00	39.54	48.88	4.89%	35.56	3.61	38.07	10.00	28.69	2.00	133.96	13.40%	84.09
9         634.80           10         596.79           11         558.78           12         520.77           13         482.76           14         444.75           15         406.74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         184.73           22         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (126.39)           34         (125.32)           35         (178.25)           36         (230.10)           38         (256.03)           39         (281.96)           33         (126.39)           40         (37.88)           41         42           43         (385.677)           <		14.82	0.00	35.46	45.22	4.52%	35.56	2.62	38.97	10.51	29.93	2.04	131.03	13.40%	76.96
10         566,79           11         S58.78           12         S50.77           13         442.76           14         444.75           15         406,74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         184.83           22         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (126.39)           34         (152.32)           35         (178.25)           36         (226.03)           39         (228.96)           30         (30.788)           41         (333.81)           42         (359.74)           43         (385.67)		14.82	0.00	33.46	45.22 44.62	4.52%	35.56	2.62	36.82	9.97	30.57	2.09	128.13	12.81%	70.90
11         558.78           12         520.77           13         482.76           14         444.75           15         406.74           16         368.73           17         330.72           19         254.71           20         216.70           21         184.73           22         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           32         104.47           32         (100.47)           33         (126.39)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.03)           39         (2281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)		13.15	0.00	31.46	44.61	4.46%	35.56	2.45	34.08	9.23	31.23	2.13	125.25	12.52%	64.40
12         520,77           13         442,75           14         444,75           15         406,74           16         386,73           17         330,72           18         222,72           19         254,71           20         216,70           21         184,73           23         132,88           24         106,95           25         81,02           26         55,10           27         29,17           28         3,24           29         22,69           30         (48,61)           31         (74,54)           32         (100,47)           33         (126,39)           34         (152,32)           35         (178,25)           36         (226,03)           39         (226,03)           39         (226,03)           39         (226,03)           39         (226,03)           39         (226,03)           39         (226,03)           39         (226,03)           39         (230,10) <t< td=""><td></td><td>12.31</td><td>0.00</td><td>29.45</td><td>44.62</td><td>4.46%</td><td>35.56</td><td>2.45</td><td>34.08</td><td>8.48</td><td>31.90</td><td>2.18</td><td>122.38</td><td>12.32%</td><td>58.88</td></t<>		12.31	0.00	29.45	44.62	4.46%	35.56	2.45	34.08	8.48	31.90	2.18	122.38	12.32%	58.88
13         482.76           14         444.75           15         406.74           16         368.73           17         330.72           19         254.71           20         216.70           21         124.73           22         158.80           23         132.88           24         106.95           25         51.0           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (226.10)           39         (221.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)		11.47	0.00	27.45	44.61	4.46%	35.56	2.45	28.59	7.74	32.58	2.23	119.53	11.95%	53.81
14         444,75           15         406,74           16         368,73           17         330,72           18         292,72           19         254,71           20         216,70           21         184,73           22         158,80           23         132,88           24         106,95           25         81,02           26         55,10           27         29,17           28         3,24           29         (22,69)           30         (48,61)           31         (126,39)           34         (125,32)           35         (178,25)           36         (226,03)           39         (226,03)           39         (281,96)           30         (307,88)           41         (333,81)           42         (359,74)           43         (385,67)		10.64	0.00	25.45	44.62	4.46%	35.56	2.45	25.83	6.99	33.28	2.27	116.69	11.53%	49.15
15         406.74           16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         184.73           22         158.80           23         132.88           24         106.95           25         5.10           27         29.12           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (125.32)           35         (178.25)           36         (24.18)           37         (230.10)           38         (256.03)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)		9.80	0.00	23.43	44.61	4.46%	35.56	2.45	23.03	6.25	33.99	2.32	113.87	11.39%	44.87
16         368.73           17         330.72           18         292.72           19         254.71           20         216.70           21         184.73           22         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (226.01)           38         (256.63)           40<(307.88)		8.96	0.00	21.44	44.62	4.46%	35.56	2.45	20.34	5.51	34.72	2.42	111.06	11.11%	40.95
17         330.72           18         292.72           19         254.71           20         216.70           21         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (174.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (226.03)           39         (228.96)           30         (30.10)           38         (266.03)           39         (281.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)		8.12	0.00	19.44	44.61	4.46%	35.56	2.45	17.60	4.77	35.47	2.42	108.27	10.83%	37.36
18         292,72           19         254,71           20         216,70           21         184,73           22         158,80           23         132,88           24         106,55           25         55,10           27         29,17           28         3,24           29         (22,69)           30         (48,61)           31         (74,54)           32         (100,47)           33         (125,32)           36         (22,41,8)           37         (230,10)           38         (256,03)           40         (37,88)           41         (333,81)           42         (359,74)           43         (385,677)		7.29	0.00	17.43	44.62	4.46%	35.56	2.45	14.84	4.02	36.23	2.53	105.50	10.55%	34.06
19         254.71           20         216.70           21         184.73           22         158.80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.32)           35         (178.25)           36         (226.03)           39         (281.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)		6.45	0.00	15.43	44.61	4.46%	35.56	2.45	12.10	3.28	37.00	2.58	102.75	10.27%	31.03
20         216.70           21         184.73           22         132.88           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           31         (74.54)           32         (100.47)           33         (125.32)           36         (224.18)           37         (230.10)           38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)		5.61	0.00	13.42	44.62	4.46%	35.56	2.45	9.35	2.53	37.80	2.64	100.01	10.00%	28.26
21         184,73           22         158,80           23         132,88           24         106,95           25         81,02           26         55,10           27         29,17           28         3,24           29         (22,69)           30         (48,61)           31         (74,54)           32         (100,47)           33         (126,39)           34         (125,32)           35         (178,25)           36         (226,10)           38         (256,63)           39         (251,96)           40         (37,88)           41         (333,81)           42         (359,74)           43         (385,67)		4.77	0.00	11.42	44.61	4.46%	35.56	2.45	6.61	1.79	38.61	2.69	97.30	9.73%	25.73
22         158 80           23         132.88           24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         22.69           30         (48.61)           31         (126.39)           34         (152.32)           35         (178.25)           36         (226.03)           37         (230.10)           38         (226.03)           39         (228.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)		4.07	0.00	9.74	22.31	2.23%	35.56	(3.59)	26.60	7.20	39.44	2.75	95.17	9.52%	23.54
24         106.95           25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (226.10)           38         (256.03)           39         (281.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)		3.50	0.00	8.37	0.00		35.56	(9.63)	47.03	12.74	40.28	2.81	93.63	9.36%	21.67
25         81.02           26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (125.32)           35         (178.25)           36         (204.18)           37         (230.10)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)		2.93	0.00	7.00	0.00		35.56	(9.63)	45.16	12.23	41.15	2.87	92.10	9.21%	19.95
26         55.10           27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (152.32)           35         (178.25)           36         (204.18)           37         (230.10)           38         (256.03)           39         (251.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)		2.36	0.00	5.64	0.00		35.56	(9.63)	43.29	11.72	42.03	2.93	90.60	9.06%	18.36
27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (226.03)           39         (281.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	81.02	1.79	0.00	4.27	0.00		35.56	(9.63)	41.41	11.21	42.93	3.00	89.12	8.91%	16.90
27         29.17           28         3.24           29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (226.03)           39         (281.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	55.10	1.21	0.00	2.90	0.00		35.56	(9.63)	39.54	10.71	43.85	3.06	87.66	8.77%	15.55
29         (22.69)           30         (48.61)           31         (74.54)           32         (100.47)           33         (152.32)           35         (178.25)           36         (224.18)           37         (230.10)           38         (256.03)           39         (221.96)           40         (37.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)		0.64	0.00	1.54	0.00		35.56	(9.63)	37.66	10.20	44.79	3.12	86.22	8.62%	14.31
30         (48.61)           31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (204.18)           37         (230.10)           38         (256.03)           39         (281.96)           40         (37.88)           41         (33.81)           42         (359.74)           43         (385.67)           44         (411.59)	3.24	0.07	0.00	0.17	0.00		35.56	(9.63)	35.79	9.69	45.75	3.19	84.80	8.48%	13.17
31         (74.54)           32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (204.18)           37         (230.10)           38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(22.69)	(0.50)	0.00	(1.20)	0.00		35.56	(9.63)	33.92	9.18	0.00	0.00	33.42	3.34%	4.86
32         (100.47)           33         (126.39)           34         (152.32)           35         (178.25)           36         (204.18)           37         (230.10)           38         (226.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(48.61)	(1.07)	0.00	(2.56)	0.00		35.56	(9.63)	32.04	8.68	0.00	0.00	30.97	3.10%	4.21
33         (126.39)           34         (152.32)           35         (178.25)           36         (204.18)           37         (230.10)           38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(74.54)	(1.64)	0.00	(3.93)	0.00		35.56	(9.63)	30.17	8.17	0.00	0.00	28.53	2.85%	3.63
34         (152,32)           35         (178,25)           36         (204,18)           37         (230,10)           38         (256,03)           39         (21,96)           40         (307,88)           41         (333,81)           42         (359,74)           43         (385,67)           44         (411,59)	(100.47)	(2.21)	0.00	(5.30)	0.00		35.56	(9.63)	28.29	7.66	0.00	0.00	26.08	2.61%	3.10
35         (178.25)           36         (204.18)           37         (230.10)           38         (256.03)           39         (21.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(126.39)	(2.78)	0.00	(6.66)	0.00		35.56	(9.63)	26.42	7.15	0.00	0.00	23.63	2.36%	2.63
36         (204.18)           37         (230.10)           38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(152.32)	(3.36)	0.00	(8.03)	0.00		35.56	(9.63)	24.55	6.65	0.00	0.00	21.19	2.12%	2.21
37         (230.10)           38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(178.25)	(3.93)	0.00	(9.40)	0.00		35.56	(9.63)	22.67	6.14	0.00	0.00	18.74	1.87%	1.83
38         (256.03)           39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(204.18)	(4.50)	0.00	(10.76)	0.00		35.56	(9.63)	20.80	5.63	0.00	0.00	16.30	1.63%	1.49
39         (281.96)           40         (307.88)           41         (333.81)           42         (359.74)           43         (385.67)           44         (411.59)	(230.10)	(5.07)	0.00	(12.13)	0.00		35.56	(9.63)	18.92	5.12	0.00	0.00	13.85	1.39%	1.18
40 (307.88) 41 (333.81) 42 (359.74) 43 (385.67) 44 (411.59)	(256.03)	(5.64)	0.00	(13.49)	0.00		35.56	(9.63)	17.05	4.62	0.00	0.00	11.41	1.14%	0.91
41 (333.81) 42 (359.74) 43 (385.67) 44 (411.59)	(281.96)	(6.21)	0.00	(14.86)	0.00		35.56	(9.63)	<b>≈15.18</b>	• 4.11	0.00	0.00	• 8.96	0.90%	0.67
42 (359.74) 43 (385.67) 44 (411.59)	. ,	(6.78)	0.00	(16.23)	0.00		35.56	(9.63)	13.30	3.60	0.00	0.00	6.52	0.65%	0.46
43 (385.67) 44 (411.59)	(333.81)	(7.36)	0.00	(17.59)	0.00		35.56	(9.63)	11.43	3.09	0.00	0.00	4.07	0.41%	0.27
44 (411.59)		(7.93)	0.00	(18.96)	0.00		35.56	(9.63)	9.55	2.59	0.00	0.00	1.63	0.16%	0.10
		(8.50)	0.00	(20.33)	0.00		35.56	(9.63)	7.68	2.08	0.00	0.00	-0.82	-0.08%	-0.05
45 (600.00)		(9.07)	0.00	(21.69)	0.00		35.56	(9.63)	5.81	1.57	0.00	0.00	-3.26	-0.33%	-0.17
	(600.00)	(13.22)	0.00	(31.62)	600.00		35.56	152.85	-607.81	(164.60)	0.00	0.00	-21.03	-2.10%	-1.05
Total		182.87		437.45	1,600.00		1,600.00	0.00	599.90	162.45	976.17	68.11	3,427.05	342.70%	1,568.08
V		153.70		367.68	579.10		491.07	23.84	416.19	112.71	391.75	27.33	1,568.08	156.81%	
evelized payment current \$ evelized payment constant \$		11.13 8.31		26.62 19.88	41.93 31.32		35.56 26.56	1.73 1.29	30.13 22.51	8.16 6.10	28.36 21.19	1.98 1.48	113.54 84.80	11.35% 8.48%	

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# Development of Revenue Requirements Stream Meters

			Return on	Return on		Тах								% of Original	
		Interest on	Preferred	Common	Тах	Depreciation	Book	Deferred	Taxable	Income	Property	Property	Revenue		PV of Revenue
Year	Rate Base	Debt	Equity	Equity	Depreciation	Rate	Depreciation	Taxes	Income	Taxes	Тах	Insurance	Requirement	Revenue	Requirement
0	1000.00														
1	964.70	21.26	0.00	50.85	37.50	3.75%	34.48	0.82	66.71	18.07	25.80	1.80	153.07	15.31%	143.22
2	920.01	20.27	0.00	48.49	72.19	7.22%	34.48	10.21	28.79	7.80	26.35	1.84	149.45	14.94%	130.83
3	876.78	19.32	0.00	46.21	66.77	6.68%	34.48	8.74	31.09	8.42	26.92	1.88	145.97	14.60%	119.57
4	834.91	18.40	0.00	44.01	61.77	6.18%	34.48	7.39	33.06	8.95	27.50	1.92	142.64	14.26%	109.32
5	794.29	17.50	0.00	41.87	57.13	5.71%	34.48	6.13	34.77	9.41	28.09	1.96	139.44	13.94%	99.99
6	754.84	16.63	0.00	39.79	52.85	5.29%	34.48	4.97	36.19	9.80	28.69	2.00	136.36	13.64%	91.49
7	716.45	15.79	0.00	37.76	48.88	4.89%	34.48	3.90	37.39	10.12	29.30	2.04	133.40	13.34%	83.75
8	679.06	14.96	0.00	35.79	45.22	4.52%	34.48	2.91	38.35	10.38	29.93	2.09	130.55	13.05%	76.68
9	641.84	14.14	0.00	33.83	44.62	4.46%	34.48	2.75	36.26	9.82	30.57	2.13	127.72	12.77%	70.19
10	604.61	13.32	0.00	31.87	44.61	4.46%	34.48	2.74	33.57	9.09	31.23	2.18	124.91	12.49%	64.23
11	567.38	12.50	0.00	29.91	44.62	4.46%	34.48	2.75	30.87	8.36	31.90	2.23	122.12	12.21%	58.75
12	530.16	11.68	0.00	27.94	44.61	4.46%	34.48	2.74	28.19	7.63	32.58	2.27	119.34	11.93%	53.72
13	492.93	10.86	0.00	25.98	44.62	4.46%	34.48	2.75	25.49	6.90	33.28	2.32	116.58	11.66%	49.10
14	455.70	10.04	0.00	24.02	44.61	4.46%	34.48	2.74	22.81	6.18	33.99	2.37	113.83	11.38%	44.86
15	418.48	9.22	0.00	22.06	44.62	4.46%	34.48	2.75	20.11	5.45	34.72	2.42	111.10	11.11%	40.96
16	381.25	8.40	0.00	20.09	44.61	4.46%	34.48	2.74	17.43	4.72	35.47	2.47	108.38	10.84%	37.39
17	344.02	7.58	0.00	18.13	44.62	4.46%	34.48	2.75	14.73	3.99	36.23	2.53	105.68	10.57%	34.12
18	306.80	6.76	0.00	16.17	44.61	4.46%	34.48	2.74	12.05	3.26	37.00	2.58	103.01	10.30%	31.11
19	269.57	5.94	0.00	14.21	44.62	4.46%	34.48	2.75	9.35	2.53	37.80	2.64	100.34	10.03%	28.36
20	232.34	5.12	0.00	12.25	44.61	4.46%	34.48	2.74	6.67	1.81	38.61	2.69	97.70	9.77%	25.83
21	201.16	4.43	0.00	10.60	22.31	2.23%	34.48	(3.30)	26.71	7.23	39.44	2.75	95.64	9.56%	23.66
22	176.01	3.88	0.00	9.28	0.00		34.48	(9.34)	47.21	12.78	40.28	2.81	94.18	9.42%	21.80
23	150.87	3.32	0.00	7.95	0.00		34.48	(9.34)	45.39	12.29	41.15	2.87	92.73	9.27%	20.08
24	125.72	2.77	0.00	6.63	0.00		34.48	(9.34)	43.57	11.80	42.03	2.93	91.30	9.13%	18.50
25	100.58	2.22	0.00	5.30	0.00		34.48	(9.34)	41.75	11.31	42.93	3.00	89.89	8.99%	17.04
26	75.43	1.66	0.00	3.98	0.00		34.48	(9.34)	39.94	10.81	43.85	3.06	88.51	8.85%	15.70
27	50.29	1.11	0.00	2.65	0.00		34.48	(9.34)	38.12	10.32	44.79	3.12	87.14	8.71%	14.46
28	25.14	0.55	0.00	1.33	0.00		34.48	(9.34)	36.30	9.83	45.75	3.19	85.80	8.58%	13.32
29	(0.00)	(0.00)	0.00	(0.00)	0.00		34.48	(9.34)	34.48	9.34	46.73	3.26	84.48	8.45%	12.28
Total		279.64		668.93	1,000.00		1,000.00	(0.00)	917.35	248.42	1,022.91	71.37	3,291.26	329.13%	1,550.33
PV		162.47		388.65	549.02		428.53	32.63	412.50	111.70	398.54	27.81	1,550.33	155.03%	
Levelized payr	ment current \$	13.07		31.27	44.18		34.48	2.63	33.19	8.99	32.07	2.24	124.75	12.48%	
Levelized payr	ment constant \$	10.41		24.91	35.19		27.47	2.09	26.44	7.16	25.54	1.78	99.37	9.94%	

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Fixed Carrying Charge Rates

			Producti	ion Plant			Ma	ins			Serv	ices			Me	ters	
Line	Description	Curren	t Dollars	Consta	nt Dollars	Curren	t Dollars	Constar	nt Dollars	Curren	t Dollars	Consta	nt Dollars	Curren	t Dollars	Consta	nt Dollars
		Engine	er's FCCR	Econom	ist's FCCR	Engine	er's FCCR	Econom	ist's FCCR	Engine	er's FCCR	Econom	nist's FCCR	Engine	er's FCCR	Econom	nist's FCCR
		Current		Constant		Current		Constant		Current		Constant		Current		Constant	
		Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital	Levelized	% of Capital
		Dollars	Investment	Dollars	Investment	Dollars	Investment	Dollars	Investment	Dollars	Investment	Dollars	Investment	Dollars	Investment	Dollars	Investment
1	Interest on Debt	\$13.40	1.3%	\$10.38	1.0%	\$14.10	1.4%	\$10.18	1.0%	\$11.13	1.1%	\$8.31	0.8%	\$13.07	1.3%	\$10.41	1.0%
2	Return on Preferred	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
3	Return on Common	\$32.06	3.2%	\$24.83	2.5%	\$33.73	3.4%	\$24.35	2.4%	\$26.62	2.7%	\$19.88	2.0%	\$31.27	3.1%	\$24.91	2.5%
4	Total Return	\$45.46	4.5%	\$35.21	3.5%	\$47.84	4.8%	\$34.53	3.5%	\$37.75	3.8%	\$28.20	2.8%	\$44.35	4.4%	\$35.32	3.5%
5	Depreciation	\$28.57	2.9%	\$22.13	2.2%	\$19.42	1.9%	\$14.02	1.4%	\$35.56	3.6%	\$26.56	2.7%	\$34.48	3.4%	\$27.47	2.7%
6	Income tax	\$8.31	0.8%	\$6.44	0.6%	\$7.30	0.7%	\$5.27	0.5%	\$8.16	0.8%	\$6.10	0.6%	\$8.99	0.9%	\$7.16	0.7%
7	Deferred Taxes	\$3.59	0.4%	\$2.78	0.3%	\$5.23	0.5%	\$3.77	0.4%	\$1.73	0.2%	\$1.29	0.1%	\$2.63	0.3%	\$2.09	0.2%
8	Revenue Tax	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%	\$0.00	0.0%
9	Property Tax	<u>\$33.03</u>	3.3%	\$25.58	2.6%	\$34.45	3.4%	\$24.86	2.5%	\$28.36	2.8%	<u>\$21.19</u>	2.1%	<u>\$32.07</u>	3.2%	\$25.54	2.6%
10	Total Taxes	\$44.93	4.5%	\$34.81	3.5%	\$46.98	4.7%	\$33.91	3.4%	\$38.25	3.8%	\$28.57	2.9%	\$43.68	4.4%	\$34.80	3.5%
11	Property Insurance	\$2.30	0.2%	\$1.78	0.2%	\$2.48	0.2%	\$1.79	0.2%	\$1.98	0.2%	\$1.48	0.1%	\$2.24	0.2%	\$1.78	0.2%
12	Total Revenue Required	\$121.27	12.1%	\$93.94	9.4%	\$116.72	11.7%	\$84.24	8.4%	\$113.54	11.4%	\$84.80	8.5%	\$124.75	12.5%	\$99.37	9.9%

### Summary of Marginal Capacity-Related Costs

	Description	Production in lieu of				
Line	Description	reinforcement	Mains reinforcement	Mains extension	Total distribution	
1	Plant Investment					-
2	Long-run unit costs - \$/design day dth	\$59.52	\$1,261.97	\$1,090.65	\$2,412.14	[1]
3	General plant loading factor	5.49%	5.49%	5.49%		[2]
4	Gross-up unit costs	\$62.79	\$1,331.28	\$1,150.55	\$2,544.63	[3]
5	Fixed charge rate	9.39%	8.42%	8.42%		[4]
6	Plant-related A&G loading factor	0.61%	0.61%	0.61%		[5]
7	Grossed up fixed charge rate	10.00%	9.03%	9.03%		[6]
8	Annualized cost	\$6.28	\$120.24	\$103.91	\$230.43	[7]
9	Operating Expense					
10	Production capacity costs	\$1.15			\$1.15	[8]
11	Distribution capacity costs			\$46.87	\$46.87	[9]
12	Non-plant A&G loading factor	<u>66.16%</u>	66.16%	66.16%		[10]
13	Total O&M expense	\$1.92	\$0.00	\$77.88	\$79.80	[11]
14	Working Capital					
15	M&S and prepayments rate	<u>1.31%</u>	1.31%	1.31%	0.00%	[12]
16	M&S and prepayments cost	\$0.83	\$17.50	\$15.13	\$33.45	[13]
17	Working cash allowance lag (days)	26.10	26.10	26.10		[14]
18	Working cash allowance lag (rate)	7.15%	7.15%	7.15%		[15]
19	Working cash O&M allowance	<u>\$0.59</u>	<u>\$8.60</u>	<u>\$13.00</u>	<u>\$22.18</u>	[16]
20	Total working capital	\$1.41	\$26.10	\$28.12	\$55.64	[17]
21	Tax affected cost of capital rate	<u>9.43%</u>	<u>9.43%</u>	<u>9.43%</u>	0.00%	[18]
22	Working capital revenue requirement	\$0.13	\$2.46	\$2.65	\$5.25	[19]
23	System Seasonal Capacity Related Cost					
24	\$/design day dth	\$8.33	\$122.70	\$184.45	\$315.47	[20]
25	Sales/sendout factor	95.28%	95.28%	<u>95.28%</u>		[21]
26	Inflation	2.14%	<u>2.14%</u>	<u>2.14%</u>		[22]
27	Seasonal Capacity Cost	\$8.91	\$131.25	\$197.30	\$337.46	[23]

[1] MCOS-1 and MCOS-2 [2] MCOS-4 [3] (1 + Line 3) x Line 2 [4] MCOS-5 [5] MCOS-4 [6] Line 5 + Line 6 [7] Line 4 x Line 7 [8] MCOS-2 [9] MCOS-2 [10] MCOS-4 [11] (1 + Line 12) x (Line 10 + Line 11) [12] MCOS-4 [13] Line 15 x Line 4 [14] Company data [15] Line 17 / 365 [16] (Line 8 + Line 13) x Line 18 [17] Line 19 + Line 16 [18] MCOS-5 [19] Line 21 x Line 20 [20] Line 22 + Line 13 + Line 8 [21] Company data [23] ((1 + (1 - Line 25)) x Line 24) x (1 + Line 26)

Summary of Marginal Customer-Related Costs

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54
1	Plant Investment									
2	Meters and regulators	\$439.76	\$439.76	\$1,076.76	\$2,750.07	\$9,332.68	\$3,482.86	\$2,750.07	\$3,995.06	\$11,904.46
3	General plant loading factor	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%
4	Grossed up meter costs	\$463.92	\$463.92	\$1,135.90	\$2,901.12	\$9,845.27	\$3,674.15	\$2,901.12	\$4,214.48	\$12,558.30
5	Fixed charge rate	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%	9.94%
6	Meter carrying costs	\$46.10	\$46.10	\$112.88	\$288.28	\$978.33	\$365.10	\$288.28	\$418.79	\$1,247.92
7	Services	\$4,063.04	\$4,063.04	\$3,796.20	\$6,346.48	\$10,912.52	\$11,893.51	\$6,582.61	\$39,407.48	\$9,647.45
8	General plant loading factor	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%	5.49%
9	Grossed up services costs	\$4,286.19	\$4,286.19	\$4,004.70	\$6,695.05	\$11,511.88	\$12,546.75	\$6,944.15	\$41,571.89	\$10,177.32
10	Fixed charge rate	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%	8.48%
11	Services carrying costs	\$363.48	\$363.48	\$339.61	\$567.76	\$976.24	\$1,064.00	\$588.89	\$3,525.43	\$863.07
12	Total plant carrying costs	\$409.58	\$409.58	\$452.49	\$856.05	\$1,954.57	\$1,429.10	\$877.17	\$3,944.22	\$2,110.99
13	Plant -related A&G loading factor	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%	0.61%
14	Annualized cost	\$412.07	\$412.07	\$455.23	\$861.24	\$1,966.44	\$1,437.78	\$882.50	\$3,968.17	\$2,123.81
15	Operating Expense									
16	Plant-related O&M/customer	\$62.26	\$62.26	\$67.38	\$125.77	\$279.92	\$212.60	\$129.04	\$600.10	\$297.99
17	Customer accounting & marketing expense	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88	\$65.88
18	Non-plant A&G loading factor	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%	66.16%
19	Total O&M expense	\$212.92	\$212.92	\$221.42	\$318.46	\$574.59	\$462.73	\$323.88	\$1,106.61	\$604.61
20	Working Capital									
21	M&S and prepayments rate	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%	1.31%
22	M&S and prepayments cost	\$62.45	\$62.45	\$67.58	\$126.15	\$280.76	\$213.24	\$129.43	\$601.91	\$298.89
23	Working cash allowance (days)	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10	26.10
24	Working cash lag (rate)	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%	7.15%
25	Working cash O&M allowance	\$44.69	\$44.69	\$48.39	\$84.36	\$181.70	\$135.90	\$86.26	\$362.88	\$195.10
26	Total working capital	\$107.14	\$107.14	\$115.96	\$210.51	\$462.47	\$349.14	\$215.69	\$964.80	\$493.99
27	Tax affected cost of capital	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%	9.43%
28	Working capital revenue requirement	\$10.10	\$10.10	\$10.94	\$19.85	\$43.62	\$32.93	\$20.34	\$90.99	\$46.59
29	Customer Related Cost									
30	Annual cost per customer	\$635.09	\$635.09	\$687.59	\$1,199.56	\$2,584.64	\$1,933.44	\$1,226.72	\$5,165.77	\$2,775.01
31	Inflation	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%
32	Annual customer related cost	\$648.71	\$648.71	\$702.34	\$1,225.28	\$2,640.07	\$1,974.90	\$1,253.03	\$5,276.54	\$2,834.51

[1] Company data
[2] MCOS-4
[3] (1 + Line 3) x Line 2
[4] MCOS-5
[5] Line 5 x Line 4
[6] Company data
[7] MCOS-4
[8] (1 + Line 8) x Line 7
[9] MCOS-5
[10] Line 10 x Line 9
[11] Line 11 + Line 6
[12] MCOS-4
[13] (1 + Line 13) x Line 12
[14] MCOS-3
[15] MCOS-3
[16] MCOS-4
[20] (Line 16 + Line 17) x (1 + Line 18)
[21] MCOS-4
[22] (Line 9 + Line 4) x Line 21
[23] Company data
[24] Line 23 / 365
[25] (Line 19 + Line 14) x Line 24
[26] Line 25 + Line 27
[29] Line 28 + Line 19 + Line 14
[31] Line 30 x (1 + Line 31)

Page 3 of 3

Liberty Utilities (EnergyNorth Natural Gas) Corp. Marginal Cost Study

Marginal Cost Estimates

Line	Description	R-1	R3, R-4	G-41	G-42	G-43	G-51	G-52	G-53	G-54	1
1	Bad debt factor	4.38%	3.18%	0.83%	0.15%	0.00%	0.57%	0.05%	0.00%	0.00%	[1]
2	Monthly Charge										
3	Monthly customer charge	\$54.06	\$54.06	\$58.53	\$102.11	\$220.01	\$164.58	\$104.42	\$439.71	\$236.21	[2]
4	Adjustment for uncollectible	\$2.37	\$1.72	\$0.48	\$0.15	\$0.00	\$0.94	\$0.05	\$0.00	\$0.00	[3]
5	Grossed up monthly cust charge	\$56.43	\$55.78	\$59.01	\$102.26	\$220.01	\$165.51	\$104.47	\$439.71	\$236.21	[4]
6	Winter Charge										
7	Distribution charge - pressure support	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	\$8.91	[5]
8	Distribution charge - reinforcement	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	\$131.25	[6]
9	Distribution charge - main extension	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	\$197.30	[7]
10	Adjustment for uncollectible	\$14.78	\$10.73	\$2.79	\$0.51	\$0.00	\$1.93	\$0.17	\$0.00	\$0.00	[8]
11	Grossed up winter charge	\$352.25	\$348.19	\$340.25	\$337.97	\$337.46	\$339.39	\$337.63	\$337.46	\$337.46	[9]
12	Summer Charge										
13	Summer Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	[10]
13	Billing Determinants										
14	Customers	3,549	79,448	9,349	1,423	58	1,319	394	34	28	[11]
15	Design day demand	500	73,735	33,053	40,264	11,556	2,400	5,518	5,921	3,412	[12]
16	Winter demand	50,154	5,266,930	2,191,390	2,937,838	878,444	255,488	594,059	629,151	803,047	[13
17	Summer demand	24,402	1,071,772	306,315	576,528	249,918	157,811	362,434	423,139	1,025,126	[14]
18	Total Marginal Costs										
19	Total customer-related cost (annual)	\$2,403,044	\$53,177,077	\$6,620,165	\$1,745,916	\$153,894	\$2,619,671	\$493,488	\$181,659	\$78,791	[15]
20	Capacity-related, winter										
21	Pressure support	\$4,651	\$677,839	\$296,925	\$359,277	\$102,960	\$21,504	\$49,193	\$52,754	\$30,401	[16
22	Reinforcements	\$68,509	\$9,985,322	\$4,374,030	\$5,292,554	\$1,516,719	\$316,772	\$724,667	\$777,120	\$447,844	[17
23	Main extension	\$102,986	\$15,010,493	<u>\$6,575,286</u>	<u>\$7,956,062</u>	\$2,280,017	\$476,189	\$1,089,360	\$1,168,211	\$673,224	[18]
24	Total winter	\$176,146	\$25,673,655	\$11,246,241	\$13,607,893	\$3,899,697	\$814,464	\$1,863,220	\$1,998,084	\$1,151,469	[19
25	Capacity-related, summer										
26	Capacity related - summer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	[20]
27	Totals										
28	Total Annual Marginal Cost	\$2,579,190	\$78,850,731	\$17,866,407	\$15,353,809	\$4,053,591	\$3,434,135	\$2,356,708	\$2,179,744	\$1,230,261	[21]
29	Share	2.0%	61.6%	14.0%	12.0%	3.2%	2.7%	1.8%	1.7%	1.0%	[22]
30	Unit Costs										
31	\$/customer	\$56.43	\$55.78	\$59.01	\$102.26	\$220.01	\$165.51	\$104.47	\$439.71	\$236.21	[23]
32	Winter (\$/dth)										1
33	Pressure support	\$0.09	\$0.13	\$0.14	\$0.12	\$0.12	\$0.08	\$0.08	\$0.08	\$0.04	[24
34	Reinforcements	\$1.37	\$1.90	\$2.00	\$1.80	\$1.73	\$1.24	\$1.22	\$1.24	\$0.56	[25
35	Main extensions	\$2.05	\$2.85	\$3.00	\$2.71	\$2.60	\$1.86	\$1.83	\$1.86	\$0.84	[26
36	Summer (\$/dth)	\$0.00	\$0.00	\$0.00	<u>\$0.00</u>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	[27
37	Average Annual (\$/dth)	\$2.36	\$4.05	\$4.50	\$3.87	\$3.46	\$1.97	\$1.95	\$1.90	\$0.63	[28]

[1] MCOS-4 [2] MCOS-6 Page 2 Line 32 / 12 [3] Line 1 x Line 3 [4] Line 4 + Line 3 [5] MCOS-6 Page 1 Line 27 [6] MCOS-6 Page 1 Line 27 [7] MCOS-6 Page 1 Line 27

[8] (Line 7 + Line 8 + Line 9) x Line 1 [9] Line 7 + Line 8 + Line 9 + Line 10

[10] Company data

[11] Company data

[12] Company data

[13] Company data [14] Company data

[15] Line 14 x Line 5 x 12

[16] (1 + Line 1) x Line 15 x Line 7 [17] (1 + Line 1) x Line 15 x Line 8

[18] (1 + Line 1) x Line 15 x Line 9

[19] Line 21 + Line 22 + Line 23
[20] Company data
[21] Line 19 + Line 24

[22] Line 28 / Sum of Line 28 [23] Line 5

[24] Line 21 / Line 16 [25] Line 22 / Line 16

[26] Line 23 / Line 16

[27] Line 26 / Line 17

[28] (Line 26 + Line 24) / (Line 16 + Line 17)

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 <u>Summary of Revenue Proof</u>

### Docket No. DG 20-105 Attachment RATES-1 Page 1 of 3

Customer Count - Actual Number of Bills         Jan-19         Feb-19         Mar-19         Apr-19         May-19         Jun-19         Jul-19         Aug-19         Sep-19         Oct-19           1         R-1         3,665         3,392         3,368         3,397         3,523         3,593         3,463         3,530         3,502         3,368           2         R-3         77,739         71,346         71,242         71,330         74,030         74,738         73,127         74,666         72,418         71,237           3         R-4         5,974         6,118         6,221         6,463         6,612         5,983         5,630         5,700         5,442         5,167           4         R-5         74         61         66         69         68         68         76         69         68         73           5         R-6         219         188         189         202         218         232         247         260         255         265           6         R-7         2         7         3         3         4         4         4           7         Total Residential         87,673         81,106         81,094 </th <th>3,318 3, 70,735 77, 5,067 5, 71 273 4 79,468 87, 8,656 9,</th> <th>12 Month           Dec-19         Average           3,623         3,479           77,452         73,355           5,769         5,846           6         4           87,207         82,988           9,933         9,318</th>	3,318 3, 70,735 77, 5,067 5, 71 273 4 79,468 87, 8,656 9,	12 Month           Dec-19         Average           3,623         3,479           77,452         73,355           5,769         5,846           6         4           87,207         82,988           9,933         9,318
Number of Bills         Jan-19         Feb-19         Mar-19         Apr-19         May-19         Jun-19         Jul-19         Aug-19         Sep-19         Oct-19           1         R-1         3,665         3,392         3,368         3,397         3,523         3,593         3,463         3,500         3,502         3,368           2         R-3         77,739         71,346         71,247         71,300         74,738         75,127         74,666         72,418         71,237           3         R-4         5,974         6,118         6,621         6,643         6,612         5,983         5,630         5,700         5,424         5,167           4         R-5         74         61         66         69         68         68         76         69         68         73           5         R-6         219         188         189         202         218         232         247         260         255         265           6         R-7         2         2         7         3         3         3         3         4         4         4           7 total Residential         87,673         81,006         81,465	3,318 3, 70,735 77, 5,067 5, 71 273 4 79,468 87, 8,656 9, 1,351 1,	Dec-19         Average           3,623         3,479           77,452         73,355           5,769         5,846           75         70           283         236           6         4           87,207         82,988           9,933         9,318
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	70,735 77, 5,067 5, 71 273 4 79,468 87, 8,656 9, 1,351 1,	77,452 73,355 5,769 5,846 75 70 283 236 6 4 87,207 82,988 9,933 9,318
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5,067 5, 71 273 4 79,468 87, 8,656 9, 1,351 1,	5,769 5,846 75 70 283 236 6 4 87,207 82,988 9,933 9,318
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	71 273 4 79,468 87, 8,656 9, 1,351 1,	75         70           283         236           6         4           87,207         82,988           9,933         9,318
5         R.6         219         188         189         202         218         232         247         260         255         265           6         R-7         2         2         7         3         3         3         3         3         4         4         4         4           7         Total Residential         87,673         81,066         81,465         84,453         86,617         82,547         84,428         81,689         80,115           8         -	273 4 79,468 87, 8,656 9, 1,351 1,	283         236           6         4           87,207         82,988           9,933         9,318
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4 79,468 87, 8,656 9, 1,351 1,	6 4 87,207 82,988 9,933 9,318
7         Total Residential         87,673         81,106         81,094         81,465         84,453         84,617         82,547         84,428         81,689         80,115           8         9         G-41         10,049         9,080         9,327         9,615         9,351         9,560         9,437         9,182         8,754         8,872           10         G-42         1,485         1,350         1,376         1,414         1,394         1,424         1,421         1,455         1,393         1,397           11         G-43         61         59         55         58         57         57         58         57         59         57           12         G-44         1         2         2         2         2         3         3	79,468 87, 8,656 9, 1,351 1,	87,207 82,988 9,933 9,318
8         9         G-41         10.049         9.080         9.327         9.615         9.351         9.560         9.437         9.182         8.754         8.872           10         G-42         1.485         1.350         1.376         1.414         1.394         1.424         1.421         1.455         1.393         1.397           11         G-43         61         59         55         58         57         57         58         57         59         57           12         G-44         1         2         2         2         2         2         3         3	8,656 9, 1,351 1,	9,933 9,318
10         G-42         1,485         1,350         1,376         1,414         1,394         1,424         1,421         1,455         1,393         1,397           11         G-43         61         59         55         58         57         58         57         58         57         59         57           12         G-44         1         2         2         2         2         2         3         3	1,351 1,	
11         G-43         61         59         55         58         57         57         58         57         59         57           12         G-44         1         2         2         2         2         2         2         3         3		
12 G44 1 2 2 2 2 2 2 2 3 3		1,494 1,413
		59 58
	4	4 2
	7	7 5
14 G-46 0 0 0 0 0 0 0 0 0 0 0	0	0 0
15 G-51 1,390 1,280 1,271 1,284 1,316 1,336 1,309 1,346 1,330 1,265		1,394 1,315
16 G-52 404 364 373 389 382 401 399 402 387 391		429 391
17 G-53 38 36 34 36 34 36 36 33 31 33	33	35 35
18 G-54 29 27 27 29 28 27 27 26 25 24 19 G-55 3 4 2 3 3 3 3 3 3 3	25	29 27
	3	3 3
20 G-56 0 0 0 0 0 0 0 0 0 0 0	0	0 0
21 G-57 0 0 0 0 0 0 0 0 0 0 0	0	0 0
22 G-58 <u>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</u>	1	1 1
23 Total C/I 13,468 12,206 12,474 12,835 12,573 12,850 12,696 12,512 11,992 12,053 24	11,764 13,	13,388 12,567
24 25 Total	91,231 100,	00,595 95,556
Per Books Data		
Actual - Therms billed Jan-19 Feb-19 Mar-19 Apr-19 May-19 Jun-19 Jul-19 Aug-19 Sep-19 Oct-19	Nov-19 De	Dec-19 Total
26 R-1 88,312 89,781 85,523 75,772 61,312 51,500 39,994 32,680 34,468 38,518	50,194 78,	78,635 726,689
		51.572 58.205.415
28 R-4 685,665 832,335 791,552 616,505 385,336 169,582 92,841 79,605 79,388 108,054		58,158 4,635,290
29 R-5 2,459 2,208 2,403 1,506 924 499 454 357 435 696	1,402 2,	2,135 15,478
30 R-6 25,681 25,315 22,848 15,536 9,324 4,598 2,805 2,621 2,751 5,372	15,491 27,	27,991 160,333
31 R-7 182 169 461 158 88 30 26 20 20 52		407 1,803
32 Total Residential 10,327,081 11,462,368 10,321,013 7,251,410 4,213,465 2,303,735 1,321,768 1,124,578 1,160,980 1,688,420 3 33	3,851,290 8,718,	18,899 63,745,008
	1,230,906 3,393,	93,209 24,617,416
35 G-42 5,585,268 6,067,067 5,658,958 4,176,998 2,326,679 1,242,218 624,361 557,180 562,741 937,089 2	2,037,124 4,715,	15,295 34,490,978
36 G-43 1,545,052 1,835,644 1,589,381 1,418,349 888,296 588,694 366,070 349,197 236,954 371,997	654,147 1,254,	54,271 11,098,051
37 G-44 508 896 844 536 285 147 71 64 73 138		2,353 6,646
38 G-45 18,414 17,636 15,951 11,831 6,553 5,647 1,015 430 989 3,951	10,997 23,	23,427 116,841
39 G-46 0 0 0 0 0 0 0 0 0 0 0	0	0 0
40 G-51 457,491 483,241 469,505 380,588 333,668 301,708 249,851 237,833 264,277 259,397	291,596 412,	12,872 4,142,026
41 G-52 1,058,630 1,094,095 1,050,193 906,153 756,556 652,598 579,058 567,763 552,389 629,622		48,628 9,609,204
42 G-53 1,073,624 1,230,849 1,084,725 1,063,450 838,251 776,896 696,615 680,191 697,014 642,704		43,097 10,561,692
		58,296 18,367,621
44 G-55 527 1,081 308 546 313 189 66 9 62 54		437 3,694
45 G-56 0 0 0 0 0 0 0 0 0 0 0	0	0 0
46 G-57 0 0 0 0 0 0 0 0 0 0 0	0	0 0
47 G-58 <u>3,712 3,510 225,768 59,302 63,292 42,032 33,380 35,064 33,476 37,076</u>		64,976) 313,096
48 Total C/I 15,405,988 16,852,474 15,766,771 12,228,043 8,077,112 5,955,271 4,532,987 4,452,647 4,302,022 5,115,070 7 49	7,551,973 13,086,	86,909 113,327,267
50 Total	1,403,263 21,805,	05,807 177,072,274

Docket No. DG 20-105 Attachment RATES-1 Page 2 of 3

Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 <u>Summary of Revenue Proof</u>

								Per Books Data						
	Actual - Base Revenue (Margin) w/o Normal Weather Adjustment	Jan-19	Feb-19	<u>Mar-19</u>	Apr-19	<u>May-19</u>	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Sep-19	<u>Oct-19</u>	<u>Nov-19</u>	Dec-19	Total
1	R-1	\$88,102	\$84,541	\$82,588	\$79,357	\$75,851	\$73,241	\$67,186	\$66,017	\$66,273	\$65,767	\$69,439	\$84,840	\$903,202
2	R-3	\$6,408,219	\$6,855,501	\$6,251,924	\$4,670,732	\$3,178,741	\$2,265,520	\$1,757,764	\$1,699,551	\$1,681,833	\$1,937,904	\$3,050,840	\$5,661,065	\$45,419,593
3	R-4	\$186,824	\$219,993	\$211,632	\$174,548	\$124,565	\$73,282	\$54,466	\$52,380	\$50,774	\$55,454	\$83,448	\$159,434	\$1,446,800
4 5	R-5 R-6	\$2,632 \$22,656	\$2,268 \$21,772	\$2,461 \$20,028	\$2,078 \$15,064	\$1,774 \$10,919	\$1,564 \$7,817	\$1,724 \$6,881	\$1,531 \$7,026	\$1,560 \$7,028	\$1,775 \$9,130	\$2,100 \$16,602	\$2,523 \$25,851	\$23,991 \$170,773
6	R-7	\$70	\$63	\$187	\$70	\$49	\$31	\$33	\$37	\$36	\$48	\$86	\$165	\$876
7	Total Residential	\$6,683,144	\$7,160,034	\$6,546,144	\$4,924,638	\$3,379,156	\$2,412,042	\$1,879,417	\$1,817,948	\$1,798,880	\$2,059,126	\$3,203,727	\$5,905,340	\$47,965,235
9	G-41	\$2,018,048	\$2,104,957	\$2,006,531	\$1,574,033	\$1,049,624	\$767,206	\$632,128	\$596,588	\$580,228	\$651,006	\$911,735	\$1,737,079	\$14,629,163
10	G-42	\$1,992,383	\$2,086,784	\$1,980,377	\$1,582,659	\$1,017,020	\$645,801	\$452,462	\$437,843	\$432,009	\$551,672	\$898,653	\$1,774,036	\$13,851,701
11	G-43	\$437,697	\$510,222	\$445,329	\$403,689	\$259,578	\$110,833	\$84,132	\$82,816	\$74,589	\$85,658	\$124,068	\$365,251	\$2,983,863
12		\$294	\$530	\$531 \$7,299	\$380	\$290	\$211	\$176	\$190	\$259	\$272	\$582	\$1,323	\$5,038
13 14	G-45 G-46	\$9,367 \$0	\$8,037 \$0	\$7,299 \$0	\$5,791 \$0	\$3,907 \$0	\$3,290 \$0	\$1,363 \$0	\$1,179 \$0	\$1,835 \$0	\$3,290 \$0	\$6,029 \$0	\$11,278 \$0	\$62,666 \$0
14	G-51	\$168.535	\$166.450	\$163.492	\$0 \$148.156	\$141.541	\$136.746	\$125.887	\$126.857	\$130.843	\$126.111	\$131.639	\$162.439	\$1.728.696
16	G-52	\$264,983	\$260,610	\$256,120	\$237,092	\$198.080	\$157,032	\$148,361	\$149,222	\$144,568	\$153,404	\$171.040	\$270.114	\$2,410,626
17	G-53	\$205,105	\$229,603	\$204,554	\$202,072	\$159,103	\$88,359	\$82,071	\$79,246	\$78,852	\$76,215	\$93,445	\$182,777	\$1,681,402
18	G-54	\$106,050	\$102,066	\$97,869	\$97,225	\$105,783	\$76,071	\$77,412	\$81,478	\$77,453	\$79,866	\$78,625	\$119,101	\$1,098,999
19	G-55	\$350	\$544	\$258	\$350	\$320	\$275	\$234	\$237	\$250	\$225	\$249	\$345	\$3,637
20	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
22	G-58	\$1,263	\$1,311	\$17,498	\$5,784	\$6,207	\$2,882	\$2,413	\$2,611	\$2,510	\$2,575	\$2,804	(\$15,437)	\$32,420
23 24	Total C/I	\$5,202,461	\$5,469,259	\$5,162,103	\$4,251,097	\$2,934,927	\$1,985,551	\$1,603,993	\$1,555,419	\$1,520,635	\$1,727,495	\$2,415,817	\$4,623,397	\$38,488,210
25	Total	\$11,885,605	\$12,629,293	\$11,708,247	\$9,175,735	\$6,314,082	\$4,397,592	\$3,483,410	\$3,373,367	\$3,319,516	\$3,786,621	\$5,619,544	\$10,528,737	\$86,453,445
								Calculated						
		ļ						Calculated						
	Calculated - Base Revenue (Margin) w/o Normal Weather Adjustment	Jan-19	Feb-19	<u>Mar-19</u>	<u>Apr-19</u>	<u>May-19</u>	<u>Jun-19</u>	Calculated Jul-19	<u>Aug-19</u>	Sep-19	<u>Oct-19</u>	<u>Nov-19</u>	<u>Dec-19</u>	Total
26	w/o Normal Weather Adjustment							Jul-19						
26 27		<u>Jan-19</u> \$88,082 \$6,408,266	Feb-19 \$84,536 \$6,855,612	<u>Mar-19</u> \$82,587 \$6,251,934	<u>Apr-19</u> \$79,370 \$4,670,728	<u>May-19</u> \$75,849 \$3,178,743	<u>Jun-19</u> \$73,240 \$2,265,622		<u>Aug-19</u> \$66,029 \$1,699,931	<u>Sep-19</u> \$66,274 \$1,682,009	<u>Oct-19</u> \$65,770 \$1,937,937	<u>Nov-19</u> \$69,441 \$3,050,906	<u>Dec-19</u> \$84,843 \$5,661,186	<u>Total</u> \$903,243 \$45,420,035
	w/o Normal Weather Adjustment	\$88,082	\$84,536	\$82,587	\$79,370	\$75,849	\$73,240	<u>Jul-19</u> \$67,223	\$66,029	\$66,274	\$65,770	\$69,441	\$84,843	\$903,243
27 28 29	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5	\$88,082 \$6,408,266 \$186,834 \$2,632	\$84,536 \$6,855,612 \$219,992 \$2,268	\$82,587 \$6,251,934 \$211,632 \$2,461	\$79,370 \$4,670,728 \$174,549 \$2,078	\$75,849 \$3,178,743 \$124,553 \$1,774	\$73,240 \$2,265,622 \$73,282 \$1,564	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718	\$66,029 \$1,699,931 \$52,388 \$1,531	\$66,274 \$1,682,009 \$50,775 \$1,560	\$65,770 \$1,937,937 \$55,493 \$1,775	\$69,441 \$3,050,906 \$83,448 \$2,100	\$84,843 \$5,661,186 \$159,435 \$2,523	\$903,243 \$45,420,035 \$1,446,851 \$23,984
27 28 29 30	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-6	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759
27 28 29 30 31	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-6 R-7	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$31	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875
27 28 29 30	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-6	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759
27 28 29 30 31 32	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-6 R-7	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$31	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,778 \$6,865 \$33 \$1,878,854 \$632,176	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$580,226	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875
27 28 29 30 31 32 33 34 35	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 <u>\$49</u> \$3,379,144 \$1,049,622 \$1,016,937	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 <u>\$31</u> \$2,412,144 \$767,205 \$645,801	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$632,176 \$452,447	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$580,226 \$432,012	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036	\$903,243 \$45,420,035 \$1,446,851 \$22,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713
27 28 29 30 31 32 33 34 35 36	w/o Normal Weather Adjustment 	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377 \$445,329	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$2,412,144 \$767,205 \$645,801 \$110,833	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$8,865 \$33 \$1,878,854 \$632,176 \$452,447 \$84,355	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946 \$82,821	\$682,009 \$50,775 \$1,660 \$7,028 \$36 \$1,799,058 \$580,226 \$432,012 \$74,578	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 <u>\$48</u> \$2,059,200 \$651,005 \$551,676 \$85,658	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653 \$124,068	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079
27 28 29 30 31 32 33 34 35 36 37	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44	\$88,082 \$6,408,266 \$186,834 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377 \$445,329 \$534	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,669 \$382	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$291	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$84,355 \$176	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$337 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$580,226 \$432,012 \$74,578 \$259	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251 \$1,323	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048
27 28 29 30 31 32 33 34 35 36 37 38	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$8,037	\$82,587 \$6,251,934 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377 \$445,329 \$534 \$7,299	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$382 \$3,791	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$291 \$3,907	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$31 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211 \$3,290	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$0,865 \$33 \$1,878,854 \$632,176 \$452,447 \$44,355 \$176 \$1,368	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$580,226 \$432,012 \$74,578 \$259 \$1,835	\$657.00 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272 \$3,290	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582 \$582 \$6,029	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251 \$1,323 \$11,278	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$62,646
27 28 29 30 31 32 33 34 35 36 37 38 39	w/o Normal Weather Adjustment ' R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$8,037 \$0	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377 \$445,329 \$534 \$7,299 \$0	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,669 \$403,669 \$382 \$5,791 \$0	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$291 \$3,907 \$0	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$31 \$2,412,144 \$767,205 \$645,801 \$10,833 \$10,833 \$211 \$3,290 \$0	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$84,355 \$176 \$1,368 \$1,368 \$0	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$0	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$336 \$1,799,058 \$432,012 \$74,578 \$259 \$1,835 \$0	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272 \$3,290 \$0	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582 \$6,029 \$0	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251 \$1,323 \$11,278 \$0	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$2,984,079 \$5,048 \$62,646 \$0
27 28 29 30 31 32 33 34 35 36 37 38 39 40	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51	\$88,082 \$6,408,266 \$186,834 \$2,632 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0 \$0 \$168,535	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$8,037 \$0 \$166,452	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$2,006,538 \$1,980,377 \$445,329 \$534 \$7,299 \$0 \$163,492	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$15,064 \$1,574,035 \$1,582,660 \$403,689 \$403,689 \$382 \$5,791 \$0 \$148,156	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$291 \$3,907 \$4,907	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$31 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211 \$3,290 \$0 \$3,290 \$0 \$136,746	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$452,447 \$44,355 \$176 \$1,368 \$10,5891	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$0 \$126,880	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$580,226 \$432,012 \$74,578 \$259 \$1,835 \$0,843	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272 \$,290 \$0 \$126,111	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$3,203,795 \$911,731 \$898,653 \$124,653 \$124,653 \$124,653 \$124,653 \$131,640	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$5,905,464 \$1,777,235 \$1,774,036 \$365,251 \$1,323 \$11,278 \$11,278 \$162,445	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,994,079 \$5,048 \$62,646 \$0 \$1,728,731
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52	\$88,082 \$166,834 \$2,632 \$22,656 <u>\$70</u> \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0 \$1,68,535 \$264,983	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$532 \$8,037 \$00 \$166,452 \$260,610	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$1,980,377 \$445,329 \$534 \$7,299 \$0 \$163,492 \$256,120	\$79,370 \$4,670,728 \$174,549 \$15,064 \$707 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$382 \$5,791 \$0 \$148,156 \$237,092	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$3,379,144 \$1,016,937 \$1,016,937 \$259,578 \$291 \$3,3907 \$0 \$141,541 \$197,504	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211 \$3,290 \$00 \$136,746 \$157,032	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$44,355 \$176 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,48,336	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$337 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$0 \$1,180 \$0 \$149,246	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$336 \$1,799,058 \$432,012 \$74,578 \$259 \$1,835 \$0 \$130,843 \$144,546	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$5551,676 \$85,658 \$272 \$3,290 \$0 \$126,111 \$153,412	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582 \$6,029 \$0 \$131,640 \$171,040	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,774,036 \$365,251 \$1,274,036 \$365,251 \$1,273 \$11,278 \$0 \$162,445 \$270,119	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$22,646 \$00 \$1,728,731 \$2,410,039
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51	\$88,082 \$6,408,266 \$186,834 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0 \$168,535 \$264,983 \$205,105	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$8,037 \$0 \$166,452 \$260,610 \$229,603	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$1,980,377 \$445,329 \$534 \$7,299 \$0 \$163,492 \$266,120 \$204,554	\$79,370 \$4,670,728 \$174,549 \$2,078 \$15,064 \$15,064 \$1,574,035 \$1,582,660 \$403,689 \$3382 \$5,791 \$0 \$148,156 \$237,092 \$202,072	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$29,144 \$1,049,622 \$1,016,937 \$259,578 \$29,144 \$1,049,622 \$1,016,937 \$29,144 \$1,049,622 \$1,016,937 \$20,144 \$1,049,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,622\$1,040,622 \$1,040,620,620\$1,040,620 \$1,040,620,620,620\$1,040,620,620,620,620,620,620,620,620,620,62	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$2,412,144 \$767,205 \$645,801 \$110,833 \$2211 \$3,290 \$3,290 \$136,746 \$157,032 \$88,359	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$84,355 \$452,447 \$84,355 \$1,368 \$1,378 \$1,878 \$1,878 \$1,878 \$1,778 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,878,854 \$1,978 \$	\$66.029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$1,180 \$0 \$126,880 \$149,246 \$79,246	\$66.274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$7,028 \$1,799,058 \$580,226 \$432,012 \$74,578 \$259 \$1,835 \$0 \$130,843 \$144,546 \$78,852	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272 \$3,290 \$0 \$126,111 \$153,412 \$76,215	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$998,653 \$124,068 \$582 \$6,029 \$0 \$131,640 \$131,640 \$93,445	\$84,843 \$5,661,186 \$159,435 \$2,523 \$2,523 \$5,905,464 \$1,774,036 \$365,251 \$1,278 \$1,278 \$1,278 \$1,277,119 \$182,777	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$47,965,748 \$14,629,495 \$13,861,713 \$2,984,079 \$5,048 \$62,646 \$0 \$1,728,731 \$2,410,039 \$1,681,627
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-52 G-53	\$88,082 \$166,834 \$2,632 \$22,656 <u>\$70</u> \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0 \$1,68,535 \$264,983	\$84,536 \$6,855,612 \$219,992 \$2,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$532 \$8,037 \$00 \$166,452 \$260,610	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$1,980,377 \$445,329 \$534 \$7,299 \$0 \$163,492 \$256,120	\$79,370 \$4,670,728 \$174,549 \$15,064 \$707 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$382 \$5,791 \$0 \$148,156 \$237,092	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$3,379,144 \$1,016,937 \$1,016,937 \$259,578 \$291 \$3,3907 \$0 \$141,541 \$197,504	\$73,240 \$2,265,622 \$73,282 \$1,564 \$7,817 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211 \$3,290 \$00 \$136,746 \$157,032	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33 \$1,878,854 \$632,176 \$452,447 \$44,355 \$176 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,48,336	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$337 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$0 \$1,180 \$0 \$149,246	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$336 \$1,799,058 \$432,012 \$74,578 \$259 \$1,835 \$0 \$130,843 \$144,546	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$5551,676 \$85,658 \$272 \$3,290 \$0 \$126,111 \$153,412	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582 \$6,029 \$0 \$131,640 \$171,040	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$165 \$5,905,464 \$1,774,036 \$365,251 \$1,274,036 \$365,251 \$1,273 \$11,278 \$0 \$162,445 \$270,119	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$22,646 \$00 \$1,728,731 \$2,410,039
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-52 G-53 G-54	\$88,082 \$6,408,266 \$186,834 \$22,656 \$70 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$9,340 \$0 \$186,535 \$264,983 \$205,105 \$106,050	\$84,536 \$6,855,612 \$219,992 \$22,268 \$21,772 \$63 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$532 \$8,037 \$0 \$166,452 \$260,610 \$229,603 \$102,066	\$82,587 \$6,251,934 \$211,632 \$2,461 \$20,028 \$187 \$6,546,153 \$1,980,377 \$445,329 \$534 \$7,299 \$0 \$63,492 \$256,120 \$204,554 \$97,869	\$79,370 \$4,670,728 \$174,549 \$15,064 \$15,064 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$15,82,660 \$403,689 \$382 \$5,791 \$0 \$148,156 \$237,092 \$202,072 \$97,225	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 <u>\$49</u> \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$259,578 \$3,907 \$0 \$141,541 \$197,504 \$159,103 \$105,783	\$73,240 \$2,265,622 \$1,564 \$7,817 \$31 \$2,412,144 \$767,205 \$645,801 \$110,833 \$211 \$3,220 \$0 \$136,746 \$157,032 \$88,359 \$76,071	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$8,865 \$33 \$1,878,854 \$632,176 \$452,447 \$452,447 \$452,447 \$452,447 \$1,368 \$1,3	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$37 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$0 \$149,246 \$79,246 \$79,246 \$79,246	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$432,012 \$74,578 \$432,012 \$74,578 \$259 \$1,305 \$130,843 \$144,546 \$78,852 \$77,453	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,658 \$272 \$3,290 \$0 \$126,111 \$153,412 \$76,215 \$79,884	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$86 \$3,203,795 \$911,731 \$898,653 \$124,068 \$582 \$6,029 \$0 \$131,640 \$171,040 \$171,040 \$78,625	\$84,843 \$5,661,186 \$159,435 \$2,523 \$25,851 \$5,905,464 \$1,777,036 \$365,251 \$1,774,036 \$365,251 \$1,774,036 \$365,251 \$1,323 \$11,278 \$0 \$1,277 \$119,101	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$22,646 \$50,648 \$22,646 \$50,648 \$22,410,039 \$1,681,627 \$1,099,286
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-52 G-53 G-54 G-55 G-56 G-57 Complete Complete Comp	\$88.082 \$6,408,266 \$166,834 \$2,632 \$2,22,2656 \$700 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$3,940 \$0,500 \$166,535 \$264,983 \$205,105 \$106,600 \$3500 \$350 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$94,536 \$6,855,612 \$2,298 \$2,268 \$2,1772 \$2,086,784 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$8,037 \$106,452 \$280,610 \$229,603 \$106,452 \$229,603 \$102,529,633 \$102,524 \$229,603 \$102,524 \$229,525 \$220,525 \$220,5	\$82.587 \$6.251.934 \$211.632 \$214.641 \$20.028 \$187 \$6.546.153 \$2.006.538 \$1.980.377 \$445.329 \$0 \$163.492 \$256.120 \$2264.554 \$2264.554 \$2588 \$0 \$2588 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$79,370 \$4,670,728 \$174,549 \$2,078 \$1,510,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$382 \$3,152,660 \$403,689 \$382 \$3,1574,035 \$1,456 \$237,092 \$202,072 \$372,027 \$350,072 \$350 \$350 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$1,016,937 \$259,578 \$0 \$141,541 \$197,504 \$159,103 \$105,783 \$105,795	\$73,240 \$2,265,622 \$7,317 \$7,317 \$2,412,144 \$767,205 \$645,801 \$110,833 \$110,835\$\$110,835\$\$110,835\$\$110,855\$\$110	<u>Jul-19</u> \$77,223 \$17,57,160 \$54,471 \$1,78 \$6,865 \$6,865 \$3,865 \$1,978,854 \$632,176 \$452,447 \$443,547 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491\$1,444,491 \$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,4455\$1,444,4455\$1,4455\$1,4455\$1,4455\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$	\$66,029 \$1,699,931 \$52,2388 \$1,531 \$7,028 \$37,028 \$37,946 \$82,821 \$1,818,349 \$437,946 \$82,821 \$1,180\$1,180\$1,180\$\$1,180\$\$1,180\$\$1,180\$1	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$36,226 \$432,012 \$74,578 \$259 \$130,843 \$144,546 \$74,852 \$144,546 \$74,852 \$144,546 \$77,852 \$77,78,852 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$145,546 \$144,546 \$145,546 \$146,546 \$156,5566 \$156,5566\$}	\$65,770 \$1,937,937 \$55,493 \$1,775 \$8,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,668 \$2,722 \$3,290 \$0 \$126,111 \$153,412 \$76,824 \$276,215 \$76,824 \$2255 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$866 \$3,203,795 \$911,731 \$898,653 \$124,068 \$3124,068 \$622 \$6,029 \$00 \$131,640 \$171,040 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$132,650,966 \$133,650,966 \$132,650,9660,966 \$132,650,9666 \$132,650,9666,9666,9666,9666,96666,9666,9666	\$84,843 \$5,661,186 \$159,435 \$2,523 \$2,5,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251 \$1,278 \$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$62,646 \$0 \$1,728,731 \$2,410,039 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,682,859 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	w/o Normal Weather Adjustment                    R-1             R-3             R-4             R-5             R-7             Total Residential               G-41             G-42             G-43             G-44             G-43             G-44             G-45             G-45             G-52             G-53             G-54             G-55             G-55	\$88.082 \$6,408,266 \$186,84 \$2,632 \$2,252 \$6,683,182 \$2,018,047 \$1,962,333 \$437,697 \$296 \$9,340 \$0 \$5,264,983 \$205,105 \$106,050 \$106,050 \$350 \$106,050\$100\$100\$100\$100\$100\$100\$100\$100\$100\$	\$84,536 \$6,855,612 \$219,902 \$2,268 \$7,160,140 \$2,104,957 \$2,048,734 \$510,222 \$532 \$510,222 \$8,037 \$0 \$2,048,734 \$102,026 \$229,603 \$102,026 \$544 \$0 \$229,603 \$102,026 \$103,114 \$102,026 \$103,114\$\$103,114\$	\$82.587 \$6,251,934 \$21,416 \$20,028 \$18,47 \$6,546,153 \$200,6546,153 \$200,6546,153 \$200,6546,153 \$200,554 \$204,554 \$7,299 \$0 \$204,554\$205 \$205 \$205 \$205 \$205 \$205 \$205 \$205	\$79,370 \$4,670,728 \$174,549 \$2,078 \$1,549 \$2,078 \$1,540,647 \$1,542,647 \$1,542,6647 \$1,582,660 \$3,822 \$5,791 \$49,216 \$2,729 \$3,500 \$0 \$0 \$5,784	\$75,849 \$3,178,743 \$124,853 \$1,774 \$1,0,919 \$4,97 \$3,379,144 \$1,046,822 \$1,016,837 \$259,576 \$259,576 \$259,576 \$259,576 \$3,907 \$0 \$141,1541 \$19,75,64 \$159,103 \$105,783 \$3200 \$0 \$5207 \$200 \$200 \$200 \$200 \$200 \$200 \$200 \$	\$73,240 \$2,265,622 \$1,564 \$7,817 \$2,412,144 \$767,205 \$445,801 \$110,833 \$110,835 \$110,855 \$110,855 \$110,855 \$110,855\$\$100	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33,176 \$452,447 \$84,355 \$1,878,854 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,577,691 \$1,42,336 \$1,22,497 \$1,42,336 \$1,22,497 \$1,42,336 \$1,22,497 \$1,42,497\$1,42,497 \$1,42,497\$1,42,42,497\$1,42,497\$1,42,42,	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$337 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,1478 \$238 \$0 \$0 \$0 \$2,613	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$33,0058 \$1,799,058 \$50,226 \$432,012 \$74,578 \$259 \$1,835 \$130,843 \$144,546 \$78,852 \$77,453 \$250 \$0 \$30 \$130,843 \$145,546 \$130,843 \$145,546 \$130,843 \$145,546 \$130,843 \$145,546 \$130,845 \$130,845 \$130,845 \$130,845 \$150,9566 \$150,9566\$150,9566\$150,9566\$150,9566\$150,9566\$150,9566\$1	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$551,075 \$551,075 \$551,075 \$5551,075 \$3,290 \$0 \$126,111 \$153,412 \$76,215 \$79,884 \$2255 \$0 \$0 \$50 \$51,884 \$2255 \$0 \$0 \$50 \$51,884 \$2255 \$0 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$5	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 <u>\$86</u> \$3,203,795 \$911,731 \$998,653 \$124,068 \$124,068 \$124,068 \$124,068 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$132,840 \$131,640 \$131,640 \$132,840 \$131,640 \$132,640 \$131,640 \$132,640\$\$132,640\$\$100,640\$\$100,640\$\$102,64	\$84,843 \$5,661,186 \$159,435 \$2,625,851 \$162 \$5,905,464 \$1,777,235 \$1,774,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,755,055\$	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$8775 \$47,965,748 \$13,851,713 \$2,984,079 \$5,048 \$62,846 \$05 \$1,728,731 \$2,410,039 \$1,681,627 \$1,009,286 \$3,639\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$3,639\$\$\$\$3,639\$\$\$3,639\$\$\$\$3,639\$\$\$\$3,639\$\$\$\$3,639\$\$\$\$\$3,639\$\$\$\$3,639\$\$\$\$3,639\$\$\$\$\$3,639\$\$\$\$\$\$3,639\$\$\$\$\$\$\$\$\$\$
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	w/o Normal Weather Adjustment R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-52 G-53 G-54 G-55 G-56 G-57 Complete Complete Comp	\$88.082 \$6,408,266 \$166,834 \$2,632 \$2,22,2656 \$700 \$6,683,182 \$2,018,047 \$1,992,383 \$437,697 \$296 \$3,940 \$0,500 \$166,535 \$264,983 \$205,105 \$106,600 \$3500 \$350 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$94,536 \$6,855,612 \$2,298 \$2,268 \$2,1772 \$2,086,784 \$7,160,140 \$2,104,957 \$2,086,784 \$510,222 \$8,037 \$106,452 \$280,610 \$229,603 \$106,452 \$229,603 \$102,529,633 \$102,524 \$229,603 \$102,524 \$229,525 \$220,525 \$220,5	\$82.587 \$6.251.934 \$211.632 \$214.641 \$20.028 \$187 \$6.546.153 \$2.006.538 \$1.980.377 \$445.329 \$0 \$163.492 \$256.120 \$2264.554 \$2264.554 \$2588 \$0 \$2588 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$2588 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$79,370 \$4,670,728 \$174,549 \$2,078 \$1,510,064 \$70 \$4,924,647 \$1,574,035 \$1,582,660 \$403,689 \$382 \$3,152,660 \$403,689 \$382 \$3,1574,035 \$1,456 \$237,092 \$202,072 \$372,027 \$350,072 \$350 \$350 \$0 \$0 \$0 \$0 \$0	\$75,849 \$3,178,743 \$124,553 \$1,774 \$10,919 \$49 \$3,379,144 \$1,049,622 \$1,016,937 \$259,578 \$1,016,937 \$259,578 \$0 \$141,541 \$197,504 \$159,103 \$105,783 \$105,795	\$73,240 \$2,265,622 \$7,317 \$7,317 \$2,412,144 \$767,205 \$645,801 \$110,833 \$110,835\$\$110,835\$\$110,835\$\$110,855\$\$110	<u>Jul-19</u> \$77,223 \$17,57,160 \$54,471 \$1,78 \$6,865 \$6,865 \$3,865 \$1,978,854 \$632,176 \$452,447 \$443,547 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,336 \$1,228,891 \$1,443,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491 \$1,444,491\$1,444,491\$1,444,491 \$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,491\$1,444,4455\$1,444,4455\$1,4455\$1,4455\$1,4455\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$1,445\$	\$66,029 \$1,699,931 \$52,2388 \$1,531 \$7,028 \$37,028 \$37,946 \$82,821 \$1,818,349 \$437,946 \$82,821 \$1,180\$1,180\$1,180\$\$1,180\$\$1,180\$\$1,180\$1	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$36 \$1,799,058 \$36,226 \$432,012 \$74,578 \$259 \$130,843 \$144,546 \$74,852 \$144,546 \$74,852 \$144,546 \$77,852 \$77,78,852 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$144,546 \$145,546 \$144,546 \$145,546 \$146,546 \$156,5566 \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$ \$156,5566\$\$156,5566\$ \$156,5566\$ \$156,5566\$\$156,5566\$ \$156,5566\$\$156,5566\$ \$156,5566\$\$156,5566\$ \$156,5566\$\$156,5566\$\$156,5566\$ \$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$156,5566\$\$1566\$\$1566\$\$1566\$\$1566\$\$15666\$\$1566\$\$1566\$\$1566\$\$1566\$\$1566\$\$1566\$\$1566\$\$1566\$\$	\$65,770 \$1,937,937 \$55,493 \$1,775 \$8,130 \$48 \$2,059,200 \$651,005 \$551,676 \$85,668 \$2,722 \$3,290 \$0 \$126,111 \$153,412 \$76,824 \$276,215 \$76,824 \$2255 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 \$866 \$3,203,795 \$911,731 \$898,653 \$124,068 \$3124,068 \$622 \$6,029 \$00 \$131,640 \$171,040 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$132,650,966 \$133,650,966 \$132,650,9660,966 \$132,650,9666 \$132,650,9666,9666,9666,9666,96666,9666,9666	\$84,843 \$5,661,186 \$159,435 \$2,523 \$2,5,851 \$165 \$5,905,464 \$1,737,235 \$1,774,036 \$365,251 \$1,278 \$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,278\$\$10,	\$903,243 \$45,420,035 \$1,446,851 \$23,984 \$170,759 \$875 \$47,965,748 \$14,629,495 \$13,851,713 \$2,984,079 \$5,048 \$62,646 \$0 \$1,728,731 \$2,410,039 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,681,627 \$1,682,859 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 5 46 47 48	w/o Normal Weather Adjustment                    R-1             R-3             R-4             R-5             R-7             Total Residential               G-41             G-42             G-43             G-44             G-43             G-44             G-45             G-45             G-52             G-53             G-54             G-55             G-55	\$88.082 \$6.408.266 \$2.632 \$2.632 \$2.632 \$2.2656 \$2.2656 \$2.2656 \$2.018.047 \$1.902.383 \$43762 \$9.340 \$1.902.383 \$43762 \$2.945,903 \$2.015,105 \$2.024,903 \$1.065,000 \$1.063 \$5.202,436	\$84,536 \$6,855,612 \$219,902 \$2,268 \$7,160,140 \$2,104,957 \$2,048,734 \$510,222 \$532 \$510,222 \$8,037 \$0 \$2,048,734 \$102,026 \$229,603 \$102,026 \$544 \$0 \$229,603 \$102,026 \$103,114 \$102,026 \$103,114\$\$103,114\$	\$82.587 \$6,251,934 \$211,632 \$2,461 \$2,00,28 \$187 \$6,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,546,153 \$2,006,153\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,155\$}2,006,	\$79,370 \$4,670,728 \$174,549 \$2,078 \$1,549 \$2,078 \$1,540,647 \$1,542,647 \$1,542,6647 \$1,582,660 \$3,822 \$5,791 \$49,216 \$2,729 \$3,500 \$0 \$0 \$5,784	\$75,849 \$3,178,743 \$124,853 \$1,774 \$1,0,919 \$4,97 \$3,379,144 \$1,046,822 \$1,016,837 \$259,576 \$259,576 \$259,576 \$259,576 \$3,907 \$0 \$141,1541 \$19,75,64 \$159,103 \$105,783 \$3200 \$0 \$5207 \$200 \$200 \$200 \$200 \$200 \$200 \$200 \$	\$73,240 \$2,265,622 \$1,564 \$7,817 \$2,412,144 \$767,205 \$445,801 \$110,833 \$110,835 \$110,855 \$110,855 \$110,855 \$110,855\$\$100	<u>Jul-19</u> \$67,223 \$1,757,160 \$54,471 \$1,718 \$6,865 \$33,176 \$452,447 \$84,355 \$1,878,854 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,368 \$1,577,691 \$1,42,336 \$1,22,497 \$1,42,336 \$1,22,497 \$1,42,336 \$1,22,497 \$1,42,497\$1,42,497 \$1,42,497\$1,42,42,497\$1,42,497\$1,42,42,	\$66,029 \$1,699,931 \$52,388 \$1,531 \$7,028 \$337 \$1,818,349 \$596,717 \$437,946 \$82,821 \$190 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,180 \$1,1478 \$238 \$0 \$0 \$0 \$2,613	\$66,274 \$1,682,009 \$50,775 \$1,560 \$7,028 \$33,0058 \$1,799,058 \$50,226 \$432,012 \$74,578 \$259 \$1,835 \$130,843 \$144,546 \$78,852 \$77,453 \$250 \$0 \$30 \$130,843 \$145,546 \$130,843 \$145,546 \$130,843 \$145,546 \$130,843 \$145,546 \$130,845 \$130,845 \$130,845 \$130,845 \$150,9566 \$150,9566\$150,9566\$150,9566\$150,9566\$150,9566\$150,9566\$1	\$65,770 \$1,937,937 \$55,493 \$1,775 \$9,130 \$48 \$2,059,200 \$551,075 \$551,075 \$551,075 \$5551,075 \$3,290 \$0 \$126,111 \$153,412 \$76,215 \$79,884 \$2255 \$0 \$0 \$50 \$51,884 \$2255 \$0 \$0 \$50 \$51,884 \$2255 \$0 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$5	\$69,441 \$3,050,906 \$83,448 \$2,100 \$16,602 <u>\$86</u> \$3,203,795 \$911,731 \$808,653 \$124,068 \$124,068 \$124,068 \$52,804 \$171,040 \$131,640 \$131,640 \$131,640 \$131,640 \$131,640 \$134,650 \$131,640 \$131,640 \$134,650 \$131,640 \$134,650 \$131,650 \$131,650 \$131,650 \$131,650 \$131,650 \$131,650 \$131,650 \$132,650 \$131,650 \$131,650 \$131,650 \$132,650 \$131,650 \$132,650 \$131,650 \$132,650 \$131,650 \$132,650 \$131,650 \$132,650 \$131,650 \$132,650 \$152,650\$\$152,650	\$84,843 \$5,661,186 \$159,435 \$2,625,851 \$162 \$5,905,464 \$1,777,235 \$1,774,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055 \$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,775,055\$\$1,755,055\$	\$903.243 \$45,420.035 \$23,944 \$170,755 \$47,965,745 \$14,629,495 \$2,984,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075 \$2,985,075,075 \$2,985,075,075 \$2,985,075,075 \$2,985,075,075,075 \$2,985,075,075,075,075,075,075,075,075,075,07

Docket No. DG 20-105

Exhibit 35

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 <u>Summary of Revenue Proof</u>

Docket No. DG 20-105 Attachment RATES-1 Page 3 of 3

		r						Calculated						
	Calculated to Actual	1												
	Difference - Base Revenue (Margin)	Jan-19	Feb-19	<u>Mar-19</u>	Apr-19	<u>May-19</u>	<u>Jun-19</u>	<u>Jul-19</u>	<u>Aug-19</u>	Sep-19	Oct-19	<u>Nov-19</u>	Dec-19	Total
1 2	R-1 R-3	\$20 \$47	<mark>(\$5)</mark> \$111	<mark>(\$1)</mark> \$10	\$12 (\$4)	(\$2) \$2	<mark>(\$1)</mark> \$103	\$36 (\$604)	\$12 \$381	\$1 \$176	\$3 \$32	\$1 \$66	\$3 \$121	\$81 \$442
2	R-3 R-4	\$47 \$11	(\$1)	\$10 (\$0)	(\$4) \$1	(\$12)	(\$0)	(\$604) \$4	\$361	\$176	\$32 \$39	300 \$0	\$121	\$442
4	R-5	\$0	\$0	\$0	(\$0)	\$0	\$0	(\$7)	\$9 \$0	\$0	\$0	\$0 \$0	\$0	(\$7)
5	R-6	\$0	\$0	\$0	\$0	\$0	(\$0)	(\$16)	\$2	\$0	\$0	\$0	\$0	(\$14)
6	R-7	(\$0)	(\$0)	(\$0)	\$0	\$0	\$0	(\$0)	\$0	\$0	\$0	\$0	\$0	(\$0)
7	Total Residential	\$77	\$105	\$9	\$9	(\$11)	\$102	(\$586)	\$403	\$177	\$74	\$68	\$124	\$552
9	G-41	(\$1)	\$0	\$6	\$3	(\$2)	(\$1)	\$48	\$128	(\$2)	(\$1)	(\$4)	\$156	\$332
10 11		\$0 (\$0)	(\$0) \$0	\$0 \$0	\$0 \$0	(\$83) \$0	\$0 \$0	(\$15) \$223	\$103 \$5	\$3	\$4 \$0	\$0 \$0	\$0 \$0	\$12 \$217
12		(\$0) \$1	\$0 \$2	\$0 \$3	\$0 \$2	\$2	\$0 \$0	\$223 \$0	\$5 \$0	(\$11) \$0	\$0 \$0	\$0 \$0	\$0	\$217
12		(\$26)	\$2 \$0	\$3 \$0	\$2 \$0	\$2 \$0	\$0 \$0	\$U \$5	\$0 \$1	\$0	\$0 \$0	\$0 \$0	\$0 \$0	(\$20)
14		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15		\$0	\$2	\$0	\$0	(\$0)	\$0	\$3	\$22	\$0	(\$0)	\$1	\$6	\$35
16		\$0	\$0	\$0	\$0	(\$576)	\$0	(\$25)	\$24	(\$22)	\$8	\$0	\$5	(\$587)
17	G-53	\$0	\$0	(\$0)	\$0	\$0	\$0	\$226	\$0	\$0	\$0	\$0	\$0	\$226
18		\$0	(\$0)	\$0	\$0	\$0	\$0	\$269	\$0	\$0	\$18	\$0	(\$0)	\$287
19		\$0	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$1
20		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
21 22		\$0 \$0	\$0 \$0	\$0 (\$32)	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$9	\$0 \$3	\$0 \$0	\$0 \$0	\$0 \$0	\$0 (\$170)	\$0 (\$191)
22		(\$26)	\$0	(\$32)	\$U \$5	(\$659)	(\$0)	\$9	\$287	(\$31)	\$0	(\$4)	(\$170)	\$323
24 25		\$52	\$110	(\$14)	\$15	(\$671)	\$102	\$158	\$690	\$146	\$103	\$64	\$120	\$875
								Calculated						
	Actual to Calculated													
	Pct Diff - Base Revenue (Margin)	Jan-19	Feb-19	Mar-19	Apr-19	May-19		Jul-19		Sep-19				
26							<u>Jun-19</u>	001-13	Aug-19		Oct-19	Nov-19	Dec-19	Total
27		0.0%	(0.0%)	(0.0%)	0.0%	(0.0%)	(0.0%)	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
		0.0%	0.0%	0.0%	(0.0%)	(0.0%) 0.0%	(0.0%) 0.0%	0.1% (0.0%)	0.0%	0.0% 0.0%	0.0%	0.0%	0.0% 0.0%	0.0% 0.0%
28	R-4	0.0%	0.0%	0.0%	(0.0%) 0.0%	(0.0%) 0.0% (0.0%)	(0.0%) 0.0% (0.0%)	0.1% (0.0%) 0.0%	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%	0.0% 0.0% 0.1%	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%	0.0% 0.0% 0.0%
29	R-4 R-5	0.0% 0.0% 0.0%	0.0% (0.0%) 0.0%	0.0% (0.0%) 0.0%	(0.0%) 0.0% (0.0%)	(0.0%) 0.0% (0.0%) 0.0%	(0.0%) 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%)	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% (0.0%)
29 30	R-4 R-5 R-6	0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%)	0.1% (0.0%) 0.0% (0.4%) (0.2%)	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%)
29	R-4 R-5 R-6 R-7 Total Residential	0.0% 0.0% 0.0%	0.0% (0.0%) 0.0%	0.0% (0.0%) 0.0%	(0.0%) 0.0% (0.0%)	(0.0%) 0.0% (0.0%) 0.0%	(0.0%) 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%)	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% (0.0%)
29 30 31 32	R-4 R-5 R-6 R-7 Total Residential	0.0% 0.0% 0.0% (0.0%)	0.0% (0.0%) 0.0% 0.0% (0.0%)	0.0% (0.0%) 0.0% 0.0% (0.1%)	(0.0%) 0.0% (0.0%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%)	0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) (0.0%)
29 30 31 32 33 34 35	R-4 R-5 R-7 Total Residential G-41 G-42	0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0%	0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0% 0.0% (0.0%)	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%)	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%)	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0%
29 30 31 32 33 34 35 36	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43	0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%)	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.1% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0%
29 30 31 32 33 34 35 36 37	R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44	0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.4%	0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.5%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.2%
29 30 31 32 33 34 35 36 37 38	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45	0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.4% (0.3%)	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.4% 0.0%	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.6% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1% 0.1% 0.4%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%)
29 30 31 32 33 34 35 36 37 38 39	R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-45 G-45 G-46	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.4% (0.3%) 0.0%	0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% (0.1%) 0.0% 0.0% 0.0% 0.0% 0.5% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1% 0.4% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.2% (0.0%) 0.0%
29 30 31 32 33 34 35 36 37 38 39 40	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-45	0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.4% (0.3%) 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% (0.1%) 0.0% 0.0% 0.0% 0.0% 0.5% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1% 0.4% 0.4% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% (0.0% 0.2% (0.0%) 0.0%
29 30 31 32 33 34 35 36 37 38 39 40 41	R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52	0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.4% (0.3%) 0.0% 0.0%	0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.4% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0% 0.0% 0.5% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.6% 0.6% 0.0% 0.0	(0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1% 0.3% 0.4% 0.0% (0.0%)	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%)
29 30 31 32 33 34 35 36 37 38 39 40 41 42	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-51 G-52 G-53	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.6% 0.6% 0.0% (0.0%) (0.3%) (0.3%) (0.3%)	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) (0.4%) (0.2%) (0.5%) (0.5%) (0.0%) (0.0%) 0.3% 0.1% 0.4% 0.0% (0.0%) 0.3%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% (0.0% 0.0% 0.0
29 30 31 32 33 34 35 36 37 38 39 40 41	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-52 G-53 G-54	0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.4% (0.3%) 0.0% 0.0%	0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.4% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% (0.1%) 0.0% 0.0% 0.0% 0.5% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.6% 0.6% 0.0% 0.0	(0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.5%) (0.0%) 0.0% (0.0%) 0.3% 0.1% 0.3% 0.4% 0.0% (0.0%)	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%)
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-51 G-52 G-53 G-54 G-55 G-56 G-56 G-56	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.6% 0.0% 0.0	(0.0%) 0.0% 0.0% 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% (0.0% 0.0% 0.0% 0.0% 0.0	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.0%) 0.0% (0.0%) 0.0% 0.3% 0.1% 0.4% 0.0% 0.0% 0.0% 0.0% 0.3% 0.3%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% (0.0% (0.0%) 0.0% (0.0%) 0.0%
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-51 G-52 G-54 G-55 G-55 G-56 G-56	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1% (0.0%) (0.4%) (0.2%) (0.5%) (0.0%) (0.0%) 0.3% 0.1% 0.1% 0.4% 0.0% (0.0%) 0.3% 0.3% 0.3% 0.3% 0.3% 0.4%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% (0.0%) 0.0%
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-45 G-54 G-53 G-54 G-55 G-55 G-57 G-58	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% (0.0%) 0.0% 0.4% 0.4% 0.4% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.1%           (0.0%)           0.3%           (0.4%)           (0.2%)           (0.5%)           (0.0%)           0.0%           0.0%           0.0%           0.3%           0.3%           0.3%           0.3%           0.3%           0.3%           0.4%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%
29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-45 G-46 G-45 G-45 G-55 G-56 G-55 G-56 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-57 G-58 G-58 G-58 G-58 G-58 G-58 G-58 G-58	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0.0%) 0.0% (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	(0,0%) 0,0% (0,0%) 0,0% 0,0% (0,0%) (0,0%) (0,0%) 0,0% 0,	(0.0%) 0.0% (0.0%) 0.0% (0.0%) 0.0%	0.1% (0.0%) 0.0% (0.4%) (0.2%) (0.2%) (0.0%) 0.0% 0.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.3% 0.3% 0.3% 0.3	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	0.0% 0.0% (0.0%) (0.0%) 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Fixed Billing Determinants

### Docket No. DG 20-105 Attachment RATES-2 Page 1 of 8

Deve	elopment of Fixed Billing Determinants													Page 1 of 8
	Ţ						P	er Books Data						
	Customer Count - Actual													12 Month
	Number of Bills	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Average
1	R-1	3,665	3,392	3,368	3,397	3,523	3,593	3,463	3,530	3,502	3,368	3,318	3,623	3,479
2	R-3	77,739	71,346	71,242	71,330	74,030	74,738	73,127	74,866	72,418	71,237	70,735	77,452	73,355
3	R-4	5,974	6,118	6,221	6,463	6,612	5,983	5,630	5,700	5,442	5,167	5,067	5,769	5,846
4	R-5	74	61	66	69	68	68	76	69	68	73	71	75	70
5	R-6	219	188	189	202	218	232	247	260	255	265	273	283	236
6	R-7	2	2	7	3	3	3	3	4	4	4	4	6	4
7 8	Total Residential	87,673	81,106	81,094	81,465	84,453	84,617	82,547	84,428	81,689	80,115	79,468	87,207	82,988
9	G-41	10,049	9,080	9,327	9,615	9,351	9,560	9,437	9,182	8,754	8,872	8,656	9,933	9,318
10		1,485	1,350	1,376	1,414	1,394	1,424	1,421	1,455	1,393	1,397	1,351	1,494	1,413
11		61	59	55	58	57	57	58	57	59	57	57	59	58
12		1	2	2	2	2	2	2	2	3	3	4	4	2
13 14		8	4	4	4	4 0	4	4	4	0	0	0	0	5
15		1,390	1,280	1,271	1,284	1,316	1,336	1,309	1,346	1,330	1,265	1,257	1,394	1,315
16		404	364	373	389	382	401	399	402	387	391	370	429	391
17		38	36	34	36	34	36	36	33	31	33	33	35	35
18		29	27	27	29	28	27	27	26	25	24	25	29	27
19		3	4	2	3	3	3	3	3	3	3	3	3	3
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22		1	1	1	1	1	1	1	1	1	1	1	1	1
23 24	Total C/I	13,468	12,206	12,474	12,835	12,573	12,850	12,696	12,512	11,992	12,053	11,764	13,388	12,567
	Total	101,141	93,312	93,568	94,300	97,026	97,467	95,244	96,940	93,681	92,167	91,231	100,595	95,556
	Ľ							Calculated						
	Calendarization													12 Month
	Adjustment - Bills	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Average
26		(109)	(184)	185	38	27	(161)	69	10	(75)	168	111	(76)	0
	R-3	(3,172)	(3,841)	3,616	1,040	579	(2,689)	1,254	(483)	(183)	3,788	2,237	(1,442)	59
28		232	(521)	(52)	(588)	(657)	(303)	80	(130)	(133)	495	812	105	(55)
29		(36)	(18)	(19)	(16)	(13)	(4)	(10)	(8)	(1)	(6)	(1)	(5)	(11)
30		(133)	(93)	(89)	(78)	(72)	(52)	(56)	(82)	(53)	(54)	(40)	(46)	(71)
	R-7	(1)	(1)	(6)	(1)	(0)	0	(0)	(1)	(1)	(1)	(1)	(3)	(1)
32 33	Total Residential	(3,219)	(4,658)	3,635	396	(135)	(3,210)	1,335	(693)	(445)	4,390	3,117	(1,467)	(79)
34	G-41	(328)	(270)	431	(220)	183	(515)	(230)	(36)	111	538	760	(90)	28
35		(47)	(50)	63	(32)	30	(53)	17	(3)	9	64	76	(17)	5
36		(1)	(6)	3	(4)	(2)	(5)	(5)	(8)	(11)	(7)	(8)	(6)	(5)
37		0	(0)	(0)	0	(0)	(0)	0	1	(0)	1	0	(0)	0
38	G-45	(3)	(1)	0	0	0	(0)	0	2	1	1	0	0	0
39	G-46	0	1	2	3	4	5	6	7	8	9	10	11	6
40		(51)	(71)	66	7	11	(52)	34	8	(27)	85	51	(47)	1
	G-52	(14)	(11)	19	(8)	15	(16)	2	4	5	18	31	(12)	3
	G-53	(0)	(2)	1	(1)	2	(1)	(2)	(0)	2	1	0	(1)	(0)
43		(1)	(1)	1	(2)	0	0	0	0	0	2	0	(2)	(0)
	G-55	0	(1)	1	0	(0)	0	0	(0)	(0)	0	0	0	0
	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46		0	0	0	0	0	0	0	0 (0)	0	0	0	0	0
47	G-58 Total C/I	(444)	(0) (412)	589	(256)	242	(636)	(177)	(0)	(0) 99	711	921	(165)	(0) 37
49														
	Total	(3.663)	(5,070)	4,223	139	107	(3,846)	1,158	(720)	(347)	5,102	4,039	(1,631)	(42)

Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Fixed Billing Determinants

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	Calendar Month - Bills	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 Month Average
1	R-1	3,556	3,208	3,554	3,435	3,550	3,433	3,532	3,541	3,426	3,536	3,429	3,548	3,479
2	R-3	74,568	67,504	74,858	72,371	74,609	72,049	74,381	74,383	72,235	75,025	72,971	76,009	73,414
3	R-4	6,206	5.597	6,169	5.875	5,955	5.680	5,709	5,570	5,309	5.662	5.879	5.874	5,791
4	R-5	37	43	47	53	55	63	66	60	67	67	70	70	58
5	R-6	86	94	100	125	146	180	191	178	202	212	233	237	165
6	R-7	1	1	1	2	3	3	3	3	3	3	3	3	2
7	Total Residential	84,454	76,448	84,729	81,860	84,318	81,407	83,883	83,735	81,244	84,505	82,585	85,741	82,909
8														
9	G-41	9,722	8.810	9,759	9,395	9.534	9.045	9,208	9.146	8,865	9.410	9.417	9.843	9.346
10	G-42	1,438	1,300	1,439	1,383	1,423	1,371	1,437	1,451	1,402	1,461	1,428	1,477	1,418
11	G-43	60	53	58	54	55	52	53	49	48	50	48	53	53
12	G-44	1	2	2	2	2	2	2	3	3	4	4	4	3
13	G-45	4	4	4	4	4	4	4	6	7	7	7	7	5
14	G-46	0	1	2	3	4	5	6	7	8	9	10	11	6
15	G-51	1,339	1,208	1,338	1,291	1,327	1,284	1,342	1,354	1,303	1,350	1,308	1,347	1,316
16	G-52	390	352	392	381	397	385	401	406	392	409	401	417	394
17	G-53	37	34	35	34	36	35	34	33	33	34	33	34	34
18	G-54	28	26	29	27	28	27	27	26	25	26	25	27	27
19	G-55	3	3	3	3	3	3	3	3	3	3	3	3	3
	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	1	1	1	1	1	1	1	1	1	1	1	1	1
23	Total C/I	13,024	11,794	13,063	12,579	12,815	12,214	12,519	12,485	12,091	12,764	12,685	13,223	12,605
24														
25	Total	97,478	88.242	97,791	94,439	97,133	93,621	96,402	96,220	93,334	97.269	95.270	98,964	95,514

Calculated

Docket No. DG 20-105 Attachment RATES-2 Page 2 of 8

Docket No.	DG 20-105
	Exhibit 35

Docket No. DG 20-105 Attachment RATES-2 Page 3 of 8

Liberty Utilities (EnergyNorth Natural Gas) Test Year Ending December 31, 2019 Development of Volumetric Billing Determ									
						Pe	er Books Data		
Actual - Therms billed	Jan-19	Feb-19	<u>Mar-19</u>	Apr-19	<u>May-19</u>	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	S

	Actual - Therms billed	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	<u>Nov-19</u>	Dec-19	Total
1	R-1	88,312	89,781	85,523	75,772	61,312	51,500	39,994	32,680	34,468	38,518	50,194	78,635	726,689
2	R-3	9,524,781	10,512,561	9,418,226	6,541,933	3,756,481	2,077,526	1,185,648	1,009,296	1,043,918	1,535,728	3,547,745	8,051,572	58.205.415
3	R-4	685,665	832,335	791,552	616,505	385,336	169,582	92,841	79,605	79,388	108,054	236,269	558,158	4,635,290
4	R-5	2,459	2,208	2,403	1,506	924	499	454	357	435	696	1,402	2,135	15,478
5	R-6	25,681	25,315	22,848	15,536	9,324	4,598	2,805	2,621	2,751	5,372	15,491	27,991	160,333
6	R-7	182	169	461	158	88	30	26	20	20	52	190	407	1,803
7	Total Residential	10,327,081	11,462,368	10,321,013	7,251,410	4,213,465	2,303,735	1,321,768	1,124,578	1,160,980	1,688,420	3,851,290	8,718,899	63,745,008
8														
9	G-41	4,321,413	4,808,165	4,439,730	3,005,894	1,489,238	701,903	306,229	227,646	250,812	442,272	1,230,906	3,393,209	24,617,416
10		5,585,268	6,067,067	5,658,958	4,176,998	2,326,679	1,242,218	624,361	557,180	562,741	937,089	2,037,124	4,715,295	34,490,978
11		1,545,052	1,835,644	1,589,381	1,418,349	888,296	588,694	366,070	349,197	236,954	371,997	654,147	1,254,271	11,098,051
12		508	896	844	536	285	147	71	64	73	138	731	2,353	6,646
13	G-45	18,414	17,636	15,951	11,831	6,553	5,647	1,015	430	989	3,951	10,997	23,427	116,841
14		0	0	0	0	0	0	0	0	0	0	0	0	0
15		457,491	483,241	469,505	380,588	333,668	301,708	249,851	237,833	264,277	259,397	291,596	412,872	4,142,026
16 17		1,058,630	1,094,095	1,050,193	906,153	756,556	652,598	579,058 696.615	567,763 680,191	552,389 697.014	629,622 642,704	713,520	1,048,628	9,609,204
17		1,073,624 1,341,350	1,230,849 1,310,289	1,084,725 1,231,408	1,063,450 1,204,395	838,251 1,373,982	776,896 1,643,240	1,676,270	1,797,269	1,703,235	642,704 1,790,770	834,275 1,737,115	943,097 1,558,296	10,561,692 18,367,621
10		527	1,310,289	308	1,204,395 546	313	1,043,240	1,676,270	1,797,209	62	1,790,770	1,737,115	437	3,694
20		527	1,001	308	546	0	189	0	9	02	0	102	437	3,694
20		0	0	0	0	0	0	0	0	0	0	0	0	0
22		3,712	3,510	225,768	59,302	63,292	42,032	33,380	35,064	33,476	37,076	41,460	(264,976)	313,096
23	Total C/I	15,405,988	16,852,474	15,766,771	12,228,043	8,077,112	5,955,271	4,532,987	4,452,647	4,302,022	5,115,070	7,551,973	13,086,909	113,327,267
24	rotal off	10,100,000	10,002,111	10,700,777	12,220,010	0,011,112	0,000,211	1,002,001	1,102,017	1,002,022	0,110,010	1,001,010	10,000,000	110,021,201
25	Total	25,733,069	28,314,842	26,087,784	19,479,453	12,290,577	8,259,006	5,854,755	5,577,225	5,463,002	6,803,491	11,403,263	21,805,807	177,072,274
									*)***)==*	*1.**1***				
								Calculated						
	Calendarization		5 1 10	14		N	1		1	0	0.140	N	D 40	<b>T</b>
	Calendarization Adjustment - Therms	Jan-19	Feb-19	Mar-19	Apr-19	<u>May-19</u>	Jun-19	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	<u>Nov-19</u>	Dec-19	Total
26	Adjustment - Therms													
26 27	Adjustment - Therms R-1	9,958	(7,303)	(4,350)	(13,203)	(9,906)	(12,296)	(7,286)	882	1,728	8,794	24,162	12,137	3,318
27	Adjustment - Therms R-1 R-3	9,958 1,522,834	(7,303) (1,343,711)	(4,350) (1,580,319)	(13,203) (2,186,158)	(9,906) (1,287,679)	(12,296) (792,003)	(7,286) (190,491)	882 4,082	1,728 232,846	8,794 1,348,445	24,162 3,499,823	12,137 1,194,260	3,318 421,929
27 28	Adjustment - Therms R-1 R-3 R-4	9,958 1,522,834 200,247	(7,303) (1,343,711) (104,755)	(4,350) (1,580,319) (163,280)	(13,203) (2,186,158) (267,490)	(9,906) (1,287,679) (189,938)	(12,296) (792,003) (64,975)	(7,286) (190,491) (13,891)	882 4,082 (1,388)	1,728 232,846 14,249	8,794 1,348,445 104,474	24,162 3,499,823 311,375	12,137 1,194,260 132,777	3,318 421,929 (42,595)
27 28 29	Adjustment - Therms R-1 R-3 R-4 R-5	9,958 1,522,834 200,247 (41)	(7,303) (1,343,711) (104,755) (42)	(4,350) (1,580,319) (163,280) (426)	(13,203) (2,186,158) (267,490) (251)	(9,906) (1,287,679) (189,938) (122)	(12,296) (792,003) (64,975) (22)	(7,286) (190,491) (13,891) (43)	882 4,082 (1,388) 44	1,728 232,846 14,249 102	8,794 1,348,445 104,474 310	24,162 3,499,823 311,375 387	12,137 1,194,260 132,777 179	3,318 421,929 (42,595) 75
27 28	Adjustment - Therms R-1 R-3 R-4 R-5 R-6	9,958 1,522,834 200,247	(7,303) (1,343,711) (104,755)	(4,350) (1,580,319) (163,280)	(13,203) (2,186,158) (267,490) (251) (3,429)	(9,906) (1,287,679) (189,938)	(12,296) (792,003) (64,975)	(7,286) (190,491) (13,891) (43) (187)	882 4,082 (1,388)	1,728 232,846 14,249	8,794 1,348,445 104,474	24,162 3,499,823 311,375	12,137 1,194,260 132,777 179 3,652	3,318 421,929 (42,595) 75 4,875
27 28 29 30	Adjustment - Therms R-1 R-3 R-4 R-5 R-6 R-7	9,958 1,522,834 200,247 (41) (910)	(7,303) (1,343,711) (104,755) (42) (2,586)	(4,350) (1,580,319) (163,280) (426) (2,520)	(13,203) (2,186,158) (267,490) (251)	(9,906) (1,287,679) (189,938) (122) (2,251)	(12,296) (792,003) (64,975) (22) (1,301)	(7,286) (190,491) (13,891) (43)	882 4,082 (1,388) 44 76	1,728 232,846 14,249 102 1,202	8,794 1,348,445 104,474 310 5,277	24,162 3,499,823 311,375 387 7,853	12,137 1,194,260 132,777 179	3,318 421,929 (42,595) 75
27 28 29 30 31	Adjustment - Therms R-1 R-3 R-4 R-5 R-6 R-7	9,958 1,522,834 200,247 (41) (910) 54	(7,303) (1,343,711) (104,755) (42) (2,586) 50	(4,350) (1,580,319) (163,280) (426) (2,520) (256)	(13,203) (2,186,158) (267,490) (251) (3,429) (26)	(9,906) (1,287,679) (189,938) (122) (2,251) (14)	(12,296) (792,003) (64,975) (22) (1,301) (1)	(7,286) (190,491) (13,891) (43) (187) (3)	882 4,082 (1,388) 44 76 1	1,728 232,846 14,249 102 1,202 11	8,794 1,348,445 104,474 310 5,277 64	24,162 3,499,823 311,375 387 7,853 96	12,137 1,194,260 132,777 179 3,652 (12)	3,318 421,929 (42,595) 75 4,875 (36)
27 28 29 30 31 32	Adjustment - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential	9,958 1,522,834 200,247 (41) (910) 54	(7,303) (1,343,711) (104,755) (42) (2,586) 50	(4,350) (1,580,319) (163,280) (426) (2,520) (256)	(13,203) (2,186,158) (267,490) (251) (3,429) (26)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354)	(12,296) (792,003) (64,975) (22) (1,301) (1)	(7,286) (190,491) (13,891) (43) (187) (3)	882 4,082 (1,388) 44 76 1	1,728 232,846 14,249 102 1,202 11	8,794 1,348,445 104,474 310 5,277 64	24,162 3,499,823 311,375 387 7,853 96	12,137 1,194,260 132,777 179 3,652 (12)	3,318 421,929 (42,595) 75 4,875 (36)
27 28 29 30 31 32 33	Adjustment - Therms R-1 R-3 R-5 R-6 R-7 Total Residential G-41	9,958 1,522,834 200,247 (41) (910) 54 1,732,142	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348)	(4,350) (1,580,319) (163,280) (426) (2,520) (256) (1,751,152)	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598)	(7,286) (190,491) (13,891) (43) (187) (3) (211,901)	882 4,082 (1,388) 44 76 1 3,698	1,728 232,846 14,249 102 1,202 11 250,139	8,794 1,348,445 104,474 310 5,277 64 1,467,364	24,162 3,499,823 311,375 387 7,853 96 3,843,697	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993	3,318 421,929 (42,595) 75 4,875 (36) 387,568
27 28 29 30 31 32 33 34 35 36	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (528,708) (591,295) (274,603)	(4,350) (1,580,319) (163,280) (426) (2,520) (256) (1,751,152) (908,597) (933,440) (154,856)	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693)	(7,286) (190,491) (13,891) (43) (187) (3) (211,901) (70,888)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,821)	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,567
27 28 29 30 31 32 33 34 35	Adjustment - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (528,708) (529,295) (274,603) (125)	(4,350) (1,580,319) (163,280) (426) (2,520) (2,520) (1,751,152) (908,597) (933,440) (154,856) (273)	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (132)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693) (75)	(7,286) (190,491) (13,891) (43) (43) (187) (3) (211,901) (70,888) (122,550) (85,583) (8)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365)	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,779	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,567 3,455
27 28 29 30 31 32 33 34 35 36 37 38	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327 (1,348)	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (528,708) (591,295) (274,603) (125) (2,627)	(4,350) (1,580,319) (163,280) (426) (2,520) (2,56) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023)	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (132) (1,410)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693) (75) (4,662)	(7,286) (190,491) (13,891) (43) (187) (211,901) (70,888) (122,550) (85,583) (85,583) (85,583)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,821) 14 840	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116	8,794 1,348,445 104,474 310 5,277 <u>64</u> 1,467,364 573,514 821,625 263,401 984 9,457	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,567 3,455 16,648
27 28 29 30 31 32 33 34 35 36 37 38 39	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327 (1,348) 0	(7,303) (1,343,711) (104,755) (2,586) 50 (1,458,348) (528,708) (591,295) (274,603) (125) (2,627) 0	(4,350) (1,580,319) (163,280) (426) (2,520) (2,56) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023) 0	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) 0	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (132) (1,410) 0	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693) (75) (4,662) 0 0	(7,286) (190,491) (13,891) (43) (187) (3) (211,901) (70,888) (122,550) (85,583) (8) (592) 0	882 4,082 (1,388) 44 76 1 3,698 (22,365) (50,821) (50,821) 14 840 0	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,567 3,455 16,648 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45 G-46 G-51	9,958 1,522,834 200,247 (41) 54 1,732,142 850,199 945,150 360,784 327 (1,348) 0 55,874	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (591,295) (274,603) (125) (2,627) (2,627) (2,627) (46,347)	(4,350) (1,580,319) (163,280) (426) (2,520) (2,520) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023) (0 (4,6840)	(13,203) (2,186,158) (267,490) (251) (3,249) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) (5,492) 0 (48,737)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (132) (132) (1,410) 0 (35,545)	(12,296) (792,003) (64,975) (22) (1,301) (870,598) (350,140) (548,662) (248,662) (248,662) (248,662) (75) (4,662) 0 (52,574)	(7,286) (190,491) (13,891) (43) (187) (211,901) (70,888) (122,550) (85,583) (8) (592) 0 (17,998)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,821) 14 840 0 20,643	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,779 13,520 0 99,278	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 1,86 8,871 0 43,345	3,318 421,929 (42,595 75 4,875 (36) 387,568 349,541 519,186 185,567 3,3,455 16,648 0 (12,560)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327 (1,348) 0 55,874 109,065	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (591,295) (274,603) (125) (274,603) (125) (2,627) 0 (46,347) (106,065)	(4,350) (1,580,319) (163,280) (426) (2,550) (2,550) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023) 0 (46,840) (74,944)	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) 0 (48,737) (134,474)	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (1,32) (1,410) 0 (35,545) (98,798)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693) (75) (4,662) 0 (52,574) (100,264)	(7,286) (190,491) (13,891) (43) (187) (211,901) (70,888) (122,550) (85,583) (85,583) (85,583) (592) 0 (17,998) (37,293)	882 4,082 (1,388) 44 76 1 3,698 (22,365) (50,821) 14 840 0 20,643 13,245	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121) 36,868	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598	24,162 3,499,823 311,375 387 7,863 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 99,278 244,491	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0 43,345 31,297	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 349,541 519,186 185,567 3,455 16,648 0 (12,560) (44,275)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	Adjustment - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45 G-46 G-51 G-52 G-53 G-53	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327 (1,348) 0 55,874 109,065 263,510	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (591,295) (274,603) (125) (274,603) (125) (2,627) 0 (46,347) (106,065) (164,958)	(4,350) (1,580,319) (163,280) (426) (2,520) (2,520) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023) 0 (46,840) (74,944) (46,518)	(13,203) (2,186,158) (267,490) (251) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) 0 (48,737) (134,474) (237,172)	(9,906) (1,287,679) (189,938) (2,251) (2,251) (1,489,910) (624,354) (844,640) (132) (132) (1,410) 0 (35,545) (98,798) (61,818)	(12,296) (792,003) (64,975) (22) (1,301) (1) (870,598) (350,140) (548,662) (248,693) (75) (4,662) 0 (52,574) (100,264) (113,387)	(7,286) (190,491) (13,891) (43) (1877) (211,901) (70,888) (122,550) (65,583) (6) (592) 0 (17,998) (37,293) (33,526)	882 4,082 (1,388) 44 4 76 7 1 3,698 13,668 (22,365) (50,821) (50,821) 14 840 0 20,643 13,245 17,452	1,728 232,846 14,249 1,202 1,202 1,202 1,202 1,202 1,203 101,600 205,268 104,052 97 4,116 0 (10,121) 36,868 (49,101)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598 140,101	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 9,9,278 244,491 121,934	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0 43,345 31,297 124,699	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,667 185,667 185,667 0 (12,560) (44,275) (38,785)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	Adjustment - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52 G-53 G-54	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 0 0,55,874 109,065 263,510 (13,916)	(7,303) (1,343,711) (104,755) (42) (2,586) 50 (1,458,348) (591,295) (274,603) (125) (2,627) 0 (46,347) (106,065) (164,958) (103,975)	(4,350) (1,580,319) (163,280) (428) (2,520) (2,520) (2,520) (1,751,152) (908,597) (933,440) (154,856) (273) (4,023) 0 (46,840) (74,944) (46,518) (45,526)	(13,203) (2,186,158) (267,490) (251) (3,429) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) 0 (48,737) (134,474) (237,172) 104,700	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (1,489,910) (624,354) (844,640) (284,382) (132) (1,410) 0 (35,545) (98,798) (61,818) (66,818)	(12,296) (792,003) (64,975) (22) (1,301) (350,140) (548,652) (248,653) (75) (4,662) 0 (52,574) (100,264) (113,387) 22,612	(7,286) (190,491) (13,891) (43) (1877) (211,901) (70,888) (122,550) (85,583) (85,583) (592) 0 (17,998) (37,293) (33,526) 93,758	882 4,082 (1,388) (1,388) (1,388) 13,698 13,698 (22,365) (50,821) (50,821) (50,821) 14 840 0 0 20,643 13,245 17,452 (30,816)	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121) 36,868 (49,101) (77,469)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598 140,101 (125,402)	24,162 3,499,823 311,375 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,779 13,520 0 99,278 244,491 121,934 (192,277)	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0 43,345 31,297 124,699 (264,906)	3,318 421,929 (42,595) 75 4,875 (36) 387,568 349,541 519,186 185,567 3,455 185,567 3,455 185,567 (34,4275) (38,785) (364,639)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	Adjustment - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-55 G-55 G-55	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 360,784 327 (1,348) 0 55,874 109,065 263,510 (13,916) 94	(7.303) (1.343,711) (104,755) (42) (2.586) (1.458,348) (528,708) (591,295) (274,603) (125) (2,627) 0 (46,347) (106,065) (164,958) (103,975) (504)	(4,350) (1,580,319) (163,280) (426) (2,520) (2,520) (1,751,152) (908,597) (933,440) (154,856) (2,73) (4,023) 0 (46,840) (74,944) (46,518) (45,526) 196	(13,203) (2,186,158) (267,490) (251) (3,429) (26) (2,470,557) (1,240,113) (1,504,456) (518,383) (259) (5,492) 0 (48,737) (134,474) (237,172) 104,700 (283)	(9,906) (1,287,679) (189,938) (122) (2,251) (144) (1,489,910) (624,354) (844,640) (284,382) (132) (1,410) 0 (35,545) (98,798) (61,818) 265,578 (142)	(12,296) (792,003) (64,975) (22) (1,301) (350,140) (548,662) (248,663) (248,663) (248,663) (75) (4,662) 0 (62,574) (100,264) (113,387) 25,612 (131)	(7,286) (190,491) (13,891) (43) (187) (211,901) (70,888) (122,550) (85,583) (592) 0 (17,998) (37,293) (33,526) 93,758 (54)	882 4,082 (1,388) 44 76 1 3,698 (22,365) (50,821) 14 840 0 20,643 13,245 17,452 (30,816) 48	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 9,7 4,116 0 (10,121) 38,868 (49,101) (77,469) (3)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598 140,101 (125,402) 103	24,162 3,499,823 311,375 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 9,9,278 244,491 121,934 (192,277) 319	12,137 1,194,260 132,777 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0 43,345 31,297 124,699 (264,906) 188	3,318 421,929 (42,595) 75 (38) 387,568 349,541 349,541 1519,186 185,567 3,455 16,648 16,648 16,648 (12,560) (44,275) (38,785) (38,64,539) (169)
27 28 29 30 31 32 33 35 36 37 38 39 40 41 42 43 44	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-51 G-46 G-51 G-56 G-56 G-56 G-56 G-56 G-56 G-56 G-56	9,958 1,522,834 200,247 (41) (910) 54 1,732,142 850,199 945,150 380,784 327 (1,348) 0 55,874 109,065 263,510 (13,916) 94 0	(7,303) (1,343,711) (104,755) (422) (2,586) 50 (1,458,348) (591,295) (274,603) (125) (258,708) (591,295) (274,603) (125) (2,627) (145,5348) (102,975) (164,958) (103,975) (504) 0 0	(4,350) (1,580,319) (163,280) (4,226) (2,520) (2,520) (2,520) (333,440) (154,856) (273) (4,023) (4,023) (4,023) (46,840) (74,944) (45,526) 196 0	(13,203) (2,186,158) (267,490) (251) (3,429) (2,470,557) (1,240,113) (1,504,456) (518,383) (5,492) 0 (48,737) (134,474) (237,172) 104,700 (283) 0	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (14,489,910) (624,354) (844,640) (284,382) (1,320) (284,382) (35,545) (98,798) (61,818) (61,818) (61,818) (61,818) (142) 0	(12,296) (792,003) (64,975) (22) (1,301) (870,598) (350,140) (548,662) (248,693) (75) (4,662) 0 (52,574) (100,264) (113,387) 25,612 (131) 0	(7,286) (190,491) (13,891) (43) (1877) (211,901) (70,888) (122,550) (85,583) (122,550) (85,583) (552) 0 (17,998) (37,293) (33,526) 93,758 (54) 0 0	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,621) 44 840 0 20,643 13,245 17,452 (30,816) 48 0 0	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121) 38,688 (49,101) (77,469) (3) 0	8,794 1,348,445 104,474 310 5,277 64 1,467,364 821,625 263,401 984 9,457 0,26,463 72,598 140,101 (125,402) 103 0	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 99,278 244,491 121,934 (192,277) 319 0	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 419,835 1,186 8,871 0 43,345 31,297 124,699 (264,906) 188 0	3,318 421,929 (42,595) (42,595) (36) 387,568 349,541 519,186 349,541 519,186 519,186 519,186 519,186 (38,567 (38,785) (384,639) (384,639) (384,639) (169) 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Adjustment - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-42 G-43 G-44 G-45 G-46 G-51 G-52 G-55 G-56 G-57	9,958 1,522,834 200,247 (411) (910) 54 1,732,142 850,199 945,150 360,784 1,732,142 850,199 94,5150 360,784 109,065 283,510 (1,314) 94 0 0 0 0 0 0 0 0 0 0 0 0 0	(7, 303) (1,343,711) (104,755) (42) (2,586) (1,458,348) (528,708) (524,708) (524,708) (125) (274,603) (125) (125) (125) (125) (126,347) (100,065) (164,958) (103,955) (504) 0 0	(4,350) (1,580,319) (163,280) (4226) (2,520) (2,520) (2,550) (1,751,152) (908,597) (933,440) (154,856) (2,73) (4,6,840) (74,944) (46,518) (45,518) (46,518) 196 0 0	(13,203) (2,186,158) (267,490) (251) (3,429) (2,470,557) (1,240,113) (1,504,456) (1,504,456) (1,504,450) (259) (5,492) 0 (48,737) (134,474) (237,172) 104,700 0 0 0 0 0 0	(9,906) (1,287,679) (189,938) (122) (2,251) (1,489,910) (624,354) (844,640) (844,840) (132) (132) (132) (1,410) (35,545) (98,798) (61,818) 266,578 (142) 0 0 0	(12,296) (792,003) (64,975) (22) (1,301) (870,598) (350,140) (548,662) (248,693) (1548,662) (248,693) (4,662) (4,662) (4,662) (13,387) (25,612) (131) 0 0 0	(7,286) (190,491) (13,891) (43) (211,901) (70,888) (122,550) (122,550) (85,583) (592) 0 (17,998) (37,293) (33,526) 93,758 93,758 0 0 0	882 4,082 (1,388) 44 76 1 3,698 (22,365) (50,821	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121) 36,868 (49,101) (7,749) 36,868 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) 36,808 (49,101) 36,808 (49,101) 36,808 (49,101) 36,808 (40,101) 30,008 (40,1008) 30,008 (40,1008) 30,008 (40,1008) 30,008 (40,1008)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598 140,101 (125,402) 103 0 0 0	24,162 3,499,823 311,375 387 7,853 96 63,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 99,278 244,491 121,934 (192,277) 319 0 0	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 418,835 1,186 8,871 0 43,345 31,297 124,699 (264,906) (284,906) 188 0 0	3,318 421,929 (42,595) 75 (38) 387,568 349,541 519,186 185,567 3,3455 16,648 16,648 16,648 (42,75) (38,785) (364,633) (364,633) 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 5 46 47	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-45 G-45 G-45 G-55 G-5	9,958 1,522,834 200,277 (41) (910) 54 1,732,142 850,199 945,150 360,784 927 (1,348) 0 55,874 109,065 223,510 (13,916) 94 0 0 15,002 94 0 0 15,002 10,	(7,303) (1,343,711) (104,755) (422) (2,586) 50 (1,458,348) (591,295) (1,458,348) (591,295) (1,458,348) (591,295) (1,458,348) (1,254,003) (1,154,956) (1,155,956) (1,154,956) (1,154,956) (1,155,956) (	(4,350) (1,580,319) (162,280) (425) (2,520) (2,550) (2,520) (1,751,152) (933,440) (45,456) (2,73) (4,023) 0 (48,846) (73,944) (45,528) 196 0 0 (194,173)	(2,18,158) (27,490) (25,1490) (267) (267) (2,470,557) (1,2470,557) (1,2470,557) (1,544,456) (5,18,383) (2599) (5,492) 0 (49,737) (134,474) (237,172) (134,474) (237,172) (104,700) (239,922) 0 (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (237,	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (14,89,910) (224,354) (34,464) (224,382) (1,32) (1,410) 0 (35,545) (43,265,578) (142) 0 0 0 (41,825) 0 0	(12,296) (792,003) (64,975) (22) (1,301) (1301) (870,598) (350,140) (548,662) (248,683) (75) (4,662) (100,264) (110,264) (131,387) 25,612 (131) 0 0 (24,849)	(7,286) (190,491) (13,891) (43) (211,901) (211,901) (70,888) (122,550) (85,583) (85,583) (55,583) (55,583) (55,583) (37,293) (33,526) 93,756) 93,756 (54) 0 0 (16,412)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,821) (50,821) 4 8,400 0 0 20,643 13,245 17,452 (30,816) 48 0 0 0 (18,082)	1,728 232,846 14,249 102 1,202 11 250,139 104,650 97 4,116 0 (10,21) 36,868 (49,01) 36,868 (49,01) (77,469) (3) 0 0 (13,403)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 9,457 0 264,663 72,598 140,101 (125,402) 0 0 0 (14,515) 0 0 0 0 0 0 0 0 0 0 0 0 0	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,652 654,816 654,816 654,816 0,99,278 244,491 121,934 (192,277) 319 0 0 0 (18,009)	12,137 1,194,260 132,777 3,652 (12) 1,342,993 760,097 419,835 410,93741,937 410,9376 410,9376 410,9376410,9376 410,9376 410,	3,318 421,929 (42,995) (42,995) (42,795 (36) 387,568 349,541 519,186 185,567 3,455 16,648 0 (12,560) (44,275) (364,639) (169) (354,639) 0 0 (34,342)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-45 G-45 G-45 G-55 G-5	9,958 1,522,834 200,247 (411) (910) 54 1,732,142 850,199 945,150 360,784 1,732,142 850,199 94,5150 360,784 109,065 283,510 (1,314) 94 0 0 0 0 0 0 0 0 0 0 0 0 0	(7, 303) (1,343,711) (104,755) (42) (2,586) (1,458,348) (528,708) (524,708) (524,708) (125) (274,603) (125) (125) (125) (125) (126,347) (100,065) (164,958) (103,955) (504) 0 0	(4,350) (1,580,319) (163,280) (4226) (2,520) (2,520) (2,550) (1,751,152) (908,597) (933,440) (154,856) (2,73) (4,6,840) (74,944) (46,518) (45,518) (46,518) 196 0 0	(13,203) (2,186,158) (267,490) (251) (3,429) (2,470,557) (1,240,113) (1,504,456) (1,504,456) (1,504,450) (259) (5,492) 0 (48,737) (134,474) (237,172) 104,700 0 0 0 0 0 0	(9,906) (1,287,679) (189,938) (122) (2,251) (1,489,910) (624,354) (844,640) (844,840) (132) (132) (132) (1,410) (35,545) (98,798) (61,818) 266,578 (142) 0 0 0	(12,296) (792,003) (64,975) (22) (1,301) (870,598) (350,140) (548,662) (248,693) (1548,662) (248,693) (4,662) (4,662) (4,662) (13,387) (25,612) (131) 0 0 0	(7,286) (190,491) (13,891) (43) (211,901) (70,888) (122,550) (122,550) (85,583) (592) 0 (17,998) (37,293) (33,526) 93,758 93,758 0 0 0	882 4,082 (1,388) 44 76 1 3,698 (22,365) (50,821	1,728 232,846 14,249 102 1,202 11 250,139 101,600 205,268 104,052 97 4,116 0 (10,121) 36,868 (49,101) (7,749) 36,868 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) (7,749) 36,808 (49,101) 36,808 (49,101) 36,808 (49,101) 36,808 (49,101) 36,808 (40,101) 30,008 (40,1008) 30,008 (40,1008) 30,008 (40,1008) 30,008 (40,1008)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 984 9,457 0 26,463 72,598 140,101 (125,402) 103 0 0 0	24,162 3,499,823 311,375 387 7,853 96 63,843,697 1,773,265 2,234,622 654,816 1,719 13,520 0 99,278 244,491 121,934 (192,277) 319 0 0	12,137 1,194,260 132,777 179 3,652 (12) 1,342,993 760,097 879,929 418,835 1,186 8,871 0 43,345 31,297 124,699 (264,906) (284,906) 188 0 0	3.318 421,929 (42,595) 75 (36) 387,568 349,541 519,186 185,567 3,455 16,648 16,648 16,648 (12,560) (44,275) (38,785) (364,633) 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 37 38 39 40 41 42 43 44 45 46 47 48 49	Adjustment - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-45 G-45 G-45 G-55 G-5	9,958 1,522,834 200,277 (41) (910) 54 1,732,142 850,199 945,150 360,784 927 (1,348) 0 55,874 109,065 223,510 (13,916) 94 0 0 15,002 94 0 0 15,002 10,	(7,303) (1,343,711) (104,755) (422) (2,586) 50 (1,458,348) (591,295) (1,458,348) (591,295) (1,458,348) (591,295) (1,458,348) (1,254,003) (1,154,956) (1,155,956) (1,154,956) (1,154,956) (1,155,956) (	(4,350) (1,580,319) (162,280) (425) (2,520) (2,550) (2,520) (1,751,152) (933,440) (45,456) (2,73) (4,023) 0 (48,846) (73,944) (45,528) 196 0 0 (194,173)	(2,18,158) (27,490) (25,1490) (267) (267) (2,470,557) (1,2470,557) (1,2470,557) (1,544,456) (5,18,383) (2599) (5,492) 0 (49,737) (134,474) (237,172) (134,474) (237,172) (104,700) (239,922) 0 (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (239,922) (237,	(9,906) (1,287,679) (189,938) (122) (2,251) (14) (14,89,910) (224,354) (34,464) (224,382) (1,32) (1,410) 0 (35,545) (43,265,578) (142) 0 0 0 (41,825) 0 0	(12,296) (792,003) (64,975) (22) (1,301) (1301) (870,598) (350,140) (548,662) (248,693) (4,662) (4,662) (100,264) (110,264) (113,387) 0 0 0 (24,849)	(7,286) (190,491) (13,891) (43) (211,901) (211,901) (70,888) (122,550) (85,583) (85,583) (55,583) (55,583) (55,583) (37,293) (33,526) 93,756) 93,756 (54) 0 0 (16,412)	882 4,082 (1,388) 44 76 1 3,698 13,668 (22,365) (50,821) (50,821) 4 8,400 0 0 20,643 13,245 17,452 (30,816) 48 0 0 0 (18,082)	1,728 232,846 14,249 102 1,202 11 250,139 104,650 97 4,116 0 (10,21) 36,868 (49,01) 36,868 (49,01) (77,469) (3) 0 0 (13,403)	8,794 1,348,445 104,474 310 5,277 64 1,467,364 573,514 821,625 263,401 9,457 0 264,663 72,598 140,101 (125,402) 0 0 0 (14,515) 0 0 0 0 0 0 0 0 0 0 0 0 0	24,162 3,499,823 311,375 387 7,853 96 3,843,697 1,773,265 2,234,652 654,816 654,816 654,816 0,99,278 244,491 121,934 (192,277) 319 0 0 0 (18,009)	12,137 1,194,260 132,777 3,652 (12) 1,342,993 760,097 419,835 410,93741,937 410,9376 410,9376 410,9376410,9376 410,9376 410,	3,318 421,929 (42,595) (42,595) (48,75 (38) 387,568 349,541 519,186 185,567 3,455 16,648 0 (12,560) (44,275) (364,639) (169) 0 0 (34,342)

Docket No. DG 20-105
Exhibit 35

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Volumetric Billing Determinants

### Docket No. DG 20-105 Attachment RATES-2 Page 4 of 8

Deve	elopment of volumetric Billing De	terminants												Page 4 of 8
		i						Calculated						
		I						Calculated						
	Calendar Month - Therms	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	98.270	82.477	81,173	62,569	51,406	39,204	32.708	33,562	36,196	47,312	74,356	90,773	730.007
2	R-3	11,047,615	9,168,849	7,837,906	4,355,776	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	7,047,568	9,245,832	58,627,344
3	R-4	885,912	727,579	628,272	349,015	195,398	104,607	78,949	78,217	93,638	212,528	547,644	690,935	4,592,696
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7.073	3,298	2,618	2,697	3,953	10,649	23.344	31.643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	12,059,223	10,004,020	8,569,861	4,780,853	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	7,694,988	10,061,892	64,132,575
8 9	G-41	5,171,612	4,279,458	3,531,133	1,765,781	864,883	351,762	235,341	241,313	352,412	1,015,786	3,004,170	4,153,306	24,966,957
10	G-42	6,530,418	5,475,772	4,725,518	2,672,542	1,482,039	693,556	501,810	534,815	768,009	1,758,714	4,271,746	5,595,225	35,010,164
11	G-43	1,905,835	1,561,041	1,434,525	899,966	603,914	340,002	280,487	298,376	341,006	635,398	1,308,963	1,674,106	11,283,618
12	G-44	835	771	571	277	153	72	63	78	170	1,122	2,450	3,539	10,101
13	G-45	17,066	15,009	11,928	6,338	5,143	985	423	1,270	5,105	13,408	24,517	32,298	133,489
14		0	0	0	0	0	0	0	0	0	0	0	0	0
	G-51	513,365	436,895	422,665	331,851	298,122	249,134	231,853	258,476	254,156	285,859	390,874	456,217	4,129,466
	G-52	1,167,695	988,029	975,249	771,679	657,758	552,333	541,766	581,009	589,257	702,220	958,011	1,079,925	9,564,929
	G-53	1,337,134	1,065,891	1,038,207	826,277	776,434	663,509	663,090	697,644	647,913	782,805	956,209	1,067,796	10,522,907
18		1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
	G-55	621	577	504	263	172	58	12	57	59	157	421	625	3,525
20		0	0	0	0	0	0	0	0	0	0	0	0	0
21		0	0	0	0	0	0 17.183	0	0	0	0	0	0	0 278.754
22 23	G-58 Total C/I	<u>19,016</u> 17,991,031	33,980	31,595 13,357,776	29,380 8,613,449	21,467 6,349,644	4,537,445	16,968 4,241,840	16,982 4,396,473	20,073 4,603,926	22,561 6,883,398	23,451 12,485,650	26,099 15,382,524	113,906,893
23	Total C/T	17,991,031	13,003,730	13,337,770	0,013,449	0,349,044	4,007,440	4,241,040	4,350,473	4,003,920	0,003,390	12,465,050	15,562,524	113,900,093
	Total	30,050,254	25,067,756	21,927,637	13,394,303	9,073,199	5,970,583	5,351,707	5,524,748	6,015,045	10,039,183	20,180,637	25,444,416	178,039,468
								Calculated						
		-												
	Headblock Volume Ratio	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	Jul-19	Aug-19	Sep-19	Oct-19	<u>Nov-19</u>	Dec-19	
	R-1	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
	R-3	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
	R-4	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
	R-5	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
30		100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
	R-7	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
32 33														
34	G-41	17.9209%	18.4060%	23.0291%	32.5220%	22.5306%	21.1314%	23.9874%	24.2645%	21.2121%	20.5934%	24.3859%	21.4869%	
35		22.6230%	23.0003%	29.0478%	42.0030%	38.7080%	44.4681%	49.7484%	50.1757%	42.5889%	34.4643%	31.3654%	26.7830%	
36		100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
37		17.3965%	22.3132%	29.6302%	45.5067%	22.4305%	34.6539%	40.8031%	34.6452%	27.6321%	10.7583%	13.0449%	10.7310%	
38		24.2196%	24.8747%	34.2544%	53.1992%	35.5228%	90.8021%	100.0000%	88.5062%	46.8697%	26.0474%	26.8946%	22.3958%	
	G-46	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
40		19.3205%	19.3886%	21.7864%	25.8571%	28.3600%	31.4939%	34.1718%	31.7658%	31.1330%	28.7791%	23.3782%	21.0834%	
41		34.0257%	34.1604%	38.1347%	45.5222%	52.1518%	57.6418%	59.9423%	58.6653%	55.3881%	49.5502%	40.5518%	37.6578%	
42	G-53	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
43	G-54	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	
44	G-55	19.7069%	18.7331%	22.4107%	44.7078%	66.1722%	100.0000%	100.0000%	100.0000%	100.0000%	65.5208%	26.9961%	18.8713%	
45	G-56	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
	G-57	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	
47	G-58	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	100.0000%	

Docket No. DG 20-105	5
Exhibit 35	5

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Test Year Ending December 31, 2019
Development of Volumetric Billing Determinants

Docket No. DG 20-105 Attachment RATES-2 Page 5 of 8

								Calculated						
	Calendar Month Headblock - Therms	<u>Jan-19</u>	Feb-19	Mar-19	Apr-19	<u>May-19</u>	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	Dec-19	Total
1	R-1	98,270	82,477	81,173	62,569	51,406	39,204	32,708	33,562	36,196	47,312	74,356	90,773	730,007
2	R-3	11,047,615	9,168,849	7,837,906	4,355,776	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	7,047,568	9,245,832	58,627,344
3	R-4	885,912	727,579	628,272	349,015	195,398	104,607	78,949	78,217	93,638	212,528	547,644	690,935	4,592,696
4	R-5	2,418	2,166	1,977	1,255	802	477	411	401	537	1,006	1,789	2,314	15,553
5	R-6	24,771	22,729	20,328	12,107	7,073	3,298	2,618	2,697	3,953	10,649	23,344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	12,059,223	10,004,020	8,569,861	4,780,853	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	7,694,988	10,061,892	64,132,575
8	o. //	000 700	707 077	040 400	574.000	40.4.000	74.000	50.450	50 550	71751	000 105	700 505	000 440	5 005 005
9	G-41	926,798	787,677	813,189	574,268	194,863	74,332	56,452	58,553	74,754	209,185	732,595	892,418	5,395,085
10	G-42	1,477,379 1,905,835	1,259,445 1,561,041	1,372,659 1,434,525	1,122,549 899,966	573,668 603,914	308,411 340,002	249,643 280,487	268,347 298,376	327,086 341,006	606,128 635,398	1,339,850 1,308,963	1,498,571 1,674,106	10,403,735 11,283,618
11 12		1,905,835	1,561,041	1,434,525	126	603,914 34	25	260,467	296,376	341,006	121	320	380	1,203,010
13		4,133	3,733	4,086	3,372	1,827	895	423	1,124	2,393	3.492	6.594	7,233	39,305
14		4,133	3,733	4,080	3,372	1,027	095	423	1,124	2,393	3,492	0,594	7,233	39,303
15		99.185	84,708	92,083	85,807	84,547	78,462	79,228	82,107	79,126	82,268	91,379	96,186	1,035,087
16		397,316	337.514	371.909	351,285	343,033	318,375	324.747	340,851	326.378	347.952	388.491	406,675	4,254,525
17		1.337.134	1,065,891	1,038,207	826,277	776,434	663,509	663,090	697,644	647,913	782.805	956,209	1,067,796	10,522,907
18		1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19	G-55	122	108	113	118	113	58	12	57	59	103	114	118	1,095
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
23	Total C/I	7,494,497	6,340,583	6,344,417	5,202,243	4,239,460	3,470,103	3,441,103	3,530,521	3,444,602	4,355,381	6,392,803	6,962,972	61,218,685
24 25	Total	19,553,720	16,344,603	14,914,278	9,983,096	6,963,015	4,903,240	4,550,970	4,658,797	4,855,722	7,511,165	14,087,791	17,024,864	125,351,260
								Calculated						
	Calendar Month Tailblock - Therms	Jan-19	Feb-19	<u>Mar-19</u>	<u>Apr-19</u>	<u>May-19</u>	Jun-19	Calculated	Aug-19	<u>Sep-19</u>	Oct-19	<u>Nov-19</u>	Dec-19	Total
26	Tailblock - Therms	<u>Jan-19</u> 0	<u>Feb-19</u> 0	<u>Mar-19</u> 0	<u>Apr-19</u> 0	<u>May-19</u> 0	<u>Jun-19</u> 0		<u>Aug-19</u> 0	<u>Sep-19</u> 0	<u>Oct-19</u> 0	<u>Nov-19</u> 0	<u>Dec-19</u> 0	<u>Total</u> 0
26 27	Tailblock - Therms R-1							<u>Jul-19</u>						
	Tailblock - Therms R-1 R-3	0	0	0	0	0	0	<u>Jul-19</u> 0	0	0	0	0	0	0
27 28	Tailblock - Therms R-1 R-3	0	0	0	0	0	0	<u>Jul-19</u> 0 0	0	0	0	0	0	0
27 28	Tailblock - Therms R-1 R-3 R-4 R-5	0 0 0	0 0 0	0 0 0 0	0 0 0 0 0	0 0 0	0 0 0	<u>Jul-19</u> 0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
27 28 29 30 31	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
27 28 29 30 31 32	Tailblock - Therms R-1 R-3 R-4 R-5 R-6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	<u>Jul-19</u> 0 0 0 0	0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
27 28 29 30 31	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	Jul-19 0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
27 28 29 30 31 32 33	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
27 28 29 30 31 32 33 34	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42	0 0 0 0 0 4,244,814	0 0 0 0 0 3,491,781	0 0 0 0 0 2,717,944	0 0 0 0 0 1,191,513	0 0 0 0 0 0 670,020	0 0 0 0 0 0 277,430	<u>Jul-19</u> 0 0 0 0 0 0 0 178,889	0 0 0 0 0 0 182,760	0 0 0 0 0 0 277,658	0 0 0 0 0 0 806,601	0 0 0 0 0 2,271,576	0 0 0 0 0 0 3,260,888	0 0 0 0 0 19,571,872
27 28 29 30 31 32 33 34 35	Tailblock - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43	0 0 0 0 0 4,244,814 5,053,039	0 0 0 0 0 3,491,781 4,216,328	0 0 0 0 0 2,717,944 3,352,860	0 0 0 0 0 0 1,191,513 1,549,993	0 0 0 0 0 0 0 670,020 908,371	0 0 0 0 0 0 277,430 385,145	<u>Jul-19</u> 0 0 0 0 0 0 178,889 252,168	0 0 0 0 0 0 182,760 266,468	0 0 0 0 0 0 277,658 440,923	0 0 0 0 0 806,601 1,152,586	0 0 0 0 0 0 2,271,576 2,931,895	0 0 0 0 0 3,260,888 4,096,654	0 0 0 0 0 19,571,872 24,606,429
27 28 29 30 31 32 33 34 35 36	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44	0 0 0 0 4,244,814 5,053,039 0	0 0 0 0 0 0 3,491,781 4,216,328 0	0 0 0 0 0 2,717,944 3,352,860 0	0 0 0 0 0 0 1,191,513 1,549,993 0	0 0 0 0 0 670,020 908,371 0	0 0 0 0 0 277,430 385,145 0	<u>Jul-19</u> 0 0 0 0 0 178,889 252,168 0	0 0 0 0 0 182,760 266,468 0	0 0 0 0 0 277,658 440,923 0	0 0 0 0 0 806,601 1,152,586 0	0 0 0 0 2,271,576 2,931,895 0	0 0 0 0 0 3,260,888 4,096,654 0	0 0 0 0 0 19,571,872 24,606,429 0
27 28 29 30 31 32 33 34 35 36 37	Tailblock - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45	0 0 0 0 4,244,814 5,053,039 0 690	0 0 0 0 0 3,491,781 4,216,328 0 599	0 0 0 0 2,717,944 3,352,860 0 402	0 0 0 0 1,191,513 1,549,993 0 151	0 0 0 0 0 670,020 908,371 0 119	0 0 0 0 277,430 385,145 0 47	<u>Jul-19</u> 0 0 0 0 0 178,889 252,168 0 37	0 0 0 0 0 182,760 266,468 0 51	0 0 0 0 277,658 440,923 0 123	0 0 0 0 0 806,601 1,152,586 0 1,001	0 0 0 0 2,271,576 2,931,895 0 2,130	0 0 0 0 3,260,888 4,096,654 0 3,159	0 0 0 0 0 19,571,872 24,606,429 0 8,509
27 28 29 30 31 32 33 34 35 36 37 38	Tailblock - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45 G-46 G-51	0 0 0 0 4,244,814 5,053,039 0 690 12,933 0 0 414,181	0 0 0 0 3,491,781 4,216,328 599 11,275 0 352,187	0 0 0 0 2,717,944 3,352,860 402 7,842 7,842 0 330,581	0 0 0 0 1,191,513 1,549,993 1,549,993 0 151 2,966 0 246,044	0 0 0 0 0 670,020 908,371 0 119 3,316 0 213,575	0 0 0 0 277,430 385,145 0 47 91 0 170,672	<u>Jul-19</u> 0 0 0 0 178,889 252,168 0 37 0 152,624	0 0 0 0 182,760 266,468 0 51 146 0 176,369	0 0 0 0 277,658 440,923 2,712 2,712 0 175,029	0 0 0 0 806,601 1,152,586 0 1,001 9,915 0 203,592	0 0 0 0 2,271,576 2,931,885 0 2,130 17,923 0 299,494	0 0 0 0 3,260,888 4,096,654 0 3,159 25,064 0 360,031	0 0 0 0 19,571,872 24,606,429 0 8,509 94,184 0 3,094,379
27 28 29 30 31 32 33 34 35 36 37 38 39	Tailblock - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-52	0 0 0 0 4,244,814 5,053,039 0 690 12,933 0 414,181 770,379	0 0 0 0 0 3,491,781 4,216,328 4,216,328 9 11,275 0 0 352,187 650,515	0 0 0 0 2,717,944 3,352,860 402 7,842 0 330,581 603,340	0 0 0 0 1,191,513 1,549,993 1,549,993 0 151 2,966 0 246,044 420,394	0 0 0 0 0 0 908,371 0 119 3,316 0	0 0 0 0 277,430 385,145 385,145 91 0 47 91 0 170,672 233,958	<u>Jul-19</u> 0 0 0 0 0 178,889 252,168 0 37 0 0 152,624 217,019	0 0 0 0 0 182,760 266,468 0 51 146 0 176,369 240,158	0 0 0 0 277,658 440,923 440,923 2,712 0 175,029 262,879	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2,271,576 2,931,885 0 2,130 2,130 2,730 0 2,99,494 569,520	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 19,571,872 24,606,429 0 8,509 94,184 0 3,094,379 5,310,405
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-51 G-52 G-53 G-53	0 0 0 0 4,244,814 5,053,039 0 690 12,933 0 0 414,181 770,379 0	0 0 0 0 0 3,491,781 4,216,328 0 5599 11,275 0 352,187 650,515 0	0 0 0 0 0 2,717,944 3,352,860 0 402 7,842 0 330,581 603,340 0	0 0 0 0 1,191,513 1,549,993 0 151 2,966 0 246,044 420,394 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,430 385,145 0 47 91 0 170,672 233,958 0	<u>Jul-19</u> 0 0 0 0 0 178,889 252,168 0 37 0 152,624 217,019 0	0 0 0 0 266,468 0 51 146 0 176,389 240,158 0	0 0 0 0 277,658 440,923 0 123 2,712 0 175,029 262,879 0	0 0 0 0 0 806,601 1,152,586 0 1,001 9,915 0 203,592 354,268 0	0 0 0 0 2,271,576 2,931,895 0 2,130 17,923 0 299,494 569,520 0	0 0 0 0 0 3,260,888 4,096,654 0 3,159 25,064 0 360,031 673,249 0	0 0 0 0 19,571,872 24,606,429 9 4,184 0 3,094,379 5,310,405 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	Tailblock - Therms R-1 R-3 R-4 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-52 G-53 G-54	0 0 0 4,244,814 5,053,039 0 690 12,933 0 414,181 770,379 0 0	0 0 0 0 0 3,491,781 4,216,328 0 599 11,275 0 599 11,275 0 50,515 0 0 0	0 0 0 0 0 2,717,944 3,352,860 402 7,842 0 330,581 603,340 0 0	0 0 0 0 1,191,513 1,549,993 0 151 2,966 0 246,044 420,394 0 0	0 0 0 0 0 670,020 908,371 0 119 3,316 0 213,575 314,725 0 0	0 0 0 0 0 277,430 385,145 0 47 91 0 170,672 233,958 0 0	<u>Jul-19</u> 0 0 0 0 0 176.889 252.168 0 37 0 0 152.624 217,019 0 0	0 0 0 0 0 182,760 266,468 0 51 146 0 176,369 240,158 0 0	0 0 0 0 277,658 440,923 0 123 2,712 0 175,029 262,879 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2,271,576 2,931,885 0 2,130 17,923 0 299,494 569,520 0 0	0 0 0 0 0 3,260,888 4,096,654 0 3,159 25,064 0 3,159 25,064 0 3,60,031 673,249 0 0	0 0 0 0 19,571,872 24,606,429 9 4,184 0 3,094,379 5,310,405 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52 G-55 G-55	0 0 0 0 4,244,814 5,053,039 0 12,933 0 4,14,181 770,379 0 0 4,44,9	0 0 0 0 0 3,491,781 4,216,328 0 599 11,275 0 0 352,187 650,515 0 0 0 0 469	0 0 0 0 2,717,944 3,352,860 402 7,842 0 330,581 603,340 0 0 3391	0 0 0 0 1,191,513 1,549,993 151 2,966 0 246,044 420,394 0 0 145	0 0 0 0 0 670,020 908,371 119 3,316 0 213,575 314,725 314,725 0 0 58	0 0 0 0 277,430 385,145 0 477 91 0 170,672 233,958 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 178,889 252,188 0 377 0 0 152,524 217,019 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 182,760 266,468 51 146 51 146,369 240,158 0 0 0 0 0	0 0 0 0 277,658 440,923 2,712 0 123 2,712 0 175,029 262,879 0 0 0 0	0 0 0 0 806,601 1,152,586 0 1,001 9,915 0 203,592 354,262 354,262 0 0 54	0 0 0 0 2,271,576 2,931,885 0 2,130 17,923 0 0 299,494 569,520 0 0 0 0 307	0 0 0 0 0 3,260,888 4,096,654 0 3,159 25,064 0 3,50,031 673,249 0 0 0 507	0 0 0 0 19,571,872 24,606,429 94,184 0 3,094,379 5,310,405 0 0 0 2,430
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Tailblock - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-46 G-51 G-45 G-46 G-51 G-55 G-56 G-56 G-56 G-56 G-56 G-56 G-56	0 0 0 0 4,244,814 5,053,039 0 690 0 12,933 0 0 414,181 770,379 0 449 9 0 0 449 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 3,491,781 4,216,328 0 599 11,275 0 0 352,187 650,515 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1,191,513 1,549,993 0 151 2,966 0 246,044 420,394 0 0 145 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,430 385,145 0 47 91 0 170,672 233,958 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 176,889 252,168 0 0 152,624 217,019 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 182,760 266,468 0 51 146 0 176,369 240,158 0 0 0 0 0	0 0 0 0 277,658 440,923 0 123 2,712 0 175,029 262,879 0 0 0 0 0 0 0	0 0 0 0 806,601 1,152,586 0 1,001 9,915 0 203,592 354,268 0 0 54 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,260,888 4,096,654 0 3,159 25,064 0 3,60,031 673,249 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 19.571.872 24.606.429 0 8.509 9.4.184 0 3.094.379 5.310.405 5.310.405 0 0 2.430 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-41 G-42 G-43 G-44 G-45 G-46 G-45 G-46 G-51 G-52 G-56 G-56 G-56 G-56 G-56 G-56 G-56 G-56	0 0 0 0 4,244,814 5,053,039 0 12,933 0 414,181 770,379 0 0 4144,181 770,379 0 0 0 4144,90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 3,491,781 4,216,328 0 599 11,275 0 352,187 650,515 0 0 0 469 0 0	2,717,944 3,352,860 0 402 7,842 0 330,581 603,30 0 0 391 0 0 0	0 0 0 0 1,191,513 1,549,993 0 151 151 2,966 0 246,044 420,394 0 0 0 0 0 0 0 145 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,430 385,145 0 47 91 170,672 233,958 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 178,889 252,168 0 37 0 0 152,624 217,019 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 182,760 266,468 0 146 51 146 0 176,369 240,158 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 277,658 440,923 0 123 2,712 0 175,029 262,879 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2,271,576 2,931,895 0 2,130 17,923 0 299,494 569,520 0 0 0 307 0 0 0 0 0	3,260,888 4,096,654 0 3,159 25,064 0 360,031 673,249 0 0 0 507 0 0 0	0 0 0 0 19,571,872 24,606,429 94,184 0 3,094,379 5,310,405 0 0 2,430 0 0 2,430 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-45 G-45 G-45 G-45 G-55 G-52 G-53 G-54 G-55 G-55 G-57 G-56 G-57 G-58 G-58 G-58 G-58 G-58 G-58 G-58 G-58	0 0 0 0 4,244,814 5,053,039 0 12,933 0 0 414,181 770,379 0 4499 0 0 4499 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3,491,781 4,216,328 0 599 11,275 559 11,275 650,515 0 0 469 0 0 0 0 0 0 0	0 0 0 0 2,717,944 3,352,60 0 402 7,842 0 3,30,581 603,340 0 0 391 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1.191,513 1,549,993 0 1549,993 0 2.966 0 0 2.46,044 420,394 420,394 0 0 0 145 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,430 385,145 0 477 91 0 170,672 233,958 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 176,889 252,188 0 0 0 152,624 217,019 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 182,760 266,468 0 51 146 0 176,369 240,158 240,158 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,658 440,257 2,712 2,712 2,712 0 175,029 262,879 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1,152,586 9,915 0 203,592 354,268 0 0 54 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2,271,576 2,931,90 0 2,130 17,923 0 299,494 569,520 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 3.260.888 4.096,654 0 3.159 25,064 0 0 3.159 25,064 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 19.571.872 24,606,429 9.4,184 0 3.094,379 5.3104,405 0 0 2,430 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49	Tailblock - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-41 G-43 G-44 G-44 G-45 G-46 G-45 G-46 G-51 G-52 G-56 G-56 G-56 G-56 G-56 G-56 G-56 G-56	0 0 0 0 4,244,814 5,053,039 0 12,933 0 414,181 770,379 0 0 4144,181 770,379 0 0 0 4144,90 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 3,491,781 4,216,328 0 599 11,275 0 352,187 650,515 0 0 0 469 0 0	2,717,944 3,352,860 0 402 7,842 0 330,581 603,30 0 0 391 0 0 0	0 0 0 0 1,191,513 1,549,993 0 151 151 2,966 0 246,044 420,394 0 0 0 0 0 0 0 145 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 277,430 385,145 0 47 91 170,672 233,958 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 178,889 252,168 0 37 0 0 152,624 217,019 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 182,760 266,468 0 146 51 146 0 176,369 240,158 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 277,658 440,923 0 123 2,712 0 175,029 262,879 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 2,271,576 2,931,895 0 2,130 17,923 0 299,494 569,520 0 0 0 307 0 0 0 0 0	3,260,888 4,096,654 0 3,159 25,064 0 360,031 673,249 0 0 0 507 0 0 0	0 0 0 0 19,571,872 24,606,429 94,184 0 3,094,379 5,310,405 0 0 2,430 0 0 2,430 0 0

Docket No.	DG 20-105
	Exhibit 35

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Test Year Ending December 31, 2019
Development of Volumetric Billing Determinante

Docket No. DG 20-105 Attachment RATES-2 Page 6 of 8

	1							Calculated						
	l							Calculated						
	Weather Normalization													
	Headblock Adj- Therms	Jan-19	Feb-19	Mar. 40	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	N= 10	D 10	Total
	Headblock Adj- Therms	<u>Jau-18</u>	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Seb-18	001-19	<u>Nov-19</u>	Dec-19	Total
	D.4	(4.240)	4 007	40.4	1.000	0	0	0	0	0	0	(7.070)	450	(4.000)
1	R-1	(1,310)	1,287	404	1,606	0	0		0	0	0	(7,072)	156	(4,929)
2	R-3	(194,464)	193,820	55,053	169,953	0	0	0	0	0	0	(970,225)	21,387	(724,476)
3	R-4	(15,463)	15,226	4,368	13,433	0	0	0	0	0	0	(74,415)	1,582	(55,270)
4	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
5	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
6	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
7	Total Residential	(211,237)	210,332	59,824	184,992	0	0	0	0	0	0	(1,051,712)	23,124	(784,675)
8														
9	G-41	0	0	0	0	0	0	0	0	0	0	0	0	0
10	G-42	0	0	0	0	0	0	0	0	0	0	0	0	0
11	G-43	(31,229)	30,422	9,198	31,279	0	0	0	0	0	0	(163,763)	3,545	(120,548)
	G-44	0	0	0	0	0	Ó	0	Ó	Ó	0	0	0	0
13	G-45	0	0	0	0	0	Ó	0	0	Ó	0	0	0	Ó
14	G-46	ō	0	0	0	ō	0	0	0	0	0	0	ō	0
15	G-51	ŏ	ő	ŏ	ŏ	ő	ő	0	ő	ŏ	ŏ	ŏ	ő	ŏ
16	G-52	ő	ő	0	0	0	ő	0	0	ő	0	ő	ő	0
17		(13,192)	11,116	3,346	11.001	0	0	0	0	0	0	(59,922)	1,213	(46,438)
	G-53 G-54	(13, 192)	0	3,346	0	0	0	0	0	0	0	(59,922)	1,213	(40,438)
18														
19	G-55	0	0	0	0	0	0	0	0	0	0	0	0	0
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
21	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
22	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
23	Total C/I	(44,421)	41,538	12,544	42,281	0	0	0	0	0	0	(223,685)	4,758	(166,986)
24														
25	Total	(255,657)	251,870	72,368	227,273	0	0	0	0	0	0	(1,275,397)	27,883	(951,661)
	_													
	[							Calculated						
	I							Calculated						
	Weather Normalization							Calculated						
	Weather Normalization Tailblock Adj - Therms	Jan-19	Feb-19	Mar-19	Apr-19	May-19		-	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
		<u>Jan-19</u>	<u>Feb-19</u>	<u>Mar-19</u>	<u>Apr-19</u>	<u>May-19</u>	<u>Jun-19</u>	Calculated Jul-19	<u>Aug-19</u>	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	Dec-19	Total
26	Tailblock Adj - Therms			<u>Mar-19</u> 0			<u>Jun-19</u>	<u>Jul-19</u>						
	Tailblock Adj - Therms R-1	0	0		0	0	<u>Jun-19</u> 0	-	0	0	<u>Oct-19</u> 0	<u>Nov-19</u> 0 0	0	<u>Total</u> 0 0
27	Tailblock Adj - Therms R-1 R-3	0	0	0	0	0	<u>Jun-19</u> 0 0	<u>Jul-19</u> 0 0	0	0	0 0	0	0	0
27 28	Tailblock Adj - Therms R-1 R-3 R-4	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	<u>Jun-19</u> 0 0 0	<u>Jul-19</u> 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
27 28 29	Tailblock Adj - Therms R-1 R-3 R-4 R-5	0 0 0 0	0 0 0 0	0 0 0	0 0 0 0	0 0 0	<u>Jun-19</u> 0 0 0 0	<u>Jul-19</u> 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0	0 0 0	0 0 0 0
27 28 29 30	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
27 28 29 30 31	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-6 R-7	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0
27 28 29 30 31 32	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-6	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0	0 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
27 28 29 30 31 32 33	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0
27 28 29 30 31 32 33 34	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41	0 0 0 0 0 (95,028)	0 0 0 0 0 0 94,809	0 0 0 0 0 0 26,347	0 0 0 0 0 0 76,233	0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0		0 0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 0 0 (440,226)	0 0 0 0 0 0 10,110	0 0 0 0 0 (327,756)
27 28 29 30 31 32 33 34 35	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-6 R-7 Total Residential G-41 G-42	0 0 0 0 0 0 (95,028) (116,437)	0 0 0 0 0 94,809 117,510	0 0 0 0 0 26,347 33,900	0 0 0 0 0 76,233 109,203	0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0			0 0 0 0 0 0 0 0	0 0 0 0 0 (440,226) (602,500)	0 0 0 0 0 10,110 13,200	0 0 0 0 0 (327,756) (445,124)
27 28 29 30 31 32 33 34 35 36	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43	0 0 0 0 0 (95,028) (116,437) 0	0 0 0 0 0 94,809 117,510 0	0 0 0 0 0 26,347 33,900 0	0 0 0 0 0 76,233 109,203 0	0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0			0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (440,226) (602,500) 0	0 0 0 0 0 0 0 10,110 13,200 0	0 0 0 0 (327,756) (445,124) 0
27 28 29 30 31 32 33 34 35 36 37	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-44 G-43 G-44 G-44 G-44	0 0 0 0 (95,028) (116,437) 0 0	0 0 0 0 0 94,809 117,510 0 0	0 0 0 0 26,347 33,900 0	0 0 0 0 0 0 76,233 109,203 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (440,226) (602,500) 0 0	0 0 0 0 0 10,110 13,200 0 0	0 0 0 0 (327,756) (445,124) 0 0
27 28 29 30 31 32 33 34 35 36	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43	0 0 0 0 0 (95,028) (116,437) 0	0 0 0 0 0 94,809 117,510 0	0 0 0 0 0 26,347 33,900 0	0 0 0 0 0 76,233 109,203 0	0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0			0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (440,226) (602,500) 0	0 0 0 0 0 0 0 10,110 13,200 0	0 0 0 0 (327,756) (445,124) 0
27 28 29 30 31 32 33 34 35 36 37	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-44 G-43 G-44 G-44 G-44	0 0 0 0 (95,028) (116,437) 0 0	0 0 0 0 0 94,809 117,510 0 0	0 0 0 0 26,347 33,900 0	0 0 0 0 0 0 76,233 109,203 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (440,226) (602,500) 0 0	0 0 0 0 0 10,110 13,200 0 0	0 0 0 0 (327,756) (445,124) 0 0
27 28 29 30 31 32 33 34 35 36 37 38	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-44 G-45 G-45	0 0 0 0 0 0 (95,028) (116,437) 0 0 0	0 0 0 0 0 0 94,809 117,510 0 0 0	0 0 0 0 0 26,347 33,900 0 0 0	0 0 0 0 0 0 0 0 76,233 109,203 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 0 0 (440,226) (602,500) 0 0 0 0 0	0 0 0 0 0 10,110 13,200 0 0 0	0 0 0 0 (327,756) (445,124) 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-51	0 0 0 0 (95,028) (116,437) 0 0 0 0 0	0 0 0 0 0 94,809 117,510 0 0 0 0	0 0 0 0 0 26,347 33,900 0 0 0 0 0	76,233 00,00 00 00 00 00 00 00 00 00 00 00 00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 0 0 0 0 0	0 0 0 0 0 0 10,110 13,200 0 0 0 0 0 0	0 0 0 0 0 0 (327,756) (445,124) 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52	0 0 0 0 (95,028) (116,437) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 94,809 117,510 0 0 0 5,220	0 0 0 0 0 26,347 33,900 0 0 0 0 0 0 0 0 0 1,493	0 0 0 0 0 0 76,233 109,203 0 0 0 0 0 0 0 5,162	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 10,110 13,200 0 0 0 0 565	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-5 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-51 G-52 G-53	0 0 0 0 (95,028) (116,437) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 117,510 0 5,220 11,450	0 0 0 0 26,347 33,900 0 0 0 0 0 0 0 1,493 3,378	0 0 0 0 0 0 76,233 109,203 0 0 0 0 0 0 5,162 11,608	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 (25,364) (62,273)	0 0 0 0 0 10,110 13,200 0 0 0 0 0 0 0 565 1,270	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,454)
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-52 G-53 G-54 G-55 G-54 G-56	0 0 0 0 0 0 0 (95,028) (116,437) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 94,809 117,510 0 0 0 5,220 11,450 0 0	0 0 0 26,347 33,900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 76,233 109,203 0 0 0 0 0 5,162 11,608 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	UI-19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 0 (25,364) (62,73) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 10,110 13,200 0 0 0 0 565 1,270 0 0	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,454) 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-5 R-6 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-51 G-52 G-53 G-54 G-55	0 0 0 0 (95,028) (116,437) 0 0 0 (5,339) (11,886) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 117,510 0 5,220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 26,347 33,900 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 109,203 0 5,162 11,608 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 10,110 13,200 0 0 0 0 0 5665 1,270 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,454) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-45 G-46 G-51 G-52 G-53 G-54 G-55 G-55 G-56 G-56 G-56 G-56 G-56 G-56	0 0 0 0 (95,028) (116,437) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 0 94,809 117,510 0 0 0 5,5220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 26,347 33,900 0 0 0 0 1,493 3,378 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 109,203 0 5,162 11,608 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 10,110 13,200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,454) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-5 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-45 G-46 G-57 G-56 G-56 G-56 G-56 G-57 G-56 G-57 G-57 G-57 G-57 G-57 G-57 G-57 G-57	0 0 0 (95,028) (116,437) 0 0 0 (5,339) (11,886) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 0 0 117,510 0 5,220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 26,347 33,900 0 0 0 1,493 3,378 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 10,110 13,200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 (327,756) (445,124) 0 0 (18,262) (46,454) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-42 G-44 G-45 G-46 G-51 G-46 G-51 G-54 G-55 G-56 G-56 G-57 G-56 G-57 G-58 G-58 G-58 G-58 G-58 G-58 G-58 G-58	0 0 0 (95,028) (116,437) 0 0 (5,339) (11,886) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 0 94,809 117,510 0 0 0 5,220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 26,347 33,900 0 0 0 0 0 0 1,493 3,378 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 109,203 5,162 11,608 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 (40,226) (602,500) 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 10,110 13,200 0 0 0 0 5655 1,270 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 (327,756) (445,124) 0 0 0 0 (15,252) (46,454) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 6 47 48	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-5 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-43 G-44 G-45 G-46 G-45 G-46 G-57 G-56 G-56 G-56 G-56 G-57 G-56 G-57 G-57 G-57 G-57 G-57 G-57 G-57 G-57	0 0 0 (95,028) (116,437) 0 0 0 (5,339) (11,886) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 0 0 117,510 0 5,220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 26,347 33,900 0 0 0 1,493 3,378 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 0 (440,226) (602,500) 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 10,110 13,200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,454) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
27 28 29 30 31 32 33 34 35 36 37 37 37 37 37 37 40 41 42 43 44 45 46 47 48 49	Tailblock Adj - Therms R-1 R-3 R-4 R-5 R-7 Total Residential G-41 G-42 G-43 G-44 G-42 G-44 G-45 G-46 G-51 G-46 G-51 G-54 G-55 G-56 G-56 G-57 G-56 G-57 G-58 G-58 G-58 G-58 G-58 G-58 G-58 G-58	0 0 0 (95,028) (116,437) 0 0 (5,339) (11,886) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	94,809 0 94,809 117,510 0 0 0 5,220 11,450 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 26,347 33,900 0 0 0 0 0 0 1,493 3,378 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	76,233 109,203 5,162 11,608 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		<u>Jun-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>Jul-19</u> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				0 0 0 (40,226) (602,500) 0 0 0 (25,364) (62,273) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 10,110 13,200 0 0 0 0 5655 1,270 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 (327,756) (445,124) 0 0 0 (18,262) (46,54) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Docket No.	DG 20-105
	Exhibit 35

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Test Year Ending December 31, 2019
Development of Velometric Dilling Determinents

Docket No. DG 20-105 Attachment RATES-2 Page 7 of 8

								Calculated						
	Calendar Month Weather Normal Headblock - Therms	Jan-19	Feb-19	<u>Mar-19</u>	Apr-19	May-19	Jun-19	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	<u>Nov-19</u>	Dec-19	Total
1	R-1	96,960	83,764	81.577	64,175	51,406	39.204	32,708	33,562	36,196	47.312	67.285	90.929	725.078
2	R-3	10,853,151	9,362,669	7,892,959	4,525,729	2,468,802	1,285,524	995,157	1,013,378	1,276,765	2,884,173	6,077,343	9,267,219	57,902,868
3	R-4	870,449	742,805	632,640	362,448	195,398	104,607	78,949	78,217	93,638	212,528	473,230	692,517	4,537,425
4	R-5	2,418	2,166	1,977	1.255	802	477	411	401	537	1.006	1,789	2,314	15.553
5	R-6	24,771	22,729	20.328	12,107	7.073	3.298	2.618	2.697	3.953	10.649	23.344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	11,847,986	10,214,353	8,629,685	4,965,845	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	6,643,276	10,085,016	63,347,900
8														
9	G-41	926,798	787,677	813,189	574,268	194,863	74,332	56,452	58,553	74,754	209,185	732,595	892,418	5,395,085
10	G-42	1,477,379	1,259,445	1,372,659	1,122,549	573,668	308,411	249,643	268,347	327,086	606,128	1,339,850	1,498,571	10,403,735
11		1,874,607	1,591,462	1,443,723	931,245	603,914	340,002 25	280,487	298,376	341,006	635,398	1,145,200	1,677,651	11,163,070
12 13	G-44 G-45	145 4.133	172 3.733	169 4.086	126 3.372	34 1.827	895	26 423	27 1,124	47 2.393	121 3.492	320 6.594	380 7.233	1,591 39.305
14	G-46	4,133	3,733	4,080	0	1,027	095	423	1,124	2,393	3,452	0,554	7,233	39,305
14	G-40 G-51	99,185	84,708	92,083	85,807	84,547	78,462	79,228	82,107	79,126	82,268	91,379	96,186	1,035,087
16		397,316	337.514	371,909	351,285	343,033	318,375	324.747	340,851	326,378	347.952	388,491	406,675	4,254,525
17	G-53	1.323.942	1.077.007	1,041,553	837.279	776.434	663,509	663.090	697,644	647.913	782.805	896,286	1,069,009	10.476.470
18	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
19		122	1,200,010	113	1,303,035	113	58	1,770,020	57	59	1,000,000	1,544,055	1,235,555	1,095
20	G-56	0	0	0	0	0	0	0	0	0	0	0	0	1,035
21		ő	ő	0	0	ő	0	ő	ů.	ŏ	ů 0	ő	ő	ő
22		19.016	33.980	31.595	29.380	21.467	17.183	16,968	16,982	20.073	22.561	23,451	26.099	278.754
23	Total C/I	7,450,076	6,382,121	6,356,960	5,244,523	4,239,460	3,470,103	3,441,103	3,530,521	3,444,602	4,355,381	6,169,118	6,967,730	61,051,699
24 25	Total	19.298.063	16,596,473	14.986.646	10,210,369	6,963,015	4,903,240	4,550,970	4.658.797	4,855,722	7,511,165	12,812,394	17,052,746	124,399,599
	Calendar Month Weather Normal Tailblock - Therms	<u>Jan-19</u>	Feb-19	<u>Mar-19</u>	Apr-19	May-19	Jun-19	<u>Jul-19</u>	Aug-19	Sep-19	<u>Oct-19</u>	<u>Nov-19</u>	Dec-19	Total
26	R-1	0	0	0	0	0	0	0	0	0	0	0	0	0
27	R-3	0	0	0	0	0	0	0	0	0	0	0	0	0
28	R-4	0	0	0	0	0	0	0	0	0	0	0	0	0
29	R-5	0	0	0	0	0	0	0	0	0	0	0	0	0
30	R-6	0	0	0	0	0	0	0	0	0	0	0	0	0
31	R-7	0	0	0	0	0	0	0	0	0	0	0	0	0
32 33	Total Residential	0	0	0	0	0	0	0	0	0	0	0	0	0
34	G-41	4,149,785	3,586,590	2,744,290	1,267,746	670.020	277.430	178.889	182,760	277,658	806.601	1,831,350	3,270,998	19.244.116
35	G-42	4,936,602	4.333.838	3.386.760	1.659.195	908.371	385,145	252,168	266.468	440.923	1.152.586	2,329,396	4.109.853	24.161.305
36	G-43	4,330,002	4,000,000	0,000,700	1,000,100	0	000,140	232,100	200,400	440,323	0	2,023,030	4,103,000	24,101,505
37	G-44	690	599	402	151	119	47	37	51	123	1,001	2,130	3,159	8,509
38	G-45	12,933	11,275	7,842	2,966	3,316	91	0	146	2,712	9,915	17,923	25,064	94,184
39	G-46	0	0	0	_,0	0	0	ō	0	_,	0	0	0	0
40	G-51	408,842	357,407	332,075	251,206	213,575	170,672	152,624	176,369	175,029	203,592	274,130	360,595	3,076,117
41		758,492	661,965	606,718	432,002	314,725	233,958	217,019	240,158	262,879	354,268	507,247	674,519	5,263,951
42		0	0	0	0	0	0	0	0	0	0	0	0	0
43	G-54	0	0	0	0	0	0	0	0	0	0	0	0	0
44	G-55	499	469	391	145	58	0	0	0	0	54	307	507	2,430
45	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
46	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
47	G-58	0	0	0	0	0	0	0	0	0	0	0	0	0
48	Total C/I	10,267,843	8,952,143	7,078,478	3,613,412	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	4,962,484	8,444,696	51,850,612
49 50	Total	10,267,843	8,952,143	7,078,478	3,613,412	2,110,184	1,067,343	800,737	865,952	1,159,324	2,528,018	4,962,484	8,444,696	51,850,612

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# Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Volumetric Billing Determinants

								Calculated						
	Calendar Month Weather Normal													
	Total - Therms	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	96.960	83.764	81.577	64,175	51,406	39,204	32,708	33,562	36,196	47.312	67.285	90,929	725.078
2	R-3	10.853.151	9.362.669	7.892.959	4,525,729	2.468.802	1.285.524	995,157	1.013.378	1.276.765	2.884,173	6.077.343	9,267,219	57.902.868
3	R-4	870,449	742.805	632,640	362,448	195,398	104,607	78,949	78.217	93,638	212,528	473,230	692,517	4,537,425
4	R-5	2,418	2.166	1,977	1,255	802	477	411	401	537	1.006	1.789	2,314	15,553
5	R-6	24,771	22.729	20.328	12,107	7.073	3,298	2,618	2,697	3.953	10.649	23.344	31,643	165,208
6	R-7	236	219	205	132	74	29	23	21	31	116	286	395	1,767
7	Total Residential	11,847,986	10,214,353	8,629,685	4,965,845	2,723,555	1,433,138	1,109,867	1,128,276	1,411,120	3,155,784	6,643,276	10,085,016	63,347,900
8														
9	G-41	5,076,584	4,374,267	3,557,480	1,842,013	864,883	351,762	235,341	241,313	352,412	1,015,786	2,563,944	4,163,416	24,639,201
10	G-42	6,413,980	5,593,283	4,759,419	2,781,744	1,482,039	693,556	501,810	534,815	768,009	1,758,714	3,669,246	5,608,424	34,565,040
11	G-43	1,874,607	1,591,462	1,443,723	931,245	603,914	340,002	280,487	298,376	341,006	635,398	1,145,200	1,677,651	11,163,070
	G-44	835	771	571	277	153	72	63	78	170	1,122	2,450	3,539	10,101
13	G-45	17,066	15,009	11,928	6,338	5,143	985	423	1,270	5,105	13,408	24,517	32,298	133,489
	G-46	0	0	0	0	0	0	0	0	0	0	0	0	0
	G-51	508,027	442,115	424,158	337,013	298,122	249,134	231,853	258,476	254,156	285,859	365,510	456,781	4,111,204
	G-52	1,155,808	999,479	978,627	783,287	657,758	552,333	541,766	581,009	589,257	702,220	895,738	1,081,194	9,518,475
	G-53	1,323,942	1,077,007	1,041,553	837,279	776,434	663,509	663,090	697,644	647,913	782,805	896,286	1,069,009	10,476,470
	G-54	1,327,434	1,206,315	1,185,882	1,309,095	1,639,560	1,668,852	1,770,028	1,766,454	1,625,766	1,665,368	1,544,839	1,293,390	18,002,982
	G-55	621	577	504	263	172	58	12	57	59	157	421	625	3,525
	G-56	0	0	0	0	0	0	0	0	0	0	0	0	0
	G-57	0	0	0	0	0	0	0	0	0	0	0	0	0
	G-58	19,016	33,980	31,595	29,380	21,467	17,183	16,968	16,982	20,073	22,561	23,451	26,099	278,754
	Total C/I	17,717,919	15,334,263	13,435,438	8,857,935	6,349,644	4,537,445	4,241,840	4,396,473	4,603,926	6,883,398	11,131,602	15,412,426	112,902,311
24														
25	Total	29,565,905	25,548,616	22,065,123	13,823,781	9,073,199	5,970,583	5,351,707	5,524,748	6,015,045	10,039,183	17,774,877	25,497,443	176,250,211

# Docket No. DG 20-105 Attachment RATES-2 Page 8 of 8

Docket No. DG 20-105	
Exhibit 35	

Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Calendar Month Weather Normalized Base Revenues

Docket No. DG 20-105 Attachment RATES-3 Page 1 of 4

							F	Per Books Data						
	Actual - Base Revenue (Margin) w/o Normal Weather Adjustment	Jan-19	Feb-19	Mar-19	Apr-19	May-19	<u>Jun-19</u>	<u>Jul-19</u>	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1	R-1	\$88,102	\$84,541	\$82,588	\$79,357	\$75,851	\$73,241	\$67,186	\$66,017	\$66,273	\$65,767	\$69,439	\$84,840	\$903,202
2	R-3	\$6.408.219	\$6,855,501	\$6,251,924	\$4,670,732	\$3,178,741	\$2,265,520	\$1,757,764	\$1,699,551	\$1,681,833	\$1.937.904	\$3.050.840	\$5,661,065	\$45.419.593
3	R-4	\$186.824	\$219,993	\$211.632	\$174.548	\$124,565	\$73.282	\$54,466	\$52,380	\$50,774	\$55,454	\$83,448	\$159,434	\$1,446,800
4	R-5	\$2,632	\$2,268	\$2,461	\$2,078	\$1,774	\$1,564	\$1,724	\$1,531	\$1,560	\$1,775	\$2,100	\$2,523	\$23,991
5	R-6	\$22.656	\$21,772	\$20.028	\$15.064	\$10.919	\$7.817	\$6.881	\$7.026	\$7.028	\$9,130	\$16.602	\$25.851	\$170,773
6	R-7	\$70	\$63	\$187	\$70	\$49	\$31	\$33	\$37	\$36	\$48	\$86	\$165	\$876
7 8	Total Residential	\$6,708,502	\$7,184,137	\$6,568,820	\$4,941,851	\$3,391,897	\$2,421,453	\$1,888,055	\$1,826,543	\$1,807,505	\$2,070,078	\$3,222,515	\$5,933,878	\$47,965,235
9	G-41	\$2,018,048	\$2,104,957	\$2,006,531	\$1,574,033	\$1,049,624	\$767,206	\$632,128	\$596,588	\$580,228	\$651,006	\$911,735	\$1,737,079	\$14,629,163
10	G-42	\$1,992,383	\$2,086,784	\$1,980,377	\$1,582,659	\$1,017,020	\$645,801	\$452,462	\$437,843	\$432,009	\$551,672	\$898,653	\$1,774,036	\$13,851,701
11	G-43	\$437,697	\$510,222	\$445,329	\$403,689	\$259,578	\$110,833	\$84,132	\$82,816	\$74,589	\$85,658	\$124,068	\$365,251	\$2,983,863
	G-44	\$294	\$530	\$531	\$380	\$290	\$211	\$176	\$190	\$259	\$272	\$582	\$1,323	\$5,038
13	G-45	\$9,367	\$8,037	\$7,299	\$5,791	\$3,907	\$3,290	\$1,363	\$1,179	\$1,835	\$3,290	\$6,029	\$11,278	\$62,666
14	G-46	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
15	G-51	\$168,535	\$166,450	\$163,492	\$148,156	\$141,541	\$136,746	\$125,887	\$126,857	\$130,843	\$126,111	\$131,639	\$162,439	\$1,728,696
16	G-52 G-53	\$264,983	\$260,610	\$256,120	\$237,092	\$198,080	\$157,032	\$148,361	\$149,222	\$144,568	\$153,404	\$171,040	\$270,114	\$2,410,626
17 18	G-53 G-54	\$205,105 \$106.050	\$229,603 \$102,066	\$204,554 \$97,869	\$202,072 \$97.225	\$159,103 \$105,783	\$88,359 \$76.071	\$82,071 \$77,412	\$79,246 \$81,478	\$78,852 \$77,453	\$76,215 \$79.866	\$93,445 \$78.625	\$182,777 \$119.101	\$1,681,402 \$1.098,999
10	G-54 G-55	\$108,050 \$350	\$102,086	\$97,869 \$258	\$97,225 \$350	\$105,783	\$275	\$234	\$01,478	\$77,455 \$250	\$79,800 \$225	\$78,625	\$119,101	\$1,098,999 \$3,637
20	G-55 G-56	\$350 \$0	\$544 \$0	\$∠56 \$0	\$350	\$320	\$275	\$∠34 \$0	\$237	\$250 \$0	\$225	\$249 \$0	\$345 \$0	\$3,637 \$0
	G-57	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0	\$0 \$0	\$0	\$0	\$0	\$0 \$0	\$0 \$0	\$0
22	G-58	\$1,263	\$1.311	\$17.498	\$5.784	\$6.207	\$2.882	\$2.413	\$2.611	\$2,510	\$2.575	\$2.804	(\$15,437)	\$32,420
23 24	Total C/I	\$5,204,075	\$5,471,113	\$5,179,859	\$4,257,231	\$2,941,453	\$1,988,708	\$1,606,639	\$1,558,267	\$1,523,394	\$1,730,294	\$2,418,871	\$4,608,305	\$38,488,210
	Total	\$11,912,577	\$12,655,251	\$11,748,679	\$9,199,082	\$6,333,351	\$4,410,161	\$3,494,695	\$3,384,810	\$3,330,899	\$3,800,372	\$5,641,386	\$10,542,184	\$86,453,445
								Calculated						
	Calendar Month Base Revenue Adjustment	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
26	R-1	\$2,078	(\$5,495)	\$1,159	(\$4,351)	(\$3,293)	(\$7,012)	(\$1,110)	\$518	(\$478)	\$5,907	\$10,846	\$3,463	\$2,231
27	R-3	\$789,972	(\$797,052)	(\$815,265)	(\$1,187,209)	(\$699,752)	(\$475,999)	(\$72,796)	(\$4,405)	\$127,340	\$808,827	\$1,983,200	\$643,342	\$300,202
28	R-4	\$45,417	(\$26,257)	(\$36,314)	(\$62,454)	(\$45,793)	(\$16,147)	(\$2,147)	(\$1,071)	\$2,383	\$26,336	\$74,313	\$30,222	(\$11,513)
29	R-5	(\$716)	(\$358)	(\$567)	(\$421)	(\$310)	(\$93)	(\$231)	(\$157)	\$17	\$21	\$155	(\$18)	(\$2,678)
30	R-6	(\$3,041)	(\$3,473)	(\$3,356)	(\$3,862)	(\$3,014)	(\$1,951)	(\$1,249)	(\$1,596)	(\$219)	\$2,711	\$4,842	\$1,679	(\$12,530)
31	R-7	\$7	\$8	(\$120)	(\$18)	(\$4)	\$1	(\$2)	(\$9)	(\$3)	\$9	\$22	(\$27)	(\$137)
32 33	Total Residential	\$833,716	(\$832,627)	(\$854,463)	(\$1,258,315)	(\$752,166)	(\$501,201)	(\$77,536)	(\$6,721)	\$129,039	\$843,811	\$2,073,377	\$678,660	\$275,575
34	G-41	\$248,269	(\$183,851)	(\$258,282)	(\$423,279)	(\$224,274)	(\$144,526)	(\$31,597)	\$2,635	\$40,141	\$226,364	\$662,673	\$242,315	\$156,590
35	G-42	\$258,934	(\$180,408)	(\$242,608)	(\$456,873)	(\$289,775)	(\$182,129)	(\$33,927)	(\$5,064)	\$65,932	\$272,733	\$726,645	\$252,358	\$185,817
36	G-43	\$91,641	(\$73,751)	(\$37,537)	(\$135,184)	(\$149,743)	(\$33,827)	(\$12,614)	(\$12,111)	\$837	\$25,701	\$249,160	\$105,270	\$17,842
37	G-44	\$180	(\$50)	(\$118)	(\$98)	(\$72)	(\$33)	\$13	\$74	\$38	\$505	\$763	\$483	\$1,686
38	G-45	(\$1,505)	(\$1,084)	(\$1,316)	(\$2,001)	(\$831)	(\$1,906)	(\$223)	\$837	\$1,998	\$3,816	\$5,634	\$3,385	\$6,803
39	G-46 G-51	\$0	\$932	\$1,864	\$2,796	\$3,728	\$4,660	\$5,660 (\$540)	\$6,604	\$7,547	\$8,490 \$9,748	\$9,434 \$21.784	\$10,377 \$5,444	\$62,092 (\$931)
40 41	G-51 G-52	\$7,409 \$15,335	(\$12,860) (\$19,610)	(\$4,527) (\$7,783)	(\$8,641) (\$24,186)	(\$6,191) (\$42,392)	(\$13,138) (\$15,472)	(\$540) (\$2,902)	\$4,263 \$2,134	(\$3,682) \$4,203	\$9,748 \$10,929	\$21,784 \$80,377	\$5,444 \$4,885	(\$931) \$5,518
41	G-52 G-53	\$15,335 \$43,173	(\$19,610) (\$28,777)	(\$7,783) (\$6,996)	(\$24,100) (\$40,155)	(\$70,988)	(\$15,472) (\$10,029)	(\$2,902) (\$3,276)	\$2,134 \$1,348	\$4,203	\$10,929	\$91.085	\$4,005 \$21,233	\$6,328
42	G-53 G-54	(\$1,486)	(\$26,812)	(\$6,996) (\$1,820)	\$5,282	(\$29,088)	\$961	\$4,321	(\$1,039)	(\$2,294) (\$2,506)	(\$2,926)	\$38,553	(\$16,588)	(\$13,147)
44	G-55	\$36	(\$192)	\$99	(\$56)	(\$42)	(\$37)	(\$2)	\$10	(\$8)	\$52	\$84	\$44	(\$12)
45	G-56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46	G-57	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
47	G-58	\$1,304	\$2,402	(\$13,888)	(\$2,389)	(\$4,260)	(\$1,158)	(\$646)	(\$843)	(\$635)	(\$556)	\$111	\$18,603	(\$1,956)
48	Total C/I	\$663,290	(\$504,062)	(\$572,910)	(\$1,084,783)	(\$813,929)	(\$396,633)	(\$75,733)	(\$1,153)	\$111,569	\$566,859	\$1,886,302	\$647,810	\$426,628
49														

### Docket No. DG 20-105 Exhibit 35

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Calendar Month Weather Normalized Base Revenues

### Docket No. DG 20-105 Attachment RATES-3 Page 2 of 4

							Calculated						
Calendar Month													
Base Revenues (Margin) w/o NWA	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
1 R-1	\$ 90,179	\$ 79,045	\$ 83,747	\$ 75,006	\$ 72,558	\$ 66,229			\$ 65,795	\$ 71,674	\$ 80,285	\$ 88,303	\$905,433
2 R-3	\$ 7,198,190	\$ 6,058,449					\$ 1,684,968 \$					\$ 6,304,407	\$45,719,796
3 R-4	\$ 232,241						\$ 52,319 \$					\$ 189,656	\$1,435,286
4 R-5	\$ 1,917						\$ 1,494 \$					\$ 2,505	\$21,313
5 R-6	\$ 19,615					\$ 5,865						\$ 27,529	\$158,243
6 R-7	\$ 77	\$ 72				\$ 32					\$ 107	\$ 138	\$739
7 Total Residential 8	\$7,542,218	\$6,351,510	\$5,714,357	\$3,683,536	\$2,639,731	\$1,920,253	\$1,810,520	\$1,819,822	\$1,936,544	\$2,913,889	\$5,295,892	\$6,612,539	\$48,240,810
o 9 G-41	\$ 2.266.317	\$ 1,921,105	\$ 1.748.249	\$ 1.150.754	\$ 825,351	\$ 622.680	\$ 600.531 \$	\$ 599.223	\$ 620.369	\$ 877,370	\$ 1.574.408	\$ 1.979.394	\$14,785,753
10 G-42	\$ 2,251,317					\$ 463.673						\$ 2.026.394	\$14,037,517
11 G-43	\$ 529.337					\$ 77.006						\$ 470.521	\$3.001.705
12 G-44	\$ 474					\$ 178						\$ 1,806	\$6,724
13 G-45	\$ 7.862					\$ 1.384						\$ 14.663	\$69,469
14 G-46	\$ -						\$ 5,660 \$					\$ 10,377	\$62,092
15 G-51	\$ 175,944	\$ 153,590					\$ 125,347 \$					\$ 167,883	\$1,727,765
16 G-52	\$ 280,317					\$ 141,560						\$ 274,999	\$2,416,143
17 G-53	\$ 248,279	\$ 200,826	\$ 197,557	\$ 161,917	\$ 88,115	\$ 78,330	\$ 78,795 \$	\$ 80,594	\$ 76,558	\$ 88,218	\$ 184,530	\$ 204,010	\$1,687,729
18 G-54	\$ 104,564	\$ 95,254	\$ 96,049	\$ 102,507	\$ 76,694	\$ 77,033	\$ 81,733 \$	\$ 80,439	\$ 74,947	\$ 76,940	\$ 117,178	\$ 102,513	\$1,085,852
19 G-55	\$ 386	\$ 352	\$ 357	\$ 294	\$ 278	\$ 238	\$ 231 \$	\$ 248	\$ 241	\$ 277	\$ 333	\$ 389	\$3,626
20 G-56	\$-	s -					\$-\$					\$-	\$0
21 G-57	\$-	\$-	\$-	\$ -	\$-	\$-	\$-\$	ş -	\$-	\$-	\$ -	\$-	\$0
22 G-58	\$ 2,568	\$ 3,712					\$ 1,767 \$					\$ 3,167	\$30,464
23 Total C/I	\$5,867,365	\$4,967,052	\$4,606,949	\$3,172,448	\$2,127,524	\$1,592,075	\$1,530,907	\$1,557,114	\$1,634,963	\$2,297,153	\$4,305,173	\$5,256,115	\$38,914,838
24 25 Total	\$13.409.583	\$11,318,562	\$10,321,306	\$6,855,984	\$4,767,256	\$3,512,327	\$3,341,426	\$3,376,936	\$3,571,508	\$5,211,042	\$9,601,065	\$11,868,654	\$87,155,648
25 10/21	\$13,409,303	\$11,310,302	φ10,321,300	\$0,035,904	\$4,707,230	\$3,312,321	φ3,341,420	\$3,370,930	\$3,371,308	\$J,211,042	\$9,001,005	\$11,000,034	\$67,133,048
							Calculated						
							Calculated						]
Calendar Month Weather Normal							Calculated						
Calendar Month Weather Normal Base Revenue Adjustment	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19		Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total
	<u>Jan-19</u>	Feb-19	<u>Mar-19</u>	<u>Apr-19</u>	<u>May-19</u>	<u>Jun-19</u>	Calculated Jul-19	<u>Aug-19</u>	<u>Sep-19</u>	<u>Oct-19</u>	<u>Nov-19</u>	<u>Dec-19</u>	Total
	<u>Jan-19</u> (\$490)		<u>Mar-19</u> \$151	<u>Apr-19</u> \$601	<u>May-19</u> \$0	<u>Jun-19</u> \$0		<u>Aug-19</u> \$0	<u>Sep-19</u> \$0	<u>Oct-19</u> \$0	<u>Nov-19</u> (\$2,678)	<u>Dec-19</u> \$59	<u>Total</u> (\$1,875)
Base Revenue Adjustment							<u>Jul-19</u>						
Base Revenue Adjustment 26 R-1	(\$490)	\$481	\$151	\$601	\$0	\$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0	\$0 \$0 \$0	\$0	\$0	(\$2,678)	\$59	(\$1,875)
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5	(\$490) (\$106,989) (\$3,403) \$0	\$481 \$106,634 \$3,351 \$0	\$151 \$30,288 \$961 \$0	\$601 \$93,504 \$2,956 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0	\$59 \$11,910 \$352 \$0	(\$1,875) (\$404,957) (\$12,360) \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6	(\$490) (\$106,989) (\$3,403) \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0	\$59 \$11,910 \$352 \$0 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7	(\$490) (\$106,989) (\$3,403) \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 \$0
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-5 31 R-7 32 Total Residential	(\$490) (\$106,989) (\$3,403) \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0	\$59 \$11,910 \$352 \$0 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         X	(\$490) (\$106,989) (\$3,403) \$0 \$0 (\$110,882)	\$481 \$106,634 \$3,351 \$0 \$0 \$110,466	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Jul-19 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 \$0 (\$559,560)	\$59 \$11,910 \$352 \$0 \$0 \$0 \$12,321	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 \$0 (\$419,193)
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-6 31 R-7 32 Total Residential 33 34 G-41	(\$490) (\$106,989) (\$3,403) \$0 \$0 (\$110,882) (\$29,144)	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$29,076	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658)	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128)
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         34           34         G-41           35         G-42	(\$490) (\$106,989) (\$3,403) \$0 \$0 \$0 (\$110,882) (\$29,144) (\$32,207)	\$481 \$106,634 \$3,351 \$0 \$0 \$110,466 \$29,076 \$32,503	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$168,677)	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695	(\$1.875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$102,128) (\$125,102)
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-6 31 R-7 32 Total Residential 33 4 G-41 35 G-42 36 G-43	(\$490) (\$106,989) (\$3,403) \$0 \$0 (\$110,882) (\$29,144) (\$22,207) (\$7,970)	\$481 \$106,634 \$3,351 \$0 \$0 \$10,466 \$29,076 \$32,503 \$7,764	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$168,677) (\$42,300)	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$102,128) (\$125,102) (\$31,261)
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           35         G-42           36         G-43           37         G-44	(\$490) (\$106,989) (\$3,403) \$0 \$0 (\$110,882) (\$29,144) (\$32,207) (\$7,970) \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$110,466 \$29,076 \$32,503 \$7,764 \$0	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$136,658) (\$168,677) (\$42,300) \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$102,128) (\$102,128) (\$125,102) (\$31,261) \$0
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 30 R-6 31 R-7 27 Total Residential 33 4 G-41 35 G-42 36 G-43 37 G-44 38 G-45	(\$490) (\$106,989) (\$3,403) \$0 \$0 (\$110,882) (\$29,144) (\$32,207) (\$7,970) \$0 \$0 \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$1559,560) (\$136,658) (\$168,677) (\$42,300) \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$102,128) (\$125,102) (\$31,261) \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46	(\$490) (\$106,989) (\$3,403) \$0 (\$110,882) (\$29,144) (\$32,207) (\$7,970) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$110,466 \$29,076 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$10,466	\$151 \$30,288 \$961 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 (\$1559,560) (\$136,658) (\$168,677) (\$42,300) \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,695 \$916 \$0 \$0 \$0 \$0 \$0 \$0	(\$1,875) (\$404,957) (\$12,360) \$0 (\$419,193) (\$102,128) (\$125,102) (\$31,261) \$0 \$0 \$0
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-6 31 R-7 32 Total Residential 33 4 G-41 35 G-42 36 G-43 37 G-44 38 G-45 39 G-46 40 G-51	(\$490) (\$106,969) (\$3,403) \$0 (\$110,82) (\$29,144) (\$32,207) (\$7,970) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$10,466 \$32,503 \$7,764 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$2,347 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$23,379	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	Jul-19 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$188,677) (\$42,300) \$0 \$0 \$0 \$0 (\$4,593)	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$0 \$102	(\$1.875) (\$404,957) (\$12.360) \$0 (\$419,193) (\$102,128) (\$125,102) (\$31,261) (\$31,261) (\$31,261) (\$33,21)
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           34         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46           40         G-51           41         G-52	(\$490) (\$105.989) (\$3.403) \$00 \$00 (\$110.882) (\$29.144) (\$32.207) (\$7.970) (\$7.970) (\$7.970) (\$7.970) (\$7.970) (\$1.971) (\$1.871)	\$481 \$106,634 \$3,351 \$0 \$0 \$110,466 \$32,503 \$7,764 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$267 \$532	\$601 \$93,504 \$2,956 \$0 \$90 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$923 \$1,827	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$168,677) (\$42,300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$102 \$202	(\$1.875) (\$404,957) (\$12.360) \$0 \$0 (\$419.193) (\$102.128) (\$102.128) (\$125.102) (\$31.261) \$0 \$0 \$0 \$0 (\$3.321) (\$7.428)
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-6 31 R-7 32 Total Residential 33 4 G-41 34 G-41 35 G-42 36 G-43 37 G-44 38 G-45 39 G-45 39 G-46 40 G-51 41 G-52 42 G-53	(\$490) (\$105,989) (\$3,403) \$0 (\$110,882) (\$2,9,144) (\$32,207) (\$7,970) \$0 \$0 \$0 \$30 (\$955) (\$1,871) (\$2,179)	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$934 \$1,802 \$1,836	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$0 \$2,67 \$552 \$553	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$188,677) (\$42,300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$0 \$102 \$202 \$203	(\$1.875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$125,102) (\$1,261) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         -           4         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46           40         G-51           41         G-52           42         G-53           43         G-54	(\$490) (\$106,989) (\$3,403) (\$3,403) (\$00) (\$110,882) (\$2,91,144) (\$2,207) (\$7,970) (	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$22,503 \$7,764 \$0 \$0 \$934 \$1,802\$1,802\$1,802\$1,802\$1,8	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$2,67 \$5532 \$5552 \$55552 \$55552 \$55552 \$55552 \$55552 \$55552 \$55552 \$55555555	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$7,982 \$0 \$0 \$0 \$0 \$0 \$23,379 \$1,827 \$1,817 \$1,817 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2.678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$168,677) (\$42,300) \$0 \$0 \$0 \$0 \$0 \$0 \$1 (\$4,593) (\$4,593) (\$4,593) (\$59,921) (\$10,019) \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,695 \$916 \$0 \$0 \$0 \$0 \$102 \$202 \$203 \$203 \$203	(\$1.875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$125,102) (\$31,261) \$0 \$0 \$0 \$0 \$0 \$3,321] (\$7,790) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46           40         G-521           41         G-523           43         G-54           44         G-55	(\$490) (\$105,983) (\$3,03) \$0 (\$110,882) (\$2,9,144) (\$3,2,207) (\$7,970) (\$7,970) (\$7,970) (\$1,871) (\$2,171) (\$2,171) (\$2,171) (\$2,171) (\$2,171)	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$22,076 \$32,503 \$7,764 \$0 \$0 \$0 \$0 \$1,802 \$1,802 \$1,836 \$0 \$0 \$34	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$8,080 \$3377 \$2,347 \$0 \$0 \$0 \$267 \$532 \$553 \$553 \$553 \$50 \$0 \$0 \$267	\$601 \$93,504 \$2,956 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$233 \$1,827 \$1,817 \$0 \$0 \$0 \$0 \$0 \$233 \$1,827 \$1,817 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$138,658) (\$188,677) (\$42,300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$0 \$12,321 \$3,695 \$916 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$1.875) (\$404,957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$125,102) (\$1.261) \$0 \$0 \$0 \$0 \$0 \$0 \$3.321) (\$7.429) (\$7.790) \$0 \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33	(\$490) (\$106,989) (\$3,403) (\$3,403) (\$0 (\$0 (\$20,144) (\$22,207) (\$7,970) (\$	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$22,076 \$22,076 \$32,506 \$32,506 \$32,507 \$0 \$32,507 \$0 \$32,507 \$0 \$32,507 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$0 \$0 \$0 \$2,347 \$0 \$0 \$2,67 \$532 \$553 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$22,379 \$1,827 \$1,827 \$1,827 \$1,827 \$1,827 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2.678) (\$540.305) (\$16.578) \$0 \$0 (\$559.560) (\$136.658) (\$168.677) (\$42.300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$102 \$202 \$202 \$202 \$203 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$1.875) (\$404.957) (\$12,360) \$0 \$0 (\$419,193) (\$102,128) (\$125,102) (\$31,261) \$0 \$0 \$0 \$0 \$3,321) (\$7,429) (\$7,790) (\$7,790) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46           40         G-51           41         G-52           42         G-53           43         G-54           44         G-55           45         G-56           44         G-55           45         G-56           46         G-57	(\$490) (\$105,993) (\$3,403) \$0 (\$110,882) (\$29,144) (\$32,207) (\$7,970) (\$7,970) (\$7,970) (\$1,871) (\$2,179) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$32,503 \$7,764 \$32,503 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$2,347 \$2,347 \$50 \$0 \$0 \$267 \$552 \$553 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$601 \$93,504 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$233 \$1,827 \$1,817 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2.678) (\$540,305) (\$16,578) 0 0 (\$559,560) (\$136,658) (\$188,677) (\$42,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$59 \$11,910 \$352 \$0 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$0 \$102 \$202 \$202 \$202 \$203 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$1.875) (\$404.957) (\$12.360) 50 (\$419.193) (\$102.128) (\$125.102) (\$31.261) (\$31.261) (\$3.221) (\$7.429) (\$7.429) (\$7.790) 50 50 50 50
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-5 31 R-7 32 Total Residential 33 4 G-41 35 G-42 36 G-43 37 G-44 38 G-45 39 G-45 30 G-51 41 G-52 42 G-54 43 G-55 45 G-56 46 G-57 47 G-58	(\$490) (\$106,989) (\$3,403) (\$3,403) (\$0 (\$0 (\$29,144) (\$32,207) (\$7,970) (\$7,970) (\$7,970) (\$7,970) (\$1,871) (\$2,179) (\$2,070) (\$	\$481 \$106.634 \$3.351 \$3.351 \$0 \$0 \$0 \$110.466 \$32.503 \$0 \$20.766 \$32.503 \$0 \$0 \$0 \$0 \$1.802 \$1.802 \$1.802 \$1.802 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$9,377 \$2,347 \$2,347 \$2,347 \$50 \$0 \$267 \$5532 \$55	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$233 \$1,827 \$1,827 \$1,827 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50 50 50 50 50 50 50 50 50 50 50 50 50 5	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		50 50 50 50 50 50 50 50 50 50 50 50 50 5	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$42,300) (\$4,563) (\$4,2300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,138 \$3,695 \$916 \$0 \$00 \$102 \$202 \$202 \$202 \$203 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$	(\$1.875) (\$404.957) (\$12.360) \$0 \$0 (\$419.193) (\$122.128) (\$125.102) (\$1.261) (\$3.321) (\$7.790) (\$7.790) (\$7.790) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
Base Revenue Adjustment 26 R-1 27 R-3 28 R-4 29 R-5 30 R-6 31 R-7 33 G-41 35 G-42 36 G-42 36 G-43 37 G-44 38 G-45 39 G-46 40 G-51 41 G-52 42 G-53 43 G-54 44 G-55 45 G-56 45 G-56 45 G-57	(\$490) (\$105,993) (\$3,403) \$0 (\$110,882) (\$29,144) (\$32,207) (\$7,970) (\$7,970) (\$7,970) (\$1,871) (\$2,179) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$481 \$106,634 \$3,351 \$0 \$0 \$0 \$110,466 \$32,503 \$7,764 \$32,503 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$151 \$30,288 \$961 \$0 \$0 \$31,401 \$8,080 \$9,377 \$2,347 \$2,347 \$2,347 \$50 \$0 \$0 \$267 \$552 \$553 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$601 \$93,504 \$0 \$0 \$97,061 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$233 \$1,827 \$1,817 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	(\$2.678) (\$540,305) (\$16,578) 0 0 (\$559,560) (\$136,658) (\$188,677) (\$42,300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$59 \$11,910 \$352 \$0 \$0 \$0 \$12,321 \$3,138 \$3,695 \$916 \$0 \$0 \$0 \$0 \$102 \$202 \$202 \$202 \$203 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	(\$1.875) (\$404.957) (\$12.360) 50 (\$419.193) (\$102.128) (\$125.102) (\$31.261) (\$31.261) (\$3.221) (\$7.429) (\$7.429) (\$7.790) 50 50 50 50
Base Revenue Adjustment           26         R-1           27         R-3           28         R-4           29         R-5           30         R-6           31         R-7           32         Total Residential           33         G-41           35         G-42           36         G-43           37         G-44           38         G-45           39         G-46           41         G-52           42         G-53           43         G-54           44         G-55           44         G-55           45         G-56           46         G-57           47         G-58           48         Total C/I	(\$490) (\$106,989) (\$3,403) (\$3,403) (\$0 (\$0 (\$29,144) (\$32,207) (\$7,970) (\$7,970) (\$7,970) (\$7,970) (\$1,871) (\$2,179) (\$2,070) (\$	\$441 \$106.634 \$0 \$0 \$0 \$0 \$110.466 \$22.076 \$32.503 \$7.764 \$32.503 \$0 \$0 \$334 \$1.836 \$1.836 \$0 \$0 \$0 \$0 \$0 \$1.10.465 \$0 \$0 \$0 \$0 \$0 \$1.0.465 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455 \$1.0.455\$\$1.0.45\$\$1.0.45\$\$1.0.45\$\$1.0.45\$\$1.0.45\$\$1.	\$151 \$30,288 \$961 \$0 \$0 \$0 \$31,401 \$9,377 \$2,347 \$2,347 \$2,347 \$50 \$0 \$267 \$5532 \$55	\$601 \$93,504 \$2,956 \$0 \$0 \$0 \$23,379 \$30,205 \$7,982 \$0 \$0 \$23,379 \$30,205 \$7,982 \$0 \$0 \$23,379 \$30,205 \$7,982 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	50 50 50 50 50 50 50 50 50 50 50 50 50 5	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	<u>Jul-19</u> \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		50 50 50 50 50 50 50 50 50 50 50 50 50 5	(\$2,678) (\$540,305) (\$16,578) \$0 \$0 (\$559,560) (\$136,658) (\$42,300) (\$4,563) (\$4,2300) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$59 \$11,910 \$352 \$0 \$0 \$12,321 \$3,138 \$3,138 \$3,695 \$916 \$0 \$00 \$102 \$202 \$202 \$202 \$203 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$	(\$1.875) (\$404.957) (\$12.360) \$0 \$0 (\$419.193) (\$122.128) (\$125.102) (\$1.261) (\$3.321) (\$7.790) (\$7.790) (\$7.790) \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0

Docket No.	DG 20-105
	Exhibit 35

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Calendar Month Weather Normalized Base Revenues

### Docket No. DG 20-105 Attachment RATES-3 Page 3 of 4

													•
							Calculated						
Calendar Month Weather Normal Base Revenues (Margin)	Jan-19	Feb-19	Mar-19	Apr-19	<u>May-19</u>	<u>Jun-19</u>	Jul-19	Aug-19	Sep-19	<u>Oct-19</u>	<u>Nov-19</u>	Dec-19	Total
1 R-1 2 R-3 3 R-4 4 R-5	\$ 89,689 \$ 7,091,202 \$ 228,838 \$ 1,917	\$ 6,165,084 \$ 197,086 \$ 1,909	\$ 5,466,948 \$ 176,279 \$ 1,893	\$ 115,050 \$ 1,658	\$ 2,478,989 \$ 78,771 \$ 1,464	\$ 66,229 \$ \$ 1,789,520 \$ \$ 57,135 \$ \$ 1,471 \$	5 1,684,968 5 52,319 5 1,494 5	\$ 1,695,145 \$ \$ 51,309 \$ \$ 1,374 \$	5 1,809,174 5 53,157 5 1,577	\$ 2,746,731 \$ 81,790 \$ 1,796	\$ 4,493,734 \$ 141,183 \$ 2,255	\$ 88,362 \$ 6,316,317 \$ 190,009 \$ 2,505	\$903,558 \$45,314,839 \$1,422,926 \$21,313
5 R-6 6 R-7 7 Total Residential 8	\$ 19,615 \$ 77 \$7,431,337			\$ 11,202 \$ 53 \$3,780,596		\$ 5,865 \$ \$ 32 \$ \$1,920,253						\$ 27,529 \$ 138 \$6,624,860	\$158,243 \$739 \$47,821,617
9 G-41 10 G-42 11 G-43 12 G-44 13 G-45	\$ 2,237,173 \$ 2,219,110 \$ 521,368 \$ 474 \$ 7.862	\$ 1,938,879 \$ 444,234 \$ 480	\$ 1,747,146 \$ 410,140 \$ 413	\$ 1,174,133 \$ 1,155,992 \$ 276,488 \$ 282 \$ 3,790	\$ 727,244 \$ 109,836 \$ 217	\$ 622,680 \$ \$ 463,673 \$ \$ 77,006 \$ \$ 178 \$ \$ 1.384 \$	418,536 71,518 189	\$ 432,779 \$ \$ 70,704 \$ \$ 264 \$	497,941 75,425 298	\$ 824,405 \$ 111,359 \$ 777	\$ 1,456,621 \$ 330,929 \$ 1,345	\$ 1,982,533 \$ 2,030,089 \$ 471,437 \$ 1,806 \$ 14,663	\$14,683,625 \$13,912,415 \$2,970,444 \$6,724 \$69,469
14 G-46 15 G-51 16 G-52 17 G-53 18 G-54	\$ 174,989 \$ 174,989 \$ 278,447 \$ 246,100 \$ 104,564	\$ 932 \$ 154,524 \$ 242,802 \$ 202,662	\$ 1,864 \$ 159,232 \$ 248,869 \$ 198,110	\$ 2,796 \$ 140,439 \$ 214,733 \$ 163,734 \$ 102,507	\$ 3,728 \$ 135,350 \$ 155,688 \$ 88,115	\$ 4,660 \$ \$ 123,608 \$ \$ 141,560 \$ \$ 78,330 \$ \$ 77,033 \$	5,660 5 125,347 5 145,459 5 78,795 5	\$ 6,604 5 \$ 131,120 5 \$ 151,356 5 \$ 80,594 5	7,547 127,160 148,770 76,558	\$ 8,490 \$ 135,859 \$ 164,333 \$ 88,218	\$ 9,434 \$ 148,830 \$ 241,496 \$ 174,510	\$ 10,377 \$ 167,986 \$ 275,201 \$ 204,212 \$ 102,513	\$62,092 \$1,724,444 \$2,408,715 \$1,679,939
18 G-54 19 G-55 20 G-56 21 G-57 22 G-58 23 Total C/I	\$ 104,564 \$ 386 \$ - \$ 2,568 \$5,793,041	\$ 352 \$ - \$ -	\$ 357 \$ - \$ -	\$ 102,507 \$ 294 \$ - \$ - \$ 3,395 \$3,238,583	\$278 \$- \$-	\$ 77,033 \$ \$ 238 \$ \$ - 5 \$ - 5	231 S - S	\$248 \$-\$ \$-\$	5 241 5 - 5 -	\$ 277 \$ - \$ -	\$ 333	\$ 102,513 \$ 389 \$ - \$ 3,167 \$5,264,372	\$1,085,852 \$3,626 \$0 \$0 <u>\$30,464</u> \$38,637,808
24 25 Total	\$13,224,378		\$10,373,862	\$7,019,179	\$4,767,256	\$3,512,327	\$3,341,426	\$3,376,936	\$3,571,508	\$5,211,042	\$8,669,336	\$11,889,232	\$86,459,425
							Calculated						
Calendar Month Weather Normal Base Rev Adj at EOY Rates	Jan-19	Feb-19	Mar-19	Apr-19	<u>May-19</u>	<u>Jun-19</u>	<u>Jul-19</u>	<u>Aug-19</u>	Sep-19	<u>Oct-19</u>	Nov-19	Dec-19	Total
26 R-1 27 R-3 28 R-4 29 R-5	\$1,084 \$86,381 \$2,830 \$9	\$961 \$75,094 \$2,438 \$10	\$1,014 \$66,561 \$2,184 \$11	\$913 \$43,504 \$1,430 \$12	\$876 \$30,101 \$985 \$17	\$800 \$21,693 \$718 \$17	\$0 \$0 \$0 \$15	\$0 \$0 \$0 \$14	\$0 \$0 \$0 \$15	\$0 \$0 \$15	\$0 \$0 \$0 \$16	\$0 \$0 \$0 \$16	\$5,648 \$323,333 \$10,585 \$168
30 R-6 31 R-7	\$20 \$0	\$22 \$0	\$23 \$0	\$29 \$0	\$96 \$1	\$70 \$0	\$44 \$0	\$41 \$0	\$46 \$0	\$49 \$0	\$54 \$0	\$54 \$0	\$547 \$3
32 Total Residential	\$90,324	\$78,525	\$69,792	\$45,889	\$32,075	\$23,298	\$60	\$55	\$62	\$64	\$70	\$71	\$340,286
33 34 G-41 35 G-42 36 G-43 37 G-44	\$27,228 \$26,958 \$6,337 \$1	\$23,733 \$23,553 \$5,399 \$2	\$21,360 \$21,224 \$4,985 \$2	\$14,260 \$14,042 \$3,360 \$2	\$10,008 \$8,834 \$1,336 \$3	\$7,540 \$5,632 \$937 \$2	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$104,130 \$100,243 \$22,355 \$11
38 G-45 39 G-46 40 G-51 41 G-52	\$11 \$0 \$2,131 \$3,390	\$10 \$11 \$1,881 \$2,956	\$11 \$23 \$1,938 \$3,028	\$11 \$34 \$1,708 \$2,610	\$37 \$45 \$1,645 \$1,884	\$17 \$57 \$1,502 \$1,713	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$96 \$170 \$10,804 \$15,582
42 G-53 43 G-54 44 G-55 45 G-56	\$3,054 \$1,281 \$3 \$0	\$2,514 \$1,167 \$2 \$0	\$2,457 \$1,177 \$3 \$0	\$2,030 \$1,256 \$3 \$0	\$1,035 \$896 \$3 \$0	\$922 \$899 \$3 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$12,013 \$6,676 \$17 \$0
46 G-57 47 G-58 48 Total C/I	\$0 \$12 \$70,406	\$0 \$11 \$61,242	\$0 \$12 \$56,219	\$0 \$12 \$39,327	\$0 \$23 \$25,750	\$0 \$20 \$19,244	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$90 \$272,187
49 50 Total	\$160,729	\$139,767	\$126,011	\$85,216	\$57,825	\$42,542	\$60	\$55	\$62	\$64	\$70	\$71	\$612,472

### Liberty Utilities (EnergyNorth Natural Gas) Corp. Test Year Ending December 31, 2019 Development of Calendar Month Weather Normalized Base Revenues

### Docket No. DG 20-105 Attachment RATES-3 Page 4 of 4

											Calculated								
		· · · ·																	
	Calendar Month Weather Normal																		
	Base Revenues at EOY Rates		Jan-19	Fel	b-19	Mar-19	Apr-19	Ma	-19	Jun-19	Jul-19	,	Aug-19	Sep-19	Oct-19	No No	v-19	Dec-19	Total
											-	-							
1	R-1	\$	90,773	\$ 80.4	487 \$	84.912	\$ 76.520	\$ 73.4	34 \$	67,029	66.076	s	66,535	\$ 65.795	\$ 71.674	\$ 77.	608 \$	88,362	\$909.206
2	R-3	ŝ	7.177.583	\$ 6.240.	178 \$	5.533,508	\$ 3.620.531	\$ 2,509.			1.684.968	ŝ		\$ 1.809.174	\$ 2,746,731	\$ 4,493.	734 \$		\$45,638,172
3	R-4	ŝ		\$ 199.				\$ 79.						\$ 53.157	\$ 81.790	\$ 141,			\$1,433,511
4	R-5	ŝ	1,925	\$ 1.	919 \$	1,904	\$ 1.670	\$ 1.	81 S					\$ 1.593	\$ 1.812		272 \$		\$21,481
5	R-6	ŝ	19.635	\$ 18,3	321 9	16.695	\$ 11.231	\$ 8	00 \$			ŝ	5.471	\$ 6.855	\$ 11.890	\$ 21.	498 S	27.584	\$158,791
6	R-7	ŝ		s	72 9		\$ 53	\$ 5	45 \$			ŝ		\$ 33	\$ 57		107 \$		\$742
7	Total Residential		\$7.521.660	\$6.540.	502	\$5.815.550	\$3.826.485	\$2,671,	07	\$1.943.551	\$1,810,579		\$1.819.877	\$1,936,606	\$2,913,953	\$4,736.	401	\$6.624.931	\$48,161,903
8																			
9	G-41	\$	2.264.401	\$ 1.973.	915 \$	1.777.690	\$ 1.188.393	\$ 835.3	59 \$	630,220	600.531	s	599.223	\$ 620.369	\$ 877.370	\$ 1.437.	750 \$	1.982.533	\$14,787,756
10	G-42	ŝ	2.246.068	\$ 1.962.	433 \$	1,768,370	\$ 1,170,033	\$ 736.	78 \$	469,305	418,536	ŝ	432,779	\$ 497.941	\$ 824,405	\$ 1,456,	621 \$	2,030,089	\$14,012,658
11	G-43	ŝ	527,705	\$ 449.	633 \$	415.125	\$ 279.848	\$ 111.	72 \$	77,943	71.518	ŝ	70,704	\$ 75.425	\$ 111.359				\$2,992,799
12	G-44	ŝ	476	s .	482 \$	415	\$ 283	\$	20 S	180 \$	189	ŝ	264	\$ 298	\$ 777	\$ 1.	345 \$	1.806	\$6.735
13	G-45	ŝ	7.873	\$ 6.9	963 \$	5,994	\$ 3.801	\$ 3.	13 S	1.401 \$	1,140	ŝ	2.015	\$ 3.833	\$ 7.106		663 \$	14,663	\$69,565
14		ŝ	-	s i	943 \$	1.887	\$ 2.830	\$ 3.	73 \$	4,717	5.660	ŝ	6.604	\$ 7.547	\$ 8,490	\$ 9.	434 \$		\$62,262
15	G-51	ŝ	177.119	\$ 156.4	405 \$	161,170	\$ 142,146	\$ 136.	95 \$	125,110	125,347	ŝ	131,120	\$ 127,160	\$ 135.859	\$ 148.	830 \$		\$1,735,247
	G-52	ŝ	281.837	\$ 245.	759 \$	251,897	\$ 217.343	\$ 157.	71 S	143,273	145,459	ŝ	151.356	\$ 148,770	\$ 164.333	\$ 241.	496 \$	275,201	\$2,424,297
17	G-53	ŝ	249,154	\$ 205.	176 \$	200,567	\$ 165,764	\$ 89.	51 S	79.252	78,795	ŝ	80.594	\$ 76.558	\$ 88.218	\$ 174.	510 \$		\$1,691,952
18	G-54	ŝ	105.845	\$ 96.	421 \$	97.226	\$ 103,763	\$ 77.	90 \$	77,932	81,733	ŝ	80,439	\$ 74.947	\$ 76,940	\$ 117.	178 \$		\$1,092,528
19	G-55	ŝ	389	s	355 \$	360	\$ 297	\$	82 \$	241 \$	231	ŝ	248	\$ 241	\$ 277	ŝ	333 \$		\$3,642
	G-56	ŝ	-	s	- 5	-	\$ -	s	- s	- 9		ŝ		s -	s -	s	- 5	-	\$0
21		ŝ	-	š	- 3		š -	ŝ	- š		-	ŝ	-	s -	š -	ŝ	- 5		\$0
22		ŝ	2,580	\$ 3	723 9	3.622	\$ 3,406	\$ 1.	69 \$	1.744	1,767	ŝ	1,767	\$ 1,874	\$ 2.018	\$ 2	915 \$	3.167	\$30,553
23	Total C/I	-	\$5.863.447	\$5,102,3		\$4.684.323	\$3,277,909	\$2,153.		\$1.611.318	\$1,530,907		\$1,557,114	\$1.634.963	\$2.297.153	\$3.933.		\$5,264,372	\$38,909,995
24				, . ,															,
25	Total	\$	13,385,107	\$11,642,	710	\$10,499,873	\$7,104,395	\$4,825,	81	\$3,554,869	\$3,341,486		\$3,376,991	\$3,571,570	\$5,211,107	\$8,669,	406	\$11,889,303	\$87,071,898
											Calculated								
	Calendar Month Weather Normal																		
	Low-Inc Discount at EOY Rates		Jan-19	Fel	b-19	Mar-19	Apr-19	Mar	-19	Jun-19	Jul-19	9	Aug-19	Sep-19	Oct-19	No No	v-19	Dec-19	Total
26	R-4 Cust		6,207	5,	598	6,170	5,877	5,	58	5,683	5,713		5,573	5,312	5,665	5,	882	5,877	69,515
27	R-3 Cust Charge	\$	15.20	\$ 15	.20 \$	15.20	\$ 15.20	\$ 15	20 \$	15.20 \$	15.20	\$	15.20	\$ 15.20	\$ 15.20	\$ 15	.20 \$	5 15.20	
28	Customer Revenue at R-3 Rate		\$94,369	\$85,	103	\$93,802	\$89,339	\$90,	81	\$86,391	\$86,846		\$84,726	\$80,763	\$86,126	\$89.	416	\$89,350	\$1,056,811
29																			
30	R-7 Cust		1		1	1	2		3	3	3		3	3	3		3	3	29
31	R-6 Cust Charge	\$	19.76	\$ 19	.76 \$	19.76	\$ 19.76	\$ 19	76 \$	19.76	19.76	\$	19.76	\$ 19.76	\$ 19.76	\$ 19	.76 \$	5 19.76	
32	Customer Revenue at R-6 Rate		\$20		\$20	\$20	\$36		59	\$61	\$61		\$55	\$61	\$59		\$61	\$59	\$575
33	Customer Revenue at R-3/6 Rate	-	\$94,390	\$85,	124	\$93,822	\$89,375	\$90,	40	\$86,452	\$86,907		\$84,781	\$80,824	\$86,185	\$89,	477	\$89,409	\$1,057,386
34		-																	
35	R-4 Volume		870,449	742,	805	632,640	362,448	195,	98	104,607	78,949		78,217	93,638	212,528	473,	230	692,517	4,537,425
36	R-3 Rate		\$0.5569	\$0.5	569	\$0.5569	\$0.5569	\$0.5	69	\$0.5569	\$0.5569		\$0.5569	\$0.5569	\$0.5569	\$0.5	569	\$0.5569	
37	Dist Revenue at R-3 Rate	-	\$484,741	\$413,	658	\$352,308	\$201,842	\$108,	14	\$58,254	\$43,966		\$43,558	\$52,145	\$118,354	\$263,	535	\$385,653	\$2,526,829
38																			
39	R-7 Volume		236	1	219	205	132		74	29	23		21	31	116		286	395	1,767
40	R-6 Rate		\$0.7240	\$0.7	240	\$0.7240	\$0.7240	\$0.7	40	\$0.7240	\$0.7240		\$0.7240	\$0.7240	\$0.7240	\$0.7	240	\$0.7240	
41	Dist Revenue at R-6 Rate		\$171	\$	159	\$149	\$96	:	53	\$21	\$17		\$15	\$22	\$84	\$	207	\$286	\$1,280
42	Dist Revenue at R-4/6 Rate		\$484,912	\$413,	817	\$352,457	\$201,938	\$108,	68	\$58,275	\$43,983		\$43,573	\$52,168	\$118,438	\$263,	742	\$385,939	\$2,528,108
43																			
44	Base Revenue at R-3/6 Rate		\$579,302	\$498,	940	\$446,278	\$291,313	\$199,	80	\$144,727	\$130,890		\$128,354	\$132,992	\$204,623	\$353,	219	\$475,348	\$3,585,494
45	Base Revenue at R-4/7 Rate	\$	231,745	\$ 199,	596 \$	178,531	\$ 116,533	\$ 79,	01 \$	57,886 \$	52,350	\$	51,337	\$ 53,190	\$ 81,847	\$ 141,	290 \$	5 190,147	\$1,434,253
46	Low-Inc Base Rate Discount Rev	_	\$347,557	\$299,	344	\$267,748	\$174,780	\$119,	07	\$86,841	\$78,540		\$77,017	\$79,801	\$122,776	\$211,	929	\$285,201	\$2,151,241
		_																	

Liberty Utilities (EnergyNorth Natural Gas) Corp	С
Current Base Distribution Rates	

Docket No. DG 20-105 Attachment RATES-4 Page 1 of 4

### **Current Base Distribution Rates** Rate Cur COG & LDAC Cur Prop R1 15.50 **Customer Charge** \$ \$ 17.99 \$ 0.3860 \$ 0.4137 Winter Charge for 1st Therms LDAC Charge \$ 0.0310 \$ 0.0329 \$ 0.03100 Charge for Therms over 1st 0.3860 \$ 0.4137 Energy Charge \$ Block Size Cutoff for First Block Cost of Gas Cost of Gas Rate 0.2679 \$ 0.2660 0.26790 \$ \$ 0.3860 \$ Summer Charge for 1st Therms \$ 0.4137 LDAC Charge \$ 0.0310 \$ 0.0329 \$ 0.03100 \$ 0.3860 \$ 0.4137 Energy Charge Charge for Therms over 1st Block Size Cutoff for First Block Cost of Gas Cost of Gas Rate \$ 0.3715 \$ 0.3738 \$ 0.37150 R3 **Customer Charge** \$ 15.50 \$ 17.99 Winter Charge for 1st Therms \$ 0.5678 \$ 0.6520 0.0310 LDAC Charge \$ \$ 0.0329 \$ 0.03100 Energy Charge Charge for Therms over 1st \$ 0.5678 \$ 0.6520 Block Size Cutoff for First Block Cost of Gas Rate 0.2679 \$ 0.2660 0.26790 Cost of Gas \$ \$ Charge for 1st Therms \$ 0.5678 \$ 0.6520 Summer LDAC Charge \$ 0.0310 \$ 0.0329 \$ 0.03100 Energy Charge Charge for Therms over 1st \$ 0.5678 \$ 0.6520 Block Size Cutoff for First Block Cost of Gas Cost of Gas Rate \$ 0.3715 \$ 0.3738 \$ 0.37150 R4 **Customer Charge** \$ 6.20 7.20 \$ Charge for 1st Therms \$ 0.2272 \$ 0.2608 Winter 0.0310 \$ 0.0329 0.03100 LDAC Charge \$ \$ Energy Charge Charge for Therms over 1st \$ 0.2272 \$ 0.2608 Block Size Cutoff for First Block Cost of Gas Cost of Gas Rate \$ 0.2679 \$ 0.2660 \$ 0.26790 Summer Charge for 1st Therms \$ 0.2272 \$ 0.2608 \$ 0.0310 0.0329 0.03100 LDAC Charge \$ \$ 0.2272 Energy Charge Charge for Therms over 1st \$ \$ 0.2608 Cutoff for First Block Block Size Cost of Gas Cost of Gas Rate \$ 0.3715 \$ 0.3738 \$ 0.37150 41 \$ 57.46 \$ 66.71 **Customer Charge** Winter Charge for 1st Therms \$ 0.4711 \$ 0.5433 LDAC Charge \$ 0.0478 \$ 0.0497 \$ 0.04780 Energy Charge Charge for Therms over 1st \$ 0.3165 \$ 0.3650 Block Size Cutoff for First Block 100 100 \$ 0.2666 \$ 0.2647 0.26660 Cost of Gas Cost of Gas Rate \$ 0.4711 0.5433 Summer Charge for 1st Therms \$ \$ \$ 0.0478 \$ 0.0497 0.04780 LDAC Charge \$ Energy Charge Charge for Therms over 1st \$ 0.3165 \$ 0.3650 Block Size Cutoff for First Block 20 20 Cost of Gas Cost of Gas Rate \$ 0.3669 \$ 0.3692 \$ 0.36690 42 **Customer Charge** \$ 172.39 \$ 200.14 \$ 0.4284 \$ 0.4999 Winter Charge for 1st Therms LDAC Charge \$ 0.0478 0.0497 \$ 0.04780 \$ Energy Charge Charge for Therms over 1st \$ 0.2855 \$ 0.3331 Block Size Cutoff for First Block 1,000 1,000 Cost of Gas 0.2666 0.2647 0.26660 Cost of Gas Rate \$ \$ \$ 0.4284 Summer Charge for 1st Therms \$ \$ 0.4999 LDAC Charge \$ 0.0478 \$ 0.0497 \$ 0.04780 Energy Charge Charge for Therms over 1st \$ 0.2855 \$ 0.3331 Block Size Cutoff for First Block 400 400 Cost of Gas Cost of Gas Rate 0.3669 \$ 0.3692 \$ 0.36690 \$

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Liberty Utilities (EnergyNorth Natural Gas) Corp.
Current Base Distribution Rates

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Cur	rent Base Dist	ribution Rates			-			
Rate				Cur		Prop	Cur	COG & LDAC
43	Customer Charg	е	\$	739.83	\$	858.91		
	Winter	Charge for 1st Therms	\$	0.2633	\$	0.3126		
	LDAC Charge		\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.2633	\$	0.3126		
	Block Size	Cutoff for First Block		-		-		
	Cost of Gas	Cost of Gas Rate	\$	0.2666	\$	0.2647	\$	0.26660
	<u>Summer</u>	Charge for 1st Therms	\$	0.1204	\$	0.1429		
	LDAC Charge		\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1204	\$	0.1429		
	Block Size	Cutoff for First Block		-		-		
	Cost of Gas	Cost of Gas Rate	\$	0.3669	\$	0.3692	\$	0.36690
51	Customer Charg	e	\$	57.46	\$	66.71		
	Winter	Charge for 1st Therms	\$	0.2839	\$	0.3408		
	LDAC Charge		\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1846	\$	0.2216		
	Block Size	Cutoff for First Block		100		100		
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	\$	0.27340
	<u>Summer</u>	Charge for 1st Therms	\$	0.2839	\$	0.3408		
	LDAC Charge		\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1846	\$	0.2216		
	Block Size	Cutoff for First Block		100		100		
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	\$	0.37860
52	Customer Charg	e	\$	172.39	\$	200.14		
	Winter	Charge for 1st Therms	\$	0.2439	\$	0.2926		
	LDAC Charge		\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1624	\$	0.1948		
	Block Size	Cutoff for First Block		1,000		1,000		
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	\$	0.27340
	<u>Summer</u>	Charge for 1st Therms	\$	0.1767	\$	0.2120		
	LDAC Charge	-	\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1004	\$	0.1205		
	Block Size	Cutoff for First Block		1,000		1,000		
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	\$	0.37860
53	Customer Charg	e	\$	761.39	\$	883.94		
	Winter	Charge for 1st Therms	\$	0.1705	\$	0.2092		
	LDAC Charge	-	\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.1705	\$	0.2092		
	Block Size	Cutoff for First Block		-		-		
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	\$	0.27340
	Summer	Charge for 1st Therms	\$	0.0818	\$	0.1003		
	LDAC Charge	-	\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.0818	\$	0.1003		
	Block Size	Cutoff for First Block		-		-		
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	\$	0.37860
54	Customer Charg	e	\$	761.39	\$	883.94		
	Winter	Charge for 1st Therms	\$	0.0650	\$	0.0900		
	LDAC Charge	-	\$	0.0478	\$	0.0497	\$	0.04780
	Energy Charge	Charge for Therms over 1st	\$	0.0650	\$	0.0900		
	Block Size	Cutoff for First Block		-		-		
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	\$	0.27340
	Summer	Charge for 1st Therms	\$	0.0353	\$	0.0488	Ť	0.21040
	LDAC Charge		\$	0.0333	φ \$	0.0400	\$	0.04780
	Energy Charge	Charge for Therms over 1st	э \$	0.0478	э \$	0.0497	Ψ	0.04700
	Block Size	Charge for First Block	φ	0.0303	Φ	0.0400		
			¢	-	¢	-	¢	0.07000
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	\$	0.37860

### rent Read Distribution Rotes

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Current Base Distribution Rates

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Rate				Cur		Prop	Cur COG & LDA
R5	Customer Charg	e	\$	20.15	\$	23.39	
	Winter	Charge for 1st Therms	\$	0.5018	\$	0.5378	
	LDAC Charge	J. J	\$	0.0310	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.5018	\$	0.5378	
	Block Size	Cutoff for First Block		-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.2679	\$	0.2660	
	Summer	Charge for 1st Therms	\$	0.5018	\$	0.5378	
	LDAC Charge	5	\$	0.0310	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.5018	\$	0.5378	
	Block Size	Cutoff for First Block	ŗ	-	ľ	-	
	Cost of Gas	Cost of Gas Rate	\$	0.3715	\$	0.3738	
<b>R</b> 6	Customer Charge		\$	20.15	\$	23.39	
	Winter	Charge for 1st Therms	\$	0.7381	\$	0.8476	
	LDAC Charge	enalge ter ter menne	\$	0.0310	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.7381	\$	0.8476	
	Block Size	Cutoff for First Block	Ŷ	-	Ť	-	
	Cost of Gas	Cost of Gas Rate	\$	0.2679	\$	0.2660	
	Summer	Charge for 1st Therms	\$	0.7381	\$	0.8476	
	LDAC Charge	charge for for mornie	\$	0.0310	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.7381	\$	0.8476	
	Block Size	Cutoff for First Block	Ŷ	-	Ť	-	
	Cost of Gas	Cost of Gas Rate	\$	0.3715	\$	0.3738	
<b>R</b> 7	Customer Charge		\$	8.06	\$	9.36	
VI.	Winter	Charge for 1st Therms	\$	0.2953	\$	0.3390	
	LDAC Charge	onarge for for mennio	\$	0.0310	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.2953	\$	0.3390	
	Block Size	Cutoff for First Block	Ψ	0.2355	Ψ	0.5550	
	Cost of Gas	Cost of Gas Rate	\$	- 0.2679	\$	0.2660	
	Summer	Charge for 1st Therms	\$	0.2073	\$	0.3390	
	LDAC Charge	onarge for 1st mennis	\$	0.2300	\$	0.0329	
	Energy Charge	Charge for Therms over 1st	\$	0.2953	\$	0.3390	
	Block Size	Cutoff for First Block	Ψ	0.2355	Ψ	0.5550	
	Cost of Gas	Cost of Gas Rate	\$	- 0.3715	\$	- 0.3738	
14	Customer Charge		\$	74.70	φ \$	86.72	
+4		Charge for 1st Therms	\$	0.6125	\$	0.7063	
	Winter	Charge for 1st menns		0.0123		0.0497	
	LDAC Charge	Charge for Thorme over 1st	\$ \$			0.0497	
	Energy Charge Block Size	Charge for Therms over 1st Cutoff for First Block	Φ	0.4114	\$		
	Cost of Gas	Cost of Gas Rate	\$	100 0.2666	\$	100 0.2647	
			э \$			0.2047	
	Summer	Charge for 1st Therms		0.6125	\$		
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.4114	\$	0.4745	
	Block Size	Cutoff for First Block	¢	20	<u>م</u>	20	
4 5	Cost of Gas	Cost of Gas Rate	\$	0.3669	\$	0.3692	
15	Customer Charg		\$	224.11	\$	260.18	
	Winter	Charge for 1st Therms	\$	0.5569	\$	0.6498	
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.3711	\$	0.4330	
	Block Size	Cutoff for First Block		1,000		1,000	
	Cost of Gas	Cost of Gas Rate	\$	0.2666	\$	0.2647	
	Summer	Charge for 1st Therms	\$	0.5569	\$	0.6498	
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.3711	\$	0.4330	
	Block Size	Cutoff for First Block		400		400	
	Cost of Gas	Cost of Gas Rate	\$	0.3669	\$	0.3692	

Liberty Utilities (EnergyNorth Natural Gas) Corp.
Current Base Distribution Rates

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Rate				Cur		Prop	Cur COG & LD/
46	Customer Charg	e	\$	961.78	\$	1,116.58	
	Winter	Charge for 1st Therms	\$	0.3423	\$	0.4064	
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.3423	\$	0.4064	
	Block Size	Cutoff for First Block		-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.2666	\$	0.2647	
	Summer	Charge for 1st Therms	\$	0.1565	\$	0.1858	
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.1565	\$	0.1858	
	Block Size	Cutoff for First Block		-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.3669	\$	0.3692	
55	Customer Charg	e	\$	74.69	\$	86.72	
	Winter	Charge for 1st Therms	\$	0.3691	\$	0.4430	
	LDAC Charge	- 5	\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.2400	\$	0.2881	
	Block Size	Cutoff for First Block	Ŷ	100	Ť	100	
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	
	Summer	Charge for 1st Therms	\$	0.3691	\$	0.4430	
	LDAC Charge	charge for for the memo	\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.2400	\$	0.2881	
	Block Size	Cutoff for First Block	Ψ	100	Ψ	100	
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	
56			\$	224.11	φ \$	260.18	
00	Customer Charg					0.3804	
	<u>Winter</u>	Charge for 1st Therms	\$	0.3170	\$		
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.2111	\$	0.2533	
	Block Size	Cutoff for First Block	<b>•</b>	1,000		1,000	
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	
	Summer	Charge for 1st Therms	\$	0.2297	\$	0.2756	
	LDAC Charge	· · ·	\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.1306	\$	0.1566	
	Block Size	Cutoff for First Block		1,000		1,000	
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	
57	Customer Charg		\$	989.81		1,149.12	
	<u>Winter</u>	Charge for 1st Therms	\$	0.2216	\$	0.2720	
	LDAC Charge		\$	0.0478	\$		
	Energy Charge	Charge for Therms over 1st	\$	0.2216	\$	0.2720	
	Block Size	Cutoff for First Block		-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	
	<u>Summer</u>	Charge for 1st Therms	\$	0.1063	\$	0.1305	
	LDAC Charge		\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.1063	\$	0.1305	
	Block Size	Cutoff for First Block		-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	
58	Customer Charg	e	\$	989.81	\$	1,149.12	
	Winter	Charge for 1st Therms	\$	0.0846	\$	0.1170	
	LDAC Charge	-	\$	0.0478	\$	0.0497	
	Energy Charge	Charge for Therms over 1st	\$	0.0846	\$	0.1170	
	Block Size	Cutoff for First Block	ĺ	-	Ľ	-	
	Cost of Gas	Cost of Gas Rate	\$	0.2734	\$	0.2715	
	Summer	Charge for 1st Therms	\$	0.2754	\$	0.0634	
	LDAC Charge	charge for 1st menns	э \$	0.0459	э \$	0.0034	
	-	Charge for Thorms over 1st					
	Energy Charge	Charge for Therms over 1st	\$	0.0459	\$	0.0634	
	Block Size	Cutoff for First Block	_	-		-	
	Cost of Gas	Cost of Gas Rate	\$	0.3786	\$	0.3809	

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Liberty Utilities (EnergyNorth Natural Gas) Corp.
Rate Design Analysis and Calculations

		<u> </u>	romidentia	4				Comm	sercial and Industrial: Lo	w Load Facto	٢		100		Commercial and int	astrial: High Load	Factor		1000-00-0		
	Non Heat ME R-1	EP Non Heat R-5	Heat R-3	MEP Heat R-6	Wincome ME Heat Inco R-4	EP Low ome Heat R-7	Low Annual G-41	MEP Low Annual G-44	Medium Annual G-42	EP Medium Annual G-45	Hiph Annual G-43	AEP High Annual G-46	Low Annual A	PLow 1 nual -55	Medium MEP Mediur Annual Annual G-52 G-58	High Annual G-53	Annual G-57	Hish Annual G-54	MEP High Annual G-58	Company Total	Explanation
(A) . Proforma Normalized Revenues at Current Rates Winter	(0)	(6)	(D)	(E)	(F)	(G)	(H)	10	(2)	(A)	(L)	(M)	(%)	0	(P) (Q)	(PC)	(5)	(1)	(0)	(v)	(W)
Winter Customer Revenues Winter Volumetric Revenues	\$321,238 \$187,087	\$5,468 \$5,961	\$6,791,969 \$27,241,345	\$17,618 \$99,586	\$220,676 \$857,288	\$89 \$435	\$3,272,068 \$7,559,599	\$1,163 \$3,737	\$1,459,217 \$9,382,504	\$6,776 \$45,183	\$241,408 \$2,281,585	\$25,968	\$449,950 \$522,348	\$1,352 \$812	\$402,292 \$ \$1,140,817 \$	\$158,192	\$0 \$0	\$123,675 \$511,713	\$5,972 \$13,827	\$13,508,098 \$50,918,418	8 Company Records 8 Company Records
Summer Customer Revenues	\$325.707	\$7.628	\$5,850,183	\$22.327	\$210.052	\$146	\$3,172,280	\$1.228	\$1.473.257	\$7.313	\$227.277	\$37.510	\$457.344	\$1.374	\$412.025 \$	\$156.365	so.	\$121.036	\$5.071	\$13,499,124	4 Company Records
Summer Volumetric Revenues Base Revenues	\$92,788 \$926,820	\$1,824 \$21,900	\$5,634,491 \$46,527,988	\$22,355	\$173,393	\$86 \$756	\$1,072,183 \$15,076,131	\$738 \$6,866	\$1,971,800 \$14,285,778	\$11,659 \$70,932	\$300,918 \$3,051,188	\$0 \$63,478	\$339,518 \$1,769,170	\$175	\$516,593 \$ \$2,471,727 \$	\$345,985	\$0 \$0	\$357,555 \$1,113,980	\$5,284 \$31,154	\$10,847,346 \$88,770,986	6 Company Records
EOY Revenue Adjustment	(\$8,583)	\$0 \$21,900	\$399,127	\$0	(\$11,384)	\$0 \$756	\$144,745	\$0 \$6,886	\$151,520 \$14,438,298	\$0 \$70,932	\$53,669	\$0 \$63,478	(\$6,972)	\$0	\$38,522 \$	(\$7,074)	\$0	\$0 \$1,113,980	\$0 \$31,154	\$755.571	RATES-5 WP - EOY Adjustment
Adjusted Base Revenues Revenue Shortfall R-4 revenues at R-4, R-3 rates	\$920,238	\$21,900	\$46,927,115	\$161,857 \$1	1,450,025	\$756 \$1,134	\$15,220,876	\$5,595	\$14,438,298	\$70,932	\$3,104,857	\$63,478	\$1,762,197	\$3,714 \$	\$2,510,249 \$	\$1,718,038	\$0	\$1,113,980	\$31,154	\$89,526,557 \$2,175,896	6 Column (F) + Column (G)
R-4 Shortall Recovery Rate Recovery of R-4 Revenue Shortfall	\$8,819	\$191	\$715,729	\$2,025	\$55,164	\$22	\$304,523	\$124	\$427,836	\$1,638	\$139,255	\$0	\$50,211	\$43	\$118,454 \$	\$127,785	\$0	\$220,663	\$3,417	\$0.0125 \$2,175,896	3 Line 11 / Line 47 6 Line 12 * Line 47
L Billing Determinanta Customer Bil Count												_		_			-				-
Winter Summer	20,729 21,018	321 379	438,281 442,683	875 1,108	35,600 33,886	11 18	56,945 55,208	16 16	8,465 8,546	30 33	326 307	27 39	7,831 7,960	18 18	2,334 2,390	208	0	162	6	572,184 573,975	9 Company Records
Total EOY Customer Bill Count Adjustement	41,747	700	880,964	1,983	69,486	29	112,152	32	17,010	63	634	66	15,791	35	4,724	413	0	321	12		4 Line 16 + Line 17
Winter Summer	(161) (126) (286)	0	3,858 3,922 7,779	0	(329) (158) (487)	0	455 816	0	100 120	0	6 11	0	(26) (42) (58)	0	41 34	(0) (2)	00	0	0	3,944 4,575 8,515	4 RATES-5 WP - EOY Adiustment 5 RATES-5 WP - EOY Adjustment
Total Adjusted Customer Bill Count Winter		0		0		0	1,271	۰	221	0	10	0		•	75	(~)	0	0	0		
Winter Summer	20,569	321 379 700	442,139 446,604	875	35,271 33,728	11	57,400	16 16	8,565	30 33	332 318 650	27 39	7,806 7,918 15,723	18 18	2,374 2,424	207	0	162 159	6	576,128 578,555	8 Line 16 + Line 20 5 Line 17 + Line 21
Total	20,892 41,461	700	446,604 888,743	1,108 1,983	68,999	29	56,024 113,424	32	8,666 17,231	63	650	66	15,723	36	2,424 4,798	203	õ	159 321	12	1,154,683	5 Line 17 + Line 21 3 Line 24 + Line 25
elivery Quantities (Weather Normalized, Calendarized) Winter Volumes	i i																				
Headblock Talblock	484,690	11,918	47,979,070	134,921 5	3,774,088	1,474	4,728,945	1,312 7,131	8,070,452 20,755,644	29,152 78.004	8,663,887	0	549,348 1,984,258	693 2.318	2,253,190 3.640,943	6,245,076	0	7,868,954	163,520	90,956,690 43,319,056	0 Company Records 6 Company Records
Winter EOY Adjustment	(4,108)		405.786		(33,342)	-	33.478				124.301	-			37.130	(11.829)	-	-	-		RATES 5 WP - FOY Advancement
Headblock Taiblock	(4,100)	ő	0	ő	0	ő	126,054	ŏ	83,266 183,774	ő	0	ő	(1,801) (6,278)	ŏ	59,430	0	ŏ	ō	ő	362,980	D RATES-5 WP - EOY Adjustemnt
Haadblock Headblock Tailblock	480,581	11,918	48,384,856	134,921 3	3,740,746	1,474	4,760,423	1,312 7,131	8,153,718 20,939,418	29,152	8,788,188	0	547,547 1,977,978		2,290,320 3,700,373	6,233,247	0	7,866,954	163,520	91,589,571 43,682,035	
	240.388	3.635	9,923,798	0 30.287	0		16,976,813		23,939,418	78,004	2,499,183	°,	485.738		2.001.334	4,231,394	, s	10.136.028	115.234	43,682,035	
Haatblock Taliblock Surrese EOY Adjustment	240,300	3,035	9,9423,796	30,207	0	293 0	688,140 2,393,357	279 1,378	2,333,283 3,405,661	10,153 16,180	a,4064,103 0	0	485,738 1,091,861	402 112	2,001,334 1,623,007	9,231,399	0	-0,130,045 0	115,234	33,442,905 8,531,556	9 Company Records 6 Company Records
Summer ECY Adjustment Headblock Talblock	(1,454)	0	84,849	0	(3,478)	0	9,353 36,717	0	30,864 42,528	0	73,922	0	(2,043) (4,547)	0	26,041 23,093	(39,193)	0	0	0	178,861	1 RATES-5 WP - EOY Aduatemnt 1 RATES-5 WP - EOY Aduatemnt
Summer Adjusted Volumes	238,935	3,635	0	0 30.287	0	293	36,717	279	42,528	10 153	2.573.105	°,	(4,547)	402	23,093	4,192,201	, s	10.136.028	115.234		
Haudook Headblock Tailblock	238,935	3,635	10,008,648	30,287	/59,859 0	293	677,493 2,430,074	279 1,378	2,354,147 3,448,189	10,153	2,573,105 0	0	483,696 1,087,314	402	2,027,375	4,192,201	0	+0,138,028	115,234	33,621,770 8,629,348	0 Line 39 + Line 42 8 Line 40 + Line 43 4 Line 36 + Line 37 + Line 45 + Line 4
CLASS REVENUE TARGETS	719.516	15.553	58.393.504	165.208 4	4 200.000	1.767	24.844.803	10.101	34.905.472	133,489	11.361.293	0	4.035.535	3.525	2.004.169	:0.425.448	¢	+8.002.5802	278.754	177.522.724	- Line 36 + Line 37 + Line 45 + Line 4
25 Results Total Delivery Service Marginal Costs																					1
Total Customer-related Marginal Costs Total Capacity-related Marginal Costs	\$2,403,044 \$176,146		\$53,177,077 \$25,673,655				\$6,620,165 \$11,246,241		\$1,745,916 \$13,607,893		\$153,894 \$3,899,697		\$2,619,671 \$814,464		\$493,488 \$1,863,220	\$181,659 \$1,998,084		\$78,791 \$1,151,469		\$67,473,706 \$60,430,865	6 Marcinal Annual Revenues from MC 9 Marginal Annual Revenues from MC
Total Class Marginal Costs	\$2,579,190		\$78,850,731				\$17,866,407		\$15,353,809		\$4,053,591		\$3,434,135		\$2,356,708	\$2,179,744		\$1,230,261			6 Line 51 + Line 52
Delivery Service Unit Costa - Merginal Unit Costa Customer Costa	3.585 \$56.43		1.350 \$55.78				0.719 \$59.01		0.440 \$102.26		0.357 \$220.01		0.838 \$165.51		0.244 \$104.47	0.209 \$439.71		0.068 \$236.21		\$0.73	2 Line 53 / Line 47 Marcinal Unit Costs from MCS
Customer Costs Capacity-Related Costs	\$56.43 \$0.2363		\$55.78 \$0.4050				\$59.01 \$0.4503		\$102.26 \$0.3872		\$220.01 \$0.3456		\$165.51 \$0.1971		\$104.47 \$0.1948	\$439.71 \$0.1899		\$238.21 \$0.0630			Marcinal Unit Costa from MCS Marginal Unit Costa from MCS
Delivery Revenue Requirement Other Revenue	i i																			97,277,247	Functional Cost of Service Study Revenue Requirement
Special Contract Revenue Base Rate Revenue Recurrent	i i																				Revenue Requirement Line 59 - Line 60 - Line 61
Current Revenue RLIAP shortfall Base Rate Revenue Recuirement Plus Current RLIAP	i i																			2,175,896	Line 11
Base Rate Revenue Requirement Plus Current RLIAP Step Adjustment Revenue target	i i																			98,255,367 5,680,641 103,936,008	Line 62 + Line 63 RR-1
Revenue target Difference: Revenue Requirement - Total Merginal Costs	i i																			103,936,008 (23,968,567)	Line 64 + Line 65 ) Line 66 - Line 53
revenue target Difference: Revenue Requirement - Total Merginal Costs Equi-proportional Adjustment Factor Equi-proportional Adjustment Customer	(\$450,316)		(\$9,965,072)				(\$1,240,580)		(\$327,174)		(\$28,839)		(\$490,911)		(\$92,477)	(\$34,042)		(\$14,765)		-18.74% (\$12,644,177)	7) Line 66 - Line 53 5 Line 67 / Line 53 7) Line 51 * Line 68
Equi proportional Adjustment Capacity-Related Marginal Cost Constrained to Allowed Revenues	(\$33,009) (\$483,325)		(\$4,811,092) (\$14,776,165)				(\$2,107,480) (\$3,348,080)		(\$2,550,039) (\$2,877,214)		(\$730,780) (\$759,619)		(\$152,626) (\$843,537)		(\$349,157) (\$441,633)	(\$374,429) (\$408,471)		(\$215,779) (\$230,544)		(\$11,324,390) (\$23,968,567)	0) Line 52 * Line 68 7) Line 69 + Line 70
Delivery Service Revenue - Equi-Proportional Revenue Requirement																					
Total Customer Marginal Costs Total Capacity-Related Marginal Costs	\$1,952,728 \$143,137		\$43,212,004 \$20,862,562				\$5,379,585 \$9,138,762		\$1,418,742 \$11,057,854		\$125,055 \$3,168,917		\$2,128,760 \$661,838		\$401,011 \$1,514,064	\$147,617 \$1,623,655		\$64,026 \$935,691 \$999,717		\$54,829,525 \$49,108.475	9 Line 51 + Line 69 9 Line 52 + Line 70 8 Line 74 + Line 75
Total	\$2,095,885		\$64,074,567				\$14,518,347		\$12,476,595		\$3,293,972		\$2,790,598		\$1,915,075	\$1,771,272		\$999,717		\$103,938,008	8 Line 74 + Line 75
Delivery Service Unit Costs - Equi-Proportional Revenue Requirement Contemport Costs	\$45.85		\$45.33				\$47.95		\$83.10		\$178.78		\$134.50		\$84.89	\$357.31		\$191.95			line 56 * Line 68
Customer Costs Distribution Volumetric Costs eliminary Class Revenue Targets	0		0				°.		0		0		0		0	0		0			Line 58 * Line 68 Line 57 * Line 68
Proforma Revenues, Adjusted Grouped class total revenues	\$920,238 \$942,138	\$21,900	\$46,927,115	\$161.887 \$	\$1,450.025	\$756	\$15,220,876	\$6,895											\$31,154		
Potential class grouping revenue requirement change from MCOS Potential class grouping revenue requirement change from MCOS				\$161,887 \$			\$15,220,070	\$0,000	\$14,438,298	\$70,932	\$3,104,857	\$63,478	\$1,762,197	\$3,714	\$2,510,249 \$	\$1,718,038	\$0	\$1,113,980	\$31,154	\$89,526,557	7 Line 10 S conference reservings for account of
			\$48,539,782	s761,887 \$			\$15,227,742	\$6,000	\$14,509,229	\$70,932	\$3,168,335	\$63,478	\$1,765,911	1	\$2,510,249	\$1,718,038	\$0	\$1,145,135	\$31,154		∑ customer revenues for grouped cla
Potential increase/(decrease), %	\$942,138 \$1,153,727 122,40%		\$48,539,782 \$15,534,785 32,00%	s161,887 \$			\$15,220,876 \$15,227,742 (\$709,395) -4,88%	\$6,666	\$14,438,298 \$14,509,229 (\$2,032,634) -14,01%	\$70,932	\$3,104,857 \$3,168,335 \$125,637 3,97%	\$63,478	\$1,762,197 \$1,765,911 \$1,024,687 58.03%	1	\$2,510,249 \$ \$2,510,249 (\$595,174) -23,71%	\$1,718,038 \$1,718,038 \$53,236 3.10%	\$0	\$1,113,980 \$1,145,135 (\$146,418) -12,70%	\$31,154	\$89,528,557 \$14,409,451 16,10%	∑ customer revenues for grouped d
Potential increase(decrease), % System-wide Average Increase	\$1,153,727 122.46% 16.10%		\$15,534,785 32.00% 16,10%	9161,887 \$			\$15,227,742 (\$709,395) -4,00%	\$6,666	\$14,509,229 (\$2,032,634) -14,01%	\$70,932	\$3,168,335 \$125,637 3.97%	\$63,478	\$1,765,911 \$1,024,687 58.03% 16.10%		\$2,510,249 (\$595,174) -23,71% 16,10%	\$1,718,038 \$53,236 3.10%	\$0	\$1,145,135 (\$145,418) -12,70% 16,10%	531,104	\$14,409,451 16.10%	∑ cuatomer revenues for grouped cli Line 76 - Line 82 Line 85 / Line 83 (Line 66 / Line 82) - 1
Potential Increase(decrease), % System-wide Average Increase Preliminary grouped class revenue target	\$1,153,727 122,46%		\$15,534,785 32.00%	s161,887 \$			\$15,227,742 (\$709,305) -4,08%	30,000	\$14,509,229 (\$2,032,634) -14,01%	\$70,932	\$3,168,335 \$125,637 3.97%	\$63,478	\$1,765,911 \$1,024,687 58.03%		\$2,510,249 (\$595,174) -23,71%	\$1,718,036 \$53,236 3.10%	\$0	\$1,145,135 (\$145,418) -12.70%	\$31,154	\$14,409,451 16.10%	Σ customer revenues for grouped cli Line 76 - Line 82 Line 85 / Line 83
Potential increase(decrease), % System-wide Average Increase Philiminary grouped class revenue target Considency consideration: Class target revenues Change to perfinitively class revenue target	\$1,153,727 122.46% 16.10% \$1,093,777 -5.00%		\$15,534,785 32,00% 16,10% \$56,352,343 -2,50%	3 <sup>161,887</sup> \$			\$15,227,742 (\$709,395) -4,00%	30,000	\$14,909,229 (\$2,032,834) -14,01% \$16,844,514 0.00%	\$70,932	\$3,168,335 \$125,637 3.97%	\$63,478	\$1,785,911 \$1,024,687 58.03% 16.10% \$2,050,137		\$2,510,249 (\$595,174) -23,71% 16,10%	\$1,718,038 \$53,238 3,10% \$1,994,557 0.09%	50	\$1,145,135 (\$145,418) -12.70% 16.10% \$1,329,448 0.00%	3.31, 154	\$14,409,451 18.10% \$103,938,008	Σ cuatomer revenues for grouped cli 1 Line 76 - Line 82 6 Line 85 / Line 83 (Line 86 / Line 83) - 1 8 Line 83 * (1 + Line 88) Input
Photoniki Increase()docrease), % Syntem-vide Average horease Photonixing round class revenue target Consideration: Class target revenues Optimize profilinitary class reserve target Aplication: Allocation:	\$1,153,727 122,46% 16.10% \$1,093,777 -5.80% -554,689 0		\$15,534,785 32.00% 16.10% \$56,352,343	s161,887 \$			\$15,227,742 (\$700,395) -4.85% 16.10% \$17,678,673 0.00% \$0 24.654.903	30,000	\$14,509,229 (\$2,032,634) -14,01% 16,10% \$16,844,514 0,00% \$0 35,038,961	\$70,932	\$3,168,335 \$125,637 3.97% 16,10% \$3,678,284 0.00% \$0 11,361,283	\$63,478	\$1,785,911 \$1,024,687 58.03% 16.10% \$2,050,137 -1.05% -\$20,501 0		(\$565,174) -23,715 16,105 \$2,914,278 0,00% \$0 9,664,109	\$1,718,038 \$53,238 3,10% 18,10% \$1,994,557 0,05% \$0 10,425,448	50	\$1,145,135 (\$146,418) -12,70% 16,10% \$1,329,446 0.00% \$0 18,261,736	5.31, 154	\$14,409,451 16,10% \$103,936,008 -\$1,483,995 109,636,510	Σ customer revenues for grouped cli     Line 75 - Line 82     Line 85 - Line 83     (Line 65 - Line 83     (Line 65 - Line 83)     Ione 83 - 1     Ione 83 - 1     Ione 83 - 1     Ione 83 - 1     Ione 82 - 1     Ione 83     Ione 82 - 1     Ione 82 -
Phetrafin Increase(Screase), % Spelm-side Average broase Phetraficity groups of class revenues target Charling or phetrafic Class larget and spelment Acceler Acceler Acceler Acceler Acceler Acceler	\$1,153,727 122.46% 16.10% \$1,093,777 -5.00%		\$15,534,785 32,00% 16,10% \$56,352,343 -2,50%	a <sup>161,857</sup> \$			\$15,227,742 (\$709,395) -4,86% 16,10% \$17,678,673 0,00%	30,000	\$14,509,229 (\$2,032,634) -14,01% \$16,10% \$16,844,514 0.00% \$0	\$70,932	\$3,168,335 \$125,637 3.97% 16,10% \$3,678,284 0.00%	\$63,478	\$1,785,911 \$1,024,687 58.03% 16.10% \$2,050,137		(2596,174) -23.71% 18.10% 52.914,278	\$1,718,038 \$53,238 3,10% \$1,994,557 0.09%	50	\$1,145,135 (\$145,418) -12.70% 16.10% \$1,329,448 0.00%	5.31,154	\$14,409,451 18.10% \$103,938,008	Σ contermar revenues for grouped of 1 Line 75 - Line 82 (Line 85 / Line 83 (Line 85 / (1 + Line 85) Ingot (1 + Line 85) Ingot (2 - Line 85) Ingot (2
Aduration to exceed (accesses), %     System mich Arrays Processes     Pedininary grouped class resources ped     Comparies profilments     Class target revenues     Occupies to profilments     Alocater     Alocater     Alocater     Alocater target     Alocater     Alocater target     Alocater target     Alocater     Alocater target     Alocater     Alocater target     Alocater target     Alocater target     Alocater     Al	\$1,153,727 122,48% 16,10% \$1,003,777 -5,60% -554,680 0 90	\$20.15	\$15,534,785 32,00% 18,10% \$38,352,343 -2,50% -\$1,408,809 0 \$0 \$254,943,534	\$20.15	\$8.20	\$3.06	\$15,227,742 (\$702,335) -4,85% 18,10% \$17,678,873 0,00% \$24,854,903 \$338,457 \$18,015,130	\$74.70	\$14,509,229 (\$2,032,634) -14,015 16,1015 \$16,844,514 <b>0.095</b> \$0 35,035,861 \$474,318 \$17,38,832 \$172,39	\$224.11	\$3,168,335 \$125,637 3.97% 16.10% \$3,678,284 0.00% \$0 11,361,293 \$153,796	\$83,478	\$1,765,911 \$1,024,657 \$8,03% \$2,050,137 -\$20,050 \$2,029,636 \$2,029,636 \$32,029,636		\$2,510,249 (\$556,174) -22,715 \$2,914,278 \$0 9,664,169 \$130,823 \$33,045,100 \$172,39 \$224.1	\$1,718,038 \$53,238 3,10% \$1,0% \$1	\$0 \$989.81	\$1,145,135 (\$146,418) -12,70% 16,10% \$1,329,446 0,80% \$0 18,281,736 \$247,477 \$1,578,523 \$761,59	\$331,154	\$14,409,451 16,10% \$103,536,008 -\$1,463,955 109,626,510 \$1,463,955	∑ custome revenues for grouped cl Line 30 / Line 82 Line 80 / Line 83 Line 60 / Line 83 Line 60 / Line 83 Line 60 / Line 83 Line 60 / Line 83 Line 50 / Line 80 Line 50 / Line 60 Line 50 / Line 60 Line 50 / Line 60 Line 50 / Line 60 Line 50 / Line 61 Line 51 / Line 61 Line 16 / Line 18
Naturalia norseensi (soorseam), 50 Siyam noldi Auraya (horosasa Palerinarga grouped calasa noranu targat Charges paulamiany calasa marana targat Alguinant Algui	\$1,153,727 122,48% 16,10% \$1,003,777 -5,60% -554,680 0 90	\$20.15 38.10% \$22.39	\$15,534,785 32,00% 16,10% \$36,352,343 -2,50% -\$1,408,809 0 91	\$20.15 10.0% \$22.39	\$6.20 16.10% \$7.20	\$8.06 16.10% \$9.36	\$15,227,742 (\$700,395) -4,855 18,10% \$17,678,673 0,00% \$0 24,654,903 \$390,447	\$74.70 \$74.70 \$86.72	\$14,509,229 (\$2,032,634) -14,01% 16,10% \$16,844,514 0,00% \$0 35,038,961 \$0	\$70,932 \$224.11 16.10% \$260.18	\$3,168,335 \$125,637 3.97% 16.10% \$3,678,284 0.00% \$0 11,361,293 \$153,796	\$20,478 \$2001.78 16.10% \$1,116.58	\$1,765,911 \$1,024,687 \$8,03% \$2,050,137 -1,02% -\$20,501 0 \$0		(2595,174) -23,715 18,10% 32,914,278 0,00% 50 9,084,189 5130,823	\$1,718,038 \$53,238 3,10% \$1,0% \$1	\$0 \$5000.81 16.10% \$1,148.12	\$1,145,135 (\$145,418) -12,70% 16,10% \$1,329,449 0,00% \$0 18,261,736 \$247,477	\$331,124 \$365,81 95,10% \$1,149,12	\$14,409,451 16,10% \$103,536,008 -\$1,463,955 109,626,510 \$1,463,955	∑ custome revenues for grouped d 1 line 27 - Line 82 line 85 / Line 83 (Line 66 / Line 82) - 1 8 line 82 / 1 + Line 88 Input 0 line 82 * Line 80 0 line 82 * Line 94. Cot (V) * 1 6 Line 80 + Line 94. Cot (V) * 1 6 Line 80 + Line 94 - Line 94
Natrial increase(second), % Systemic law regression target Patimery groups of data retinue target Charge to groups of data retinue target Charge to groups of data retinue target Anotation Anot	\$1,153,727 122,46% 16,10% \$1,003,777 -55,60% -454,680 0 51,030,688 \$11,030,688 \$11,050,688		\$15,534,785 32,00% 16,10% \$36,352,343 -\$1,406,000 0 504,943,534 \$15,50 16,10% \$17,99	\$20.15 10.10% \$23.39	\$7.20	\$9.36	\$15,227,742 (\$700,385) -4.885 \$17,678,873 \$17,678,873 \$18,015,130 \$324,654,903 \$338,457 \$18,015,130 \$37,45 16,105 \$66,71	\$74.70 16.10% \$86.72	\$14.509.229 (\$2.53,634) (-2.63,634) (-3.610% \$16,844,514 (-3.60%) \$25,035,861 \$474,318 \$17,318,852 \$17,238,852 \$17,238,852 \$17,238,852 \$17,239,14	\$224.11 16.10% \$260.18	\$3,168,335 \$125,637 3,97% \$3,676,284 \$0,676,284 \$0 11,381,293 \$153,796 \$3,832,080 \$739,83 16,10% \$355,91	\$961.78 16.10% \$1,116.58	\$1,745,911 \$1,024,687 58,03% 10,19% \$2,060,137 -1,09% -2,02,501 0 50 52,029,636 537,46 16,10% \$56,71	\$74.09 16.10% \$86.72	\$2,510,249 (\$506,174) -23,71% 16,10% \$2,914,278 \$0 9,664,109 \$150,823 \$3,065,100 \$172,30 \$2,944,109 \$150,823 \$3,065,100	\$1,718,036 \$53,328 3,10% \$1,924,557 0,05% 0,05% 51,924,557 0,05% 50 10,425,448 \$141,128 \$2,135,685 15,761,59 10,10% \$383,34	\$0 \$5699.81 16.10% \$1,143.12	\$1,145,135 (\$146,418) -12,70% 18,10% \$1,329,446 \$1,329,446 \$0,00% \$0,00% \$15,281,738 \$247,477 \$1,578,523 \$761,59 10,10% \$283,94	\$959.81 96.10% \$1,149.12	\$14,409,451 16,10% \$103,536,008 -\$1,463,955 109,626,510 \$1,463,955	$\label{eq:2} \begin{array}{l} \sum_{i=1}^{n} (i_{i} + i_{i} + i_{i}$
A Natrial Increase(Increase), % Subservals Analyze Section Se	\$1,153,727 122,495 16,105 \$1,003,777 -\$54,600 0 \$1,009,088 \$1,009,088 \$1,009,088 \$1,009,085	\$7,509	\$15,534,785 32,00% 16,10% \$06,552,343 -32,50% -31,408,000 00 \$4,943,534 \$10,90 \$10,10% \$17,59 \$2,044,940	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$700,335) -4,855 16,105 \$17,678,673 24,854,903 \$356,457 \$18,015,130 \$37,46 \$16,105 \$57,46 \$16,105	\$74.70 16.10% \$86.72 \$1.350	\$14.509.229 (\$2.032.634) -14.015 10.10% \$10,844.514 0.09% \$474.518 \$17,318,852 \$272.30 10.20% \$200.14	\$224.11 16.10% \$260.18 \$7,885	\$3,168,335 \$125,637 3,97% 16,10% \$3,676,284 0,00% \$11,391,283 \$153,786 \$1,520 \$153,786 \$16,10% \$385,91 \$285,910	\$261.78 16.10% \$1,116.35 \$30,148	\$1,745,911 \$1,724,857 36,03% 16,19% \$2,090,137 -1,02% -2,03,501 0 \$2,003,636 \$2,003,636 \$2,746 10,10% \$56,71 \$2,000,656	\$74.00 18.10% \$86.72 \$1.570	22.510.249 (2005.174) -22.71% 16.10% 22.914.278 22.94.278 29.954.109 23.045.109 33.045.109 33.045.109 33.045.109 33.045.109 33.045.109 35.020.14 3	\$1,718,036 \$53,328 3,10% 1,10% \$1,994,557 0,09% 0,425,448 \$141,128 \$2,135,685 1,5761,59 1,0% \$383,34 5,16% \$1,917,577 1,5761,59 1,0% \$383,34 5,16% \$1,917,128 \$2,135,685 1,0% \$1,917,128 \$2,108 \$1,917,128 \$2,108 \$1,917,128 \$2,108 \$1,917,128 \$1,	\$0 \$5893.81 16.10% \$1,143.12 \$0 \$7	\$1,145,135 (\$146,418) -12,70% \$1,329,446 \$1,329,446 \$0,90% \$0 \$2,47,477 \$1,576,623 \$781,59 \$16,10% \$283,94 \$1,676,951	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,409,451 16,10% \$103,536,008 -\$1,463,955 109,626,510 \$1,463,955	$\label{eq:constraints} \begin{array}{l} \sum_{i=1}^{n} constraints revenues for groupset of the two products of two pro$
Natrial increasing/occurate, % Subjective durant series Nationary grouped data resonances patients of patients of the series Applications	\$1,153,727 122,49% 18,10% \$1,003,777 -\$54,089 0 \$1,009,088 \$1,009,088 \$1,009,088 \$1,009,088 \$1,009,088 \$1,009,088		\$15,534,785 32,00% 16,10% \$36,352,343 356,352,343 356,352,343 30 \$51,408,609 0 \$51,408,609 0 \$51,408,609 \$0 \$51,509 \$15,509 \$51,509,405 \$51,509,405	\$20.15 10.10% \$23.39	\$7.20	\$9.36	\$15,227,742 (3700,336) -4,865, 16,105, \$17,678,873 <b>0.005,</b> 50 24,854,903 \$338,457 \$18,015,130 \$37,46 16,105, \$66,71 \$3,377,295 \$3,737,295 \$3,737,295 \$3,737,295,392 \$7,580,392	\$74.70 16.10% \$86.72	\$14.00,229 (\$2,02,5%) - 14.01% 510,844,514 510,844,514 517,318,852 517,318,852 517,318,852 517,318,852 517,318,852 517,318,852 517,714,140 51,774,140 51,774,140	\$224.11 16.10% \$260.18	\$3,168,335 \$125,637 3,97% 16,10% \$3,676,284 0,00% \$11,361,263 \$153,796 \$11,361,263 \$153,796 \$3,872,080 \$739,83 16,10% \$383,91 \$285,910	\$961.78 16.10% \$1,116.58	\$1,726,811 \$1,024,887 58,03% 10,10% \$2,000,137 -1,00% 10,10% 50 50 50,008 \$57,46 10,10% \$56,71 \$2,008,636 \$52,068 \$52,0,688 \$52,0,688 \$52,0,811	\$74.09 16.10% \$86.72	22.512.349 (25.65,17.4) -22.775 16.10% 22.914.278 23.914.278 35.26599 35.2659 35.2659 35.2659 35.2659 35.26599 35.26599 35.26599 35.26	\$1,718,036 \$33,326 1,924,557 1,924,557 10,425,465 \$14,128 \$2,135,685 \$141,128 \$2,135,685 \$141,128 \$2,135,685 \$141,128 \$2,135,685 \$141,128 \$2,135,685 \$141,128 \$2,135,685 \$141,128 \$177,623 \$153,211 \$177,623 \$33,034	\$0 55690.81 18.10% \$1,142.12 \$0 \$0 \$0 \$0 \$0	\$1,145,135 (\$146,418) -12,705 16,10% \$1,329,446 0,00% \$0 18,281,736 \$2,47,477 \$1,578,623 \$16,10% \$283,94 \$163,581 \$140,517 \$224,038 \$1240,517 \$2240,038	\$959.81 96.10% \$1,149.12	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	Image: The second of
Natrial increasing/occurate, % Subjective durant series Nationary grouped data resonances patients of patients of the series Applications	\$1,153,727 122,495 16,105 \$1,003,777 -\$54,600 0 \$1,009,088 \$1,009,088 \$1,009,088 \$1,009,085	\$7,509	\$15,534,785 32,00% 16,10% \$06,552,343 -32,50% -31,408,000 00 \$4,943,534 \$10,90 \$10,10% \$17,59 \$2,044,940	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$700,335) -4,855 16,105 \$17,678,673 24,854,903 \$356,457 \$18,015,130 \$37,46 \$16,105 \$57,46 \$16,105	\$74.70 16.10% \$86.72 \$1.350	\$14.509.229 (\$2.032.634) -14.015 10.10% \$10,844.514 0.09% \$474.518 \$17,318,852 \$272.30 10.20% \$200.14	\$224.11 16.10% \$260.18 \$7,885	\$3,168,335 \$125,637 3,97% 16,10% \$3,676,284 0,00% \$11,391,283 \$153,786 \$1,520 \$153,786 \$16,10% \$385,91 \$285,910	\$261.78 16.10% \$1,116.35 \$30,148	\$1,745,911 \$1,724,857 36,03% 16,19% \$2,090,137 -1,02% -2,03,501 0 \$2,003,636 \$2,003,636 \$2,746 10,10% \$56,71 \$2,000,656	\$74.00 16.10% \$86.72 \$1,570 \$1,506 \$3,165	22.510.249 (2005.174) -22.71% 16.10% 22.914.278 22.94.278 29.954.109 23.045.109 33.045.109 33.045.109 33.045.109 33.045.109 33.045.109 35.020.14 3	\$1,718,036 \$53,328 3,10% 1,10% \$1,994,557 0,09% 0,425,448 \$141,128 \$2,135,685 1,5761,59 1,0% \$383,34 5,16% \$1,917,577 1,5761,59 1,0% \$383,34 5,16% \$1,917,128 \$2,135,685 1,0% \$1,917,128 \$2,108 \$1,917,128 \$2,108 \$1,917,128 \$2,108 \$1,917,128 \$1,	\$0 55690.81 16.10% \$1,143.12 \$0 \$0 \$0 \$0	\$1,145,135 (\$146,418) -12,70% \$1,329,446 \$1,329,446 \$0,90% \$0 \$2,47,477 \$1,576,623 \$781,59 \$16,10% \$283,94 \$1,676,951	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	Image: The control interview in the grouped of the the set of the
A Narrial Increase(Secure), % Systemick Anarge Security Constraints Pathnering proparation Constraints and path Constraints operative properties of the security of the security Applications App	\$1,153,727 122,46% 18,10% \$1,003,777 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$54,889 -\$55,887 15,155 -\$1,056	\$7,509	\$15,534,785 32,20% 18,10% 505,322,343 -2,56% -\$1,408,600 0 50 \$54,943,534 \$15,50 16,10% \$17,994,552 \$5,094,463 \$15,509,440 \$15,509,440 \$15,509,440 \$15,509,440 \$15,509,440	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$709,385) -4,85% 16,105, \$17,678,673 50 24,854,903 \$358,457 518,015,130 \$358,457 518,015,130 \$358,457 \$358,71 \$358,71 \$358,71 \$358,70	\$74.70 16.10% \$86.72 \$1.350	\$14.200.229 (\$2.202.63) -34.07% 5110,844.554 5110,844.554 5110,844.554 5112,844.554 512,354,861 517,314,80 517,734,465 51,734,735 51,734,7355 51,734,7355 51,7355555555555555555555555555555555555	\$224.11 16.10% \$260.18 \$7,885	\$1,160,335 \$126,357 3,27% 16,10% \$1,00% \$1,00% \$2,070,224 \$0 \$11,361,223 \$153,766 \$20 \$11,361,223 \$153,766 \$20 \$11,361,223 \$153,766 \$20 \$12,166,335 \$126,176 \$20 \$12,176 \$20,0000 \$20,00000 \$20,00000 \$20,000000 \$20,00000 \$20,000000000000000000000	\$261.78 16.10% \$1,116.35 \$30,148	\$1,726,911 \$1,726,487 \$1,83% \$2,090,137 *5,05% \$2,090,137 *5,05% \$2,090,137 \$2,023,501 \$2,023,551 \$2,023,656 \$20,068 \$20,681 \$30,681 \$20,081	\$74.00 16.10% \$86.72 \$1,570 \$1,506 \$3,165	22.510.249 (2506.174) 22.71% 52.91% 50 9.664.169 9.664.169 9.664.169 1510.623 1530.623 1530.641.00 15200.14 1512.09 15	\$1,718,038 \$32,228 3,10% \$1,90% \$1,90% \$0,90% \$0,90% \$2,135,687 \$2,135,687 \$2,135,687 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$2,135,687 \$1,017,597 \$1,017	\$0 \$500.01 16.10% \$1,143.12 \$0 \$0 \$0	\$1,145,125 (\$144,48), -12,70% \$1,329,445 \$1,329,445 \$1,329,445 \$13,329,445 \$13,329,445 \$13,329,445 \$143,329,324 \$13,329,324 \$143,351 \$143,351 \$143,351 \$145,351,351 \$145,3555\$1555\$1555\$1555\$1555\$1555\$1555\$155	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	Image: The control interview in the grouped of the the set of the
Norriel messationsmult, S. Monitory topolet data reasons topol Antimity spread data reasons topol Antional properties of the second second second Antional Second Seco	\$1,153,727 122,46% 181,005,51,003,777 -5,80% -5,4,689 90 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$	\$7,509	\$15,334,785 32,20% 32,20% 556,352,343 -2,56% -31,406,600 0 354,943,534 515,00 \$15,00 \$15,00 \$15,00 \$17,99 \$7,944,553 \$15,004,450 \$516,552,463 \$35,400,450 \$16,050,2453 \$16,552,463 \$16,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653 \$16,550,550,4653\$16,550,4653 \$16,550,4653\$10,4653\$10,4653\$1000\$1000\$1000\$1000\$1000\$1000\$1000\$10	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$702,336) -4,65% 16,10% \$17,678,873 \$17,678,873 \$18,01%,130 \$24,859,4933 \$238,457 \$18,01%,130 \$538,61%,130 \$538,61% \$15,60%,107 \$15,60%,107 \$15,00%	\$74.70 16.10% \$86.72 \$1.350	514.200.229 (\$2.200.254) -44.01% 56.10% 516.94.514 0.00% 516.94.514 5177.318.820 517.238.820 517.238.85 517.238.85 51.774.140 51.774.140 51.244.650 51.244.655 51.2455 51.2455 51.2455 51.2455 51.2455	\$224.11 16.10% \$260.18 \$7,885	\$3,168,335 \$125,877 3,377 \$2,10% \$3,670,284 0,00% \$3,670,284 0,00% \$3,670,284 \$11,351,283 \$3,52,080 \$3,52,780 \$3,52,780 \$3,52,790 \$3,52,790 \$3,527,902 \$3,537,902 \$3,537,	\$261.78 16.10% \$1,116.35 \$30,148	\$1,726,811 \$1,024,867 \$1,035 \$2,000,137 -4,035 \$2,000,436 \$2,000,436 \$2,000,436 \$2,000,456 \$55,46 \$55,746 \$55,746 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,068 \$55,07541 \$50,055 \$1,005,068 \$50,057 \$1,005,068 \$55,068 \$55,07541 \$1,005 \$1	\$74.00 16.10% \$86.72 \$1,570 \$1,506 \$3,165	22.310.249 (2550.174) 25.271% 16.10% 25.24.278 16.10% 25.94.278 25.94.278 25.94.278 25.9510 25.9510 25.9510 25.9510 25.95111 25.951111 25.951111 25.951111 25.9511111111111111111111111111111111111	\$1,718,038 \$33,230 3,10% \$1,904,537 0,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,555	\$0 \$500.51 16.10% \$1,143.12 \$0 \$0 \$0	\$1,445,125 (\$144,48) -12,70% 16,10% \$1,202,445 10,00% \$13,202,445 10,00% \$13,202,445 10,00% \$13,202,445 10,00% \$145,561 \$145,561 \$1246,007 \$2266,007 \$2266,007 \$2266,0	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	2         control revenues for grouped of Long 70 - Line 52 - Line 53 - Line 50 - Li
Narriel Investment (Income) % Website of Analysis Section 2014 National Section 2014 National Section 2014 Advances of Analysis (Income Section 2014) Advances of Analysis (Income Section 2014) California of California Personal California Orage Website Personal Personal California (Income Section 2014) Website Personal Personal California (Income Section 2014) Website Personal Personal California (Income Section 2014) Website Personal Personal Formation (Income Section 2014) National Personal Formation (Income Technology (Income	\$1,153,727 122,46% \$1,003,777 -5,000 \$1,003,777 -5,54,66% 50 \$10,009,06% \$11,009 \$11,009 \$11,009 \$11,009 \$11,009 \$15,50 161,109 \$17,209 \$15,207 \$17,209 \$15,207 \$17,209 \$11,009 \$10,000\$10,000\$10,000\$	\$7,509	\$15,334,785 32,00% 32,00% 56,352,343 -4,10% 50 50 50 50 50 50 50 50 50 50 50 50 50	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$700,336) -4,555 (\$17,678,457,578,457,578,457,578,457,578,457,578,457,578,578,457,578,578,578,578,578,578,578,578,578,5	\$74.70 16.10% \$86.72 \$1.350	\$14.200.229 (\$2.202.534) 	\$224.11 16.10% \$260.18 \$7,885	\$3,168,335 \$125,837 3,377 16,10% \$1,670,85 \$1,670,85 \$1,00% \$1,00% \$1,00% \$1,00% \$23,872,082 \$25,822,082 \$25,822,082 \$258,821,00% \$258,10,00% \$258,10,00% \$258,10%	\$261.78 16.10% \$1,116.35 \$30,148	51,785,911 51,726,917 51,024,607 51,024,607 52,029,017 52,029,017 52,029,017 52,029,017 52,029,017 52,029,007 51,044	\$74.00 16.10% \$86.72 \$1,570 \$1,506 \$3,165	2230249 2230749 24050174) 24050174 240715 22314275 22314275 2005	\$1,718,080 \$1,718,080 \$1,256 \$1,276	\$0 5500.01 16.10% \$1,149.12 \$0 \$0 \$0 \$0	\$1,145,135 (\$145,435) -12,705 \$1,22,445 \$1,22,445 \$1,22,445 \$1,22,445 \$1,22,445 \$1,25,45\$\$1,25,45\$\$1,2	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	2         control revenues for grouped difference           1
Narriel Investment (Income) % Website of Analysis Section 2014 National Section 2014 National Section 2014 Advances of Analysis (Income Section 2014) Advances of Analysis (Income Section 2014) California of California Personal California Orage Website Personal Personal California (Income Section 2014) Website Personal Personal California (Income Section 2014) Website Personal Personal California (Income Section 2014) Website Personal Personal Formation (Income Section 2014) National Personal Formation (Income Technology (Income	\$1,153,727 122,46% 181,005,51,003,777 -5,80% -5,4,689 90 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,030,088 \$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$1,055\$	\$7,509	\$15,334,785 32,20% 32,20% 556,352,343 -2,56% -31,406,600 0 354,943,534 515,00 \$10,0% \$17,99 \$7,944,535 \$10,500 \$10,0% \$17,99 \$7,944,553 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,465 \$10,500,455\$}	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103	\$15,227,742 (\$702,336) -4,65% 16,10% \$17,678,873 \$17,678,873 \$18,01%,130 \$24,859,4933 \$238,457 \$18,01%,130 \$538,61%,130 \$538,61% \$15,60%,107 \$15,60%,107 \$15,00%	\$74.70 16.10% \$86.72 \$1.350	514.200.229 (\$2.200.254) -44.01% 56.10% 516.94.514 0.00% 516.94.514 5177.318.820 517.238.820 517.238.85 517.238.85 51.774.140 51.774.140 51.244.650 51.244.655 51.2455 51.2455 51.2455 51.2455 51.2455	\$224.11 16.10% \$260.18 \$7,885	\$3,168,335 \$125,877 3,377 \$2,10% \$3,670,284 0,00% \$3,670,284 0,00% \$3,670,284 \$11,351,283 \$3,52,080 \$3,52,780 \$3,52,780 \$3,52,790 \$3,52,790 \$3,527,902 \$3,537,902 \$3,537,	\$261.78 16.10% \$1,116.35 \$30,148	\$1,726,911 \$1,024,687 51,03% 10,13% 10,13% 10,13% 10,13% 10,13% 52,009,687 50,058,951 52,029,658 535,461 535,462 535,461 535	\$74.02 16.10% \$86.72 \$1.570 \$1.505 \$3,165	22.310.249 (2550.174) 25.271% 16.10% 25.24.278 16.10% 25.94.278 25.94.278 25.94.278 25.9510 25.9510 25.9510 25.9510 25.95111 25.951111 25.951111 25.951111 25.9511111111111111111111111111111111111	\$1,718,038 \$33,230 3,10% \$1,904,537 0,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,435,549 10,555	50 5560.01 16.10% \$1,143.12 50 50 50	\$1,145,135 (\$146,135) -12,705 \$1,120,445 \$1,120,446\$ \$1,120,446\$\$1,120,446\$ \$1,120,446\$ \$1,120,446\$\$1,120,446\$ \$1,120,446\$\$1,120,446\$ \$1,120,446\$\$1,120,446\$\$1,120,446\$ \$1,120,446\$	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,403,451 16,105 \$100,938,000 -51,463,986 109,628,51 \$1,463,986 \$100,638,000	2         control revenues for grouped of Long 70 - Line 52 - Line 53 - Line 50 - Li
Namia Investmental Americania Su Mantana propandi dian sensa ang Distantesi propandi dian sensa tagin Adalatati tagi tanga Distante Dang Mana Su Distante Dang Mana Distante Dang Mana Su Mater Dang Mater Dang Mater Mater Dang Mater Dang Mater Dang Mater Dang Mater Dang Mater Dang Mater Dang Mater Dang Mater Dang Mater D	\$1,153,727 122,46% 16,10% \$1,000,777 4,569% 0 51,000,008 \$15,000 51,000,008 \$15,000 51,000,008 \$15,000 51,000,008 \$15,000 \$10,000 \$15,000 \$10,000 \$15,000 \$15,000 \$10,000 \$15,000 \$10,000 \$15,000 \$10,0000\$1000\$1	\$7,509	315.534.785 32.00% 311.10% 506.332.343 -2.59% -3.148.80 -3.148.80 -3.148.80 -3.148.80 -3.159% -3.148.80 -3.159% -3.148.80 -3.159% -3.148.80 -3.159% -3.148.80 -3.159% -3.148.80 -3.	\$20.15 10.10% \$23.39	\$7.20	\$9.36 \$103 \$169 \$272	\$15.27,742 (\$700.355) -4.555 \$17.678,873 \$20,7678,873 \$20,7678,873 \$20,7678,873 \$20,7678,873 \$20,7678,873 \$20,7678 \$20,7678 \$20,778 \$10,745,983 \$20,773 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$30,007 \$10,445,983 \$10,2078\$10,2078\$100\$1008\$100\$100\$1000\$100\$100\$100	\$74.70 16.10% \$86.72 \$1.350	\$14.00.229 (\$2.202.534) -34.075 516,044.574 0.000 52 35,003,861 517,244.55 517,244.55 517,244,355 517,244,355 51,744,455 51,444,051 51,544,051 51,544,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055 51,545,055,055 51,545,055,055,055,055,055,055,055,055,055	\$224.11 16.10% \$260.18 \$7,885	53,163,335 3,2975 3,2975 53,576,244 50,576,244 50,576,244 50,576,244 50,576,244 50,576,244 50,576,245 50,576,245 50,576,245 50,576,245 50,576,245 50,576,245 51,526,577 51,506,153 51,526,155 51,526 51,526	\$261.78 16.10% \$1,116.35 \$30,148	5.1785311 5.1024.637 5.004.637	\$74.00 16.10% \$86.72 \$1.570 \$1.500 \$1.500 \$1.500	22:30:249 22:30:249 242:37% 50:05%	\$1,718,035 \$1,226; \$1,226; \$1,226; \$1,226; \$1,226; \$1,226; \$2,128,65; \$2,128,65; \$2,128,65; \$1,22; \$	50 5000 81 16.10% 51,148.12 50 50 50	\$1,145,135 (\$145,435) -12,705 \$1,22,445 \$1,22,445 \$1,22,445 \$1,22,445 \$1,22,445 \$1,25,45\$\$1,25,45\$\$1,2	\$3859.81 16.10% \$1,149.12 \$8,933	\$14,409,451 16,10% \$100,508,000 -\$1,453,959,000 \$100,620,314,53,959 \$100,535,000 \$110,535,000 \$110,535,000 \$317,534,305	$\label{eq:results} \left\{ \begin{array}{llllllllllllllllllllllllllllllllllll$
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Andrei mersenjenerum), % Weinstehnikkrypsprechen Andrei eine Stehnikkristen Mersen stehnikristen Mersen stehnikkristen Mersen stehni	111.82,277 122.468 13.00,764 123.468 13.00,704 13.00,008	\$7,509	1955292 3.2.0% 19.1% 19.3% 19.3% 19.4% 19.5% 19.	\$20.15 10.10% \$23.39	\$7.20	\$138 \$169 \$272	\$15.227,742 (*102,258) 4.85% 517,678,673 517,678,673 517,678,673 5236,475 518,076,120 518,076,120 518,076,120 517,528,043 517,528,045 517,528,045 517,528,045 517,528,045 517,528,045 517,528,045 517,528,045 517,528,045 517,528,045,045,045,045,045,045,045,045,045,045	\$74.70 16.10% \$86.72 \$1.350	11-090220 (2.20224) (2.20224) (2.4055) (2.20224) (2.4055) (2.20224	\$224.11 16.10% \$260.18 \$7,885	\$2,163,355 \$122,637 \$3,275 \$1,2637 \$2,1676,284 <b>9,005</b> \$1,3678,284 <b>9,005</b> \$1,3678,284 <b>9,005</b> <b>11,361,283</b> \$151,283 \$151,283 \$151,283 \$151,283 \$151,283 \$150,185 <b>5729,835</b> <b>12,3679,294</b> <b>5729,357</b> <b>574,183</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,21,2518</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b> <b>51,218</b>	\$261.78 16.10% \$1,116.35 \$30,148	\$1,09,50,100,4637 \$1,000,4637 \$1,000,4637 \$1,000,4637 \$1,000,4637 \$1,000,403 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400 \$1,000,400,400 \$1,000,400,400 \$1,000,400,400 \$1,000,400,400 \$1,000,400,400,400 \$1,000,400,400,400,400,400,400,400,400,40	\$74.09 16.10% \$86.72 \$1,570 \$1,570 \$1,508 \$3,165 \$	22.115.240 (3.23.75) 22.54.250 22.54.250 22.54.250 20.550 20.5500 20.5500 20.5500 20.5500 20.5500 20.5500 20.5500 20	12.77.8,058 25.2,26 25.2,26 25.2,26 25.2,26 25.2,26 25.2,26 25.2,26 25.158,65 25.158,65 25.158,65 25.158,65 25.158,65 25.2,26	50 500 31 15 0% 51,148,12 50 50 50	1 146, 15 1 (146, 45) (146, 45) 1 20% 1	\$3859.81 16.10% \$1,149.12 \$6,933	\$14,402,451 16,109,000 \$100,000,000 100,000,015 \$100,000,000 \$100,000 \$100,0000\$100000\$10000\$10000\$10000\$10000\$1000\$1000000	I automoustic grouped di           I automous

Docket No. DG 20-105 Attachment RATES-5 Page 1 of 2

			Resider	tial				Con	nmercial and Industrial:	Low Load Fact	0e				Comme	cial and Indus	strial: High Loa	d Factor				
	Non Heat R-1	MEP Non Heat R-5	Heat R-3	MEP Heat R-6	Low Income Heat R-4	MEP Low Income Heat R-7	Low Annual G-41	MEP Low Annual G-44	Medium Annual G-42	MEP Medium Annual G-45	High Annual G-43	MEP High Annual G-46	Low Annual G-51	MEP Low Annual G-55	Medium Annual G-52	VEP Medium Annual G-58	High Annual G-53	MEP High Annual G-57	High Annual G-54	MEP High Annual G-58	Company Total	Explanation
(A)	(8)	(Ĉ)	(D)	(E)	(F)	(G)	(H)	(1)	(J)	(K)	(L)	(M)	(N)	(0)	(P)	(Q)	(R)	(8)	(1)	(U)	(V)	(W)
Winter Volumenic Rates     Meadblock     Tailblock     Tailblock     Summer Volumetric Rates	\$0.4137 \$0.4137	\$0.5378 \$0.5378	\$0.6520 \$0.6520	\$0.8476 \$0.8476	\$0.2608 \$0.2608	\$0.3390 \$0.3390	\$0.5433 \$0.3850	\$0.7063 \$0.4745	\$0.4999 \$0.3331	\$0.6498 \$0.4330	\$0.3126 \$0.3126	\$0.4064 \$0.4064	\$0.3408 \$0.2216	\$0.4430 \$0.2681	\$0.2926 \$0.1948	\$0.3804 \$0.2533	\$0.2092 \$0.2092	\$0.2720 \$0.2720	\$0.0900 \$0.0900	\$0.1170 \$0.1170		Goel seek Line 127 ° Line 135
8 Headblock 9 Taiblock 10	\$0.4137 \$0.4137	\$0.5378 \$0.5378	\$0.6520 \$0.6520	\$0.8476 \$0.8476	\$0.2608 \$0.2608	\$0.3390 \$0.3390	\$0.5433 \$0.3650	\$0.7063 \$0.4745	\$0.4999 \$0.3331	\$0.6498 \$0.4330	\$0.1429 \$0.1429	\$0.1858 \$0.1858	\$0.3408 \$0.2216	\$0.4430 \$0.2681	\$0.2120 \$0.1205	\$0.2756 \$0.1565	\$0.1003 \$0.1003	\$0.1305 \$0.1305	\$0.0488 \$0.0488	\$0.0634 \$0.0634		Line 131 " Line 135 Line 132 " Line 136
11 Class volumetric revenue 12 Total Revenue (Base plus MEP) 13 Oven/junder/secovery	\$297,656 \$306,020 \$2	\$8,364	\$38,071,771 \$39,386,131 \$3	\$140,028	\$1,173,733	\$509	\$10,037,370 \$10,042,532 \$0	\$5,161	\$13,380,782 \$13,447,107 \$0	\$66,325	\$3,115,408 \$3,115,408 \$0	\$0	\$1,030,692 \$1,031,877 \$0	\$1,185	\$2,019,196 \$2,019,196 \$0	\$0	\$1,724,680 \$1,724,680 \$0	\$0	\$1,202,318 \$1,228,753 \$0	\$26,434		Line 138 + Line 46 * Line 139 ∑ volumetic revenues for related classes Line 142 - Line 121
4 E. LOW INCOME DISCOUNT AND RUAP CALCULATION 5 Base Revenues before RUAP Discount																						
Customer Revenue     Customer Rovenue     Winter Pariod Variable Rates     Heid Block					\$1,241,369 \$2,438,916	\$524																Line 26 ° Line 100 Line 38 ° Line 135
0 Tail Block 0 Summer Period Variable Rates 1 Head Block					\$0 \$495,418	\$0																Line 37 ° Line 138 Line 45 ° Line 138
12 Tail Block 13 Total Base Revenue before Low Income Discount 14					\$0 \$4,175,703	\$0 \$1,676															\$4,177,379	Line 46 ° Line 139 ∑ Line 146 to Line 152
Eve Income Discourt % of Distribution Rates     Total discount (revenue shortfall)     Low Income RLAP rate (Sthem)					60.00% \$2,505,422	60.00% \$1,005															\$0.0141	Master Inputs Line 153 * Line 155 Line 156 / Line 47
8 RLMP Revenues 9 Increase in RLMP Rate 0	\$10,159	\$220	\$824,453	\$2,333	\$53,544	\$25	\$350,782	\$143	\$492,827	\$1,885	\$160,409	\$0	\$57,839	\$50	\$136,448	\$2	\$147,196	\$0	\$254,182	\$3,938		Line 47 * Line 157 Col (V) Line 157 - Line 12
1 F. CHECK Revenue Target	\$1.068.307		\$55.918.773				\$17.611.699		\$16.912.068		\$3,747,195		\$2,083.871		\$2,979,549		\$2.087.714		\$1,526,832		\$103,936,008	
12 Prevenue range: 13 Customer Revenue	\$762.287		\$16,532,643				\$7,569,167		\$3,464,961		\$631.787		\$1,051,994		\$960.353		\$363.034		\$1,526,632 \$296,079		\$31,634,305	
4 Volumetric Revenue																						
5 Check	\$306,020 \$0		\$39,386,131 \$0				\$10,042,532 \$0		\$13,447,107 \$0		\$3,115,408 \$0		\$1,031,877 (\$0)		\$2,019,196 \$0		\$1,724,680 \$0		\$1,228,753 \$0		\$72,301,703 \$0	
	\$0		\$2				\$10,042,532 \$0		\$13,447,107 \$0		\$3,115,408 \$0		(\$0)		\$0		\$0		\$0		\$72,301,703	
5 Check 6 7 G. COMPONENT RATE CHANGES 8		Rő		R-6	R-4	R-7	\$10,042,532	G-44	\$13,447,107	G-45	\$3,115,408	G-46		6-85		G-58		G-57		G-58	\$72,301,703	
5 Check 7 G. <u>comPonent RATE CHANGES</u> 8 Customer change 9 Customer tailf	\$0 R-1 \$15.50	\$20.15	\$0 R-3 \$15.50	\$20.15	\$6.20	\$8.06	\$10,042,532 \$0 G-41 \$57,46	\$74.70	\$13,447,107 \$0 G-42 \$172,39	\$224.11	\$3,115,408 \$0 G-43 \$739.83	\$961.78	(\$0) G-51 \$\$7.46	\$74.69	\$0 G-52 \$172.39	\$224.11	\$0 G-53 \$761.39	\$989.81	\$0 G-54 \$761.39	\$969.81	\$72,301,703	
5 Check 7 G. COMPONENT RATE CHANGES 38 9 Customer change	90 R-1		\$0 R-3				\$10,042,532 \$0 G-41		\$13,447,107 \$0 G-42		\$3,115,408 \$0 G-43		(\$0) G-51		\$0 G-62		\$0 G-53 \$761.39		\$0 G-64		\$72,301,703	
6 Check G. COMPONENT RATE CHANGES O Culture d'arge Culture tairif Proposed S Incoment Weiter franchische	\$0 R-1 \$15.50 \$17.59 16.1%	\$20.15 \$23.39 16.1%	\$0 R-3 \$15.50 \$17.99 18.1%	\$20.15 \$23.39 16.1%	\$8.20 \$7.20 16.1%	\$8.06 \$9.36 16.1%	\$10,042,532 \$0 G-41 \$37,46 \$86,71 16,1%	\$74.70 \$86.72 16.1%	\$13,447,107 \$0 G-42 \$172,39 \$200.14 16.1%	\$224.11 \$260.18 16.1%	G-45 50 G-45 5739.83 5858.91 16.1%	\$961.78 \$1,116.58 16.1%	(\$0) G-51 \$57.46 \$86.71 16.1%	\$74.69 \$86.72 16.1%	\$0 G-82 \$172.39 \$200.14 16.1%	\$234.11 \$260.18 16.1%	\$0 G-53 \$761.39 \$885.94 36.1%	\$089.81 \$1,149.12 16.1%	\$2 G-54 \$761.39 \$883.94 16.1%	\$969.81 \$1,149.12 16.1%	\$72,301,703	
Check Controller Ant Changes Control Ant Changes Control and Changes Control and Changes Control and Changes To Toronse To Toronse Weiter Headbook Coment sulf Co	\$0 R-1 \$15.50 \$17.99	\$20.15 \$23.39	\$0 R-3 \$15.50 \$17.99	\$20.15 \$23.39	\$6.20 \$7.20	\$8.06 \$9.35	\$10,042,532 \$0 G-41 \$57,46 \$26,71	\$74.70 \$86.72	\$13,447,107 \$0 G-42 \$172,39 \$200,14	\$224.11 \$200.18	\$3,115,408 \$0 G-43 \$739.83 \$858.91	\$961.78 \$1.116.58	(\$0) G-51 \$57.46 \$88.71	\$74.60 \$86.72	\$0 G-62 \$172.39 \$200.14	\$224.11 \$280.18	\$0 G-53 \$761.59 \$885.94	\$089.81 \$1,149.12	\$0 G-54 \$761.39 \$883.94	\$989.81 \$1,149,12	\$72,301,703	
Orack     O	\$0 R-1 \$15.50 \$17.99 16.1% \$0.3860 \$0.4137	\$20.15 \$23.39 16.1% \$0.50 \$0.5378	\$0 R-3 \$15.50 \$17.99 16.1% \$0.5578 \$0.6520	\$20.15 \$23.39 16.1% \$0.74 \$0.8476	\$6.20 \$7.20 16.1% \$0.2272 \$0.2608	\$8.06 \$9.35 16.1% \$0.30 \$0.30	\$10,042,532 50 G-41 \$37,46 \$86,71 16,1% \$0,4711 \$0,5433 15,3% \$0,3165	\$74.70 \$86.72 16.1% \$0.61 \$0.7063 15.3% \$0.41	\$13,447,107 50 C-42 \$172.39 \$260.14 18.1% \$0.4284 \$0.4284 \$0.4289 18.7% \$0.2855	\$224.11 \$260.18 16.1% \$0.96 \$0.6498 16.7% \$0.37	\$3,115,408 \$0 C-45 \$739,83 \$858,91 16,1% \$0,2633 \$0,3128	\$061.78 \$1,116.58 16.1% \$0.34 \$0.4064	(\$0) G-51 \$57,46 \$66,71 16,1% \$0,2839 \$0,3408 20,0% \$0,1846	\$74.69 \$86.72 16.1% \$0.37 \$0.4430 20.0% \$0.24	\$0 G-52 \$172.39 \$200.14 16.1% \$0.2439 \$0.2828 20.0% \$0.1824	\$224.11 \$260.18 16.1% \$0.32 \$0.3804 20.0% \$0.21	\$0 G-53 \$761.30 \$883.94 36.1% \$0.1705 \$0.2052	\$0.22 \$0.22 \$0.272	\$2 G-54 \$761.39 \$883.94 16.1% \$0.0650 \$0.0600	\$989.81 \$1,149.12 16.1% \$0.08 \$0.1170	\$72,301,703	
Direk     Deck	\$0 R-1 \$15.50 \$17.99 16.1% \$0.3860 \$0.4137	\$20.15 \$23.39 16.1% \$0.50 \$0.5378	\$0 R-3 \$15.50 \$17.99 16.1% \$0.5578 \$0.6520	\$20.15 \$23.39 16.1% \$0.74 \$0.8476	\$6.20 \$7.20 16.1% \$0.2272 \$0.2608	\$8.06 \$9.35 16.1% \$0.30 \$0.30	\$10,042,532 \$0 G-41 \$37,46 \$06,71 16,1% \$0,4711 \$0,4711 \$0,5433 15,3%	\$74,70 \$88,72 16,1% \$0,61 \$0,7063 15,3%	\$13,447,107 50 G-42 \$172,39 \$200,14 18,1% \$0,4284 \$0,4899 18,7%	\$224.11 \$200.18 16.1% \$0.56 \$0.6498 16.7%	\$3,115,408 \$0 C-45 \$739,83 \$858,91 16,1% \$0,2633 \$0,3128	\$061.78 \$1,116.58 16.1% \$0.34 \$0.4064	(\$0) G-51 \$57.46 \$86.71 16.1% \$0.2839 \$0.3408 20.0%	\$74.69 \$86.72 16.1% \$0.37 \$0.4430 20.0%	\$0 G-52 \$172.39 \$200.14 16.1% \$0.2439 \$0.2926 20.0%	\$224.11 \$260.18 16.1% \$0.32 \$0.3804 20.0%	\$0 G-53 \$761.30 \$883.94 36.1% \$0.1705 \$0.2052	\$0.22 \$0.22 \$0.272	\$2 G-54 \$761.39 \$883.94 16.1% \$0.0650 \$0.0600	\$989.81 \$1,149.12 16.1% \$0.08 \$0.1170	\$72,301,703	
Oracle     Controller AT COMMON     Controller AT COMMON     Controller AT COMMON     Controller AT     Controler A	\$0 R-1 \$15.50 \$17.99 16.1% \$0.3800 \$0.4137 7.2%	\$20.15 \$22.39 18.1% \$0.50 \$0.5378 7.2%	\$0 R-3 \$15.50 \$17.99 16.1% \$0.5678 \$0.6520 14.8% \$0.5678	\$20.15 \$23.39 16.1% \$0.74 \$0.8476 14.5%	\$6.20 \$7.20 16.1% \$0.2272 \$0.2608 14.6%	\$8.06 \$9.36 16.1% \$0.30 \$0.3350 14.8%	\$10,042,532 50 G-41 \$27,46 \$262,71 \$20,4711 \$0,5453 15,3% \$0,3165 \$0,3650 15,3% \$0,4711	\$74.70 \$88.72 36.1% \$0.61 \$0.765 15.3% \$0.41 \$0.4745 15.3% \$0.61	\$13,447,107 50 G-42 \$172,39 \$200,14 16,1% \$0,486 \$0,486 \$0,486 \$0,486 \$0,486 \$0,485 \$0,485 \$0,255 \$0,3351 16,7% \$0,255	\$224.11 \$260.18 16.1% \$0.668 \$0.6688 16.7% \$0.37 \$0.4330 16.7% \$0.56	\$3,115,408 50 C-43 \$739,83 \$358,91 16,1% \$0,2633 \$0,3128 18,7%	\$961.78 \$1,118.58 16.1% \$0.34 \$0.4084 18.7%	(\$0) G-51 \$37.46 \$262.71 16.1% \$0.2839 \$0.3408 20.0% \$0.21846 \$0.2216 20.0% \$0.2216 \$0.2239	\$74.60 \$88.72 16.1% \$0.37 \$0.4430 20.0% \$0.2631 20.0% \$0.2631 20.0%	\$0 G-82 \$177.39 \$200.14 16.1% \$0.2439 \$0.2226 20.0% \$0.1624 \$0.1048 20.0% \$0.1624 \$0.1048	\$224.11 5260.18 16.1% \$0.32 \$0.3804 20.0% \$0.21 \$0.2533 20.0% \$0.23	50 G-83 \$781.39 \$883.94 36.1% \$0.1705 \$0.2092 22.7% \$0.0518	\$000.81 \$1,149.12 16.1% \$0.22 \$0.2720 22.7%	50 C-54 5761.39 5863.94 16.1% 50.0650 50.0600 36.5% 50.0003	\$260.81 \$1,149.12 18.1% \$0.08 \$0.1170 38.3%	\$72,301,703	
Oracit     Compression Art Consess     Compression Art Consess     Constant and art Consess     Constant and art Consess     Water relations     Constant and      Consess     Second	\$0 R-1 \$15.50 \$17.50 16.1% \$0.3860 \$0.4137 7.2%	\$20.15 \$22.39 16.1% \$0.50 \$0.5378 7.2%	\$0 R-3 \$15.50 \$17.99 16.1% \$0.6520 14.6%	\$20.15 \$23.39 18.1% \$0.74 \$0.8476 14.8%	\$6.20 \$7.20 16.1% \$0.2272 \$0.2608 14.8%	\$8.06 \$9.38 16.1% \$0.30 \$0.3390 14.8%	\$10,042,532 50 G-41 \$37,46 \$86,71 16,1% \$0,4711 \$0,4711 \$0,5453 15,5% \$0,3165 \$0,3650 15,5%	\$74.70 \$88.72 16.1% \$0.61 \$0.7063 15.3% \$0.41 \$0.4745 15.3%	\$13,447,107 50 G-42 \$172,30 \$200,14 16,1% \$0,4284 50,4284 16,1% \$0,2856 \$0,3331 16,7%	\$224.11 \$200.18 16.1% \$0.6485 16.7% \$0.37 \$0.4330 16.7%	\$3,115,408 \$0 C-43 \$759,83 \$355,91 16,75 \$0,2833 \$0,3128 18,7%	\$961.78 \$1,118.58 16.1% \$0.34 \$0.4064 18.7%	(\$0) G-51 \$57,46 \$66,71 16,1% \$0,2830 \$0,3408 20,0% \$0,1846 \$0,2216 \$0,0%	\$74.69 \$86.72 16.1% \$0.37 \$0.4430 20.0% \$0.2881 20.0%	\$0 G-52 \$172.39 \$200.14 \$0.2439 \$0.2228 20.0% \$0.1824 \$0.1824 \$0.1824 \$0.1824 \$0.1824	\$224.11 \$260.18 16.1% \$0.32 \$0.3804 20.0% \$0.21 \$0.2533 20.0%	50 G-53 \$781.59 \$855.94 96.1% \$6.1% \$0.2002 22.7%	\$099.81 \$1,149.12 16.1% \$0.22 \$0.2720 22.7%	50 G-54 5761.39 5853.94 16.1% 50.0650 30.0500 30.3%	\$069.81 \$1,540.12 16.1% \$0.06 \$0.1170 38.3%	\$72,301,703	
Oracl     Oracle     Oracle     Oracle      Oracl	\$0 R-1 \$15.50 \$17.50 16.75 \$0.3800 \$0.4137 7.2%	\$20.15 \$23.39 18.1% \$0.50 \$0.5378 7.2%	\$0 R-3 \$15.50 \$17.99 16.1% \$0.5678 \$0.5678 \$0.6520	\$20.15 \$23.39 16.15 \$0.74 \$0.8476 14.8%	\$6.20 \$7.20 16.1% \$0.2272 \$0.2608 14.8%	\$8.06 \$9.36 16.1% \$0.30 \$0.350 14.8% \$0.30 \$0.30 \$0.320	\$10,042,532 50 G-41 \$37,46 \$66,71 16,1% \$0,4711 \$0,5433 \$0,3165 \$0,3650 \$15,3% \$0,3165 \$0,3650 \$15,3% \$0,3711 \$0,4711 \$0,4711 \$0,4711	\$74.70 \$88.72 16.1% \$0.61 \$0.7063 15.3% \$0.41 \$0.4745 15.3% \$0.61 \$0.7063	\$13,447,107 50 5772 30 5772 30 5250,14 16,1% 50,4564 50,4565 50,3331 16,7% 50,4564 50,4564 50,4564 50,4564 50,4584 50,4669	\$224.11 \$200.18 16.1% \$0.56 \$0.5498 16.7% \$0.37 \$0.4330 16.7% \$0.56 \$0.56	\$3,115,408 50 G-43 \$730,83 \$828,91 16,1% 50,2833 \$0,3128 50,3128 58,7% \$0,1204 \$0,1204 \$0,1429	\$961.78 \$1,118.58 16.1% \$0.34 \$0.4084 18.7% \$0.16 \$0.16 \$0.1838	(\$0) G-51 \$37.46 \$86.71 16.1% \$0.2839 \$0.3408 \$0.2216 \$0.2239 \$0.3408 \$0.2839 \$0.2839 \$0.2839 \$0.2839 \$0.2839	\$74.69 \$86.72 16.1% \$0.37 \$0.4430 20.0% \$0.2881 20.0% \$0.2881 20.0% \$0.27 \$0.4430	\$0 G-52 \$172.39 \$200.14 16.1% \$0.2439 \$0.2226 20.0% \$0.1624 \$0.1948 20.0% \$0.1624 \$0.1948 20.0%	\$224.11 \$260.18 15.1% \$0.32 \$0.3804 20.0% \$0.21 \$0.2533 20.0% \$0.23 \$0.2756	50 G-53 5761.39 5853.94 98.1% 50.2092 22.7% 50.00518 50.00518 50.1003	\$089.81 \$1,149.12 16.1% \$0.22 \$0.2720 22.7% \$0.11 \$0.1305	\$0 G-54 \$761.39 \$833.94 16.1% \$0.0850 \$0.0000 38.3% \$0.0850 \$0.0005 38.3%	\$260.61 \$1,549.12 16.1% \$0.06 \$0.1170 38.3% \$0.05 \$0.0654	\$72,301,703	

Liberty Utilities (EnergyNorth Natural Gas) Corp. Rate Design Analysis and Calculations

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		Re	esidential	-		Comr	nerciai	and ir	idustriai: Lo	DW L	oad Factor		Comme			triai:	High Loa	d⊦a	ctor			
	on Heat R-1		Heat R-3	н	Income leat R-4	Low A G-			um Annual G-42	н	ligh Annual G-43	Lo	w Annual G-51	A	ledium Annual G-52		h Annual G-53		h Annual G-54	Co	ompany Total	Explan
Description	(A)		(B)		(C)	([			(E)		(F)		(G)		(H)		(I)		(J)		(K)	(L)
LP and LNG Costs Winter Sales Volumes Unit Cost in COGC Class Revenues	\$ 496,608 13,210		3,113,991 1,279,832		775,563 100,430		96,529 98,328		3,820,500 101,625	\$	2,390,624 63,591	\$	402,620 10,710		799,290 21,261	\$	585,444 15,573	\$	71,792	\$ \$ \$		
Bad Debt Costs Annual Sales Volumes Unit Cost in COGC Class Revenues	\$ 735,069 34		3,558,712 2,694	4, \$	502,373 207	., .	31,444 894		6,527,518 760	\$	3,134,919 144		3,001,166 138		,428,240 158	\$	977,333 45	\$	163,438 8	\$ \$ \$	110,460,211 0.00005	FCOS Company R Line 6 / Line Line 7 x Lin
Gas Working Capital Annual Sales Volumes Unit Cost in COGC Class Revenues	\$ 735,069 -	58 \$	3,558,712 -	4, \$	502,373 -	19,43 \$	31,444	1) \$	6,527,518 -	\$	3,134,919 -	\$	3,001,166 -	3. \$	,428,240 -	\$	977,333	\$	163,438 -	\$ \$ \$	110,460,211 -	FCOS Company R Line 11 / Lir Line 12 x Lir
Other A&G and Misc. Annual Sales Volumes Unit Cost in COGC Class Revenues	\$ 735,069 1,964		3,558,712 156,469		502,373 12,030		31,444 51,921		6,527,518 44,162	\$	3,134,919 8,377	\$	3,001,166 8,019		,428,240 9,160	\$	977,333 2,611	\$	163,438 437	\$ \$		
Total Indirect Costs	\$ 15,208	\$ 1	1,438,995	\$	112,667	\$ 15	51,142	\$	146,547	\$	72,111	\$	18,867	\$	30,579	\$	18,229	\$	2,354	\$	2,006,700	∑ Cols A-J
Total from FCOS Variance \$s %																				\$ \$		∑ Lines 1, 6 Line 21 - Lir Line 25 / Lir

Liberty Utilities (EnergyNorth Natural Gas) Corp. Indirect Gas Costs Analysis

		Currently effective	/e		Rate case	
	2020	2019-2020				
	Summer	Winter COG				
	COG Filing	Filing		Summer	Winter	
LP and LNG Costs	ş -	\$ 1,980,428			\$ 1,708,977	
Bad Debt Costs	12,571	17,415	29,986	2,131	2,952	\$ 5,08
Gas Working Capital						
Other A&G and Misc.	5,521	7,649	13,170	123,744	171,432	\$ 295,17
Total Indirect Costs	\$ 18,092	\$ 2,005,492		\$ 125,875	\$ 1,883,362	
Volumes	46,307,251	64,152,960	110,460,211	46,307,251	64,152,960	110,460,21
Indirect Gas Rate	\$ 0.0004	\$ 0.0313		\$ 0.0027	\$ 0.0294	

COG Adder f	or Rate Case
Summer	Winter
\$ 0.0023	\$ (0.0019)

				Cur	rently effectiv	/e
			2020	2	019-2020	
		5	Summer	W	inter COG	
		C	OG Filing		Filing	
39	LP and LNG Costs	\$	-	\$	1,980,428	
40	Bad Debt Costs	\$	353,092	\$	1,012,101	per company
41	Gas Working Capital	\$	22,172	\$	142,623	per company
42	Other A&G and Misc.	\$	2,521	\$	10,649	
43	Total	\$	377,785	\$	3,145,801	

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# COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE R-1 : RESIDENTIAL NON-HEATING

Present Rates	Winter	Summer	Proposed Rates	Winter	Sι
Cost of Gas	\$0.4737	\$0.3715	Cost of Gas	\$0.4718	5
LDAC	\$0.0310	\$0.0310	LDAC	\$0.0329	
Customer charge	\$15.50		Customer charge	\$17.99	
Sales rate			Sales rate		
First Block Size			First Block Size		
Block 1	\$0.3860	\$0.3860	Block 1	\$0.4137	\$
Block 2	\$0.3860	\$0.3860	Block 2	\$0.4137	\$

11																					
12			Mont	hly Bills at F	resent Rat	es			Month	nly Bills at P	roposed Ra	ates		Cha	ange in N	Nonthly E	Bill		Uni	t Costs	
13	Use per		Winter			Summer			Winter			Summer		Win	ter	Sum	mer	Cur	rent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
14	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
15																					
16	0	\$15.50	\$0.00	\$15.50	\$15.50	\$0.00	\$15.50	\$17.99	\$0.00	\$17.99	\$17.99	\$0.00	\$17.99	\$2.49	16.1%	\$2.49		\$0.0000		\$0.0000	\$0.0000
17	2	\$16.27	\$1.01	\$17.28	\$16.27	\$0.81	\$17.07	\$18.82	\$1.01	\$19.83	\$18.82	\$0.81	\$19.63	\$2.55	14.8%	\$2.56		\$8.6391		\$9.9139	\$9.8159
18	4	\$17.04	\$2.02	\$19.06	\$17.04	\$1.61	\$18.65	\$19.65	\$2.02	\$21.66	\$19.65	\$1.63	\$21.27	\$2.60	13.7%	\$2.62		\$4.7649		\$5.4161	\$5.3181
19	6	\$17.81	\$3.03	\$20.84	\$17.81	\$2.42	\$20.23	\$20.47	\$3.03	\$23.50	\$20.47	\$2.44	\$22.91	\$2.66	12.8%	\$2.69		\$3.4735		\$3.9169	\$3.8189
20	8	\$18.58	\$4.04	\$22.62	\$18.58	\$3.22	\$21.80	\$21.30	\$4.04	\$25.34	\$21.30	\$3.25	\$24.55	\$2.72	12.0%	\$2.75		\$2.8278		\$3.1672	\$3.0692
21	10	\$19.36	\$5.05	\$24.40	\$19.36	\$4.03	\$23.38	\$22.13	\$5.05	\$27.17	\$22.13	\$4.07	\$26.19	\$2.77	11.4%	\$2.81		\$2.4404		\$2.7175	\$2.6195
22	15	\$21.29	\$7.57	\$28.86	\$21.29	\$6.04	\$27.32	\$24.20	\$7.57	\$31.77	\$24.20	\$6.10	\$30.30	\$2.91	10.1%	\$2.97		\$1.9238		\$2.1178	\$2.0198
23	20	\$23.22	\$10.09	\$33.31	\$23.22	\$8.05	\$31.27	\$26.26	\$10.09	\$36.36	\$26.26	\$8.13	\$34.40	\$3.05	9.1%	\$3.13		\$1.6655		\$1.8179	\$1.7199
24	25	\$25.15	\$12.62	\$37.76	\$25.15	\$10.06	\$35.21	\$28.33	\$12.62	\$40.95	\$28.33	\$10.17	\$38.50	\$3.19	8.4%	\$3.29		\$1.5106		\$1.6380	\$1.5400
25	30	\$27.08	\$15.14	\$42.22	\$27.08	\$12.08	\$39.15	\$30.40	\$15.14	\$45.54	\$30.40	\$12.20	\$42.60	\$3.32	7.9%	\$3.45		\$1.4073		\$1.5181	\$1.4201
26	35	\$29.01	\$17.66	\$46.67	\$29.01	\$14.09	\$43.09	\$32.47	\$17.66	\$50.13	\$32.47	\$14.23	\$46.70	\$3.46	7.4%	\$3.61		\$1.3335		\$1.4324	\$1.3344
27	40	\$30.94	\$20.19	\$51.12	\$30.94	\$16.10	\$47.04	\$34.54	\$20.19	\$54.73	\$34.54	\$16.27	\$50.81	\$3.60	7.0%	\$3.77		\$1.2781		\$1.3681	\$1.2701
28	45	\$32.87	\$22.71	\$55.58	\$32.87	\$18.11	\$50.98	\$36.61	\$22.71	\$59.32	\$36.61	\$18.30	\$54.91	\$3.74	6.7%	\$3.93		\$1.2351		\$1.3182	\$1.2202
29	50	\$34.80	\$25.24	\$60.03	\$34.80	\$20.13	\$54.92	\$38.68	\$25.23	\$63.91	\$38.68	\$20.33	\$59.01	\$3.88	6.5%	\$4.09		\$1.2006		\$1.2782	\$1.1802
30	60	\$38.66	\$30.28	\$68.94	\$38.66	\$24.15	\$62.81	\$42.81	\$30.28	\$73.09	\$42.81	\$24.40	\$67.21	\$4.15	6.0%	\$4.41		\$1.1490		\$1.2182	\$1.1202
31	70	\$42.52	\$35.33	\$77.85	\$42.52	\$28.18	\$70.69	\$46.95	\$35.33	\$82.28	\$46.95	\$28.47	\$75.42	\$4.43	5.7%	\$4.72		\$1.1121		\$1.1754	\$1.0774
32	80	\$46.38	\$40.38	\$86.75	\$46.38	\$32.20	\$78.58	\$51.09	\$40.37	\$91.46	\$51.09	\$32.53	\$83.62	\$4.71	5.4%	\$5.04		\$1.0844		\$1.1432	\$1.0452
33	90	\$50.24	\$45.42	\$95.66	\$50.24	\$36.23	\$86.46	\$55.22	\$45.42	\$100.64	\$55.22	\$36.60	\$91.82	\$4.98	5.2%	\$5.36		\$1.0629		\$1.1183	\$1.0203
34	100	\$54.10	\$50.47	\$104.57	\$54.10	\$40.25	\$94.35	\$59.36	\$50.47	\$109.83	\$59.36	\$40.67	\$100.03	\$5.26	5.0%	\$5.68		\$1.0457		\$1.0983	\$1.0003
35	200	\$92.70	\$100.94	\$193.64	\$92.70	\$80.50	\$173.20	\$100.73	\$100.93	\$201.66	\$100.73	\$81.33	\$182.06	\$8.03	4.1%	\$8.87	5.1%	\$0.9682	\$0.8660	\$1.0083	\$0.9103
36																					
	stimated Bill Percentiles																				
	Vinter - 25% 8	\$18.58	\$4.04	\$22.62				\$21.30	\$4.04	\$25.34				\$2.72	12.0%			\$2.8278		\$3.1672	
	Vinter - 50% 20	\$23.22	\$10.09	\$33.31				\$26.26	\$10.09	\$36.36				\$3.05	9.1%			\$1.6655		\$1.8179	
	Vinter - 75% 30	\$27.08	\$15.14	\$42.22				\$30.40	\$15.14	\$45.54				\$3.32	7.9%			\$1.4073		\$1.5181	
	Summer - 25% 5	1			\$17.43	\$2.01	\$19.44				\$20.06	\$2.03	\$22.09			\$2.65			\$3.8879		\$4.4186
	Summer - 50% 11	1			\$19.74	\$4.43	\$24.17				\$22.54	\$4.47	\$27.01			\$2.84	11.8%		\$2.1973		\$2.4559
43 8	Summer - 75% 20				\$23.22	\$8.05	\$31.27				\$26.26	\$8.13	\$34.40			\$3.13	10.0%		\$1.5633		\$1.7199

Estimated Bill Percentiles per 2010 MCS

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# COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE R-3 : RESIDENTIAL HEATING

Present Rates	Winter	Summer
Cost of Gas	\$0.4737	\$0.3715
.DAC	\$0.0310	\$0.0310
Customer charge	\$15.50	
Sales rate		
First Block Size		
Block 1	\$0.5678	\$0.5678
Block 2	\$0.5678	\$0.5678

				nthly Bills at	Present R					hly Bills at F	Proposed R					Monthly B			Unit (		
	Jse per		Winter			Summer			Winter			Summer		Wint	er	Sum	mer	Cur	rent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
(1	therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
	0	\$15.50	\$0.00	\$15.50	\$15.50	\$0.00	\$15.50	\$17.99	\$0.00	\$17.99	\$17.99	\$0.00	\$17.99	\$2.49	16.1%	\$2.49		\$0.0000	\$0.0000	\$0.0000	\$0.0000
	10	\$21.17	\$5.05	\$26.22	\$21.17	\$4.03	\$25.20	\$24.51	\$5.05	\$29.56	\$24.51	\$4.07	\$28.58	\$3.34	12.7%		13.4%	\$2.6222	\$2.5200	\$2.9558	\$2.8578
	25	\$29.69	\$12.62	\$42.31	\$29.69	\$10.06	\$39.75	\$34.29	\$12.62	\$46.91	\$34.29	\$10.17	\$44.46	\$4.60	10.9%		11.8%	\$1.6923	\$1.5901	\$1.8763	\$1.7783
	50	\$43.89	\$25.24	\$69.12	\$43.89	\$20.13	\$64.01	\$50.59	\$25.23	\$75.82	\$50.59	\$20.33	\$70.92	\$6.70	9.7%		10.8%	\$1.3824	\$1.2802	\$1.5165	\$1.4185
	75	\$58.08	\$37.85	\$95.93	\$58.08	\$30.19	\$88.27	\$66.89	\$37.85	\$104.74	\$66.89	\$30.50	\$97.39	\$8.81	9.2%	\$9.12		\$1.2791	\$1.1769	\$1.3965	\$1.2985
	100	\$72.27	\$50.47	\$122.74	\$72.27	\$40.25	\$112.52	\$83.19	\$50.47	\$133.66	\$83.19	\$40.67	\$123.86	\$10.91	8.9%	\$11.33		\$1.2274	\$1.1252	\$1.3366	\$1.2386
	125	\$86.47	\$63.09	\$149.56	\$86.47	\$50.31	\$136.78	\$99.49	\$63.08	\$162.57	\$99.49	\$50.83	\$150.32	\$13.02	8.7%	\$13.54	9.9%	\$1.1965	\$1.0943	\$1.3006	\$1.2026
		\$100.66	\$75.71	\$176.37	\$100.66	\$60.38	\$161.04	\$115.79	\$75.70	\$191.49	\$115.79	\$61.00	\$176.79	\$15.12	8.6%	\$15.75	9.8%	\$1.1758	\$1.0736	\$1.2766	\$1.1786
		\$114.86	\$88.32	\$203.18	\$114.86	\$70.44	\$185.30	\$132.09	\$88.32	\$220.40	\$132.09	\$71.17	\$203.25	\$17.22	8.5%	\$17.96	9.7%	\$1.1610	\$1.0588	\$1.2595	\$1.1615
	200	\$129.05	\$100.94	\$229.99	\$129.05	\$80.50	\$209.55	\$148.39	\$100.93	\$249.32	\$148.39	\$81.33	\$229.72	\$19.33	8.4%	\$20.17	9.6%	\$1.1500	\$1.0478	\$1.2466	\$1.1486
		\$143.25	\$113.56	\$256.80	\$143.25	\$90.56	\$233.81	\$164.69	\$113.55	\$278.24	\$164.69	\$91.50	\$256.19	\$21.43	8.3%	\$22.38	9.6%	\$1.1414	\$1.0392	\$1.2366	\$1.1386
		\$157.44	\$126.18	\$283.62	\$157.44	\$100.63	\$258.07	\$180.99	\$126.17	\$307.15	\$180.99	\$101.67	\$282.65	\$23.54	8.3%	\$24.59	9.5%	\$1.1345	\$1.0323	\$1.2286	\$1.1306
		\$171.64	\$138.79	\$310.43	\$171.64	\$110.69	\$282.32	\$197.29	\$138.78	\$336.07	\$197.29	\$111.83	\$309.12	\$25.64	8.3%	\$26.80	9.5%	\$1.1288	\$1.0266	\$1.2221	\$1.1241
	300	\$185.83	\$151.41	\$337.24	\$185.83	\$120.75	\$306.58	\$213.59	\$151.40	\$364.99	\$213.59	\$122.00	\$335.59	\$27.75	8.2%	\$29.01	9.5%	\$1.1241	\$1.0219	\$1.2166	\$1.1186
	350	\$214.22	\$176.65	\$390.86	\$214.22	\$140.88	\$355.09	\$246.19	\$176.63	\$422.82	\$246.19	\$142.33	\$388.52	\$31.95	8.2%	\$33.42	9.4%	\$1.1168	\$1.0146	\$1.2081	\$1.1101
	400	\$242.61	\$201.88	\$444.49	\$242.61	\$161.00	\$403.61	\$278.79	\$201.86	\$480.65	\$278.79	\$162.66	\$441.45	\$36.16	8.1%	\$37.84	9.4%	\$1.1112	\$1.0090	\$1.2016	\$1.1036
	450	\$271.00	\$227.12	\$498.11	\$271.00	\$181.13	\$452.12	\$311.38	\$227.10	\$538.48	\$311.38	\$183.00	\$494.38	\$40.37	8.1%	\$42.26	9.3%	\$1.1069	\$1.0047	\$1.1966	\$1.0986
	500	\$299.38	\$252.35	\$551.73	\$299.38	\$201.25	\$500.63	\$343.98	\$252.33	\$596.32	\$343.98	\$203.33	\$547.32	\$44.58	8.1%	\$46.68	9.3%	\$1.1035	\$1.0013	\$1.1926	\$1.0946
		\$441.33	\$378.53	\$819.85	\$441.33	\$301.88	\$743.20	\$506.98	\$378.50	\$885.48	\$506.98	\$305.00	\$811.98	\$65.62	8.0%	\$68.77	9.3%	\$1.0931	\$0.9909	\$1.1806	\$1.0826
	1,000	\$583.27	\$504.70	\$1,087.97	\$583.27	\$402.50	\$985.77	\$669.98	\$504.66	\$1,174.64	\$669.98	\$406.66	\$1,076.64	\$86.67	8.0%	\$90.87	9.2%	\$1.0880	\$0.9858	\$1.1746	\$1.0766
Estimated Bill Perce	centiles																				
Winter - 25%	60	\$49.56	\$30.28	\$79.85	1	1		\$57.11	\$30.28	\$87.39	1			\$7.54	9.4%			\$1.3308		\$1.4565	
Winter - 50%	100	\$72.27	\$50.47	\$122.74				\$83.19	\$50.47	\$133.66				\$10.91	8.9%			\$1.2274		\$1.3366	
Winter - 75%	175	\$114.86	\$88.32	\$203.18				\$132.09	\$88.32	\$220.40				\$17.22	8.5%			\$1.1610		\$1.2595	
Summer - 25%	12				\$22.31	\$4.83	\$27.14				\$25.81	\$4.88	\$30.69			\$3.55	13.1%		\$2.2617		\$2.5579
Summer - 50%	20				\$26.85	\$8.05	\$34.90				\$31.03	\$8.13	\$39.16			\$4.26	12.2%		\$1.7451		\$1.9582
Summer - 75%	30				\$32.53	\$12.08	\$44.61				\$37.55	\$12.20	\$49.75			\$5.15	11.5%		\$1.4868		\$1.6584

Estimated Bill Percentiles per 2010 MCS

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# COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE R-4 : LOW INCOME RESIDENTIAL HEATING

Present Rates	Winter	Summer
Cost of Gas	\$0.4737	\$0.3715
LDAC	\$0.0310	\$0.0310
Customer charge	\$6.20	
Sales rate		
First Block Size		
Block 1	\$0.2272	\$0.2272
Block 2	\$0.2272	\$0.2272

	RATE R-4 : LOW INCOME RESIDENTIAL HEATING																					
Line																						
1						Present R	ates	Winter	Summer		Proposed I	Rates	Winter	Summer								
2						Cost of Ga	s	\$0.4737	\$0.3715		Cost of Gas		\$0.4718	\$0.3738								
3						LDAC		\$0.0310	\$0.0310		LDAC		\$0.0329	\$0.0329								
4																						
5						Customer of	charge	\$6.20			Customer c	harge	\$7.20									
6						Sales rate					Sales rate											
7						First Block	Size		First Block Size													
8						Block 1			\$0.2272		Block 1		\$0.2608	\$0.2608								
9						Block 2		\$0.2272	\$0.2272	\$0.2272 Block 2 \$0.2608 \$0.2608												
10																						
11																						
12				Mor	thly Bills at	Present Ra	ates			Monti	nly Bills at P	roposed Ra	ates		Ch	ange in I	Monthly B	ill		Unit (	Costs	
13		Use per	er Winter Summer							Winter			Summer		Wint	ter	Sumr	ner	Curr	rent	Prop	osed
		Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
14		(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
15																						
16		0	\$6.20	\$0.00	\$6.20	\$6.20	\$0.00	\$6.20	\$7.20	\$0.00	\$7.20	\$7.20	\$0.00	\$7.20	\$1.00	16.1%	\$1.00	16.1%	\$0.0000	\$0.0000	\$0.0000	\$0.0000
17		10	\$8.47	\$5.05	\$13.52	\$8.47	\$4.03	\$12.50	\$9.80	\$5.05	\$14.85	\$9.80	\$4.07	\$13.87	\$1.33	9.9%	\$1.38	11.0%	\$1.3517	\$1.2495	\$1.4851	\$1.3871
18		25	\$11.88	\$12.62	\$24.50	\$11.88	\$10.06	\$21.94	\$13.72	\$12.62	\$26.33	\$13.72	\$10.17	\$23.88	\$1.84	7.5%	\$1.94	8.9%	\$0.9798	\$0.8776	\$1.0533	\$0.9553
19		50	\$17.56	\$25.24	\$42.79	\$17.56	\$20.13	\$37.68	\$20.24	\$25.23	\$45.47	\$20.24	\$20.33	\$40.57	\$2.68	6.3%	\$2.89	7.7%	\$0.8558	\$0.7536	\$0.9094	\$0.8114
20		75	\$23.24	\$37.85	\$61.09	\$23.24	\$30.19	\$53.42	\$26.76	\$37.85	\$64.61	\$26.76	\$30.50	\$57.26	\$3.52	5.8%	\$3.83	7.2%	\$0.8145	\$0.7123	\$0.8614	\$0.7634
21		100	\$28.91	\$50.47	\$79.38	\$28.91	\$40.25	\$69.16	\$33.28	\$50.47	\$83.74	\$33.28	\$40.67	\$73.94	\$4.36	5.5%	\$4.78	6.9%	\$0.7938	\$0.6916	\$0.8374	\$0.7394
22		125	\$34.59	\$63.09	\$97.68	\$34.59	\$50.31	\$84.91	\$39.80	\$63.08	\$102.88	\$39.80	\$50.83	\$90.63	\$5.20	5.3%	\$5.72		\$0.7814	\$0.6792	\$0.8230	\$0.7250
23		150	\$40.27	\$75.71	\$115.98	\$40.27	\$60.38	\$100.65	\$46.32	\$75.70	\$122.01	\$46.32	\$61.00	\$107.31	\$6.04	5.2%	\$6.67	6.6%	\$0.7732	\$0.6710	\$0.8134	\$0.7154
24		175	\$45.95	\$88.32	\$134.27	\$45.95	\$70.44	\$116.39	\$52.84	\$88.32	\$141.15	\$52.84	\$71.17	\$124.00	\$6.88	5.1%	\$7.61	6.5%	\$0.7673	\$0.6651	\$0.8066	\$0.7086
25		200	\$51.63	\$100.94	\$152.57	\$51.63	\$80.50	\$132.13	\$59.36	\$100.93	\$160.29	\$59.36	\$81.33	\$140.69	\$7.72	5.1%	\$8.56	6.5%	\$0.7628	\$0.6606	\$0.8014	\$0.7034
26		225	\$57.31	\$113.56	\$170.87	\$57.31	\$90.56	\$147.87	\$65.88	\$113.55	\$179.42	\$65.88	\$91.50	\$157.37	\$8.56	5.0%	\$9.50	6.4%	\$0.7594	\$0.6572	\$0.7974	\$0.6994
27		250	\$62.99	\$126.18	\$189.16	\$62.99	\$100.63	\$163.61	\$72.40	\$126.17	\$198.56	\$72.40	\$101.67	\$174.06	\$9.40	5.0%	\$10.45	6.4%	\$0.7566	\$0.6544	\$0.7942	\$0.6962
28		275	\$68.67	\$138.79	\$207.46	\$68.67	\$110.69	\$179.35	\$78.91	\$138.78	\$217.70	\$78.91	\$111.83	\$190.75	\$10.24	4.9%	\$11.39	6.4%	\$0.7544	\$0.6522	\$0.7916	\$0.6936
29		300	\$74.34	\$151.41	\$225.75	\$74.34	\$120.75	\$195.09	\$85.43	\$151.40	\$236.83	\$85.43	\$122.00	\$207.43	\$11.08	4.9%	\$12.34	6.3%	\$0.7525	\$0.6503	\$0.7894	\$0.6914
30		350	\$85.70	\$176.65	\$262.35	\$85.70	\$140.88	\$226.58	\$98.47	\$176.63	\$275.11	\$98.47	\$142.33	\$240.81	\$12.76	4.9%	\$14.23	6.3%	\$0.7496	\$0.6474	\$0.7860	\$0.6880
31		400	\$97.06 \$108.42	\$201.88	\$298.94	\$97.06 \$108.42	\$161.00	\$258.06	\$111.51 \$124.55	\$201.86	\$313.38	\$111.51 \$124.55	\$162.66	\$274.18	\$14.44	4.8%	\$16.12	6.2%	\$0.7473	\$0.6451	\$0.7834	\$0.6854
32		450		\$227.12	\$335.53		\$181.13	\$289.54	\$124.55 \$137.59	\$227.10	\$351.65	\$124.55 \$137.59	\$183.00	\$307.55	\$16.12	4.8%	\$18.01	6.2%	\$0.7456	\$0.6434	\$0.7814	\$0.6834
33 34		500 750	\$119.77 \$176.56	\$252.35	\$372.12 \$555.09	\$119.77	\$201.25	\$321.02 \$478.44	\$137.59	\$252.33	\$389.92	\$137.59	\$203.33	\$340.92 \$507.79	\$17.80	4.8%	\$19.90	6.2% 6.1%	\$0.7442	\$0.6420	\$0.7798 \$0.7751	\$0.6818 \$0.6771
34			\$233.35	\$378.53 \$504.70	\$555.09 \$738.05	\$176.56 \$233.35	\$301.88 \$402.50	\$478.44	\$202.79 \$267.99	\$378.50 \$504.66	\$581.29 \$772.65	\$202.79 \$267.99	\$305.00 \$406.66	\$507.79	\$26.20 \$34.60	4.7% 4.7%	\$29.35 \$38.80	6.1%	\$0.7401 \$0.7380	\$0.6379 \$0.6358	\$0.7751 \$0.7727	\$0.6747
		1,000	φ200.00	<i>\$</i> 304.70	φ130.03	φ200.00	9402.JU	<b>4033.03</b>	φ201.33	<i>\$</i> 304.00	φ112.03	φ201.33	\$400.00	φ074.03	φ34.00	4.770	<b>\$30.00</b>	0.170	<i>ф</i> 0.7300	φ0.0330	φ0.1121	\$0.0747
36 37	Estimated Bill Pe	rcontiloe																				
	Winter - 25%		\$22.10	605.00	057 40				\$25.45	605 00	¢c0 70				60.00	E 00/			¢0.000.4		£0.0600	
38 39	Winter - 25% Winter - 50%	70 100	\$22.10	\$35.33 \$50.47	\$57.43 \$79.38				\$25.45 \$33.28	\$35.33 \$50.47	\$60.78 \$83.74				\$3.35	5.8% 5.5%			\$0.8204 \$0.7938		\$0.8683 \$0.8374	
39	Winter - 75%	100	\$20.91	\$50.47 \$75.71	\$79.38 \$115.98				\$33.20	\$50.47 \$75.70	\$83.74 \$122.01				\$4.36 \$6.04	5.5% 5.2%			\$0.7938 \$0.7732		\$0.8374 \$0.8134	
40	Summer - 25%		\$40.27	φ/5./1	φil5.98	\$0.20	\$5.64	\$15.01	φ40.3Z	φr5.70	φ122.01	¢10.95	¢5 60	\$16.54	φ0.04	5.2%	¢1 F3	10.2%	φU.1132	\$1.0724	φ <b>υ.</b> σ134	¢1 1015
41	Summer - 25% Summer - 50%	14 25				\$9.38 \$11.88	\$5.64 \$10.06	\$15.01 \$21.94				\$10.85 \$13.72	\$5.69 \$10.17	\$16.54 \$23.88			\$1.53 \$1.94	8.9%		\$1.0724 \$0.8776		\$1.1815 \$0.9553
	Summer - 75%	40				\$15.28	\$10.00	\$21.94 \$31.38				\$17.63	\$10.17	\$23.00			\$1.94	8.0%		\$0.7846		\$0.9555
40	Saminor - 7070	40				ψ10.20	φ10.1U	φυ1.30				ψ17.00	φ10.27	<i>4</i> 00.09			ا د. ∠پ	0.070		90.1040		<b>⊅</b> ∪.04/4

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-41 : COMMERCIAL/INDUSTRIAL - LOW ANNUAL USE, HIGH WINTER USE

Present Rates	Winter	Summer	Proposed Rates	Winter	
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	
Customer charge	\$57.46		Customer charge	\$66.71	
Sales rate			Sales rate		
First Block Size	100	20	First Block Size	100	
Block 1	\$0.4711	\$0.4711	Block 1	\$0.5433	
Block 2	\$0.3165	\$0.3165	Block 2	\$0.3650	

Line	RATE G-41 : COMMERCIAL/INDUSTRIAL - LOW ANNUAL USE, HIGH WINTER USE																					
LINE					1	Present Ra	tee	Winter	Summer	1	Proposed	Bataa	Winter	Summer								
2						Cost of Ga		\$0.4724	\$0.3669		Cost of Ga		\$0.4705	\$0.3692								
2						LDAC	5		\$0.3669		LDAC	s		\$0.3692 \$0.0497								
3						LDAC		\$0.0478	\$0.0478		LDAC		\$0.0497	\$0.0497								
4 5						Customer of	harao	\$57.46			Customer	chargo	\$66.71									
6						Sales rate	naige	φJ7.40			Sales rate	charge	400.7 T									
7						First Block	Sizo	100	20		First Block	Size	100	20								
8						Block 1	0120	\$0.4711			Block 1	0120	\$0.5433	\$0.5433								
9						Block 2		\$0.3165	\$0.3165		Block 2		\$0.3650	\$0.3650								
10																						
11																						
12				Mor	nthly Bills a	t Present R	ates			Mont	nly Bills at I	Proposed R	ates	1	CI	hange in N	fonthly Bill			Uni	it Costs	
13		Use per		Winter			Summer			Winter			Summer		Wint	ter	Sumn	ner	Cun	rent	Propo	osed
		Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
14		(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
15																						
16		0	\$57	\$0	\$57	\$57	\$0	\$57	\$67	\$0	\$67	\$67	\$0	\$67	\$9.25	16.1%	\$9.25		\$0.0000		\$0.0000	\$0.0000
17		10	\$62	\$5	\$67	\$62	\$4	\$66	\$72	\$5	\$77	\$72	\$4	\$76	\$9.97	14.8%	\$10.01		\$6.7374		\$7.7344	\$7.6331
18		25 50	\$69 \$81	\$13 \$26	\$82 \$107	\$68 \$76	\$10 \$21	\$79 \$97	\$80 \$94	\$13	\$93	\$79 \$89	\$10 \$21	\$90	\$11.05	13.4%	\$11.04		\$3.2898 \$2.1405		\$3.7319	\$3.5949
19 20		50 75	\$81	\$26 \$39	\$107 \$132	\$75 \$84	\$21 \$31	\$97 \$115	\$94 \$107	\$26 \$39	\$120 \$146	\$89 \$98	\$21 \$31	\$109 \$129	\$12.86 \$14.66	12.0% 11.1%	\$12.36 \$13.67		\$2.1405		\$2.3977 \$1.9529	\$2.1894 \$1.7208
20		100	\$105	\$52	\$132	\$92	\$31 \$41	\$115	\$107	\$52	\$140	\$107	\$42	\$129	\$14.00	10.5%	\$13.67		\$1.5659		\$1.9529	\$1.4866
22		150	\$120	\$78	\$198	\$108	\$62	\$170	\$139	\$78	\$217	\$125	\$63	\$188	\$18.89	9.5%	\$17.62		\$1.3228		\$1.4488	\$1.2523
23		200	\$136	\$104	\$240	\$124	\$83	\$207	\$158	\$104	\$262	\$143	\$84	\$227	\$21.31	8.9%	\$20.26		\$1.2013		\$1.3079	\$1,1352
24		250	\$152	\$130	\$282	\$140	\$104	\$243	\$176	\$130	\$306	\$162	\$105	\$266	\$23.73	8.4%	\$22.89		\$1.1284		\$1.2233	\$1.0649
25		300	\$168	\$156	\$324	\$155	\$124	\$280	\$194	\$156	\$350	\$180	\$126	\$305	\$26.16	8.1%	\$25.52		\$1.0798		\$1.1669	\$1.0181
26		350	\$184	\$182	\$366	\$171	\$145	\$316	\$212	\$182	\$394	\$198	\$147	\$345	\$28.58	7.8%	\$28.15	8.9%	\$1.0450	\$0.9042	\$1.1267	\$0.9846
27		400	\$200	\$208	\$408	\$187	\$166	\$353	\$231	\$208	\$439	\$216	\$168	\$384	\$31.00	7.6%	\$30.79		\$1.0190		\$1.0965	\$0.9595
28		500	\$231	\$260	\$491	\$219	\$207	\$426	\$267	\$260	\$527	\$253	\$209	\$462	\$35.85	7.3%	\$36.05		\$0.9825		\$1.0542	\$0.9244
29		600	\$263	\$312	\$575	\$250	\$249	\$499	\$304	\$312	\$616	\$289	\$251	\$541	\$40.70	7.1%	\$41.32		\$0.9582		\$1.0260	\$0.9010
30		700	\$294	\$364	\$659	\$282	\$290	\$572	\$340	\$364	\$704	\$326	\$293	\$619	\$45.54	6.9%	\$46.59			\$0.8177	\$1.0059	\$0.8842
31		800	\$326	\$416	\$742	\$314	\$332	\$645	\$377	\$416	\$793	\$362	\$335	\$697	\$50.39	6.8%	\$51.85		\$0.9278		\$0.9908	\$0.8717
32 33		900	\$358 \$389	\$468 \$520	\$826 \$910	\$345 \$377	\$373 \$415	\$719 \$792	\$413 \$450	\$468 \$520	\$881 \$970	\$399 \$435	\$377 \$419	\$776 \$854	\$55.24	6.7% 6.6%	\$57.12 \$62.39		\$0.9177 \$0.9096		\$0.9791 \$0.9697	\$0.8619 \$0.8541
33		1,000 1,250	\$369 \$469	\$520 \$650	\$910	\$456	\$415	\$792	\$450 \$541	\$650	\$970 \$1,191	\$526	\$419	\$054 \$1,050	\$60.08 \$72.20	6.5%	\$75.55		\$0.8950		\$0.9528	\$0.8541
35		1,200	\$548	\$780	\$1,113	\$535	\$622	\$1,157	\$632	\$780	\$1,131	\$618	\$628	\$1,030	\$84.31	6.3%	\$88.72		\$0.8853		\$0.9320	\$0.8307
36		1,000	<i><b>4</b></i> 10	ψι 30	ψ1,020	<i><b>‡</b>150</i>	ψυΖΖ	ψ1,137	+- <i>3</i> L	ψ/30	ψι, τΙΖ	<i><b></b></i>	ψ020	ψ1,240	ψ0 <del>4</del> .01	0.070	ψ00.72	1.170	<i>w</i> 0.0000	<i>40.1110</i>	90.0 <del>-</del> 10	Q0.0007
37	Estimated Bill Pe	rcentiles																				
38	Winter - 25%	70	\$90	\$36	\$127	I	1	1	\$105	\$36	\$141	I	1	1	\$14.30	11.3%	1		\$1.8122		\$2.0165	
39	Winter - 50%	200	\$136	\$104	\$240				\$158	\$104	\$262				\$21.31	8.9%			\$1.2013		\$1.3079	
40	Winter - 75%	500	\$231	\$260	\$491				\$267	\$260	\$527				\$35.85	7.3%			\$0.9825		\$1.0542	
41	Summer - 25%	0				\$57	\$0	\$57				\$67	\$0	\$67			\$9.25	16.1%		\$0.0000		\$0.0000
42	Summer - 50%	8				\$61	\$3	\$65				\$71	\$3	\$74			\$9.86	15.3%		\$8.0684		\$9.3008
43	Summer - 75%	45				\$75	\$19	\$93				\$87	\$19	\$106			\$12.09	12.9%		\$2.0768		\$2.3455

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-42 : COMMERCIAL/INDUSTRIAL - MEDIUM ANNUAL USE, HIGH WINTER USE

Present Rates	Winter	Summer	Proposed Rates	Winter	Summ
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	\$0.369
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.049
Customer charge	\$172.39		Customer charge	\$200.14	
Sales rate			Sales rate		
First Block Size	1000	400	First Block Size	1000	40
Block 1	\$0.4284	\$0.4284	Block 1	\$0.4999	\$0.499
Block 2	\$0.2855	\$0.2855	Block 2	\$0.3331	\$0.333

				nthly Bills a	t Present R					Bills at Pro	posed F			-	nange in N				-	Costs	
	Use per		Winter			Summer			Winter			Summer		Wi	nter	Sum	mer	Cur	rent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
	0	\$172	\$0	\$172	\$172	\$0	\$172	\$200	\$0	\$200	\$200	\$0	\$200	\$27.75	16.1%	\$27.75		\$0.0000		\$0.0000	
	10	\$177	\$5	\$182	\$177	\$4	\$181	\$205	\$5	\$210	\$205	\$4	\$209	\$28.46	15.6%	\$28.50		\$18.1878	\$18.0823	\$21.0339	
	25	\$183	\$13	\$196	\$183	\$10	\$193	\$213	\$13	\$226	\$213	\$10	\$223	\$29.53	15.1%	\$29.64		\$7.8443		\$9.0256	
	50	\$194	\$26	\$220	\$194	\$21	\$215	\$225	\$26	\$251	\$225	\$21	\$246	\$31.32	14.2%	\$31.53		\$4.3964	\$4.2909	\$5.0228	
	75	\$205	\$39	\$244	\$205	\$31	\$236	\$238	\$39	\$277	\$238	\$31	\$269	\$33.10	13.6%	\$33.42	14.2%	\$3.2472	\$3.1417	\$3.6886	\$3.5873
	100	\$215	\$52	\$267	\$215	\$41	\$257	\$250	\$52	\$302	\$250	\$42	\$292	\$34.89	13.1%	\$35.31		\$2.6725	\$2.5670	\$3.0214	
	150	\$237	\$78	\$315	\$237	\$62	\$299	\$275	\$78	\$353	\$275	\$63	\$338	\$38.46	12.2%	\$39.09		\$2.0979	\$1.9924	\$2.3543	\$2.2530
	200	\$258	\$104	\$362	\$258	\$83	\$341	\$300	\$104	\$404	\$300	\$84	\$384	\$42.03	11.6%	\$42.87		\$1.8106		\$2.0207	\$1.9194
	250	\$279	\$130	\$410	\$279	\$104	\$383	\$325	\$130	\$455	\$325	\$105	\$430	\$45.60	11.1%	\$46.65	12.2%	\$1.6382	\$1.5327	\$1.8206	\$1.7193
	300	\$301	\$156	\$457	\$301	\$124	\$425	\$350	\$156	\$506	\$350	\$126	\$476	\$49.17	10.8%	\$50.43	11.9%	\$1.5232	\$1.4177	\$1.6872	\$1.5859
	350	\$322	\$182	\$504	\$322	\$145	\$467	\$375	\$182	\$557	\$375	\$147	\$522	\$52.75	10.5%	\$54.22	11.6%	\$1.4412	\$1.3357	\$1.5919	\$1.4906
	400	\$344	\$208	\$552	\$344	\$166	\$510	\$400	\$208	\$608	\$400	\$168	\$568	\$56.32	10.2%	\$58.00	11.4%	\$1.3796	\$1.2741	\$1.5204	\$1.4191
	500	\$387	\$260	\$647	\$372	\$207	\$580	\$450	\$260	\$710	\$433	\$209	\$643	\$63.46	9.8%	\$63.18	10.9%	\$1.2934	\$1.1593	\$1.4203	\$1.2857
	750	\$494	\$390	\$884	\$444	\$311	\$755	\$575	\$390	\$965	\$517	\$314	\$831	\$81.32	9.2%	\$76.12	10.1%	\$1.1785	\$1.0063	\$1.2869	\$1.1078
	1,000	\$601	\$520	\$1,121	\$515	\$415	\$930	\$700	\$520	\$1,220	\$600	\$419	\$1,019	\$99.17	8.8%	\$89.07	9.6%	\$1.1210	\$0.9297	\$1.2202	\$1.0188
	1,500	\$744	\$780	\$1,524	\$658	\$622	\$1,280	\$867	\$780	\$1,647	\$766	\$628	\$1,395	\$122.96	8.1%	\$114.96	9.0%	\$1.0159	\$0.8532	\$1.0979	\$0.9299
	2,000	\$886	\$1,040	\$1,927	\$801	\$829	\$1,630	\$1,033	\$1,040	\$2,073	\$933	\$838	\$1,771	\$146.75	7.6%	\$140.85	8.6%	\$0.9633	\$0.8150	\$1.0367	\$0.8854
	3,000	\$1,172	\$1,561	\$2,732	\$1,086	\$1,244	\$2,330	\$1,366	\$1,560	\$2,927	\$1,266	\$1,257	\$2,523	\$194.34	7.1%	\$192.63	8.3%	\$0.9108	\$0.7767	\$0.9756	\$0.8409
	4,000	\$1,457	\$2,081	\$3,538	\$1,371	\$1,659	\$3,030	\$1,699	\$2,081	\$3,780	\$1,599	\$1,675	\$3,275	\$241.92	6.8%	\$244.41	8.1%	\$0.8845	\$0.7576	\$0.9450	\$0.8187
	5,000	\$1,743	\$2,601	\$4,344	\$1,657	\$2,074	\$3,730	\$2,032	\$2,601	\$4,633	\$1,932	\$2,094	\$4,027	\$289.50	6.7%	\$296.19	7.9%	\$0.8687	\$0.7461	\$0.9266	\$0.8053
Estimated Bill Pe	rcentiles																				
Winter - 25%	1,300	\$686	\$676	\$1,363		1		\$800	\$676	\$1,476				\$113.45	8.3%			\$1.0482		\$1.1355	
Winter - 50%	2,000	\$886	\$1,040	\$1,927				\$1,033	\$1,040	\$2,073				\$146.75	7.6%			\$0.9633		\$1.0367	
Winter - 75%	3,500	\$1,314	\$1,821	\$3,135				\$1,533	\$1,821	\$3,353				\$218.13	7.0%			\$0.8958		\$0.9581	
Summer - 25%	45				\$192	\$19	\$210				\$223	\$19	\$241			\$31.15	14.8%		\$4.6740		\$5.3663
Summer - 50%	350				\$322	\$145	\$467				\$375	\$147	\$522			\$54.22	11.6%		\$1.3357		\$1.4906
Summer - 75%	750				\$444	\$311	\$755				\$517	\$314	\$831			\$76.12	10.1%		\$1.0063		\$1.1078

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-43 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, HIGH WINTER USE

Present Rates	Winter	Summer	Proposed Rates	Winter	Summ
Cost of Gas	\$0.4724	\$0.3669	Cost of Gas	\$0.4705	\$0.36
LDAC	\$0.0478	\$0.0478	LDAC	\$0.0497	\$0.04
Customer charge	\$739.83		Customer charge	\$858.91	
Sales rate			Sales rate		
First Block Size			First Block Size		
Block 1	\$0.2633	\$0.1204	Block 1	\$0.3126	\$0.14
Block 2	\$0.2633	\$0.1204	Block 2	\$0.3126	\$0.14

1																					
2			Mor	nthly Bills at	t Present R	ates			Mont	nly Bills at F	Proposed R	ates		(	Change in	Monthly Bill			Unit	Costs	
3	Use per		Winter			Summer			Winter			Summer		Wint	er	Sumr	ner	Curi	rent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
4	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
5																					
6	200	\$793	\$104	\$897	\$764	\$83	\$847	\$921	\$104	\$1,025	\$888	\$84	\$971	\$128.93	14.4%	\$124.42	14.7%		\$4.2343	\$5.1274	\$4.8564
7	500	\$872	\$260	\$1,132	\$800	\$207	\$1,007	\$1,015	\$260	\$1,275	\$930	\$209	\$1,140	\$143.71	12.7%	\$132.43	13.1%	\$2.2632		\$2.5506	\$2.2796
8	1,000	\$1,003	\$520	\$1,523	\$860	\$415	\$1,275	\$1,172	\$520	\$1,692	\$1,002	\$419	\$1,421	\$168.34	11.1%	\$145.78	11.4%		\$1.2749	\$1.6917	\$1.4207
9	1,250	\$1,069	\$650	\$1,719	\$890	\$518	\$1,409	\$1,250	\$650	\$1,900	\$1,038	\$524	\$1,561	\$180.66	10.5%	\$152.46	10.8%		\$1.1270	\$1.5199	\$1.2489
0	1,500	\$1,135	\$780	\$1,915	\$920	\$622	\$1,542	\$1,328	\$780	\$2,108	\$1,073	\$628	\$1,702	\$192.97	10.1%	\$159.13	10.3%		\$1.0283	\$1.4054	\$1.1344
1	1,750	\$1,201	\$910	\$2,111	\$951	\$726	\$1,676	\$1,406	\$910	\$2,316	\$1,109	\$733	\$1,842	\$205.29	9.7%	\$165.81	9.9%	\$1.2063	\$0.9579	\$1.3236	\$1.0526
2	2,000	\$1,267	\$1,040	\$2,307	\$981	\$829	\$1,810	\$1,484	\$1,040	\$2,525	\$1,145	\$838	\$1,983	\$217.60	9.4%	\$172.48	9.5%	\$1.1535	\$0.9050	\$1.2623	\$0.9913
3	2,500	\$1,398	\$1,301	\$2,699	\$1,041	\$1,037	\$2,078	\$1,641	\$1,300	\$2,941	\$1,216	\$1,047	\$2,263	\$242.24	9.0%	\$185.84	8.9%	\$1.0795		\$1.1764	\$0.9054
4	3,000	\$1,530	\$1,561	\$3,090	\$1,101	\$1,244	\$2,345	\$1,797	\$1,560	\$3,357	\$1,288	\$1,257	\$2,544	\$266.87	8.6%	\$199.19	8.5%		\$0.7817	\$1.1191	\$0.8481
5	3,500	\$1,662	\$1,821	\$3,482	\$1,161	\$1,451	\$2,613	\$1,953	\$1,821	\$3,774	\$1,359	\$1,466	\$2,825	\$291.50	8.4%	\$212.54	8.1%	\$0.9949		\$1.0782	\$0.8072
6	4,000	\$1,793	\$2,081	\$3,874	\$1,221	\$1,659	\$2,880	\$2,109	\$2,081	\$4,190	\$1,431	\$1,675	\$3,106	\$316.13	8.2%	\$225.89	7.8%	\$0.9685	\$0.7201	\$1.0475	\$0.7765
7	4,500	\$1,925	\$2,341	\$4,266	\$1,282	\$1,866	\$3,148	\$2,266	\$2,341	\$4,607	\$1,502	\$1,885	\$3,387	\$340.76	8.0%	\$239.24	7.6%	\$0.9480	\$0.6995	\$1.0237	\$0.7527
8	5,000	\$2,057	\$2,601	\$4,658	\$1,342	\$2,074	\$3,415	\$2,422	\$2,601	\$5,023	\$1,574	\$2,094	\$3,668	\$365.39	7.8%	\$252.59	7.4%	\$0.9315	\$0.6831	\$1.0046	\$0.7336
9	6,000	\$2,320	\$3,121	\$5,441	\$1,462	\$2,488	\$3,950	\$2,735	\$3,121	\$5,856	\$1,717	\$2,513	\$4,230	\$414.66	7.6%	\$279.30	7.1%	\$0.9068	\$0.6584	\$0.9760	\$0.7050
0	7,000	\$2,583	\$3,641	\$6,225	\$1,583	\$2,903	\$4,486	\$3,047	\$3,641	\$6,689	\$1,860	\$2,932	\$4,792	\$463.92	7.5%	\$306.00	6.8%	\$0.8892	\$0.6408	\$0.9555	\$0.6845
1	8,000	\$2,847	\$4,162	\$7,008	\$1,703	\$3,318	\$5,021	\$3,360	\$4,161	\$7,521	\$2,002	\$3,351	\$5,353	\$513.18	7.3%	\$332.71	6.6%	\$0.8760	\$0.6276	\$0.9402	\$0.6692
2	9,000	\$3,110	\$4,682	\$7,792	\$1,823	\$3,732	\$5,556	\$3,673	\$4,681	\$8,354	\$2,145	\$3,770	\$5,915	\$562.45	7.2%	\$359.41	6.5%	\$0.8657	\$0.6173	\$0.9282	\$0.6572
3	10,000	\$3,373	\$5,202	\$8,575	\$1,944	\$4,147	\$6,091	\$3,985	\$5,202	\$9,187	\$2,288	\$4,189	\$6,477	\$611.71	7.1%	\$386.11	6.3%	\$0.8575	\$0.6091	\$0.9187	\$0.6477
4	15,000	\$4,690	\$7,803	\$12,493	\$2,546	\$6,221	\$8,766	\$5,549	\$7,802	\$13,351	\$3,003	\$6,283	\$9,286	\$858.03	6.9%	\$519.63	5.9%	\$0.8329		\$0.8901	\$0.6191
5	20,000	\$6,007	\$10,404	\$16,411	\$3,148	\$8,294	\$11,442	\$7,112	\$10,403	\$17,515	\$3,718	\$8,377	\$12,095	\$1,104.34	6.7%	\$653.15	5.7%	\$0.8205	\$0.5721	\$0.8758	\$0.6048
6																					
7 Estimated Bill I	Percentiles	-																			
8 Winter - 25%	9,000	\$3,110	\$4,682	\$7,792				\$3,673	\$4,681	\$8,354	1			\$562.45	7.2%			\$0.8657		\$0.9282	
9 Winter - 50%	15,000	\$4,690	\$7,803	\$12,493				\$5,549	\$7,802	\$13,351				\$858.03	6.9%			\$0.8329		\$0.8901	
0 Winter - 75%	25,000	\$7,323	\$13,005	\$20,328				\$8,675	\$13,004	\$21,679				\$1,350.66	6.6%			\$0.8131		\$0.8672	
1 Summer - 25%	450				\$794	\$187	\$981				\$923	\$188	\$1,112			\$131.09	13.4%		\$2.1792		\$2.4705
2 Summer - 50%	3,500				\$1,161	\$1,451	\$2,613				\$1,359	\$1,466	\$2,825			\$212.54	8.1%		\$0.7465		\$0.8072
3 Summer - 75%	10,000				\$1,944	\$4,147	\$6,091				\$2,288	\$4,189	\$6,477			\$386.11	6.3%		\$0.6091		\$0.6477

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-51 : COMMERCIAL/INDUSTRIAL - LOW ANNUAL USE, LOW WINTER USE

Present Rates	Winter	Summer
Cost of Gas	\$0.4792	\$0.3786
LDAC	\$0.0478	\$0.0478
Customer charge	\$57.46	
Sales rate		
First Block Size	100	100
Block 1	\$0.2839	\$0.2839
Block 2	\$0.1846	\$0.1846

				nthly Bills a	t Present F					hly Bills at	Proposed F					Monthly E				Costs	
	Use per		Winter			Summer			Winter			Summer		Win	ter	Sum	mer	Cu	rrent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
	0	\$57	\$0	\$57	\$57	\$0	\$57	\$67	\$0	\$67	\$67	\$0	\$67	\$9.25				\$0.0000	\$0.0000	\$0.0000	\$0.0000
	10	\$60	\$5	\$66	\$60	\$4	\$65	\$70	\$5	\$75	\$70	\$4	\$74	\$9.82				\$6.5567	\$6.4561	\$7.5382	\$7.4418
	25	\$65	\$13	\$78	\$65	\$11	\$75	\$75	\$13	\$88	\$75	\$11	\$86	\$10.67				\$3.1092		\$3.5359	\$3.4395
	50	\$72	\$26	\$98	\$72	\$21	\$93	\$84	\$26	\$110	\$84	\$22	\$105	\$12.09				\$1.9601	\$1.8595	\$2.2018	\$2.1054
	75	\$79	\$40	\$118	\$79	\$32	\$111	\$92	\$40	\$132	\$92	\$32	\$125	\$13.51				\$1.5770		\$1.7571	\$1.6607
	100	\$86	\$53	\$139	\$86	\$43	\$128	\$101	\$53	\$153	\$101	\$43	\$144	\$14.93				\$1.3855		\$1.5348	\$1.4384
	150	\$95	\$79	\$174	\$95	\$64	\$159	\$112	\$79	\$191	\$112	\$65	\$176	\$16.77				\$1.1609	\$1.0603	\$1.2727	\$1.1763
	200	\$104	\$105	\$210	\$104	\$85	\$190	\$123	\$105	\$228	\$123	\$86	\$209	\$18.62		\$19.46		\$1.0486	\$0.9480	\$1.1417	\$1.0453
	250	\$114	\$132	\$245	\$114	\$107	\$220	\$134	\$132	\$266	\$134	\$108	\$242	\$20.47	8.3%	\$21.52	9.8%	\$0.9812	\$0.8806	\$1.0631	\$0.9667
	300	\$123	\$158	\$281	\$123	\$128	\$251	\$145	\$158	\$303	\$145	\$129	\$274	\$22.31		\$23.57		\$0.9363	\$0.8357	\$1.0106	\$0.9142
	350	\$132	\$184	\$316	\$132	\$149	\$281	\$156	\$184	\$341	\$156	\$151	\$307	\$24.16	7.6%	\$25.63	9.1%	\$0.9042	\$0.8036	\$0.9732	\$0.8768
	400	\$141	\$211	\$352	\$141	\$171	\$312	\$167	\$211	\$378	\$167	\$172	\$339	\$26.01		\$27.69		\$0.8801	\$0.7795	\$0.9451	\$0.8487
	500	\$160	\$264	\$423	\$160	\$213	\$373	\$189	\$263	\$453	\$189	\$215	\$405	\$29.70	7.0%	\$31.80	8.5%	\$0.8464	\$0.7458	\$0.9058	\$0.8094
	600	\$178	\$316	\$494	\$178	\$256	\$434	\$212	\$316	\$528	\$212	\$258	\$470	\$33.39	6.8%	\$35.91	8.3%	\$0.8239	\$0.7233	\$0.8796	\$0.7832
	700	\$197	\$369	\$566	\$197	\$298	\$495	\$234	\$369	\$603	\$234	\$301	\$535	\$37.08	6.6%	\$40.02	8.1%	\$0.8079	\$0.7073	\$0.8609	\$0.7645
	800	\$215	\$422	\$637	\$215	\$341	\$556	\$256	\$422	\$677	\$256	\$344	\$600	\$40.77	6.4%	\$44.13	7.9%	\$0.7959	\$0.6953	\$0.8468	\$0.7504
	900	\$234	\$474	\$708	\$234	\$384	\$617	\$278	\$474	\$752	\$278	\$388	\$666	\$44.47	6.3%	\$48.25		\$0.7865	\$0.6859	\$0.8359	\$0.7395
	1,000	\$252	\$527	\$779	\$252	\$426	\$678	\$300	\$527	\$827	\$300	\$431	\$731	\$48.16	6.2%	\$52.36	7.7%	\$0.7790	\$0.6784	\$0.8272	\$0.7308
	1,250	\$298	\$659	\$957	\$298	\$533	\$831	\$356	\$659	\$1,014	\$356	\$538	\$894	\$57.39	6.0%	\$62.64	7.5%	\$0.7655	\$0.6649	\$0.8115	\$0.7151
	1,500	\$344	\$791	\$1,135	\$344	\$640	\$984	\$411	\$790	\$1,201	\$411	\$646	\$1,057	\$66.62	5.9%	\$72.92	7.4%	\$0.7566	\$0.6560	\$0.8010	\$0.7046
Estimated Bill Pe	rcentiles																				
Winter - 25%	45	\$70	\$24	\$94				\$82	\$24	\$106				\$11.80	12.6%			\$2.0878		\$2.3501	
Winter - 50%	175	\$100	\$92	\$192				\$117	\$92	\$210				\$17.70	9.2%			\$1.0967		\$1.1978	
Winter - 75%	450	\$150	\$237	\$388				\$178	\$237	\$415				\$27.85	7.2%			\$0.8614		\$0.9233	
Summer - 25%	6				\$59	\$3	\$62				\$69	\$3	\$71			\$9.61	15.6%		\$10.2865		\$11.8888
Summer - 50%	60				\$74	\$26	\$100				\$87	\$26	\$113			\$12.91	12.9%		\$1.6680		\$1.8831
Summer - 75%	250				\$114	\$107	\$220				\$134	\$108	\$242			\$21.52	9.8%		\$0.8806		\$0.9667

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-52 : COMMERCIAL/INDUSTRIAL - MEDIUM ANNUAL USE, LOW WINTER USE

Present Rates	Winter	Summer
Cost of Gas	\$0.4792	\$0.3786
LDAC	\$0.0478	\$0.0478
Customer charge	\$172.39	
Sales rate		
First Block Size	1000	1000
Block 1	\$0.2439	\$0.1767
Block 2	\$0.1624	\$0.1004

							-					_									
				nthly Bills a	t Present F					hly Bills at	Proposed I				~	Monthly E				t Costs	
	Use per		Winter			Summer			Winter			Summer		Win	ter	Sum	mer	Cur	rent	Propo	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
	200	\$221	\$105	\$327	\$208	\$85	\$293	\$259	\$105	\$364	\$243	\$86	\$329	\$37.48	11.5%	\$35.64		\$1.6328		\$1.8202	\$1.6432
	300	\$246	\$158	\$404	\$225	\$128	\$353	\$288	\$158	\$446	\$264	\$129	\$393	\$42.35	10.5%	\$39.58		\$1.3455		\$1.4867	\$1.3097
	400	\$270	\$211	\$481	\$243	\$171	\$414	\$317	\$211	\$528	\$285	\$172	\$457	\$47.22	9.8%	\$43.53		\$1.2019		\$1.3199	\$1.1429
	500	\$294	\$264	\$558	\$261	\$213	\$474	\$346	\$263	\$610	\$306	\$215	\$521	\$52.08	9.3%	\$47.47		\$1.1157		\$1.2198	\$1.0428
	600	\$319	\$316	\$635	\$278	\$256	\$534	\$376	\$316	\$692	\$327	\$258	\$586	\$56.95	9.0%	\$51.42		\$1.0582		\$1.1531	\$0.9761
	700	\$343	\$369	\$712	\$296	\$298	\$595	\$405	\$369	\$774	\$349	\$301	\$650	\$61.82	8.7%	\$55.36		\$1.0171		\$1.1055	\$0.9284
	800	\$367	\$422	\$789	\$314	\$341	\$655	\$434	\$422	\$856	\$370	\$344	\$714	\$66.68	8.5%	\$59.31		\$0.9864		\$1.0697	\$0.8927
	900	\$392	\$474	\$866	\$331	\$384	\$715	\$463	\$474	\$938	\$391	\$388	\$778	\$71.55	8.3%	\$63.25		\$0.9624		\$1.0419	\$0.8649
	1,000	\$416	\$527	\$943	\$349	\$426	\$775	\$493	\$527	\$1,020	\$412	\$431	\$843	\$76.42	8.1%	\$67.20		\$0.9433		\$1.0197	\$0.8427
	1,100	\$433	\$580	\$1,012	\$359	\$469	\$828	\$512	\$580	\$1,092	\$424	\$474	\$898	\$79.66	7.9%	\$69.62		\$0.9202		\$0.9926	\$0.8162
	1,200	\$449	\$632	\$1,081	\$369	\$512	\$881	\$532	\$632	\$1,164	\$436	\$517	\$953	\$82.90	7.7%	\$72.04		\$0.9010		\$0.9700	\$0.7941
	1,300	\$465	\$685	\$1,150	\$379	\$554	\$934	\$551	\$685	\$1,236	\$448	\$560	\$1,008	\$86.14	7.5%	\$74.46		\$0.8847		\$0.9509	\$0.7754
	1,400	\$481	\$738	\$1,219	\$389	\$597	\$986	\$571	\$738	\$1,308	\$460	\$603	\$1,063	\$89.38	7.3%	\$76.89		\$0.8707		\$0.9346	\$0.7594
	1,500	\$497	\$791	\$1,288	\$399	\$640	\$1,039	\$590	\$790	\$1,381	\$472	\$646	\$1,118	\$92.62	7.2%	\$79.31		\$0.8586		\$0.9204	\$0.7455
	1,750	\$538	\$922	\$1,460	\$424	\$746	\$1,171	\$639	\$922	\$1,561	\$502	\$753	\$1,256	\$100.72	6.9%	\$85.36	7.3%	\$0.8345	\$0.6689	\$0.8920	\$0.7177
	2,000	\$579	\$1,054	\$1,633	\$450	\$853	\$1,302	\$688	\$1,054	\$1,741	\$533	\$861	\$1,394	\$108.82	6.7%	\$91.42	7.0%	\$0.8163	\$0.6512	\$0.8707	\$0.6969
	2,500	\$660	\$1,318	\$1,977	\$500	\$1,066	\$1,566	\$785	\$1,317	\$2,102	\$593	\$1,076	\$1,669	\$125.02	6.3%	\$103.53	6.6%	\$0.7910	\$0.6263	\$0.8410	\$0.6677
	3,000	\$741	\$1,581	\$2,322	\$550	\$1,279	\$1,829	\$882	\$1,581	\$2,463	\$653	\$1,292	\$1,945	\$141.22	6.1%	\$115.64	6.3%	\$0.7740	\$0.6097	\$0.8211	\$0.6483
	4,000	\$903	\$2,108	\$3,011	\$650	\$1,706	\$2,356	\$1,077	\$2,108	\$3,185	\$774	\$1,722	\$2,496	\$173.62	5.8%	\$139.86	5.9%	\$0.7529	\$0.5890	\$0.7963	\$0.6240
	5,000	\$1,066	\$2,635	\$3,701	\$751	\$2,132	\$2,883	\$1,272	\$2,635	\$3,907	\$894	\$2,153	\$3,047	\$206.02	5.6%	\$164.08	5.7%	\$0.7402	\$0.5766	\$0.7814	\$0.6094
Estimated Bill Pe	rcentiles																				
Winter - 25%	1,040	\$423	\$548	\$971				\$501	\$548	\$1,049				\$77.71	8.0%			\$0.9335		\$1.0082	
Winter - 50%	2,000	\$579	\$1,054	\$1,633				\$688	\$1,054	\$1,741				\$108.82	6.7%			\$0.8163		\$0.8707	
Winter - 75%	3,500	\$822	\$1,845	\$2,667				\$980	\$1,844	\$2,824				\$157.42	5.9%			\$0.7619		\$0.8069	
Summer - 25%	700				\$296	\$298	\$595				\$349	\$301	\$650			\$55.36	9.3%		\$0.8494		\$0.9284
Summer - 50%	1,040				\$353	\$443	\$797				\$417	\$448	\$865			\$68.17	8.6%		\$0.7659		\$0.8315
Summer - 75%	2,000				\$450	\$853	\$1,302				\$533	\$861	\$1,394			\$91.42	7.0%		\$0.6512		\$0.6969

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-53 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, LOAD FACTOR LESS THAN 90%

Present Rates	Winter	Summer
Cost of Gas	\$0.4792	\$0.3786
LDAC	\$0.0478	\$0.0478
Customer charge	\$761.39	
Sales rate		
First Block Size		
Block 1	\$0.1705	\$0.0818
Block 2	\$0.1705	\$0.0818

			Mor	nthly Bills a	t Present F	lates			Mont	hly Bills at F	Proposed F	Rates		Cha	nge in l	Monthly Bill			Unit	Costs	
	Use per		Winter			Summer			Winter			Summer		Winte	er	Summ	er	Cur	rent	Prop	osed
	Month	Base	COG /		Base	COG /		Base	COG /		Base	COG /									
	(therms)	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	Rates	LDAC	TOTAL	\$	%	\$	%	Winter	Summer	Winter	Summer
	1,000	\$932	\$527	\$1,459	\$843	\$426	\$1,270	\$1,093	\$527	\$1,620	\$984	\$431	\$1,415	\$161.25				\$1.4589		\$1.6201	\$1.4149
	2,500	\$1,188	\$1,318	\$2,505	\$966	\$1,066	\$2,032	\$1,407	\$1,317	\$2,724	\$1,135	\$1,076	\$2,211	\$219.29				\$1.0020		\$1.0897	\$0.8845
	5,000	\$1,614	\$2,635	\$4,249	\$1,170	\$2,132	\$3,302	\$1,930	\$2,635	\$4,565	\$1,386	\$2,153	\$3,538	\$316.04				\$0.8497		\$0.9130	\$0.7077
	7,500	\$2,040	\$3,953	\$5,992	\$1,375	\$3,198	\$4,573	\$2,453	\$3,952	\$6,405	\$1,637	\$3,229	\$4,866					\$0.7990		\$0.8540	\$0.6488
	10,000	\$2,466	\$5,270	\$7,736	\$1,579	\$4,264	\$5,843	\$2,976	\$5,270	\$8,246	\$1,887	\$4,306	\$6,193	\$509.53	6.6%			\$0.7736		\$0.8246	\$0.6193
	12,500	\$2,892	\$6,588	\$9,480	\$1,783	\$5,330	\$7,113	\$3,499	\$6,587	\$10,086	\$2,138	\$5,382	\$7,520	\$606.28	6.4%			\$0.7584		\$0.8069	\$0.6016
	15,000	\$3,318	\$7,905	\$11,223	\$1,988	\$6,396	\$8,384	\$4,022	\$7,904	\$11,926	\$2,389	\$6,458	\$8,848		6.3%			\$0.7482		\$0.7951	\$0.5898
	20,000	\$4,171	\$10,540	\$14,711	\$2,397	\$8,528	\$10,925	\$5,068	\$10,539	\$15,607	\$2,891	\$8,611	\$11,502		6.1%			\$0.7355		\$0.7804	\$0.5751
	25,000	\$5,023	\$13,175	\$18,198	\$2,806	\$10,660	\$13,466	\$6,114	\$13,174	\$19,288	\$3,393	\$10,764		\$1,090.01	6.0%			\$0.7279		\$0.7715	\$0.5663
	30,000	\$5,875	\$15,810	\$21,685	\$3,214	\$12,792	\$16,006	\$7,160	\$15,809	\$22,969	\$3,894	\$12,917		\$1,283.50	5.9%			\$0.7228		\$0.7656	\$0.5604
	35,000	\$6,728	\$18,445	\$25,173	\$3,623	\$14,924	\$18,547	\$8,206	\$18,444	\$26,650	\$4,396	\$15,070		\$1,476.99	5.9%			\$0.7192		\$0.7614	\$0.5562
	40,000	\$7,580	\$21,080	\$28,660	\$4,032	\$17,056	\$21,088	\$9,252	\$21,078	\$30,330	\$4,898	\$17,222		\$1,670.49		\$1,032.25				\$0.7583	\$0.5530
	45,000	\$8,432	\$23,715	\$32,147	\$4,441	\$19,188	\$23,629	\$10,298	\$23,713	\$34,011	\$5,400	\$19,375		\$1,863.98		\$1,145.96				\$0.7558	\$0.5506
	50,000	\$9,285	\$26,350	\$35,635	\$4,850	\$21,320	\$26,170	\$11,344	\$26,348	\$37,692	\$5,901	\$21,528		\$2,057.47		\$1,259.67				\$0.7538	\$0.5486
	55,000	\$10,137	\$28,985	\$39,122	\$5,259	\$23,452	\$28,711	\$12,390	\$28,983	\$41,373	\$6,403	\$23,681		\$2,250.96		\$1,373.38				\$0.7522	\$0.5470
	60,000	\$10,989	\$31,620	\$42,609	\$5,667	\$25,584	\$31,251	\$13,436	\$31,618	\$45,054	\$6,905	\$25,834		\$2,444.45		\$1,487.10				\$0.7509	\$0.5456
	75,000	\$13,546	\$39,525	\$53,071	\$6,894	\$31,980	\$38,874	\$16,574	\$39,522	\$56,096	\$8,410	\$32,292		\$3,024.93		\$1,828.23				\$0.7479	\$0.5427
		\$17,808	\$52,700		\$8,938	\$42,640	\$51,578	\$21,804	\$52,696	\$74,500	\$10,919	\$43,056		\$3,992.39		\$2,396.79				\$0.7450	\$0.5397
		\$26,331		\$105,381	\$13,026	\$63,960	\$76,986	\$32,264		\$111,308	\$15,936	\$64,584		\$5,927.31		\$3,533.92				\$0.7421	\$0.5368
	200,000	\$34,854	\$105,400	\$140,254	\$17,115	\$85,280	\$102,395	\$42,724	\$105,392	\$148,117	\$20,953	\$86,112	\$107,066	\$7,862.23	5.6%	\$4,671.04	4.6%	\$0.7013	\$0.5120	\$0.7406	\$0.5353
Estimated Bill Pe																					
				A = = 0.0				** ***		** ***					0.00/						
Winter - 25%	10,000	\$2,466	\$5,270	\$7,736				\$2,976	\$5,270	\$8,246				\$509.53	6.6%			\$0.7736		\$0.8246	
Winter - 50%	15,000	\$3,318	\$7,905					\$4,022	\$7,904	\$11,926				\$703.02	6.3%			\$0.7482		\$0.7951	
Winter - 75%	30,000	\$5,875	\$15,810	\$21,685	04.470	00 400		\$7,160	\$15,809	\$22,969		00.450	<b>A</b> O 500	\$1,283.50	5.9%	0000.00	7 00/	\$0.7228	AA AAA 4	\$0.7656	00 7077
Summer - 25%	5,000				\$1,170	\$2,132	\$3,302				\$1,386	\$2,153	\$3,538			\$236.26			\$0.6604		\$0.7077
Summer - 50% Summer - 75%	15,000				\$1,988 \$2,397	\$6,396	\$8,384				\$2,389 \$2.891	\$6,458	\$8,848			\$463.68			\$0.5589		\$0.5898
Summer - 75%	20,000				φ∠,397	\$8,528	\$10,925				φ∠,691	\$8,611	\$11,502			\$577.40	5.3%		\$0.5462		\$0.5751

Estimated Bill Percentiles per 2010 MCS

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COMPARATIVE MONTHLY BILLING UNDER PRESENT AND PROPOSED RATES RATE G-54 : COMMERCIAL/INDUSTRIAL - HIGH ANNUAL USE, LOAD FACTOR GREATER THAN 90%

Present Rates	Winter	Summer	Proposed Rates	Winter
Cost of Gas	\$0.4792	\$0.3786	Cost of Gas	\$0.4773
DAC	\$0.0478	\$0.0478	LDAC	\$0.0497
Customer charge	\$761.39		Customer charge	\$883.94
Sales rate			Sales rate	
First Block Size			First Block Size	
Block 1	\$0.0650	\$0.0353	Block 1	\$0.0900
Block 2	\$0.0650	\$0.0353	Block 2	\$0.0900

15         5         5         5         5         7         5         5         5         7         5         6         5         7         5         6         5         7         5         6         5         7         5					RATE G-5	54 : COMME	ERCIAL/IN	DUSTRIAL	- HIGH AN	NUAL US	E, LOAD F.	ACTOR GF	REATER T	HAN 90%								
2         Cost of Gas         \$0.4792         \$0.3786         Cost of Gas         \$0.4778         \$0.3000           3         UDAC         \$0.0478         \$0.0478         \$0.0497         \$0.0497         \$0.0497           5         Customer charge         \$761.39         Sates rate         <	e																					
LDAC \$0.0477 \$0.0477 LDAC \$0.0477 \$0.0477 Customer charge \$761.39 States rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0607 \$0.0497 Customer charge \$761.39 States rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0600 \$0.0487 Stotes rate First Block Size Stotes rate First Block Size Block 1 \$0.0600 \$0.0487 Stotes rate First Block Size Stotes rate Stotes rate						Present R	ates	Winter	Summer		Proposed	Rates	Winter	Summer								
LDAC \$0.0477 \$0.0477 LDAC \$0.0477 \$0.0477 Customer charge \$761.39 States rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0607 \$0.0497 Customer charge \$761.39 States rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0605 \$0.035 Block 2 \$0.0600 \$0.0487 Stotes rate First Block Size Block 1 \$0.0600 \$0.0487 Stotes rate First Block Size Stotes rate First Block Size Block 1 \$0.0600 \$0.0487 Stotes rate First Block Size Stotes rate Stotes rate						Cost of Ga	IS	\$0.4792	\$0.3786		Cost of Ga	s	\$0.4773	\$0.3809								
4       Customer charge       \$761.39       Sales rate       Customer charge       \$883.94         6       Sales rate       First Block Size       Block 1       \$0.0650       \$0.0353       Block 1       \$0.0900       \$0.0488         9       Block 1       \$0.0650       \$0.0353       Block 1       \$0.0900       \$0.0488         10       Use per       Winter       Summer       Winter       Summer       Current       Proposed         14       (therms)       Base       COG /       Base       COG /       Base       COG /       Summer       Summer       Vinter       Summer       Summer       Vinter       Summer       Summer       Vinter       Summer       Summer       Summer       Summer       Summer       Summer       Summer       Summer       S							-					-										
Sales rate First Block Size Block 1         Sales rate First Block Size Block 1         Sales rate First Block Size Block 1         Sales rate Sol 0650         Sales rate Sor						20/10		φ0.0 H 0	¢0.0110		20/10		<i>\\</i> 0.0101	φ0.0101								
Sales rate First Block Size Block 1         Sales rate First Block Size Block 1         Sales rate First Block Size Block 1         Sales rate Sol 0650         Sales rate Sor						Customer	charge	\$761.30			Customer	charge	\$883.04									
First Block Size Block 1         First Block Size Block 2         First Block Size Block 1         First Block Size Block 1         First Block Size Block 1         First Block Size Block 1         Stote 2							onargo	φr σ 1.00				onargo	¢000.01									
Biock 1         S0.0650         S0.0353         Biock 1         S0.0900         S0.0488           9         Biock 2         S0.0650         S0.0353         Biock 2         S0.0900         S0.0488           10         Image: Sologia Sologi Sologia Sologia Sologia Sologia Sologia Sologia Sologia Sologia							Sizo					Sizo										
9         Block 2         \$0.060         \$0.0333         Block 2         \$0.0900         \$0.0488           11         1							0120	\$0.0650	\$0.0252			5126	\$0.000	¢0.0499								
Initial         Monthly Bills at Present Rates         Monthly Bills at Proposed Rates         Change in Monthly Bill         Unit Costs           13         Use per Month         Winter         Summer         Winter         Summer         Winter         Current         Proposed           14         (thems)         Rates         LDAC         TOTAL         Rates         LDAC         TOTAL         Rates         LDAC         TOTAL         Summer         Winter         Summer         Current         Proposed           16         1,000         \$826         \$527         \$1,353         \$777         \$426         \$1,106         \$1,107         \$2,2426         \$1,066         \$1,076         \$2,002         \$184.76         8.2%         \$166.74         \$7%         \$0.8966         \$0.7662         \$0.0765         \$0.99         \$1,234         \$1,66.74         \$7%         \$0.8966         \$0.7662         \$0.0765         \$0.99         \$1.244         \$1.67.74         \$0.896         \$0.7662         \$0.0765         \$0.99         \$1.244         \$1.67.74         \$0.896         \$0.7662         \$0.0765         \$0.99         \$0.7662         \$0.0765         \$0.99         \$0.7662         \$0.0765         \$0.99         \$0.7663         \$0.772         \$4.306         \$0.7663 </td <td></td>																						
Inter         Monthly Bills at Present Rates         Monthly Bills at Present Rates         Change in Monthly Bills         Unit Costs           12         Use per         Winter         Summer         Winter         Summer         Winter         Summer         Current         Proposed Rates           14         (therms)         Base         COG /         Base         COG /         Base         COG /         Summer         Winter         Summer         Summer         Winter         Summer         Winter         Summer         Winter         Summer         Su						DIOCK 2		φ0.0000	φ0.0333		DIOCK Z		<i>40.0900</i>	φ0.0400								
12         Monthly Bills at Present Rates         Monthly Bills at Proposed Rates         Change in Monthly Bill         Unit Costs           13         Winter         Summer         Winter <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>																						
13         Use per Month         Winter         Summer         Winter         Summer         Winter         Summer         Current         Proposed           14         (therms)         Rates         LDAC         TOTAL         Rates											D:11 (1				01						<u> </u>	
Month         Base         COG / Rates         DAC         TOTAL         Rates         LDAC         Rates         LDAC         Rates         LDAC         Rates         LDAC         Rates         LD					nthiy Bills a	at Present F					niy Bills at I	Proposed F										
14         (therms)         Rates         LDAC         TOTAL         Rates         LDAC         TOTAL         Rates         LDAC         TOTAL         Rates         LDAC         TOTAL         \$         %         \$         %         Winter         Summer         <			Deer			Deer			Deer			Dees			Winte	r	Summ	er	Cur	rent	Prop	osed
15         5					TOTAL			TOTAL			TOTAL			TOTAL		0/	¢		Montes	o	146-4	0
16       1.000       \$226       \$527       \$1.33       \$777       \$426       \$1.23       \$974       \$527       \$1.517       \$933       \$431       \$1.333       \$147.43       ####       \$1.40.23       ####       \$1.302       \$1.203       \$1.500       \$1.100       \$1.100       \$1.117       \$2.426       \$1.006       \$1.076       \$2.082       \$18.76 $8.276$ \$1.666       \$2.032       \$1.066       \$1.076       \$2.082       \$1.84.76 $8.276$ \$1.676       \$2.082       \$1.676 $8.276$ \$1.676       \$2.082       \$1.676 $8.276$ \$1.066       \$2.0133       \$0.614 $0.797$ \$0       \$2.551 $6.667$ \$2.0107       \$0.748       \$0.7748		(therms)	Rates	LDAC	TUTAL	Rates	LDAC	TUTAL	Rates	LDAC	TUTAL	Rates	LDAC	TUTAL	\$	%	Ð	70	winter	Summer	winter	Summer
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$		4 000	¢000	A507		¢707	÷ 400	A4 000	¢074	0507	A. 50.	¢000	<b></b>		A							
18 $5.000$ \$1.087\$2.635\$3.722\$9.88\$2.122\$3.705\$1.344 $52.635$ \$3.989\$1.128\$2.213\$3.281\$2.408 $6.6\%$ \$2.103 $6.9\%$ \$0.743\$0.6163\$0.7937\$0.103197,500\$1.249\$3.953\$5.202\$1.026\$3.198\$4.224\$1.559\$3.925\$5.511\$1.250\$3.229\$4.479\$309.17 $5.9\%$ \$255.13 $6.0\%$ \$2.0938\$0.5632\$0.7348\$0.7393\$0.2132010.000\$1.412\$5.270\$6.682\$1.174\$5.270\$7.053\$1.372\$4.306\$5.677\$37.188 $5.6\%$ \$299.32\$0.5788\$0.6783\$0.5787\$0.6783\$0.5728\$0.6783\$0.5728\$0.6783\$0.5728\$0.6785\$0.6828\$0.6783\$0.6783\$0.5728\$0.6876\$0.6828\$0.6783\$0.6783\$0.6787\$0.6783\$0.5787\$0.6783\$0.5728\$0.8676\$0.6828\$0.6783\$0.5282\$0.6876\$0.6828\$0.6830\$0.6230\$0.5224\$0.8076																						\$1.3633
19       7,500       \$1,249       \$3,953       \$5,202       \$1,026       \$3,318       \$4,224       \$1,550       \$3,325       \$5,511       \$1,470       \$300,17       \$9,96       \$255,13       60,908       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6936       \$0,6737       \$37,138       \$6,676       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,767       \$37,138       \$6,468       \$8,074       \$49,580       \$5,14       \$30       \$0,6523       \$0,0759       \$0         22       15,000       \$2,238       \$11,175       \$15,563       \$1,643       \$10,660       \$12,303       \$3,133       \$13,174       \$16,307       \$2,248       \$12,917       \$15,265       \$869.05       \$4,76       \$652.87       \$4,48       \$0,6138       \$0,4421       \$0,6138       \$0,4421       \$0,6138       \$0,4424																						\$0.8329
20         10.000         \$1.412         \$5.270         \$6.882         \$1.114         \$4.284         \$5.378         \$1.774         \$5.270         \$7.033         \$1.372         \$4.306         \$5.677         \$371.38         5.6%         \$2.99.22         \$6.5%         \$5.086         \$5.0705         \$5.177           21         12.500         \$1.737         \$5.688         \$8.162         \$1.202         \$5.330         \$6.532         \$2.09         \$6.587         \$5.382         \$5.986         \$3.43.59         \$5.36         \$5.362         \$5.9642         \$5.306         \$5.786         \$5.238         \$5.362         \$5.964         \$5.362         \$5.362         \$5.9642         \$5.362         \$5.9642         \$5.687         \$5.368         \$5.648         \$5.362         \$5.368         \$5.362         \$5.368         \$5.362         \$5.368         \$5.362         \$5.368         \$5.362         \$5.368         \$5.368         \$5.464         \$5.464         \$5.4454         \$5.464         \$5.4451         \$5.464         \$5.4451         \$5.448         \$5.4484         \$6.617         \$5.368         \$5.609         \$1.2792         \$1.6163         \$5.606         \$7.463         \$5.616         \$5.600         \$5.276         \$5.2692         \$15.070         \$17.661         \$993.47																						\$0.6561
21       12,500       \$1,574       \$6,688       \$8,122       \$1,202       \$5,330       \$6,637       \$8,636       \$1,494       \$5,382       \$6,876       \$43.59       5.3%       \$343.51       5.3%       \$0,6428       \$0,6428       \$0,6799       \$0,0629       \$0,6476       \$0,0799       \$0,0642       \$0,279       \$0,0679       \$0,0799       \$0,0679       \$0,0679       \$0,0679       \$0,0629       \$0,479       \$0,0629       \$0,4876       \$0,282       \$0,4979       \$0,0611       \$0,0629       \$0,0679       \$0,0629       \$0,0629       \$0,4979       \$0,0611       \$0,06225       \$0,090       \$2,713       \$15,810       \$16,467       \$8,528       \$19,999       \$2,688       \$10,509       \$10,223       \$10,800       \$8,611       \$10,474       \$15,226       \$10,600       \$1,373       \$13,174       \$16,307       \$2,104       \$10,764       \$12,888       \$744.63       \$4.9%       \$0,6125       \$0,0425       \$0,4971       \$0,6625       \$0,0425       \$0,4971       \$0,6625       \$0,6225       \$0,4971       \$0,6624       \$0,0525       \$0,0424       \$0,6148       \$0,6148       \$0,6225       \$0,4471       \$0,6484       \$0,6464       \$0,0638       \$0,0716       \$0,4384       \$0,6422       \$0,0339       \$0,6000       \$0																						\$0.5972
22       15,000       \$1,737       \$7,905       \$9,642       \$1,291       \$6,396       \$7,878       \$2,233       \$7,904       \$10,138       \$1,616       \$6,488       \$8,074       \$495,80       \$1,91       \$37,71       \$0,06428       \$0,0759       \$0,0759       \$0,0759       \$0,0759       \$0,0759       \$0,0759       \$0,0759       \$0,0754       \$1,023       \$1,0174       \$1,0,039       \$1,223       \$1,060       \$6,011       \$10,0764       \$12,862       \$4,463       \$4,86       \$56,448       \$0,6125       \$0,4907       \$0,6611       \$0,0661       \$1,0045       \$1,0174       \$12,868       \$744,63       \$4,86       \$56,448       \$0,6174       \$0,6428       \$0,6174       \$0,6428       \$0,6174       \$0,6428       \$0,6174       \$0,6428       \$0,6225       \$0,4971       \$0,6428       \$0,6174																						\$0.5677
23       20,000       \$2,062       \$10,540       \$12,602       \$1,467       \$8,528       \$5,995       \$10,539       \$13,232       \$1,860       \$8,611       \$10,471       \$520,22       \$4,96       \$54,600       \$4,96       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$50,600       \$2,388       \$3,133       \$3,134       \$16,407       \$12,868       \$744,63       4.89       \$564,464       \$66,80       \$0,601       \$0,604       \$0,602       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,601       \$0,602       \$0,602       \$0,601       \$0,602       \$0,602       \$0,602       \$0,601       \$0,602       \$0,602       \$0,602       \$0,602       \$0,602       \$0,602       \$0,602       \$0,602       \$0,6013       \$0,602<																						\$0.5501
24       25,000       \$2,388       \$13,175       \$15,563       \$16,43       \$10,660       \$12,33       \$31,33       \$13,174       \$16,307       \$2,104       \$10,268       \$744,83       \$4.8%       \$564,48       \$4.6%       \$0.6225       \$0.6223       \$0.6223       \$0.6223       \$0.6223       \$0.6224       \$0.6244       \$0.6114       \$0.6624       \$0.6304       \$0.6304       \$0.6224       \$0.6334       \$0.6324       \$0.6324       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.6334       \$0.633																						\$0.5383
25       30,000       \$2,713       \$15,810       \$18,253       \$12,92       \$14,642       \$5,803       \$15,809       \$12,92       \$14,642       \$5,803       \$12,942       \$12,947       \$15,265       \$868.06       \$4.7%       \$652.87       \$4.5%       \$0.6174       \$0.6464       \$0.6644       \$0.6464       \$0.6464       \$0.6464       \$0.6464       \$0.6644       \$0.6464       \$0.6644       \$0.6464       \$0.6694       \$0.4694       \$0.6174       \$0.6308       \$0.4834       \$0.6464       \$0.6694       \$0.4694       \$0.6174       \$0.6308       \$0.4694       \$0.6694       \$0.4694       \$0.6174       \$0.6308       \$0.6366       \$0.008       \$0.414       \$0.6318       \$0.4644       \$0.6336       \$0.6364       \$0.6308       \$0.3084       \$0.6174       \$0.6336       \$0.6366       \$0.6308       \$0.6366       \$0.6308       \$0.6366       \$0.6308       \$0.6366       \$0.6308       \$0.6366<																						\$0.5236
26       35,000       \$3,038       \$18,445       \$21,483       \$1,996       \$14,924       \$16,920       \$4,033       \$18,444       \$22,276       \$2,592       \$17,601       \$993.47       4.6%       \$741.26       4.4%       \$0.6138       \$0.4834       \$0.6422       \$0.003         27       40,000       \$3,363       \$21,000       \$24,443       \$21,77       \$17,056       \$19,224       \$1,075       \$25,561       \$2,363       \$17,222       \$20,058       \$1,117.89       4.6%       \$292.644       \$3%       \$0.06138       \$0.4834       \$0.6422       \$0.0390       \$0.0391       \$22,476       \$22,854       \$0.808       \$19,375       \$22,455       \$27,403       \$21,528       \$24,455       \$12,42.30       \$4,3%       \$0.6003       \$0.4768       \$0.6336       \$0         29       50,000       \$4,014       \$26,350       \$30,346       \$22,525       \$21,320       \$23,452       \$26,648       \$31,730       \$3,323       \$21,528       \$24,855       \$1,861,74       \$4,59       \$1,006,42       \$4,2%       \$0.6073       \$0.4769       \$0.6336       \$0         30       55,000       \$4,333       \$28,945       \$33,48       \$5,702       \$34,815       \$37,602       \$34,815       \$3,616,15																						\$0.5147 \$0.5088
27         40,000         \$3,363         \$21,080         \$24,443         \$2,172         \$17,056         \$19,237         \$4,432         \$21,078         \$25,561         \$2,836         \$17,222         \$20,068         \$1,117,89         4.6%         \$28,264         4.3%         \$0,6111         \$0,6309         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0390         \$0,0476         \$0,0330         \$0,007         \$4,483         \$24,852         \$1,317.90         \$3,323         \$23,851         \$3,248         \$3,1730         \$3,367         \$23,851         \$3,263         \$23,851         \$24,852         \$1,481.91         \$4,49																						
28         45,000         \$3,688         \$23,715         \$27,403         \$2,349         \$19,188         \$21,577         \$4,932         \$23,713         \$28,646         \$3,080         \$19,375         \$22,455         \$1,242.30         4.5%         \$918.03         4.3%         \$0.6009         \$0.4786         \$0.6366         \$0           29         50,000         \$4,014         \$26,350         \$30,344         \$2,525         \$21,320         \$23,464         \$31,223         \$21,528         \$24,852         \$1,306.42         4.2%         \$0,6073         \$0.4786         \$0.6366         \$0           30         55,000         \$4,433         \$28,985         \$33,324         \$27,528         \$24,852         \$1,306.42         4.2%         \$0,6073         \$0.4786         \$0.6366         \$0           31         60,000         \$4,464         \$31,620         \$36,284         \$23,452         \$23,452         \$31,618         \$37,900         \$3,811         \$25,834         \$29,645         \$1,161.56         \$4,576         \$1,183.10         \$4,378         \$0,6027         \$0,4745         \$0,6371         \$0           32         75,000         \$5,640         \$39,525         \$4,168         \$31,980         \$3,527         \$5,768         \$4,3089																						\$0.5046 \$0.5015
29         50,000         \$4,014         \$26,350         \$30,364         \$2,252         \$21,320         \$23,845         \$5,820         \$26,848         \$31,730         \$3,322         \$21,528         \$24,852         \$1,966,72         4.5%         \$1,006,42         4.2%         \$0,0073         \$0,4769         \$0,6346         \$0           30         55,000         \$4,339         \$28,985         \$33,24         \$27,02         \$23,452         \$26,848         \$31,730         \$3,322         \$21,528         \$24,852         \$1,961,14         4.5%         \$1,006,42         4.2%         \$0,6073         \$0,4769         \$0,6346         \$0           31         60,000         \$4,646         \$31,620         \$36,248         \$28,465         \$31,835         \$1,851,61         \$4,2%         \$0,6073         \$0,4769         \$0,6346         \$0           32         75,000         \$56,40         \$36,287         \$23,878         \$25,846         \$36,327         \$35,377         \$57,63         \$43,453         \$1,988,81         4.4%         \$1,480,35         \$4,1%         \$0,6022         \$0,4718         \$0,6287         \$0           32         75,000         \$57,605         \$43,696         \$24,777         \$57,63         \$44,968         \$1,980,28																						\$0.3013
30         55.000         \$4.339         \$28.895         \$33.324         \$27.702         \$23.452         \$26.164         \$5.832         \$28.893         \$34.815         \$3.567         \$23.661         \$27.248         \$1.491.14         4.5%         \$1.094.04         4.2%         \$0.0058         \$0.6330         \$0.0330 </td <td></td> <td>\$0.4990</td>																						\$0.4990
31         60,000         \$4,664         \$31,620         \$36,284         \$28,878         \$25,584         \$28,462         \$6,282         \$31,618         \$37,900         \$3,811         \$25,834         \$29,645         \$1,163.19         4.2%         \$0,6047         \$0,4744         \$0,6317         \$00           32         75,000         \$5,640         \$39,525         \$45,165         \$34,075         \$31,980         \$5,632         \$39,522         \$47,164         \$4,6433         \$22,22         \$5,6835         \$1,988.81         \$4,4%         \$1,480.35         \$1,980.81         \$4,960.825         \$0,022         \$0,4714         \$0,627         \$0           33         100,000         \$7,266         \$52,700         \$59,966         \$42,693         \$46,929         \$9,881         \$52,696         \$62,577         \$5,763         \$43,056         \$48,819         \$2,610.89         4,4%         \$1,480.28         4,0%         \$0,697         \$0,4693         \$0,6258         \$0           34         150,000         \$10,518         \$79,050         \$89,688         \$60,553         \$63,960         \$70,013         \$14,370         \$79,044         \$93,423         \$82,025         \$64,584         \$27,745         \$50,468         \$0,6228         \$0,698         \$0,6257 <td></td> <td>\$0.4970</td>																						\$0.4970
32         75,000         \$5,640         \$39,525         \$45,165         \$3,407         \$31,980         \$35,387         \$7,632         \$39,522         \$47,154         \$4,543         \$32,222         \$36,835         \$1,988,81         \$4,4%         \$1,448,35         \$4,1%         \$0,6022         \$0,6287         \$0           33         100,000         \$7,266         \$52,700         \$59,966         \$42,89         \$42,640         \$46,929         \$52,696         \$62,577         \$5,763         \$43,056         \$48,819         \$2,610.89         4.4%         \$1,890,0597         \$0,0597         \$0,0597         \$0,0598         \$0,0528         \$0,0528         \$0,0586         \$30,056         \$48,819         \$2,610.89         4.4%         \$1,890,80         \$2,610,89         4.4%         \$1,890,80         \$5,0597         \$3,950         \$4,945         \$4,905         \$4,946         \$4,905         \$4,946         \$2,7701         \$5,0459         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$2,04593         \$4,045         \$2,04598 </td <td></td> <td>\$0.4954</td>																						\$0.4954
33 100,000 \$7,266 \$52,700 \$59,966 \$4,289 \$42,640 \$46,929 \$9,881 \$52,696 \$62,577 \$5,763 \$43,056 \$48,819 \$2,610.89 4.4% \$1,890.28 4.0% \$0.5997 \$0.4693 \$0.6258 \$0 34 150,000 \$10,518 \$79,050 \$89,568 \$6,053 \$63,960 \$70,013 \$14,379 \$79,044 \$93,423 \$8,203 \$64,584 \$72,787 \$3,855.07 4.3% \$2,774.15 4.0% \$0.5971 \$0.4668 \$0.6228 \$0																						\$0.4941
34 150,000 \$10,518 \$79,050 \$89,568 \$6,053 \$63,960 \$70,013 \$14,379 \$79,044 \$93,423 \$8,203 \$64,584 \$72,787 \$3,855.07 4.3% \$2,774.15 4.0% \$0.5971 \$0.4668 \$0.6228 \$0																						\$0.4911
																						\$0.4852
											\$93,423 \$124,270											\$0.4832
36		200,000	<i></i>	ψ10 <b>3</b> ,400	ψ113,171	<i>\$7,011</i>	ψ0 <u>0</u> ,200	ψ33,031	¢.5,011	ψ100,09Z	ψ124,210	¢10,042	ψ00, 11Z	ψ30,733	ψ0,000.24	4.370	ψ0,000.0Z	0.970	ψ0.3333	ψυ.+000	ψ0.0213	ψ0.4030
oo 37 Estimated Bill Percentiles		orcontilce																				
			¢1.000	60 100	¢0 400	,			¢1 0/4	60.400	¢0.000				£000.00	7 10/		-	¢0 7004		¢0 0070	
			¢7,200	a02,700	დემ,900	\$1.201	¢6 206	\$7,697	a9,881	a02,696	φυ2,577	\$1,616	¢6 450	¢0.074	φ∠,010.89	4.4%	\$207.74	E 00/		¢0 5104	φU.0208	\$0.5383
																						\$0.5383
			1																			\$0.4970
	Gammor - 1070	00,000	L			<i>\$</i> 0,000	ψ <b>0</b> <del>1</del> ,112	ψ01,000				<i>\(\phi\)</i> ,101	<i>4</i> 04,440	φJ9,Z3Z			φ1,000.74	4.170		φυ.471Z		φ0.4904

Estimated Bill Percentiles per 2010 MCS

Line No

# Docket No. DG 20-105 Attachment RATES-8 Page 1 of 10

Summer 69

\$107.95 \$0.00 \$28.37

Oct-21

\$17.99 \$0.00 \$5.53

2020/21 Total 209

\$215.89 \$0.00 \$86.38

\$0.4401 \$91.90

\$0.0310 \$6.47

\$364.93

\$35.99 9.86%

\$35.71 13.40%

\$0.28 0.28%

\$0.3715 \$25.48

\$0.0310 \$2.13

\$147.06

\$17.15 11.66%

\$16.86 14.12%

\$0.29 1.03%

# Liberty Utilities (EnergyNorth Natural Gas) Corp. Bill Impact Analysis - Cost of Gas Filing Methodology

1	Winter Season (Jan Apr., Nov Dec	.)							Summer Season	(May - Oct.)	
2	Residential Non-Heating (R1)										
3	PROPOSED										
4		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter	May-21	Jun-21	Jul-21
5	average Usage (Therms)	20	26	27	26	23	19	140	14	11	9
6											
7	Winter:										
8	Cust. Chg	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95			
9	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
10	Tailblock	\$8.12	\$10.60	\$11.27	\$10.79	\$9.49	\$7.74	\$58.01			
11	HB Threshold										
12											
13	Summer:										
14	Cust. Chg								\$17.99	\$17.99	\$17.99
15	Headblock								\$0.00	\$0.00	\$0.00
16	Tailblock								\$5.99	\$4.72	\$3.83
17	HB Threshold										
18											
19	Total Base Rate Amount	\$26.11	\$28.59	\$29.26	\$28.78	\$27.48	\$25.73	\$165.95	\$23.98	\$22.72	\$21.82
20											
21	COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718			
22	COG amount - Winter	\$9.26	\$12.09	\$12.85	\$12.30	\$10.82	\$8.82	\$66.15			
23											
24	COG Rate - (Summer)								\$0.3738	\$0.3738	\$0.3738
25	COG amount - Summer								\$5.41	\$4.27	\$3.46
26											
27	LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
28	LDAC amount	\$0.65	\$0.84	\$0.90	\$0.86	\$0.75	\$0.61	\$4.61	\$0.48	\$0.38	\$0.30
29											
30	Total Bill	\$36.02	\$41.53	\$43.01	\$41.94	\$39.06	\$35.16	\$236.71	\$29.86	\$27.36	\$25.59
31	Winter Season (Jan Apr., Nov Dec	.)							Summer Season	(May - Oct.)	

CURRENT								
	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter	May
average Usage (Therms)	20	26	27	26	23	19	140	14
Winter:								
Cust. Chg	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98	
Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Tailblock	\$7.58	\$9.89	\$10.51	\$10.07	\$8.86	\$7.22	\$54.12	
HB Threshold								
Summer:								
Cust. Chg								\$1
Headblock								\$1
Tailblock								\$
HB Threshold								
Total Base Rate Amount	\$23.07	\$25.39	\$26.01	\$25.56	\$24.35	\$22.71	\$147.10	\$2
COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	
COG amount - Winter	\$9.30	\$12.14	\$12.90	\$12.35	\$10.87	\$8.86	\$66.42	
COG Rate - (Summer)								\$0
COG amount - Summer								S
LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.
LDAC amount	\$0.61	\$0.79	\$0.84	\$0.81	\$0.71	\$0.58	\$4.35	S
							•	
Total Bill	\$32.98	\$38.32	\$39.76	\$38.72	\$35.93	\$32.15	\$217.87	\$2
DIFFERENCE:								
Total Bill	\$3.04	\$3.20	\$3.25	\$3.22	\$3.13	\$3.01	\$18.84	\$2
% Change	9.21%	8.36%	8.17%	8.30%	8.71%	9.37%	8.65%	10
Base Rate	\$3.04	\$3.20	\$3.25	\$3.22	\$3.13	\$3.01	\$18.85	\$2
% Change	13.17%	12.62%	12.49%	12.58%	12.85%	13.26%	12.81%	13
1								
COG & LDAC	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.00)	(\$0.01)	\$0
% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	1.0

\$23.98	\$22.72	\$21.82	\$21.91	\$22.36	\$23.53	\$136.32	\$302.27
\$0.3738 \$5.41	\$0.3738 \$4.27	\$0.3738 \$3.46	\$0.3738 \$3.54	\$0.3738 \$3.95	\$0.3738 \$5.00	\$0.3738 \$25.64	\$0.4396 \$91.79
\$0.0329 \$0.48	\$0.0329 \$0.38	\$0.0329 \$0.30	\$0.0329 \$0.31	\$0.0329 \$0.35	\$0.0329 \$0.44	\$0.0329 \$2.25	\$0.0329 \$6.86
\$29.86	\$27.36	\$25.59	\$25.77	\$26.66	\$28.97	\$164.21	\$400.92
Summer Season (							
Summer Season (		Jul 21	Aug. 21	Son 21	Oct 21	Summor	2020/21
Summer Season ( May-21 14	Jun-21 11	<b>Jul-21</b> 9	<b>Aug-21</b> 9	Sep-21 11	Oct-21 13	Summer 69	2020/21 Total 209
May-21	Jun-21		Aug-21 9				Total
May-21 14 \$15.50	Jun-21 11	9 \$15.50	9 \$15.50	11	13 \$15.50	69 \$92.98	Total 209 \$185.96
May-21 14	Jun-21 11	9	9	11	13	69	Total 209

Aug-21

\$17.99 \$0.00 \$3.92

\$0.3715 \$3.44

\$0.0310 \$0.29

\$22.80

\$2.79 12.23%

\$2.75 14.42%

\$0.04 1.03%

\$0.3715 \$4.24

\$0.0310 \$0.35

\$24.50

\$2.86 11.66%

\$2.81 14.12%

\$0.05 1.03%

\$0.3715 \$3.52

\$0.0310 \$0.29

\$22.97

\$2.80 12.17%

\$2.76 14.39%

\$0.04 1.03%

\$0.3715 \$3.93

\$0.0310 \$0.33

\$23.83

\$2.83 11.88%

\$2.79 14.24%

\$0.04 1.03%

\$0.3715 \$4.97

\$0.0310 \$0.41

\$26.04

\$2.92 11.21%

\$2.86 13.87%

\$0.06 1.03%

Sep-21

\$17.99 \$0.00 \$4.37

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# Liberty Utilities (EnergyNorth Natural Gas) Corp. Bill Impact Analysis - Cost of Gas Filing Methodology

Summer Season (May - Oct.)

Winter Season (Jan Apr., Nov Dec.)	
Residential Heating (R3)	

	1011-1-10-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1							
71 72	Winter Season (Jan Apr., Nov Dec. Residential Heating (R3)	•)						
73	PROPOSED							
74		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
75	average Usage (Therms)	83	122	145	139	105	62	657
76								
77	Winter:							
78	Cust. Chg	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95
79	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
80	Tailblock	\$54.29	\$79.49	\$94.79	\$90.32	\$68.73	\$40.72	\$428.33
81	HB Threshold							
82	-							
83	Summer:							
84	Cust. Chg							
85	Headblock							
86	Tailblock							
87	HB Threshold							
88	Total Base Rate Amount	670.00	007.40	A440 70	6400.04	000 70	050 74	AC00.00
89	I otal Base Rate Amount	\$72.28	\$97.48	\$112.78	\$108.31	\$86.72	\$58.71	\$536.28
90 91	COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718
91	COG amount - Winter	\$39.29	\$0.4718	\$68.59	\$65.36	\$49.73	\$0.4718	\$0.4718
92	COG amount - winter	\$39.29	307.02	\$00.39	300.30	\$49.73	\$29.40	\$309.90
93 94	COG Rate - (Summer)							
95	COG amount - Summer							
96	COO amount Camino							
97	LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
98	LDAC amount	\$2.74	\$4.01	\$4.78	\$4.55	\$3.46	\$2.05	\$21.59
99		*=			•			
100	Total Bill	\$114.31	\$159.01	\$186.15	\$178.21	\$139.92	\$90.23	\$867.83

May 24	Jun-21	Jul-21	Aug 24	Sen 24	Oct-21	Summer	2020/2 Total
May-21 33	18	13	Aug-21 14	Sep-21 18	38	134	791
\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$17.99	\$107.95	\$215.8
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$21.57	\$11.64	\$8.73	\$8.88	\$11.53	\$25.06	\$87.42	\$515.7
\$39.57	\$29.63	\$26.72	\$26.88	\$29.52	\$43.05	\$195.36	\$731.6
\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.455
\$12.37	\$6.67	\$5.00	\$5.09	\$6.61	\$14.37	\$50.12	\$360.0
\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.032
\$1.09	\$0.59	\$0.44	\$0.45	\$0.58	\$1.26	\$4.41	\$26.00
\$53.02	\$36.89	\$32.16	\$32.42	\$36.71	\$58.69	\$249.89	\$1,117.7

101 Winter Season (Jan. - Apr., Nov. - Dec.)

	winter beason (Jan Apr., Nov Dec.	)						
102	Residential Heating (R3)							
103	CURRENT							
104		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
105	average Usage (Therms)	83	122	145	139	105	62	657
106								
107	Winter:							
108	Cust. Chg	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98
109	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
110	Tailblock	\$47.28	\$69.22	\$82.55	\$78.65	\$59.85	\$35.46	\$373.01
111	HB Threshold							
112								
113	Summer:							
114	Cust. Chg							
115	Headblock							
116	Tailblock							
117	HB Threshold							
118								
119	Total Base Rate Amount	\$62.78	\$84.72	\$98.04	\$94.15	\$75.35	\$50.96	\$465.99
120								
121	COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737
122	COG amount - Winter	\$39.45	\$57.75	\$68.87	\$65.62	\$49.93	\$29.58	\$311.21
123								
124	COG Rate - (Summer)							
125	COG amount - Summer							
126								
127	LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310
128	LDAC amount	\$2.58	\$3.78	\$4.51	\$4.29	\$3.27	\$1.94	\$20.37
129								
130	Total Bill	\$104.80	\$146.25	\$171.42	\$164.06	\$128.55	\$82.47	\$797.56
131								
	DIFFERENCE:							
	Total Bill	\$9.50	\$12.76	\$14.73	\$14.15	\$11.37	\$7.75	\$70.26
134	% Change	9.07%	8.72%	8.59%	8.63%	8.84%	9.40%	8.81%
135								
136	Base Rate	\$9.51	\$12.76	\$14.74	\$14.16	\$11.37	\$7.75	\$70.29
137	% Change	15.14%	15.06%	15.03%	15.04%	15.09%	15.22%	15.08%
138								
139	COG & LDAC	(\$0.00)	(\$0.00)	(\$0.01)	(\$0.01)	(\$0.00)	(\$0.00)	(\$0.03)
140	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
33	18	13	14	18	38	134	791
\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$15.50	\$92.98	\$185.96
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$18.79	\$10.14	\$7.60	\$7.74	\$10.04	\$21.83	\$76.13	\$449.14
\$34.28	\$25.64	\$23.10	\$23.23	\$25.54	\$37.32	\$169.11	\$635.10
\$0.3715 \$12.29	\$0.3715 \$6.63	\$0.3715 \$4.97	\$0.3715 \$5.06	\$0.3715 \$6.57	\$0.3715 \$14.28	\$0.3715 \$49.81	\$0.4564 \$361.02
\$0.0310 \$1.03	\$0.0310 \$0.55	\$0.0310 \$0.41	\$0.0310 \$0.42	\$0.0310 \$0.55	\$0.0310 \$1.19	\$0.0310 \$4.16	\$0.0310 \$24.52
\$47.60	\$32.82	\$28.48	\$28.72	\$32.65	\$52.79	\$223.07	\$1,020.6
\$5.42 11.38%	\$4.07 12.41%	\$3.68 12.91%	\$3.70 12.88%	\$4.06 12.42%	\$5.89 11.16%	\$26.81 12.02%	\$97.08 9.51%
\$5.28	\$4.00	\$3.62	\$3.64	\$3.98	\$5.73	\$26.26	\$96.55
15.40%	15.60%	15.68%	15.67%	15.60%	15.36%	15.53%	15.20%
\$0.14	\$0.07	\$0.06	\$0.06	\$0.07	\$0.16	\$0.56	\$0.53
1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	0.14%

Line No

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#### Liberty Utilities (EnergyNorth Natural Gas) Corp. Bill Impact Analysis - Cost of Gas Filing Methodology

141	Winter Season (Jan Apr., Nov Dec.)
142	Low Income Residential Heating (R4)

142	Low Income Residential Heating (R4)							
143	PROPOSED							
144		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
145	average Usage (Therms)	81	118	140	133	103	62	636
146								
147	Winter:							
148	Cust. Chg	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$43.18
149	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
150	Tailblock	\$21.00	\$30.75	\$36.63	\$34.68	\$26.75	\$16.09	\$165.90
151	HB Threshold							
152								
153	Summer:							
154	Cust. Chg							
155	Headblock							
156	Tailblock							
157	HB Threshold							
158								
159	Total Base Rate Amount	\$28.19	\$37.95	\$43.83	\$41.87	\$33.94	\$23.29	\$209.08
160								
161	COG Rate - (Winter)	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718	\$0.4718
162	COG amount - Winter	\$37.99	\$55.64	\$66.27	\$62.74	\$48.39	\$29.11	\$300.13
163								
164	COG Rate - (Summer)							
165	COG amount - Summer							
166								
167	LDAC	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329
168	LDAC amount	\$2.65	\$3.88	\$4.62	\$4.37	\$3.37	\$2.03	\$20.90
169								
170	Total Bill	\$68.83	\$97.46	\$114.71	\$108.98	\$85.70	\$54.42	\$530.11

May-21	Jun-21	Jul-21	Aug 24	Sep-21	Oct-21	Summer	2020/2 Tota
33	18	14	Aug-21 14	18	38	134	770
\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$7.20	\$43.18	\$86.3
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$8.56	\$4.80	\$3.61	\$3.66	\$4.60	\$9.79	\$35.02	\$200.
\$15.76	\$12.00	\$10.80	\$10.86	\$11.80	\$16.99	\$78.19	\$287.2
\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.3738	\$0.454
\$12.27	\$6.88	\$5.17	\$5.25	\$6.59	\$14.03	\$50.19	\$350.3
\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.0329	\$0.032
\$1.08	\$0.60	\$0.45	\$0.46	\$0.58	\$1.23	\$4.41	\$25.3
\$29.10	\$19.48	\$16.42	\$16.57	\$18.97	\$32.25	\$132.79	\$662.9

171 Winter Season (Jan. - Apr., Nov. - Dec.)

173	CURRENT							
174		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
175	average Usage (Therms)	81	118	140	133	103	62	636
176								
177	Winter:							
178	Cust. Chg	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$37.19
179	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
180	Tailblock	\$18.29	\$26.79	\$31.90	\$30.20	\$23.30	\$14.01	\$144.50
181	HB Threshold							
182								
183	Summer:							
184	Cust. Chg							
185	Headblock							
186	Tailblock							
187	HB Threshold							
188								
189	Total Base Rate Amount	\$24.49	\$32.99	\$38.10	\$36.40	\$29.50	\$20.21	\$181.69
190								
191	COG Rate - (Winter)	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737	\$0.4737
192	COG amount - Winter	\$38.14	\$55.86	\$66.53	\$62.99	\$48.58	\$29.23	\$301.33
193								
194	COG Rate - (Summer)							
195	COG amount - Summer							
196								
197	LDAC	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	0.0310
198	LDAC amount	\$2.50	\$3.66	\$4.35	\$4.12	\$3.18	\$1.91	\$19.72
199								
200	Total Bill	\$65.12	\$92.50	\$108.99	\$103.51	\$81.26	\$51.35	\$502.74
201								
202	DIFFERENCE:							
203	Total Bill	\$3.70	\$4.96	\$5.72	\$5.47	\$4.44	\$3.07	\$27.36
204	% Change	5.69%	5.36%	5.25%	5.28%	5.47%	5.98%	5.44%
205								
206	Base Rate	\$3.71	\$4.97	\$5.72	\$5.47	\$4.45	\$3.07	\$27.39
207	% Change	15.14%	15.05%	15.02%	15.03%	15.08%	15.20%	15.07%
208	1							
209	COG & LDAC	(\$0.00)	(\$0.00)	(\$0.01)	(\$0.01)	(\$0.00)	(\$0.00)	(\$0.02)
210	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

Summer Season	(May - Oct.)

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/2 Tota
33	18	14	14	18	38	134	770
\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$6.20	\$37.19	\$74.3
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$7.46	\$4.18	\$3.14	\$3.19	\$4.01	\$8.53	\$30.50	\$175.0
\$13.65	\$10.38	\$9.34	\$9.39	\$10.20	\$14.72	\$67.69	\$249.3
\$0.3715 \$12.19	\$0.3715 \$6.84	\$0.3715 \$5.14	\$0.3715 \$5.22	\$0.3715 \$6.55	\$0.3715 \$13.94	\$0.3715 \$49.88	\$0.455 \$351.2
\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.0310	\$0.031
\$1.02	\$0.57	\$0.43	\$0.44	\$0.55	\$1.16	\$4.16	\$23.8
\$26.87	\$17.79	\$14.90	\$15.04	\$17.30	\$29.83	\$121.73	\$624.4
\$2.24	\$1.69	\$1.52	\$1.53	\$1.66	\$2.42	\$11.06	\$38.43
8.33%	9.52%	10.20%	10.16%	9.62%	8.10%	9.09%	6.15%
\$2.10	\$1.62	\$1.46	\$1.47	\$1.59	\$2.26	\$10.50	\$37.8
15.39%	15.58%	15.66%	15.66%	15.59%	15.35%	15.52%	15.19
\$0.14	\$0.08	\$0.06	\$0.06	\$0.07	\$0.16	\$0.56	\$0.53
1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	0.149

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Summer Season (May - Oct.)

Summer Season (May - Oct.)

\$0.38 1.00%

\$0.16 1.00%

\$0.11 1.00%

211 Winter Season (Jan. - Apr., Nov. - Dec.) 212 Commercial/Industrial - Low Annual Use, High Winter Use (G-41)

Line No

212	Commercial/Industrial - Low Annual Us	se, High Winter Us	e (G-41)					
213	PROPOSED							
214		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
215	average Usage (Therms)	272	423	521	496	364	196	2,273
216								
217	Winter:							
218	Cust. Chg	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.25
219	Headblock	\$54.33	\$54.33	\$54.33	\$54.33	\$54.33	\$54.33	\$326.00
220	Tailblock	\$62.84	\$117.86	\$153.80	\$144.50	\$96.49	\$35.00	\$610.49
221	HB Threshold							
222								
223	Summer:							
224	Cust. Chg							
225	Headblock							
226	Tailblock							
227	HB Threshold							
228								
229	Total Base Rate Amount	\$183.88	\$238.90	\$274.84	\$265.54	\$217.54	\$156.04	\$1,336.74
230								
231	COG Rate - (Winter)	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705
232	COG amount - Winter	\$128.06	\$198.99	\$245.33	\$233.33	\$171.45	\$92.17	\$1,069.32
233								
234	COG Rate - (Summer)							
235	COG amount - Summer							
236								
237	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
238	LDAC amount	\$13.52	\$21.00	\$25.89	\$24.63	\$18.10	\$9.73	\$112.87
239								
240	Total Bill	\$325.46	\$458.89	\$546.06	\$523.50	\$407.08	\$257.94	\$2,518.93

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
91	39	26	26	40	108	330	2,603
\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.25	\$800.51
\$10.87	\$10.87	\$10.87	\$10.87	\$10.87	\$10.87	\$65.20	\$391.20
\$25.82	\$6.95	\$2.07	\$2.36	\$7.25	\$32.09	\$76.56	\$687.04
\$103.40	\$84.53	\$79.65	\$79.94	\$84.83	\$109.66	\$542.01	\$1,878.7
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4577
\$33.51	\$14.42	\$9.48	\$9.78	\$14.72	\$39.85	\$121.75	\$1,191.0
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$4.51	\$1.94	\$1.28	\$1.31	\$1.98	\$5.36	\$16.38	\$129.25
\$141.42	\$100.89	\$90.41	\$91.03	\$101.53	\$154.87	\$680.14	\$3,199.0

241 Winter Season (Jan. - Apr., Nov. - Dec.)

241	winter beabon (ban Apr., Nov Dec.							
242	Commercial/Industrial - Low Annual U	se, High Winter Us	se (G-41)					
243	CURRENT							
244		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
245	average Usage (Therms)	272	423	521	496	364	196	2,273
246								
247	Winter:							
248	Cust. Chg	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.76
249	Headblock	\$47.11	\$47.11	\$47.11	\$47.11	\$47.11	\$47.11	\$282.67
250	Tailblock	\$54.49	\$102.20	\$133.36	\$125.29	\$83.67	\$30.35	\$529.36
251	HB Threshold							
252								
253	Summer:							
254	Cust. Chg							
255	Headblock							
256	Tailblock							
257	HB Threshold							
258								
259	Total Base Rate Amount	\$159.06	\$206.77	\$237.94	\$229.87	\$188.24	\$134.92	\$1,156.80
260								
261	COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
262	COG amount - Winter	\$128.58	\$199.79	\$246.32	\$234.27	\$172.14	\$92.54	\$1,073.64
263								
264	COG Rate - (Summer)							
265	COG amount - Summer							
266								
267	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
268	LDAC amount	\$13.01	\$20.22	\$24.92	\$23.71	\$17.42	\$9.36	\$108.64
269								
270	Total Bill	\$300.65	\$426.78	\$509.18	\$487.85	\$377.80	\$236.82	\$2,339.08
271								
	DIFFERENCE:							
273	Total Bill	\$24.81	\$32.12	\$36.89	\$35.65	\$29.28	\$21.11	\$179.86
274	% Change	8.25%	7.53%	7.24%	7.31%	7.75%	8.91%	7.69%
275								
276	Base Rate	\$24.82	\$32.13	\$36.91	\$35.67	\$29.29	\$21.12	\$179.94
277	% Change	15.60%	15.54%	15.51%	15.52%	15.56%	15.65%	15.56%
278	1							
279	COG & LDAC	(\$0.01)	(\$0.02)	(\$0.02)	(\$0.02)	(\$0.01)	(\$0.01)	(\$0.09)
280	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

							2020/21
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	Total
91	39	26	26	40	108	330	2,603
\$57.46 \$9.42 \$22.39	\$57.46 \$9.42 \$6.03	\$57.46 \$9.42 \$1.80	\$57.46 \$9.42 \$2.05	\$57.46 \$9.42 \$6.29	\$57.46 \$9.42 \$27.82	\$344.76 \$56.53 \$66.38	\$689.53 \$339.21 \$595.74
\$89.28	\$72.91	\$68.68	\$68.93	\$73.17	\$94.71	\$467.68	\$1,624.48
\$0.3669 \$33.30	\$0.3669 \$14.33	\$0.3669 \$9.42	\$0.3669 \$9.72	\$0.3669 \$14.63	\$0.3669 \$39.60	\$0.3669 \$120.99	\$0.4590 \$1,194.63
\$0.0478 \$4.34	\$0.0478 \$1.87	\$0.0478 \$1.23	\$0.0478 \$1.27	\$0.0478 \$1.91	\$0.0478 \$5.16	\$0.0478 \$15.76	\$0.0478 \$124.40
\$126.91	\$89.11	\$79.33	\$79.91	\$89.70	\$139.46	\$604.44	\$2,943.51
\$14.50	\$11.78	\$11.07	\$11.12	\$11.82	\$15.41	\$75.70	\$255.56
11.43%	13.22%	13.96%	13.91%	13.18%	11.05%	12.52%	8.68%
\$14.12 15.82%	\$11.62 15.93%	\$10.97 15.97%	\$11.01 15.97%	\$11.66 15.93%	\$14.96 15.79%	\$74.33 15.89%	\$254.27 15.65%

\$0.11 1.00%

\$0.17 1.00%

\$0.45 1.00%

\$1.37 1.00%

\$1.29 0.10%

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Summer Season (May - Oct.)

 281
 Winter Season (Jan. - Apr., Nov. - Dec.)

 282
 Commercial/Industrial - Medium Annual Use, High Winter Use (G-42)

Line No

283         PROPOSED         Nov-20         Dec-20         Jan-21         Feb-21         Mar-21         Apr-21         Winter           285         average Usage (Therms)         2.568         3.706         4.442         4.284         3.296         2.004         20.390           287         Winter:         2.568         3.706         4.442         4.284         3.296         2.004         20.390           287         Winter:         2.00.14         \$200.14         \$200.14         \$220.14         \$200.14         \$200.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.14         \$220.12         \$220.14         \$220.14         \$220.14         \$220.12         \$220.12         \$220.14         \$220.14         \$220.14         \$220.12         \$220.12         \$220.14         \$21.02.22         \$220.14         \$220.14         \$220.14         \$220.12         \$220.14         \$220.14         \$220.14         \$220.12         \$220.12         \$220.12         \$220.14         \$220.15         \$220.15         \$20.17         \$20.17         \$20.17         \$20.17         \$20.17         \$2									
285         swerage Usage (Therms)         2.588         3.796         4.442         4.284         3.296         2.004         20.300           267         Winter:         2.588         3.796         4.442         4.284         3.296         2.004         20.300           267         Winter:         5200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.83           269         Headblock         \$499.87         \$409.87         \$470.83         \$170.83         \$170.83         \$170.46         \$170.55         \$14.64.63         \$1,04.63         \$1,04.64         \$1,044.63         \$1,044.63<	283	PROPOSED							
268         200         14         \$200.12         \$100.2         \$200.14	284		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
267         Winter:         5200.14         \$200.12         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.12         \$200.12         \$1.761.10         \$1.708.17         \$1.46.63         \$1.703.75         \$1.464.63         \$1.040.63         \$1.040.63         \$1.040.63         \$1.010.60         \$1.010.60         \$1.010.6	285	average Usage (Therms)	2,568	3,796	4,442	4,284	3,296	2,004	20,390
288         Cust. Chg         \$200.14	286								
289         Headblock         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$409.87         \$2299.22           291         HB Threshold         \$522.19         \$031.43         \$1.146.64         \$1.083.74         \$764.63         \$334.59         \$4.793.22           292         293         Summer:         \$1.46.64         \$1.083.74         \$764.63         \$334.59         \$4.793.22           294         Cust.Chg         \$1.46.64         \$1.083.74         \$764.63         \$1.09         \$1.79           295         Headblock         \$1.292.20         \$1.831.44         \$1.846.65         \$1.793.75         \$1.464.63         \$1.034.00         \$8.993.27           296         Tailblock         \$1.222.20         \$1.831.44         \$1.846.65         \$1.793.75         \$1.464.63         \$1.034.00         \$8.993.27           206         Tailblock         \$1.020.812         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.4705         \$0.6477         \$0.607         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497 <td>287</td> <td>Winter:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	287	Winter:							
190         Taiblock         \$522.19         \$031.43         \$1,146.64         \$1,003.74         \$764.63         \$334.59         \$4,703.22           211         HB Threshold         222         1	288								
291     HB Threshold     Harman Harma	289	Headblock	\$499.87	\$499.87	\$499.87	\$499.87	\$499.87	\$499.87	\$2,999.22
1292         Summer:         204         Cust. Chg         Summer:         205         Summer:         206         Summer:         207         Summer:         Su	290	Tailblock	\$522.19	\$931.43	\$1,146.64	\$1,093.74	\$764.63	\$334.59	\$4,793.22
203         Summer:         204         Cust. Chg           295         Headblock         205         Headblock         205           205         Headblock         207         HB Threshold         207           206         Tailblock         1         207         148         1.780.75         \$1.464.63         \$1.034.60         \$8.993.27           206         Cold Rale - (Winter)         \$0.4705         \$0.9471         \$0.950.61         \$0.5056         \$943.12         \$0.953.61         \$0.5056         \$943.12         \$0.953.61         \$0.5056         \$943.12         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61         \$0.953.61	291	HB Threshold							
294         Cust. Chg         295         Telablock         296         Tablock         296         Tablock         297         H8 Threshold         298         Telablock         298         Telablock         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           299         Total Base Rate Amount         \$1,222.20         \$1,631.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           300         0         COG Rate (Writter)         \$0,4705         \$0,6477         \$0,6477         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,0	292								
295         Headblock         295         Headblock         51,222.20         \$1,831.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           296         Tailblock         207         HB Threshold         208         1         209         10.108.008         200 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
296         Taiblock         297         H3 Threshold         298           298         TelaBise Rate Amount         \$1,222.20         \$1,631.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           300         COG Rate (Writter)         \$0,4705         \$0,606         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$1,012.62         \$1,012.62<	294	Cust. Chg							
297         HB Threshold         297         HB Threshold         298         148         1793.75         \$1,464.63         \$1.034.60         \$8,993.27           298         Total Base Rate Amount         \$1.222.20         \$1,631.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1.034.60         \$8,993.27           301         COG Rate - (Winter)         \$0.4705         \$0									
298 299 704 [Base Rate Amount         \$1,222.20         \$1,831.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           300 300         COG Rate - (Writer)         \$0,4705         \$0,64705         \$0,64705         \$0,6497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62         \$1,012.62	296								
299         Total Base Rate Amount         \$1,222.20         \$1,831.44         \$1,846.65         \$1,793.75         \$1,464.63         \$1,034.60         \$8,993.27           301         COG Rate - (Winter)         \$0,4705         \$0,0497         \$0,0407         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497	297	HB Threshold							
300         COC Rate - (Writer)         \$0.4705         \$0.497									
301         COC Rate - (Winter)         \$0,4705         \$0,0497         \$0,0497         \$0,0497	299	Total Base Rate Amount	\$1,222.20	\$1,631.44	\$1,846.65	\$1,793.75	\$1,464.63	\$1,034.60	\$8,993.27
302         COC amount: Winter         \$1,208.12         \$1,786.19         \$2,090.18         \$2,015.45         \$1,550.56         \$943.12         \$9,593.61           304         COC Rate - (Summer)         305         COC amount. Summer         306         COC Rate - (Summer)         307         LDAC         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$0,0497         \$1,022.62         \$212.73         \$163.66         \$99.55         \$1,012.62           306         309          \$1,022.62         \$221.273         \$163.66         \$99.55         \$1,012.62									
033 204 COG Rate - (Summer) 305 COG amount - Summer 306 307 LDAC 30.0497 \$0.0497 \$0.0497 \$0.0497 \$0.0497 \$0.0497 \$0.0497 \$0.0497 308 LDAC amount \$127.52 \$188.53 \$220.62 \$212.73 \$163.66 \$99.55 \$1,012.62 309									
304         COC Rate - (Summer)           305         COC amount - Summer)           306         DAC           307         LDAC           308         \$20.0497           309         \$10AC           309         \$10AC           309         \$127.52           \$188.53         \$220.62           \$212.73         \$163.66           \$99.55         \$1,012.62	302	COG amount - Winter	\$1,208.12	\$1,786.19	\$2,090.18	\$2,015.45	\$1,550.56	\$943.12	\$9,593.61
305         COG amount - Summer           306         307         LDAC         \$0.0497									
306									
307         LDAC         \$0.0497         \$0.04		COG amount - Summer							
308 LDAC amount \$127.52 \$188.53 \$220.62 \$212.73 \$163.66 \$99.55 \$1,012.62 309									
309									
		LDAC amount	\$127.52	\$188.53	\$220.62	\$212.73	\$163.66	\$99.55	\$1,012.62
310 Total Bill \$2,557.83 \$3,606.16 \$4,157.45 \$4,021.94 \$3,178.86 \$2,077.26 \$19,599.50									
	310	Total Bill	\$2,557.83	\$3,606.16	\$4,157.45	\$4,021.94	\$3,178.86	\$2,077.26	\$19,599.50

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
1,039	507	350	368	548	1,203	4,014	24,404
\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83	\$2,401.67
\$199.95	\$199.95	\$174.72	\$184.06	\$199.95	\$199.95	\$1,158.58	\$4,157.80
\$212.86	\$35.52	\$0.00	\$0.00	\$49.14	\$267.46	\$564.98	\$5,358.20
\$612.95	\$435.61	\$374.86	\$384.20	\$449.23	\$667.54	\$2,924.39	\$11,917.66
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4538
\$383.62	\$187.05	\$129.05	\$135.95	\$202.15	\$444.13	\$1,481.95	\$11,075.56
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$51.60	\$25.16	\$17.36	\$18.29	\$27.19	\$59.74	\$199.34	\$1,211.96
\$1.048.17	\$647.82	\$521.27	\$538.44	\$678.56	\$1.171.42	\$4,605,69	\$24,205,19

311 Winter Season (Jan. - Apr., Nov. - Dec.)

	Winter ocubon (oun Apri, Nov Dec.							
312	Commercial/Industrial - Medium Annua	al Use, High Winte	r Use (G-42)					
313	CURRENT							
314		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
315	average Usage (Therms)	2,568	3,796	4,442	4,284	3,296	2,004	20,390
316								
317	Winter:							
318	Cust. Chg	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35
319	Headblock	\$428.41	\$428.41	\$428.41	\$428.41	\$428.41	\$428.41	\$2,570.44
320	Tailblock	\$447.54	\$798.27	\$982.71	\$937.37	\$655.31	\$286.75	\$4,107.96
321	HB Threshold							
322								
323	Summer:							
324	Cust. Chg							
325	Headblock							
326	Tailblock							
327	HB Threshold							
328								
329	Total Base Rate Amount	\$1,048.33	\$1,399.07	\$1,583.51	\$1,538.17	\$1,256.11	\$887.55	\$7,712.75
30								
31	COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
32	COG amount - Winter	\$1,212.99	\$1,793.40	\$2,098.62	\$2,023.59	\$1,556.83	\$946.93	\$9,632.35
333								
34	COG Rate - (Summer)							
35	COG amount - Summer							
36								
37	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
38	LDAC amount	\$122.74	\$181.47	\$212.35	\$204.76	\$157.53	\$95.82	\$974.65
39								
40	Total Bill	\$2,384.07	\$3,373.93	\$3,894.47	\$3,766.52	\$2,970.46	\$1,930.29	\$18,319.75
41								
	DIFFERENCE:							
	Total Bill	\$173.77	\$232.23	\$262.97	\$255.41	\$208.40	\$146.97	\$1,279.75
	% Change	7.29%	6.88%	6.75%	6.78%	7.02%	7.61%	6.99%
45								
	Base Rate	\$173.87	\$232.37	\$263.14	\$255.58	\$208.53	\$147.04	\$1,280.53
47	% Change	16.58%	16.61%	16.62%	16.62%	16.60%	16.57%	16.60%
48								
	COG & LDAC	(\$0.10)	(\$0.14)	(\$0.17)	(\$0.16)	(\$0.13)	(\$0.08)	(\$0.78)
350	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

							2020/21
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	Total
1,039	507	350	368	548	1,203	4,014	24,404
\$172.39 \$171.36	\$172.39 \$171.36	\$172.39 \$149.74	\$172.39 \$157.75	\$172.39 \$171.36	\$172.39 \$171.36	\$1,034.35 \$992.94	\$2,068.71 \$3.563.38
\$182.43	\$30.44	\$0.00	\$0.00	\$42.11	\$229.22	\$484.21	\$4,592,17
\$526.19	\$374.20	\$322.13	\$330.14	\$385.87	\$572.97	\$2,511.50	\$10,224.2
\$0.3669 \$381.23	\$0.3669 \$185.89	\$0.3669 \$128.24	\$0.3669 \$135.10	\$0.3669 \$200.89	\$0.3669 \$441.37	\$0.3669 \$1,472.72	\$0.4550 \$11,105.07
\$0.0478 \$49.67	\$0.0478 \$24.22	\$0.0478 \$16.71	\$0.0478 \$17.60	\$0.0478 \$26.17	\$0.0478 \$57.50	\$0.0478 \$191.87	\$0.0478 \$1.166.52
\$957.09	\$584.30	\$467.09	\$482.85	\$612.93	\$1,071.84	\$4,176.09	\$22,495.84
\$91.09 9.52%	\$63.52 10.87%	\$54.18 11.60%	\$55.59 11.51%	\$65.64 10.71%	\$99.58 9.29%	\$429.60 10.29%	\$1,709.34 7.60%
\$86.76	\$61.41	\$52.73	\$54.06	\$63.36	\$94.57	\$412.89	\$1,693.42
16.49%	16.41%	16.37%	16.38%	16.42%	16.50%	16.44%	16.56%
\$4.32	\$2.11	\$1.45	\$1.53	\$2.28	\$5.01	\$16.71	\$15.93
1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.13%

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Summer Season (May - Oct.)

Winter Season (Jan. - Apr., Nov. - Dec.)
Commercial/Industrial - High Annual Use, High Winter Use (G-43)

Line No

352	Commercial/Industrial - High Annual U	se, High Winter U	se (G-43)					
353	PROPOSED							
354		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
355	average Usage (Therms)	23,661	31,955	31,276	29,903	24,765	17,078	158,638
356								
357	Winter:							
358	Cust. Chg	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$5,153.47
359	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
360	Tailblock	\$7,397.55	\$9,990.65	\$9,778.26	\$9,348.91	\$7,742.67	\$5,339.37	\$49,597.40
361	HB Threshold							
362								
363	Summer:							
364	Cust. Chg							
365	Headblock							
366	Tailblock							
367	HB Threshold							
368								
369	Total Base Rate Amount	\$8,256.46	\$10,849.56	\$10,637.17	\$10,207.82	\$8,601.58	\$6,198.28	\$54,750.87
370								
371	COG Rate - (Winter)	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705	\$0.4705
372	COG amount - Winter	\$11,132.57	\$15,034.91	\$14,715.29	\$14,069.17	\$11,651.94	\$8,035.21	\$74,639.08
373								
374	COG Rate - (Summer)							
375	COG amount - Summer							
376								
377	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
378	LDAC amount	\$1,175.06	\$1,586.96	\$1,553.22	\$1,485.02	\$1,229.88	\$848.13	\$7,878.26
379								
380	Total Bill	\$20,564.08	\$27,471.43	\$26,905.68	\$25,762.01	\$21,483.40	\$15,081.61	\$137,268.21

							2020/21
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	Total
11,030	6,524	5,278	6,059	7,044	12,595	48,531	207,169
\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$858.91	\$5,153.47	\$10,306.94
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$1,576.67	\$932.64	\$754.49	\$866.15	\$1,006.99	\$1,800.44	\$6,937.38	\$56,534.78
\$2,435.58	\$1.791.55	\$1.613.40	\$1,725.06	\$1,865.90	\$2.659.35	\$12.090.85	\$66,841.72
	• .,. ••		+ .,. =				
\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.3692	\$0.4468
\$4,072.15	\$2,408.79	\$1,948.67	\$2,237.06	\$2,600.82	\$4,650.11	\$17,917.59	\$92,556.67
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$547.75	\$324.01	\$262.12	\$300.91	\$349.84	\$625.50	\$2,410,13	\$10.288.39
	0124.01		÷==0.01	÷= .0.04	÷==0.00	\$ <u>2</u> ,.10.10	\$10,200.00
\$7,055.48	\$4,524.35	\$3,824.19	\$4,263.03	\$4,816.56	\$7,934.96	\$32,418.58	\$169,686.78

381 Winter Season (Jan. - Apr., Nov. - Dec.) 382 Commercial/Industrial - High Annual Use, High Winter Use (G-43)

382	Commercial/Industrial - High Annual U	Jse, High Winter U	se (G-43)					
383	CURRENT							
384		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
385	average Usage (Therms)	23,661	31,955	31,276	29,903	24,765	17,078	158,638
386								
387	Winter:							
388	Cust. Chg	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$4,439.00
389	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
390	Tailblock	\$6,231.03	\$8,415.22	\$8,236.32	\$7,874.68	\$6,521.73	\$4,497.40	\$41,776.36
391	HB Threshold							
392								
393	Summer:							
394	Cust. Chg							
395	Headblock							
396	Tailblock							
397	HB Threshold							
398								
399	Total Base Rate Amount	\$6,970.86	\$9,155.05	\$8,976.15	\$8,614.51	\$7,261.56	\$5,237.23	\$46,215.36
400								
401	COG Rate - (Winter)	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724	\$0.4724
402	COG amount - Winter	\$11,177.52	\$15,095.63	\$14,774.71	\$14,125.98	\$11,698.99	\$8,067.65	\$74,940.49
403								
404	COG Rate - (Summer)							
405	COG amount - Summer							
406								
407	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
408	LDAC amount	\$1,131.00	\$1,527.46	\$1,494.99	\$1,429.34	\$1,183.77	\$816.33	\$7,582.89
409								
410	Total Bill	\$19,279.38	\$25,778.13	\$25,245.85	\$24,169.84	\$20,144.32	\$14,121.21	\$128,738.74
411								
	DIFFERENCE:							
413	Total Bill	\$1,284.70	\$1,693.29	\$1,659.83	\$1,592.17	\$1,339.08	\$960.39	\$8,529.47
414	% Change	6.66%	6.57%	6.57%	6.59%	6.65%	6.80%	6.63%
415								
416	Base Rate	\$1,285.60	\$1,694.51	\$1,661.02	\$1,593.31	\$1,340.02	\$961.05	\$8,535.51
417	% Change	18.44%	18.51%	18.50%	18.50%	18.45%	18.35%	18.47%
418		1						1
419	COG & LDAC	(\$0.90)	(\$1.22)	(\$1.19)	(\$1.14)	(\$0.94)	(\$0.65)	(\$6.04)
420	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/2 Total
11,030	6,524	5,278	6,059	7,044	12,595	48,531	207,16
\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$739.83	\$4,439.00	\$8,878.
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$1,328.04	\$785.57	\$635.51	\$729.57	\$848.20	\$1,516.53	\$5,843.42	\$47,619
\$2,067.87	\$1,525.41	\$1,375.35	\$1,469.40	\$1,588.03	\$2,256.36	\$10,282.43	\$56,497
\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.3669	\$0.447
\$4,046.78	\$2,393.78	\$1,936.53	\$2,223.12	\$2,584.62	\$4,621.14	\$17,805.97	\$92,746
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.047
\$527.22	\$311.86	\$252.29	\$289.63	\$336.73	\$602.05	\$2,319.77	\$9,902.0
\$6,641.87	\$4,231.05	\$3,564.17	\$3,982.15	\$4,509.37	\$7,479.55	\$30,408.17	\$159,146
\$413.61	\$293.30	\$260.02	\$280.88	\$307.19	\$455.41	\$2,010.41	\$10,539.
6.23%	6.93%	7.30%	7.05%	6.81%	6.09%	6.61%	6.62%
\$367.70	\$266.15	\$238.05	\$255.66	\$277.87	\$402.99	\$1,808.42	\$10,343.
17.78%	17.45%	17.31%	17.40%	17.50%	17.86%	17.59%	18.319
\$45.90	\$27.15	\$21.97	\$25.22	\$29.32	\$52.42	\$201.98	\$195.9
1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	0.19%

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#### Liberty Utilities (EnergyNorth Natural Gas) Corp. Bill Impact Analysis - Cost of Gas Filing Methodology

Summer Season (May - Oct.)

421 Winter Season (Jan. - Apr., Nov. - Dec.) 422 <u>Commercial/Industrial - Low Annual Use, Low Winter Use (G-51)</u>

Line No

422	Commercial/Industrial - Low Annual Use, Low Winter Use (G-51)										
423	PROPOSED										
424		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter			
425	average Usage (Therms)	279	339	379	366	317	261	1,942			
426											
427	Winter:										
428	Cust. Chg	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.23			
429	Headblock	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$204.47			
430	Tailblock	\$39.74	\$53.00	\$61.92	\$58.94	\$48.11	\$35.74	\$297.44			
431	HB Threshold										
432											
433	Summer:										
434	Cust. Chg										
435	Headblock										
436	Tailblock										
437	HB Threshold										
438											
439	Total Base Rate Amount	\$140.52	\$153.78	\$162.70	\$159.72	\$148.90	\$136.52	\$902.14			
440											
441	COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773			
442	COG amount - Winter	\$133.33	\$161.88	\$181.10	\$174.67	\$151.36	\$124.70	\$927.04			
443											
444	COG Rate - (Summer)										
445	COG amount - Summer										
446											
447	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497			
448	LDAC amount	\$13.87	\$16.84	\$18.84	\$18.17	\$15.75	\$12.97	\$96.46			
449											
450	Total Bill	\$287.73	\$332.50	\$362.65	\$352.56	\$316.01	\$274.19	\$1,925.64			

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
225	194	173	191	195	212	1,190	3,133
\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$66.71	\$400.23	\$800.46
\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$34.08	\$204.47	\$408.94
\$27.68	\$20.92	\$16.17	\$20.20	\$21.10	\$24.76	\$130.83	\$428.28
\$128.46	\$121.70	\$116.96	\$120.99	\$121.88	\$125.55	\$735.53	\$1,637.67
\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4407
\$85.66	\$74.04	\$65.89	\$72.82	\$74.35	\$80.66	\$453.42	\$1,380.46
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$11.17	\$9.65	\$8.59	\$9.49	\$9.69	\$10.52	\$59.12	\$155.57
\$225.29	\$205.40	\$191.44	\$203.29	\$205.93	\$216.72	\$1,248.07	\$3,173.71

451 Winter Season (Jan. - Apr., Nov. - Dec.)

452	Commercial/Industrial - Low Annual U		e (G-51)					
453	CURRENT							
454		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
455	average Usage (Therms)	279	339	379	366	317	261	1,942
456								
457	Winter:							
458	Cust. Chg	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344.74
459	Headblock	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$170.36
460	Tailblock	\$33.11	\$44.16	\$51.59	\$49.11	\$40.09	\$29.77	\$247.83
461	HB Threshold							
462								
463	Summer:							
464	Cust. Chg							
465	Headblock							
466	Tailblock							
467	HB Threshold							
468								
469	Total Base Rate Amount	\$118.96	\$130.01	\$137.44	\$134.96	\$125.94	\$115.63	\$762.94
470								
471	COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
472	COG amount - Winter	\$133.86	\$162.52	\$181.82	\$175.37	\$151.96	\$125.20	\$930.73
473								
474	COG Rate - (Summer)							
475	COG amount - Summer							
476								
477	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
478	LDAC amount	\$13.35	\$16.21	\$18.14	\$17.49	\$15.16	\$12.49	\$92.84
479								
480	Total Bill	\$266.18	\$308.74	\$337.41	\$327.82	\$293.06	\$253.31	\$1,786.51
481								
	DIFFERENCE:							
483	Total Bill	\$21.55	\$23.76	\$25.25	\$24.75	\$22.95	\$20.88	\$139.13
484	% Change	8.10%	7.70%	7.48%	7.55%	7.83%	8.24%	7.79%
485								
486	Base Rate	\$21.56	\$23.77	\$25.26	\$24.76	\$22.96	\$20.89	\$139.20
487	% Change	18.12%	18.28%	18.38%	18.35%	18.23%	18.07%	18.25%
488								
489	COG & LDAC	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.01)	(\$0.07)
490	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/ Tota
225	194	173	191	195	212	1,190	3,13
\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$57.46	\$344 74	\$689
\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$28.39	\$170.36	\$340.
\$23.06	\$17.43	\$13.48	\$16.83	\$17.58	\$20.63	\$109.01	\$356.
\$108.91	\$103.28	\$99.33	\$102.68	\$103.43	\$106.48	\$624.12	\$1,387
\$0.3786 \$85.14	\$0.3786 \$73.60	\$0.3786 \$65.49	\$0.3786 \$72.38	\$0.3786 \$73.90	\$0.3786 \$80.17	\$0.3786 \$450.68	\$0.44 \$1,381
\$0.0478 \$10.75	\$0.0478 \$9.29	\$0.0478 \$8.27	\$0.0478 \$9.14	\$0.0478 \$9.33	\$0.0478 \$10.12	\$0.0478 \$56.90	\$0.04 \$149.
\$204.80	\$9.29	\$173.09	\$184.20	\$186.66	\$10.12	\$30.90	\$2,918
\$20.48 10.00%	\$19.23 10.33%	\$18.35 10.60%	\$19.10 10.37%	\$19.26 10.32%	\$19.94 10.14%	\$116.37 10.28%	\$255. 8.76
\$19.55	\$18.42	\$17.63	\$18.30	\$18.45	\$19.06	\$111.41	\$250.
17.95%	17.84%	17.75%	17.82%	17.84%	17.90%	17.85%	18.07
\$0.94	\$0.81	\$0.72	\$0.80	\$0.81	\$0.88	\$4.95	\$4.88
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.329

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Summer Season (May - Oct.)

E

491 Winter Season (Jan. - Apr., Nov. - Dec.) 492 <u>Commercial/Industrial - Medium Annual Use, Low Winter Use (G-52)</u>

Line No

H39         PROPOSED         Nov.20         Dec-20         Jan.21         Feb.21         Mar.21         Apr.21         Winter           498         severage Usage (Therms)         2.236         2.594         2.953         2.850         2.492         2.049         15.155           497         Winter         2.236         2.051         2.850         2.492         2.049         15.155           497         Winter         5200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.156         \$1.000.83         \$1.000.83         \$1.755.48         \$1.755.48         \$1.755.48         \$1.755.48         \$1.763.76         \$1.783.76 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>									
4495         werage Usage (Therms)         2.236         2.994         2.953         2.830         2.492         2.049         15,155           4497         Winter:         5200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$120.83           4499         Handblock         \$232.58         \$232.58         \$232.58         \$220.28         \$31,755.48           501         Hall Threshold         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           503         Burmaer:         504         Cust. Chg         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           504         Fatablock         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           505         Inadblock         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           506         Talblock         \$240.82         \$30.8173         \$0.4773         \$0.4773         \$0.4773         \$0.4773         \$0.4773	493	PROPOSED							
1496         Vinter:         5200.14         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$	494		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
497         Winter:         5120.014         \$200.14         \$201.16         \$1,08.55         \$201.75         \$1,783.76         \$1,783.76         \$1,783.76         \$1,783.76         \$1,783.76	495	average Usage (Therms)	2,236	2,594	2,953	2,830	2,492	2,049	15,155
4486         Cust. Chg         \$200.14         \$210.83         \$200.14         \$200.14         \$210.83         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$200.14         \$201.45         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35         \$201.35 <th< td=""><td>496</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	496								
499         Headblock         \$292.58         \$292.58         \$292.58         \$292.58         \$292.58         \$292.58         \$292.58         \$290.57         \$204.35         \$1,755.48           501         Halbook         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           503         Bummer:         \$40.40.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           503         Summer:         \$47.40.82         \$50.473         \$47.40.08         \$47.40.08           504         Cust. Chg         \$47.73         \$50.4773         \$0.4773 <td< td=""><td>497</td><td>Winter:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	497	Winter:							
100         Taiblock         \$240.82         \$310.61         \$380.56         \$356.65         \$290.77         \$204.35         \$1,783.76           001         HB Trreshold         \$300.61         \$380.56         \$390.77         \$204.35         \$1,783.76           002         Summer: 004         Cast. Chg Chat. Chg         \$400.82         \$310.61         \$380.56         \$390.77         \$204.35         \$1,783.76           004         Cast. Chg         \$400.82         \$4	498								
601         HB Threehold         File	499	Headblock	\$292.58	\$292.58	\$292.58	\$292.58	\$292.58	\$292.58	\$1,755.48
502 503 504 504 505 504 506 506 506 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 507 500 500	500	Tailblock	\$240.82	\$310.61	\$380.56	\$356.65	\$290.77	\$204.35	\$1,783.76
503         Summer:         503         Summer:         504           Gut, Chg         Headblock         505         Headblock         506           606         Headblock         507         H80 Trablock         507           507         H80 Trablock         500         Fablock         507           508         Headblock         503.33         \$873.28         \$849.37         \$773.49         \$607.07         \$4,740.08           500         Total Base Rate Amount         \$73.354         \$90.4773         \$0.4773	501	HB Threshold							
564         Cust. Chg         Solution         Solution <th< td=""><td>502</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	502								
505         Haadblock         505         Haadblock         507         Haadblock           507         HB Threshold         507         HB Threshold         507         161           508         Total Base Rate Amount         \$733.54         \$803.33         \$873.28         \$849.37         \$783.49         \$697.07         \$4,740.08           501         Total Base Rate Amount         \$0.4773         \$0.4									
506         Tablock         507         HB Treehold         508         509         Flat Base Rate Amount         \$733.54         \$803.33         \$873.28         \$849.37         \$783.49         \$697.07         \$4,740.08           509         Total Base Rate Amount         \$0.4773         \$0.497         \$0.497         \$0.497         \$0.497         \$0.497         \$0.497         \$0.497         \$0.497         \$0.497 <t< td=""><td>504</td><td>Cust. Chg</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	504	Cust. Chg							
Gor         HB Threehold         573.54         \$903.33         \$873.28         \$849.37         \$783.49         \$697.07         \$4,740.08           509         Total Base Rate Amount         \$733.54         \$903.33         \$873.28         \$849.37         \$783.49         \$697.07         \$4,740.08           511         COG Rate - (Winter)         \$0.4773									
508 509         Total Base Rate Amount         \$733.54         \$803.33         \$873.28         \$849.37         \$783.49         \$697.07         \$4,740.08           510         COG amount         \$0.4773         \$0.497         \$0.497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497         \$0.0497	506								
509         Total Base Rate Amount         \$733.54         \$800.33         \$873.28         \$849.37         \$783.49         \$607.07         \$4,740.08           511         COG Rate - (Winter)         \$0.4773<		HB Threshold							
510         COG Rate - (Winter)         \$0.4773									
511         COG Rata - (Winter)         \$0,4773         \$0,773         \$0,4773         \$0,4773         \$0,4773         \$0,4773         \$0,773         \$0		Total Base Rate Amount	\$733.54	\$803.33	\$873.28	\$849.37	\$783.49	\$697.07	\$4,740.08
512         COG amount - Winter         \$1,067.20         \$1,238.16         \$1,409.51         \$1,350.95         \$1,189.55         \$977.88         \$7,233.27           513         COG Rate - (Summer)         515         COG amount - Summer)         516         COG amount - Summer)         517         LDAC         \$0.0497									
513         Constraint         State									
514         COG Rate - (Summer)           515         COG amount - Summer           516         COG amount - Summer           517         LDAC           517         LDAC           518         COG amount - Summer           519         LDAC amount           511         LDAC           512         LDAC amount           519         S14.666		COG amount - Winter	\$1,067.20	\$1,238.16	\$1,409.51	\$1,350.95	\$1,189.55	\$977.88	\$7,233.27
515         COG amount - Summer           516         517         LDAC         \$0.0497									
516         517         LDAC         \$0.0497 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
517         LDAC         \$0.0497         \$0.04		COG amount - Summer							
518 LDAC amount \$111.04 \$128.83 \$146.66 \$140.56 \$123.77 \$101.75 \$752.60 519									
519									
		LDAC amount	\$111.04	\$128.83	\$146.66	\$140.56	\$123.77	\$101.75	\$752.60
520         Total Bill         \$1,911.78         \$2,170.32         \$2,429.45         \$2,340.89         \$2,096.81         \$1,776.70         \$12,725.95									
	520	Total Bill	\$1,911.78	\$2,170.32	\$2,429.45	\$2,340.89	\$2,096.81	\$1,776.70	\$12,725.95

	1			0	0		2020/21
May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	Total
1,655	1,433	1,349	1,430	1,501	1,720	9,088	24,242
\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$200.14	\$1,200.83	\$2,401.67
\$211.97	\$211.97	\$211.97	\$211.97	\$211.97	\$211.97	\$1,271.84	\$3,027.33
\$78.97	\$52.15	\$42.09	\$51.81	\$60.32	\$86.69	\$372.03	\$2,155.79
\$491.08	\$464.27	\$454.20	\$463.92	\$472.43	\$498.81	\$2,844.70	\$7,584.78
\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.3809	\$0.4412
\$630.55	\$545.78	\$513.96	\$544.68	\$571.60	\$654.98	\$3,461.55	\$10,694.82
\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
\$82.21	\$71.16	\$67.01	\$71.02	\$74.53	\$85.40	\$451.32	\$1,203.92
** *** ***		** ***	A4 070 00		** *** **		A40 400 50
\$1,203.84	\$1,081.20	\$1,035.17	\$1,079.62	\$1,118.56	\$1,239.18	\$6,757.57	\$19,483.52

521 Winter Season (Jan. - Apr., Nov. - Dec.)

	21 winter beason (Jan Apr., Nov Dec.								Summer Season (	(n
5	522 Commercial/Industrial - Medium Annua	al Use, Low Winte	r Use (G-52)							
5	523 CURRENT									_
5	524	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter	May-21	
	525 average Usage (Therms)	2,236	2,594	2,953	2,830	2,492	2,049	15,155	1,655	_
	526									
1	527 Winter:									
	528 Cust. Chg	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35		
5	529 Headblock	\$243.87	\$243.87	\$243.87	\$243.87	\$243.87	\$243.87	\$1,463.23		
5	530 Tailblock	\$200.73	\$258.90	\$317.20	\$297.28	\$242.36	\$170.33	\$1,486.80		
5	531 HB Threshold									
5	532									
5	533 Summer:									
5	534 Cust. Chg								\$172.39	
5	535 Headblock								\$176.68	
	536 Tailblock								\$65.82	
	537 HB Threshold									
5	538									
	539 Total Base Rate Amount	\$616.99	\$675.16	\$733.47	\$713.54	\$658.62	\$586.60	\$3,984.38	\$414.90	
5	540									
5	541 COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792		
	542 COG amount - Winter	\$1,071.45	\$1,243.09	\$1,415.12	\$1,356.33	\$1,194.29	\$981.78	\$7,262.06		
5	543									
	544 COG Rate - (Summer)								\$0.3786	
	545 COG amount - Summer								\$626.74	
	546									
	547 LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	
	548 LDAC amount	\$106.88	\$124.00	\$141.16	\$135.29	\$119.13	\$97.93	\$724.39	\$79.13	
	549									
	550 Total Bill	\$1,795.32	\$2,042.25	\$2,289.75	\$2,205.17	\$1,972.04	\$1,666.30	\$11,970.83	\$1,120.77	_
	551									
	552 DIFFERENCE:							1		_
	553 Total Bill	\$116.46	\$128.07	\$139.70	\$135.72	\$124.77	\$110.40	\$755.12	\$83.07	
	554 % Change	6.49%	6.27%	6.10%	6.15%	6.33%	6.63%	6.31%	7.41%	
	555									
	556 Base Rate	\$116.55	\$128.17	\$139.81	\$135.83	\$124.86	\$110.48	\$755.70	\$76.18	
	557 % Change	18.89%	18.98%	19.06%	19.04%	18.96%	18.83%	18.97%	18.36%	
	558		(*** ***)			()		(44.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4		
	559 COG & LDAC	(\$0.09)	(\$0.10) -0.01%	(\$0.11)	(\$0.11)	(\$0.09) -0.01%	(\$0.08)	(\$0.58)	\$6.89	
<u>, v</u>	560 % Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.98%	_

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/2 Total
1,655	1,433	1,349	1,430	1,501	1,720	9,088	24,24
\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$172.39	\$1,034.35	\$2,068
\$176.68	\$176.68	\$176.68	\$176.68	\$176.68	\$176.68	\$1,060.11	\$2,523
\$65.82	\$43.47	\$35.08	\$43.18	\$50.28	\$72.26	\$310.09	\$1,796.
\$414.90	\$392.55	\$384.16	\$392.26	\$399.35	\$421.34	\$2,404.55	\$6,388
\$0.3786 \$626.74	\$0.3786 \$542.48	\$0.3786 \$510.86	\$0.3786 \$541.40	\$0.3786 \$568.15	\$0.3786 \$651.02	\$0.3786 \$3.440.65	\$0.441 \$10.702
						,	, .
\$0.0478	\$0.0478	\$0.0478	\$0.0478 \$68.35	\$0.0478 \$71.73	\$0.0478 \$82.19	\$0.0478	\$0.047
\$79.13	\$68.49	\$64.50	306.30	ər1./3	ao2.19	\$434.40	\$1,158.
\$1,120.77	\$1,003.52	\$959.51	\$1,002.01	\$1,039.23	\$1,154.56	\$6,279.59	\$18,250
\$83.07 7.41%	\$77.68 7.74%	\$75.66 7.89%	\$77.61 7.75%	\$79.32 7.63%	\$84.63 7.33%	\$477.98 7.61%	\$1,233. 6.76%
\$76.18	\$71.72	\$70.04	\$71.66	\$73.08	\$77.47	\$440.16	\$1,195.
18.36%	18.27%	18.23%	18.27%	18.30%	18.39%	18.31%	18.72
\$6.89	\$5.96	\$5.62	\$5.95	\$6.25	\$7.16	\$37.82	\$37.2
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.31%

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# Liberty Utilities (EnergyNorth Natural Gas) Corp. Bill Impact Analysis - Cost of Gas Filing Methodology

 561
 Winter Season (Jan. - Apr., Nov. - Dec.)

 562
 Commercial/Industrial - High Annual Use, Load Factor Less Than 90% (G-53)

Line No

563	PROPOSED							
564		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
565	average Usage (Therms)	27,160	31,349	35,590	32,054	29,450	24,278	179,882
566								
567	Winter:							
568	Cust. Chg	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$5,303.65
569	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
570	Tailblock	\$5,681.96	\$6,558.33	\$7,445.50	\$6,705.72	\$6,161.05	\$5,079.01	\$37,631.57
571	HB Threshold							
572								
573	Summer:							
574	Cust. Chg							
575	Headblock							
576	Tailblock							
577	HB Threshold							
578								
579	Total Base Rate Amount	\$6,565.90	\$7,442.28	\$8,329.44	\$7,589.66	\$7,044.99	\$5,962.95	\$42,935.22
580								
581	COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
582	COG amount - Winter	\$12,963.57	\$14,963.03	\$16,987.12	\$15,299.29	\$14,056.61	\$11,587.92	\$85,857.54
583								
584	COG Rate - (Summer)							
585	COG amount - Summer							
586								
587	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
588	LDAC amount	\$1,348.83	\$1,556.87	\$1,767.47	\$1,591.85	\$1,462.56	\$1,205.69	\$8,933.27
589								
590	Total Bill	\$20,878.30	\$23,962.18	\$27,084.03	\$24,480.80	\$22,564.15	\$18,756.57	\$137,726.03

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
21,519	19,047	19,313	21,119	19,654	22,956	123,608	303,490
\$883.94 \$0.00 \$2.159.31	\$883.94 \$0.00 \$1.911.32	\$883.94 \$0.00 \$1.938.03	\$883.94 \$0.00 \$2.119.27	\$883.94 \$0.00 \$1.972.17	\$883.94 \$0.00 \$2.303.59	\$5,303.65 \$0.00 \$12.403.69	\$10,607.30 \$0.00 \$50.035.25
\$3,043.25	\$2,795.26	\$2,821.97	\$3,003.21	\$2,856.11	\$3,187.53	\$17,707.34	\$60,642.56
\$0.3809 \$8,196.40	\$0.3809 \$7,255.05	\$0.3809 \$7,356.45	\$0.3809 \$8,044.40	\$0.3809 \$7,486.04	\$0.3809 \$8,744.03	\$0.3809 \$47,082.38	\$0.4380 \$132,939.91
\$0.0497 \$1,068.65	\$0.0497 \$945.92	\$0.0497 \$959.14	\$0.0497 \$1,048.83	\$0.0497 \$976.03	\$0.0497 \$1,140.05	\$0.0497 \$6,138.62	\$0.0497 \$15,071.89
\$12,308.30	\$10,996.23	\$11,137.56	\$12,096.44	\$11,318.19	\$13,071.61	\$70,928.34	\$208,654.36

591 Winter Season (Jan. - Apr., Nov. - Dec.) 

592		al Use, Load Factor L	ess Than 90% (G-5	(3)					
593									
594		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter	May
595		27,160	31,349	35,590	32,054	29,450	24,278	179,882	21,5
596									
597	Winter:								
598		\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37	
599		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
600		\$4,629.87	\$5,343.97	\$6,066.86	\$5,464.06	\$5,020.25	\$4,138.57	\$30,663.58	
601									
602									
603									
604									\$761
605	Headblock								\$0.0
606									\$1,75
607	HB Threshold								
608									
609		\$5,391.26	\$6,105.36	\$6,828.26	\$6,225.46	\$5,781.64	\$4,899.96	\$35,231.94	\$2,52
610									
611	COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	
612		\$13,015.17	\$15,022.60	\$17,054.74	\$15,360.19	\$14,112.57	\$11,634.05	\$86,199.31	
613									
614									\$0.3
615									\$8,14
616									
617		\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.04
618		\$1,298.26	\$1,498.50	\$1,701.20	\$1,532.17	\$1,407.72	\$1,160.49	\$8,598.35	\$1,028
619									
620	Total Bill	\$19,704.69	\$22,626.46	\$25,584.20	\$23,117.82	\$21,301.93	\$17,694.50	\$130,029.60	\$11,69
621									
622									
623		\$1,173.61	\$1,335.72	\$1,499.83	\$1,362.98	\$1,262.23	\$1,062.07	\$7,696.43	\$611
624		5.96%	5.90%	5.86%	5.90%	5.93%	6.00%	5.92%	5.23
625									
626		\$1,174.64	\$1,336.91	\$1,501.18	\$1,364.20	\$1,263.35	\$1,063.00	\$7,703.28	\$522
627	% Change	21.79%	21.90%	21.98%	21.91%	21.85%	21.69%	21.86%	20.7
628									
n 629		(\$1.03)	(\$1.19)	(\$1.36)	(\$1.22)	(\$1.12)	(\$0.92)	(\$6.85)	\$89.
÷ 630	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.98
4									

Summer	Season	(May -	Oct.)

Summer Season (May - Oct.)

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/2 Total
21,519	19,047	19,313	21,119	19,654	22,956	123,608	303,49
\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37	\$9,136.
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
\$1,759.49	\$1,557.41	\$1,579.18	\$1,726.86	\$1,607.00	\$1,877.05	\$10,106.98	\$40,770.
\$2,520.88	\$2,318.81	\$2,340.57	\$2,488.25	\$2,368.39	\$2,638.44	\$14,675.34	\$49,907.
\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.438
\$8,146.91	\$7,211.24	\$7,312.03	\$7,995.82	\$7,440.84	\$8,691.23	\$46,798.08	\$132,997
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
\$1,028.58	\$910.45	\$923.18	\$1,009.51	\$939.44	\$1,097.31	\$5,908.47	\$14,506.
\$11,696.37	\$10,440.50	\$10,575.78	\$11,493.58	\$10,748.67	\$12,426.98	\$67,381.89	\$197,411
\$611.93	\$555.73	\$561.78	\$602.86	\$569.52	\$644.63	\$3,546.44	\$11,242.
5.23%	5.32%	5.31%	5.25%	5.30%	5.19%	5.26%	5.70%
\$522.37	\$476.45	\$481.40	\$514.96	\$487.72	\$549.09	\$3,032.00	\$10,735.
20.72%	20.55%	20.57%	20.70%	20.59%	20.81%	20.66%	21.519
\$89.56	\$79.27	\$80.38	\$87.90	\$81.80	\$95.54	\$514.45	\$507.59
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	

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Summer Season (May - Oct.)

631 Winter Season (Jan. - Apr., Nov. - Dec.) 632 Commercial/Industrial - High Annual Use, Load Factor Greater Than 90% (G-54)

Line No

032	Commercial/Industrial - High Annua	TUSE, LOAU FACIOR G	reater finali 90 % (C	3-34)				
633	PROPOSED							
634		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
635	average Usage (Therms)	61,794	48,201	46,759	46,199	40,987	48,188	292,128
636								
637	Winter:							
638	Cust. Chg	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$883.94	\$5,303.65
639	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
640	Tailblock	\$5,559.41	\$4,336.53	\$4,206.81	\$4,156.44	\$3,687.49	\$4,335.34	\$26,282.01
641	HB Threshold							
642								
643	Summer:							
644	Cust. Chg							
645	Headblock							
646	Tailblock							
647	HB Threshold							
648								
649	Total Base Rate Amount	\$6,443.35	\$5,220.47	\$5,090.75	\$5,040.38	\$4,571.43	\$5,219.28	\$31,585.66
650								
651	COG Rate - (Winter)	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773	\$0.4773
652	COG amount - Winter	\$29,494.06	\$23,006.38	\$22,318.15	\$22,050.94	\$19,563.06	\$23,000.04	\$139,432.64
653								
654	COG Rate - (Summer)							
655	COG amount - Summer							
656								
657	LDAC	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497	\$0.0497
658	LDAC amount	\$3,068.79	\$2,393.76	\$2,322.15	\$2,294.35	\$2,035.49	\$2,393.10	\$14,507.63
659								
660	Total Bill	\$39,006.20	\$30,620.61	\$29,731.05	\$29,385.66	\$26,169.99	\$30,612.42	\$185,525.93

661 Winter Season (Jan. - Apr., Nov. - Dec.) 662 Commercial/Industrial - High Annual Use, Load Factor Greater Than 90% (G-54)

662	Commercial/Industrial - High Annual U	se, Load Factor G	reater Than 90% (G	i-54)				
663	CURRENT							
664		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	Winter
665	average Usage (Therms)	61,794	48,201	46,759	46,199	40,987	48,188	292,128
666								
667	Winter:							
668	Cust. Chg	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37
669	Headblock	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
670	Tailblock	\$4,019.42	\$3,135.29	\$3,041.49	\$3,005.08	\$2,666.03	\$3,134.42	\$19,001.73
671	HB Threshold							
672								
673	Summer:							
674	Cust. Chg							
675	Headblock							
676	Tailblock							
677	HB Threshold							
678								
679	Total Base Rate Amount	\$4,780.81	\$3,896.68	\$3,802.89	\$3,766.47	\$3,427.43	\$3,895.82	\$23,570.10
680								
681	COG Rate - (Winter)	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792	\$0.4792
682	COG amount - Winter	\$29,611.47	\$23,097.96	\$22,407.00	\$22,138.72	\$19,640.94	\$23,091.60	\$139,987.68
683								
684	COG Rate - (Summer)							
685	COG amount - Summer							
686								
687	LDAC	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478
688	LDAC amount	\$2,953.73	\$2,304.01	\$2,235.09	\$2,208.33	\$1,959.18	\$2,303.38	\$13,963.71
689								
690	Total Bill	\$37,346.02	\$29,298.66	\$28,444.97	\$28,113.52	\$25,027.54	\$29,290.79	\$177,521.50
691								
692	DIFFERENCE:							
693	Total Bill	\$1,660.18	\$1,321.96	\$1,286.08	\$1,272.15	\$1,142.44	\$1,321.63	\$8,004.44
694	% Change	4.45%	4.51%	4.52%	4.53%	4.56%	4.51%	4.51%
695								
696	Base Rate	\$1,662.54	\$1,323.79	\$1,287.86	\$1,273.91	\$1,144.01	\$1,323.46	\$8,015.56
697	% Change	34.78%	33.97%	33.87%	33.82%	33.38%	33.97%	34.01%
698								1
699	COG & LDAC	(\$2.35)	(\$1.84)	(\$1.78)	(\$1.76)	(\$1.56)	(\$1.84)	(\$11.13)
700	% Change	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/21 Total
58,766	61,809	64,600	68,379	65,031	64,466	383,051	675,179
\$883.94 \$0.00	\$883.94 \$0.00	\$883.94 \$0.00	\$883.94 \$0.00	\$883.94 \$0.00	\$883.94 \$0.00	\$5,303.65 \$0.00	\$10,607.3 \$0.00
\$2,867.24 \$3,751.18	\$3,015.75	\$3,151.90	\$3,336.30	\$3,172.92	\$3,145.38	\$18,689.48	\$44,971.5
\$0.3809 \$22,383.82	\$0.3809 \$23,543.16	\$0.3809 \$24,606.08	\$0.3809 \$26,045.63	\$0.3809 \$24,770.18	\$0.3809 \$24,555.16	\$0.3809 \$145,904.03	\$0.4226 \$285,336.6
\$0.0497 \$2,918.41	\$0.0497 \$3,069.57	\$0.0497 \$3,208.15	\$0.0497 \$3,395.84	\$0.0497 \$3,229.55	\$0.0497 \$3,201.51	\$0.0497 \$19,023.03	\$0.0497 \$33,530.6
\$29.053.41	\$30,512,42	\$31.850.08	\$33.661.71	\$32.056.59	\$31,785,99	\$188.920.20	\$374,446.

May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Summer	2020/2 Tota
58,766	61,809	64,600	68,379	65,031	64,466	383,051	675,17
\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$761.39	\$4,568.37	\$9,136
\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01
\$2.073.00	\$2.180.37	\$2.278.80	\$2.412.12	\$2.294.00	\$2.274.09	\$13,512.38	\$32.514
\$2,834.39	\$2,941.76	\$3,040.20	\$3,173.52	\$3,055.40	\$3,035.48	\$18,080.75	\$41,650
\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.3786	\$0.422
\$22,248.66	\$23,401.00	\$24,457.50	\$25,888.36	\$24,620.61	\$24,406.89	\$145,023.01	\$285,01
\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.0478	\$0.047
\$2,809.00	\$2,954.48	\$3,087.87	\$3,268.52	\$3,108.47	\$3,081.48	\$18,309.83	\$32,273
\$27,892.04	\$29,297.25	\$30,585.57	\$32,330.40	\$30,784.47	\$30,523.85	\$181,413.59	\$358,93
\$1,161.37	\$1,215.17	\$1,264.50	\$1,331.31	\$1,272.12	\$1,262.14	\$7,506.61	\$15,511
4.16%	4.15%	4.13%	4.12%	4.13%	4.13%	4.14%	4.32
\$916.79	\$957.93	\$995.64	\$1,046.72	\$1,001.47	\$993.84	\$5,912.39	\$13,927
32.35%	32.56%	32.75%	32.98%	32.78%	32.74%	32.70%	33.44
\$244.58	\$257.24	\$268.86	\$284.59	\$270.65	\$268.30	\$1,594.22	\$1,583.
0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.98%	0.50%