**STATE OF NEW HAMPSHIRE**
**BEFORE THE**
**NEW HAMPSHIRE PUBLIC UTILIITES COMMISSION**

Docket No. DG 22-045
**Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty**
**Winter 2022-2023 and Summer 2023 Cost of Gas**
**(Re: Revenue Decoupling Adjustment Factor)**

Supplemental Technical Statement of Faisal Deen Arif, Gas Director &
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Department of Energy, Division of Regulatory Support
**April 3, 2024**

The New Hampshire Department of Energy ("DOE" or the "Department") submits this technical statement[2] pursuant to the proceedings in Dkt. No. DG 22-045 and the revised procedural schedule approved by the Public Utilities Commission ("PUC" or the "Commission") through a Procedural Order dated March 15, 2024.[3]

This statement pertains to the overall RDAF claim of $3,813,298[4] (hereafter referred to as $3.8 million) in the 2021-22 Revenue Decoupling Adjustment Factor (RDAF), as was reported in the Technical Statement dated January 12, 2024[5], by Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty ("Liberty", or "the Company").

The purpose of this statement is to provide the Commission with additional information on the Department's analytical findings in an effort to validate Liberty's overall ask of $3.8 million from their third and fourth Decoupling Year ("DY3"[6] and "DY4"[7]) periods.

The Department supports Liberty's RDAF claim of $3.8 million as the Company's calculation appears to be in compliance with the relevant Tariff provisions pertaining to RDAF. Tariff 11[8], Original Page 36, Section 19, Sub-section D (5). As such, the Department recommends the that

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[1] See Attachment 1, CV of Ashraful Alam.

[2] The testimony was submitted on June 8, 2023. See Tab 89 in DG 22-045.

[3] See Procedural Order Re: Proposed Procedural Schedule.

[4] The Department notes that the reported RDAF under-collection from 2021-22 period was $3,511,438. Please see Liberty's Technical Statement from December 8, 2022 in Dkt. No. DG 22-045 (Tab 41). The amount $3,511,438 includes under-collection of $727,670 from DY3 and deficiency of $2,783,768 from DY4 period. The updated prior-period under-collection of $3,813,298 is $301,860 higher than the reported RDAF under-recovery from Liberty's December 8, 2022 technical statement and can be attributed to accumulated carrying charges.

[5] See Technical Statement of Tyler J Culbertson & Adam R. M. Yusuf (Bates p. 001), and the accompanying Schedules (Bates pp. 28-30), Tab 44 in Dkt. No. DG 23-076.

[6] DY3 spans the time period September 1, 2020 to August 31, 2021.

[7] DY4 covers the time period September 1, 2021 to August 31, 2022.

[8] For Tariff 11, see Dkt. No. DG 20-105, Exhibit 49, starting at Bates 50.

the Commission approve recovery of this amount through RDAF rates currently in place for the duration February 1, 2024 through January 31, 2025.  See p. 3, 5 of PUC Order No. 26,940 (January 31, 2024) in Dkt. No. DG 23-076 (Tab 51).

Notwithstanding the support, the Department observes that the current *Revenue Per Customer* (RPC) decoupling structure may have, inadvertently, over-compensated the Company that was not envisioned at the development of the current decoupling framework and, therefore, may have contravened the purpose[9] of RDAF.  Consequently, the mere mathematical application of RPC formula may have led to undue harm to the other party, namely the ratepayers, which is an area of significant concern to the Department.  For elaborative discussion on this, please see Section 5.

The current technical statement is organized as follows:
1. Background
2. Summary of Docket Activity
3. RDAF Analytical Framework
4. Summary of DOE Analysis
5. DOE Observations
6. DOE Recommendations for DY3 and DY4

## 1.  Background

Pursuant to Section 19 of Liberty's current Tariff 11, the Company made its initial petition for approval of the Revenue Decoupling Adjustment Factor (RDAF) for Decoupling Year 4 (DY4) on August 3, 2022.  Through Order No. 26,692 dated September 29, 2022, the Commission severed the RDAF under-collection recovery request and put the matter on a separate procedural schedule.

An initial procedural schedule was developed and was approved by the Commission in its Procedural Order dated November 17, 2022.  This was subsequently amended and approved by the PUC via Procedural Order dated April 27, 2023.  A hearing was scheduled for August 30, 2023.

After holding the hearing in August, through Procedural Order dated September 1, 2023, the Commission continued the hearing and set November 8, 2023 as Hearing Day Two .  Upon requests from various parties, the procedural schedule was further modified multiple times.  The latest scheduled was submitted on March 12, 2024 and was approved by the Commission in its Procedural Order dated March 15, 2024.  Hearing Day Two is scheduled for May 14, 2024.

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[9] See Liberty's Tariff 11, Original Page 35, Section 19, Sub-Section D (1) ("Revenue decoupling eliminates the link between volumetric sales and Company revenue in order to align the interests of the Company and customers with respect to changing customer usage by establishing an allowed revenue per customer ("RPC").

## 2. Summary of Docket Activity

Throughout the proceeding of this case, due to the complexities pertaining to RDAF matters, the Department issued multiple data requests (DRs) and held several technical sessions (TS) with the Company.  This led to the submission of DOE testimony of Arif and Thompson on June 8, 2023.  Mr. Thompson also testified at Hearing Day One, August 30, 2023, and is expected to testify at Hearing Day Two.  Mr. Thompson supports the results of the DOE analysis as described in a separate contemporaneous *Supplemental Technical Statement of Mark Thompson* filed in this docket.

After August 30, 2023, more DOE DRs were issued and information was provided by Liberty.[10]

The current technical statement benefits from the DOE analytics, the development of which was made possible through exchange of information by Liberty.

## 3. RDAF Analytical Framework

Liberty's current RDAF is structured after a *Revenue Per Customer* ("RPC") model.  This model along with its specific RPC values for each rate class were developed in the Company's last rate case, Dkt. No. DG 20-105, using the 2019 Test Year ("TY") billing determinants[11].

The Revenue Decoupling Mechanism (RDM) was proposed to "eliminates the link between volumetric sales and Company revenue in order to <u>align the interests of the Company and customers</u> with respect to changing customer usage".  See Liberty Tariff 11, Section 19, Sub-Section D (1).  Additionally, the proposed RPC-based decoupling model was designed to "fix a flaw in the traditional ratemaking methodology that does not allow utilities a reasonable opportunity <u>to earn a reasonable return</u> when customer usage is declining" (emphasis added).[12] For a greater discussion on the history of the development of Liberty's Revenue Decoupling Mechanism (RDM) and the current RPC model, see Dkt. No. DG 17-048, Direct Testimony of Gregg H. Therrien (Exhibit 8) and Rebuttal Testimony (of) Gregg Therrien (Tab 29, Exhibit 27B).

Two factors – the impact of Energy Efficiency (EE) [13], and the <u>reasonable</u> opportunity for a <u>reasonable</u> recovery of utility costs and return[14] – played significant role in the development of

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[10] Liberty provided both reported information and source data.

[11] The billing determinants, among others, included: i) the number or count of customers per rate class, per month; and ii) the total therm sales per rate class, per month.

[12] See DG 17-048, Direct Testimony of Gregg H. Therrien; Bates 283, lines 6-8.

[13] In Dkt. No. DG 17-048, Liberty witness writes: "By eliminating the link between customer consumption and Company earnings, decoupling removes the disincentive for utilities to promote conservation and energy efficiency programs." See Direct Testimony of Gregg H. Therrien, Bates p. 283, Lines 13-15.

[14] In Dkt. No. DG 17-048, Liberty witness highlights the following: "While reduced energy usage is good for individual consumers and society as a whole, it does have a negative impact on a utility's ability to earn its allowed rate of return under traditional ratemaking."  See Direct Testimony of Gregg H. Therrien, Bates p. 285, Lines 20-22 (emphasis added).

current RPC decoupling framework.  As such, the performance of the current RPC model must be evaluated against the envisioned objective set out for laying down a decoupling framework. DOE's current analysis takes this into account.

The utility business model reflects distribution costs that are largely fixed and change very little in the short run with changes in usage levels.  Yet the distribution rates have a significant variable, or usage-based component, that changes revenues and, consequently, the reasonable recovery of costs.

The RDM was conceived to correct this misalignment by adjusting the Company's actual revenues to match its approved revenues[15,16].  As such, the approved revenues and the revenue requirement calculation performed in Liberty's last distribution rate case (i.e., DG 20-105) to arrive at the approved revenue requirement level bear significance.  A holistic evaluation of the performance of current RPC decoupling framework, therefore, requires a thorough evaluation of the underlying cost components leading up to the approved revenue requirement level.

In particular, performance of the RPC model should evaluate whether Liberty have had a reasonable opportunity to recover its costs.  To the extent the costs are recovered, the objective of the decoupling framework would have been met.  Alternatively, if the current RPC model provides additional revenues beyond the reasonable recovery of costs, this would essentially run contrary to the envisioned revenue decoupling objective (and also inflict undue harm to ratepayers).  The Department's analysis takes this into account.

Without undermining the significance of this broader scope of evaluation, in DOE's view, Liberty appears to have followed the RPC calculation methodology as stipulated in its Tariff 11.  This fact was also accounted for in DOE's recommendations.

Along the course of this docket, DOE's analysis has generated concerns about the RPC model in general.  The development of Liberty's current RPC model, inherently, reflects an average energy consumption behavior (i.e., the Usage Per Customer, UPC, or simply the usage) by the customers for every rate class, and over a given unit of time (i.e., monthly).  With changes in the unit price of the commodity (i.e., price per therm) between the Test Year ("TY")[17] and the subsequent Decoupling Years ("DYs"), such usage would naturally vary as a response to varying unit prices.  The price elasticities would capture such variations.  Any UPC variation beyond what can be explained by the price response could be attributed to all other factors (including but not exclusively, the Energy Efficiency).

Additionally, the *per customer* structure of the RPC model implies that the Company is entitled to a certain amount of decoupled revenue for every customer it finds in the subsequent

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[15] The "allowed revenue" was calculated on a per customer class basis in DG 20-105 based on approved distribution revenue (emphasis added).

[16] See Liberty Tariff 11, Section 19, Sub-Section D (5) for greater understanding regarding the linkages between "allowed" and "approved" (distribution) revenue.

[17] When RDM was designed.

periods. This immediately draws attention to three factors: a) the customer count methodology; b) the impact of customer growth over time on RDAF recovery request; and c) the cost recovery components that were inherent in the allowed revenue requirement calculation.[18]

Taken together, it implies that the current RDAF ask could be explained by the observed variation between the Test Year (TY2019) and the subsequent Decoupling Years (DY3 and DY4) in terms of:

    i)   The variation in customer count (i.e., the customer growth aspect);
    ii)  The variation in price per therm; and/or
    iii) The variation in UPC (i.e., the price response and the non-price response aspects).

This provides the basis for the Department's current analytical framework. See Attachment 2 for a detailed exposition of the theoretical and empirical models used by the Department.


## 4. Summary of DOE Analysis[19]

Based on the information sourced from DG 20-105, from DG 22-045 and the Company's data responses, the following is a summary of Department's analytical findings[20]:

4.1 We observe that Liberty has a *Revenue Per Customer* (RPC) decoupling structure. Three variables are of primary interest under an RPC structure. These include:
    a.  The commodity unit price, $p$, measured in terms of price per therm;
    b.  The customer count, $n$, measured using the Company methodology;
    c.  The usage per customer (UPC), $q$, measured in terms of average therm consumption.
These are our variables of interest. See Attachment 2 for an overview of DOE's analytical models.

4.2 Any RDAF ask could be explained by:
    a.  Significant (in the sense of statistical significance) variation in customer numbers (i.e., customer growth factor) between TY2020 and DY1 at levels;
    b.  Significant variation in usage per customer (i.e., the UPC factor) between the same timeframes; or
    c.  A combination of both.

4.3 Do we observe any difference in these variables? More specifically, do we observe:
    a.  The difference at levels? In other words, do we see any differences for the variables of interest between their TY2020 level and their DY1 level; and

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[18] The interplay between "embedded costs", "average costs", and "marginal costs" and their impacts in the final class-level revenue requirements bear significance for an RPC decoupling structure.
[19] Please see Attachment 3, DOE Summary of Model Results.
[20] For all relevant values, please refer to the Tables in Attachment 4 (provided in live format).

b. (more importantly) Is there any statistically significant differences in those variables that can related to the current RDAF ask?  The answer to the latter question also bears policy significance.

The DOE's analysis attempted to answer these questions.

4.4 In comparing the variables at level, we observe:

**Table 1.1 : Customer Count (n - Equivalent Bills)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 82,909 | 85,151 | 85,674 |
| C&I | 12,605 | 12,913 | 12,993 |
| Total | 95,514 | 98,064 | 98,667 |

**Table 1.2 :  Customer Count – Y-o-Y Growth**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | 2.7% | 3.3% | 3.0% | 1.1% |
| C&I | 2.4% | 3.1% | 2.8% | 1.0% |
| Total | 2.7% | 3.3% | 3.0% | 1.1% |

a. Liberty had 95,514 customers in an average month in TY2019.  In the DY3 year (i.e., between September 2020 and August 2021), they reported 98,064 customers in an average month.  For DY4 (spanning September 2021 through August 2022) the reported number of customers was 98,667.  This indicates, relative to TY2019, a 2.7% customer growth in DY3 and a 3.3% growth in DY4 on an average-month basis.  In general, on a cumulative basis, this represents a 1.1% year-over-year growth in the customer base since TY2019.

**Table 2.1 : Usage Per Customer (Therm)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 64.6 | 58.5 | 57.7 |
| C&I | 749.3 | 684.8 | 675.7 |
| Total | 155.4 | 141.3 | 139.5 |

**Table 2.2 : UPC – Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | -9.5% | -10.7% | -10.1% | -3.7% |
| C&I | -8.6% | -9.8% | -9.2% | -3.4% |
| Total | -9.1% | -10.3% | -9.7% | -3.5% |

b. At the Company level, Liberty reported an average usage of 155.4 therms per month in TY2019.  In DY3, it is reported to be 141.3 therms per month, registering a fall of 9.1% on an average-month.  In DY4, the UPC was reported to be 139.5 therms, a fall of 10.3% relative to TY2019.  On a cumulative basis, this continuous fall in UPC accounts for a year-over-year decline of 3.5% since TY2019.

**Table 3.1 : Price Per Therm ($)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 0.7011 | 1.0076 | 1.3767 |
| C&I | 0.7078 | 0.7628 | 1.1025 |
| Total | 0.7044 | 0.8852 | 1.2396 |

**Table 3.2 : Average Price – Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | 43.7% | 96.4% | 70.1% | 25.2% |
| C&I | 7.8% | 55.8% | 31.8% | 15.9% |
| Total | 25.7% | 76.0% | 50.8% | 20.7% |

c.  In terms of price per therm, gas prices are observed to vary significantly both across rate classes and over time. Overall, the price per therm rose by 25.7% between TY2019 and DY3. BY DY4, the price hike registers an increase of 76% relative to TY2019. More interestingly, on a cumulative basis, gas prices register a year-over-year rise by 20.7% since TY2019. This temporal price variation, however, is different between the sectors. While on a year-over-year basis gas prices encountered by the ratepayers rose by 25.2% for the residential customers, in C&I sector prices rose by an average 15.9% per year. These differences are significant as they would elicit different usage and gas consumption behavior depending on the price elasticity of the specific sector.

**Table 4.1 : Sales (Therm)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 64,132,575 | 59,485,775 | 59,088,893 |
| C&I | 113,906,893 | 106,307,619 | 105,709,196 |
| Total | 178,039,468 | 165,793,394 | 164,798,089 |

**Table 4.2 : Sales – Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | -7.2% | -7.9% | -7.6% | -2.7% |
| C&I | -6.7% | -7.2% | -6.9% | -2.5% |
| Total | -6.9% | -7.4% | -7.2% | -2.5% |

d.  For therm sales, at the total Company level the overall sales kept decreasing from about 178 million therms in TY2019 to 165.8 million (i.e., a fall of 6.9% relative to TY) in DY3 to 164.8 million therms (i.e., a fall of 7.4% relative to TY) in DY4. On a cumulative basis, since TY2019, Liberty experienced a year-over-year average fall of 2.5% in gas sales.

| Table 5.1 : Revenues without RDAF ($) | | | |
|---|---|---|---|
| | Test Year | DY3 | DY4 |
| Residential | 48,161,903 | 50,346,404 | 49,382,370 |
| C&I | 38,909,995 | 39,797,551 | 39,660,589 |
| Total | **87,071,898** | 90,143,955 | 89,042,958 |
| | | | |
| Authorized Revenue: | | 89,782,950 | 91,082,950 |

| Table 5.2 : Revenues without RDAF – Y-o-Y Change | | | | |
|---|---|---|---|---|
| | | | Avg Growth Rate | Cumulative Growth Rate |
| | DY3 | DY4 | (DY3 & DY4) | (TY to DY4) |
| Residential | 4.5% | 2.5% | 3.5% | 0.8% |
| C&I | 2.3% | 1.9% | 2.1% | 0.6% |
| Total | 3.5% | 2.3% | 2.9% | 0.7% |

e. In terms of distribution revenues without RDAF (i.e., without accounting for decoupling revenues), Liberty reported $87.1 million in TY2019, which increased to $90.1 million in DY3 and $89.0 million in DY4. These represented a year-over-year average revenue growth of 0.7% since TY2019.

4.5 In comparing the variables of interest at the sectoral level, we observe:

*Customer Count*

a. In the residential sector, the reported average number of customers per month in TY2019 was 82,909, which was reported to be 85,151 in DY3 and 85,674 in DY4. Relative to the TY2019, this registers a residential customer growth of 2.7% in DY3 and 3.3% in DY4 respectively, and a year-over-year average residential customer growth of 1.1% since TY2019. Interestingly, the R-4 (i.e., low-income heating residential customers) registers a negative growth of 8.9% in DY3, while the other residential classes register a positive growth. For DY4, only the R-1 (i.e., non-heating residential customers) registers a negative growth of 0.8%. See Table 1.1 through 1.7 in Attachment 4.

b. The C&I sector, on the other hand, reported a total of 12,605 customers on an average month during TY2019. This increased to 12,913 customers in DY3 and 12,993 in DY4; reporting a 2.4% and 3.1% customer growth respectively. On a year-over-year basis, customer base grew by 0.9% in the C&I sector since TY 2019. Please refer to Table 1.1 through 1.7 in Attachment 4 for further details.

*Sales*

c. Total therm sales in the residential sector in TY2019 was reported to be 64.1 million therms. This reduced to 59.5 million in DY3 and further reduced to 59.1 million therms in DY4; recording a 7.2% and 7.9% decline in total sales respectively. The R-3 and R-4 (i.e., heating residential customers) rate classes showed a decline in total consumption in DY3 and DY4 when compared to TY2019; whereas the other residential rate classes showed an increase in consumption. Overall, the residential therm sales on average fell by 2.7% year-over-year since TY2019. See Table 2.1 through 2.7 in Attachment 4.

8

d. For the C&I sector, a total consumption of 113.9 million therms was reported in TY2019; which is reduced to 106.3 million therms in DY3 and 105.7 million therms in DY4. This registers a 6.7% and 7.2% decline in total consumption in DY3 and DY4 respectively. All the C&I rate classes had less consumption except for G-43, G-44, G-45 and G-55 in both DY3 and DY4 when compared to TY2019. Overall, the C&I sector oversaw an average 2.5% decline is consumption since TY2019. Detailed information can be found in Table 2.1 through 2.7 in Attachment 4.

*Revenues*

e. The reported revenue (without RDAF) for the residential customers in TY2019 was $48.2 million, which is reported to be $50.3 million in DY3 and $49.4 million in DY4. This registers a revenue growth of 4.5% in DY3 and 2.5% in DY4 respectively. On a cumulative basis, this implies that the residential sector oversaw an average 0.8% revenue growth since TY2019. See Table 3.1 through 3.7 in Attachment 4.

f. The C&I sector reported a revenue (without RDAF) of $38.9 million during TY2019. This increased to $39.8 million in DY3 and $39.7 million in DY4; reporting a 2.3% and 1.9% revenue growth respectively. Since TY219, this also represents an average year-over-year revenue growth of 0.6%. Please refer to Table 3.1 through 3.7 in Attachment 4 for more details.

*Gas (per therm) Price*

g. In TY2019, residential gas prices on average were $0.7011 per therm. It went up to $1.0076 (a 43.7% increase) in DY3. In DY4, it further went up to $1.3767, registering a 96.4% increase relative to TY2019 levels. On a year-over-year basis, gas prices in the residential sector rose by an average 25.2% per year between TY2019 and DY4 (until August 31, 2022). See Table 4.1 through 4.7 in Attachment 4.

h. The average gas price for the C&I sector stood at $0.7078 in TY2019. By DY3, prices rose to an average $0.7628 per therm, registering a 7.8% hike. Gas prices further rose to an average $1.1025 per therm in DY4, representing a 55.8% increase relative to TY2019 levels. Overall, the average gas price rose by 15.9% per year between TY2019 and DY4. Please refer to Table 4.1 through 4.7 in Attachment 4 for more details.

*UPC*

i. In terms of usage per customer (UPC), the residential customer reported an average use of 64.6 therms per month in TY2019. This reduced to 58.5 therms per month in DY3 and 57.7 therms per month in DY4; registering a 9.5% and 10.7% decline in UPC per month respectively. The corresponding UPC values for R-1 and R-5 classes (i.e., non-heating residential customers) are 17.5 therms and 24.8 therms in TY2019. The UPC values for R-1 increased to 18.3 therms and decreased to 23.7 therms for R-5 in DY3. In DY4, the UPC values for R-1 and R-5 both increased to 18.8 and 28.9 therms respectively.

9

In TY2019, the corresponding UPC values for R-3, R-4, R-6, and R-7 classes (i.e., heating residential customers) are 66.8, 64.9, 102.4 and 87.6 therms respectively. For both DY3 and DY4, the UPC values for the heating residential customer classes witnessed a decline compared to TY2019 values. It is important to note that the DY3 and DY4 UPC figures are inclusive of the observed customer growth that occurred between TY2019 and DY3 and DY4. Overall, the residential sector experienced an average 3.7% year-over-year decline in UPC since TY2019. See Table 5.1 through 5.7 in Attachment 4.

j. Variations in the C&I sector are significant both across its fourteen separate rate classes[21] as well as in terms of their variability across time (i.e., TY2019 versus DY3 and DY4). See Attachment 4 for a review of the observed variations. Overall, while the UPC for an average C&I customer was 749.3 therms per month in TY2019, it is 684.8 therms in DY3 and 675.7 therms in DY4, registering a decrease of 8.6% and 9.8% on an average-month basis. Overall, there has been a 3.4% year-on-year decline in UPC since TY2019 for the C&I sector. See Table 5.1 through 5.7 in Attachment 4.

4.6 Taken together, the observed variations would validate Liberty's current RDAF recovery requests at levels. The question is whether it also validates the claim from a statistical perspective.

4.7 This inquiry led DOE to perform statistical analysis. See Attachment 2 for an overview of the statistical models.

4.8 In comparing the variables of interest for statistical significance, we observe:
   a. Customer growth between TY2019 and DY3 and TY2019 and DY4 are statistically significant in terms of explaining Liberty's RDAF revenue recovery request in respective decoupling years. This implies that customer count in TY2019 is significantly different from that of the customer counts in DY3 and DY4, indicating that, from a statistical perspective, the customer growth is predominantly responsible for the requested RDAF recovery amounts.

   b. When looked at the sectoral level, while customer count is found to be a statistically significant variable for the residential sector, it is not for the C&I sector (for both DY3 and DY4). This could imply potential cross-subsidization issues between the sectors that could be attributed to the current RPC structure.

   c. Overall, in DY3, estimates from the data indicate that a 1% increase in customer growth would lead to a 1.51% increase in RDAF revenue request (1.19% for residential and 1.83% for C&I). In terms of levels, the estimates show that one additional customer

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[21] That is, G-41, G-42, G-43, G-44, G-45, G-46, G-51, G-52, G-53, G-54, G-55, G-56, G-57, and G-58. G-43 and G-54 classes represent large customers. For example, UPC in G-43 class in TY2019 was 17,515.5 therms per month that declined to 15,290.9 therms per month in DY3 and 15,250.5 therms per month in DY4, a decline of 2,224.6 therms per month in DY3 and 2,265 per month in DY4, between the test year and the corresponding decoupling years.

added to the distribution system (i.e., the marginal customer) would increase the RDAF revenue request for all customers by $1.47 per month (or $17.38 annually).  The corresponding figures vary across residential and C&I sectors.  While the marginal customer in the residential sector raises RDAF revenues for all residential customers by $17.03 annually, it is observed to be $56.71 per year for C&I marginal customer.  These estimates are all statistically significant (except for C&I)[22]  which is indicative of growth impact on the current RPC decoupling structure.

d.  In DY4, estimates from the data indicate that a 1% increase in customer growth would lead to a 1.34% increase in RDAF revenue request (1.12% for residential and 1.57% for C&I).  In terms of levels, the estimates show that the marginal customer would cause the RDAF request for all customers to go up by $2.45 per month (or $29.41 annually).  The corresponding figures vary across residential and C&I sectors.  Whereas the marginal customer in the residential sector raises RDAF revenue request for all residential customers by $28.89 annually, it is observed to be $60.55 per year for C&I marginal customer.  These estimates are all statistically significant (except for C&I)[23]  which is indicative of growth impact on the current RPC decoupling structure.

4.9 A comparison of the usage difference between test year (TY) and decoupling year (DY) is not straight forward.  It is because per customer gas usage can vary for multiple reasons.  This, however, can be categorized in terms of UPC variation due to price changes (i.e., the price response), and the UPC variation for other reasons (i.e., the non-price response).  The latter category can include, among others, usage variation due to the Energy Efficiency program run by the utility.

4.10    The price response to UPC variation can be measured through price elasticities.  Overall, Liberty's gas sales appear be inelastic in nature for both DY3 and DY4.  This is largely due to the inelasticity of the C&I sector, where some customers are significantly larger than the customers in other sectors.  Residential customers generally exhibit higher price elasticity relative to their C&I counterparts.

4.11    The higher price elasticity of residential customers coupled with the observed hike in gas price per therm between TY2019 and DY3 and DY4 would imply that the residential sector would have responded by more than proportionally decreasing its sectoral gas demand.  This would manifest in terms of significant reduction in usage per customer despite the observed growth in customer count.  Indeed, between TY2019 and DY3, the residential UPC fell from 64.6 therms to 58.5 in DY3 and to 57.7 therm in DY4 on an average-month basis.

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[22] All observations are significant at least at 95% except for C&I, which is significant at 88%.  See Attachment 4.
[23] All observations are significant at least at 95% except for C&I, which is significant at 92%.  See Attachment 4.

## 5.  DOE Observations

5.1 We first take a reminder that Liberty has a Revenue Per Customer (RPC) decoupling Structure, that was proposed as a Revenue Decoupling Mechanism (RDM) in DG 17-048, and approved by the Commission in Order No. 26,122 (April 27, 2018).

5.2 The RDM was proposed to "fix a flaw in the traditional ratemaking methodology that does not allow utilities a reasonable opportunity to earn a reasonable return when customer usage is declining."(emphasis added)[24]  Additionally, the proposed RPC-based decoupling model was designed to "eliminate the link between volumetric sales and Company revenue in order to align the interests of the Company and customers with respect to changing customer usage".  See Liberty Tariff 11, Original Tariff Page 35 Section 19, Sub-Section D (1) (emphasis added).

5.3 As such, the underlying premise, and an inherent part of the ensuing Revenue Decoupling Mechanism (RDM) was to correct the misalignment by adjusting the Company's actual revenues to match its allowed revenues so that the Company has an opportunity of a reasonable recovery of its costs.

5.4 DOE observes that Liberty's authorized revenue level from its last rate case was determined to be $91,082,950.[25]  This included an approved Return on Equity (ROE) of 9.3%, a permanent increase to its distribution revenue requirement of $6,294,290, and an opportunity to recover capital expenditures placed in service in 2020 and 2021 via two step increases.[26]  The resulting approved revenue levels for DY3 and DY4 is summarized in Table 6 below.

| Table 6 : Revenue Impact of RPC Decoupling Structure | | Rate Case S/A (DG 20-105)* | DY3 | DY4 |
|---|---|---|---|---|
| (A) | Approved/Authorized Revenues: | 91,082,950 | 89,891,283** | 91,082,950 |
| (B) | Actual Revenue: | | 90,143,955 | 89,042,958 |
| (B) - (A) | (Actual - Authorized): | | 252,672 | (2,039,992) |
| (C) | RDAF Rev. Recovery Request: | | 2,426,364 | 3,085,628 |
| (D) = (B) + (C) | Total Rev. (= Actual + RDAF): | | 92,570,319 | 92,128,586 |
| (D) - (A) | Revenues above authorized level: | | 2,679,036 | 1,045,636 |

\* This represents the final approved revenue level per Settlement Agreement in DG 20-105 effective August 1, 2021.
\*\* The figure is lower since temporary rates plus recoupment were in effect over October 1, 2020 to July 31, 2021 that overlapped the DY3 period.

5.5 Table 6 provides a summary of the impact of RPC decoupling structure on Liberty's overall distribution revenues.  DOE notes that while in DY3 Liberty's actual revenues exceeded its

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[24] See DG 17-048, Direct Testimony of Gregg H. Therrien; Bates 283, lines 6-8.
[25] See Exhibit 49, in DG 20-105, Bates 005.
[26] See PUC Order No. 26,505 (July 30, 2021).

authorized level, in DY4 it fell short.  However, with the Company's recovery of the requested decoupling (i.e., RDAF) revenues, total revenues will exceed authorized level of revenues in both DY3 and DY4 by $2.7 million and $1.05 million respectively.

| Table 7.1 : Marginal Costs by Rate Class ($) from DG 20-105[27] | | | |
|---|---|---|---|
| Class | Customer-related | Capacity-related | Total |
| R-1 | 2,403,000 | 176,000 | 2,579,000 |
| R-3, R-4 | 53,177,000 | 25,674,000 | 78,851,000 |
| G-41 | 6,620,000 | 11,246,000 | 17,866,000 |
| G-42 | 1,746,000 | 13,608,000 | 15,354,000 |
| G-43 | 154,000 | 3,900,000 | 4,054,000 |
| G-51 | 2,620,000 | 815,000 | 3,435,000 |
| G-52 | 494,000 | 1,863,000 | 2,357,000 |
| G-53 | 182,000 | 1,998,000 | 2,180,000 |
| G-54 | 79,000 | 1,152,000 | 1,231,000 |
| Total | 67,475,000 | 60,432,000 | 127,907,000 |

| Table 7.2 : Marginal Costs by Rate Class (%) | | | |
|---|---|---|---|
| Class | Customer-related | Capacity-related | Total |
| R-1 | 1.9% | 0.1% | 2.0% |
| R-3, R-4 | 41.6% | 20.1% | 61.6% |
| G-41 | 5.2% | 8.8% | 14.0% |
| G-42 | 1.4% | 10.6% | 12.0% |
| G-43 | 0.1% | 3.0% | 3.2% |
| G-51 | 2.0% | 0.6% | 2.7% |
| G-52 | 0.4% | 1.5% | 1.8% |
| G-53 | 0.1% | 1.6% | 1.7% |
| G-54 | 0.1% | 0.9% | 1.0% |
| Total | 52.8% | 47.2% | 100.0% |

5.6 Table 7 above provide summary of Liberty's Marginal Cost Study (MCOSS) submitted in its last distribution rate case in Dkt. No. DG 20-105.  The tables show that about 52.8% of additional costs, incurred due to marginal customer i.e., the last customer added to the distribution network, relates to customer-related charges.  The rest is incurred due to capacity-related costs.

5.7 In utility business model, the "Capacity-related" marginal costs (MCs) are generally lumpy, meaning that such costs are incurred in blocks/chunks.  Also, due to the design-day capacity requirements, utilities generally carry excess capacity.  That is, planned redundancy is a feature of the utility business model.  The investments leading to these excess capacity-related costs are generally accounted and compensated for through their inclusion into the utility rate base.  Furthermore, the utilities earn return on (via ROE) and return of (i.e., through the revenue requirement calculation) these capacity-related investments through the rate case proceedings.

5.8 Given this, the Department observes that the RPC or the *per customer* decoupling structure creates multiple misalignments:
   a. First, the class-level RPCs were developed in Liberty's last rate case, DG 20-105.  The development those RPCs made use of two factors: the exiting number of customers in TY2019, and the allowed revenue requirement figures that were derived using Liberty's

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[27] See Dkt. No. DG 20-105, Direct Testimony of Matthew J. DeCourcey, Bates II-418, Line 3.

FCOSS and MCOSS.[28]  Simply put, the RPC is the revenue requirement divided by the number of customers in existence in 2019.

As such, all utility costs inclusive of planned redundancies are inherently included in the approved revenue requirements.  The use of RPC beyond the TY, therefore, assumes that all of those costs are instantly incurred with the addition of a marginal customer.  This is not necessarily the case in utility management since some costs are incurred in discreet blocks (e.g., main extension with planned redundancies, payroll expense etc.)  This topic was highlighted in Liberty's MCOSS and FCOSS in Dkt. No DG 20-105.  See Direct Testimony of Matthew J. DeCourcey and Direct Testimony of Kenneth A. Sosnick.

Liberty's class-level revenue requirements included the planned redundancies.  As such, so long as the Company realizes its authorized revenue requirements, the Company is sufficiently compensated for its capacity-related costs.  In the context of RPCs, therefore, any RDAF revenue beyond the approved[29] level of revenues would unduly harm the ratepayers unless the Company can verifiably demonstrate[30] that some capacity-related costs have not be compensated for.

b.  Second, the RPC structure does not put any cap on the level of revenue requirement that the Company can realize.  This is the reason why Liberty effectively seeks more than the approved level of revenues.  See Table 6 above.

c.  Third, when the marginal costs are lower than the average costs[31], the use of RPC would over-compensate the Company and unduly harm the ratepayers.

d.  Fourth, the misalignment is further accentuated by periodic updates to RPCs through the approved step-adjustments.  In other words, while the step-adjustments compensate the utility for their additional capital investments, it also carries the same assumption of average costs being equal to marginal costs.

e.  Fifth, the *per customer* structure does not allow for price responsiveness aspect to usage adjustments into consideration.  When per therm price goes up, through price elasticities, the customers respond by reducing gas demand.  This creates natural usage variations.  However, depending on the price elasticity in different sectors, namely residential vs C&I, this may create opportunities for cross-subsidization between the sectors, even within the approved revenue level.

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[28] The Functional Cost of Service Study (FCOSS) and the Marginal Cost of Service Study (MCOSS).  See Direct Testimony of Kenneth A. Sosnick and Direct Testimony of Matthew J. DeCourcey in Dkt. No. DG 20-105.
[29] That is, the authorized level of revenues approved in Liberty's last rate case in DG 20-105.
[30] Uncompensated capacity-related costs were not the focus of inquiry in the instant docket, Dkt. No. DG 22-045.
[31] Also known as "embedded costs".

f.  Finally, the RPC structure creates misalignment in terms of compensating the Company for both the reduction in average usage and also for its growth in customer base.

5.9 Based on the above and in the absence of demonstration of additional (and verifiable) costs incurred by Liberty to serve new customers, any amount beyond the approved revenue requirement would not be just, reasonable and in the public interest.

## 6.  DOE Recommendation for DY3 and DY4

In light of the foregone analysis, the presented information, and given the circumstances, including Liberty's Tariff 11, the limited scope of this docket, and adherence to the RPC's mathematical formula, the relief requested by the Company appears to be just and reasonable and in the public interest.

Accordingly, the Department reluctantly recommends that the Commission approve Liberty's RDAF request of $3,813,298 (DY3 and DY4) to be recovered through 2023/24 COG Season as consistent with its Tariff 11, and thus just and reasonable and in the public interest.

However, the Department's position should not be construed as waiving its regulatory obligation to raise and take a position in a future docket that the RDAF formula itself is not just, reasonable and in the public interest, or that the RDAF tariff clauses should be otherwise modified.

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Concord, N.H. 03301-2429
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## SUMMARY

- **Education:** MA in Analytical Economics with specialization in Data Analytics, Macroeconomic Consulting, Behavioral Analysis, Policy Analysis and Strategic Planning.

- **Highlights of relevant professional experience:** Experience working as an Assistant Director at Bangladesh Rural Electrification Board; specialized in utility regulation, policy analysis and operational management. I managed regulatory activities, analyzed regulatory data, and derived actionable insights for performance improvement of the rural electric utilities.
  - Extensive experience in leveraging regulatory data to assess the financial condition and operational performance of the regulated rural electric utilities
  - Extensive experience in leading and supervising teams for evaluating the performance of the rate classes under given rate structure and providing recommendations for improvement
  - Experience in reviewing the regulatory activities in the rural utilities by performing collaborative monitoring, compliance audit, financial investigation and recommending necessary policy updates to the senior management
  - Significant experience in establishing Energy Regulatory Commission guidelines and providing detailed reports to the Ministry of Energy and Mineral Resources with actionable recommendations on program performance, operational management and policy issues
  - Experience in analyzing market conditions and industry trends, identifying existing strategy related issues, recommending appropriate rate structures and designing adaptive policies for process improvement
  - Extensive experience in establishing tariff compliance in the regulated rural utilities by regular collective supervision and designing strategic cost optimization plans for revenue enhancements
  - Demonstrated ability and extensive experience in establishing and maintaining continuous contact with external (e.g., other Government wings, international development partners, utility representatives, and the public) and internal officials/stakeholders (e.g., other units within and across the Departments/rural utilities)

- **Knowledge**
  - Knowledge of the mission, commitment, structure, and operations of the New Hampshire Department of Energy
  - Knowledge of the general jurisdiction and statutory and regulatory framework
  - Knowledge and experience in analyzing utility reports, analyzing market conditions and industry trends, resolving substantive industry issues related to utility service and regulatory policy
  - Extensive experience in preparing reports on performance of rate classes under given rate structure, developing performance improvement strategies, evaluating utility reports and tariff compliance

- **Linguistic profile:** Excellent oral and written communication skills in English

- **Personal Traits:** Great management and analytical skills; self-motivated problem solver and able to adopt innovative approaches for efficient results; committed to continuous learning, and upholding integrity and respect; sound judgment, values and ethics

- **Professional Goal:** Utilizing my Economics background with analytical skills and professional experience to effectively contribute towards maintaining stable regulatory practices, delivering strategic insights on energy-related proceedings and designing policies for a sustainable and affordable energy economy for the people of New Hampshire

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## EDUCATION

- MA, Analytical Economics, University of New Hampshire, Durham, N.H., 2023 (duration 2 years)
- Specialization in Data Analytics, Econometrics, Macroeconomic Analysis & Consulting, Financial Modelling and Behavioral Analysis
- MSS, Economics, University of Dhaka, Dhaka, Bangladesh, 2015 (duration 1 year)
- BSS, Economics, University of Dhaka, Dhaka, Bangladesh, 2014 (duration 4 years)

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## EMPLOYMENT OVERVIEW

**Utility Analyst**
**Gas Division; New Hampshire Department of Energy (NHDOE)**
**September 2023 – to-date**

- Work on contents and cases associated with various gas dockets before the Department
- Represent Departmental positions on gas dockets before the NH Public Utilities Commission (NHPUC)
- Coordinate communications and work plan among the Department and the regulated utility companies in New Hampshire
- Review and analyze the gas related reports submitted by the regulated utility companies, consolidate the reports and utilize relevant information for regulatory analysis
- Develop analytical frameworks and formats for efficient analysis of company filings
- Assist Departmental Senior Management in performing regulatory and administrative functions

**Assistant Director**
**Department of Financial Monitoring, Bangladesh Rural Electrification Board (BREB)**
**February 2019 – August 2021**

- Supervised regulatory activities, analyzed data, and devised actionable activities driven by insights from data analytics
- Wrote reports on performance of rate classes under given rate structure, identification of performance improvement and performed the relevant policy analysis

- Analyzed market conditions and industry trends and recommended applicable rate structures and necessary service changes
- Administered Energy Regulatory Commission guidelines, evaluated utility reports and tariffs for compliance with rules, and settled industry issues
- Fostered collaborative working relationships with development partners, central and local officials, utility representatives and organized cross functional workshops with project stakeholders
- Explored consumer mixes and effectively established strategic cost optimization plans that boosted revenues
- Assessed the sectors eligible for subsidized electricity, accomplished ERP implementation and streamlined the Annual Performance Agreement plan
- Created research reports on resource and income planning approach to prioritize investment decisions

**Officer**
**Southeast Bank Limited**
**September 2016 – January 2017**

- Executed operations in General Banking, Credit and Foreign Exchange departments
- Managed Letter of Credit accounts and coordinated processes like advising and issuance
- Monitored and networked with potential and active clients for revenue enhancement opportunities
- Standardized customer experience, retained existing clients, and secured new ones

**Attachment 2 : DOE Analytical Framework**

*Theoretical Framework:*

$$RPC_{TY} = \frac{R_{TY}}{n_{TY}} = \frac{R_0}{n_0}$$

or, $\quad RPC_0 = \frac{R_0}{n_o}$ ; where 'TY' is represented by the subscript '0'

Where: $\qquad$ TY = Test Year,

$\qquad R_{TY} = R_0$ = Revenue in Test Year

$\qquad n_{TY} = n_0$ = Number of customers in Test Year

$\qquad RPC_{TY} = RPC_0$ = Revenue per customer in Test Year

Now,

$$R_{\text{All}} = n_{Act}\, RPC_0 \qquad\qquad \text{...........................} \ (1)$$

Where: $\qquad R_{\text{All}}$ = Allowed/Authorized Revenue

$\qquad n_{Act}$ = Number of customers in Decoupling Year1

$\qquad RPC_0$ = Revenue per customer in Test Year

Note:

$$R_0 = n_0 p_0 q_0$$

Where:

$\qquad R_0$ = Revenue in Test Year

$\qquad n_0$ = Number of customers in Test Year

$\qquad p_0$ = Price per therm or the Gas Rates in Test Year

$\qquad q_0$ = Average therm consumption in Test Year

Note also that,

$$Q_0 = \ n_0 q_0$$

Where: $\qquad Q_0$ = Total therm consumption in Test Year

$\qquad n_0$ = Number of customers in Test Year

$\qquad q_0$ = Average therm consumption in Test Year

Now,

$$R_0 = p_0 Q_0 = p_0\ (n_0 q_0)$$

$$\frac{R_0}{n_0} = \frac{p_0 Q_0}{n_0} = \frac{p_0 (n_0 q_0)}{n_0}$$

$$RPC_0 = p_0 q_0 \qquad \text{..........................} \ (2)$$

That is, RPC in the Test Year is equal to the calculated rate from the Test Year ($p_0$ updated through DG 21-104) multiplied by the average therm consumption.

Applying equation (2) into equation (1), we get:

$$R_{\text{All}} = n_{Act} \, RPC_0$$

$$R_{\text{All}} = n_{Act} \, p_0 q_0 \qquad \text{...............................}(3)$$

Similarly, actual revenue in the Decoupling Year (DY1) is:

$$R_{\text{Act}} = n_{Act} \, p_{Act} q_{Act}$$

$$R_{\text{Act}} = n_1 p_1 q_1 \qquad \text{...............................}(4)$$

; where 'Act', for actual, is represented by the subscript '1'

Here:

$R_{Act}$ = Revenue in Decoupling Year

$n_{Act} = n_1$ = Number of customers in Decoupling Year

$p_{Act} = p_1$ = Price per therm or Gas Rate in Decoupling Year

$q_{Act} = q_1$ = Average therm consumption in Decoupling Year

*Note: Decoupling Year runs from August 2022 through July 2023*

*Now, dividing* equation (3) by equation (4) gives:

$$\frac{R_{All}}{R_{Act}} = \frac{n_{Act} p_0 q_0}{n_1 p_1 q_1}$$

$$\frac{R_{All}}{R_{Act}} = \frac{n_1 p_0 q_0}{n_1 p_1 q_1}$$

; where '$n_{Act}$' is the same as '$n_1$'

Therefore:

$$\left(\frac{R_{All}}{R_{Act}}\right) = \left(\frac{p_0}{p_1}\right)\left(\frac{q_0}{q_1}\right) \qquad \text{...........................}(5)$$

**Empirical Framework:**

Revenue functions:
$$R_{\text{All}} = n_1\, p_0 q_0 \qquad \text{................................(1)}$$

$$R_{\text{Act}} = n_1 p_1 q_1 \qquad \text{................................(2)}$$

*Note:* here,  q = Average therm consumption

n = Number of customers

Q = Total therm consumption

So,  $q = \dfrac{Q}{n}$

Multiplying both sides with price per therm or the rate '$p$' gives:

$$pq = p\,\frac{Q}{n} = \frac{R}{n} = Average\ Revnue \qquad ; \text{where } Total\ Revenue,\ R = p\,Q$$

Subtracting equation (2) from equation (1) gives:

$$R_{\text{All}} - R_{\text{Act}} = n_1\, p_0 q_0 - n_1 p_1 q_1$$

$$R_{\text{All}} - R_{\text{Act}} = n_1\, (p_0 q_0 - p_1 q_1) \qquad \text{..............................(3)}$$

**Model 1:**  $\boldsymbol{R_{\text{All}} - R_{\text{Act}} = n_1\, (p_0 q_0 - p_1 q_1)}$

**Model 2:**  $\boldsymbol{\ln (R_{\text{All}} - R_{\text{Act}}) = \ln (n_1) + \ln (p_0 q_0 - p_1 q_1)}$

Demand function:  $\qquad Q = a - b * p \qquad\qquad \text{..............................(4)}$

Using Log-transformed values in demand function gives:

**Model 3:**  $\boldsymbol{\ln Q = \alpha + \beta \ln p + e}$

This yields:  $\dfrac{1}{Q}\dfrac{\partial Q}{\partial p} = 0 + \beta\, \dfrac{1}{p}\dfrac{\partial p}{\partial p} + 0$

Therefore, price elasticity:

$$\boldsymbol{\varepsilon_{Q,p} = \frac{p}{Q}\frac{\partial Q}{\partial p} = \beta}$$

**Attachment 3: Tables**

**Decoupling Year 3**

**Model 1.1:** Level Model (Reg 1_all) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 1.472986 | 0.39579291 | 3.721609 | 0.000304 | 0.689277 | 2.256696 | 0.689277 | 2.256696 |

**Model 1.2:** Level Model (Reg 1_RES) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 1.419263 | 0.43847081 | 3.236847 | 0.002644 | 0.52912 | 2.309406 | 0.52912 | 2.309406 |

**Model 1.3:** Level Model (Reg 1_C&I) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 4.7256 | 2.963873 | 1.5944 | 0.114648 | -1.16942 | 10.62062 | -1.16942 | 10.62062 |

**Model 2.1:** Ln Model (Reg 2_all) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.509951 | 0.059335 | 25.44773 | 5.79E-50 | 1.392461 | 1.627441 | 1.392461 | 1.627441 |

**Model 2.2:** Ln Model (Reg 2_RES) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.191629 | 0.068489 | 17.39896 | 8.33E-19 | 1.05259 | 1.330668 | 1.05259 | 1.330668 |

**Model 2.3:** Ln Model (Reg 2_C&I) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.829391 | 0.075324 | 24.28694 | 1.79E-39 | 1.679575 | 1.979208 | 1.679575 | 1.979208 |

**Model 3.1:** Ln Model (Reg 3_all) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 13.5206 | 0.183544 | 73.66413 | 1.7E-100 | 13.15713 | 13.88407 | 13.15713 | 13.88407 |
| Ln(p_act) | 0.389587 | 0.535447 | 0.727592 | 0.468304 | -0.67074 | 1.449917 | -0.67074 | 1.449917 |

**Model 3.2:** Ln Model (Reg 3_RES) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 13.05339 | 0.314543 | 41.49949 | 1.03E-30 | 12.41416 | 13.69262 | 12.41416 | 13.69262 |
| Ln(p_act) | 3.517711 | 1.530292 | 2.298718 | 0.027794 | 0.407783 | 6.62764 | 0.407783 | 6.62764 |

**Model 3.3:** Ln Model (Reg 3_C&I) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 14.17051 | 0.183895 | 77.05776 | 2.82E-78 | 13.80469 | 14.53634 | 13.80469 | 14.53634 |
| Ln(p_act) | 1.39485 | 0.475204 | 2.935268 | 0.004322 | 0.449518 | 2.340181 | 0.449518 | 2.340181 |

**Decoupling Year 4**

**Model 1.1:** Level Model (Reg 1_all) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 2.451058 | 0.37793309 | 6.485428 | 2.11E-09 | 1.702713 | 3.199403 | 1.702713 | 3.199403 |

**Model 1.2:** Level Model (Reg 1_RES) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 2.407386 | 0.39882921 | 6.036132 | 6.92E-07 | 1.59772 | 3.217052 | 1.59772 | 3.217052 |

**Model 1.3:** Level Model (Reg 1_C&I) - Regress (R_all - R_act) on n_act

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| n_act | 5.0455 | 2.881542305 | 1.750972 | 0.083645 | -0.68577 | 10.77677 | -0.68577 | 10.77677 |

**Model 2.1:** Ln Model (Reg 2_all) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.345406 | 0.055943 | 24.04976 | 1.63E-47 | 1.234634 | 1.456178 | 1.234634 | 1.456178 |

**Model 2.2:** Ln Model (Reg 2_RES) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.119433 | 0.023514 | 47.60696 | 2.07E-33 | 1.071697 | 1.167169 | 1.071697 | 1.167169 |

**Model 2.3:** Ln Model (Reg 2_C&I) - Regress Ln(R_all - R_act)_adj on Ln(n_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Ln (n_act) | 1.574708 | 0.086866 | 18.12801 | 1.34E-30 | 1.401935 | 1.747481 | 1.401935 | 1.747481 |

**Model 3.1:** Ln Model (Reg 3_all) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 13.40221 | 0.121255 | 110.5294 | 5.4E-121 | 13.16209 | 13.64233 | 13.16209 | 13.64233 |
| Ln(p_act) | 0.072014 | 0.377052 | 0.190993 | 0.848859 | -0.67465 | 0.81868 | -0.67465 | 0.81868 |

**Model 3.2:** Ln Model (Reg 3_RES) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 12.53617 | 0.416669 | 30.08664 | 4.35E-26 | 11.6894 | 13.38295 | 11.6894 | 13.38295 |
| Ln(p_act) | 1.096913 | 1.195159 | 0.917796 | 0.365191 | -1.33194 | 3.525768 | -1.33194 | 3.525768 |

**Model 3.3:** Ln Model (Reg 3_C&I) - Regress Ln(Q_act) on Ln(p_act)

|  | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 13.66477 | 0.090185 | 151.5187 | 3.5E-102 | 13.48537 | 13.84418 | 13.48537 | 13.84418 |
| Ln(p_act) | 0.38344 | 0.291605 | 1.314931 | 0.192199 | -0.19665 | 0.963535 | -0.19665 | 0.963535 |

**Table: 1.1**

**Customer Count (n - Equivalent Bills)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 82,909 | 85,151 | 85,674 |
| C&I | 12,605 | 12,913 | 12,993 |
| Total | 95,514 | 98,064 | 98,667 |

**Table: 1.2**

**Customer Count : Y-o-Y Growth**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | 2.7% | 3.3% | 3.0% | 1.1% |
| C&I | 2.4% | 3.1% | 2.8% | 1.0% |
| Total | 2.7% | 3.3% | 3.0% | 1.1% |

**Table: 1.3**

**n0: Customer Count (Equivalent Bills) : Test Year 2019**

| Calendar Month - 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 | 12 Month Average | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 3.6% |
| 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 | 76.9% |
| 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 | 6.1% |
| R-5 | 37 | 43 | 47 | 53 | 55 | 63 | 66 | 60 | 67 | 67 | 70 | 70 | 58 | 0.1% |
| R-6 | 86 | 94 | 100 | 125 | 146 | 180 | 191 | 178 | 202 | 212 | 233 | 237 | 165 | 0.2% |
| R-7 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 0.0% |
| 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 | 86.8% |
| 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 | 9.8% |
| 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 | 1.5% |
| G-43 | 60 | 53 | 58 | 54 | 55 | 52 | 53 | 49 | 48 | 50 | 48 | 53 | 53 | 0.1% |
| G-44 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 0.0% |
| G-45 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 7 | 7 | 7 | 7 | 5 | 0.0% |
| G-46 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 6 | 0.0% |
| 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 | 1.4% |
| G-52 | 390 | 352 | 392 | 381 | 397 | 385 | 401 | 406 | 392 | 409 | 401 | 417 | 394 | 0.4% |
| G-53 | 37 | 34 | 35 | 34 | 36 | 35 | 34 | 33 | 33 | 34 | 33 | 34 | 34 | 0.0% |
| G-54 | 28 | 26 | 29 | 27 | 28 | 27 | 27 | 26 | 25 | 26 | 25 | 27 | 27 | 0.0% |
| G-55 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0.0% |
| G-56 | 0 | 0 | 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 | 0.0% |
| G-58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| 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 | 13.2% |
| 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 | 100.0% |
| % dist by calendar months | 102.1% | 92.4% | 102.4% | 98.9% | 101.7% | 98.0% | 100.9% | 100.7% | 97.7% | 101.8% | 99.7% | 103.6% | 100.0% | |

**Table: 1.4**

n1: Customer Count (Equivalent Bills) : Decoupling Year 3 (DY3 - Sept 2020 to Aug 2021)

| Calendar Month - Equivalent Bills | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 3,598 | 3,247 | 3,592 | 3,472 | 3,577 | 3,447 | 3,561 | 3,552 | 3,484 | 3,598 | 3,482 | 3,594 | 3,517 | 3.6% |
| R-3 | 77,723 | 70,149 | 77,695 | 75,123 | 77,468 | 74,760 | 77,283 | 77,270 | 74,320 | 77,198 | 74,882 | 77,559 | 75,952 | 77.5% |
| R-4 | 5,358 | 4,992 | 5,564 | 5,374 | 5,517 | 5,330 | 5,468 | 5,403 | 4,949 | 5,031 | 4,989 | 5,313 | 5,274 | 5.4% |
| R-5 | 79 | 71 | 79 | 76 | 79 | 76 | 79 | 78 | 75 | 78 | 75 | 77 | 77 | 0.1% |
| R-6 | 332 | 301 | 333 | 323 | 335 | 325 | 336 | 336 | 313 | 325 | 316 | 329 | 325 | 0.3% |
| R-7 | 7 | 7 | 7 | 6 | 6 | 5 | 4 | 4 | 6 | 7 | 7 | 7 | 6 | 0.0% |
| Total Residential | 87,096 | 78,766 | 87,269 | 84,373 | 86,980 | 83,943 | 86,731 | 86,643 | 83,147 | 86,236 | 83,751 | 86,879 | 85,151 | 86.8% |
| | | | | | | | | | | | | | | |
| G-41 | 9,973 | 9,041 | 10,017 | 9,636 | 9,791 | 9,329 | 9,564 | 9,530 | 9,167 | 9,594 | 9,490 | 9,929 | 9,588 | 9.8% |
| G-42 | 1,490 | 1,346 | 1,493 | 1,443 | 1,488 | 1,439 | 1,482 | 1,481 | 1,428 | 1,479 | 1,438 | 1,490 | 1,458 | 1.5% |
| G-43 | 65 | 59 | 65 | 63 | 65 | 62 | 64 | 64 | 62 | 65 | 63 | 65 | 64 | 0.1% |
| G-44 | 16 | 15 | 17 | 16 | 17 | 16 | 16 | 17 | 6 | 9 | 10 | 14 | 14 | 0.0% |
| G-45 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 8 | 8 | 0.0% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 1,324 | 1,197 | 1,327 | 1,284 | 1,325 | 1,281 | 1,327 | 1,328 | 1,284 | 1,328 | 1,284 | 1,325 | 1,301 | 1.3% |
| G-52 | 421 | 381 | 422 | 408 | 421 | 406 | 417 | 418 | 403 | 417 | 405 | 419 | 411 | 0.4% |
| G-53 | 36 | 33 | 35 | 34 | 36 | 34 | 34 | 34 | 35 | 36 | 35 | 36 | 35 | 0.0% |
| G-54 | 27 | 23 | 28 | 27 | 28 | 27 | 28 | 27 | 27 | 28 | 26 | 28 | 27 | 0.0% |
| G-55 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 0.0% |
| G-56 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| INAT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| Total C&I | 13,365 | 12,106 | 13,417 | 12,925 | 13,186 | 12,608 | 12,948 | 12,913 | 12,423 | 12,968 | 12,762 | 13,318 | 12,913 | 13.2% |
| | | | | | | | | | | | | | | |
| Total | 100,462 | 90,872 | 100,687 | 97,298 | 100,166 | 96,551 | 99,679 | 99,556 | 95,570 | 99,204 | 96,513 | 100,197 | 98,064 | 100.0% |
| % dist by calendar months | 102.4% | 92.7% | 102.7% | 99.2% | 102.1% | 98.5% | 101.6% | 101.5% | 97.5% | 101.2% | 98.4% | 102.2% | 100.0% | |

**Table: 1.5**

Customer Count (Equivalent Bills) : % Change relative to TY2019 ((n1 - n0) / n0)

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 1.2% | 1.2% | 1.1% | 1.1% | 0.8% | 0.4% | 0.8% | 0.3% | 1.7% | 1.7% | 1.5% | 1.3% | 1.1% |
| R-3 | 4.2% | 3.9% | 3.8% | 3.8% | 3.8% | 3.8% | 3.9% | 3.9% | 2.9% | 2.9% | 2.6% | 2.0% | 3.5% |
| R-4 | -13.7% | -10.8% | -9.8% | -8.5% | -7.4% | -6.2% | -4.2% | -3.0% | -6.8% | -11.1% | -15.1% | -9.6% | -8.9% |
| R-5 | 112.2% | 65.0% | 67.1% | 43.4% | 42.8% | 20.6% | 19.0% | 29.7% | 11.9% | 15.8% | 7.2% | 10.7% | 32.2% |
| R-6 | 285.9% | 219.8% | 232.6% | 158.1% | 129.3% | 80.8% | 76.1% | 88.7% | 54.8% | 53.2% | 35.8% | 38.8% | 97.1% |
| R-7 | 623.4% | 553.3% | 616.5% | 200.0% | 87.7% | 53.4% | 37.8% | 37.8% | 100.0% | 125.5% | 133.4% | 141.1% | 201.8% |
| Total Residential | 3.1% | 3.0% | 3.0% | 3.1% | 3.2% | 3.1% | 3.4% | 3.5% | 2.3% | 2.0% | 1.4% | 1.3% | 2.7% |
| | | | | | | | | | | | | | |
| G-41 | 2.6% | 2.6% | 2.6% | 2.6% | 2.7% | 3.1% | 3.9% | 4.2% | 3.4% | 2.0% | 0.8% | 0.9% | 2.6% |
| G-42 | 3.6% | 3.5% | 3.8% | 4.4% | 4.6% | 5.0% | 3.1% | 2.1% | 1.8% | 1.3% | 0.7% | 0.9% | 2.8% |
| G-43 | 8.6% | 10.9% | 12.2% | 16.8% | 18.4% | 19.9% | 20.9% | 30.5% | 29.4% | 29.5% | 31.3% | 22.8% | 19.9% |
| G-44 | 1453.3% | 646.7% | 726.7% | 700.0% | 726.7% | 700.0% | 723.3% | 451.1% | 114.4% | 132.5% | 156.7% | 261.7% | 369.4% |
| G-45 | 106.7% | 86.7% | 106.7% | 100.0% | 106.7% | 100.0% | 106.7% | 37.8% | 0.0% | 3.3% | 0.0% | 8.1% | 56.0% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -1.1% | -0.9% | -0.8% | -0.5% | -0.1% | -0.2% | -1.1% | -1.9% | -1.5% | -1.6% | -1.8% | -1.6% | -1.1% |
| G-52 | 8.0% | 8.1% | 7.6% | 7.1% | 6.1% | 5.4% | 4.0% | 3.0% | 2.9% | 2.0% | 0.9% | 0.5% | 4.4% |
| G-53 | -2.3% | -3.9% | 0.4% | 0.0% | 0.5% | -2.9% | 0.3% | 3.3% | 6.1% | 6.4% | 6.1% | 6.4% | 2.6% |
| G-54 | -4.0% | -12.5% | -3.7% | 0.1% | -0.5% | 0.0% | 3.3% | 4.1% | 8.0% | 7.3% | 4.0% | 3.3% | -0.2% |
| G-55 | 26.7% | 24.4% | 37.8% | 33.3% | 37.8% | 33.3% | 37.8% | 37.8% | 0.0% | 3.3% | 0.0% | 3.3% | 23.0% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 3.3% | -6.7% | 3.3% | 0.0% | 3.3% | 0.0% | 3.3% | 3.3% | 0.0% | 3.3% | 0.0% | 3.3% | 1.4% |
| INAT | | | | | | | | | | | | | |
| Total C&I | 2.6% | 2.6% | 2.7% | 2.8% | 2.9% | 3.2% | 3.4% | 3.4% | 2.7% | 1.6% | 0.6% | 0.7% | 2.4% |
| | | | | | | | | | | | | | |
| Total | 3.1% | 3.0% | 3.0% | 3.0% | 3.1% | 3.1% | 3.4% | 3.5% | 2.4% | 2.0% | 1.3% | 1.2% | 2.7% |

**Table: 1.6**

**n1: Customer Count (Equivalent Bills) : Decoupling Year 4 (DY4 - Sept 2021 to Aug 2022)**

| Calendar Month - Equivalent Bills | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 3,543 | 3,191 | 3,520 | 3,389 | 3,496 | 3,377 | 3,476 | 3,462 | 3,435 | 3,550 | 3,438 | 3,555 | 3,453 | 3.5% |
| R-3 | 77,422 | 69,953 | 77,458 | 74,848 | 77,171 | 74,527 | 76,882 | 76,892 | 74,621 | 76,997 | 74,611 | 77,333 | 75,726 | 76.7% |
| R-4 | 6,292 | 5,744 | 6,367 | 6,217 | 6,473 | 6,204 | 6,304 | 6,125 | 5,391 | 5,800 | 5,876 | 6,210 | 6,084 | 6.2% |
| R-5 | 79 | 71 | 79 | 76 | 79 | 76 | 79 | 78 | 76 | 79 | 76 | 79 | 77 | 0.1% |
| R-6 | 335 | 303 | 335 | 324 | 335 | 322 | 333 | 327 | 323 | 335 | 327 | 336 | 328 | 0.3% |
| R-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 5 | 5 | 6 | 6 | 0.0% |
| Total Residential | 87,679 | 79,269 | 87,766 | 84,862 | 87,562 | 84,513 | 87,080 | 86,892 | 83,851 | 86,765 | 84,333 | 87,518 | 85,674 | 86.8% |
| | | | | | | | | | | | | | | |
| G-41 | 10,067 | 9,118 | 10,096 | 9,714 | 9,896 | 9,416 | 9,621 | 9,523 | 9,211 | 9,655 | 9,575 | 10,019 | 9,659 | 9.8% |
| G-42 | 1,505 | 1,363 | 1,512 | 1,463 | 1,504 | 1,450 | 1,497 | 1,495 | 1,433 | 1,485 | 1,443 | 1,501 | 1,471 | 1.5% |
| G-43 | 66 | 60 | 66 | 64 | 65 | 63 | 65 | 65 | 60 | 63 | 62 | 66 | 64 | 0.1% |
| G-44 | 17 | 15 | 17 | 16 | 17 | 16 | 17 | 14 | 16 | 16 | 15 | 16 | 16 | 0.0% |
| G-45 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 0.0% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 1,324 | 1,198 | 1,327 | 1,285 | 1,326 | 1,282 | 1,324 | 1,319 | 1,283 | 1,327 | 1,283 | 1,325 | 1,300 | 1.3% |
| G-52 | 419 | 380 | 421 | 405 | 420 | 407 | 421 | 420 | 403 | 416 | 403 | 419 | 411 | 0.4% |
| G-53 | 32 | 30 | 33 | 32 | 32 | 30 | 31 | 31 | 33 | 35 | 33 | 34 | 32 | 0.0% |
| G-54 | 24 | 23 | 26 | 26 | 26 | 25 | 26 | 24 | 26 | 25 | 23 | 23 | 25 | 0.0% |
| G-55 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 0.0% |
| G-56 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| INAT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.0% |
| Total C&I | 13,469 | 12,199 | 13,512 | 13,019 | 13,299 | 12,702 | 13,016 | 12,903 | 12,481 | 13,038 | 12,852 | 13,415 | 12,993 | 13.2% |
| | | | | | | | | | | | | | | |
| Total | 101,147 | 91,467 | 101,279 | 97,881 | 100,861 | 97,216 | 100,096 | 99,794 | 96,332 | 99,803 | 97,185 | 100,934 | 98,667 | 100.0% |
| % dist by calendar months | 102.5% | 92.7% | 102.6% | 99.2% | 102.2% | 98.5% | 101.4% | 101.1% | 97.6% | 101.2% | 98.5% | 102.3% | 100.0% | |

**Table: 1.7**

**Customer Count (Equivalent Bills) : % Change relative to TY2019 ((n1 - n0) / n0)**

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | -0.4% | -0.5% | -1.0% | -1.3% | -1.5% | -1.6% | -1.6% | -2.2% | 0.3% | 0.4% | 0.3% | 0.2% | -0.8% |
| R-3 | 3.8% | 3.6% | 3.5% | 3.4% | 3.4% | 3.4% | 3.4% | 3.4% | 3.3% | 2.6% | 2.2% | 1.7% | 3.1% |
| R-4 | 1.4% | 2.6% | 3.2% | 5.8% | 8.7% | 9.2% | 10.4% | 10.0% | 1.6% | 2.4% | 0.0% | 5.7% | 5.1% |
| R-5 | 112.3% | 65.0% | 67.1% | 43.4% | 42.8% | 20.6% | 19.0% | 13.3% | 17.2% | 8.5% | 12.2% | 32.8% |
| R-6 | 289.7% | 222.7% | 235.3% | 159.6% | 129.3% | 78.9% | 74.2% | 84.0% | 59.9% | 57.9% | 40.3% | 41.6% | 98.8% |
| R-7 | 623.5% | 553.6% | 623.5% | 250.0% | 141.1% | 133.3% | 141.1% | 135.6% | 43.3% | 72.2% | 66.7% | 110.0% | 222.1% |
| Total Residential | 3.8% | 3.7% | 3.6% | 3.7% | 3.8% | 3.8% | 3.8% | 3.8% | 3.2% | 2.7% | 2.1% | 2.1% | 3.3% |
| | | | | | | | | | | | | | |
| G-41 | 3.6% | 3.5% | 3.5% | 3.4% | 3.8% | 4.1% | 4.5% | 4.1% | 3.9% | 2.6% | 1.7% | 1.8% | 3.4% |
| G-42 | 4.7% | 4.8% | 5.1% | 5.8% | 5.7% | 5.8% | 3.0% | 2.2% | 1.7% | 1.1% | 1.6% | 3.7% |
| G-43 | 10.2% | 12.7% | 14.0% | 18.5% | 18.7% | 21.3% | 22.8% | 32.4% | 26.0% | 26.1% | 29.2% | 23.8% | 20.4% |
| G-44 | 1553.3% | 646.6% | 726.6% | 700.0% | 726.7% | 700.0% | 726.7% | 367.8% | 433.3% | 298.3% | 275.0% | 293.3% | 427.1% |
| G-45 | 106.7% | 86.7% | 106.7% | 100.0% | 106.7% | 100.0% | 106.7% | 15.6% | 14.3% | 18.1% | 14.3% | 18.1% | 60.0% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -1.1% | -0.9% | -0.8% | -0.5% | -0.1% | -0.2% | -1.4% | -2.6% | -1.5% | -1.7% | -1.9% | -1.7% | -1.2% |
| G-52 | 7.5% | 7.9% | 7.4% | 6.4% | 5.8% | 5.6% | 4.9% | 3.6% | 2.9% | 1.8% | 0.6% | 0.4% | 4.4% |
| G-53 | -13.4% | -12.2% | -5.5% | -5.9% | -11.0% | -14.4% | -8.8% | -6.9% | 0.0% | 3.3% | 0.0% | -1.2% | -5.5% |
| G-54 | -15.0% | -10.2% | -9.3% | -3.7% | -7.7% | -7.4% | -4.3% | -8.6% | 4.0% | -4.6% | -8.0% | -15.8% | -8.5% |
| G-55 | 37.8% | 24.4% | 37.8% | 33.3% | 37.8% | 33.3% | 37.8% | 15.6% | 33.3% | 37.8% | 33.3% | 37.8% | 33.3% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 3.3% | -6.7% | 3.3% | 0.0% | 3.3% | 0.0% | 3.3% | 3.3% | 0.0% | 3.3% | 0.0% | 3.3% | 1.4% |
| INAT | | | | | | | | | | | | | |
| Total C&I | 3.4% | 3.4% | 3.4% | 3.5% | 3.8% | 4.0% | 4.0% | 3.3% | 3.2% | 2.1% | 1.3% | 1.5% | 3.1% |
| | | | | | | | | | | | | | |
| Total | 3.8% | 3.7% | 3.6% | 3.6% | 3.8% | 3.8% | 3.8% | 3.7% | 3.2% | 2.6% | 2.0% | 2.0% | 3.3% |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 2.1**

**Sales (Therm)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 64,132,575 | 59,485,775 | 59,088,893 |
| C&I | 113,906,893 | 106,307,619 | 105,709,196 |
| Total | 178,039,468 | 165,793,394 | 164,798,089 |

**Table: 2.2**

**Sales : Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | -7.2% | -7.9% | -7.6% | -2.7% |
| C&I | -6.7% | -7.2% | -6.9% | -2.5% |
| Total | -6.9% | -7.4% | -7.2% | -2.5% |

**Table: 2.3**

**Q0: Consumption (Therms) : Test Year 2019**

| Calendar Month - Therms | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | Dec-19 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | 0.4% |
| 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 | 32.9% |
| 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 | 2.6% |
| R-5 | 2,418 | 2,166 | 1,977 | 1,255 | 802 | 477 | 411 | 401 | 537 | 1,006 | 1,789 | 2,314 | 15,553 | 0.0% |
| 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 | 0.1% |
| R-7 | 236 | 219 | 205 | 132 | 74 | 29 | 23 | 21 | 31 | 116 | 286 | 395 | 1,767 | 0.0% |
| 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 | 36.0% |
| | | | | | | | | | | | | | | |
| 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 | 14.0% |
| 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 | 19.7% |
| 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 | 6.3% |
| G-44 | 835 | 771 | 571 | 277 | 153 | 72 | 63 | 78 | 170 | 1,122 | 2,450 | 3,539 | 10,101 | 0.0% |
| 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 | 0.1% |
| G-46 | 0 | 0 | 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 | 2.3% |
| 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 | 5.4% |
| 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 | 5.9% |
| 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 | 10.1% |
| G-55 | 621 | 577 | 504 | 263 | 172 | 58 | 12 | 57 | 59 | 157 | 421 | 625 | 3,525 | 0.0% |
| G-56 | 0 | 0 | 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 | 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 | 0.2% |
| Total C&I | 17,991,031 | 15,063,736 | 13,357,776 | 8,613,449 | 6,349,644 | 4,537,445 | 4,241,840 | 4,396,473 | 4,603,926 | 6,883,398 | 12,485,650 | 15,382,524 | 113,906,893 | 64.0% |
| | | | | | | | | | | | | | | |
| 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 | 100.0% |
| % dist by calendar months | 16.9% | 14.1% | 12.3% | 7.5% | 5.1% | 3.4% | 3.0% | 3.1% | 3.4% | 5.6% | 11.3% | 14.3% | 100.0% | |

**Table: 2.4**

**Q1: Consumption (Therms) : Decoupling Year 3 (DY3 - Sept 2020 to Aug 2021)**

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 106,038 | 98,628 | 88,143 | 64,614 | 49,739 | 36,826 | 34,604 | 33,063 | 38,864 | 53,644 | 73,200 | 94,325 | 771,689 | 0.5% |
| R-3 | 10,033,102 | 9,309,193 | 7,153,789 | 4,055,845 | 2,240,563 | 1,262,620 | 1,088,526 | 1,035,490 | 1,415,387 | 3,090,912 | 5,610,922 | 8,495,802 | 54,792,151 | 33.0% |
| R-4 | 659,679 | 632,307 | 499,458 | 290,164 | 161,898 | 90,295 | 79,001 | 74,057 | 94,045 | 192,942 | 356,623 | 553,938 | 3,684,407 | 2.2% |
| R-5 | 3,654 | 3,488 | 2,934 | 1,750 | 1,125 | 685 | 576 | 572 | 643 | 1,188 | 2,038 | 3,007 | 21,662 | 0.0% |
| R-6 | 39,151 | 36,925 | 28,806 | 15,439 | 8,572 | 4,582 | 3,762 | 3,701 | 5,210 | 11,472 | 22,068 | 32,890 | 212,577 | 0.1% |
| R-7 | 643 | 596 | 458 | 209 | 115 | 49 | 40 | 38 | 61 | 169 | 368 | 543 | 3,288 | 0.0% |
| Total Residential | 10,842,268 | 10,081,138 | 7,773,587 | 4,428,021 | 2,462,012 | 1,395,058 | 1,206,509 | 1,146,922 | 1,554,210 | 3,350,327 | 6,065,219 | 9,180,505 | 59,485,775 | 35.9% |
| | | | | | | | | | | | | | | |
| G-41 | 4,507,642 | 4,270,231 | 3,099,248 | 1,579,915 | 719,701 | 321,796 | 258,826 | 244,235 | 384,849 | 1,089,175 | 2,276,636 | 3,740,290 | 22,492,541 | 13.6% |
| G-42 | 5,889,533 | 5,518,291 | 4,304,293 | 2,467,512 | 1,254,698 | 609,544 | 534,991 | 518,008 | 769,800 | 1,878,448 | 3,349,690 | 5,019,371 | 32,114,180 | 19.4% |
| G-43 | 1,892,522 | 1,763,271 | 1,437,016 | 957,654 | 579,742 | 340,660 | 339,662 | 319,948 | 408,556 | 784,167 | 1,162,651 | 1,651,335 | 11,637,183 | 7.0% |
| G-44 | 5,673 | 6,083 | 4,120 | 1,987 | 614 | 74 | 26 | 17 | 181 | 738 | 2,588 | 4,455 | 26,556 | 0.0% |
| G-45 | 45,940 | 43,938 | 34,267 | 19,693 | 8,988 | 3,627 | 1,946 | 1,435 | 6,005 | 13,810 | 26,645 | 37,352 | 243,646 | 0.1% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 452,286 | 423,944 | 394,308 | 315,849 | 280,455 | 252,251 | 254,963 | 254,516 | 235,461 | 305,999 | 333,986 | 411,520 | 3915541 | 2.4% |
| G-52 | 996,991 | 928,392 | 853,739 | 685,388 | 586,697 | 513,036 | 531,833 | 521,994 | 536,928 | 658,931 | 754,768 | 907,694 | 8,476,391 | 5.1% |
| G-53 | 1,120,982 | 1,019,762 | 967,570 | 811,127 | 715,256 | 600,638 | 593,269 | 653,504 | 684,897 | 806,448 | 858,826 | 966,138 | 9,798,418 | 5.9% |
| G-54 | 1,257,289 | 1,027,189 | 1,224,368 | 1,431,694 | 1,558,831 | 1,558,254 | 1,577,526 | 1,715,665 | 1,657,986 | 1,607,082 | 1,543,517 | 1,197,953 | 17,357,354 | 10.5% |
| G-55 | 798 | 742 | 698 | 560 | 487 | 423 | 373 | 380 | 221 | 279 | 403 | 528 | 5,891 | 0.0% |
| G-56 | 0 | 0 | 0 | 336 | 814 | 761 | 718 | 729 | 0 | 0 | 0 | 0 | 3,358 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 20,284 | 21,393 | 22,684 | 17,060 | 15,629 | 17,785 | 15,234 | 19,069 | 17,788 | 22,135 | 19,186 | 21,921 | 230168 | 0.1% |
| INAT | 447 | 790 | 735 | 680 | 443 | 669 | 257 | 598 | 319 | 556 | 681 | 217 | 6392 | 0.0% |
| Total C&I | 16,189,941 | 15,023,237 | 12,342,311 | 8,288,776 | 5,721,911 | 4,218,848 | 4,109,367 | 4,249,501 | 4,702,671 | 7,167,213 | 10,328,895 | 13,958,558 | 106,307,619 | 64.1% |
| | | | | | | | | | | | | | | |
| Total | 27,032,209 | 25,104,375 | 20,115,898 | 12,716,797 | 8,183,923 | 5,613,906 | 5,315,876 | 5,396,422 | 6,256,881 | 10,517,540 | 16,394,113 | 23,139,062 | 165,793,394 | 100.0% |
| % dist by calendar months | 16.3% | 15.1% | 12.1% | 7.7% | 4.9% | 3.4% | 3.2% | 3.3% | 3.8% | 6.3% | 9.9% | 14.0% | 100.0% | |

**Table: 2.5**

**Consumption (Therms) : % Change relative to TY2019 ((Q1 - Q0) / Q0)**

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 8% | 20% | 9% | 3% | -3% | -6% | 6% | -1% | 7% | 13% | -2% | 4% | 6% |
| R-3 | -9% | 2% | -9% | -7% | -9% | -2% | 9% | 2% | 11% | 7% | -20% | -8% | -7% |
| R-4 | -26% | -13% | -21% | -17% | -17% | -14% | 0% | -5% | 0% | -9% | -35% | -20% | -20% |
| R-5 | 51% | 61% | 48% | 39% | 40% | 44% | 40% | 43% | 20% | 18% | 14% | 30% | 39% |
| R-6 | 58% | 62% | 42% | 28% | 21% | 39% | 44% | 37% | 32% | 8% | -5% | 4% | 29% |
| R-7 | 173% | 172% | 123% | 58% | 56% | 70% | 72% | 81% | 96% | 45% | 29% | 37% | 86% |
| Total Residential | -10% | 1% | -9% | -7% | -10% | -3% | 9% | 2% | 10% | 6% | -21% | -9% | -7.2% |
| | | | | | | | | | | | | | |
| G-41 | -13% | 0% | -12% | -11% | -17% | -9% | 10% | 1% | 9% | 7% | -24% | -10% | -10% |
| G-42 | -10% | 1% | -9% | -8% | -15% | -12% | 7% | -3% | 0% | 7% | -22% | -10% | -8% |
| G-43 | -1% | 13% | 0% | 6% | -4% | 0% | 21% | 7% | 20% | 23% | -11% | -1% | 3% |
| G-44 | 579% | 689% | 622% | 617% | 301% | 3% | -59% | -78% | 6% | -34% | 6% | 26% | 163% |
| G-45 | 169% | 193% | 187% | 211% | 75% | 268% | 360% | 13% | 18% | 3% | 9% | 16% | 83% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -12% | -3% | -7% | -5% | -6% | 1% | 10% | -2% | -7% | 7% | -15% | -10% | -5% |
| G-52 | -15% | -6% | -12% | -11% | -11% | -7% | -2% | -10% | -9% | -6% | -21% | -16% | -11% |
| G-53 | -16% | -4% | -7% | -2% | -8% | -9% | -11% | -6% | 6% | 3% | -10% | -10% | -7% |
| G-54 | -5% | -15% | 3% | 9% | -5% | -7% | -11% | -3% | 2% | -3% | 0% | -7% | -4% |
| G-55 | 29% | 29% | 38% | 113% | 183% | 629% | 3008% | 567% | 274% | 78% | -4% | -16% | 67% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 7% | -37% | -28% | -42% | -27% | 4% | -10% | 12% | -11% | -2% | -18% | -16% | -17% |
| INAT | | | | | | | | | | | | | |
| Total C&I | -10% | 0% | -8% | -4% | -10% | -7% | -3% | -3% | 2% | 4% | -17% | -9% | -6.7% |
| | | | | | | | | | | | | | |
| Total | -10% | 0% | -8% | -5% | -10% | -6% | -1% | -2% | 4% | 5% | -19% | -9% | -6.9% |

**Table: 2.6**

Q1: Consumption (Therms) : Decoupling Year 4 (DY4 - Sept 2021 to Aug 2022)

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 119,554 | 100,275 | 89,735 | 66,407 | 48,276 | 35,993 | 31,080 | 29,118 | 34,672 | 48,919 | 75,046 | 98,980 | 778,055 | 0.5% |
| R-3 | 10,894,066 | 8,888,230 | 7,019,713 | 4,245,812 | 2,138,635 | 1,156,397 | 980,432 | 925,087 | 1,141,319 | 2,473,992 | 5,664,197 | 8,310,737 | 53,838,616 | 32.7% |
| R-4 | 844,811 | 697,718 | 566,998 | 352,288 | 181,179 | 98,451 | 81,891 | 76,287 | 85,003 | 182,608 | 426,164 | 632,177 | 4,225,573 | 2.6% |
| R-5 | 4,881 | 4,134 | 3,383 | 2,188 | 1,162 | 656 | 589 | 581 | 685 | 1,436 | 2,851 | 4,026 | 26,574 | 0.0% |
| R-6 | 43,277 | 36,234 | 28,790 | 17,393 | 8,617 | 4,346 | 3,847 | 3,655 | 4,122 | 9,798 | 22,626 | 34,346 | 217,050 | 0.1% |
| R-7 | 675 | 563 | 425 | 247 | 136 | 70 | 64 | 58 | 41 | 90 | 214 | 441 | 3025 | 0.0% |
| Total Residential | 11,907,264 | 9,727,155 | 7,709,043 | 4,684,334 | 2,378,005 | 1,295,913 | 1,097,904 | 1,034,787 | 1,265,842 | 2,716,843 | 6,191,097 | 9,080,706 | 59,088,893 | 35.9% |
| | | | | | | | | | | | | | | |
| G-41 | 5,154,732 | 4,158,609 | 3,139,630 | 1,744,138 | 741,905 | 318,223 | 247,186 | 229,979 | 309,994 | 855,152 | 2,341,709 | 3,740,214 | 22,981,473 | 13.9% |
| G-42 | 6,681,341 | 5,368,934 | 4,317,380 | 2,649,733 | 1,277,006 | 606,691 | 488,362 | 489,581 | 665,397 | 1,547,407 | 3,382,887 | 4,996,493 | 32,471,212 | 19.7% |
| G-43 | 2,109,080 | 1,734,440 | 1,513,325 | 1,038,773 | 586,777 | 343,932 | 288,427 | 306,943 | 377,168 | 634,574 | 1,204,509 | 1,551,660 | 11,689,608 | 7.1% |
| G-44 | 7,280 | 6,006 | 4,774 | 2,509 | 1,096 | 387 | 354 | 290 | 51 | 733 | 3,246 | 5,813 | 32,539 | 0.0% |
| G-45 | 54,356 | 45,430 | 38,166 | 21,065 | 8,210 | 1,766 | 1,097 | 835 | 2,886 | 11,798 | 29,737 | 43,707 | 259,055 | 0.2% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 498,194 | 429,038 | 395,722 | 318,286 | 281,281 | 246,933 | 239,096 | 222,338 | 247,444 | 289,884 | 341,912 | 416,147 | 3,926,275 | 2.4% |
| G-52 | 1,085,255 | 930,075 | 876,388 | 703,029 | 609,387 | 528,965 | 505,395 | 507,382 | 533,156 | 630,568 | 770,689 | 919,108 | 8,599,399 | 5.2% |
| G-53 | 1,106,719 | 980,977 | 956,489 | 762,901 | 659,526 | 634,052 | 573,053 | 594,905 | 676,274 | 809,240 | 908,631 | 971,119 | 9,633,888 | 5.8% |
| G-54 | 1,148,525 | 1,082,315 | 1,271,806 | 1,461,249 | 1,320,584 | 1,198,962 | 1,273,837 | 1,322,408 | 1,688,519 | 1,406,723 | 1,406,712 | 1,224,611 | 15,806,252 | 9.6% |
| G-55 | 979 | 804 | 785 | 683 | 488 | 382 | 338 | 327 | 436 | 588 | 639 | 798 | 7,247 | 0.0% |
| G-56 | 1,777 | 1,491 | 1,219 | 960 | 848 | 770 | 775 | 647 | 713 | 782 | 1,002 | 1,313 | 12,297 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 31,014 | 25,394 | 26,053 | 22,326 | 22,982 | 23,177 | 20,877 | 21,374 | 20,159 | 19,604 | 24,951 | 24,935 | 282,846 | 0.2% |
| INAT | 479 | 466 | 568 | 813 | 834 | 916 | 761 | 0 | 587 | 453 | 681 | 548 | 7,106 | 0.0% |
| Total C&I | 17,879,254 | 14,763,513 | 12,541,737 | 8,725,653 | 5,510,090 | 3,904,241 | 3,638,798 | 3,697,011 | 4,522,196 | 6,207,054 | 10,416,625 | 13,895,918 | 105,709,196 | 64.1% |
| | | | | | | | | | | | | | | |
| Total | 29,786,517 | 24,490,668 | 20,250,780 | 13,409,987 | 7,888,096 | 5,200,155 | 4,736,702 | 4,731,798 | 5,788,038 | 8,923,897 | 16,607,722 | 22,976,625 | 164,798,089 | 100.0% |
| % dist by calendar months | 18.1% | 14.9% | 12.3% | 8.1% | 4.8% | 3.2% | 2.9% | 2.9% | 3.5% | 5.4% | 10.1% | 13.9% | 100.0% | |

**Table: 2.7**

Consumption (Therms) : % Change relative to TY2019 ((Q1 - Q0) / Q0)

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 22% | 22% | 11% | 6% | -6% | -8% | -5% | -13% | -4% | 3% | 1% | 9% | 7% |
| R-3 | -1% | -3% | -10% | -3% | -13% | -10% | -1% | -9% | -11% | -14% | -20% | -10% | -8% |
| R-4 | -5% | -4% | -10% | 1% | -7% | -6% | 4% | -2% | -9% | -14% | -22% | -9% | -8% |
| R-5 | 102% | 91% | 71% | 74% | 45% | 38% | 43% | 45% | 28% | 43% | 59% | 74% | 71% |
| R-6 | 75% | 59% | 42% | 44% | 22% | 32% | 47% | 36% | 4% | -8% | -3% | 9% | 31% |
| R-7 | 186% | 157% | 107% | 87% | 84% | 142% | 179% | 175% | 32% | -22% | -25% | 12% | 71% |
| Total Residential | -1% | -3% | -10% | -2% | -13% | -10% | -1% | -8% | -10% | -14% | -20% | -10% | -7.9% |
| | | | | | | | | | | | | | |
| G-41 | 0% | -3% | -11% | -1% | -14% | -10% | 5% | -5% | -12% | -16% | -22% | -10% | -8% |
| G-42 | 2% | -2% | -9% | -1% | -14% | -13% | -3% | -8% | -13% | -12% | -21% | -11% | -7% |
| G-43 | 11% | 11% | 5% | 15% | -3% | 1% | 3% | 3% | 11% | 0% | -8% | -7% | 4% |
| G-44 | 772% | 679% | 736% | 806% | 616% | 438% | 462% | 272% | -70% | -35% | 33% | 64% | 222% |
| G-45 | 219% | 203% | 220% | 232% | 60% | 79% | 159% | -34% | -43% | -12% | 21% | 35% | 94% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -3% | -2% | -6% | -4% | -6% | -1% | 3% | -14% | -3% | 1% | -13% | -9% | -5% |
| G-52 | -7% | -6% | -10% | -9% | -7% | -4% | -7% | -13% | -10% | -10% | -20% | -15% | -10% |
| G-53 | -17% | -8% | -8% | -8% | -15% | -4% | -14% | -15% | 4% | 3% | -5% | -9% | -8% |
| G-54 | -13% | -10% | 7% | 12% | -19% | -28% | -28% | -25% | 4% | -16% | -9% | -5% | -12% |
| G-55 | 58% | 39% | 56% | 160% | 184% | 559% | 2719% | 473% | 639% | 274% | 52% | 28% | 106% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 63% | -25% | -18% | -24% | 7% | 35% | 23% | 26% | 0% | -13% | 6% | -4% | 1% |
| INAT | | | | | | | | | | | | | |
| Total C&I | -1% | -2% | -6% | 1% | -13% | -14% | -14% | -16% | -2% | -10% | -17% | -10% | -7.2% |
| | | | | | | | | | | | | | |
| Total | -1% | -2% | -8% | 0% | -13% | -13% | -11% | -14% | -4% | -11% | -18% | -10% | -7.4% |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 3.1**

**Revenue without RDAF ($)**

| | Test Year | Rate Case S/A (DG 20-105) | DY3 | DY4 |
|---|---|---|---|---|
| Residential | 48,161,903 | 50,380,528 | 50,346,404 | 49,382,370 |
| C&I | 38,909,995 | 40,702,422 | 39,797,551 | 39,660,589 |
| Total | 87,071,898 | 91,082,950 | 90,143,955 | 89,042,958 |

**Table: 3.2**

**Sales : Y-o-Y Change**

| | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | 4.5% | 2.5% | 3.5% | 0.8% |
| C&I | 2.3% | 1.9% | 2.1% | 0.6% |
| Total | 3.5% | 2.3% | 2.9% | 0.7% |

**Table: 3.3**

**R0: Revenue ($) : Test Year 2019**

| Calendar Month - Revenue | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | Dec-19 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 90,773 | 80,487 | 84,912 | 76,520 | 73,434 | 67,029 | 66,076 | 66,535 | 65,795 | 71,674 | 77,608 | 88,362 | 909,206 | 1.0% |
| R-3 | 7,177,583 | 6,240,178 | 5,533,508 | 3,620,531 | 2,509,090 | 1,811,213 | 1,684,968 | 1,695,145 | 1,809,174 | 2,746,731 | 4,493,734 | 6,316,317 | 45,638,172 | 52.4% |
| R-4 | 231,668 | 199,524 | 178,463 | 116,481 | 79,756 | 57,853 | 52,319 | 51,309 | 53,157 | 81,790 | 141,183 | 190,009 | 1,433,511 | 1.6% |
| R-5 | 1925 | 1919 | 1904 | 1670 | 1481 | 1488 | 1509 | 1388 | 1593 | 1812 | 2272 | 2521 | 21481 | 0.0% |
| R-6 | 19635 | 18321 | 16695 | 11231 | 8000 | 5936 | 5676 | 5471 | 6855 | 11890 | 21498 | 27584 | 158791 | 0.2% |
| R-7 | 77 | 72 | 67 | 53 | 45 | 33 | 31 | 28 | 33 | 57 | 107 | 138 | 742 | 0.0% |
| Total Residential | 7,521,660 | 6,540,502 | 5,815,550 | 3,826,485 | 2,671,807 | 1,943,551 | 1,810,579 | 1,819,877 | 1,936,606 | 2,913,953 | 4,736,401 | 6,624,931 | 48,161,903 | 55.3% |
| | | | | | | | | | | | | | | |
| G-41 | 2,264,401 | 1,973,915 | 1,777,690 | 1,188,393 | 835,359 | 630,220 | 600,531 | 599,223 | 620,369 | 877,370 | 1,437,750 | 1,982,533 | 14,787,756 | 17.0% |
| G-42 | 2,246,068 | 1,962,433 | 1,768,370 | 1,170,033 | 736,078 | 469,305 | 418,536 | 432,779 | 497,941 | 824,405 | 1,456,621 | 2,030,089 | 14,012,658 | 16.1% |
| G-43 | 527705 | 449633 | 415125 | 279848 | 111172 | 77943 | 71518 | 70704 | 75425 | 111359 | 330929 | 471437 | 2992799 | 3.4% |
| G-44 | 476 | 482 | 415 | 283 | 220 | 180 | 189 | 264 | 298 | 777 | 1345 | 1806 | 6735 | 0.0% |
| G-45 | 7873 | 6963 | 5994 | 3801 | 3113 | 1401 | 1140 | 2015 | 3833 | 7106 | 11663 | 14663 | 69565 | 0.1% |
| G-46 | | 943 | 1887 | 2830 | 3773 | 4717 | 5660 | 6604 | 7547 | 8490 | 9434 | 10377 | 62262 | 0.1% |
| G-51 | 177,119 | 156,405 | 161,170 | 142,146 | 136,995 | 125,110 | 125,347 | 131,120 | 127,160 | 135,859 | 148,830 | 167,986 | 1,735,247 | 2.0% |
| G-52 | 281837 | 245759 | 251897 | 217343 | 157571 | 143273 | 145459 | 151356 | 148770 | 164333 | 241496 | 275201 | 2424297 | 2.8% |
| G-53 | 249154 | 205176 | 200567 | 165764 | 89151 | 79252 | 78795 | 80594 | 76558 | 88218 | 174510 | 204212 | 1691952 | 1.9% |
| G-54 | 105845 | 96421 | 97226 | 103763 | 77590 | 77932 | 81733 | 80439 | 74947 | 76940 | 117178 | 102513 | 1092528 | 1.3% |
| G-55 | 389 | 355 | 360 | 297 | 282 | 241 | 231 | 248 | 241 | 277 | 333 | 389 | 3642 | 0.0% |
| G-56 | | | | | | | | | | | | | 0 | 0.0% |
| G-57 | | | | | | | | | | | | | 0 | 0.0% |
| G-58 | 2580 | 3723 | 3622 | 3406 | 1969 | 1744 | 1767 | 1767 | 1874 | 2018 | 2915 | 3167 | 30553 | 0.0% |
| Total C&I | 5,863,447 | 5,102,208 | 4,684,323 | 3,277,909 | 2,153,274 | 1,611,318 | 1,530,907 | 1,557,114 | 1,634,963 | 2,297,153 | 3,933,005 | 5,264,372 | 38,909,995 | 44.7% |
| | | | | | | | | | | | | | | |
| Total | 13,385,107 | 11,642,710 | 10,499,873 | 7,104,395 | 4,825,081 | 3,554,869 | 3,341,486 | 3,376,991 | 3,571,570 | 5,211,107 | 8,669,406 | 11,889,303 | 87,071,898 | 100.0% |
| | | | | | | | | | | | | | | |
| % dist by calendar months | 15.4% | 13.4% | 12.1% | 8.2% | 5.5% | 4.1% | 3.8% | 3.9% | 4.1% | 6.0% | 10.0% | 13.7% | 100.0% | |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 3.4**

**R1: Revenue ($) : Decoupling Year 3 (DY3 - Sept 2020 to Aug 2021)**

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 99,058 | 88,192 | 92,600 | 80,566 | 74,725 | 67,644 | 68,491 | 67,431 | 69,006 | 76,729 | 85,152 | 93,976 | 963,570 | 1.1% |
| R-3 | 7,302,398 | 6,346,989 | 5,711,113 | 3,726,498 | 2,472,324 | 1,875,699 | 1,813,832 | 1,774,506 | 1,955,608 | 3,007,851 | 4,788,494 | 6,366,990 | 47,142,301 | 52.3% |
| R-4 | 266,227 | 239,025 | 220,485 | 158,789 | 162,020 | 133,877 | 129,469 | 125,002 | 52,054 | 81,387 | 164,696 | 229,688 | 1,962,718 | 2.2% |
| R-5 | 3,553 | 3,163 | 3,176 | 2,538 | 2,158 | 1,875 | 1,869 | 1,845 | 1,834 | 2,189 | 2,633 | 3,205 | 30,039 | 0.0% |
| R-6 | 37,657 | 33,066 | 29,891 | 19,576 | 13,132 | 9,940 | 9,542 | 9,442 | 10,145 | 15,549 | 24,456 | 32,979 | 245,376 | 0.3% |
| R-7 | 359 | 314 | 279 | 183 | 175 | 129 | 112 | 111 | 66 | 122 | 228 | 320 | 2,400 | 0.0% |
| Total Residential | 7,709,253 | 6,710,747 | 6,057,545 | 3,988,150 | 2,724,533 | 2,089,164 | 2,023,315 | 1,978,338 | 2,088,714 | 3,183,827 | 5,065,659 | 6,727,159 | 50,346,404 | 55.9% |
| | | | | | | | | | | | | | | |
| G-41 | 2,249,124 | 1,982,090 | 1,801,218 | 1,207,391 | 820,824 | 649,496 | 640,329 | 630,427 | 661,753 | 939,991 | 1,477,370 | 1,975,283 | 15,035,297 | 16.7% |
| G-42 | 2,273,422 | 1,982,911 | 1,837,379 | 1,202,381 | 695,161 | 465,807 | 446,235 | 438,651 | 516,661 | 896,165 | 1,526,439 | 2,000,512 | 14,281,724 | 15.8% |
| G-43 | 582,314 | 506,929 | 473,179 | 311,123 | 122,121 | 87,132 | 88,268 | 85,327 | 95,148 | 149,242 | 394,269 | 505,618 | 3,400,669 | 3.8% |
| G-44 | 4,009 | 3,794 | 3,397 | 2,284 | 1,524 | 1,237 | 1,245 | 1,238 | 571 | 1,056 | 2,069 | 3,291 | 25,715 | 0.0% |
| G-45 | 22,462 | 18,830 | 17,787 | 11,314 | 5,740 | 3,586 | 2,893 | 2,624 | 4,296 | 7,625 | 14,023 | 18,110 | 129,290 | 0.1% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 172,131 | 154,839 | 162,724 | 143,121 | 136,208 | 127,838 | 130,988 | 130,301 | 124,935 | 141,094 | 148,544 | 163,964 | 1,736,689 | 1.9% |
| G-52 | 273,486 | 244,685 | 250,917 | 209,669 | 164,167 | 145,607 | 149,951 | 148,295 | 147,590 | 172,110 | 223,991 | 256,695 | 2,387,162 | 2.6% |
| G-53 | 225,897 | 198,742 | 201,097 | 166,085 | 87,453 | 75,019 | 74,480 | 78,991 | 82,673 | 95,295 | 180,758 | 195,913 | 1,662,405 | 1.8% |
| G-54 | 103,879 | 84,114 | 103,121 | 114,463 | 76,245 | 75,564 | 76,929 | 80,857 | 79,084 | 77,973 | 122,589 | 99,821 | 1,094,638 | 1.2% |
| G-55 | 517 | 478 | 519 | 469 | 454 | 428 | 426 | 425 | 292 | 315 | 346 | 381 | 5,051 | 0.0% |
| G-56 | 0 | 0 | 0 | 244 | 423 | 399 | 396 | 397 | 0 | 0 | 0 | 0 | 1,859 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 2,765 | 2,735 | 3,022 | 2,438 | 1,740 | 1,806 | 1,722 | 1,887 | 1,806 | 2,039 | 2,667 | 2,903 | 27,530 | 0.0% |
| INAT | 789 | 810 | 806 | 803 | 788 | 802 | 777 | 793 | 781 | 795 | 803 | 775 | 9,521 | 0.0% |
| Total C&I | 5,910,794 | 5,180,955 | 4,855,166 | 3,371,786 | 2,112,848 | 1,634,722 | 1,614,640 | 1,600,213 | 1,715,590 | 2,483,702 | 4,093,868 | 5,223,265 | 39,797,551 | 44.1% |
| | | | | | | | | | | | | | | |
| Total | 13,620,047 | 11,891,703 | 10,912,711 | 7,359,936 | 4,837,381 | 3,723,886 | 3,637,955 | 3,578,551 | 3,804,304 | 5,667,530 | 9,159,527 | 11,950,424 | 90,143,955 | 100.0% |
| % dist by calendar months | 15.1% | 13.2% | 12.1% | 8.2% | 5.4% | 4.1% | 4.0% | 4.0% | 4.2% | 6.3% | 10.2% | 13.3% | 100.0% | |

**Table: 3.5**

**Revenue ($) : % Change relative to TY2019 ((R1 - R0) / R0)**

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 9% | 10% | 9% | 5% | 2% | 1% | 4% | 1% | 5% | 7% | 10% | 6% | 6% |
| R-3 | 2% | 2% | 3% | 3% | -1% | 4% | 8% | 5% | 8% | 10% | 7% | 1% | 3% |
| R-4 | 15% | 20% | 24% | 36% | 103% | 131% | 147% | 144% | -2% | 0% | 17% | 21% | 37% |
| R-5 | 85% | 65% | 67% | 52% | 46% | 26% | 24% | 33% | 15% | 21% | 16% | 27% | 40% |
| R-6 | 92% | 80% | 79% | 74% | 64% | 67% | 68% | 73% | 48% | 31% | 14% | 20% | 55% |
| R-7 | 366% | 336% | 317% | 245% | 290% | 291% | 262% | 296% | 101% | 115% | 113% | 132% | 223% |
| Total Residential | 2% | 3% | 4% | 4% | 2% | 7% | 12% | 9% | 8% | 9% | 7% | 2% | 4.5% |
| | | | | | | | | | | | | | |
| G-41 | -1% | 0% | 1% | 2% | -2% | 3% | 7% | 5% | 7% | 7% | 3% | 0% | 2% |
| G-42 | 1% | 1% | 4% | 3% | -6% | -1% | 7% | 1% | 4% | 9% | 5% | -1% | 2% |
| G-43 | 10% | 13% | 14% | 11% | 10% | 12% | 23% | 21% | 26% | 34% | 19% | 7% | 14% |
| G-44 | 742% | 687% | 718% | 707% | 593% | 587% | 559% | 369% | 92% | 36% | 54% | 82% | 282% |
| G-45 | 185% | 170% | 197% | 198% | 84% | 156% | 154% | 30% | 12% | 7% | 20% | 24% | 86% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -3% | -1% | 1% | 1% | -1% | 2% | 5% | -1% | -2% | 4% | 0% | -2% | 0% |
| G-52 | -3% | 0% | 0% | -4% | 4% | 2% | 3% | -2% | -1% | 5% | -7% | -7% | -2% |
| G-53 | -9% | -3% | 0% | 0% | -2% | -5% | -5% | -2% | 8% | 8% | 4% | -4% | -2% |
| G-54 | -2% | -13% | 6% | 10% | -2% | -3% | -6% | 1% | 6% | 1% | 5% | -3% | 0% |
| G-55 | 33% | 35% | 44% | 58% | 61% | 78% | 84% | 71% | 21% | 14% | 4% | -2% | 39% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 7% | -27% | -17% | -28% | -12% | 4% | -3% | 7% | -4% | 1% | -9% | -8% | -10% |
| INAT | | | | | | | | | | | | | |
| Total C&I | 1% | 2% | 4% | 3% | -2% | 1% | 5% | 3% | 5% | 8% | 4% | -1% | 2.3% |
| | | | | | | | | | | | | | |
| Total | 2% | 2% | 4% | 4% | 0% | 5% | 9% | 6% | 7% | 9% | 6% | 1% | 3.5% |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 3.6**

**R1: Revenue ($) : Decoupling Year 4 (DY4 - Sept 2021 to Aug 2022)**

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Total | % dist by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 99,945 | 89,252 | 91,794 | 79,111 | 72,908 | 65,815 | 65,853 | 67,161 | 66,200 | 73,533 | 82,682 | 95,281 | 949,536 | 1.1% |
| R-3 | 7,264,653 | 6,323,621 | 5,610,797 | 3,728,388 | 2,387,351 | 1,798,258 | 1,745,591 | 1,761,873 | 1,791,206 | 2,585,449 | 4,493,709 | 6,247,704 | 45,738,600 | 51.4% |
| R-4 | 310,753 | 275,635 | 250,720 | 184,692 | 183,088 | 150,921 | 143,882 | 142,037 | 130,848 | 174,683 | 201,166 | 265,314 | 2,413,738 | 2.7% |
| R-5 | 4,035 | 3,596 | 3,422 | 2,681 | 2,145 | 1,849 | 1,881 | 1,918 | 1,861 | 2,313 | 3,038 | 3,702 | 32,439 | 0.0% |
| R-6 | 38,597 | 33,931 | 29,943 | 20,221 | 12,916 | 9,626 | 9,541 | 9,514 | 9,481 | 14,066 | 24,171 | 33,437 | 245,445 | 0.3% |
| R-7 | 356 | 309 | 266 | 207 | 216 | 191 | 193 | 188 | 116 | 146 | 166 | 256 | 2,611 | 0.0% |
| Total Residential | 7,718,338 | 6,726,345 | 5,986,942 | 4,015,299 | 2,658,623 | 2,026,660 | 1,966,941 | 1,982,692 | 1,999,711 | 2,850,190 | 4,804,933 | 6,645,693 | 49,382,370 | 55.5% |
| | | | | | | | | | | | | | | |
| G-41 | 2,318,008 | 2,023,660 | 1,817,360 | 1,242,052 | 826,809 | 648,079 | 644,190 | 672,956 | 633,834 | 854,614 | 1,425,250 | 1,982,338 | 15,089,149 | 16.9% |
| G-42 | 2,344,805 | 2,023,118 | 1,839,179 | 1,232,018 | 697,136 | 463,281 | 436,642 | 463,704 | 478,307 | 780,349 | 1,431,510 | 1,999,036 | 14,189,087 | 15.9% |
| G-43 | 578,170 | 529,202 | 492,521 | 329,557 | 124,373 | 87,538 | 82,836 | 94,056 | 89,609 | 127,558 | 366,833 | 496,219 | 3,398,471 | 3.8% |
| G-44 | 4,492 | 4,026 | 3,601 | 2,499 | 1,725 | 1,362 | 1,399 | 1,259 | 1,214 | 1,547 | 2,727 | 3,945 | 29,797 | 0.0% |
| G-45 | 23,520 | 21,267 | 18,728 | 11,574 | 5,340 | 2,759 | 2,469 | 2,150 | 3,201 | 7,016 | 14,859 | 20,557 | 133,440 | 0.1% |
| G-46 | | | | | | | | | | | | | | 0.0% |
| G-51 | 175,014 | 157,315 | 161,852 | 142,024 | 136,147 | 126,040 | 128,683 | 133,408 | 126,204 | 137,117 | 145,453 | 164,211 | 1,733,469 | 1.9% |
| G-52 | 277,683 | 249,070 | 254,536 | 209,998 | 165,097 | 146,383 | 148,523 | 159,994 | 146,399 | 167,473 | 220,447 | 258,833 | 2,404,436 | 2.7% |
| G-53 | 207,084 | 195,321 | 197,225 | 155,756 | 78,817 | 74,270 | 70,222 | 80,821 | 80,000 | 93,982 | 179,357 | 198,385 | 1,611,240 | 1.8% |
| G-54 | 90,740 | 89,659 | 105,146 | 115,223 | 66,219 | 61,106 | 64,428 | 71,985 | 79,094 | 68,268 | 108,921 | 98,897 | 1,019,685 | 1.1% |
| G-55 | 568 | 504 | 530 | 493 | 450 | 415 | 418 | 384 | 428 | 475 | 481 | 531 | 5,677 | 0.0% |
| G-56 | 713 | 635 | 605 | 527 | 430 | 399 | 411 | 368 | 386 | 421 | 530 | 623 | 6,048 | 0.0% |
| G-57 | | | | | | | | | | | | | | 0.0% |
| G-58 | 3,552 | 3,136 | 3,331 | 2,902 | 2,066 | 2,042 | 1,970 | 2,207 | 1,904 | 1,912 | 3,107 | 3,212 | 31,340 | 0.0% |
| INAT | 785 | 785 | 791 | 806 | 807 | 812 | 807 | 803 | 0 | 792 | 784 | 798 | 8,751 | 0.0% |
| Total C&I | 6,025,135 | 5,297,696 | 4,895,406 | 3,445,428 | 2,105,415 | 1,614,485 | 1,582,994 | 1,683,293 | 1,641,372 | 2,241,516 | 3,900,271 | 5,227,577 | 39,660,589 | 44.5% |
| | | | | | | | | | | | | | | |
| Total | 13,743,472 | 12,024,042 | 10,882,348 | 7,460,728 | 4,764,038 | 3,641,145 | 3,549,936 | 3,665,985 | 3,641,083 | 5,091,706 | 8,705,205 | 11,873,270 | 89,042,958 | 100.0% |
| % dist by calendar months | 15.4% | 13.5% | 12.2% | 8.4% | 5.4% | 4.1% | 4.0% | 4.1% | 4.1% | 5.7% | 9.8% | 13.3% | 100.0% | |

**Table: 3.7**

**Revenue ($) : % Change relative to TY2019 ((R1 - R0) / R0)**

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 10% | 11% | 8% | 3% | -1% | -2% | 0% | 1% | 1% | 3% | 7% | 8% | 4% |
| R-3 | 1% | 1% | 1% | 3% | -1% | -5% | 4% | 4% | -1% | 0% | -1% | | 0% |
| R-4 | 34% | 38% | 40% | 59% | 130% | 161% | 175% | 177% | 146% | 114% | 42% | 40% | 68% |
| R-5 | 110% | 87% | 80% | 61% | 45% | 24% | 25% | 38% | 17% | 28% | 34% | 47% | 51% |
| R-6 | 97% | 85% | 79% | 80% | 61% | 62% | 68% | 74% | 38% | 18% | 12% | 21% | 55% |
| R-7 | 362% | 330% | 298% | 290% | 379% | 480% | 522% | 572% | 252% | 157% | 56% | 85% | 252% |
| Total Residential | 3% | 3% | 3% | 5% | 0% | 4% | 9% | 9% | 3% | -2% | 1% | 0% | 2.5% |
| | | | | | | | | | | | | | |
| G-41 | 2% | 3% | 2% | 5% | -1% | 3% | 7% | 12% | 2% | -3% | -1% | 0% | 2% |
| G-42 | 4% | 3% | 4% | 5% | -5% | -1% | 4% | 7% | -4% | -5% | -2% | -2% | 1% |
| G-43 | 10% | 18% | 19% | 18% | 12% | 12% | 16% | 33% | 19% | 15% | 11% | 5% | 14% |
| G-44 | 844% | 735% | 768% | 783% | 684% | 657% | 640% | 377% | 307% | 99% | 103% | 118% | 342% |
| G-45 | 199% | 205% | 212% | 204% | 72% | 97% | 117% | 7% | -16% | -1% | 27% | 40% | 92% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -1% | 1% | 0% | 0% | -1% | 1% | 3% | 2% | -1% | 1% | -2% | -2% | 0% |
| G-52 | -1% | 1% | 1% | -3% | 5% | 2% | 2% | 6% | -2% | 2% | -9% | -6% | -1% |
| G-53 | -17% | -5% | -2% | -6% | -12% | -6% | -11% | 0% | 4% | 7% | 3% | -3% | -5% |
| G-54 | -14% | -7% | 8% | 11% | -15% | -22% | -21% | -11% | 6% | -11% | -7% | -4% | -7% |
| G-55 | 46% | 42% | 47% | 66% | 59% | 72% | 81% | 55% | 78% | 72% | 45% | 37% | 56% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 38% | -16% | -8% | -15% | 5% | 17% | 11% | 25% | 2% | -5% | 7% | 1% | 3% |
| INAT | | | | | | | | | | | | | |
| Total C&I | 3% | 4% | 5% | 5% | -2% | 0% | 3% | 8% | 0% | -2% | -1% | -1% | 1.9% |
| | | | | | | | | | | | | | |
| Total | 3% | 3% | 4% | 5% | -1% | 2% | 6% | 9% | 2% | -2% | 0% | 0% | 2.3% |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 4.1**

**Price Per Therm ($)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 0.7011 | 1.0076 | 1.3767 |
| C&I | 0.7078 | 0.7628 | 1.1025 |
| Total | 0.7044 | 0.8852 | 1.2396 |

**Table: 4.2**

**Average Price : Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | 43.7% | 96.4% | 70.1% | 25.2% |
| C&I | 7.8% | 55.8% | 31.8% | 15.9% |
| Total | 25.7% | 76.0% | 50.8% | 20.7% |

**Table: 4.3**

**p0: Price Per Therms ($) : Test Year 2019**

| Calendar Month - Gas Price Per Therm | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | Dec-19 | 12-month average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 1.2008 | 1.1219 | 0.9716 | 1.0329 | 0.8949 | 0.8949 | 1.0060 | 1.0060 | 1.0060 | 1.0060 | 1.0357 | 1.0357 | 1.0177 |
| R-3 | 1.2008 | 1.1219 | 0.9716 | 1.0329 | 0.8949 | 0.8949 | 1.0060 | 1.0060 | 1.0060 | 1.0060 | 1.0357 | 1.0357 | 1.0177 |
| R-4 | 1.2008 | 1.1219 | 0.9716 | 1.0329 | 0.8949 | 0.8949 | 1.0060 | 1.0060 | 1.0060 | 1.0060 | 1.0357 | 1.0357 | 1.0177 |
| R-5 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| R-6 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| R-7 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| Residential Average | 0.7926 | 0.7532 | 0.6780 | 0.7087 | 0.6397 | 0.6397 | 0.6952 | 0.6952 | 0.6952 | 0.6952 | 0.7101 | 0.7101 | **0.7011** |
| G-41 | 1.2097 | 1.1308 | 0.9805 | 1.0418 | 0.9018 | 0.9018 | 1.0122 | 1.0122 | 1.0122 | 1.0122 | 1.0512 | 1.0512 | 1.0265 |
| G-42 | 1.2097 | 1.1308 | 0.9805 | 1.0418 | 0.9018 | 0.9018 | 1.0122 | 1.0122 | 1.0122 | 1.0122 | 1.0512 | 1.0512 | 1.0265 |
| G-43 | 1.2097 | 1.1308 | 0.9805 | 1.0418 | 0.9018 | 0.9018 | 1.0122 | 1.0122 | 1.0122 | 1.0122 | 1.0512 | 1.0512 | 1.0265 |
| G-44 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-45 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-46 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-51 | 1.2150 | 1.1361 | 0.9858 | 1.0471 | 0.9107 | 0.9107 | 1.0234 | 1.0234 | 1.0234 | 1.0234 | 1.0580 | 1.0580 | 1.0346 |
| G-52 | 1.2150 | 1.1361 | 0.9858 | 1.0471 | 0.9107 | 0.9107 | 1.0234 | 1.0234 | 1.0234 | 1.0234 | 1.0580 | 1.0580 | 1.0346 |
| G-53 | 1.2150 | 1.1361 | 0.9858 | 1.0471 | 0.9107 | 0.9107 | 1.0234 | 1.0234 | 1.0234 | 1.0234 | 1.0580 | 1.0580 | 1.0346 |
| G-54 | 1.2150 | 1.1361 | 0.9858 | 1.0471 | 0.9107 | 0.9107 | 1.0234 | 1.0234 | 1.0234 | 1.0234 | 1.0580 | 1.0580 | 1.0346 |
| G-55 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-56 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-57 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| G-58 INAT | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 | 0.3844 |
| C&I Average | 0.7986 | 0.7591 | 0.6840 | 0.7146 | 0.6456 | 0.6456 | 0.7015 | 0.7015 | 0.7015 | 0.7015 | 0.7197 | 0.7197 | **0.7078** |
| Total | 0.7956 | 0.7561 | 0.6810 | 0.7116 | 0.6426 | 0.6426 | 0.6984 | 0.6984 | 0.6984 | 0.6984 | 0.7149 | 0.7149 | **0.7044** |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 3.4**

**p1: Price Per Therms ($) : Decoupling Year 3 (DY3 - Sept 2020 to Aug 2021)**

**Calendar Month - Gas Price Per Therm**

| | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | Average by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 0.9113 | 0.8725 | 0.9605 | 1.0499 | 0.8384 | 0.8384 | 0.8384 | 0.8384 | 0.9084 | 0.9820 | 1.0020 | 1.0020 | 0.9202 |
| R-3 | 1.0931 | 1.0543 | 1.1423 | 1.2317 | 1.0202 | 1.0202 | 1.0202 | 1.0202 | 1.0902 | 1.1638 | 1.1838 | 1.1838 | 1.1020 |
| R-4 | 0.6277 | 0.6064 | 0.6548 | 0.7040 | 1.0202 | 1.0202 | 1.0202 | 0.7496 | 0.8232 | 0.6776 | 0.6776 | 0.8001 |
| R-5 | 1.0271 | 0.9883 | 1.0763 | 1.1657 | 0.9542 | 0.9542 | 0.9542 | 0.9542 | 1.0242 | 1.0978 | 1.1178 | 1.1178 | 1.0360 |
| R-6 | 1.2634 | 1.2246 | 1.3126 | 1.4020 | 1.1905 | 1.1905 | 1.1905 | 1.1905 | 1.2605 | 1.3341 | 1.3541 | 1.3541 | 1.2723 |
| R-7 | 0.7214 | 0.7001 | 0.7485 | 0.7977 | 1.1905 | 1.1905 | 1.1905 | 1.1905 | 0.8177 | 0.8913 | 0.7713 | 0.7713 | 0.9151 |
| Total Residential | 0.9407 | 0.9077 | 0.9825 | 1.0585 | 1.0357 | 1.0357 | 1.0357 | 1.0357 | 0.9751 | 1.0487 | 1.0178 | 1.0178 | **1.0076** |
| | | | | | | | | | | | | | |
| G-41 | 0.8365 | 0.7977 | 0.8857 | 0.9751 | 0.7606 | 0.7606 | 0.7606 | 0.7606 | 0.8511 | 0.9236 | 0.9272 | 0.9272 | 0.8472 |
| G-42 | 0.8055 | 0.7667 | 0.8547 | 0.9441 | 0.7296 | 0.7296 | 0.7296 | 0.7296 | 0.8201 | 0.8926 | 0.8962 | 0.8962 | 0.8162 |
| G-43 | 0.7833 | 0.7445 | 0.8325 | 0.9219 | 0.5645 | 0.5645 | 0.5645 | 0.5645 | 0.6550 | 0.7275 | 0.8740 | 0.8740 | 0.7226 |
| G-44 | 0.9314 | 0.8926 | 0.9806 | 1.0700 | 0.8555 | 1.0567 | 1.0567 | 1.0567 | 1.1472 | 1.0185 | 1.0221 | 1.0221 | 1.0092 |
| G-45 | 0.8911 | 0.8523 | 0.9403 | 1.0297 | 0.8152 | 0.8152 | 1.0010 | 1.0010 | 0.9057 | 0.9782 | 0.9818 | 0.9818 | 0.9328 |
| G-46 | 0.8623 | 0.8235 | 0.9115 | 1.0009 | 0.6006 | 0.6006 | 0.6006 | 0.6006 | 0.6911 | 0.7636 | 0.9530 | 0.9530 | 0.7801 |
| G-51 | 0.7154 | 0.6766 | 0.7646 | 0.8540 | 0.6400 | 0.6400 | 0.6400 | 0.6400 | 0.7309 | 0.8063 | 0.8061 | 0.8061 | 0.7267 |
| G-52 | 0.6932 | 0.6544 | 0.7424 | 0.8318 | 0.5558 | 0.5558 | 0.5558 | 0.5558 | 0.6467 | 0.7221 | 0.7839 | 0.7839 | 0.6735 |
| G-53 | 0.7013 | 0.6625 | 0.7505 | 0.8399 | 0.5372 | 0.5372 | 0.5372 | 0.5372 | 0.6281 | 0.7035 | 0.7920 | 0.7920 | 0.6682 |
| G-54 | 0.5958 | 0.5570 | 0.6450 | 0.7344 | 0.4907 | 0.4907 | 0.4907 | 0.4907 | 0.5816 | 0.6570 | 0.6865 | 0.6865 | 0.5922 |
| G-55 | 0.7708 | 0.7320 | 0.8200 | 0.9094 | 0.6954 | 0.6954 | 0.6954 | 0.6954 | 0.7863 | 0.8617 | 0.8615 | 0.8615 | 0.7821 |
| G-56 | 0.8479 | 0.8091 | 0.8971 | 0.9865 | 0.6851 | 0.6851 | 0.6851 | 0.6851 | 0.7760 | 0.8514 | 0.9386 | 0.9386 | 0.8155 |
| G-57 | 0.7524 | 0.7136 | 0.8016 | 0.8910 | 0.5617 | 0.5617 | 0.5617 | 0.5617 | 0.6526 | 0.7280 | 0.8431 | 0.8431 | 0.7060 |
| G-58 | 0.6154 | 0.5766 | 0.6646 | 0.7540 | 0.5013 | 0.5013 | 0.5013 | 0.5013 | 0.5922 | 0.6676 | 0.7061 | 0.7061 | 0.6073 |
| INAT | | | | | | | | | | | | | |
| Total C&I | 0.7716 | 0.7328 | 0.8208 | 0.9102 | 0.6424 | 0.6567 | 0.6700 | 0.6700 | 0.7475 | 0.8073 | 0.8623 | 0.8623 | **0.7628** |
| | | | | | | | | | | | | | |
| Average by calendar months | 0.8561 | 0.8202 | 0.9016 | 0.9843 | 0.8390 | 0.8462 | 0.8528 | 0.8528 | 0.8613 | 0.9280 | 0.9400 | 0.9400 | **0.8852** |

**Table: 3.5**

**Price : % Change relative to TY2019 ((p1 - p0) / p0)**

**Calendar Month - Gas Price Per Therm**

| | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | -24% | -22% | -1% | 2% | -6% | -6% | -17% | -17% | -10% | -2% | -3% | -3% | -10% |
| R-3 | -9% | -6% | 18% | 19% | 14% | 14% | 1% | 1% | 8% | 16% | 14% | 14% | 8% |
| R-4 | -48% | -46% | -33% | -32% | 14% | 14% | 1% | 1% | -25% | -18% | -35% | -35% | -21% |
| R-5 | 167% | 157% | 180% | 203% | 148% | 148% | 148% | 148% | 166% | 186% | 191% | 191% | 170% |
| R-6 | 229% | 219% | 241% | 265% | 210% | 210% | 210% | 210% | 228% | 247% | 252% | 252% | 231% |
| R-7 | 88% | 82% | 95% | 108% | 210% | 210% | 210% | 210% | 113% | 132% | 101% | 101% | 138% |
| Total Residential | 19% | 21% | 45% | 49% | 62% | 62% | 49% | 49% | 40% | 51% | 43% | 43% | **43.7%** |
| | | | | | | | | | | | | | |
| G-41 | -31% | -29% | -10% | -6% | -16% | -16% | -25% | -25% | -16% | -9% | -12% | -12% | -17% |
| G-42 | -33% | -32% | -13% | -9% | -19% | -19% | -28% | -28% | -19% | -12% | -15% | -15% | -20% |
| G-43 | -35% | -34% | -15% | -12% | -37% | -37% | -44% | -44% | -35% | -28% | -17% | -17% | -30% |
| G-44 | 142% | 132% | 155% | 178% | 123% | 175% | 175% | 175% | 198% | 165% | 166% | 166% | 163% |
| G-45 | 132% | 122% | 145% | 168% | 112% | 112% | 160% | 160% | 136% | 154% | 155% | 155% | 143% |
| G-46 | 124% | 114% | 137% | 160% | 56% | 56% | 56% | 56% | 80% | 99% | 148% | 148% | 103% |
| G-51 | -41% | -40% | -22% | -18% | -30% | -30% | -37% | -37% | -29% | -21% | -24% | -24% | -30% |
| G-52 | -43% | -42% | -25% | -21% | -39% | -39% | -46% | -46% | -37% | -29% | -26% | -26% | -35% |
| G-53 | -42% | -42% | -24% | -20% | -41% | -41% | -48% | -48% | -39% | -31% | -25% | -25% | -35% |
| G-54 | -51% | -51% | -35% | -30% | -46% | -46% | -52% | -52% | -43% | -36% | -35% | -35% | -43% |
| G-55 | 101% | 90% | 113% | 137% | 81% | 81% | 81% | 81% | 105% | 124% | 124% | 124% | 103% |
| G-56 | 121% | 110% | 133% | 157% | 78% | 78% | 78% | 78% | 102% | 121% | 144% | 144% | 112% |
| G-57 | 96% | 86% | 109% | 132% | 46% | 46% | 46% | 46% | 70% | 89% | 119% | 119% | 84% |
| G-58 | 60% | 50% | 73% | 96% | 30% | 30% | 30% | 30% | 54% | 74% | 84% | 84% | 58% |
| INAT | | | | | | | | | | | | | |
| Total C&I | -3% | -3% | 20% | 27% | -1% | 2% | -4% | -4% | 7% | 15% | 20% | 20% | **7.8%** |
| | | | | | | | | | | | | | |
| Average by calendar months | 8% | 8% | 32% | 38% | 31% | 32% | 22% | 22% | 23% | 33% | 31% | 31% | **25.7%** |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 3.6**

**p1: Price Per Therms ($) : Decoupling Year 4 (DY4 - Sept 2021 to Aug 2022)**

| Calendar Month - Gas Price Per Therm | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | Average by rate classes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 1.2102 | 1.0954 | 1.3126 | 1.6909 | 1.2146 | 1.2146 | 1.2146 | 1.7457 | 0.8384 | 0.8384 | 1.6580 | 1.5414 | 1.2979 |
| R-3 | 1.3890 | 1.2742 | 1.4914 | 1.8697 | 1.3934 | 1.3934 | 1.3934 | 1.9245 | 1.0202 | 1.0202 | 1.8368 | 1.7202 | 1.4772 |
| R-4 | 0.8096 | 0.7528 | 0.8896 | 1.0877 | 1.3934 | 1.3934 | 1.3934 | 1.9245 | 1.0202 | 1.0202 | 1.0731 | 1.0090 | 1.1472 |
| R-5 | 1.3255 | 1.2107 | 1.4279 | 1.8062 | 1.3299 | 1.3299 | 1.3299 | 1.8610 | 0.9542 | 0.9542 | 1.7733 | 1.6567 | 1.4133 |
| R-6 | 1.5580 | 1.4432 | 1.6604 | 2.0387 | 1.5624 | 1.5624 | 1.5624 | 2.0935 | 1.1905 | 1.1905 | 2.0058 | 1.8892 | 1.6464 |
| R-7 | 0.9025 | 0.8457 | 0.9825 | 1.1806 | 1.5624 | 1.5624 | 1.5624 | 2.0935 | 1.1905 | 1.1905 | 1.1660 | 1.1019 | 1.2784 |
| Total Residential | 1.1991 | 1.1037 | 1.2941 | 1.6123 | 1.4094 | 1.4094 | 1.4094 | 1.9405 | 1.0357 | 1.0357 | 1.5855 | 1.4864 | 1.3767 |
| | | | | | | | | | | | | | |
| G-41 | 1.1146 | 0.9998 | 1.1867 | 1.5889 | 1.1131 | 1.1131 | 1.1131 | 1.6443 | 0.7606 | 0.7606 | 1.5321 | 1.4155 | 1.1952 |
| G-42 | 1.0836 | 0.9688 | 1.1557 | 1.5579 | 1.0821 | 1.0821 | 1.0821 | 1.6133 | 0.7296 | 0.7296 | 1.5011 | 1.3845 | 1.1642 |
| G-43 | 1.0617 | 0.9469 | 1.1338 | 1.5360 | 0.9180 | 0.9180 | 0.9180 | 1.4492 | 0.5645 | 0.5645 | 1.4792 | 1.3626 | 1.0710 |
| G-44 | 1.2091 | 1.0943 | 1.2812 | 1.6834 | 1.2076 | 1.2076 | 1.2076 | 1.7388 | 1.0567 | 0.8555 | 1.6266 | 1.5100 | 1.3065 |
| G-45 | 1.1688 | 1.0540 | 1.2409 | 1.6431 | 1.1673 | 1.3521 | 1.3521 | 1.8833 | 0.8152 | 0.8152 | 1.5863 | 1.4697 | 1.2957 |
| G-46 | 1.1403 | 1.0255 | 1.2124 | 1.6146 | 0.9539 | 0.9539 | 0.9539 | 1.4851 | 0.6006 | 0.6006 | 1.5578 | 1.4412 | 1.1283 |
| G-51 | 0.9813 | 0.8665 | 1.0534 | 1.4556 | 0.9799 | 0.9799 | 0.9799 | 1.5108 | 0.6400 | 0.6400 | 1.3988 | 1.2822 | 1.0640 |
| G-52 | 0.9597 | 0.8449 | 1.0318 | 1.4340 | 0.8966 | 0.8966 | 0.8966 | 1.4275 | 0.5558 | 0.5558 | 1.3772 | 1.2606 | 1.0114 |
| G-53 | 0.9677 | 0.8529 | 1.0398 | 1.4420 | 0.8780 | 0.8780 | 0.8780 | 1.4089 | 0.5372 | 0.5372 | 1.3852 | 1.2686 | 1.0061 |
| G-54 | 0.8628 | 0.7480 | 0.9349 | 1.3371 | 0.8318 | 0.8318 | 0.8318 | 1.3627 | 0.4907 | 0.4907 | 1.2803 | 1.1637 | 0.9305 |
| G-55 | 1.0363 | 0.9215 | 1.1084 | 1.5106 | 1.0349 | 1.0349 | 1.0349 | 1.5658 | 0.6954 | 0.6954 | 1.4538 | 1.3372 | 1.1191 |
| G-56 | 1.1137 | 0.9989 | 1.1858 | 1.5880 | 1.0253 | 1.0253 | 1.0253 | 1.5562 | 0.6851 | 0.6851 | 1.5312 | 1.4146 | 1.1529 |
| G-57 | 1.0187 | 0.9039 | 1.0908 | 1.4930 | 0.9025 | 0.9025 | 0.9025 | 1.4334 | 0.5617 | 0.5617 | 1.4362 | 1.3196 | 1.0439 |
| G-58 | 0.8822 | 0.7674 | 0.9543 | 1.3565 | 0.8423 | 0.8423 | 0.8423 | 1.3732 | 0.5013 | 0.5013 | 1.2997 | 1.1831 | 0.9455 |
| INAT | | | | | | | | | | | | | |
| Total C&I | 1.0429 | 0.9281 | 1.1150 | 1.5172 | 0.9881 | 1.0013 | 1.0013 | 1.5323 | 0.6567 | 0.6424 | 1.4604 | 1.3438 | 1.1025 |
| | | | | | | | | | | | | | |
| Average by calendar months | 1.1210 | 1.0159 | 1.2045 | 1.5647 | 1.1987 | 1.2053 | 1.2053 | 1.7364 | 0.8462 | 0.8390 | 1.5229 | 1.4151 | 1.2396 |

**Table: 3.7**

**Price : % Change relative to TY2019 ((p1 - p0) / p0)**

| Calendar Month - Gas Price Per Therm | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 1% | -2% | 35% | 64% | 36% | 36% | 21% | 74% | -17% | -17% | 60% | 49% | 28% |
| R-3 | 16% | 14% | 53% | 81% | 56% | 56% | 39% | 91% | 1% | 1% | 77% | 66% | 45% |
| R-4 | -33% | -33% | -8% | 5% | 56% | 56% | 39% | 91% | 1% | 1% | 4% | -3% | 13% |
| R-5 | 245% | 215% | 271% | 370% | 246% | 246% | 246% | 384% | 148% | 148% | 361% | 331% | 268% |
| R-6 | 305% | 275% | 332% | 430% | 306% | 306% | 306% | 445% | 210% | 210% | 422% | 391% | 328% |
| R-7 | 135% | 120% | 156% | 207% | 306% | 306% | 306% | 445% | 210% | 210% | 203% | 187% | 233% |
| Total Residential | 51% | 47% | 91% | 128% | 120% | 120% | 103% | 179% | 49% | 49% | 123% | 109% | 96.4% |
| | | | | | | | | | | | | | |
| G-41 | -8% | -12% | 21% | 53% | 23% | 23% | 10% | 62% | -25% | -25% | 46% | 35% | 16% |
| G-42 | -10% | -14% | 18% | 50% | 20% | 20% | 7% | 59% | -28% | -28% | 43% | 32% | 13% |
| G-43 | -12% | -16% | 16% | 47% | 2% | 2% | -9% | 43% | -44% | -44% | 41% | 30% | 4% |
| G-44 | 215% | 185% | 233% | 338% | 214% | 214% | 214% | 352% | 175% | 123% | 323% | 293% | 240% |
| G-45 | 204% | 174% | 223% | 327% | 204% | 252% | 252% | 390% | 112% | 112% | 313% | 282% | 237% |
| G-46 | 197% | 167% | 215% | 320% | 148% | 148% | 148% | 286% | 56% | 56% | 305% | 275% | 194% |
| G-51 | -19% | -24% | 7% | 39% | 8% | 8% | -4% | 48% | -37% | -37% | 32% | 21% | 3% |
| G-52 | -21% | -26% | 5% | 37% | -2% | -2% | -12% | 39% | -46% | -46% | 30% | 19% | -2% |
| G-53 | -20% | -25% | 5% | 38% | -4% | -4% | -14% | 38% | -48% | -48% | 31% | 20% | -3% |
| G-54 | -29% | -34% | -5% | 28% | -9% | -9% | -19% | 33% | -52% | -52% | 21% | 10% | -10% |
| G-55 | 170% | 140% | 188% | 293% | 169% | 169% | 169% | 307% | 81% | 81% | 278% | 248% | 191% |
| G-56 | 190% | 160% | 208% | 313% | 167% | 167% | 167% | 305% | 78% | 78% | 298% | 268% | 200% |
| G-57 | 165% | 135% | 184% | 288% | 135% | 135% | 135% | 273% | 46% | 46% | 274% | 243% | 172% |
| G-58 | 130% | 100% | 148% | 253% | 119% | 119% | 119% | 257% | 30% | 30% | 238% | 208% | 146% |
| INAT | | | | | | | | | | | | | |
| Total C&I | 31% | 22% | 63% | 112% | 53% | 55% | 43% | 118% | -6% | -8% | 103% | 87% | 55.8% |
| | | | | | | | | | | | | | |
| Average by calendar months | 41% | 34% | 77% | 120% | 87% | 88% | 73% | 149% | 21% | 20% | 113% | 98% | 76.0% |

Docket No. DG 22-045
Technical Statement of Arif and Alam
Attachment 4

**Table: 5.1**

**Usage Per Customer (Therm)**

|  | Test Year | DY3 | DY4 |
|---|---|---|---|
| Residential | 64.6 | 58.5 | 57.7 |
| C&I | 749.3 | 684.8 | 675.7 |
| Total | 155.4 | 141.3 | 139.5 |

**Table: 5.2**

**UPC : Y-o-Y Change**

|  | DY3 | DY4 | Avg Growth Rate (DY3 & DY4) | Cumulative Growth Rate (TY to DY4) |
|---|---|---|---|---|
| Residential | -9.5% | -10.7% | -10.1% | -3.7% |
| C&I | -8.6% | -9.8% | -9.2% | -3.4% |
| Total | -9.1% | -10.3% | -9.7% | -3.5% |

**Table: 5.3**

**q0: Usage Per Customer, UPC (Therms) : Test Year 2019**

| Calendar Month - Therms | Jan-19 | Feb-19 | Mar-19 | Apr-19 | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19 | Oct-19 | Nov-19 | Dec-19 | 12-month average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 27.6 | 25.7 | 22.8 | 18.2 | 14.5 | 11.4 | 9.3 | 9.5 | 10.6 | 13.4 | 21.7 | 25.6 | 17.5 |
| R-3 | 148.2 | 135.8 | 104.7 | 60.2 | 33.1 | 17.8 | 13.4 | 13.6 | 17.7 | 38.4 | 96.6 | 121.6 | 66.8 |
| R-4 | 142.8 | 130.0 | 101.8 | 59.4 | 32.8 | 18.4 | 13.8 | 14.0 | 17.6 | 37.5 | 93.2 | 117.6 | 64.9 |
| R-5 | 65.4 | 50.4 | 42.1 | 23.7 | 14.6 | 7.6 | 6.2 | 6.7 | 8.0 | 15.0 | 25.6 | 33.1 | 24.8 |
| R-6 | 288.0 | 241.8 | 203.3 | 96.9 | 48.4 | 18.3 | 13.7 | 15.2 | 19.6 | 50.2 | 100.2 | 133.5 | 102.4 |
| R-7 | 236.0 | 219.0 | 205.0 | 66.0 | 24.7 | 9.7 | 7.7 | 7.0 | 10.3 | 38.7 | 95.3 | 131.7 | 87.6 |
| Total Residential | 142.8 | 130.9 | 101.1 | 58.4 | 32.3 | 17.6 | 13.2 | 13.5 | 17.4 | 37.3 | 93.2 | 117.4 | **64.6** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| G-41 | 531.9 | 485.8 | 361.8 | 187.9 | 90.7 | 38.9 | 25.6 | 26.4 | 39.8 | 107.9 | 319.0 | 422.0 | 219.8 |
| G-42 | 4,541.3 | 4,212.1 | 3,283.9 | 1,932.4 | 1,041.5 | 505.9 | 349.2 | 368.6 | 547.8 | 1,203.8 | 2,991.4 | 3,788.2 | 2,063.8 |
| G-43 | 31,763.9 | 29,453.6 | 24,733.2 | 16,666.0 | 10,980.3 | 6,538.5 | 5,292.2 | 6,089.3 | 7,104.3 | 12,708.0 | 27,270.1 | 31,586.9 | 17,515.5 |
| G-44 | 835.0 | 385.5 | 285.5 | 138.5 | 76.5 | 36.0 | 31.5 | 26.0 | 56.7 | 280.5 | 612.5 | 884.8 | 304.1 |
| G-45 | 4,266.5 | 3,752.3 | 2,982.0 | 1,584.5 | 1,285.6 | 246.3 | 105.8 | 211.7 | 729.3 | 1,915.4 | 3,502.4 | 4,614.0 | 2,099.7 |
| G-46 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| G-51 | 383.4 | 361.7 | 315.9 | 257.0 | 224.7 | 194.0 | 172.8 | 190.9 | 195.1 | 211.7 | 298.8 | 338.7 | 262.1 |
| G-52 | 2,994.1 | 2,806.9 | 2,487.9 | 2,025.4 | 1,656.8 | 1,434.6 | 1,351.0 | 1,431.1 | 1,503.2 | 1,716.9 | 2,389.1 | 2,589.7 | 2,032.2 |
| G-53 | 36,138.8 | 31,349.7 | 29,663.1 | 24,302.3 | 21,567.6 | 18,957.4 | 19,502.6 | 21,140.7 | 19,633.7 | 23,023.7 | 28,976.0 | 31,405.8 | 25,471.8 |
| G-54 | 47,408.4 | 46,396.7 | 40,892.5 | 48,485.0 | 58,555.7 | 61,809.3 | 65,556.6 | 67,940.5 | 65,030.6 | 64,052.6 | 61,793.6 | 47,903.3 | 56,318.7 |
| G-55 | 207.0 | 192.3 | 168.0 | 87.7 | 57.3 | 19.3 | 4.0 | 19.0 | 19.7 | 52.3 | 140.3 | 208.3 | 97.9 |
| G-56 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| G-57 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| G-58 | 19,016.0 | 33,980.0 | 31,595.0 | 29,380.0 | 21,467.0 | 17,183.0 | 16,968.0 | 16,982.0 | 20,073.0 | 22,561.0 | 23,451.0 | 26,099.0 | 23,229.6 |
| Total C&I | 1,381.4 | 1,277.2 | 1,022.6 | 684.7 | 495.5 | 371.5 | 338.8 | 352.1 | 380.8 | 539.3 | 984.3 | 1,163.3 | **749.3** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | 308.3 | 284.1 | 224.2 | 141.8 | 93.4 | 63.8 | 55.5 | 57.4 | 64.4 | 103.2 | 211.8 | 257.1 | **155.4** |

**Table: 5.4**

q1: Usage Per Customer, UPC (Therms) : Decoupling Year 3 (DY3 - Sept 2020 to Aug 2021)

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12-month average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 29.5 | 30.4 | 24.5 | 18.6 | 13.9 | 10.7 | 9.7 | 9.3 | 11.2 | 14.9 | 21.0 | 26.2 | 18.3 |
| R-3 | 129.1 | 132.7 | 92.1 | 54.0 | 28.9 | 16.9 | 14.1 | 13.4 | 19.0 | 40.0 | 74.9 | 109.5 | 60.4 |
| R-4 | 123.1 | 126.7 | 89.8 | 54.0 | 29.3 | 16.9 | 14.4 | 13.7 | 19.0 | 38.3 | 71.5 | 104.3 | 58.4 |
| R-5 | 46.5 | 49.2 | 37.3 | 23.0 | 14.3 | 9.0 | 7.3 | 7.4 | 8.6 | 15.3 | 27.2 | 38.8 | 23.7 |
| R-6 | 118.0 | 122.9 | 86.6 | 47.8 | 25.6 | 14.1 | 11.2 | 11.0 | 16.7 | 35.3 | 69.8 | 100.0 | 54.9 |
| R-7 | 88.9 | 91.2 | 63.9 | 34.8 | 20.5 | 10.7 | 9.6 | 9.2 | 10.1 | 24.9 | 52.6 | 75.0 | 41.0 |
| Total Residential | 124.5 | 128.0 | 89.1 | 52.5 | 28.3 | 16.6 | 13.9 | 13.2 | 18.7 | 38.9 | 72.4 | 105.7 | **58.5** |
| | | | | | | | | | | | | | |
| G-41 | 452.0 | 472.3 | 309.4 | 164.0 | 73.5 | 34.5 | 27.1 | 25.6 | 42.0 | 113.5 | 239.9 | 376.7 | 194.2 |
| G-42 | 3,952.4 | 4,099.4 | 2,882.3 | 1,709.7 | 843.0 | 423.6 | 361.0 | 349.8 | 539.2 | 1,269.8 | 2,329.6 | 3,368.8 | 1,844.1 |
| G-43 | 29,056.1 | 29,987.5 | 22,074.0 | 15,184.8 | 8,905.4 | 5,465.1 | 5,301.7 | 5,004.4 | 6,577.0 | 12,110.6 | 18,448.1 | 25,376.2 | 15,290.9 |
| G-44 | 365.2 | 407.4 | 249.2 | 124.2 | 37.1 | 4.6 | 1.6 | 1.1 | 28.1 | 79.4 | 252.1 | 307.9 | 154.8 |
| G-45 | 5,557.3 | 5,884.5 | 4,145.3 | 2,461.6 | 1,087.3 | 453.3 | 235.4 | 173.6 | 857.8 | 1,909.2 | 3,806.5 | 4,936.5 | 2,625.7 |
| G-46 | | | | | | | | | | | | | |
| G-51 | 341.5 | 354.2 | 297.2 | 245.9 | 211.7 | 196.9 | 192.1 | 191.7 | 183.4 | 230.4 | 260.1 | 310.5 | 251.3 |
| G-52 | 2,366.2 | 2,439.3 | 2,024.5 | 1,679.9 | 1,393.4 | 1,264.8 | 1,274.7 | 1,248.4 | 1,331.6 | 1,579.7 | 1,865.5 | 2,165.7 | 1,719.4 |
| G-53 | 30,994.9 | 31,217.2 | 27,539.9 | 23,856.7 | 19,776.6 | 17,665.8 | 17,397.9 | 19,164.4 | 19,568.5 | 22,298.1 | 24,537.9 | 26,713.5 | 23,394.3 |
| G-54 | 46,797.3 | 45,168.2 | 43,844.5 | 52,962.4 | 55,936.8 | 57,713.1 | 56,542.1 | 63,386.9 | 61,406.9 | 57,601.5 | 59,366.0 | 42,937.4 | 53,638.6 |
| G-55 | 210.1 | 198.8 | 168.7 | 140.1 | 117.9 | 105.7 | 90.2 | 92.0 | 73.6 | 89.9 | 134.2 | 170.2 | 132.6 |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 19,629.7 | 22,921.1 | 21,952.4 | 17,059.9 | 15,124.9 | 17,785.0 | 14,742.6 | 18,453.9 | 17,788.0 | 21,421.1 | 19,186.1 | 21,214.0 | 18,939.9 |
| G-58 | 447.0 | 790.0 | 734.9 | 680.0 | 443.0 | 669.0 | 257.0 | 598.0 | 319.0 | 555.9 | 681.0 | 217.0 | 532.7 |
| Total C&I | 1,211.3 | 1,241.0 | 919.9 | 641.3 | 433.9 | 334.6 | 317.4 | 329.1 | 378.5 | 552.7 | 809.3 | 1,048.1 | **684.8** |
| | | | | | | | | | | | | | |
| Total | 269.1 | 276.3 | 199.8 | 130.7 | 81.7 | 58.1 | 53.3 | 54.2 | 65.5 | 106.0 | 169.9 | 230.9 | **141.3** |

**Table: 5.5**

UPC (Therms) : % Change relative to TY2019 ((q1 - q0) / q0)

| Calendar Month - Therms | Jan-21 | Feb-21 | Mar-21 | Apr-21 | May-21 | Jun-21 | Jul-21 | Aug-21 | Sep-20 | Oct-20 | Nov-20 | Dec-20 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 7% | 18% | 7% | 2% | -4% | -6% | 5% | -2% | 6% | 11% | -3% | 3% | 5% |
| R-3 | -13% | -2% | -12% | -10% | -13% | -5% | 5% | -2% | 8% | 4% | -22% | -10% | -10% |
| R-4 | -14% | -3% | -12% | -9% | -11% | -8% | 4% | -2% | 8% | 2% | -23% | -11% | -10% |
| R-5 | -29% | -2% | -11% | -3% | -2% | 19% | 18% | 10% | 7% | 2% | 6% | 17% | -5% |
| R-6 | -59% | -49% | -57% | -51% | -47% | -23% | -18% | -27% | -15% | -30% | -30% | -25% | -46% |
| R-7 | -62% | -58% | -69% | -47% | -17% | 11% | 25% | 32% | -2% | -36% | -45% | -43% | -53% |
| Total Residential | -13% | -2% | -12% | -10% | -12% | -6% | 5% | -2% | 8% | 4% | -22% | -10% | **-9.5%** |
| | | | | | | | | | | | | | |
| G-41 | -15% | -3% | -14% | -13% | -19% | -11% | 6% | -3% | 6% | 5% | -25% | -11% | -12% |
| G-42 | -13% | -3% | -12% | -12% | -19% | -16% | 3% | -5% | -2% | 5% | -22% | -11% | -11% |
| G-43 | -9% | 2% | -11% | -9% | -19% | -16% | 0% | -18% | -7% | -5% | -32% | -20% | -13% |
| G-44 | -56% | 6% | -13% | -10% | -51% | -87% | -95% | -96% | -50% | -72% | -59% | -65% | -49% |
| G-45 | 30% | 57% | 39% | 55% | -15% | 84% | 123% | -18% | 18% | 0% | 9% | 7% | 25% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -11% | -2% | -6% | -4% | -6% | 1% | 11% | 0% | -6% | 9% | -13% | -8% | -4% |
| G-52 | -21% | -13% | -19% | -17% | -16% | -12% | -6% | -13% | -11% | -8% | -22% | -16% | -15% |
| G-53 | -14% | 0% | -7% | -2% | -8% | -7% | -11% | -9% | 0% | -3% | -15% | -15% | -8% |
| G-54 | -1% | -3% | 7% | 9% | -4% | -7% | -14% | -7% | -6% | -10% | -4% | -10% | -5% |
| G-55 | 2% | 3% | 0% | 60% | 106% | 447% | 2156% | 384% | 274% | 72% | -4% | -18% | 35% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 3% | -33% | -31% | -42% | -30% | 4% | -13% | 9% | -11% | -5% | -18% | -19% | -18% |
| INAT | | | | | | | | | | | | | |
| Total C&I | -12% | -3% | -10% | -6% | -12% | -10% | -6% | -7% | -1% | 2% | -18% | -10% | **-8.6%** |
| | | | | | | | | | | | | | |
| Total | -13% | -3% | -11% | -8% | -13% | -9% | -4% | -6% | 2% | 3% | -20% | -10% | **-9.1%** |

**Table: 5.6**

**q1: Usage Per Customer, UPC (Therms) : Decoupling Year 4 (DY4 - Sept 2021 to Aug 2022)**

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12-month average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 33.7 | 31.4 | 25.5 | 19.6 | 13.8 | 10.7 | 8.9 | 8.4 | 10.1 | 13.8 | 21.8 | 27.8 | 18.8 |
| R-3 | 140.7 | 127.1 | 90.6 | 56.7 | 27.7 | 15.5 | 12.8 | 12.0 | 15.3 | 32.1 | 75.9 | 107.5 | 59.5 |
| R-4 | 134.3 | 121.5 | 89.0 | 56.7 | 28.0 | 15.9 | 13.0 | 12.5 | 15.8 | 31.5 | 72.5 | 101.8 | 57.7 |
| R-5 | 62.2 | 58.3 | 43.1 | 28.8 | 14.8 | 8.6 | 7.5 | 7.4 | 9.0 | 18.3 | 37.5 | 51.3 | 28.9 |
| R-6 | 129.1 | 119.4 | 85.9 | 53.6 | 25.7 | 13.5 | 11.6 | 11.2 | 12.8 | 29.3 | 69.2 | 102.3 | 55.3 |
| R-7 | 93.3 | 86.1 | 58.8 | 35.3 | 18.9 | 10.0 | 8.9 | 8.2 | 9.5 | 17.4 | 42.7 | 70.0 | 38.3 |
| Total Residential | 135.8 | 122.7 | 87.8 | 55.2 | 27.2 | 15.3 | 12.6 | 11.9 | 15.1 | 31.3 | 73.4 | 103.8 | **57.7** |
| | | | | | | | | | | | | | |
| G-41 | 512.0 | 456.1 | 311.0 | 179.5 | 75.0 | 33.8 | 25.7 | 24.2 | 33.7 | 88.6 | 244.6 | 373.3 | 196.4 |
| G-42 | 4,438.9 | 3,940.0 | 2,855.5 | 1,811.3 | 849.2 | 418.4 | 326.1 | 327.5 | 464.4 | 1,041.8 | 2,343.9 | 3,329.3 | 1,845.5 |
| G-43 | 31,891.3 | 29,036.4 | 22,882.9 | 16,230.8 | 8,985.9 | 5,453.5 | 4,430.5 | 4,731.0 | 6,237.6 | 10,067.3 | 19,417.1 | 23,641.3 | 15,250.5 |
| G-44 | 440.3 | 402.2 | 288.7 | 156.8 | 66.3 | 24.2 | 21.4 | 20.7 | 3.2 | 46.0 | 216.4 | 369.5 | 171.3 |
| G-45 | 6,575.2 | 6,084.4 | 4,616.9 | 2,633.1 | 993.1 | 220.8 | 132.7 | 120.5 | 360.7 | 1,427.2 | 3,717.2 | 5,287.2 | 2,680.8 |
| G-46 | | | | | | | | | | | | | |
| G-51 | 376.3 | 358.3 | 298.2 | 247.8 | 212.2 | 192.7 | 180.6 | 168.6 | 192.8 | 218.4 | 266.6 | 314.1 | 252.2 |
| G-52 | 2,588.7 | 2,448.6 | 2,081.7 | 1,734.0 | 1,450.3 | 1,300.6 | 1,201.8 | 1,206.7 | 1,321.9 | 1,514.6 | 1,910.3 | 2,196.2 | 1,746.3 |
| G-53 | 34,549.1 | 32,845.3 | 28,926.2 | 23,840.7 | 20,588.8 | 21,158.6 | 18,485.7 | 19,357.0 | 20,493.2 | 23,033.5 | 27,534.3 | 28,902.4 | 24,976.2 |
| G-54 | 48,257.6 | 46,336.3 | 48,341.8 | 56,201.9 | 51,119.6 | 47,958.5 | 49,310.0 | 55,641.2 | 64,943.0 | 56,722.9 | 61,161.4 | 53,868.8 | 53,321.9 |
| G-55 | 236.9 | 215.3 | 189.8 | 170.8 | 118.1 | 95.5 | 81.8 | 94.2 | 109.0 | 142.2 | 159.9 | 193.0 | 150.5 |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 30,013.7 | 27,208.0 | 25,212.7 | 22,326.0 | 22,240.8 | 23,177.0 | 20,203.7 | 20,684.6 | 20,159.1 | 18,971.6 | 24,951.0 | 24,130.7 | 23,273.2 |
| G-58 | 479.0 | 465.9 | 568.0 | 813.1 | 833.9 | 916.1 | 761.0 | | 587.0 | 453.0 | 681.0 | 548.0 | 646.0 |
| Total C&I | 1,327.5 | 1,210.2 | 928.2 | 670.2 | 414.3 | 307.4 | 279.6 | 286.5 | 362.3 | 476.1 | 810.5 | 1,035.8 | **675.7** |
| | | | | | | | | | | | | | |
| Total | 294.5 | 267.8 | 200.0 | 137.0 | 78.2 | 53.5 | 47.3 | 47.4 | 60.1 | 89.4 | 170.9 | 227.6 | **139.5** |

**Table: 5.7**

**UPC (Therms) : % Change relative to TY2019 ((q1 - q0) / q0)**

| Calendar Month - Therms | Jan-22 | Feb-22 | Mar-22 | Apr-22 | May-22 | Jun-22 | Jul-22 | Aug-22 | Sep-21 | Oct-21 | Nov-21 | Dec-21 | 12 Month Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| R-1 | 22% | 22% | 12% | 8% | -5% | -7% | -3% | -11% | -4% | 3% | 1% | 9% | 7% |
| R-3 | -5% | -6% | -13% | -6% | -16% | -13% | -5% | -12% | -13% | -16% | -21% | -12% | -11% |
| R-4 | -6% | -7% | -13% | -5% | -15% | -14% | -6% | -11% | -11% | -16% | -22% | -13% | -11% |
| R-5 | -5% | 16% | 2% | 22% | 2% | 14% | 20% | 11% | 13% | 22% | 47% | 55% | 16% |
| R-6 | -55% | -51% | -58% | -45% | -47% | -26% | -16% | -26% | -35% | -42% | -31% | -23% | -46% |
| R-7 | -60% | -61% | -71% | -46% | -24% | 4% | 16% | 17% | -8% | -55% | -55% | -47% | -56% |
| Total Residential | -5% | -6% | -13% | -5% | -16% | -13% | -5% | -12% | -13% | -16% | -21% | -12% | **-10.7%** |
| | | | | | | | | | | | | | |
| G-41 | -4% | -6% | -14% | -4% | -17% | -13% | 1% | -8% | -15% | -18% | -23% | -12% | -11% |
| G-42 | -2% | -6% | -13% | -6% | -18% | -17% | -7% | -11% | -15% | -13% | -22% | -12% | -11% |
| G-43 | 0% | -1% | -7% | -3% | -18% | -17% | -16% | -22% | -12% | -21% | -29% | -25% | -13% |
| G-44 | -47% | 4% | 1% | 13% | -13% | -33% | -32% | -20% | -94% | -84% | -65% | -58% | -44% |
| G-45 | 54% | 62% | 55% | 66% | -23% | -10% | 25% | -43% | -51% | -25% | 6% | 15% | 28% |
| G-46 | | | | | | | | | | | | | |
| G-51 | -2% | -1% | -6% | -4% | -6% | -1% | 5% | -12% | -1% | 3% | -11% | -7% | -4% |
| G-52 | -14% | -13% | -16% | -14% | -12% | -9% | -11% | -16% | -12% | -12% | -20% | -15% | -14% |
| G-53 | -4% | 5% | -2% | -2% | -5% | 12% | -5% | -8% | 4% | 0% | -5% | -8% | -2% |
| G-54 | 2% | 0% | 18% | 16% | -13% | -22% | -25% | -18% | 0% | -11% | -1% | 12% | -5% |
| G-55 | 14% | 12% | 13% | 95% | 106% | 394% | 1946% | 396% | 454% | 172% | 14% | -7% | 54% |
| G-56 | | | | | | | | | | | | | |
| G-57 | | | | | | | | | | | | | |
| G-58 | 58% | -20% | -20% | -24% | 4% | 35% | 19% | 22% | 0% | -16% | 6% | -8% | 0% |
| INAT | | | | | | | | | | | | | |
| Total C&I | -4% | -5% | -9% | -2% | -16% | -17% | -17% | -19% | -5% | -12% | -18% | -11% | **-9.8%** |
| | | | | | | | | | | | | | |
| Total | -4% | -6% | -11% | -3% | -16% | -16% | -15% | -17% | -7% | -13% | -19% | -11% | **-10.3%** |