Raquel J. Webster
Senior Counsel

June 30, 2021

BY ELECTRONIC MAIL

Luly E. Massaro, Clerk
Rhode Island Division of Public Utilities and Carriers
-and-
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 5043 – Gas Long-Range Resource and Requirements Plan for the Forecast Period 2021/22 to 2025/26
Informational Filing

Dear Ms. Massaro:

Enclosed are ten (10) copies of National Grid's[1] recently completed Long-Range Gas Supply Plan (LRP) for the forecast period 2021/22 to 2025/26. Pursuant to Rhode Island General Laws § 39-24-2, the Company files its LRPs with the Rhode Island Public Utilities Commission (PUC) on a biennial basis. The Company filed its last LRP with the PUC on June 30, 2020 in Docket 5043; therefore, this LRP is not statutorily required.

Rather, the Company is submitting this LRP to the Division of Public Utilities and Carriers (Division) in order to fulfill the purposes of the proposal contained in the February 20, 2019 Joint Memorandum of National Grid and the Division in Docket No. 4816 and is simultaneously filing it in Docket 5043 as an informational filing for the benefit of the PUC.

This LRP is based upon the Company's most recent June 2021 forecasts that, absent unanticipated modification, will also be used in the Company's Gas Cost Recovery filing this year. This LRP is designed to demonstrate that the Company's gas-resource planning process has resulted in a reliable resource portfolio to meet the combined forecasted needs of the Company's Rhode Island customers at least-cost.

The Long-Range Plan includes confidential gas cost pricing information and contract terms, which are provided in Exhibits 18, 19, 20, and 21. Therefore, the Company has provided a redacted and confidential version of the Long-Range Plan and has requested confidential treatment of Exhibits 18, 19, 20, and 21 pursuant to R.I. Gen. Laws § 38-2-2(4)(B) and Rule 810-RICR-00-00-1.3(H) of the PUC's Rules of Practice and Procedure. The confidential version of the LRP is also being provided to the Division pursuant to its non-disclosure agreement with the Company that is applicable to this docket.

[1] The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

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Thank you for your attention to this matter. If you have any questions, please contact me at 781-907-2121.

Very truly yours,

Raquel J. Webster

Enclosures

cc: Docket 5043 Service List
Leo Wold, Esq., Division

STATE OF RHODE ISLAND
RHODE ISLAND PUBLIC UTILITIES COMMISSION

Gas Long-Range Resource and Requirements Plan for the Forecast Period 2020/21 to 2024/25	)	Docket No. 5043

NATIONAL GRID'S MOTON FOR PROTECTIVE TREATMENT OF CONFIDENTIAL INFORMATION

National Grid[1] respectfully requests that the Rhode Island Public Utilities Commission (PUC) grant protection from public disclosure certain confidential, competitively sensitive, and proprietary information submitted in this proceeding, as permitted by Rule 810-RICR-00-00-1.3(H) of the PUC's Rules of Practice and Procedure (Rule 1.3(H)) and R.I. Gen. Laws § 38-22(4)(B). The Company also requests that, pending entry of that finding, the PUC preliminarily grant the Company's request for confidential treatment pursuant to Rule 1.3(H)(2).

I. BACKGROUND

On June 30, 2020, the Company submitted its Gas Long-Range Resource and Requirements Plan for the Forecast Period 2020/21 to 2024/25 (2020 LRP) in the above-captioned docket. The 2020 LRP included confidential gas cost pricing information and contract terms, which were provided in Exhibits 18, 19, 20, and 21. In accordance with Rule 1.3(H)(3), National Grid provided a redacted public version and confidential version of the 2020 LRP and requested that, pursuant to Rule 1.3(H), the PUC afford confidential treatment to the gas cost pricing information and contract terms contained in Exhibits 18, 19, 20, and 21. To fulfill the

[1] The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

purposes of the February 20, 2019 Joint Memorandum of the Company and the Division of Public Utilities and Carriers in Docket 4816, National Grid has prepared a Gas Long-Range Resource and Requirements Plan for the Forecast Period 2021/22 to 2025/26 (2021 LRP). The 2021 LRP is not required to be filed with the PUC pursuant to R.I. Gen. Laws § 39-24-2 given that such plans are only required to be filed biennially. However, the Company is submitting the 2021 LRP for informational purposes in this docket which was established for the review of the 2020 LRP.

Like the 2020 LRP, the 2021 LRP contains pricing information and contract terms in Exhibits 18, 19, 20 and 21. In accordance with Rule 1.3(H)(3), National Grid has provided a redacted public version and confidential version of the 2021 LRP and requests that, pursuant to Rule 1.3(H), the PUC afford confidential treatment to the gas cost pricing information and contract terms contained in Exhibits 18, 19, 20, and 21 of the 2021 LRP.

II. LEGAL STANDARD

Rule 1.3(H) provides that access to public records shall be granted in accordance with the Access to Public Records Act (APRA), R.I. Gen. Laws § 38-2-1, *et seq.* Under the APRA, all documents and materials submitted in connection with the transaction of official business by an agency is deemed to be a "public record," unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I. Gen. Laws § 38-2-2(4). To the extent that information provided to the PUC falls within one of the designated exceptions to the public records law, the PUC has the authority under the terms of APRA to deem such information as confidential and to protect that information from public disclosure.

In that regard, R.I. Gen. Laws § 38-2-2(4)(B) provides that the following types of records shall not be deemed public:

> Trade secrets and commercial or financial information obtained from a person, firm, or corporation which is of a privileged or confidential nature.

The Rhode Island Supreme Court has held that this confidential information exemption applies where the disclosure of information would be likely either (1) to impair the government's ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. *Providence Journal*, 774 A.2d 40 (R.I. 2001).

The first prong of the test is satisfied when information is provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. *Providence Journal*, 774 A.2d at 47.

III. BASIS FOR CONFIDENTIALITY

The gas cost pricing information and confidential contract terms – which are provided in Exhibits 18, 19, 20 and 21 to the 2021 LRP – are confidential and privileged information of the type that National Grid would not ordinarily make public. As such, the information should be protected from public disclosure. Public disclosure of such information could impair National Grid's ability to obtain advantageous pricing or other terms in the future, thereby causing substantial competitive harm. Accordingly, National Grid is providing the information on a voluntary basis to assist the PUC with its decision-making in this proceeding, but respectfully requests that the PUC provide confidential treatment to the information.

IV. CONCLUSION

For the foregoing reasons, National Grid respectfully requests that the PUC grant its Motion for Protective Treatment of Confidential Information.

Respectfully submitted,

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID

By its attorney,

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Dated: June 30, 2021

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.

Joanne M. Scanlon

June 30, 2021
Date

Docket No. 5043 – National Grid's Gas Long-Range Resource Plan
Service List as of 7/23/2020

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National Grid

The Narragansett Electric Company

Gas Long-Range Resource and Requirements Plan for the Forecast Period 2021/22 to 2025/26

Informational Filing

June 30, 2021

Docket No. 5043

Submitted to:
Rhode Island Division of Public Utilities and Carriers
Rhode Island Public Utilities Commission

Submitted by:

nationalgrid

I. Introduction

This filing presents the Long-Range Resource and Requirements Plan (Long-Range Plan) for The Narragansett Electric Company d/b/a National Grid (Company) for the gas supply forecast period November 1, 2021 through October 31, 2026. The Company is a public utility under the provisions of R.I. Gen. Laws § 39-1-2 and provides natural gas sales and transportation service to approximately 277,500 residential and commercial customers in 33 cities and towns in Rhode Island. The Company is submitting this Long-Range Plan to the Rhode Island Public Utilities Commission (PUC) pursuant to R.I. Gen. Laws § 39-24-2, which requires that the Company file the Long-Range Plan on a bi-annual basis. The Company submitted its last statutorily required Long-Range Plan on June 30, 2020 in Docket 5043. This Long-Range Plan is not statutorily required, but is being submitted to the Rhode Island Division of Public Utilities and Carriers (Division) to fulfill the purposes of the proposal contained in the February 20, 2019 Joint Memorandum of the Company and the Division in Docket No. 4816 (Joint Memorandum) and to the PUC for informational purposes.[1]

This Long-Range Plan consists of a long-range energy plan for the five-year period subsequent to the date of this filing and includes all assumptions and methodologies that the Company used in formulating the plan. In addition, Section V of this Long-Range Plan contains a description of the information to be included in the Long-Range Plan, pursuant to the Joint Memorandum, together with a reference to the specific section of the Long-Range Plan or Exhibit where such information can be found. This plan is designed to demonstrate that the Company's gas-resource planning process has resulted in a reliable resource portfolio to meet the combined forecasted needs of the Company's Rhode Island customers at least-cost. To make this demonstration, this Long-Range Plan includes the following information: (i) a description of the methodology the Company uses to forecast demand on its system; (ii) a discussion of the process and assumptions the Company uses to develop its resource portfolio to meet customer requirements under design-weather conditions; (iii) a complete inventory of the expected available resources in the Company's portfolio, and (iv) a demonstration of the adequacy of the portfolio to meet customer demands under a range of weather.

II. Overview of Planning Results

As described in detail in this filing, the Company's planning process is based on a comprehensive methodology for forecasting customer load requirements using a series of econometric models to determine the annual growth expected for Residential Heating, Residential Non-Heating, Commercial, and Industrial markets. To determine the projected growth over the forecast period, the econometric models used historical economic, demographic,

[1] On October 30, 2018 in the Company's 2018 Gas Cost Recovery (GCR) proceeding in Docket No. 4872, the PUC ordered that the Company and the Division to submit the Joint Memorandum in Docket No. 4816 outlining each of their recommendations for improving the Long-Range Plan as it relates to the annual GCR filing. On February 20, 2019, the Parties submitted the Joint Memorandum in compliance with the PUC's October 30, 2018 order in Docket No. 4872. The Joint Memorandum provided that the annual Long-Range Plan filings would be submitted in June, as soon as practical, following the release of the Company's annual forecast, permitting the Company to base its annual forecast on the most recent customer usage data, and prior to the Company's annual GCR filing. It also stated that the annual Long-Range Plan filings will include certain information, which is summarized in more detail in Section V, *infra.*

and energy price data, and weather data to determine total energy demand. The Company then analyzed load reductions it expects to achieve through the implementation of its revised energy-efficiency programs because such reductions are exogenous to the demand forecast generated by the econometric models. The Company's forecast is based on the March 2021 economic forecast from Moody's Analytics, Inc. that includes estimates of the impact that COVID-19 will have on the Rhode Island economy.

The results of the Company's Base Case retail demand forecast (see Exhibit 1) indicates that, over the five-year forecast period Planning Year 2022 through Planning Year 2026, the residential heating market is projected to increase by an average of 259,000 dekatherms per year, the Residential Non-Heating market is projected to decrease by an average of 17,000 dekatherms per year, and the Commercial and Industrial Sales markets are projected to grow by 102,000 dekatherms per year. The Company projects that growth opportunities in non-traditional markets over the forecast period are reflected in the results of the econometric models. The Company is not projecting any incremental growth in these markets beyond what it experienced in the historical period upon which the models are based.

As explained below, the Company's demand forecast is then converted to supply requirements at the Company's city gates. The result of the forecasting process is that projected sendout requirements increase over the five-year forecast period, averaging 427 MDth (approximately 1.2 percent) per year under normal weather conditions (see Section III.D.2.).

To ensure that the Company maintains adequate supplies in its portfolio to meet the projected customer load requirements, the next step in the planning process involves an analysis to define the planning standards for the coldest planning year, known as the "design year", and the coldest planning day, known as the "design day". This Long-Range Plan relies on the planning standards as defined in the Company's 2018 Long-Range Plan. The Company's design year is defined as 6,250 heating degree days (HDD) with a probability of occurrence of 1 in 37.47 years, and its design day is defined as 68 HDD with a probability of occurrence of 1 in 58.92 years. The Company has also included its design hour planning standard, which represents a 5% peak-hour factor (i.e. the peak hour requirement represents 1/20th of the peak day requirement). Combining the results of the design planning standards definition and the load forecasting process, the Company is projecting its Base Case design year sendout requirements to increase over the five-year forecast period by an average of 489 MDth, or approximately 1.2 percent, per year (see Section III.F.), and design day sendout to increase by an average of 4,913 Dth, or 1.3 percent, per year. The design hour is also expected to increase over the forecast period (see Exhibit 2).

After the forecast of customer requirements are determined, the next step in the Company's planning process is to design a resource portfolio to meet those requirements in the most reliable and least-cost manner possible. To that end, the Company uses the SENDOUT® Model (a proprietary linear programming model) to determine the adequacy of the existing portfolio in meeting the forecasted requirements and to identify any shortfalls during the forecast period. SENDOUT® allows the Company to determine the least- cost, economic dispatch of its existing resources, subject to contractual and operating constraints, and identifies the need for and type of additional resources during the forecast period, if any. To evaluate the flexibility and

adequacy of the resource portfolio under a range of reasonably foreseeable conditions, the portfolio is assessed under design and normal weather conditions and a cold snap weather scenario. For the cold-snap weather scenario, the Company used a 14-day cold snap occurring in the coldest 14-day period of the Company's normal year (January 8 - January 21) by evaluating January weather data from 1977/78 to 2016/17. The Company uses the results of the cold snap scenario to test the adequacy of inventories and refill requirements. The Company also applies the peak-hour requirement to its Synergi Gas® network analysis modeling software. To meet design requirements throughout the forecast period, incremental resources are needed.

Communications regarding this Long-Range Plan should be directed as follows:

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With a copy to:

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III. Forecast Methodology

III.A. Introduction

The Company's forecast methodology supports its supply planning goal to ensure that it maintains sufficient supplies in its resource portfolio to meet customers' requirements on the design day and that it maintains sufficient supply under contract and in storage (underground storage and LNG) to meet customers' requirements over the design year. Each year, the Company employs the same process of preparing a multi-year forecast to ensure that the portfolio has sufficient resources for the upcoming winter period and sufficient time to contract for additional resources should they be required. The term "customer" as used herein means those customers for whom the Company must make capacity planning decisions.[2]

The Company develops its underlying demand forecast from econometric models of its customer billing data. This data is available by month and by rate class. The Company developed the retail forecast in this Long-Range Plan in mid-2021 and, absent unanticipated modifications, it will be the same forecast that will be used in the Company's 2021 Gas Cost Recovery filing.

The Company models its daily resources and requirements with its SENDOUT® linear programming software modeling package and, therefore, a forecast of daily customer requirements as inputs for the model.

Accordingly, the Company developed five-year forecast of customer requirements under design-weather planning conditions using the following process:

(1) Forecast Retail Demand Requirements

Retail demand requirements are based on customer billing data, which is available by rate class and by month. The Company uses a series of econometric models to develop a forecast of retail demand requirements for traditional markets (i.e., Residential Heating, Residential Non-Heating, Commercial, and Industrial customers). The forecast of retail demand requirements for traditional markets is summed to determine the total retail demand requirements over the forecast period. This forecast of retail demand is disaggregated into monthly billed and unbilled volumes and, hence, can be calendarized for supply planning purposes.

(2) Develop Reference Year Sendout Using Regression Equations

The daily values of the Company's wholesale sendout in the reference year (April 2020 – March 2021) serves as the basis of allocating the monthly retail demand forecast to the daily level. Because actual sendout data for the reference year is a function of the weather conditions experienced in that year, the Company develops this allocator for sendout using regression equations to normalize the sendout in the reference year based on normalized weather data.

[2] The Company makes capacity planning decisions for its Sales and non-Capacity Exempt Transportation (Customer Choice) customers.

(3) Normalize Forecast of Customer Requirements

The Company's monthly retail demand forecast is allocated to the daily level based on the use of its daily wholesale sendout regression equation and its normal daily heating degree day data. This step sets the Company's total normalized forecast of customer requirements over the forecast period.

(4) Determine Design Weather Planning Standards

The Company performs a determination of the appropriate design day and design year planning standards for the development of a least-cost reliable supply portfolio over the forecast period.

(5) Determine Customer Requirements Under Design Weather Conditions

Using the applicable design day and design year weather planning standards, the Company determines the design year sendout requirements and the design day sendout requirements. These design sendout requirements establish the Company's resource requirements over the forecast period.

(6) Spatial (zip code) Peak Volume Forecast

For each zip code, customer monthly billing data is used to build monthly meter count and volume models for the major rate codes. Then, an optimization process is employed to convert this zip code level monthly volume forecast into daily values. The Company then ensures that this design weather zip code level forecast sums to the Company-level forecast to provide a zip code level view of design day customer requirements for system planning purposes.

Based on the forecast, the Company projects Base Case growth in customer requirements for its Sales and Customer Choice customers of 2,137 MDth over the five-year period, or 427 MDth per year (assuming normal weather) (see Section III.D.2.). Overall, this growth in firm sales represents a 5.9 percent total increase in sendout requirements over the forecast period, or 1.2 percent per year on average.

The development of the Company's five-year forecast of customer sendout requirements, based on the steps set forth above, is described in the following sections.

III.B. Retail Demand Forecast

The first step in the Company's forecasting methodology is the generation of its retail demand forecast, which is prepared through econometric and statistical modeling.

III.B.1. Demand Forecast for Traditional Markets

III.B.1.a. Service Territory Specific Data Availability

The Company used its monthly customer billing data (volume and number of customers) for the period September 2010 through February 2021 to define the dependent variables in its econometric models. The billing data was modeled at the level of four major classes of customers (Residential Heating, Residential Non-Heating, Commercial, Industrial). Each of these four classes included the Sales customer sub-class, the Customer Choice customer sub-class, and the "capacity-exempt" (i.e., grandfathered Transportation) customer sub-class. The table below lists the relevant major groups and the Company's internal rate codes used in the Company's analysis.

	Internal Rate Codes
Residential Heating	400, 402
Residential Non-Heating	401, 403
Commercial	404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 425, 433, 434, 439, 440, 443, 444, Z407, Z411, Z415
Industrial	417, 418, 419, 420, 421, 422, 423, 424, 428, 437, 438, 441, 442, Z419, Z423

III.B.1.b. Econometric Models

With volume and customer data as identified above, the Company developed econometric models for the number of customers and use-per-customer (the quotient of the division of volume and number of customers) for each rate code. The Company's econometric modeling effort was to regress each of the two dependent variables against an array of possible independent variables and select the equation with the best fit.

By using historical economic, demographic, and energy price data listed in Exhibit 3 as the independent variables, the Company estimated statistically valid econometric equations for each customer class. The Company obtained the economic and demographic data from Moody's Analytics, Inc. (Moody's), using forecasts from March 2021.

Additionally, the Company tested time variables, actual Heating Degree Days, actual Billing Degree Days, and natural gas and oil prices from the U.S. Department of Energy, Energy Information Administration.

The Company then reduced the results of its statistical forecast models to account for the incremental impact of the energy efficiency programs sponsored by the Company. The energy efficiency programs that the Company analyzed for this forecast were those submitted by the Company in Docket No. 5076 in its 2021 Energy Efficiency Program Plan, dated October 15, 2020, which was the most recent data available when the Company prepared the forecast. The Company subtracted the incremental savings from the programs that are not embedded in the historical data used to derive the statistical models because such savings are exogenous to the modeling effort.

III.B.2. Final econometric models for the Company's demand forecast

The Company develops its retail demand forecast from econometric models of its customer billing data. The Company developed the retail forecast presented in this Long-Range Plan in mid-2021, which is the same forecast that will be used in the Company's 2021 Gas Cost Recovery filing. Summary charts and tables comparing this forecast with the Company's 2020 forecast are presented in Exhibits 1 and 4 through 6.

III.B.3. The Impact of the Energy Efficiency Programs

On October 15, 2020, the Company filed its three-year Energy Efficiency Plan for the period 2021-2023. The primary goal of the Energy Efficiency plan is to create energy (both gas and electric) and economic cost savings for Rhode Island consumers as required by the least cost procurement law, R.I. Gen. Laws § 39-1-27.7. The goal of the natural gas energy efficiency programs is annual reduction in usage; there are no programs that are specifically targeted toward peak reduction.

Because the Company's econometric forecast is based on historical data, which does not fully incorporate the increasing penetration of the Company's energy efficiency programs in the Residential and Commercial and Industrial sectors, the Company reviewed its historical energy efficiency efforts to determine whether its retail demand forecast required any adjustment to reflect the increases in energy efficiency efforts. Analysis of the Company's historical energy efficiency programs shows that historical data should have embedded within annual savings of 422 MDth. These figures are based on the three-year average of 2018 through 2020 actual persistent and non-persistent energy efficiency savings. The Company uses a three-year average in lieu of the most recent year to smooth out the year-to-year fluctuations that may occur. The Company's analysis indicated that a further incremental reduction averaging 35 MDth/year were required from 2021 to 2026 to reflect the projected energy efficiency impacts.

III.C. Translation of Retail Forecast into Customer Requirements

In the second step of the Company's forecasting methodology, the Company uses linear regression equations of total daily sendout versus daily temperature for the most recent 12

months to calculate a reference-year by division. This serves as the most accurate way for the Company to allocate its monthly demand forecast into its future daily customer requirements. This step is used to determine the Company's normal year forecast of customer requirements over the forecast period for gas cost recovery purposes and to determine the Company design year forecast of customer requirements over the forecast period for resource planning purposes. To perform its regression analysis, the Company used version 4.0.3 of the "R" statistical software package.[3]

III.C.1. Wholesale Volume by Division

To establish normal-year springboard sendout requirements, the Company developed a linear-regression equation for each of its four divisions (formerly Providence Gas, Westerly Gas, Bristol and Warren Gas, and Valley Gas) using data for the reference-year period April 1, 2020 through March 31, 2021. The Company's regression equation uses sendout as its dependent variable and temperature as its independent variable.[4]

Through the use of the linear-regression equation, the Company is able to normalize total daily sendout. Specifically, the actual daily firm sendout is regressed against: (1) HDD data as provided by its weather service vendor Weather Services International, (2) HDD data lagged over two days, and (3) a weekend dummy variable. These data elements were selected for the regression analysis since these elements have been, and continue to be, the major explanatory variables underlying the Company's daily sendout requirements.

The Company selected the T.F. Green International Airport weather station (KPVD or T.F. Green) as the source of the weather data used as the principal explanatory variable in its regression equations. The Company selected the T.F. Green weather station because it is close to the center of the Company's service territory, on a load-weighted basis, and it is highly correlated with surrounding weather stations. Specifically, the Company used the HDD value for each 24-hour period of 10:00 a.m. to 10:00 a.m., which constitutes the gas day and, therefore, corresponds to the same daily time period of observation of the sendout data.

Based on its observations of the historical relationship between total sendout and HDD, the Company chose to develop its regression equation as a segmented model, i.e., a "regression model where the relationships between the response and one or more explanatory variables are piecewise linear, namely represented by two or more straight lines connected at unknown values:

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[3] "R is a language and environment for statistical computing and graphics. It is a GNU project, which is similar to the S language and environment, which was developed at Bell Laboratories (formerly AT&T, now Lucent Technologies). R can be considered as a different implementation of S. There are some important differences, but much code written for S runs unaltered under R. . . . R is available as Free Software under the terms of the Free Software Foundation's GNU General Public License in source code form. It compiles and runs on a wide variety of UNIX platforms and similar systems (including FreeBSD and Linux), Windows and MacOS." Source: https://www.r-project.org/about.html (The R Project for Statistical Computing).

[4] Sendout includes both Sales and supplier service (Customer Choice) customer requirements and the Company's Capacity Exempt customers.

these values are usually referred as breakpoints".[5]

Since a significant portion of the Company's sendout is due to space heating usage, and space heating only occurs when average air temperatures fall below a certain level, the segmented model serves as an excellent starting point for modeling the relationship between sendout and HDD. Linear modeling of sendout is appropriate since the Company has not observed any non-linear characteristics in sendout at cold temperatures.

The Company's segmented model equation includes variables the following variables: Intercept is the MMBtu sendout predicted at HDD=0, Slope1 is the MMBtu/HDD usage below the Breakpoint HDD level, Slope2 is the incremental MMBtu/HDD usage above the Breakpoint HDD level, the Standard Error is expressed in MMBtus, and the Breakpoint HDD is the HDD value at which space heating equipment is observed to turn on. The signs of the Slope1 and Slope2 coefficients (positive) imply that as temperatures get colder and HDD increases in value, the sendout will increase, which agrees with what the Company typically observes.

Based on observations of daily sendout, the Company has observed that weekday and weekend sendout requirements are different at similar HDD levels. The Company's regression equations include a second independent variable, a weekday/weekend dummy variable, set to 0 for Mondays through Thursdays, 1 on Fridays and Sundays, and 2 on Saturdays. The sign of the coefficient (negative) implies that for a given HDD level, loads will be lower on Friday through Sunday as compared to Monday through Thursday (i.e., weekend compared to the workweek).

Finally, the Company has observed a correlation between lagged temperature and the residuals of the above equation, so the Company has added a third independent variable: the difference between HDD on day *t* and mean of the HDD on day *t-1* and day *t-2*. The differences were used in lieu of the actual lagged values to avoid correlation among the independent variables. The underlying theory of this analysis is that heating requirements increase as two consecutive days of cold weather occur, which cools down structures to a greater degree than would be experienced on a single day. The introduction of the third independent variable added another incremental improvement in the adjusted R^2 of the equations. The sign of the coefficient (negative) implies that if a day is colder than the average of the previous two days, the increase in sendout will be somewhat lower than what would be forecast without the coefficient, and vice versa.

The functional form of the equation, in pseudo code, is:

```
Sendout = Intercept Coefficient +
          Weekend Dummy Coefficient * Weekend Dummy Variable +
          Slope1 Coefficient * min(HDDt, Breakpoint HDD) +
          if(HDDt<=Breakpoint HDD) {0} else {(Slope1 Coefficient
            + Slope2 Coefficient) *
            (HDDt - Breakpoint HDD)} +
          Lagged Delta HDD Coefficient * (HDDt - average(HDDt-1, HDDt-2)
```

[5] Source: "Segmented: an R package to fit regression models with broken-line relationships," R News, Volume 8/1, May 2008, at page 20.

These regression equations capture the observed characteristics of the Company's sendout requirements by gas division. The observed characteristics include the following: (1) sendout requirements are directly related to HDD; (2) sendout requirements are affected by HDDs that occur over a multi-day period; and (3) sendout requirements differ by day of the week. Thus, the Company has developed a set of reliable regression equations to describe wholesale gas sendout by division. Using a series of daily normal HDDs, these equations allow the Company to calculate its history of normalized wholesale gas sendout for each of its four gas divisions.

Exhibit 7, provided in Microsoft Excel format, contains the wholesale volume forecast by rate group for normal and design weather and SENDOUT forecasts (normal and design weather) for capacity planning purposes for volumes and costs.

III.C.2. Wholesale Volume by End-Use

In addition to its segmented regression equations for each gas division, the Company runs similar regression equations for the sum of its four divisions for its capacity-eligible FT-1, capacity-exempt, and non-firm sales customers to best characterize the daily usage patterns of each of these customer groups. Subtracting the daily actual volumes for each of these groups from total daily wholesale sendout, the Company can also characterize the daily usage patterns of its remaining customers: Sales and FT-2. The Sales and FT-2 data are combined since they are not daily-metered customers and their volumes can only be inferred.

These regression equations capture the observed characteristics of the Company's sendout requirements by end-use. The observed characteristics include the following: (1) sendout requirements are directly related to HDDs; (2) sendout requirements are affected by HDDs that occur over a multi-day period; and (3) sendout requirements differ by day of the week. Thus, the Company has developed reliable regression equations to establish the basis upon which future sendout requirements can be forecast. Moreover, the Company has further developed a set of reliable regression equations to describe wholesale gas sendout by end-use. Using a series of daily normal HDDs, these equations allow the Company to calculate its history of normalized wholesale gas sendout by end-use.

Using its forecast of retail demand and an appropriate set of daily HDD values for a design year, the Company can successfully plan its operational requirements to provide a low-cost, adequate, and reliable supply of natural gas to its customers.

III.C.3. Comparison of Historical Retail and Wholesale Volumes to Determine Unaccounted For Gas

To align its historical and forecasted retail volumes to its wholesale data, the Company calculates its unaccounted-for-gas ('UFG') percentage by which the retail data will be inflated to wholesale levels. For the most recent (September 2019 – August 2020) period, the Company's monthly retail volumes match the wholesale volumes to within 2.9 percent, a value that both agrees with expected UFG and indicates that the Company has adequately captured all customer volumes.

III.D. Normalized Forecast of Customer Requirements

The third step in the Company's forecasting methodology is to develop a forecast of customer requirements under normal weather conditions for its demand forecast.

III.D.1. Defining Normal Year for Ratemaking Purposes

To establish the normal year's daily HDD data for ratemaking purposes, the Company calculated the average annual number of HDDs for the T.F. Green (KPVD) weather station for the 10-year period from April 2007 through March 2017, with an average of 5,422 HDD, as documented in its 2017 rate case (RIPUC Docket No. 4770).

The Company then prepared a "Typical Meteorological Year" by selecting, for each calendar month, the month in the T.F. Green weather database that most closely approximated the 10-year average HDD and standard deviation for each month. A summary of the monthly averages for the T.F. Green weather site is listed in the chart below.

Month	HDD	Standard Deviation
Jan	1,083	8.7
Feb	946	7.8
Mar	812	7.6
Apr	464	6.9
May	191	5.4
Jun	41	2.4
Jul	0	0
Aug	2	0.2
Sep	65	3.0
Oct	316	6.8
Nov	610	7.5
Dec	892	7.9
Total	5,422	

Average Monthly HDD and Average of Monthly Standard Deviations for the T.F. Green International Airport Weather Station

III.D.2. Defining Load Attributed to Customers Using Utility Capacity

For the third step of the Company's forecasting methodology set forth in Section III.A, above, the Company allocated the monthly retail volumes to the daily level based on the 2020/2021 reference-year regression equations, using normal year HDD, to yield the forecast of Sales, FT-2 (Customer Choice), and FT-1 (pipeline) customer requirements under normal weather conditions for its demand forecast, based on a 365-day year.

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Heating Season	25,906	26,011	26,463	26,964	27,151	27,411
Non-Heating Season	10,273	10,459	10,654	10,724	10,820	10,906
Total	36,180	36,470	37,118	37,688	37,972	38,317
Per-Annum Growth		290	648	570	284	345
Per-Annum Growth (%)		0.8%	1.8%	1.5%	0.8%	0.9%

Base Case Normal Year Customer Requirements for Capacity Planning (MDth)

III.E. Design Planning Standards

In the fourth step of the Company's forecasting methodology, the Company determines the appropriate design day and design year planning standards to develop a least-cost, reliable supply portfolio over the forecast period.

III.E.2. Design Year and Design Day Planning Standards

The Company's planning standards represent the defined weather conditions and consequent sendout requirement that must be met by the Company's resource portfolio. The Company's instant Long-Range Plan relies on the planning standards as defined in its 2018 Long-Range Plan. The Company's design year and design day standards are listed in the chart below.

Element	Value
Design Year HDD	6,250
Frequency of Occurrence	1 / 37.47 years
Design Day HDD	68
Frequency of Occurrence	1 / 58.92 years

Design Year and Design Day Criteria

As described below, the Company's analysis of the design year and design day standards demonstrate that these standards are appropriate.

III.E.2.a. Design Day Standard

The purpose of a design day standard is to establish the amount of system-wide throughput (interstate pipeline and underground-storage capacity plus local supplemental capacity) that is required to maintain the integrity of the distribution system. In this filing, the Company defines its design day standard at 68 HDD with a probability of occurrence of once in 58.92 years as a result of its ongoing review of planning standards.

The Company established its design day standard using a three-step process. First, the Company performed a statistical analysis of the coldest days recorded over a historical period. Second, the Company conducted a cost-benefit analysis to evaluate the cost of maintaining the resources necessary to meet design day demand versus the cost to customers of experiencing service curtailments. Third, the Company identified a design day standard that would maintain reliability at the lowest cost.

To perform the statistical analysis necessary to identify the appropriate design day standard, the Company used recorded daily HDD values based on 6,040 observations at the T.F. Green weather site for the November through March periods of 1977/78 through 2016/17. In previous long-range supply plan submissions, the Company had selected the coldest day of each of the most recent 40 heating seasons reflected in the T.F. Green weather data. The change to evaluating a larger data set was necessitated because the distribution of coldest days in the earlier methodology is trending away from a normal distribution. Using its new methodology, the Company found that these 6,040 data points fell within a normal distribution with an average of 55.00 HDD and a standard deviation of 6.13 HDD.

In its design day standard, the Company examined the cost of potential customer curtailments through a cost-benefit analysis. In the event of a service disruption, there are several types of damages that customers could experience. For example, the Company's residential customers would potentially incur re-light costs and freeze-up damages. The Company's Commercial and Industrial customers would potentially incur economic damages associated with the loss of production on the day of the event.

In the Company's design day cost-benefit analysis, the cost of maintaining adequate throughput capacity and the benefit of avoiding damage costs that would be incurred in relation to customer premises are compared. The intersection of the curves set a range for design day planning purposes from approximately 64.3 to 71.0 HDD, with a midpoint of 67.3 HDD. Thus, the Company's design day standard of 68 HDD is within the range of values based on cost and benefit. The Company's analysis indicates that the frequency of occurrence of the Company's design day standard is once in 58.92 years.

III.E.2.b. Design Year Standard

In this filing, the Company defines its design year standard as 6,250 HDD, with a probability of occurrence of once in 37.47 years.

The Company maintains a design year standard for planning purposes to identify the amount of seasonal supplies of natural gas that will be required to provide continuous service under all reasonable weather conditions. If the Company were to have a shortfall in supply during the winter season, the amount of supply in deficit can be translated into an equivalent number of customers whose service would be disrupted for more than one day. For a supply disruption of a multi-day duration, service would be curtailed on a priority basis and would likely fall on Commercial and Industrial establishments before affecting the Residential sector, since supply to the Residential sector is more likely to involve health and personal safety. To establish an estimated annual level of HDDs for which the Company should plan, the Company compared the benefit of maintaining an adequate quantity of natural gas supply under all reasonable weather conditions to the probability-weighted cost of losses that might occur if supplies are not adequate.

The Company has established its design year standard using a three-step process. First, the Company performed a statistical analysis of annual HDD data recorded over a historical period. Second, the Company conducted a cost-benefit analysis to evaluate the cost of maintaining the resources necessary to meet design year demand versus the cost to customers of experiencing service curtailments. Third, the Company identified a design year standard that would maintain reliability at the lowest cost.

As a result of this analysis, the Company has determined that a design year standard of 6,250 HDD is an appropriate level. The Company's analysis indicates that the frequency of occurrence of the Company's design year standard is once in 37.47 years.

III.E.2.c. Specification of Daily Design Year HDD

To generate the daily HDD values for its design year, the Company scaled the daily values for its normal year by the ratio of the annual normal year total to the annual design year total, making any minor adjustment necessary to ensure the peak day of the design year equaled the Company's design day standard.

III.F. Forecast of Base Case Design Year Customer Requirements

In the fifth, and final, step of the Company's forecasting methodology set forth in Section III.A., above, the Company uses the applicable design day and design year planning standards to determine the design day and design year sendout requirements. To accomplish this, the Company combines the springboard equations, which are derived from the sendout regression analysis, with its normal year daily HDD pattern and its design year daily HDD pattern to yield two springboard year estimates of normal year and design year daily customer requirements. Below are the resulting design year requirements for the demand forecast.

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Heating Season	30,007	30,149	30,671	31,252	31,470	31,773
Non-Heating Season	11,059	11,258	11,468	11,543	11,648	11,741
Total	41,066	41,406	42,139	42,795	43,118	43,513
Per-Annum Growth		340	733	656	323	395
Per-Annum Growth (%)		0.8%	1.8%	1.6%	0.8%	0.9%

Base Case Design Year Customer Requirements for Capacity Planning (MDth)

III.G. Spatial (Zip-code) Design Day Forecast

III.G.1. Purpose

The purpose of the spatial design day forecast is to provide the peak volume on the design day of each zip code for next five years.

III.G.2. Data

The data for this forecast includes: (1) customer history monthly billing data of each rate code for each zip code; (2) historic weather data; (3) history economic data; (4) normalized weather data for future prediction; (5) forecast economic data; (6) zip code based saturation values; and (7) zip code moratorium/engineering constrains (if applicable).

III.G.3. Modeling and Forecasting Process

The entire modeling and forecasting process consists of the following major steps:

- Customer monthly billing data calendarization and monthly aggregation for each major rate code;
- Zip code-based weather data processing and heating degree day (HDD) calculation;
- Meter count number correction to remove outliers and adjust the shifts (big jump or drop) caused by rate code re-definition or some other issues;
- Building meter count monthly model of each major rate code for each zip code;
- Trimming meter count number with the saturation result and moratorium constrains;
- Building volume monthly model of each major rate code for each zip code;
- Monthly volume bill/unbill split;
- Estimate the peak volume on the design data by using an optimization process to provide a best allocation from monthly volume to daily volume. This is a key step for the entire peak volume forecast; and
- From this year (2020), the spatial design day forecast has been extended to a more granular level (Residential vs. Non-Residential) through a separate optimization problem which doubles variables.

III.H. Design Hour Requirements

Once the design day sendout requirement is established, the Company converts this sendout to a design hour based on a 5% peak-hour factor (i.e. the design hour requirement represents 1/20th of the design day requirement). The Company then applies the design hour requirement to its Synergi network analysis modeling software by means of growth factors generated from the spatial (i.e., zip code) forecast. The resulting design hour Synergi models are used to perform various analyses necessary for distribution system operations (e.g., regulator pressure settings, LNG requirements) and capital planning.

On January 29, 2019, Algonquin Gas Transmission, LLC (AGT), one of the interstate pipeline companies that serves the Company, notified the Company (and all AGT customers served by AGT's G Lateral pipeline) that, during peak periods, it may issue orders under its tariff requiring local distribution companies, including the Company, to limit their hourly takes to calculated hourly flow limits at each take station. Under the Company's contracts with AGT, those calculated hourly flow limits are either 1/24th or 6% of the daily MDQ under each contract (see Exhibit 8 for the Company's daily and hourly contract quantities). The total calculated hourly flow limits for each take station are then equal to the combined calculated hourly flow limit for all contracts providing deliveries to each take station. Historically, AGT has not imposed any requirements that its customers manage hourly takes to fall within the calculated hourly flow limits, nor has AGT restricted the Company's ability to balance its overall takes across all take stations.

The January 29, 2019 notice expired on April 1, 2019, and, due to the overall mild winters of 2019/20 and 2020/21, it was not reissued. However, it is possible that AGT could issue a similar notice in the future. AGT could even issue the types of orders described in the January 29, 2019 notice without first issuing another warning should extreme cold temperatures or system issues arise. Accordingly, the Company is making planning decisions so that it can comply with any such future orders. Because the Company's design hour is greater than the daily 1/24th and 6% combination, the Company will ensure that it has sufficient deliverability to meet the design hour requirements of all its customers.[6]

III.I. Capacity Exempt Customer Requirements

Capacity Exempt customers are firm transporters on the Company's distribution system; however, the Company does not plan for their upstream resources. Supply for capacity exempt customers is provided by third-party marketers. Additionally, the Company's capacity eligible FT-1 customers do not receive the storage and supplemental portion of their supplies from the Company's resource portfolio. These storage and supplemental volumes must also be provided by third-party marketers. The Company's forecasting process does include a forecast of these capacity exempt and FT-1 loads for distribution system planning purposes (see table below).

[6] The Company is also served by Tennessee Gas Pipeline (Tennessee). The Company's Tennessee contracts provide for 1/24th hourly flows.

Capacity Exempt and FT-1 Storage/Supplementals Load Summary (Dth)
Base Case Forecast

Normal Year

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
HS	2,765,352	2,679,979	2,813,373	2,917,170	2,911,649	2,891,102
NHS	2,444,224	2,566,287	2,661,450	2,656,404	2,637,523	2,617,551
Total	5,209,576	5,246,266	5,474,823	5,573,573	5,549,172	5,508,653
PA Growth		36,690	228,557	98,751	-24,401	-40,519
Pct Growth		0.7%	4.2%	1.8%	-0.4%	-0.7%

Design Year

	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
HS	3,050,801	2,951,177	3,096,765	3,209,458	3,203,413	3,181,242
NHS	2,486,598	2,610,777	2,707,589	2,702,456	2,683,248	2,662,930
Total	5,537,399	5,561,954	5,804,354	5,911,914	5,886,661	5,844,172
PA Growth		24,554	242,401	107,559	-25,253	-42,489
Pct Growth		0.4%	4.2%	1.8%	-0.4%	-0.7%

Peak Day	37,178	35,486	37,121	38,335	38,265	38,039

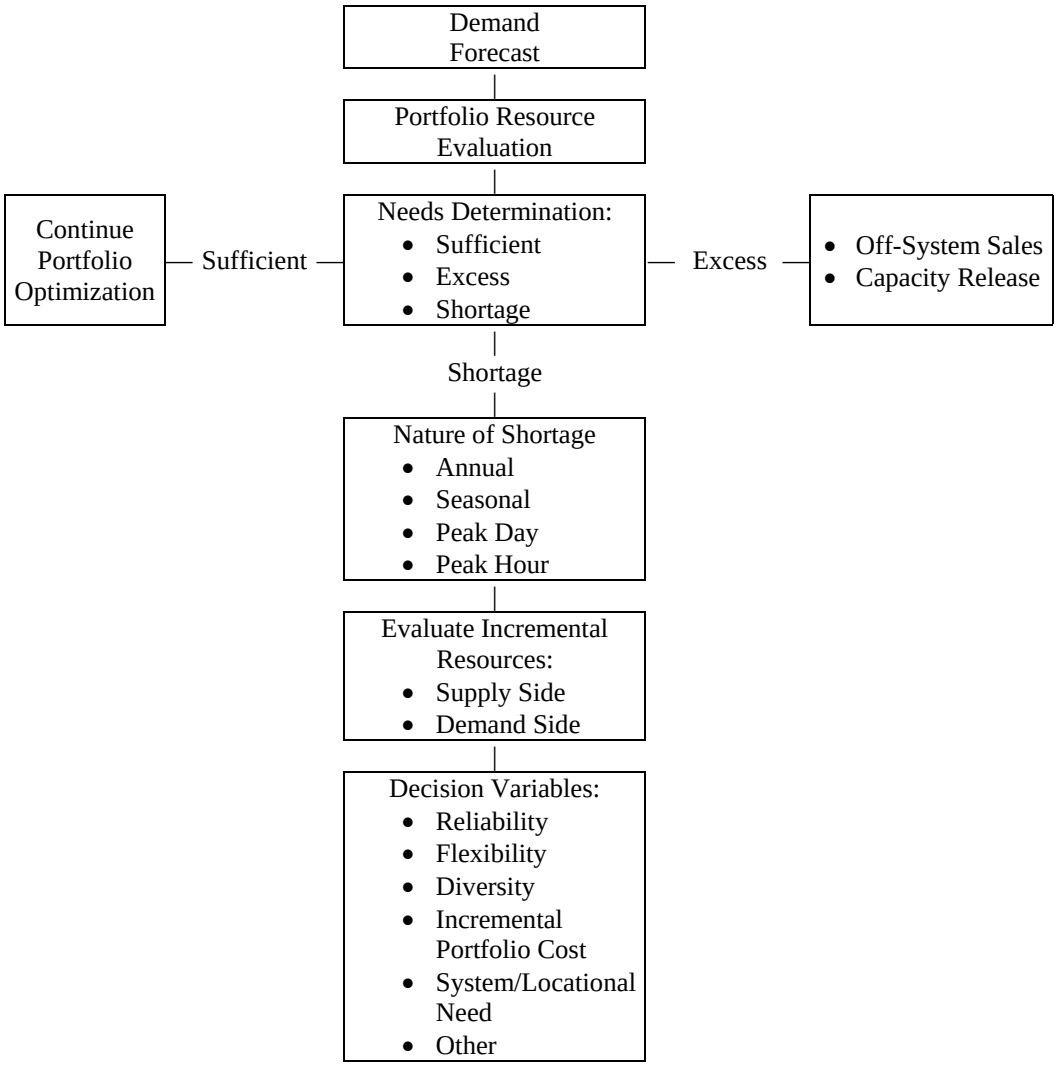
Capacity Exempt and FT.-1 Non-Pipeline Customer Requirements (Dth)

The load duration curves for FT-1 Customers, Capacity exempt Customers and Non-Firm Customers are presented in Exhibits 9 through 11. The Company is providing the back up for this data in Microsoft Excel format.

IV. Design of the Resource Portfolio

IV.A. Gas Resource Portfolio

The Company maintains a resource portfolio that includes pipeline transportation, underground storage, and peaking resources to meet customer requirements on the forecasted design hour, design day, design year, and normal year including a mid-winter cold snap. To meet this obligation, the Company employs an established and reliable approach to demand forecasting and resource procurement. To this end, the Company identifies, evaluates, and acquires a mix of supplies and capacity that minimizes cost while ensuring the reliability of service to firm customers. The following figure is a schematic representation of the Company's resource evaluation and planning process.



IV.B. Analytical Process and Assumptions

To evaluate the adequacy of its portfolio relative to forecasted design day and design year customer requirements, the Company performs several analyses. The primary analysis is conducted utilizing the SENDOUT® model. The SENDOUT® model is a linear-programming optimization software tool used to assist in evaluating, selecting, and explaining long-term portfolio strategies. SENDOUT® allows the Company to model its resources in detail and to assess the adequacy and cost of its portfolio. SENDOUT® also aids the Company in evaluating options for incremental resources based on customer requirements and cost. Using the SENDOUT® model, the Company can (1) determine the least-cost portfolio that will meet forecasted customer demand, and (2) test the sensitivity of the portfolio to key inputs and assumptions, as well as its ability to meet the Company's design day and design year planning standards and contingencies. Based on the results of this analysis, the Company can make preliminary decisions on the adequacy of the resource portfolio and its ability to meet system requirements in the near term and over the longer term.

The Company also utilizes load duration curve analysis to assess the adequacy of its supply portfolio. Load duration curve analysis allows for a visual comparison of each day's forecasted requirements for the design year with the supplies and resources available to meet those requirements. This type of analysis, coupled with SENDOUT® studies, is helpful in identifying a design heating season shortfall in the supply portfolio.

In recent years, the Company has focused on design hour planning in addition to normal, design, and cold-snap scenarios. The Company maintains Operational Balancing Agreements (OBA) with AGT and Tennessee that allow the Company to balance receipts and deliveries across all gate stations on each of the respective pipelines. In January 2019, AGT issued a notice on its system warning that it might issue future orders that would limit the operational and planning flexibilities the Company historically has exercised pursuant to its contracts with AGT, AGT's Tariff and the OBAs, by requiring AGT customers served by the G Lateral to balance receipts and deliveries by gate station by hour[7]. In response to AGT's warning, the Company adjusted its planning to incorporate design hour distribution system planning as a compliment to design day planning.

The Company identifies the expected design hour requirements at each take station utilizing its Synergi Gas® network analysis modeling software. Synergi Gas® modeling software is used to simulate natural gas transmission and distribution systems. This hydraulic modeling software identifies, predicts, and helps the Company address its operational challenges, enabling day-to-day efficiency of gas distribution and transmission networks. Synergi Gas® software provides the results needed to make design, planning, and operating decisions using robust equations. The identified take station requirements are used to assess the adequacy of the gas supply portfolio, including expected deliveries by marketers, to identify any design hour shortfall. The Company compares the forecasted flows with the supply resources delivered to the take stations which include; contractual hourly entitlements of the Company's existing transportation contracts, on-system peaking assets, and expected deliveries by marketers.

For the purpose of preparing this Long-Range Plan, the Company focused its analysis on design year forecast demand. However, the Company has also analyzed normal year forecasted demand and a cold-snap scenario using the Company's existing resource portfolio and proposed resources necessary to meet requirements. For the design year and normal year analyses, the Company compared resources and requirements for all firm planning load (i.e. firm sales and Customer Choice requirements) and also looked at resources and requirements applicable to firm sales customers only. The examination of these various scenarios enables the Company to test the adequacy and flexibility of the resource portfolio as described previously.

To perform the analysis of these scenarios, the Company incorporated several key assumptions. The Company used the NYMEX Henry Hub and basis forward curves dated June 8, 2021 as key pricing inputs to evaluate these scenarios. To model fixed and variable pipeline and storage costs, the Company relied on tariff rates effective in June 2021. However, the Company is aware of several potential tariff rate changes that may impact costs during the LRP time period:

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[7] All of the Company's Tennessee contracts allow for 1/24th hourly deliveries, while the Company's Algonquin contracts allow for a combination of 1/24th and 6% hourly deliveries.

1) On July 31, 2020, Columbia Gas Transmission (TCO) filed a rate case with the FERC proposing a substantial increase in storage and transmission costs starting February 1, 2021. The proposal was the pipeline's first rate case filing at the FERC; the Company intervened in the docket and filed a protest to the proposed rate increase. At this time, a settlement between TCO and the intervening parties to the case has not been reached.

2) On May 26, 2021, Texas Eastern Transmission, LP (Tetco) held an information session on the company's preparations for filing a general Section 4 rate case with the Federal Energy Regulatory Commission in 2021. At that session, Tetco informed participants that the need to file is being driven by a growth in system rate base including capital investments in safety and an expanded pipeline integrity management and modernization program, an increase in its cost of service and increased regulatory risk. Until such time as Tetco makes its Section 4 filing with FERC requesting the rate increase, the impact of the rate filing will not be known; for this reason, the Company has used the currently effective rates in its filing.

Throughout all these scenarios, the Company has assumed that there are no significant changes to the Customer Choice Program since the redesigned program was implemented in November 2020. The Company has also assumed that, throughout the forecast period, there is no change in the Company's service obligation to plan for the capacity requirements of firm, non-Capacity Exempt customers. Therefore, for the purposes of this filing, the Company has included both Firm Sales and Firm Transportation customers that utilize the Company's firm capacity in the SENDOUT® model (i.e. planning load). The Company's analysis assumes that all transportation and storage contracts expiring during the forecast period are renewed at the same cost, the same volume, and with the same operating characteristics except where explicitly discussed. Finally, the Company assumed that its LNG supply contracts and its city gate supply arrangements, will expire on the contract termination date, and are not assumed to be available after the respective date[8]. Where solutions to resolve supply shortfalls have been identified, the Company has modeled the capabilities and costs of incremental assets required to meet design hour, design day, and design year requirements utilizing the best information available as of June 2021.

As previously stated, the Company has also examined its remaining supply portfolio after expected capacity releases to retail marketers and compared that portfolio to forecast requirements for sales customers. While the primary purpose of this analysis is to produce a forecast of gas costs for sales customers, this analysis is also useful to help the Company understand the optimal way to dispatch the assets it is likely to manage on behalf of sales customers.

IV.C. Available Resources

This section describes the Company's current resource portfolio, the Company's expected resource portfolio given certain portfolio decisions the Company has made, and decisions the Company is considering. This section also discusses any modifications that the Company

[8] In order to facilitate feasible solutions in the SENDOUT model, the Company has included a minimal amount of 2022 summer LNG to account for boil-off volumes.

anticipates making to the portfolio during the forecast period to meet sendout requirements. As discussed in more detail below, to meet design hour, design day, and design year sendout requirements, the Company's resource portfolio is composed of the following categories of available resources: (1) transportation contracts; (2) underground storage contracts; and (3) peaking resources. In addition, a discussion of the Company's Natural Gas Portfolio Management Plan is included.

The following Exhibits detail the assets in the Company's supply portfolio:

- Exhibit 8 is a table showing the daily and the hourly contract quantities at each city gate for each transportation contract that delivers to the Company's city gates in Rhode Island on both Tennessee and Algonquin, in the Company's resource portfolio as of November 1, 2021.
- Exhibit 12 is a schematic of the Company's transportation and underground storage contracts effective as of November 1, 2021.
- Exhibit 13 is a table listing and description of each transportation and storage contract in the Company's resource portfolio as of November 1, 2021.
- Exhibit 14 is a listing of portfolio assets with the corresponding path as identified by the Company to which each asset is assigned.

IV.C.1. Transportation Contracts

The Company has capacity entitlements on multiple upstream pipelines that allow for the delivery of gas to its city gates in Rhode Island. The Company has four city gate interconnects with Tennessee: Pawtucket/Cumberland, Lincoln, Smithfield and Cranston. Additionally, the Company has ten city gate interconnects with Algonquin; Dey Street, Westerly, East Providence, Portsmouth, Tiverton, Burrillville, Barrington, Bristol/Warren, Cumberland and Crary Street. The Company's transportation contracts provide access to domestic production fields, as well as liquid trading points that afford the Company a level of operational flexibility to ensure the least-cost dispatch and reliable delivery of gas supplies. The Company's transportation contracts are summarized on pages 1 through 3 of Exhibit 13.

IV.C.2. Underground Storage Services

The Company's underground storage assets are critical to allowing the Company to meet winter-season customer requirements. By using long-haul capacity to fill storage, the Company can use its transportation resources at a higher load factor. Underground storage supplies also allow the Company to serve peak-period requirements with off-peak priced gas supplies. Additionally, underground storage greatly enhances the flexibility of the Company's portfolio, allowing the Company to manage fluctuations in weather from day to day as well as to provide balancing service to transportation customers.

One underground storage service of note within the Company's portfolio is its storage swing service under Rate Schedule Firm Storage Market Area (FS-MA) on the Tennessee pipeline. This storage swing option is designed to allow a daily imbalance tolerance that is equal to the Maximum Daily Withdrawal Quantity (MDWQ), as stated in the Company's storage contract (10,920 Dth per day). The imbalance is treated as an automatic storage injection or withdrawal under the specific contract and assessed applicable charges under the FS-MA

contract. The Company has elected its firm storage contract, FS-MA #501, as a storage swing option. This swing option provides vital flexibility to the Company's portfolio in order to manage daily fluctuations in load and avoid imbalance charges and/or penalties.

A summary of the Company's storage services is provided on page 4 of Exhibit 13.

IV.C.3. Peaking Resources

In addition to interstate pipeline and underground storage resources, the Company utilizes peaking resources to meet its design requirements. Peaking supplies are a critical component of the resource mix in that these supplies provide the Company with the ability to respond to fluctuations in weather, economics, and other factors driving the Company's sendout requirements on the coldest days.

IV.C.3.a. LNG Facilities

The Company maintains two permanent on-system LNG storage and vaporization facilities. These facilities enhance reliability and provide a source of supply for the distribution system. Because these resources can be brought on line quickly, these plants can be used to meet hourly fluctuations in demand, maintain deliveries to customers, and balance pressures across portions of the distribution system during periods of high demand. These supplies must be available throughout the heating season to ensure service to customers when the Company has exhausted its available pipeline supplies. It is the Company's practice to have its storage facilities full as of December 1 of each year.

The Company's LNG storage and vaporization capacities are summarized in the table below:

Location	Facility Type	Maximum Vaporization (Dth per day)	Gross Storage Capacity (Dth)
Providence	LNG	95,000	600,000
Exeter	LNG	24,000	202,000
Total	**LNG**	**119,000**	**802,000**

IV.C.3.b. LNG Supply Contracts

Please see the table below for a listing of the LNG supply agreement(s) that are currently part of the Company's portfolio.

Supplier	Maximum Daily Quantity (Dth)	Annual Contract Quantity (Dth)	Term
Constellation	6,000	263,112	Apr 1, 2021 – Nov. 30, 2021
NextEra	2,100	36,928	Apr 1, 2021 – Nov. 30, 2021

The Company contracts for trucking arrangements to guarantee the availability of trailers and drivers to truck LNG from the source point to the Company's LNG facilities throughout the year. The Company has contracted with Transgas and LP Transportation, Inc. to provide LNG trucking services to refill both NG LNG and Exeter for the 2021 off-peak season.

The Company plans to contract for the following in the coming months; (1) liquid refill for the 2021/22 peak season; (2) trucking arrangements for the 2021/22 peak season; (3) liquid refill for the 2022 off-peak season and (4) trucking arrangements for the 2022 off-peak season. As discussed below, the Company is also planning for NGLNG liquefaction service to be available for a portion of the 2022 off-peak season.

IV.C.3.c. Portable LNG Vaporization Contracts

In addition to the Company's LNG storage facilities at Providence and Exeter, the Company also stages portable LNG storage equipment in Cumberland, RI to support design hour system pressures and supply needs in the immediate area by utilizing the on-site vaporization capability. The Company has renewed its agreement for LNG storage services at Cumberland for the 2021/22 heating season, with the option of to an additional heating season. The Company discusses its long-term plans for the Cumberland facility in Section IV.C.10.

The Company has also mobilized temporary portable LNG vaporization equipment in Portsmouth to support its system on Aquidneck Island. This portable equipment provides critical pressure and supply support to Aquidneck Island should near-design day conditions arise. The Company's agreement for equipment rental continues through March 2022 with renewal rights through March 2023[9].

IV.C.3.c.i. 45 HDD Planning Requirement for Aquidneck Island

The Company has agreed to temporarily utilize portable LNG operations on Aquidneck Island as a contingency in the event of Company or non-Company upstream issues that affect pipeline deliveries into Portsmouth. Specifically, the Company plans to have portable LNG operations fully staffed and available for vaporization at 45 HDD conditions or colder with a vaporization capacity of 650 mcfh. The vaporization capacity of 650 mcfh provides approximately 75% of the hourly customer demand on Aquidneck Island at 45 HDD conditions and approximately 50% of the hourly customer demand at 68 HDD conditions. Demand-side initiatives are also being leveraged on Aquidneck Island to offset customer load including

[9] While the Company plans to use the Portsmouth equipment during the 2021/22 heating season, it is currently evaluating options to support Aquidneck Island in subsequent years.

community initiatives to increase customer participation in energy efficiency programs and the use of gas demand response pilots.

IV.C.4. Long-Term Supply Agreements

Please see the table below for a listing of the Company's long-term supply agreements that are currently part of the Company's portfolio.

Contract	Description	Maximum Daily Quantity (Dth)	Annual Contract Quantity (Dth)	Term
Constellation	Firm Supply @ Everett, MA into Tennessee	20,000	Dec19 – Mar20: 632,000 Dec20 – Mar21: 651,000 Dec21 – Mar22: 651,000	December 1, 2019 – March 31, 2022
Constellation	Firm Supply RI AGT City gates	14,100	507,600	December 1, 2019 – March 31, 2024

IV.C.5. Citygate Delivered Supply

From time to time, the Company can also contract for city gate delivered supplies to meet customer requirements during the peak season. These supplies represent additional resources that are needed over and above the available assets in the Company's portfolio. These resources allow for a certain volume to be called upon on a daily basis, coupled with a seasonal delivery limitation, and are delivered to the Company's city gates by a third party. The purchasing of city gate delivered supplies can minimize the cost of the resource portfolio because the Company may have the opportunity to avoid annual demand charges for capacity. However, the level at which the Company can depend on such resources varies due to several factors, including, but not limited to; current market conditions, capacity availability, supply availability and overall reliability of the portfolio.

Based on the Company's current forecast requirements, it has not identified a need for additional city gate delivered supplies for the 2021/22 heating season. The Company will explore the need for these supplies when it prepares the next update to its forecast.

IV.C.6. Asset Management Arrangements

At times, the Company may seek to enter into an asset management arrangement (AMA) for certain of the Company's assets. An AMA affords the Company the opportunity to place firm pipeline capacity into the control of a third party that is better able to manage the asset(s) without compromising access to liquid and reliable resources to firm gas customers. Currently, there are multiple assets being managed under AMAs. The Company issues a Request for Proposals (RFP) for AMAs for its Canadian transportation contracts on Union and TransCanada each year. The

third parties managing these assets are more active in the Canadian markets than the Company and are therefore able to provide value to the Company's firm customers for the opportunity to manage the assets. During the 2020/21 heating season, the Company awarded AMAs pursuant to a competitive RFP process for a portion of its Columbia pipeline capacity and its Tennessee pipeline capacity from Dracut that is not supplied from the PNGTS path. The Company will continue to assess the portfolio to determine those assets that are well positioned to be managed by a third party.

For the upcoming winter season, the Company is preparing to issue RFPs for the management of its: (1) Canadian assets, including the paths feeding Tennessee via PNGTS and Iroquois, with an option to include its domestic PNGTS and Tennessee capacity, (2) a portion of its Columbia capacity, (3) its Millennium capacity, and (4) its Tennessee Dracut capacity.

IV.C.7. Net Need Analysis

Exhibit 15 contains a comparison of current resources and forecast requirements. Exhibit 16 contains a comparison of current and proposed resources and forecast requirements. Each Exhibit contains summaries for the design day, the design heating season, the design non-heating season, and the design year. These tables show that the Company's proposed portfolio is sufficient to meet forecast customer requirements for the 2021/22 and 2022/23 gas years, but in subsequent years, there is a need for incremental resources driven primarily by the expiration of the Company's long-term supply contracts for city gate delivered supplies and supplies received at Everett. Please see section IV.C.8 in which assumptions about supply at Everett from Constellation are discussed.

The results of the Company's load duration curve analysis, in which it plots design year sales and transportation customer requirements against the supply portfolio, are provided in Exhibit 17. This analysis supports the conclusion above; beginning with the 2023/24 load duration curve and continuing through 2025/26, the unserved area beneath the Customer Requirement line exceeds any surplus above the line indicating a need for incremental resources.

With respect to the design hour, the Company's Synergi analysis was completed using the Company's 2020 models with the design peak hour customer requirements adjusted to meet the 2021 forecast for the three firm customer requirement categories; Sales and FT-2, FT-1 and Capacity Exempt. Exhibit 2 shows the hourly imbalance at each take station for the five-year forecast period. This analysis indicates an overall portfolio deficit in the 2024/25 gas year, requiring incremental resources on both AGT and Tennessee.

IV.C.8. Changes and Proposed Additions to the Company's Resource Portfolio

There have been several changes and several proposed changes to the Company's gas supply portfolio since its last Long-Range Plan filing in June 2020.

(1) National Grid LNG (NGLNG)

The Company has entered into a Precedent Agreement for liquefaction services for up to 2,616 Dth per day and 507,504 Dth per refill season for a term of 20 years, commencing upon completion of facilities to expand NGLNG's currently existing storage facilities located in Providence, Rhode Island. Based on the most current information from NGLNG on the construction schedule, the liquefaction facilities are now expected to be available for refill in the latter half of the 2022 off-peak season. For SENDOUT model analysis purposes, the Company is using September 2022 as the in-service date. The NGLNG facilities will allow the Company to utilize its existing Algonquin capacity to transport volumes to the proposed liquefaction facility. Currently, the Company has a storage agreement with NGLNG for LNG storage at the Providence site pursuant to an agreement dated November 30, 1998. This agreement is not expected to change.

(2) Northeast Energy Center, LLC (Northeast Energy)

The Company has entered into a Precedent Agreement for up to 1,780 Dth per day and 380,920 Dth per refill season for a term of 15 years, commencing upon completion of the necessary facilities. The Northeast Energy project is located in central Massachusetts and is expected to be in-service by the start of the 2023 off-peak season in April. The Northeast Energy project will allow the Company to utilize its existing Tennessee capacity to transport volumes from the Zone 4 production region to the proposed liquefaction facility located in Zone 6. The LNG will be trucked from the facility to the Company's LNG facilities in Rhode Island.

(3) PNGTS Capacity

This capacity was fully phased in effective November 1, 2020, allowing the Company to reduce its exposure at Dracut and allows the Company to access up to 29,000 Dth per day from Dawn, Ontario by way of agreements with Union, TransCanada, and PNGTS to deliver firm supplies into Dracut. The PNGTS Agreement feeds into the Company's existing Dracut capacity (29,000 Dth per day).

(4) *Incremental Winter Liquid Volumes (LNG)*

To support the portable LNG storage operations at Cumberland and Portsmouth, the Company will need to pursue a supplemental winter-only LNG purchase agreement.

As was contracted for last year, the Company also plans to purchase 125,000 Dth of additional winter-only liquid for the Exeter and NGLNG/Providence LNG facilities to accommodate balancing on an intraday and hourly basis throughout the 2021/22 winter season.

(5) *Constellation LNG LLC (fka Domac, fka Distrigas)*

At this time, it remains unclear if Constellation LNG LLC will continue to operate its LNG import terminal at Everett, MA beyond 2024. Closure of the facility would impact

the New England region's ability to supply winter vapor and summer liquid to firm gas customers. For SENDOUT purposes and for discussion, the Company has assumed that the facility will no longer be operational after the 2023/24 winter.

IV.C.9. Future Portfolio Renewal Decisions

During the forecast period, the Company will be faced with critical decisions regarding the expiration of various transportation, underground storage, and peaking contracts in the supply portfolio. These decisions will be made based on the wholesale demand forecast, which incorporates the impact of the Company's energy efficiency as well as any future demand side management programs.

The Company will employ a two-step analysis to reach decisions on contract renewals, as well as the addition of new resources. First, depending on the type of need, the Company will canvas the marketplace to determine the availability of a replacement or new resource. Where appropriate, the Company will solicit competitive bids to determine the lowest-cost available resource.

The Company will evaluate non-price factors associated with the available replacement or new resource option. The Company will consider the flexibility, diversity, reliability, and contract term to determine the least-cost, most reliable option to meet the Company's resource need.

Absent the development of new incremental capacity projects or upgrades to on-system facilities that present cost-effective alternatives to the existing resource portfolio, the Company expects to renew its existing contracts for an extended time period to maintain flexibility, diversity, and reliability consistent with least-cost principles. As discussed above, pipeline rates for legacy capacity[10] are advantaged by the significant depreciation of plant and rate base associated with legacy capacity, as well as by revenue requirement recovery at average cost-based rates. Moreover, the respective interstate pipelines flow natural gas at higher load factors (with greater billing determinants), which helps to maintain the low rates associated with these pipelines.

IV.C.10. Long-Term Cumberland Solution

For the past several winters, the Company's interim solution to meet customer requirements in northern Rhode Island and manage system pressures has depended upon portable LNG operations at the former LNG plant on Scott Road in Cumberland, RI. The Company will continue to rely on the interim solution until a permanent solution is in service.

[10] "Legacy capacity" is defined herein as firm interstate pipeline transportation and storage service provided to the Company and other local distribution companies under FERC-approved rate schedules that were in effect upon, or soon after, the unbundling of the U.S. interstate pipeline system resulting from FERC Order No. 636.

The Company completed its review of multiple options for a permanent solution to address capacity needs, driven by the peak hour requirements, in northern Rhode Island. Selection of a permanent solution focuses on securing additional infrastructure to the northern Rhode Island region to meet both design day and design peak hour needs. The Company has determined that the permanent solution is to rebuild the Scott Road take station and the Cumberland LNG facility.

The Company needs to rebuild the Scott Road take station to address several existing integrity issues. In addition, the Company will design the rebuild to ensure the flow capacity will meet long-term forecasted customer requirements. The Company started development of this project in April 2020, with a target gas in-service date of November 2023. Once rebuilt, the Company will have the capability to receive incremental volumes from Tennessee should they be available[11].

The Company needs to rebuild the Cumberland LNG facility to meet forecasted design peak hour requirements. The Company will design the LNG facility to ensure the hourly flow capacity will meet the long-term forecasted design peak hour customer requirements. The Company started developing this project in April 2020. The target construction start date is September 2028. Until the LNG facility is in service, the Company will continue to operate portable LNG to meet the design peak hour requirements.

IV.C.11. Natural Gas Portfolio Management Plan (NGPMP)

In 2009, in Docket No. 4038, the PUC approved the Company's NGPMP, which discontinued contracting the natural gas portfolio from an external third-party asset management agreement to a portfolio managed primarily by the Company. In March 2016, also in Docket 4038, the PUC approved modifications to the management of the Company's NGPMP that were designed to provide various financial, regulatory, and risk management benefits over previous asset management arrangements. The Company uses transportation contracts, underground storage contracts, peaking supplies, and supply contracts to purchase gas supplies to economically and reliably serve its sales customers. Additional purchases and sales may be made to generate revenue by extracting value from any assets that are not required to serve customers on any day. The mix of supply, transportation, and storage contracts allows for sales customers to receive natural gas during periods of high-demand, and to optimize the value of an asset when not needed. Opportunities to optimize may be limited and are subject to prevailing market conditions, which may include: the fluctuation in the price of natural gas, the value of temporarily unused assets, the existence of excess transportation and storage capacity, and the opportunity to optimize delivered supplies as storage fill opportunities arise. Unless otherwise directed by the PUC, the Company will continue to manage the natural gas portfolio as specified in the NGPMP.

[11] The Company will work with Tennessee Gas Pipeline as the rebuild progresses to determine the availability of incremental upstream capacity. The Company will endeavor to optimize alignment between the rebuild of the take station and the potential capacity addition.

IV.D. Portfolio Costs

The Company plans its portfolio to meet the forecast design day and design annual requirements of its firm sales, FT-2, and a portion of its FT-1 customers. Detailed information regarding costs of the full portfolio are presented in Exhibits 18 through 21. Cost projections were developed using the New York Mercantile Exchange (NYMEX) Henry Hub forward curve from June 8, 2021 in conjunction with forecasted regional basis from a combination of public and internally developed forward price curves.

In Exhibit 18, the Company has provided a projection of costs for its full supply portfolio assuming design weather. This projection provides a sense of the overall variable and fixed costs for all customers, including transportation customers. By evaluating these costs assuming design weather, the variable costs of all portfolio assets are reflected, including peaking assets, which are unlikely to be needed during normal weather. This Exhibit is formatted similarly to exhibits provided in the Company's Gas Cost Reconciliation (GCR). Total annual fixed costs for the 2021/22 gas year are projected to be approximately $95 million for the Company's transportation, storage, and supply agreements. Of the $95 million, $16 million is attributable to estimated supplier fixed costs. Total annual variable costs for the same period are projected to be approximately $128 million assuming design weather. Combined fixed and variable costs are projected to be $223 million.

In Exhibit 19, the Company has provided a preliminary estimate of the fixed and variable costs that will support the GCR, to be filed in August 2021. The GCR pertains solely to sales customers and assumes normal weather. The fixed costs of pipeline capacity and storage released to marketers are not included in the GCR, nor are the variable costs attributable to transportation customers. Total annual fixed costs for the 2021/22 gas year are projected to be approximately $83 million for the Company's transportation, storage, and supply agreements for sales customers. Total annual variable costs for the same period are projected to be approximately $79 million assuming normal weather. Combined fixed and variable costs are projected to be $162 million. On a unitized basis, as shown on Page 4 of Exhibit 19, the weighted average commodity cost is estimated to be $2.707 per dekatherm. For reference, the straight average NYMEX Henry Hub forward curve for the 2021/22 gas year is $2.988 per dekatherm.

Exhibit 20 provides the projected unitized costs by path for all customers and sales-only customers accounting for normal and design weather. Pages 1 through 4 of Exhibit 20 show the unitized 100% load factor cost of each path dispatched to meet customer requirements, which includes fixed costs, variable pipeline and storage costs, and commodity costs of gas supplies. Pages 5 through 8 of Exhibit 20 show the effective cost of each path at the expected load factor. These pages also include variable costs but differ from the prior pages in that the annual fixed costs for each path are unitized by the volume projected to be dispatched on each path. For paths with high load factors, the costs projected on pages 1 through 4 and on pages 5 through 8 will be relatively close; for paths with lower load factors, there will be a greater relative difference.

Exhibit 21 is an estimate of fixed costs by contract in the Company's portfolio including transportation contracts, storage contracts, and supply contracts. Pages 1 through 4 of Exhibit 21 show the unitized 100% load factor cost of each contract, which does not vary between normal and design weather. Pages 5 through 12 show the effective cost of each contract accounting for projected load factor.

IV.E. Customer Choice Program

IV.E.1 Overview of the Company's Customer Choice Program

The Company's Customer Choice Program is an optional supplier choice program that allows the Company's Small, Medium, Large, and Extra Large Commercial and Industrial (C&I) customers to purchase gas supplies from sources other than the Company for transportation service by the Company. The Company continues to provide distribution and related services to all of its customers, including those that receive gas supply from a third party. Service is classified as either Firm Transportation Service FT-1 or Firm Transportation Service FT-2.

FT-1 service is available only to Large and Extra Large C&I customers. This service provides firm transportation of customer-purchased gas supplies to customers who elect to have their gas usage recorded on a daily basis at the customer's point of delivery. This service requires daily balancing of deliveries and usage by the Marketer, which includes meeting the impact of unanticipated swings in weather and/or demand. The Company plans only for pipeline assets required to serve FT-1 customer requirements and does not plan for any storage and peaking assets required to serve these customers.

FT-2 service is available to all C&I customers. FT-2 service does not require the recording of daily gas usage at the customer's point of delivery, and as such, requires the Company to assume substantial responsibility for balancing the customer's deliveries and usage on a daily basis. Under FT-2 service, the Company informs the Marketer of the required deliveries for the upcoming gas day and is responsible for meeting any difference between the forecast and actual quantities as a result of weather or other factors, through storage and peaking services. For this reason, the Company plans for pipeline, storage, and peaking assets to meet the peak day requirements of FT-2 service.

The impact of the Customer Choice Program on portfolio planning coupled with the capacity constraints that exist on the interstate pipelines serving New England, specifically Algonquin and Tennessee, impelled the Company to re-examine its Customer Choice Program. In the Company's 2019 Long-Range Plan filing, the Company committed to considering the overall framework of the program and where appropriate seek to implement modifications to better align the program to support portfolio planning needs. Further, the review would consider several aspects of the Customer Choice Program including but not limited to; impact of customer load for which the Company is not responsible to plan for[12], capacity exempt eligibility criteria, alignment of mandatory capacity release with customer location, nomination and pooling flexibilities and balancing and cashouts. The Company committed to presenting its recommendations once the review was completed. Further, the Company's 2019/20 GCR Docket No. 4963 approved the Division's recommendation for the Company to work with the Division to evaluate the Company's cost allocation procedures for interstate pipeline firm transportation capacity assigned to firm transportation customers and to reflect modifications to the prior approach, which addressed the allocation of fixed gas supply reservation charges. In the

[12] This load includes Capacity Exempt Customers as well as the storage and peaking load of the capacity eligible FT-1 Customers.

Company's 2020 LRP filing Docket No 5043 the proposed plans were discussed and in Docket 5067 the Commission approved the change for implementation.

In November 2020, the Company successfully implemented the program changes which allowed the Company to release a pro rata share of each significant capacity path based on the Company's portfolio, thereby eliminating the previous "pick a path" approach to capacity release. Furthermore, since Marketers have access to largely the same assets as the Company, the commodity adjustment related to the "pick a path" methodology was also eliminated. Customers taking either FT-1 or FT-2 service are assigned certain pipeline assets. As discussed above, FT-2 customers are also allocated a portion of storage and peaking resources needed to meet peak day requirements. The storage and peaking resources are not physically released to customers, but are instead managed by the Company and provided to customers at the city gate. Mandatory capacity assignment enables the Company to ensure that there is adequate capacity upstream of its city gates and to maintain the operational integrity of the distribution system. It also prevents certain customers from avoiding responsibility for the cost of the Company's long-term capacity commitments given these customers' ability to avail themselves of competitive options. The Company has listed projected releases for the upcoming gas year in Exhibit 22.

Not all customers under the Company's Customer Choice Program are assigned capacity. Pursuant to the Settlement Agreement dated October 7, 1999, approved by the PUC in Docket No. 2902 (1999 Settlement Agreement), new customers who were classified as either Large or Extra-Large C&I customers and who were not previously served on firm sales service were given a one-time option to waive the Company's assignment of pipeline capacity. This one-time election is built into the Company's Tariff today.

In addition, pursuant to the 1999 Settlement Agreement, firm transportation customers transporting prior to November 1, 1997 were also given the one-time option of waiving the Company's mandatory capacity assignment shortly after the PUC's approval of the 1999 Settlement Agreement. For "grandfathered" customers who elected this waiver, those customers were thereafter ineligible to return to the Company's firm sales service.

IV.E.2 Impact of the Customer Choice Program on Portfolio Planning

In the Company's 2018 Long-Range Plan filing (page 40), the Company provided the following high-level summary of the impact of the Customer Choice Program on portfolio planning:

> On September 8, 2014, the Company filed a proposal to make certain changes to its Customer Choice Program in Docket No. 4523. In summary, the Company proposed three specific changes. First, regarding pipeline delivery requirements, the Company proposed to require a certain level of daily pipeline receipts on each of the upstream pipelines, Algonquin and Tennessee. Second, regarding the peaking assets calculation, the Company proposed to modify the FT-2 Demand Rate and associated peaking purchases to include certain pipeline assets and associated supplies in the calculations to more accurately reflect the usage of such assets. Third, regarding daily nominations under operational flow order conditions, the Company proposed to require a certain level of pipeline deliveries before FT-2 storage and peaking assets could be nominated. The

Company proposed such changes to address the overall design of the Company's Customer Choice Program, as well as the impact to the reliability of the overall gas resource portfolio and the appropriate allocation of costs among all customers. The proposed changes were accepted and went into effect on November 1, 2014. Since then, no other substantive changes have been made to the Customer Choice Program. However, as load on the distribution system continues to grow, the disconnect with how customers that have opted for Transportation service are actually served, as compared to how third-party marketers are obligated to serve them under the Customer Choice Program, continues to grow. This disconnect exists for all Transportation customers, including both those eligible for capacity assignment and those that are capacity exempt and, therefore, not eligible for capacity assignment. For example, under the Customer Choice Program, a third-party marketer can elect to take assignment of a capacity path that delivers to the Algonquin-fed side of the distributions system on behalf of a customer that is physically served from the Tennessee-fed portion of the distribution system. Then, on a day-to-day basis, to serve that customer the marketer only has to deliver a minimum of 40 percent of the customer's supply on Tennessee, with the remainder delivered on Algonquin.[13] In these circumstances, the overall portfolio of assets, including on-system peaking, allow for the entire system to remain in-balance with the pipelines at the end of the day. Capacity-eligible customers share in the overall cost of the portfolio through mandatory capacity assignment; Capacity Exempt customers do not. This disconnect between where loads are and how they are served was exacerbated with the decommissioning of the Company's Cumberland LNG plant. The Company no longer has the on-system resource to balance loads in that "pocket" of the distribution system and has to rely on pipeline deliveries from third parties that do not all have primary point capacity to the Company's city gates in Rhode Island. This is not sustainable for the long-term reliability of the distribution system, especially given the capacity constraints that exist on the interstate pipelines serving New England, specifically Algonquin and Tennessee. The Company is in the initial stages of its analysis and will present its findings and recommendations once completed.

In the Company's 2019 Long-Range Plan filing, the Company provided the results of its initial analysis, looking at the total hourly supply/demand balance at each gate station on both Algonquin and Tennessee[14]. As part of total load, the Company included the load associated with all FT-1 customers, whether the Company plans on their behalf or whether or third-party marketer provides deliveries. This FT-1 load was mapped to the gate station each of the customers is served from and the total volumes third-party marketers are expected to deliver was mapped to the gate stations to which they deliver. The results of this analysis showed an hourly imbalance at several of the Company's gate stations on both Algonquin and Tennessee. To meet the forecasted peak hour requirements for 2020/21 winter season, the Company contracted for additional resources. The results of the analysis using updated forecasted information are presented in Exhibit 2.

[13] Marketers are required to deliver a minimum of 40 percent on each pipeline and the remaining 20 percent on either or both pipelines.

[14] The analysis was performed using the June 2018 forecast for the 2019/20 through 2023/24 gas years.

In Docket No. 5066, the Company, in coordination with the Division, began allocating the fixed costs of assets used to specifically meet the hourly requirements of the distribution system to all customers. The fixed costs of several supply and transportation contracts that provide critical peak hour support are included in the DAC System Pressure factor and excluded from the GCR. Due to generally mild weather experienced during the 2020/21 winter, these assets were not dispatched to meet hourly distribution system needs. Therefore, the Company is not proposing to include any variable costs associated with these assets in the System Pressure Factor. The Company will assess the need to reconcile variable costs for these assets annually in its GCR and DAC filings.

IV.E.3. Future Changes to the Customer Choice Program

As part of its review of the Customer Choice Program over the past several years, the Company considered changes to the Capacity Exempt criteria currently contained in the tariff, specifically the ability of Capacity Exempt customer to become Capacity Eligible. Because of the complexities, including operational feasibility, of such changes, the Company bifurcated this issue from the modifications to the Capacity Eligible program implemented in November 2020. The Company committed to communicating and collaborating with third-party marketers throughout the entire transition process of the Company's Customer Choice Program. At this time, the Company has not initiated further discussions with stakeholders regarding additional changes to the Customer Choice Program, including changes to the Capacity Exempt criteria.

V. Fulfilment of the Joint Memorandum of the Company and the Division Regarding the Long-Range Plan

The Joint Memorandum between the Company and the Division states that the annual Long-Range Plan filings will include certain information[15]. A listing of this information is provided in the table below along with the referenced exhibit providing such information in this filing.

[15] Pursuant to discussions with the Division, the Company and the Division have refined the list of information to be provided pursuant to the Joint Memorandum as part of the annual Long-Range Plan filings.

Item	Description	Reference
1	Retail volume forecast by rate group for normal weather	Exhibit 1 Exhibit 4
2	Retail meter count forecast by rate group for normal weather	Exhibit 5 Exhibit 6
3	Rhode Island Economic Forecast variables for normal weather	Exhibit 3
4	Wholesale volume forecast by rate group for normal and design weather	Exhibit 7
5	SENDOUT forecasts (normal and design weather) for capacity planning purposes for volumes and costs.	Exhibit 7
6	Updated portfolio information showing all changes to the portfolio (capacity/supply/LNG), including: • Updated Exhibit 12 (schematic) if any changes have occurred; • Updated Exhibit 13 (a description of the contracts within the portfolio, including expiration date and evergreen provisions); • Updated Exhibit 8 (table showing the daily and the hourly contract quantities at each city gate for each transportation contract that delivers to the Company's city gates in Rhode Island on both Tennessee and Algonquin, in the Company's resource portfolio)	Exhibit 8 Exhibit 12 Exhibit 13
7	Detailed information on needs for upcoming winter season, including SENDOUT analysis showing derivation of need.	Exhibit 15
8	Discussion of subsequent four-years and associated need and what the Company is pursuing with potential suppliers and pipelines to meet customer requirements, as well as expected costs of options.	Exhibit 15 Exhibit 16
9	Provide historic (5-10 years) and projected (out 5 years) annual wholesale load duration curves showing the following: • Stack existing supply resources (by path) against the daily wholesale load duration curve for historic period; • Stack proposed supply resources (by path) against the daily wholesale load duration curves for the projected periods; • Stack existing supply resources (by path) against the daily wholesale load duration curves for the historic November-March period; • Stack proposed supply resources (by path) against the wholesale load duration curves for the projected November-March periods; and • The Company will endeavor to develop equivalent hourly wholesale load duration curves	Exhibit 17
10	For individually metered high load factor Transportation customers, the Company will develop aggregated annual historic (5-10 years) and projected (out 5 years) load duration curves. For those customers with hourly metering, the Company will endeavor to provide the historic (5 years) aggregated hourly load duration curve	Exhibit 9 Exhibit 10 Exhibit 11
11	The Company will provide fixed cost of existing and proposed supply resources on a dollar per dekatherm (Dth) per day basis (annualized). Once individualized, then the Company will provide the same annualized information by path.	Exhibit 20 Exhibit 21
12	For each existing and proposed supply resource (by path), the Company will provide an estimated effective Fixed Cost (on a Dth per day basis) (i.e., taking into account load factor utilization) for the current period and forecasted time periods for both its normal and design weather scenario, which is the basis of the Company's decision-making.	Exhibit 20 Exhibit 21

VI. Exhibits

2021 National Grid RI Volume Forecast (Dth) Chart III-B-1
Planning Year (Nov-Oct) Page 1 of 2

	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	606,350	17,738,289	6,726,982	7,680,544	2,569,158	35,321,323	2,267,651	37,588,973
PY2012	601,399	14,783,757	5,621,832	7,610,425	2,333,884	30,951,297	2,195,914	33,147,211
PY2013	746,890	17,315,788	6,583,721	8,278,483	3,049,869	35,974,752	2,014,144	37,988,895
PY2014	944,174	19,573,872	7,599,237	8,563,673	3,548,382	40,229,338	1,793,702	42,023,040
PY2015	736,952	20,389,772	7,870,336	9,416,525	3,680,836	42,094,420	1,828,764	43,923,185
PY2016	551,336	16,675,372	5,959,428	8,656,943	3,569,930	35,413,008	1,865,144	37,278,152
PY2017	395,749	18,594,274	6,348,282	8,698,747	3,950,370	37,987,422	1,860,594	39,848,016
PY2018	375,502	19,943,709	7,021,050	9,022,578	4,205,501	40,568,340	1,938,339	42,506,679
PY2019	397,877	20,381,718	7,033,149	8,768,235	4,469,173	41,050,152	2,012,027	43,062,179
PY2020	343,560	19,204,168	6,161,983	8,208,510	4,313,144	38,231,365	2,067,717	40,299,082
PY2021	325,747	18,874,655	6,358,826	7,907,310	4,334,777	37,801,316	2,045,839	39,847,155
PY2022	300,785	20,203,541	7,034,186	7,779,116	4,766,925	40,084,553	2,459,542	42,544,095
PY2023	276,392	20,488,801	7,126,983	8,050,746	4,832,976	40,775,897	2,499,722	43,275,619
PY2024	260,581	20,878,142	7,319,546	8,134,775	4,898,558	41,491,601	2,511,128	44,002,729
PY2025	242,867	21,008,058	7,382,548	8,080,974	4,908,508	41,622,955	2,495,241	44,118,195
PY2026	233,703	21,239,154	7,443,635	8,034,205	4,934,251	41,884,947	2,482,684	44,367,632
PY2027	226,965	21,467,738	7,503,053	7,989,121	4,959,688	42,146,566	2,470,607	44,617,173
PY2028	218,461	21,828,142	7,607,716	7,958,767	5,010,890	42,623,977	2,463,942	45,087,919
PY2029	208,599	21,934,358	7,656,121	7,914,767	5,031,032	42,744,877	2,451,954	45,196,830
PY2030	198,661	22,170,600	7,736,384	7,885,606	5,070,235	43,061,486	2,445,121	45,506,607
PY26/PY21	-6.4%	2.4%	3.2%	0.3%	2.6%	2.1%	3.9%	2.2%

2020 National Grid RI Volume Forecast (Dth)
Planning Year (Nov-Oct)

	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	606,350	17,738,289	6,726,982	7,680,544	2,569,158	35,321,323	2,267,651	37,588,973
PY2012	601,399	14,783,757	5,621,832	7,610,425	2,333,884	30,951,297	2,195,914	33,147,211
PY2013	746,890	17,315,788	6,583,721	8,278,483	3,049,869	35,974,752	2,014,144	37,988,895
PY2014	944,174	19,573,872	7,599,237	8,563,673	3,548,382	40,229,338	1,793,702	42,023,040
PY2015	736,952	20,389,772	7,870,336	9,416,525	3,680,836	42,094,420	1,828,764	43,923,185
PY2016	551,336	16,675,372	5,959,428	8,656,943	3,569,930	35,413,008	1,865,144	37,278,152
PY2017	395,749	18,594,264	6,348,282	8,698,747	3,950,370	37,987,412	1,860,594	39,848,006
PY2018	375,500	19,943,386	7,021,056	9,022,578	4,205,501	40,568,021	1,938,339	42,506,360
PY2019	397,642	20,381,686	7,030,001	8,770,816	4,479,693	41,059,838	2,012,039	43,071,878
PY2020	323,837	19,039,603	6,639,392	8,251,676	4,300,551	38,555,058	1,890,633	40,445,691
PY2021	327,328	19,842,428	7,014,708	8,051,014	4,235,312	39,470,789	1,799,964	41,270,753
PY2022	301,598	20,377,128	7,254,018	8,426,323	4,388,407	40,747,475	1,880,060	42,627,535
PY2023	274,203	20,948,766	7,472,223	8,866,659	4,529,798	42,091,649	1,941,674	44,033,323
PY2024	251,856	21,339,906	7,686,813	8,908,249	4,589,397	42,776,222	1,936,813	44,713,035
PY2025	226,569	21,313,493	7,731,019	8,749,950	4,573,365	42,594,397	1,904,790	44,499,187
PY2026	201,699	21,431,465	7,791,207	8,647,306	4,584,956	42,656,633	1,884,881	44,541,514
PY2027	176,056	21,553,988	7,849,419	8,550,507	4,596,793	42,726,763	1,866,108	44,592,871
PY2028	150,402	21,841,445	7,974,627	8,517,749	4,646,435	43,130,657	1,861,753	44,992,409
PY2029	123,602	21,862,099	8,022,933	8,458,272	4,660,570	43,127,475	1,851,302	44,978,778
PY2030	98,317	22,039,250	8,113,332	8,430,431	4,697,161	43,378,491	1,847,671	45,226,162
PY26/PY21	-9.2%	1.6%	2.1%	1.4%	1.6%	1.6%	0.9%	1.5%

Chart III-B-1
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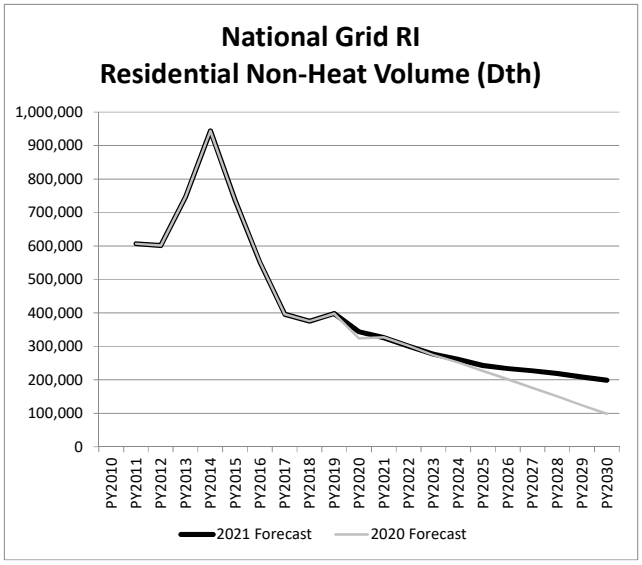

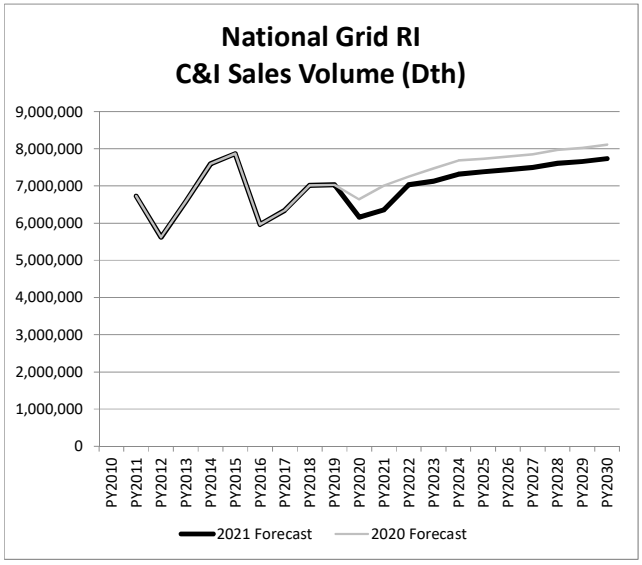

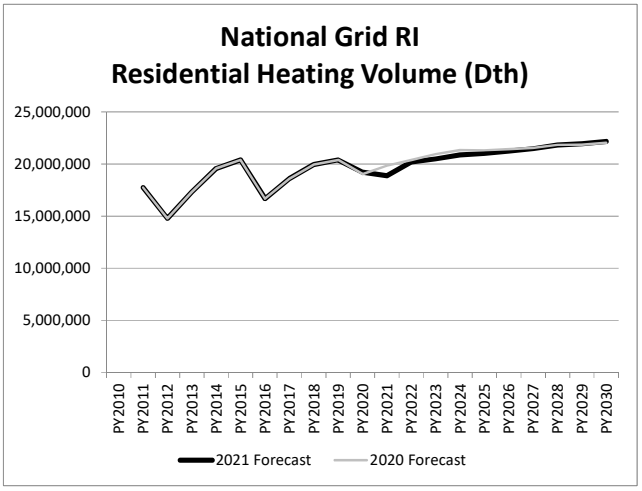

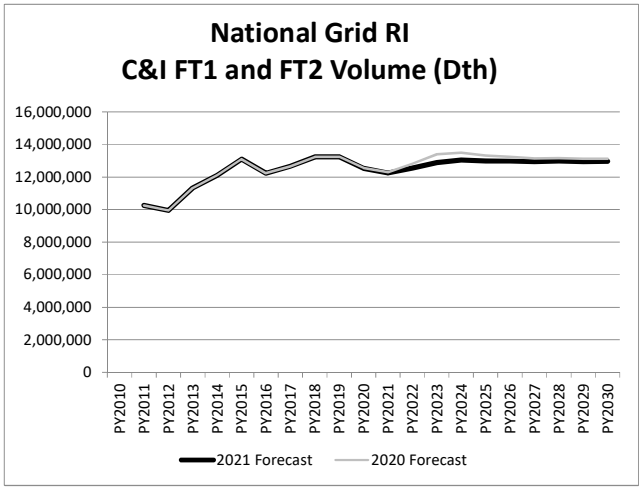

RESULTS FOR WINTER 2021/22 THROUGH 2025/26
Design Peak Hour Table

				2021/22		
Pipeline/LNG	**Lateral**	**Take Station**	**Meter No.**	**Total Supply Deliveries Company & Marketers (Dth/hr)**	**Total Firm Peak Hour Model Flow (DTH/hr)**	**Total Firm Peak Hour Balance (-) = Shortfall (+) = Surplus (DTH/hr)**
AGT	G	Barrington	00064	0	0	0
AGT	G	Warren	00012	811	759	52
AGT		Burrillville	00044	0	28	-28
AGT	G	Crary St	00842	0	3,931	-3,931
AGT	G	Dey St	00004	5,331	2,088	3,243
AGT	G	Cumberland	00083	42	24	18
AGT	G	Portsmouth	00013	1,045	1,045	0
AGT	G	Tiverton	00033	56	64	-9
AGT	G	E Providence	00010	1,698	1,050	647
AGT	E	Westerly	00008	144	120	23
AGT		Montville	00059	208	213	-5
TGP	Cranston	Cranston	420750	3,315	1,959	1,355
TGP	Cranston	Lincoln	420758	1,283	1,371	-87
TGP	Cranston	Smithfield	420910	450	1,566	-1,116
TGP		Cumberland	420135	1,343	1,343	0
PORTABLE LNG		Portsmouth		650	158	492
LNG		Exeter		1,000	1,000	0
LNG (incl. NGLNG)		Providence		3,958	3,958	0
PORTABLE LNG		Cumberland		750	750	0
			Total:	22,084	21,428	656
AGT	G-6 Only (Feed Prov Area)			7,840	7,828	12
AGT	G-2 (Feed Tiv & Al)			1,101	1,109	-9
AGT	E			352	334	18
TGP	Cranston			5,048	4,896	152

Notes

1) Flows reflect a managed system for Northern Rhode Island.
2) Flows reflect 2020 hydraulic model with a global adjustment to have demand match sendout for Capacity Exempt, FT-1 and rest of customers (SFT2) for the June 2021 forecast for Rhode Island and the region focused June 2021 forecast for Aquidneck Island.

RESULTS FOR WINTER 2021/22 THROUGH 2025/26
Design Peak Hour Table

				2022/23		
Pipeline/LNG	**Lateral**	**Take Station**	**Meter No.**	**Total Supply Deliveries Company & Marketers (Dth/hr)**	**Total Firm Peak Hour Model Flow (DTH/hr)**	**Total Firm Peak Hour Balance (-) = Shortfall (+) = Surplus (DTH/hr)**
AGT	G	Barrington	00064	0	0	0
AGT	G	Warren	00012	811	765	46
AGT		Burrillville	00044	0	28	-28
AGT	G	Crary St	00842	0	3,984	-3,984
AGT	G	Dey St	00004	5,363	2,127	3,236
AGT	G	Cumberland	00083	42	24	17
AGT	G	Portsmouth	00013	1,045	1,044	1
AGT	G	Tiverton	00033	56	65	-10
AGT	G	E Providence	00010	1,698	1,136	561
AGT	E	Westerly	00008	144	122	22
AGT		Montville	00059	208	219	-11
TGP	Cranston	Cranston	420750	3,362	2,132	1,230
TGP	Cranston	Lincoln	420758	1,283	1,379	-95
TGP	Cranston	Smithfield	420910	450	1,586	-1,136
TGP		Cumberland	420135	1,343	1,343	0
PORTABLE LNG		Portsmouth		650	181	469
LNG		Exeter		1,000	1,000	0
LNG (incl. NGLNG)		Providence		3,958	3,959	-1
PORTABLE LNG		Cumberland		750	750	0
			Total:	22,163	21,846	317
AGT	G-6 Only (Feed Prov Area)			7,872	8,013	-141
AGT	G-2 (Feed Tiv & Al)			1,101	1,110	-9
AGT	E			352	341	11
TGP	Cranston			5,095	5,096	-1

Notes

1) Flows reflect a managed system for Northern Rhode Island.
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RESULTS FOR WINTER 2021/22 THROUGH 2025/26
Design Peak Hour Table

				2023/24		
Pipeline/LNG	Lateral	Take Station	Meter No.	Total Supply Deliveries Company & Marketers (Dth/hr)	Total Firm Peak Hour Model Flow (DTH/hr)	Total Firm Peak Hour Balance (-) = Shortfall (+) = Surplus (DTH/hr)
AGT	G	Barrington	00064	0	0	0
AGT	G	Warren	00012	770	782	-12
AGT		Burrillville	00044	0	29	-29
AGT	G	Crary St	00842	0	4,157	-4,157
AGT	G	Dey St	00004	5,388	2,141	3,247
AGT	G	Cumberland	00083	42	24	17
AGT	G	Portsmouth	00013	1,045	1,045	1
AGT	G	Tiverton	00033	56	67	-11
AGT	G	E Providence	00010	1,698	1,171	527
AGT	E	Westerly	00008	144	124	20
AGT		Montville	00059	208	225	-17
TGP	Cranston	Cranston	420750	3,608	2,275	1,334
TGP	Cranston	Lincoln	420758	1,283	1,418	-135
TGP	Cranston	Smithfield	420910	450	1,575	-1,125
TGP		Cumberland	420135	1,343	1,343	0
PORTABLE LNG		Portsmouth		650	205	445
LNG		Exeter		1,000	1,000	0
LNG (incl. NGLNG)		Providence		3,958	3,959	-1
PORTABLE LNG		Cumberland		750	750	0
			Total:	22,393	22,289	105
AGT	G-6 Only (Feed Prov Area)			7,856	8,251	-395
AGT	G-2 (Feed Tiv & Al)			1,101	1,111	-11
AGT	E			352	349	3
TGP	Cranston			5,342	5,267	74

Notes

1) Flows reflect a managed system for Northern Rhode Island.
2) Flows reflect 2020 hydraulic model with a global adjustment to have demand match sendout for Capacity Exempt, FT-1 and rest of customers (SFT2) for the June 2021 forecast for Rhode Island and the region focused June 2021 forecast for Aquidneck Island.

RESULTS FOR WINTER 2021/22 THROUGH 2025/26
Design Peak Hour Table

				2024/25		
Pipeline/LNG	Lateral	Take Station	Meter No.	Total Supply Deliveries Company & Marketers (Dth/hr)	Total Firm Peak Hour Model Flow (DTH/hr)	Total Firm Peak Hour Balance (-) = Shortfall (+) = Surplus (DTH/hr)
AGT	G	Barrington	00064	0	0	0
AGT	G	Warren	00012	770	765	5
AGT		Burrillville	00044	0	29	-29
AGT	G	Crary St	00842	0	4,145	-4,145
AGT	G	Dey St	00004	5,387	2,138	3,249
AGT	G	Cumberland	00083	42	24	17
AGT	G	Portsmouth	00013	1,045	1,045	0
AGT	G	Tiverton	00033	56	67	-11
AGT	G	E Providence	00010	1,698	1,193	505
AGT	E	Westerly	00008	144	124	20
AGT		Montville	00059	208	228	-20
TGP	Cranston	Cranston	420750	3,606	2,417	1,190
TGP	Cranston	Lincoln	420758	1,283	1,419	-136
TGP	Cranston	Smithfield	420910	450	1,575	-1,125
TGP		Cumberland	420135	1,343	1,343	0
PORTABLE LNG		Portsmouth		650	213	437
LNG		Exeter		1,000	1,000	0
LNG (incl. NGLNG)		Providence		3,958	3,959	-1
PORTABLE LNG		Cumberland		750	750	0
			Total:	22,390	22,433	-43
AGT	G-6 Only (Feed Prov Area)			7,854	8,241	-386
AGT	G-2 (Feed Tiv & Al)			1,101	1,112	-11
AGT	E			352	352	0
TGP	Cranston			5,340	5,410	-71

Notes

1) Flows reflect a managed system for Northern Rhode Island.
2) Flows reflect 2020 hydraulic model with a global adjustment to have demand match sendout for Capacity Exempt, FT-1 and rest of customers (SFT2) for the June 2021 forecast for Rhode Island and the region focused June 2021 forecast for Aquidneck Island.

RESULTS FOR WINTER 2021/22 THROUGH 2025/26
Design Peak Hour Table

				2025/26		
Pipeline/LNG	Lateral	Take Station	Meter No.	Total Supply Deliveries Company & Marketers (Dth/hr)	Total Firm Peak Hour Model Flow (DTH/hr)	Total Firm Peak Hour Balance (-) = Shortfall (+) = Surplus (DTH/hr)
AGT	G	Barrington	00064	0	0	0
AGT	G	Warren	00012	770	777	-8
AGT		Burrillville	00044	0	29	-29
AGT	G	Crary St	00842	0	4,178	-4,178
AGT	G	Dey St	00004	5,382	2,158	3,225
AGT	G	Cumberland	00083	42	25	17
AGT	G	Portsmouth	00013	1,045	1,045	1
AGT	G	Tiverton	00033	56	68	-12
AGT	G	E Providence	00010	1,698	1,234	464
AGT	E	Westerly	00008	144	124	20
AGT		Montville	00059	208	231	-22
TGP	Cranston	Cranston	420750	3,599	2,447	1,152
TGP	Cranston	Lincoln	420758	1,283	1,445	-161
TGP	Cranston	Smithfield	420910	450	1,589	-1,139
TGP		Cumberland	420135	1,343	1,343	0
PORTABLE LNG		Portsmouth		650	225	425
LNG		Exeter		1,000	1,000	0
LNG (incl. NGLNG)		Providence		3,958	3,959	-1
PORTABLE LNG		Cumberland		750	750	0
			Total:	22,379	22,626	-247
AGT	G-6 Only (Feed Prov Area)			7,850	8,347	-498
AGT	G-2 (Feed Tiv & Al)			1,101	1,112	-11
AGT	E			352	355	-3
TGP	Cranston			5,333	5,480	-148

Notes

1) Flows reflect a managed system for Northern Rhode Island.
2) Flows reflect 2020 hydraulic model with a global adjustment to have demand match sendout for Capacity Exempt, FT-1 and rest of customers (SFT2) for the June 2021 forecast for Rhode Island and the region focused June 2021 forecast for Aquidneck Island.

2021 National Grid RI Economic Data
(Prices in 2019 $/Dth)

Chart III-B-3
Page 1 of 3

Year	NGPRCR Natural Gas Residential Price	OILPRCR No 2 Distillate Residential Price by All Sellers	*GORR Residential Gas-to-Oil Price Ratio*	GDP GDP (2009 Millions of $)	HH Households (thousands)	EMPL Non-Farm Employment (thousands)
1990	*13.50*	*14.60*	*0.92*	*35616*	*377*	*454*
1991	*13.62*	*13.32*	*1.02*	*34372*	*381*	*424*
1992	*13.33*	*11.69*	*1.14*	*35063*	*384*	*424*
1993	*13.77*	*11.20*	*1.23*	*35716*	*387*	*430*
1994	*15.06*	*10.61*	*1.42*	*35826*	*391*	*434*
1995	*12.79*	*10.30*	*1.24*	*36505*	*395*	*439*
1996	*13.18*	*11.25*	*1.17*	*36926*	*401*	*441*
1997	*14.58*	*11.19*	*1.30*	*38989*	*406*	*450*
1998	*14.24*	*9.70*	*1.47*	*40360*	*411*	*458*
1999	*13.96*	*9.05*	*1.54*	*41651*	*411*	*466*
2000	*13.82*	*12.91*	*1.07*	45250	410	480
2001	*16.81*	*12.61*	*1.33*	45903	407	481
2002	*16.03*	*11.17*	*1.43*	47581	410	482
2003	*15.68*	*13.33*	*1.18*	49344	411	487
2004	*17.18*	*14.12*	*1.22*	51552	412	491
2005	*18.56*	*18.01*	*1.03*	52284	411	494
2006	*21.29*	*21.17*	*1.01*	53492	411	496
2007	*19.70*	*22.08*	*0.89*	51999	412	495
2008	*19.25*	*27.64*	*0.70*	50413	414	484
2009	*19.45*	*19.50*	*1.00*	50216	414	463
2010	20.06	25.04	*0.80*	51363	415	462
2011	17.92	31.02	*0.58*	51263	417	464
2012	16.28	33.03	*0.49*	51607	421	469
2013	16.62	32.44	*0.51*	51679	425	475
2014	16.57	31.26	*0.53*	52004	428	482
2015	15.61	21.83	*0.72*	52956	428	489
2016	14.75	17.33	*0.85*	53031	428	494
2017	14.70	19.98	*0.74*	52728	426	497
2018	16.23	22.12	*0.73*	53133	426	500
2019	15.53	21.22	*0.73*	53671	429	504
2020	14.66	16.75	*0.88*	50796	427	465
2021	13.79	19.99	*0.69*	53216	424	476
2022	13.28	20.19	*0.66*	56770	435	490
2023	12.86	22.03	*0.58*	58328	438	498
2024	12.73	23.01	*0.55*	59566	440	502
2025	12.91	23.87	*0.54*	60747	442	504
2026	13.21	24.77	*0.53*	61800	443	506
2027	13.32	25.17	*0.53*	62899	445	507
2028	13.45	25.76	*0.52*	63982	446	509
2029	13.56	26.11	*0.52*	65056	447	510
2030	13.65	26.63	*0.51*	66078	448	512
PY26/PY21	-0.86%	4.39%	-5.03%	3.04%	0.88%	1.22%

2020 National Grid RI Economic Data
(Prices in 2019 $/Dth)

Chart III-B-3
Page 2 of 3

Year	NGPRCR Natural Gas Residential Price	OILPRCR No 2 Distillate Residential Price by All Sellers	*GORR*	GDP (2005 Millions of $)	Households (thousands)	Non-Farm Employment (thousands)
1990	13.50	14.60	*0.92*	35616	377	454
1991	13.62	13.32	*1.02*	34372	381	424
1992	13.33	11.69	*1.14*	35063	384	424
1993	13.77	11.20	*1.23*	35716	387	430
1994	15.06	10.61	*1.42*	35826	391	434
1995	12.79	10.30	*1.24*	36505	395	439
1996	13.18	11.25	*1.17*	36926	401	441
1997	14.58	11.19	*1.30*	38989	406	450
1998	14.24	9.70	*1.47*	40360	411	458
1999	13.96	9.05	*1.54*	41651	411	466
2000	13.82	12.91	*1.07*	43474	410	477
2001	16.81	12.61	*1.33*	44386	407	479
2002	16.03	11.17	*1.43*	45877	410	479
2003	15.68	13.33	*1.18*	47804	411	484
2004	17.18	14.12	*1.22*	49762	412	488
2005	18.56	18.01	*1.03*	50378	411	491
2006	21.29	21.17	*1.01*	51304	411	493
2007	19.70	22.08	*0.89*	49843	411	492
2008	19.25	27.64	*0.70*	48263	414	481
2009	19.45	19.50	*1.00*	47708	414	459
2010	20.06	25.04	*0.80*	48801	414	458
2011	17.92	31.03	*0.58*	48425	417	461
2012	16.28	33.04	*0.49*	48630	421	465
2013	16.62	32.45	*0.51*	48815	425	472
2014	16.57	31.26	*0.53*	49217	428	479
2015	15.61	21.83	*0.72*	50174	428	485
2016	14.74	17.32	*0.85*	50406	427	490
2017	14.69	19.96	*0.74*	51192	426	494
2018	16.23	22.12	*0.73*	52719	422	501
2019	15.42	21.07	*0.73*	54456	424	507
2020	13.64	17.38	*0.78*	55401	426	510
2021	12.82	17.73	*0.72*	56891	428	509
2022	13.19	18.32	*0.72*	58647	429	512
2023	13.26	18.73	*0.71*	60158	431	515
2024	13.68	19.34	*0.71*	61647	432	518
2025	14.13	19.75	*0.72*	63013	434	520
2026	14.19	20.08	*0.71*	64358	435	522
2027	14.30	20.14	*0.71*	65762	436	524
2028	14.35	20.43	*0.70*	67267	437	526
2029	14.27	20.62	*0.69*	68769	438	528
2030	14.19	20.73	*0.68*	70270	438	530
PY26/PY21	2.04%	2.52%	-0.46%	2.50%	0.35%	0.49%

Chart III-B-3
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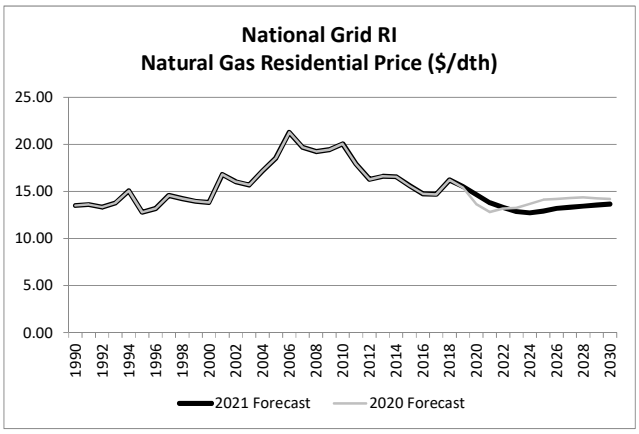
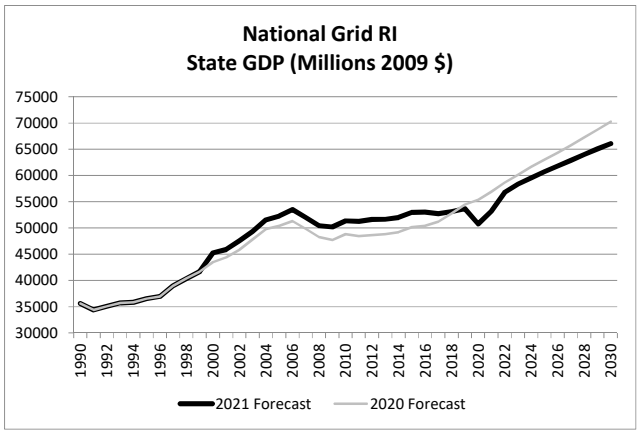
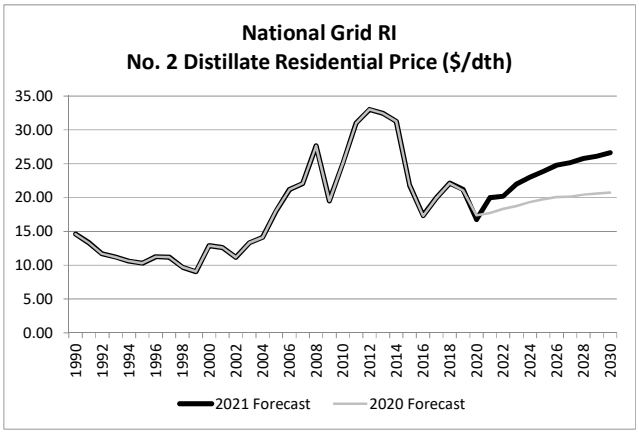
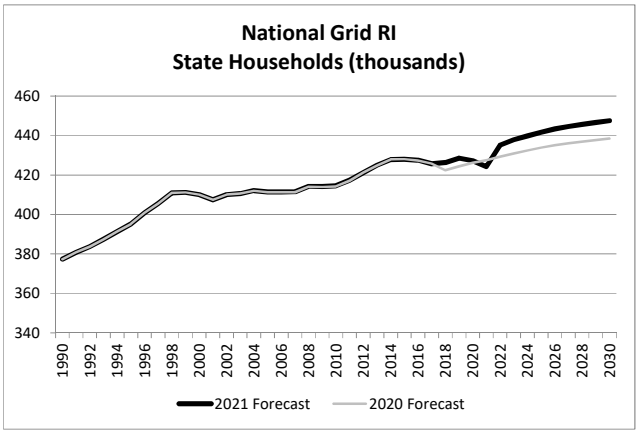
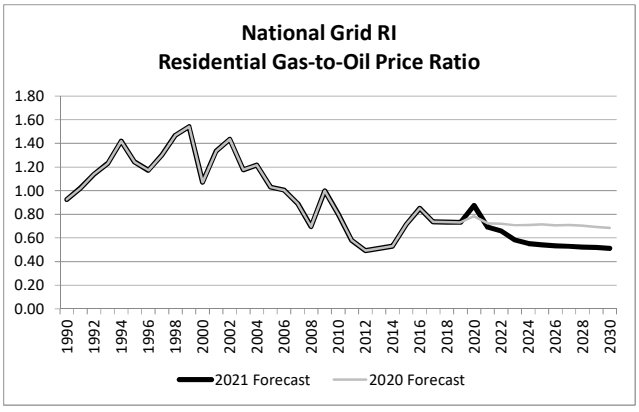
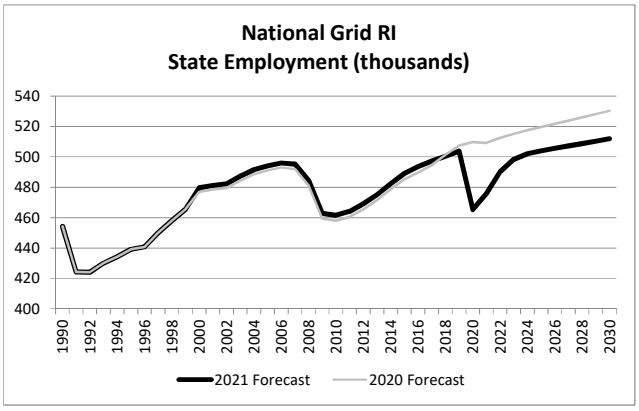




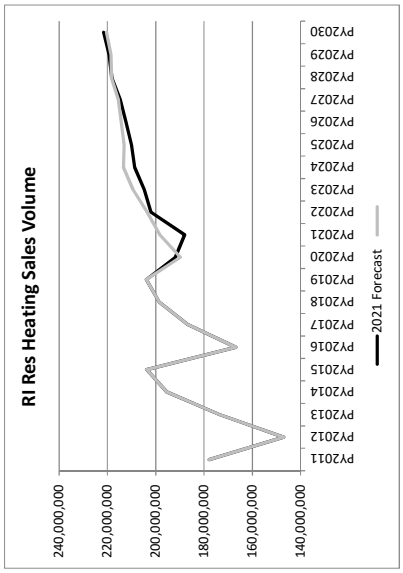


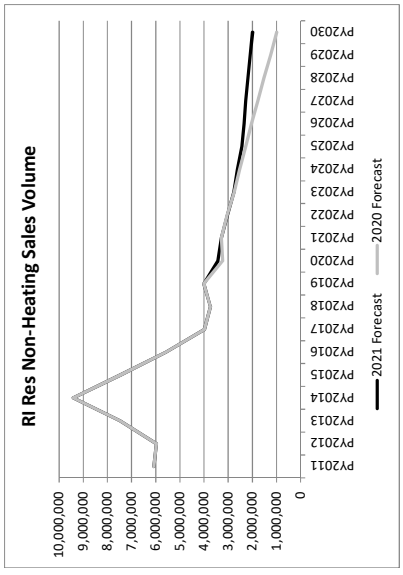


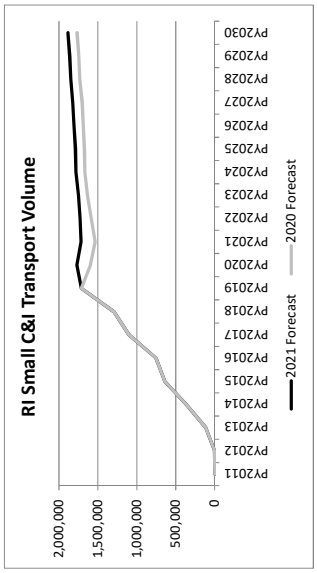


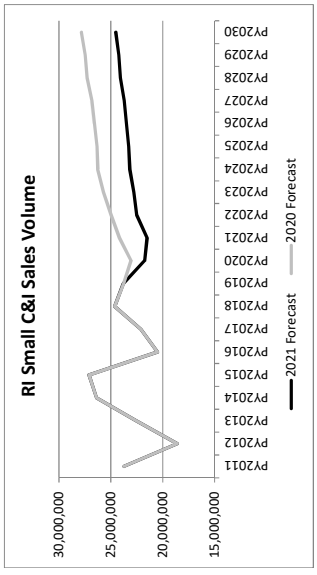


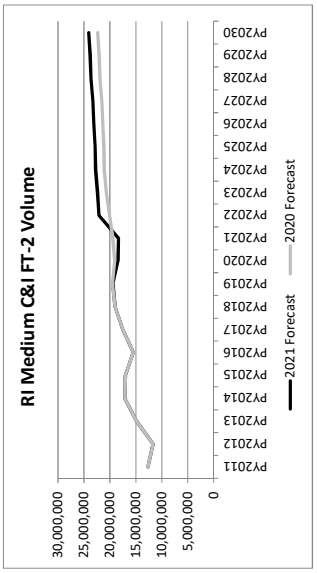
National Grid
2021 and 2020 Volume Forecasts by Rate Class
(Therms; Planning Year)

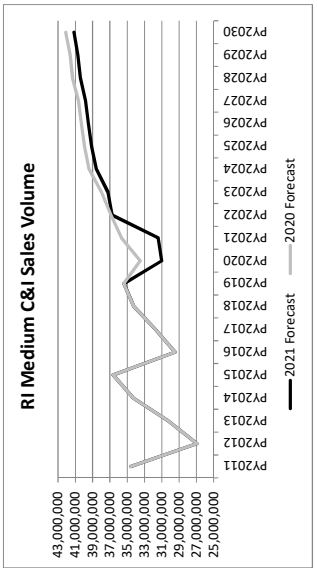


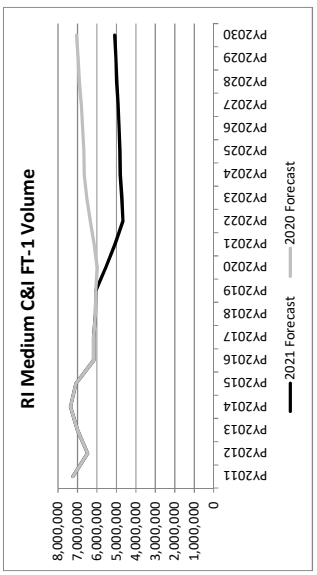




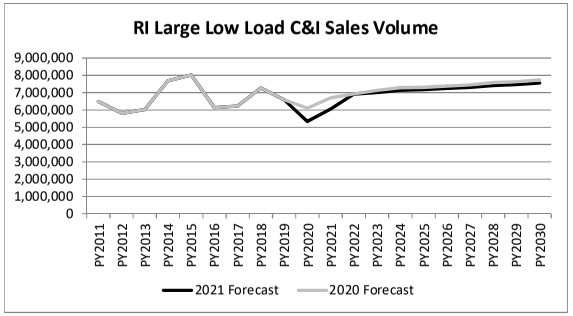


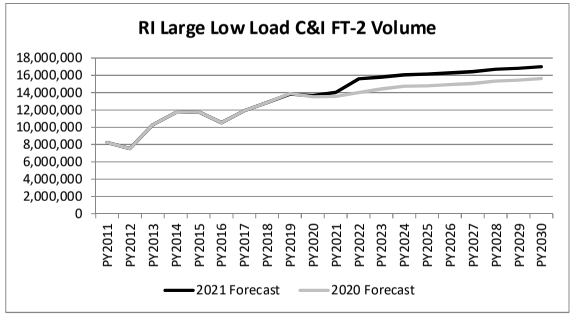


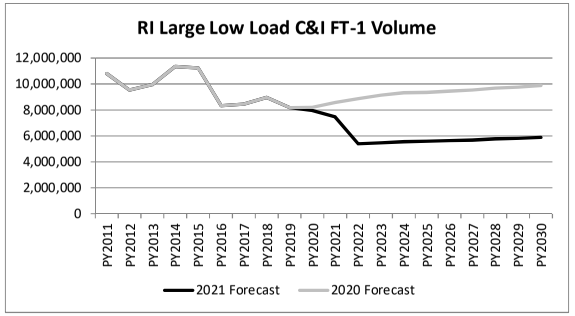


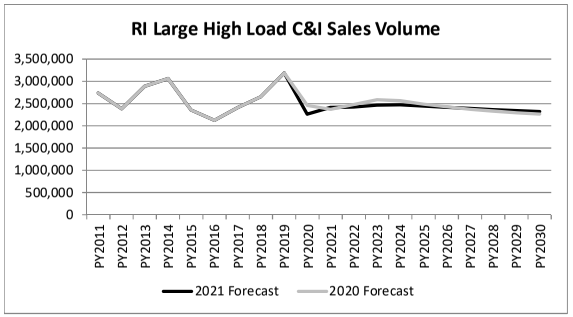


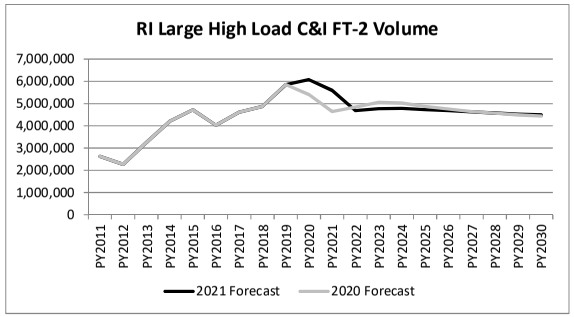
National Grid
2021 and 2020 Volume Forecasts by Rate Class
(Therms; Planning Year)

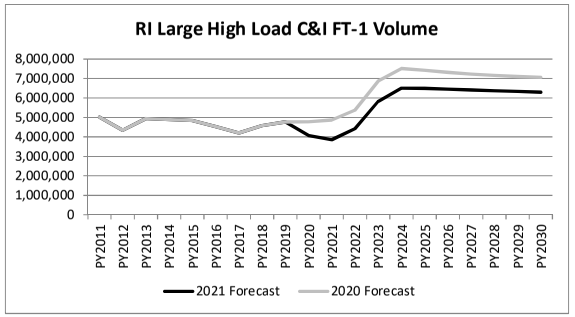


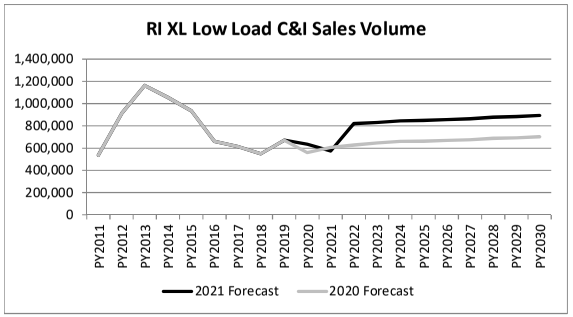


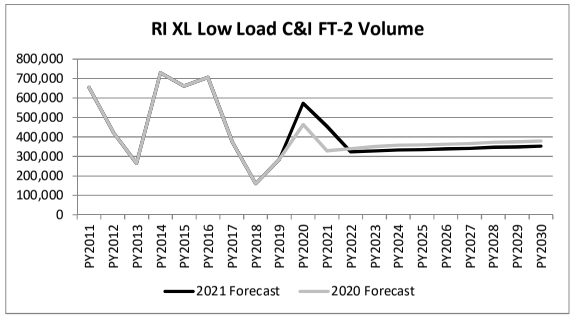


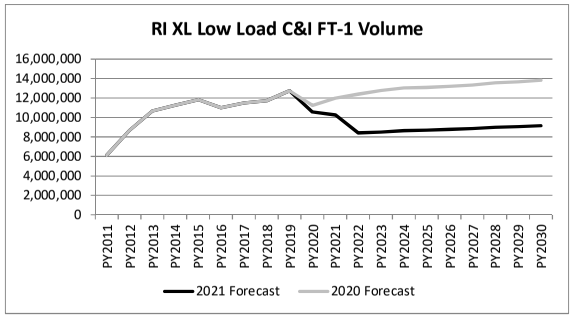




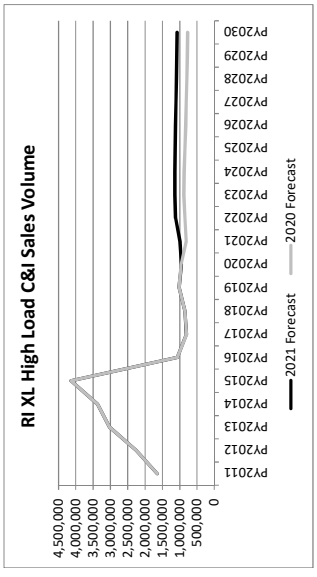


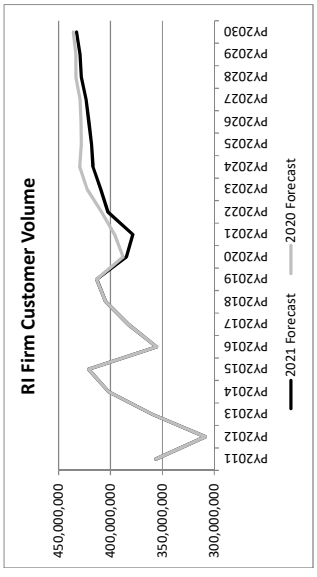


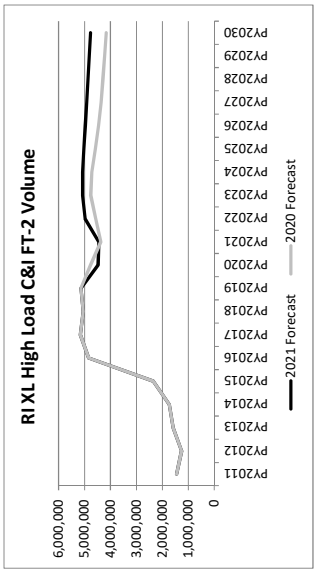


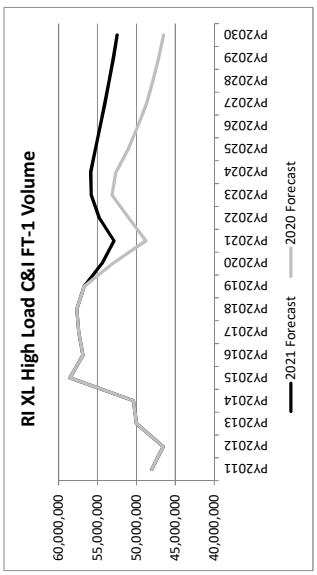


National Grid
2021 and 2020 Volume Forecasts by Rate Class
(Therms; Planning Year)









2021 National Grid RI Meter Count Forecast
End of Planning Year (Nov-Oct)

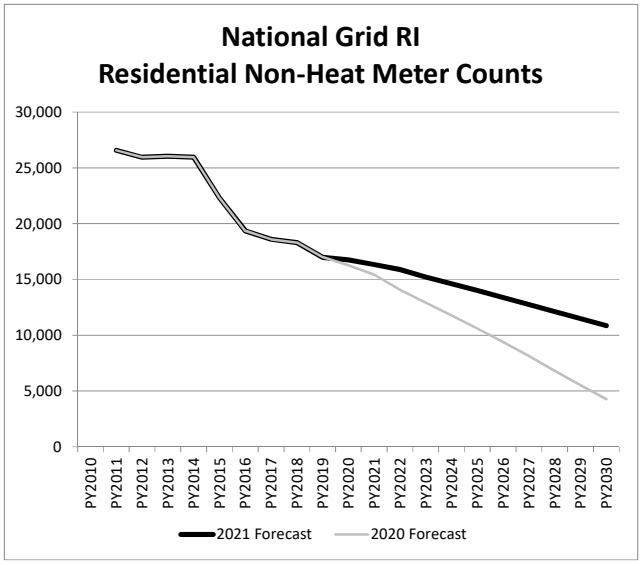
Chart III-B-2
Page 1 of 2

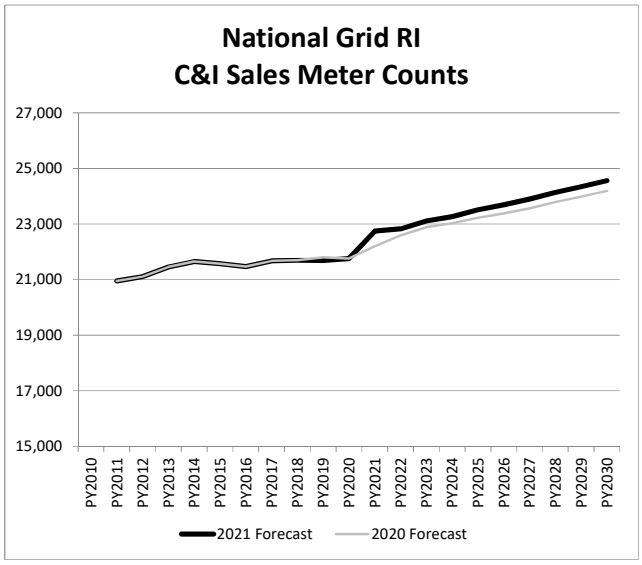
	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	26,570	196,414	20,950	747	1,244	245,925	54	245,979
PY2012	25,955	200,463	21,105	734	1,399	249,656	65	249,721
PY2013	26,042	204,521	21,451	721	1,499	254,234	159	254,393
PY2014	25,958	206,568	21,651	699	1,486	256,362	178	256,540
PY2015	22,313	212,900	21,567	684	1,552	259,016	326	259,342
PY2016	19,351	218,314	21,467	674	1,680	261,486	488	261,974
PY2017	18,591	222,124	21,670	636	1,758	264,779	577	265,356
PY2018	18,299	225,211	21,693	624	1,776	267,603	637	268,240
PY2019	16,978	228,468	21,685	609	1,865	269,605	812	270,417
PY2020	16,750	230,384	21,757	595	1,823	271,309	870	272,179
PY2021	16,329	235,062	22,745	614	1,902	276,652	876	277,528
PY2022	15,883	238,872	22,826	619	1,911	280,111	880	280,991
PY2023	15,215	242,148	23,110	628	1,935	283,036	891	283,927
PY2024	14,617	245,378	23,268	634	1,947	285,844	896	286,740
PY2025	13,996	248,385	23,513	640	1,967	288,501	905	289,406
PY2026	13,372	251,226	23,689	645	1,981	290,913	912	291,825
PY2027	12,738	254,023	23,900	650	1,998	293,309	920	294,229
PY2028	12,105	256,778	24,132	655	2,017	295,687	928	296,615
PY2029	11,476	259,550	24,342	660	2,034	298,062	936	298,998
PY2030	10,852	262,321	24,556	664	2,050	300,443	944	301,387
PY26/PY21	-3.9%	1.3%	0.8%	1.0%	0.8%	1.0%	0.8%	1.0%

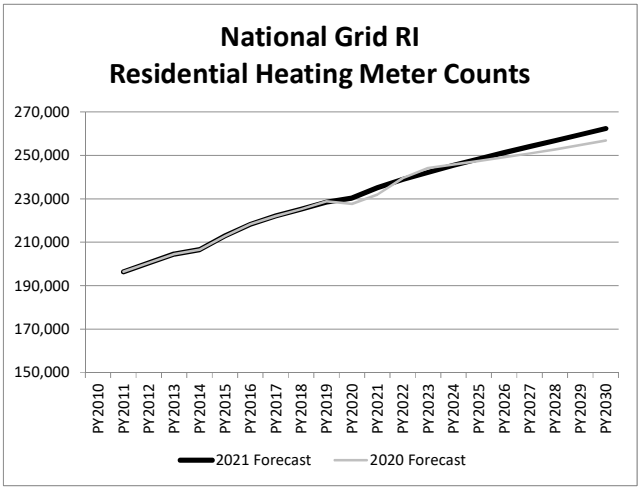
2020 National Grid RI Meter Count Forecast
End of Planning Year (Nov-Oct)

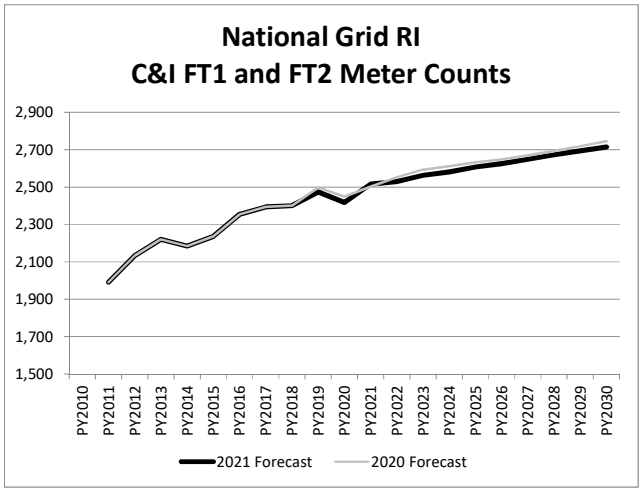
	RNH	RH	CI_Sales	FT1	FT2	Subtotal	Other	Total
PY2011	26,570	196,414	20,950	747	1,244	245,925	54	245,979
PY2012	25,955	200,463	21,105	734	1,399	249,656	65	249,721
PY2013	26,042	204,521	21,451	721	1,499	254,234	159	254,393
PY2014	25,958	206,568	21,651	699	1,486	256,362	178	256,540
PY2015	22,313	212,900	21,567	684	1,552	259,016	326	259,342
PY2016	19,351	218,313	21,467	674	1,680	261,485	488	261,973
PY2017	18,590	222,122	21,672	636	1,758	264,778	577	265,355
PY2018	18,304	225,228	21,702	624	1,776	267,634	637	268,271
PY2019	17,012	228,896	21,804	609	1,888	270,209	816	271,025
PY2020	16,272	227,624	21,758	588	1,861	268,103	845	268,948
PY2021	15,436	231,871	22,202	603	1,899	272,011	862	272,873
PY2022	14,078	239,512	22,592	616	1,936	278,734	877	279,611
PY2023	12,912	244,122	22,881	629	1,964	282,508	887	283,395
PY2024	11,787	245,713	23,024	636	1,976	283,136	893	284,029
PY2025	10,613	247,442	23,223	641	1,991	283,910	900	284,810
PY2026	9,396	249,132	23,379	643	2,005	284,555	906	285,461
PY2027	8,125	250,853	23,565	649	2,021	285,213	914	286,127
PY2028	6,820	252,737	23,786	655	2,039	286,037	922	286,959
PY2029	5,536	254,751	23,984	661	2,058	286,990	929	287,919
PY2030	4,257	256,858	24,192	669	2,076	288,052	937	288,989
PY26/PY21	-9.5%	1.4%	1.0%	1.3%	1.1%	0.9%	1.0%	0.9%

Chart III-B-2
Page 2 of 2

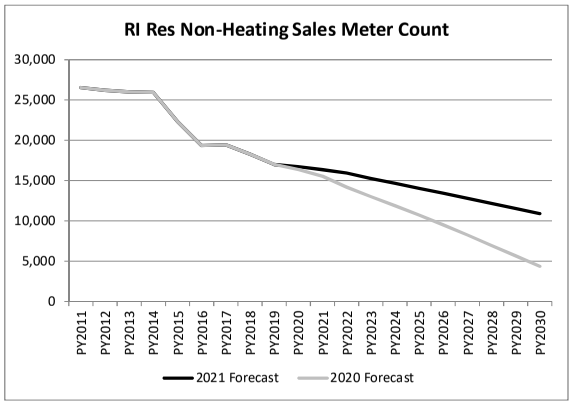


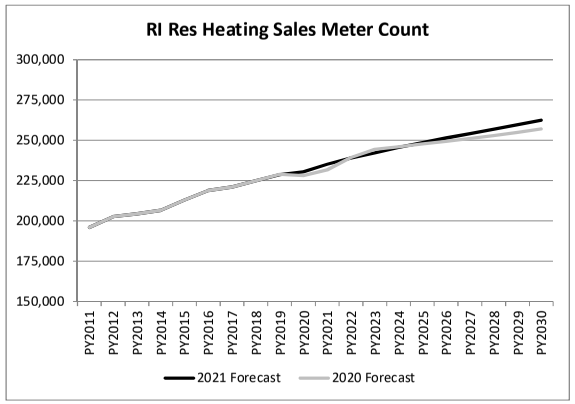


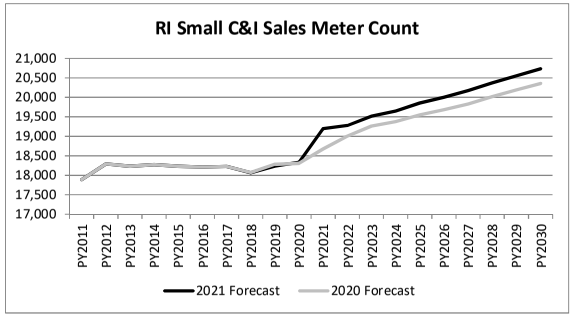


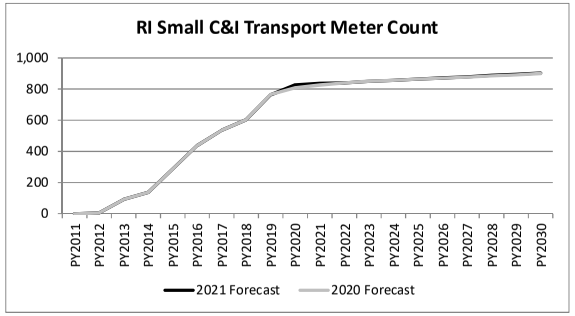


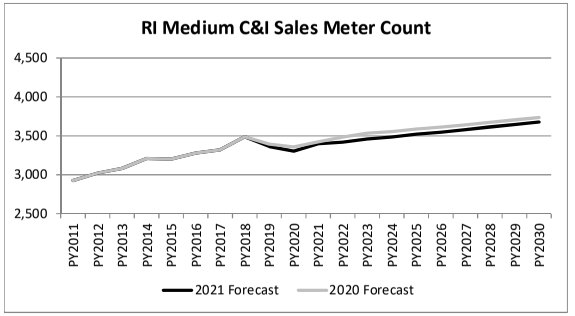
National Grid
2021 and 2020 Meter Count Forecasts by Rate Class
(end of Planning Year)

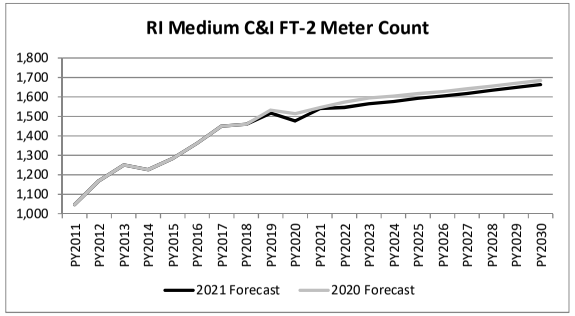


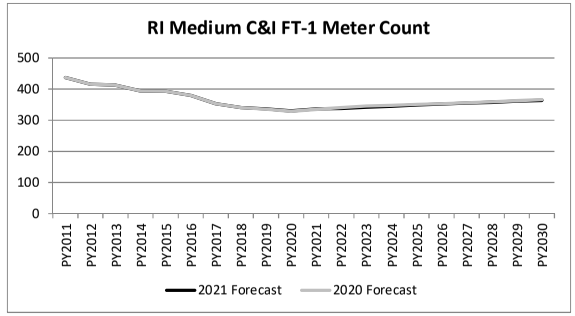




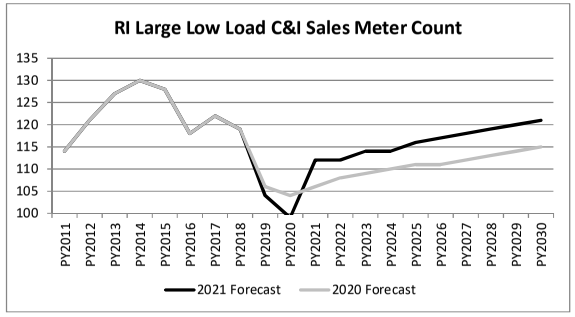


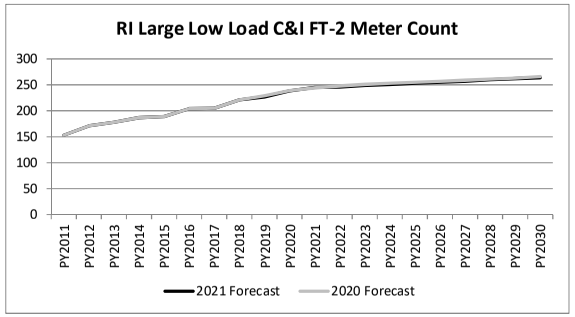


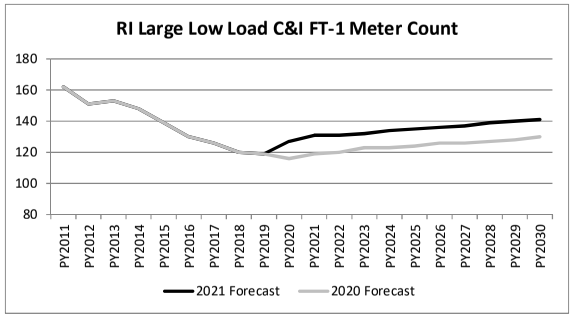


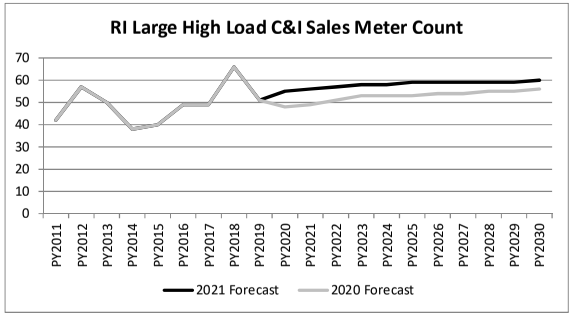


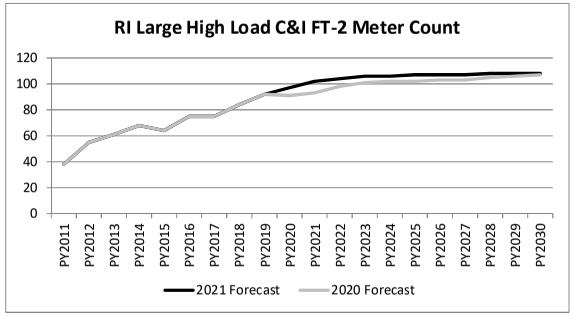
National Grid
2021 and 2020 Meter Count Forecasts by Rate Class
(end of Planning Year)

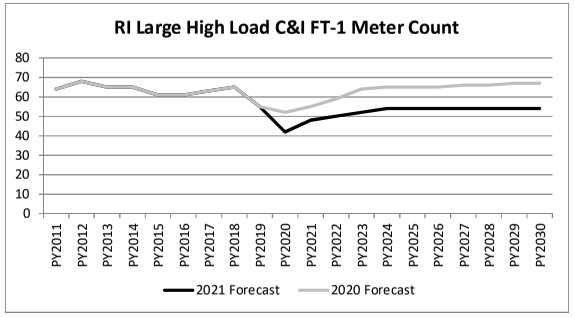


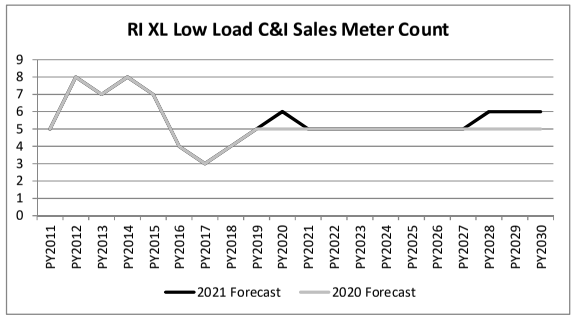


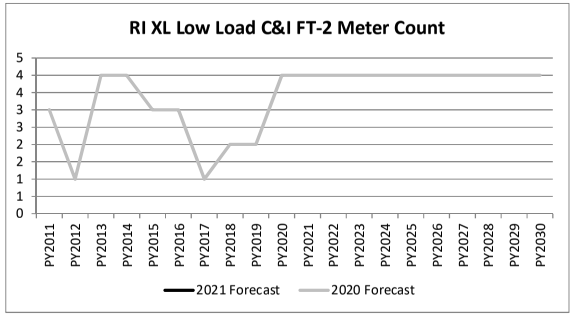


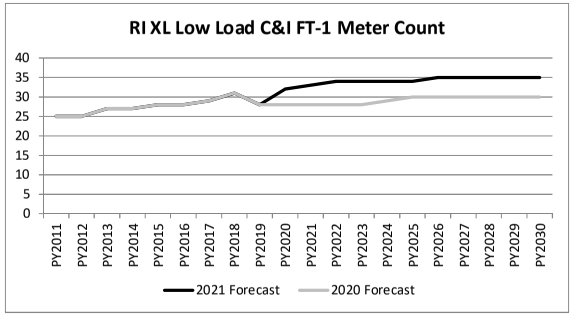




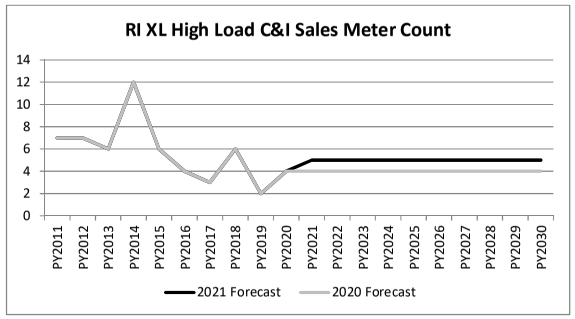


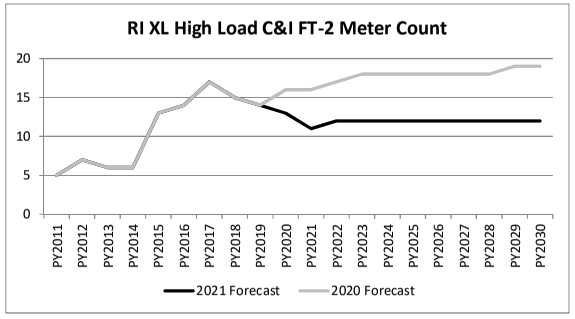


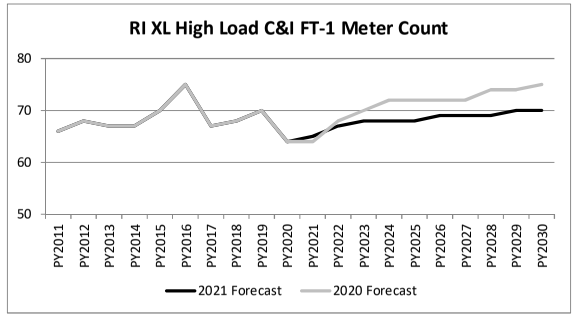


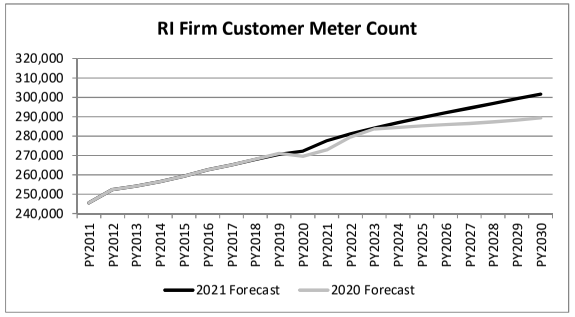


National Grid
2021 and 2020 Meter Count Forecasts by Rate Class
(end of Planning Year)









Please see the attached Excel document (Exhibit 7) for the Company's Wholesale Forecast by Rate.

The Narragansett Electric Company -Take Station Contract Quantities (MMBtu)

* = Peak MDQ

^ = Not incremental city gate capacity

ALGONQUIN DAILY VOLUMES	9001	90106	90107 *	933005	93001ESC *	93011E *	93401S	96004SC	9B105 *	9S100S *	9W009E *	510801	Constellation CG Supply NSB19_ 24-42-20	510985 ^	Total
1/24th or 6% Hourly:	1/24th	1/24th	6%	1/24th	6%	6%	1/24th	1/24th	1/24th	1/24th	6%	1/24th	1/24th	1/24th	
Contract MDTQ:	11,063	19,465	26,129	2,061	2,384	56,035	335	1,695	8,539	187	6,812	18,000	14,100	96,000	166,805
Dey St. (#00004)	11,063	9,223	19,514	---	---	25,137	---	---	4,258	---	6,234	---	13,100	---	88,529
Westerly (#00008)	---	474	---	248	---	1,221	---	---	79	---	273	500	---	---	2,795
Wampanoag Trail [E. Prov] (#00010)	---	4,092	6,615	---	---	*18,837*	---	---	---	---	---	---	---	---	29,544
Portsmouth (#00013)	---	5,078	---	---	---	6,504	---	---	4,202	---	305	6,000	---	---	22,089
Tiverton (#00033)	---	598	---	---	---	163	---	---	---	---	---	500	---	---	1,261
Burrillville (#00044)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0
Barrington (#00064)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0
Bristol/Warren (#00012)	---	---	---	813	2,384	4,173	335	1,695	---	187	---	6,000	1,000	---	16,587
Cumberland (#00083)	---	---	---	1,000	---	---	---	---	---	---	---	---	---	---	1,000
Crary St. (#00842)	---	---	---	---	---	---	---	---	---	---	---	---	---	96,000	96,000
Montville (#00059)[Yankee Gas]	---	---	---	---	---	---	---	---	---	---	---	5,000	---	---	5,000
														Take Station Total:	262,805

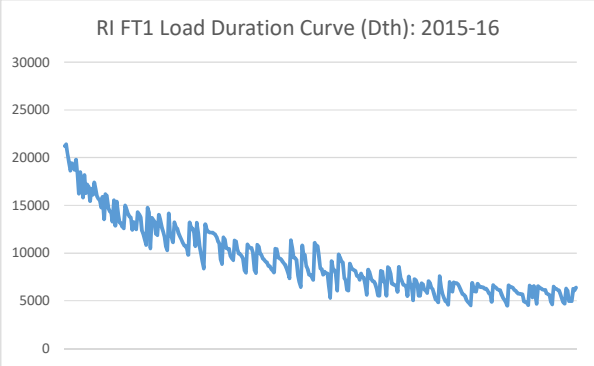
ALGONQUIN HOURLY VOLUMES	9001	90106	90107	933005	93001ESC	93011E	93401S	96004SC	9B105	9S100S	9W009E	510801	Constellation CG Supply NSB19_ 24-42-20	510985	Total
1/24th or 6% Hourly:	1/24th	1/24th	6%	1/24th	6%	6%	1/24th	1/24th	1/24th	1/24th	6%	1/24th	1/24th	1/24th	
Contract MDTQ:	461	811	1,568	86	143	3,362	14	71	356	8	409	750	588	4,000	8,625
Dey St. (#00004)	461	384	1,171	---	---	1,508	---	---	177	---	374	---	546	---	4,622
Westerly (#00008)	---	20	---	10	---	73	---	---	3	---	16	21	---	---	144
Wampanoag Trail [E. Prov] (#00010)	---	171	397	---	---	1,130	---	---	---	---	---	---	---	---	1,698
Portsmouth (#00013)	---	212	---	---	---	390	---	---	175	---	18	250	---	---	1,045
Tiverton (#00033)	---	25	---	---	---	10	---	---	---	---	---	21	---	---	56
Burrillville (#00044)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0
Barrington (#00064)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	0
Bristol/Warren (#00012)	---	---	---	34	143	250	14	71	---	8	---	250	42	---	811
Cumberland (#00083)	---	---	---	42	---	---	---	---	---	---	---	---	---	---	42
Crary St. (#00842)	---	---	---	---	---	---	---	---	---	---	---	---	---	4,000	4,000
Montville (#00059)[Yankee Gas]	---	---	---	---	---	---	---	---	---	---	---	208	---	---	208
														Take Station Total:	12,625

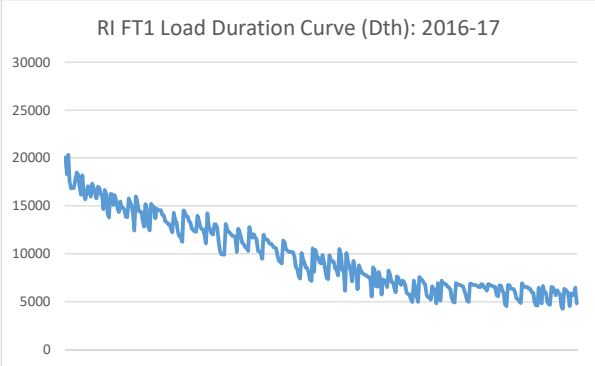
TENNESSEE DAILY VOLUMES	10807	95345	39173	62930	1597	64025	64026	330580	330581	349449	Total
All 1/24th:	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	
Contract MDTQ:	10,836	1,000	1,067	15,000	29,335	5,220	6,380	24,000	15,000	20,000	127,838
Cranston (#420750)	---	---	---	9,000	10,000	---	---	---	15,000	20,000	54,000
Smithfield (#420910)	---	---	---	---	5,000	2,610	3,190	---	---	---	10,800
Pawtucket (#420135)	10,836	---	1,067	6,000	14,335	---	---	---	---	---	32,238
Lincoln (#420758)	---	1,000	---	---	---	2,610	3,190	24,000	---	---	30,800
										Take Station Total:	127,838

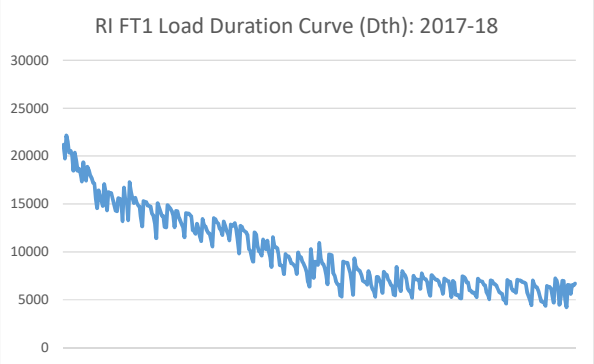
TENNESSEE HOURLY VOLUMES	10807	95345	39173	62930	1597	64025	64026	330580	330581	349449	Total
All 1/24th:	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	1/24th	
Contract MDTQ:	452	42	44	625	1,222	218	266	1,000	625	833	5,327
Cranston (#420750)	---	---	---	375	417	---	---	---	625	833	2,250
Smithfield (#420910)	---	---	---	---	208	109	133	---	---	---	450
Pawtucket (#420135)	452	---	44	250	597	---	---	---	---	---	1,343
Lincoln (#420758)	---	42	---	---	---	109	133	1,000	---	---	1,283
										Take Station Total:	5,327

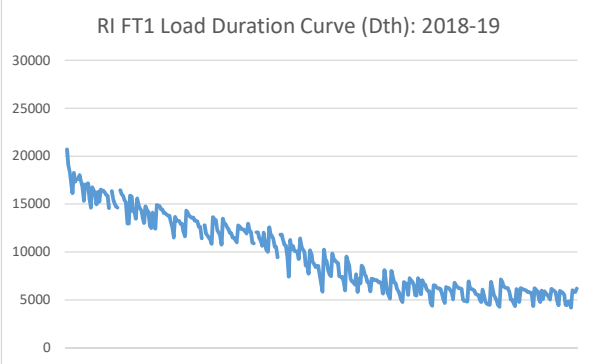
Load Duration Curves for FT1 Customers
Historical Actuals and Forecasted Design Weather

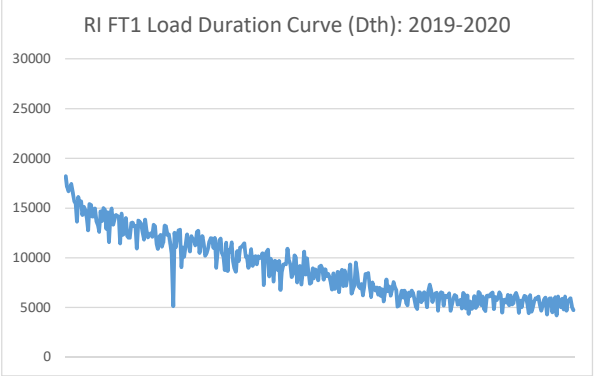
Chart VI-B-1
Page 1 of 2

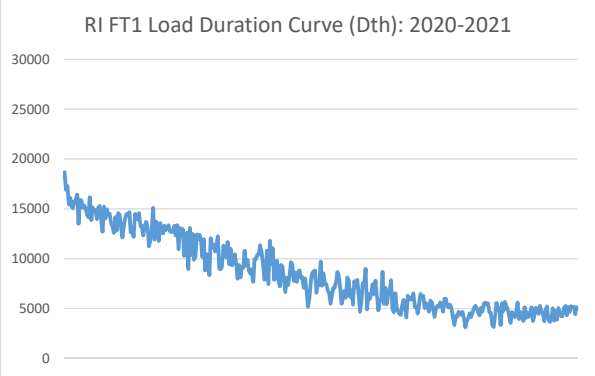






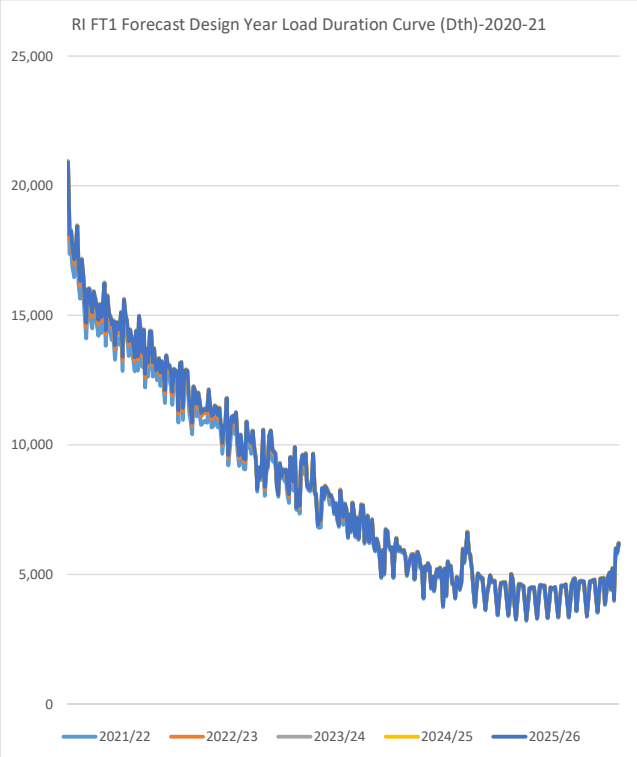






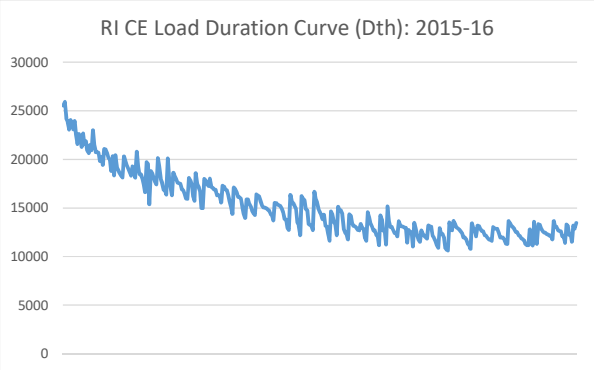
Load Duration Curves for FT1 Customers
Historical Actuals and Forecasted Design Weather

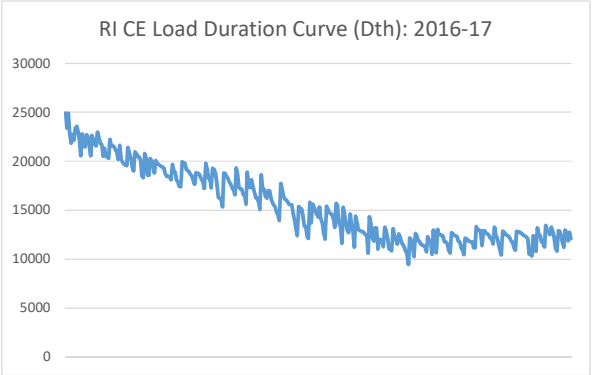
Chart VI-B-1
Page 2 of 2

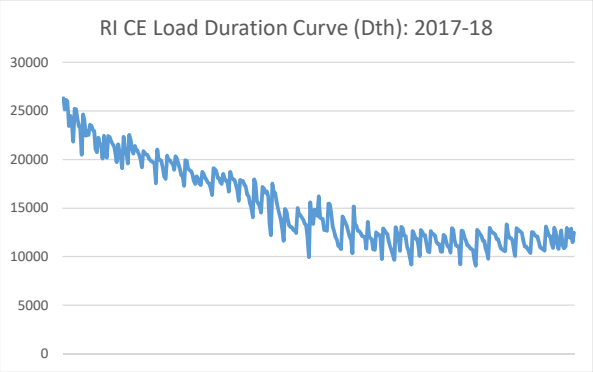


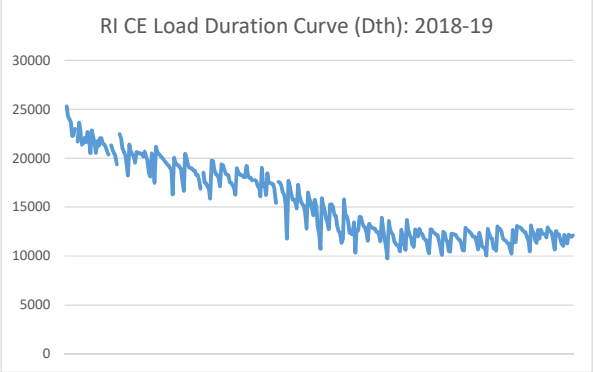
Load Duration Curves for Capacity Exempt Customers
Historical Actuals and Forecasted Design Weather

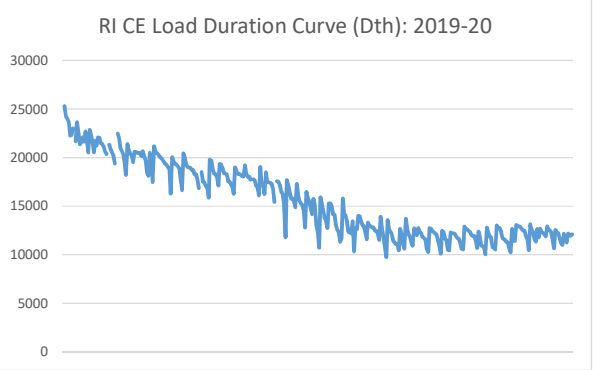
Chart VI-B-2
Page 1 of 2

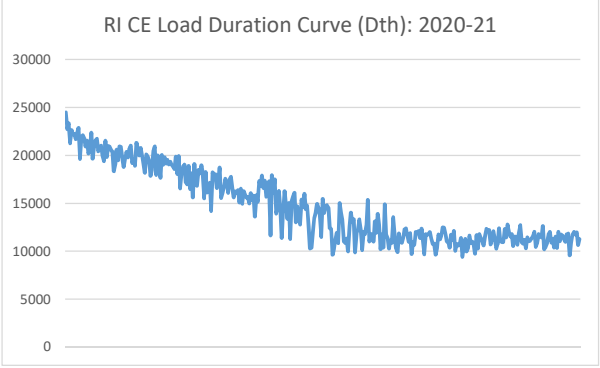






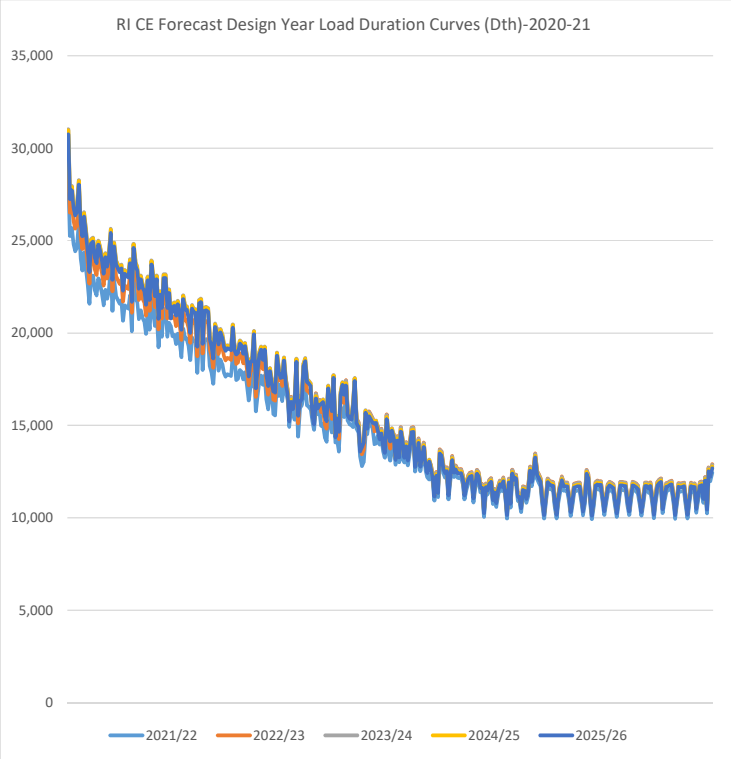






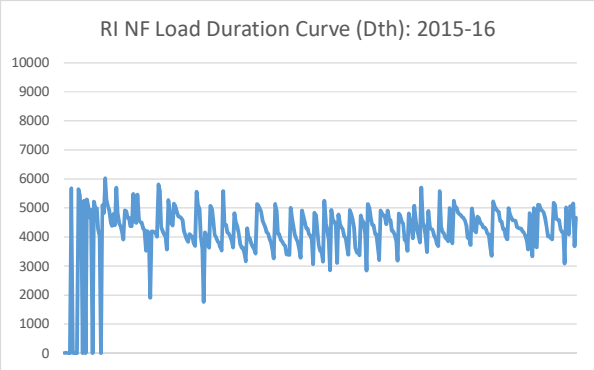
Load Duration Curves for Capacity Exempt Customers
Historical Actuals and Forecasted Design Weather

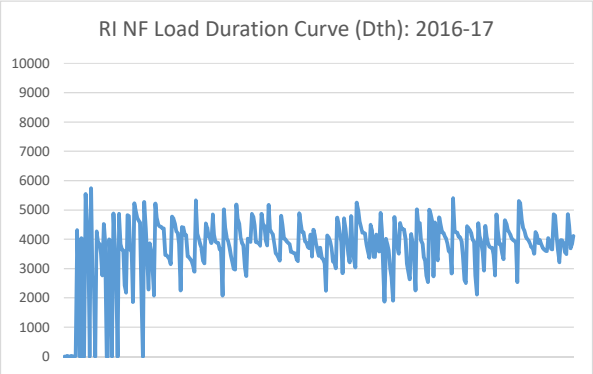
Chart VI-B-2
Page 2 of 2

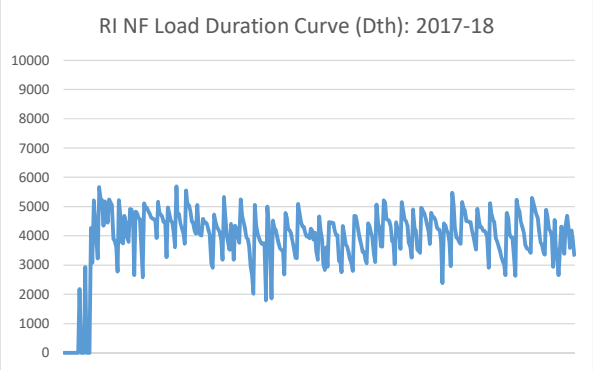


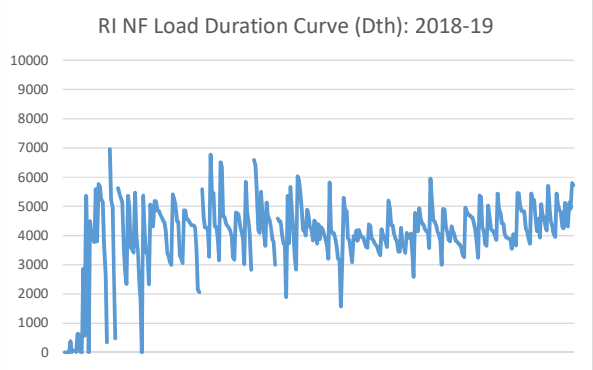
Load Duration Curves for Non-Firm Customers
Historical Actuals and Forecasted Design Weather

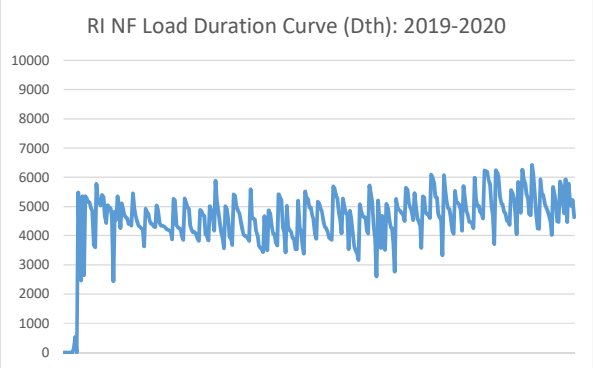
Chart VI-B-3
Page 1 of 2

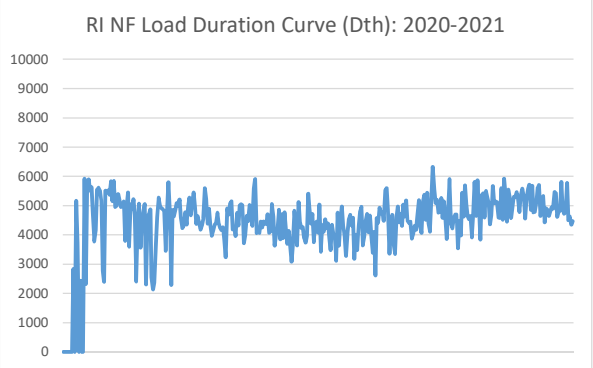






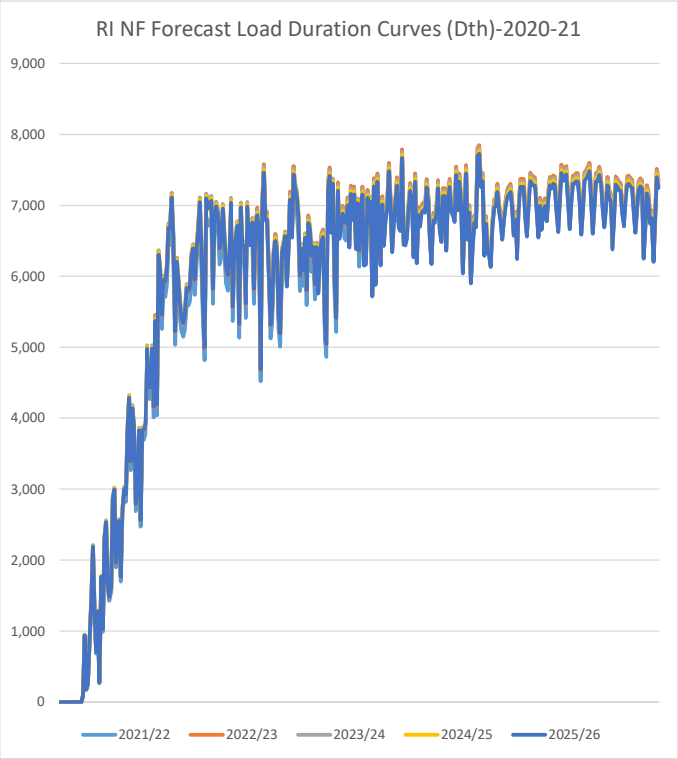






Load Duration Curves for Non-Firm Customers
Historical Actuals and Forecasted Design Weather

Chart VI-B-3
Page 2 of 2



RHODE ISLAND COMPANIES - CONSOLIDATED PORTFOLIO SCHEMATIC

Peak Season Volumes

As of November 1, 2021

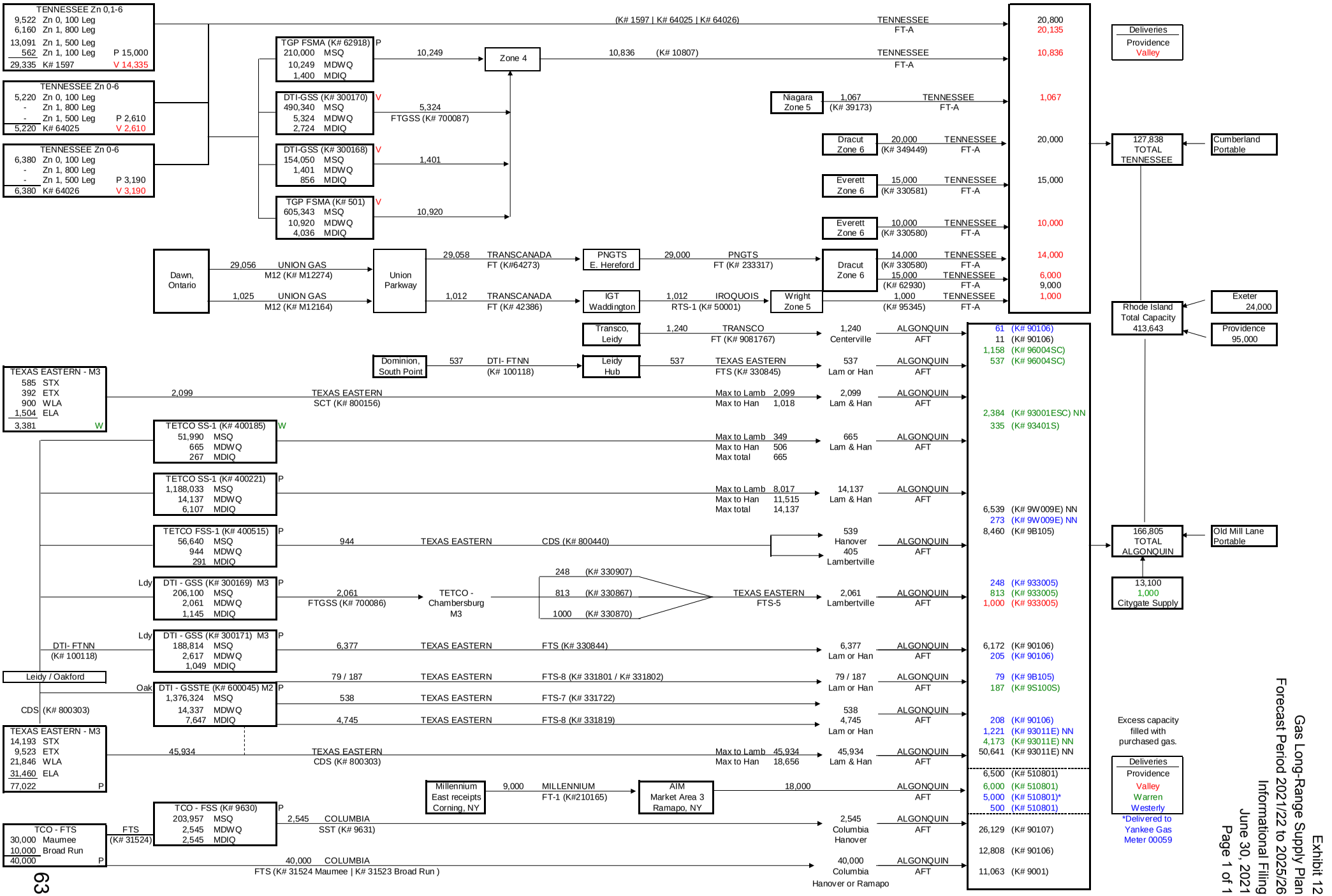


Exhibit 12
Gas Long-Range Supply Plan
Forecast Period 2021/22 to 2025/26
Informational Filing
June 30, 2021
Page 1 of 1

NATIONAL GRID - RHODE ISLAND ASSETS
Transportation Contracts

Shipper	Pipeline Company	Contract No.	Rate Schedule	City Gate MDQ	Annual Quantity	Expiration Date	Currently In Evergreen	Notes
Narragansett Electric Co.	Algonquin	9001	AFT1FT3	11,063	4,037,995	12/31/2022	No	Part-284 transportation service (365-day) used to transport gas from the Columbia interconnect at Hanover, NJ (11,063 MMBtu) to National Grid - Dey St (11,063 MMBtu).
Narragansett Electric Co.	Algonquin	90106	AFT-14	19,465	7,104,725	10/31/2022	Yes	Part-284 transportation service (365-day) used to transport gas from the Columbia interconnect at Hanover, NJ (12,808 MMBtu), TETCO interconnect at Lamberville (6,585 MMBtu) and Transco interconnect at Centerville (72 MMBtu) to National Grid - Dey St (9,223 MMBtu), National Grid - Tiverton (598 MMBtu), National Grid - Westerly (474 MMBtu), National Grid - E. Providence (4,092 Mmbtu), and National Grid - Portsmouth (5,078 MMBtu).
Narragansett Electric Co.	Algonquin	90107	AFT-1W	26,129	3,945,479	10/31/2022	Yes	Part-284 service with a seasonally adjusted MDQ of (26,129 MMBtu), used to transport gas from the Columbia interconnect at Hanover, NJ (18,674 MMBtu) or Ramapo, NY (7,455 MMBtu) to National Grid - Dey St (19,514 MMBtu) and National Grid - E. Providence (6,615 MMBtu).
Narragansett Electric Co.	Algonquin	933005	AFT-1P	2,061	752,265	3/31/2023	Yes	Part-284 transportation service (365-day) used to transport gas from the TETCO interconnect at Lamberville, NJ (2,061 MMBtu) to National Grid - Cumberland (1,000 MMBtu), National Grid - Westerly (248 MMBtu), and National Grid - Warren (813 MMBtu).
Narragansett Electric Co.	Algonquin	93001ESC	AFT-ES1	2,384	771,904	10/31/2022	Yes	Part-284 NO NOTICE service with a seasonally adjusted MDQ of (2,384 MMBtu), used to transport gas from the TETCO interconnect at Lambertville, NJ (1,377 MMBtu) and Hanover, NJ (1,007 MMBtu) to National Grid - Warren (2,384 MMBtu).
Narragansett Electric Co.	Algonquin	93011E	AFT-E1	56,035	19,446,885	10/31/2022	Yes	Part-284 NO NOTICE service with a seasonally adjusted MDQ of (56,035 MMBtu), used to transport gas from the TETCO interconnect at Lambertville, NJ (34,668 MMBtu) and Hanover, NJ (21,367 MMBtu) to National Grid - Dey St (25,137 MMBtu), National Grid - Westerly (1,221 MMBtu), National Grid - E. Providence (48,147 MMBtu), National Grid - Warren (4,173 MMBtu), National Grid - Portsmouth (6,504 MMBtu), and National Grid - Tiverton (163 MMBtu).
Narragansett Electric Co.	Algonquin	93401S	AFT-1S4	335	122,275	10/31/2022	Yes	Part-284 transportation service (365-day) used to transport gas from the TETCO interconnect at Lambertville, NJ (335 MMBtu) to National Grid - Warren (335 MMBtu).
Narragansett Electric Co.	Algonquin	96004SC	AFT-1S3	1,695	618,675	10/31/2022	Yes	Part-284 firm transportation service (365-day) used to transport gas from the TETCO interconnect at Lambertville, NJ (537 MMBtu) and Centerville, NJ (1,158 MMBtu) to National Grid - Warren (1,695 MMBtu).
Narragansett Electric Co.	Algonquin	9B105	AFT-1B	8,539	1,813,145	10/31/2022	Yes	Part-284 service with a seasonally adjusted MDQ of (8,539 MMBtu), used to transport gas from the TETCO interconnect at Lambertville, NJ to National Grid - Dey St (4,258 MMBtu), National Grid - Portsmouth (4,202 MMBtu) and National Grid - Westerly (79 MMBtu).
Narragansett Electric Co.	Algonquin	9S100S	AFT-1SX	187	39,737	10/31/2022	Yes	Part-284 service with a seasonally adjusted MDQ of (187 MMBtu), used to transport gas from the TETCO interconnect at Lambertville, NJ to National Grid - Warren (187 MMBtu).
Narragansett Electric Co.	Algonquin	9W009E	AFT-EW	6,812	1,446,384	10/31/2022	Yes	Part-284 NO NOTICE service with a seasonally adjusted MDQ of (6,812 MMBtu), used to transport gas from the TETCO interconnect at Hanover, NJ (4,222 MMBtu) and Lamberville, NJ (2,590 MMBtu) to National Grid - Dey St (6,234 MMBtu), National Grid - Westerly (273 MMBtu), and National Grid - Portsmouth (305 MMBtu).
Narragansett Electric Co.	Algonquin	510801	AFT1AIM	18,000	6,570,000	1/6/2032	No	Part-284 transportation service used to transport gas from Ramapo, NY (18,000 MMBtu) to National Grid - Westerly (500 MMBtu), National Grid - Warren (6,000 MMBtu), National Grid - Portsmouth (6,000 MMBtu), National Grid - Tiverton (500 MMBtu), and Yankee Gas - Montville (5,000 MMBtu).
Narragansett Electric Co.	Algonquin	510985	AFTCLMS	96,000	35,040,000	7/16/2032	No	Part-284 transportation service used to transport gas from Manchester Street Lateral on the G-12 System (Meter No. 80070) to National Grid - Crary Street-Providence, RI (96,000 MMBtu).
Narragansett Electric Co.	Columbia	31523	FTS	10,000	3,650,000	10/31/2025	No	Part-284 transportation service used to transport gas from Broad Run-19 (10,000 MMBtu) to Columbia interconnect at Hanover, NJ (10,000 MMBtu).
Narragansett Electric Co.	Columbia	31524	FTS	30,000	10,950,000	10/31/2025	No	Part-284 transportation service used to transport gas from Maumee-1 (30,000 MMBtu) to Columbia interconnect at Hanover, NJ (30,000 MMBtu).

Shipper	Pipeline Company	Contract No.	Rate Schedule	City Gate MDQ	Annual Quantity	Expiration Date	Currently In Evergreen	Notes
Narragansett Electric Co.	Columbia	9631	SST	2,545	695,966	4/1/2040	No	Part-284 transportation service used to transport gas from RP Strorage Point TCO-FSS #9630 (2,545 MMBtu) to Columbia interconnect at Hanover, NJ (2,545 MMBtu). MDQ Seasonally adjusted to be 1,272 MDQ from Apr - Sep.
Narragansett Electric Co.	Dominion	100118	FTNN	537	196,005	3/31/2022	No	Part-284 transportation service used to transport gas from the TETCO interconnect at Oakford (537 MMBtu) or Dominion South Point (537 MMBtu) to the Leidy Group Meter (537 MMBtu).
Narragansett Electric Co.	Dominion	700086	FTGSS	2,061	311,211	3/31/2022	No	Transportation contract used to transport gas from DTI-GSS #300169 (2,061MMBtu) to the TETCO interconnect at Chambersburg, PA (2,061 MMBtu).
Narragansett Electric Co.	Dominion	700087	FTGSS	5,324	803,924	3/31/2025	No	Transportation contract used to transport gas from DTI-GSS #300170 (5,324MMBtu) to Ellisburg, PA (5,324 MMBtu).
Narragansett Electric Co.	Iroquois	50001	RTS-1	1,012	369,380	11/1/2022	No	Transportation contract used to transport gas from Waddington (1,012 MMBtu) to the IGTS interconnect with TGP at Wright, NY.
Narragansett Electric Co.	Millennium	210165	FT-1	9,000	3,285,000	3/31/2034	No	Transportation service used to transport gas from Corning, NY to the interconnect with Algonquin Gas Transmission at Ramapo, NY (9,000 MMBtu).
Narragansett Electric Co.	PNGTS	233317	FT	29,000	10,585,000	10/31/2040	No	Transportation service used to transport gas from East Hereford to the interconnect with Tennessee Gas Pipeline at Dracut (29,000 MMBtu).
Narragansett Electric Co.	Tennessee	10807	FT-A	10,836	3,955,140	3/31/2022	No	Transportation service used to transport gas from Ellisburg (6,581 MMBtu) and Nothern Storage (4,255 MMBtu) to National Grid city gates at Pawtucket, RI (10,836 MMBtu).
Narragansett Electric Co.	Tennessee	39173	FT-A	1,067	389,455	10/31/2024	No	Transportation service (365-day) used to transport gas from Niagara River (1,067 MMBtu) to National Grid city gates at Pawtucket, RI (1,067 MMBtu).
Narragansett Electric Co.	Tennessee	1597	FT-A	29,335	10,707,275	10/31/2024	No	Transportation service used to transport gas from Zn1 800 Leg (6,160 MMBtu), Zn1 500 Leg (13,091 MMBtu), Zn0 100 Leg (9,522 MMBtu), and Zn1 100 Leg (562 MMBtu) to National Grid city gates at Pawtucket, RI (14,335 MMBtu), Cranston (10,000 MMBtu), and Smithfield (5,000 MMBtu).
Narragansett Electric Co.	Tennessee	62930	FT-A	15,000	5,475,000	8/31/2022	No	Transportstion service used to transport gas from the interconnect at Dracut (15,000 MMBtu) to National Grid city gate - Cranston (9,000) and National Grid city gate - Pawtucket, RI (6,000 MMBtu).
Narragansett Electric Co.	Tennessee	64025	FT-A	5,220	1,905,300	10/31/2027	No	TGP ConneXion - Transportation service used to transport gas from Tx Zone 0 (5,220 MMBtu) to National Grid city gates at Lincoln, RI (2,610 MMBtu) and Smithfield, RI (2,610). If volumes transported to points other than primary points as listed on the contract, maximum commodity rate per TGP's tariff apply.
Narragansett Electric Co.	Tennessee	64026	FT-A	6,380	2,328,700	10/31/2027	No	TGP ConneXion - Transportation service used to transport gas from Tx Zone 0 (6,380 MMBtu) to National Grid city gates at Lincoln, RI (3,190 MMBtu) and Smithfield, RI (3,190). If volumes transported to points other than primary points as listed on the contract, maximum commodity rate per TGP's tariff apply.
Narragansett Electric Co.	Tennessee	95345	FT-A	1,000	365,000	10/31/2022	No	Transportation service used to transport gas from interconnect at Wright, NY (1,000 MMBtu) to National Grid city gates at Lincoln (1,000 MMBtu).
Narragansett Electric Co.	Tennessee	330580	FT-A	24,000	8,760,000	10/31/2038	No	Transportstion service used to transport gas from the interconnects at Dracut (14,000 MMBtu) and at Distrigas (10,000 MMBtu) to National Grid city gate - Lincoln (24,000).
Narragansett Electric Co.	Tennessee	330581	FT-A	15,000	5,475,000	10/31/2038	No	Transportstion service used to transport gas from the interconnect at Distrigas (15,000 MMBtu) to National Grid city gate - Cranston (15,000).
Narragansett Electric Co.	Tennessee	349449	FT-A	20,000	7,300,000	10/31/2025	No	Transportstion service used to transport gas from the interconnect at Dracut (20,000 MMBtu) to National Grid city gate - Cranston (20,000).

Shipper	Pipeline Company	Contract No.	Rate Schedule	City Gate MDQ	Annual Quantity	Expiration Date	Currently In Evergreen	Notes
Narragansett Electric Co.	Texas Eastern	330844	FTS	6,377	2,327,605	10/31/2022	Yes	Part-157 (7C) transportation service used to transport gas from Leidy, PA (6,377 MMBtu) to interconnect with AGT at Lambertville, NJ or Hanover, NJ (6,377 MMBtu).
Narragansett Electric Co.	Texas Eastern	330845	FTS	537	196,005	10/31/2022	Yes	Part-157 (7C) transportation service used to transport gas from Leidy, PA (537 MMBtu) to interconnect with AGT at Lambertville, NJ or Hanover, NJ (537 MMBtu).
Narragansett Electric Co.	Texas Eastern	330867	FTS-5	813	296,745	3/31/2023	Yes	Part-157 (7C) transportation service used to transport gas from Chambersburg, PA (813 MMBtu) to Lambertville, NJ (813 MMBtu).
Narragansett Electric Co.	Texas Eastern	330870	FTS-5	1,000	365,000	3/31/2023	Yes	Part-157 (7C) transportation service used to transport gas from Chambersburg, PA (1,000 MMBtu) to Lambertville, NJ (1,000 MMBtu).
Narragansett Electric Co.	Texas Eastern	330907	FTS-5	248	90,520	3/31/2023	Yes	Part-157 (7C) transportation service used to transport gas from Chambersburg, PA (248 MMBtu) to Lambertville, NJ (248 MMBtu).
Narragansett Electric Co.	Texas Eastern	331722	FTS-7	538	196,370	3/31/2023	Yes	Part- 157 (7C) transportation service used to transport gas from Oakford, PA (538 MMBtu) to either interconnects at Lambertville or Hanover, NJ (538 MMBtu).
Narragansett Electric Co.	Texas Eastern	331801	FTS-8	79	28,835	3/31/2023	Yes	Part-157 (7C) transportation service used to transport gas from Leidy, PA (38 MMBtu) to either interconnects at Lambertville or Hanover, NJ. In addition, Oakford, PA (41 MMBtu) to either interconnects at Lamberville or Hanover, NJ.
Narragansett Electric Co.	Texas Eastern	331802	FTS-8	187	68,255	3/31/2023	Yes	Part-157 (7C) transportation service used to transport gas from Leidy, PA (89 MMBtu) to either interconnects at Lambertville or Hanover, NJ. In addition, Oakford, PA (98 MMBtu) to either interconnects at Lamberville or Hanover, NJ.
Narragansett Electric Co.	Texas Eastern	331819	FTS-8	4,745	1,731,925	3/31/2023	Yes	Part- 157 (7C) transportation service used to transport gas from Oakford, PA (4,745 MMBtu) to either interconnects at Lambertville or Hanover, NJ (4,745 MMBtu).
Narragansett Electric Co.	Texas Eastern	800156	SCT	2,099	766,135	10/31/2022	Yes	Part-284 transportation contract used to transport gas from the access areas at STX (585 MMBtu oper. entitle.), ETX (392 MMBtu oper. entitle.), WLA (900 MMBtu oper. entitle.), and ELA (1,504 MMBtu oper. entitle.) to the TETCO interconnect with AGT at Lambertville, NJ (2,099 MMBtu).
Narragansett Electric Co.	Texas Eastern	800303	CDS	45,934	16,765,910	10/31/2022	Yes	Part-284 transportation contract used to transport gas from the access areas at STX (14,193 MMBtu oper. entitle.), ETX (9,523 MMBtu oper. entitle.), WLA (21,846 MMBtu oper. entitle.), and ELA (31,460 MMBtu oper. entitle.) to the TETCO interconnect with AGT at Lambertville, NJ (45,934 MMBtu) or Hanover, NJ (18,656 MMBtu) or Zone M3 Storage Point (6,665 MMBtu).
Narragansett Electric Co.	Texas Eastern	800440	CDS	944	344,560	10/31/2022	Yes	Part-284 transportation contract used to transport gas from TETCO FSS-1 #400515 to the TETCO interconnects at Lambertville, NJ (405 MMBtu) and Hanover, NJ (539 MMBtu).
Narragansett Electric Co.	TransCanada	42386	FT	1,012	369,380	10/31/2026	No	Transportation service used to transport gas from the Union Gas interconnect at Parkway to the interconnect with Iroquois Gas Transmission at Waddington (1,012 MMBtu).
Narragansett Electric Co.	TransCanada	64273	FT	29,058	10,606,170	10/31/2040	No	Transportation service used to transport gas from the Union Gas interconnect at Parkway to the interconnect with Portland Natural Gas Transmission System at East Hereford (29,058 MMBtu).
Narragansett Electric Co.	Transco	9081767	FT	1,240	452,600	3/31/2022	Yes	Part-284 transportation service used to transport gas from Transco Leidy (1,240 MMBtu) to the Algonquin interconnect at Centerville, NJ (1,240 MMBtu).
Narragansett Electric Co.	Union Gas	M12164	M12	1,025	374,125	10/31/2022	No	Transportation service used to transport gas from Dawn, Ontario to the interconnect with TransCanada Pipeline at Parkway (1,025 MMBtu).
Narragansett Electric Co.	Union Gas	M12274	M12	29,056	10,605,440	10/31/2040	No	Transportation service used to transport gas from Dawn, Ontario to the interconnect with TransCanada Pipeline at Parkway (29,056 MMBtu).

NATIONAL GRID - RHODE ISLAND ASSETS
Storage Contracts

Shipper	Pipeline Company	Contract No.	Rate Schedule	MDWQ	Annual Quantity	Expiration Date	Currently In Evergreen	Notes
Narragansett Electric	Columbia	9630	FSS	2,545	203,957	4/1/2040	No	Part-284 storage service that provides storage capacity with an injection rate of 2,545 MMBtu/day.
Narragansett Electric	Dominion	300168	GSS	1,401	154,050	3/31/2025	No	Part-284 storage service that provides storage capacity with an injection rate of 856 MMBtu/day.
Narragansett Electric	Dominion	300169	GSS	2,061	206,100	3/31/2022	No	Part-284 storage service that provides storage capacity with an injection rate of 1,145 MMBtu/day.
Narragansett Electric	Dominion	300170	GSS	5,324	490,340	3/31/2025	No	Part-284 storage service that provides storage capacity with an injection rate of 2,724 MMBtu/day.
Narragansett Electric	Dominion	300171	GSS	2,617	188,814	3/31/2022	No	Part-284 storage service that provides storage capacity with an injection rate of 1,049 MMBtu/day.
Narragansett Electric	Dominion	600045	GSS-TE	14,337	1,376,324	3/31/2022	No	Part-157 (7C) storage service that provides storage capacity with an injection rate of 7,647 MMBtu/day.
Narragansett Electric	Tennessee	501	FSMA	10,920	605,343	10/31/2025	No	Storage service that provides storage capacity at an injection rate of 4,036 MMBtu/day.
Narragansett Electric	Tennessee	62918	FSMA	10,249	210,000	10/31/2025	No	Storage service that provides storage capacity at an injection rate of 1,400 MMBtu/day.
Narragansett Electric	Texas Eastern	400185	SS-1	665	51,990	4/30/2022	Yes	Part-284 storage service that provides storage capacity with an injection rate of 267 MMBtu/day. [from Oakford and Leidy storage fields to interconnect at Lambertville, NJ (349 MMBtu) and interconnect at Hanover, NJ (506 MMBtu).]
Narragansett Electric	Texas Eastern	400221	SS-1	14,137	1,188,033	4/30/2022	Yes	Part-284 storage service that provides storage capacity with an injection rate of 6,107 MMBtu/day. [from Oakford and Leidy storage fields to interconnect at Lambertville, NJ (8,017 MMBtu) and interconnect at Hanover, NJ (11,515 MMBtu).]
Narragansett Electric	Texas Eastern	400515	FSS-1	944	56,640	4/30/2022	Yes	Part-284 storage service that provides storage capacity with an injection rate of 291 MMBtu/day.

National Grid Rhode Island
Contract Path Mapping

Contract Name	Path
AGT 510801	AIM
AGT 9001	TCO (Pool)
AGT 90106	Transco
AGT 90106	Storage Delivery
AGT 90107	AGT M3
AGT 93001ESC	AGT M3
AGT 93001ESC	TETCO SCT Long Haul
AGT 93011E	TETCO CDS Long Haul
AGT 93011E	AGT M3
AGT 93011E	TETCO CDS Long Haul
AGT 933005	Storage Delivery
AGT 93401S	Storage Delivery
AGT 96004SC	Transco
AGT 96004SC	Dominion
AGT 9B105	Storage Delivery
AGT 9S100S	Storage Delivery
AGT 9W009E	Storage Delivery
AGT Citygate	Citygate Peaking
Constel 0416	Everett
Dawn East Hereford	Dawn via PNGTS
Dawn Waddington	Dawn via Waddington
DETI 100118	Dominion
DETI 300168	Storage
DETI 300169	Storage
DETI 300170	Storage
DETI 300171	Storage
DETI 600045	Storage
DETI 700086	Storage Delivery
DETI 700087	Storage Delivery
Dominion South Point	Dominion
IGT 50001	Dawn via Waddington
LNG	LNG
LNG_Exeter	LNG
LNG_Prov	LNG
Manchester Lateral	Manchester Lateral
Millenium East	AIM
MPL 214129	AIM
Niagara	Niagara
PNGTS 210203	Dawn via PNGTS
Portable LNG	Portable LNG
Proposed Dracut Supply Deal	Dracut
Proposed Everett Supply Deal	Everett
Proposed Summer Liquid	LNG
Proposed Summer Trucking	LNG
Ramapo	AIM
Summer Liquid Refill	LNG
Summer Trucking	LNG
TCO 31523	TCO (Pool)
TCO 31524	Storage Delivery
TCO 31524	TCO (Pool)
TCO 9630	Storage
TCO 9631	Storage Delivery
TCO Appalachia	TCO (Pool)
TCO M3	TCO (M3 ish)
TCPL 42386	Dawn via Waddington
TCPL 58577	Dawn via PNGTS
TET 330844	Storage Delivery
TET 330845	Dominion
TET 330867	Storage Delivery
TET 330870	Storage Delivery
TET 330907	Storage Delivery
TET 331722	Storage Delivery
TET 331801	Storage Delivery
TET 331802	Storage Delivery
TET 331819	Storage Delivery
TET 400185	Storage
TET 400221	Storage
TET 400515	Storage
TET 800156	TETCO SCT Long Haul
TET 800303	TETCO CDS Long Haul
TET 800440	Storage Delivery
Tetco M2 CDS	TETCO CDS Long Haul
Tetco M2 SCT	TETCO SCT Long Haul
Tetco M3	AGT M3
TGP 10807	Storage Delivery
TGP 1597	TGP Long Haul
TGP 330580	Dawn via PNGTS
TGP 330580	Everett
TGP 330581	Everett
TGP 349449	Dracut
TGP 39173	Niagara
TGP 501	Storage
TGP 62918	Storage
TGP 62930	Dawn via PNGTS
TGP 64025	TGP ConneXion
TGP 64026	TGP ConneXion
TGP 95345	Dawn via Waddington
TGP Citygate	Proposed Citygate Peaking
TGP Z4 CnX	TGP ConneXion
TGP Z4 LH	TGP Long Haul
TRA 9081767	Transco
Transco Leidy	Transco
Trucking	LNG
UN M12164	Dawn via Waddington
UN M12274	Dawn via PNGTS
Waddington	Dawn via Waddington
Winter Trucking	LNG
Yankee Interconnect	Yankee Interconnect

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Day with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	70	71	72	73	74
	Providence	305	310	316	319	322
	Warren	12	12	12	12	12
	Westerly	7	7	7	7	7
Fuel Reimbursement		5	5	5	5	5
Underground Storage Refill		0	0	0	0	0
LNG Refill		0	0	0	0	0
TOTAL		398	405	412	415	419
RESOURCES						
TGP	Dawn PNGTS	29	29	29	29	29
	Dawn Iroquois	1	1	1	1	1
	Niagara	1	1	1	1	1
	Zone 4	34	34	34	34	34
	Dracut	20	20	20	20	20
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	20	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	11	11	11	11	11
TET/AGT	M2	40	40	40	40	40
	Dominion South Point	1	1	1	1	1
	TCO Appalachia	33	33	33	33	33
	Transco Leidy	1	1	1	1	1
	AIM (Ramapo)	8	9	9	9	9
	AIM (Millennium)	9	9	9	9	9
	M3	26	25	26	25	26
	AGT Citygate	14	14	0	0	0
	Storage	28	29	28	29	28
Liquid for Portables and Refill		0	0	0	0	0
LNG From Storage		1	119	46	119	24
Unserved	Valley	0	3	18	24	19
	Providence	118	23	102	26	129
	Warren	2	3	3	3	3
	Westerly	0	0	0	0	0
		121	29	123	53	152
TOTAL		398	405	412	415	419

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only and Customer Choice)
(BBtu)

		Design Heating Season (Nov-Mar) with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	5,348	5,440	5,590	5,582	5,636
	Providence	23,409	23,814	24,470	24,435	24,670
	Warren	889	904	929	928	937
	Westerly	503	512	526	525	530
Fuel Reimbursement		609	607	610	603	606
Underground Storage Refill		0	0	0	0	0
LNG Refill		95	98	0	0	0
TOTAL		30,853	31,376	32,125	32,073	32,379
RESOURCES						
TGP	Dawn PNGTS	3,113	3,181	2,975	2,963	2,986
	Dawn Iroquois	107	110	113	119	123
	Niagara	132	131	134	131	129
	Zone 4	4,970	5,321	5,640	5,614	5,622
	Dracut	1,147	1,202	1,290	1,294	1,324
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	1,341	1,067	1,006	995	995
TET/AGT	M2	5,993	5,998	6,038	5,975	6,039
	Dominion South Point	82	83	83	82	82
	TCO Appalachia	4,751	4,722	4,566	4,353	4,360
	Transco Leidy	187	187	188	187	187
	AIM (Ramapo)	448	474	518	531	542
	AIM (Millennium)	1,365	1,365	1,374	1,365	1,365
	M3	2,381	2,457	2,877	3,086	3,092
	AGT Citygate	508	508	0	0	0
	Storage	2,619	2,617	2,650	2,627	2,626
Liquid for Portables and Refill		95	98	0	0	0
LNG From Storage		173	831	733	733	733
Unserved	Valley	2	3	77	92	83
	Providence	784	1,015	1,852	1,916	2,080
	Warren	4	5	9	10	11
	Westerly	0	0	0	0	0
		790	1,023	1,938	2,018	2,173
TOTAL		30,853	31,376	32,125	32,073	32,379

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Non-Heating Season (Apr-Oct) with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,997	2,034	2,048	2,066	2,083
	Providence	8,741	8,905	8,963	9,044	9,116
	Warren	332	338	340	343	346
	Westerly	188	191	193	194	196
Fuel Reimbursement		293	351	334	356	403
Underground Storage Refill		4,002	3,924	3,896	3,939	3,973
LNG Refill		212	867	867	867	867
TOTAL		15,765	16,610	16,640	16,810	16,984
RESOURCES						
TGP	Dawn PNGTS	38	138	142	50	53
	Dawn Iroquois	2	4	6	6	7
	Niagara	34	67	134	135	111
	Zone 4	2,367	2,832	2,932	3,042	3,319
	Dracut	909	579	320	322	97
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	232	234	236	238
TET/AGT	M2	7,387	5,486	5,393	6,061	7,841
	Dominion South Point	44	32	47	34	68
	TCO Appalachia	513	1,027	610	542	552
	Transco Leidy	35	54	54	54	60
	AIM (Ramapo)	96	100	88	92	90
	AIM (Millennium)	1,935	1,695	1,085	1,578	1,843
	M3	2,066	4,221	5,451	4,437	2,488
	AGT Citygate	0	0	0	0	0
	Storage	102	8	5	82	77
Liquid for Portables and Refill		105	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	2	3	5	6
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	2	3	5	6
TOTAL		15,765	16,610	16,640	16,810	16,984

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Annual with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	7,345	7,475	7,638	7,648	7,719
	Providence	32,150	32,719	33,433	33,479	33,786
	Warren	1,220	1,242	1,269	1,271	1,283
	Westerly	691	703	718	719	726
Fuel Reimbursement		903	958	943	958	1,009
Underground Storage Refill		4,002	3,924	3,896	3,939	3,973
LNG Refill		308	965	867	867	867
TOTAL		46,618	47,986	48,764	48,883	49,363
RESOURCES						
TGP	Dawn PNGTS	3,151	3,319	3,117	3,013	3,039
	Dawn Iroquois	109	114	120	125	130
	Niagara	165	198	268	266	240
	Zone 4	7,337	8,153	8,572	8,656	8,940
	Dracut	2,056	1,781	1,611	1,616	1,421
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	1,341	1,299	1,240	1,231	1,233
TET/AGT	M2	13,380	11,484	11,432	12,036	13,880
	Dominion South Point	127	114	130	116	150
	TCO Appalachia	5,264	5,749	5,176	4,895	4,913
	Transco Leidy	222	241	243	241	247
	AIM (Ramapo)	544	575	606	623	632
	AIM (Millennium)	3,300	3,060	2,459	2,943	3,208
	M3	4,446	6,678	8,328	7,524	5,580
	AGT Citygate	508	508	0	0	0
	Storage	2,721	2,625	2,656	2,709	2,702
Liquid for Portables and Refill		200	98	0	0	0
LNG From Storage		308	965	867	867	867
Unserved	Valley	2	3	77	92	83
	Providence	784	1,017	1,855	1,921	2,086
	Warren	4	5	9	10	11
	Westerly	0	0	0	0	0
		790	1,025	1,941	2,023	2,179
TOTAL		46,618	47,986	48,764	48,883	49,363

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Heating Season (Nov-Mar) with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	4,839	4,923	5,056	5,051	5,099
	Providence	21,199	21,567	22,149	22,128	22,340
	Warren	788	802	823	822	830
	Westerly	453	461	474	473	478
Fuel Reimbursement		578	577	578	573	576
Underground Storage Refill		0	0	0	0	0
LNG Refill		31	37	0	0	0
TOTAL		27,889	28,366	29,080	29,047	29,324
RESOURCES						
TGP	Dawn PNGTS	2,516	2,575	2,465	2,460	2,487
	Dawn Iroquois	89	95	98	99	100
	Niagara	120	117	119	113	113
	Zone 4	4,624	5,044	5,489	5,512	5,523
	Dracut	381	651	844	860	895
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	1,341	1,091	1,006	994	994
TET/AGT	M2	5,966	5,972	6,003	5,947	6,005
	Dominion South Point	82	83	83	82	83
	TCO Appalachia	4,649	4,550	4,314	4,109	4,135
	Transco Leidy	187	187	188	187	187
	AIM (Ramapo)	292	325	376	407	412
	AIM (Millennium)	1,365	1,365	1,374	1,365	1,365
	M3	1,726	1,825	2,183	2,338	2,359
	AGT Citygate	381	508	0	0	0
	Storage	2,618	2,622	2,646	2,616	2,605
Liquid for Portables and Refill		31	37	0	0	0
LNG From Storage		109	770	733	733	733
Unserved	Valley	10	15	99	107	96
	Providence	746	529	1,049	1,109	1,219
	Warren	4	5	10	11	12
	Westerly	0	0	0	0	0
		760	549	1,158	1,228	1,327
TOTAL		27,889	28,366	29,080	29,047	29,324

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Non-Heating Season (Apr-Oct) with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,853	1,888	1,900	1,917	1,932
	Providence	8,118	8,270	8,323	8,399	8,465
	Warren	302	307	309	312	315
	Westerly	174	177	178	180	181
Fuel Reimbursement		283	339	321	344	391
Underground Storage Refill		3,985	3,928	3,866	3,904	3,917
LNG Refill		212	867	867	867	867
TOTAL		14,926	15,775	15,765	15,922	16,068
RESOURCES						
TGP	Dawn PNGTS	25	75	77	29	29
	Dawn Iroquois	1	1	3	3	3
	Niagara	32	66	131	131	84
	Zone 4	2,246	2,698	2,770	2,828	3,126
	Dracut	805	538	283	287	61
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	211	212	215	217
TET/AGT	M2	7,326	5,445	5,371	6,030	7,805
	Dominion South Point	43	30	47	33	67
	TCO Appalachia	400	915	443	399	399
	Transco Leidy	34	51	51	52	55
	AIM (Ramapo)	59	58	54	58	58
	AIM (Millennium)	1,935	1,651	1,071	1,582	1,848
	M3	1,696	3,898	5,115	4,065	2,108
	AGT Citygate	0	0	0	0	0
	Storage	86	4	3	79	75
Liquid for Portables and Refill		105	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	0	0
TOTAL		14,926	15,775	15,765	15,922	16,068

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Annual with Existing Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	6,692	6,810	6,956	6,968	7,032
	Providence	29,317	29,837	30,473	30,527	30,806
	Warren	1,090	1,109	1,133	1,135	1,145
	Westerly	627	638	652	653	659
Fuel Reimbursement		861	915	900	916	967
Underground Storage Refill		3,985	3,928	3,866	3,904	3,917
LNG Refill		243	904	867	867	867
TOTAL		42,814	44,141	44,845	44,970	45,391
RESOURCES						
TGP	Dawn PNGTS	2,541	2,650	2,542	2,489	2,516
	Dawn Iroquois	90	96	101	102	103
	Niagara	152	183	250	244	198
	Zone 4	6,870	7,742	8,259	8,340	8,649
	Dracut	1,186	1,189	1,127	1,146	956
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	1,341	1,302	1,218	1,209	1,211
TET/AGT	M2	13,292	11,417	11,374	11,976	13,810
	Dominion South Point	125	113	130	115	150
	TCO Appalachia	5,049	5,465	4,757	4,508	4,534
	Transco Leidy	221	238	240	239	242
	AIM (Ramapo)	350	383	430	464	469
	AIM (Millennium)	3,300	3,016	2,445	2,947	3,213
	M3	3,421	5,723	7,298	6,402	4,467
	AGT Citygate	381	508	0	0	0
	Storage	2,704	2,626	2,649	2,695	2,680
Liquid for Portables and Refill		136	37	0	0	0
LNG From Storage		243	904	867	867	867
Unserved	Valley	10	15	99	107	96
	Providence	746	529	1,049	1,109	1,219
	Warren	4	5	10	11	12
	Westerly	0	0	0	0	0
		760	549	1,158	1,228	1,327
TOTAL		42,814	44,141	44,845	44,970	45,391

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Day with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	70	71	72	73	74
	Providence	305	310	316	319	322
	Warren	12	12	12	12	12
	Westerly	7	7	7	7	7
Fuel Reimbursement		5	5	5	5	5
Underground Storage Refill		0	0	0	0	0
LNG Refill		0	0	0	0	0
TOTAL		398	405	412	415	419
RESOURCES						
TGP	Dawn PNGTS	29	29	29	29	29
	Dawn Iroquois	1	1	1	1	1
	Niagara	1	1	1	1	1
	Zone 4	34	34	34	34	34
	Dracut	20	20	20	20	20
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	20	0	0	0	0
	Everett Swing	5	25	30	0	0
	Storage	11	11	11	11	11
TET/AGT	M2	40	40	40	40	40
	Dominion South Point	1	1	1	1	1
	TCO Appalachia	33	33	33	33	33
	Transco Leidy	1	1	1	1	1
	AIM (Ramapo)	8	9	9	9	9
	AIM (Millennium)	9	9	9	9	9
	M3	25	25	26	26	25
	AGT Citygate	11	14	0	0	0
	Storage	29	29	28	28	29
Liquid for Portables and Refill		0	4	6	0	0
LNG From Storage		119	119	119	119	37
Unserved	Valley	0	0	8	19	19
	Providence	0	0	4	32	117
	Warren	0	0	3	3	3
	Westerly	0	0	0	0	0
		0	0	15	53	139
TOTAL		398	405	412	415	419

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only and Customer Choice)
(BBtu)

		Design Heating Season (Nov-Mar) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	5,348	5,440	5,590	5,582	5,636
	Providence	23,409	23,814	24,470	24,435	24,670
	Warren	889	904	929	928	937
	Westerly	503	512	526	525	530
Fuel Reimbursement		610	609	612	603	606
Underground Storage Refill		0	0	0	0	0
LNG Refill		263	192	94	0	0
TOTAL		31,022	31,472	32,221	32,073	32,379
RESOURCES						
TGP	Dawn PNGTS	3,105	3,175	2,975	2,963	2,986
	Dawn Iroquois	107	110	113	119	123
	Niagara	132	131	134	131	129
	Zone 4	4,967	5,321	5,640	5,614	5,622
	Dracut	1,047	1,196	1,277	1,294	1,324
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	187	911	1,247	0	0
	Storage	1,341	1,067	1,006	995	995
TET/AGT	M2	5,993	5,997	6,038	5,975	6,039
	Dominion South Point	82	83	83	82	82
	TCO Appalachia	4,751	4,721	4,566	4,353	4,360
	Transco Leidy	187	187	188	187	187
	AIM (Ramapo)	445	464	518	531	542
	AIM (Millennium)	1,365	1,365	1,374	1,365	1,365
	M3	2,362	2,437	2,877	3,086	3,092
	AGT Citygate	508	508	0	0	0
	Storage	2,649	2,654	2,650	2,627	2,626
Liquid for Portables and Refill		276	223	181	0	0
LNG From Storage		867	923	827	733	733
Unserved	Valley	0	0	8	82	84
	Providence	0	0	508	1,926	2,078
	Warren	0	0	9	10	11
	Westerly	0	0	0	0	0
		0	0	526	2,018	2,173
TOTAL		31,022	31,472	32,221	32,073	32,379

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Non-Heating Season (Apr-Oct) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,997	2,034	2,048	2,066	2,083
	Providence	8,741	8,905	8,963	9,044	9,116
	Warren	332	338	340	343	346
	Westerly	188	191	193	194	196
Fuel Reimbursement		294	351	334	356	403
Underground Storage Refill		4,017	3,959	3,896	3,939	3,973
LNG Refill		738	867	867	867	867
TOTAL		16,307	16,646	16,640	16,810	16,984
RESOURCES						
TGP	Dawn PNGTS	38	139	142	50	53
	Dawn Iroquois	2	4	6	6	7
	Niagara	34	67	134	135	111
	Zone 4	2,367	2,833	2,932	3,042	3,319
	Dracut	909	579	320	322	97
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	232	234	236	238
TET/AGT	M2	7,387	5,486	5,393	6,061	7,841
	Dominion South Point	44	32	47	34	68
	TCO Appalachia	540	1,063	610	542	552
	Transco Leidy	35	54	54	54	60
	AIM (Ramapo)	98	100	88	92	90
	AIM (Millennium)	1,935	1,695	1,085	1,578	1,843
	M3	2,066	4,221	5,451	4,437	2,488
	AGT Citygate	0	0	0	0	0
	Storage	88	6	5	82	77
Liquid for Portables and Refill		631	0	0	0	0
LNG From Storage		134	137	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	3	5	6
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	3	5	6
TOTAL		16,307	16,646	16,640	16,810	16,984

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales and Customer Choice)
(BBtu)

		Design Annual with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	7,345	7,475	7,638	7,648	7,719
	Providence	32,150	32,719	33,433	33,479	33,786
	Warren	1,220	1,242	1,269	1,271	1,283
	Westerly	691	703	718	719	726
Fuel Reimbursement		904	961	946	958	1,009
Underground Storage Refill		4,017	3,959	3,896	3,939	3,973
LNG Refill		1,001	1,060	961	867	867
TOTAL		47,328	48,118	48,861	48,883	49,363
RESOURCES						
TGP	Dawn PNGTS	3,144	3,313	3,117	3,013	3,039
	Dawn Iroquois	109	114	120	125	130
	Niagara	165	198	268	266	240
	Zone 4	7,334	8,153	8,572	8,656	8,940
	Dracut	1,956	1,775	1,597	1,616	1,421
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	187	911	1,247	0	0
	Storage	1,341	1,299	1,240	1,231	1,233
TET/AGT	M2	13,379	11,483	11,432	12,036	13,880
	Dominion South Point	127	114	130	116	150
	TCO Appalachia	5,291	5,784	5,175	4,895	4,913
	Transco Leidy	222	241	243	241	247
	AIM (Ramapo)	542	565	606	623	632
	AIM (Millennium)	3,300	3,060	2,459	2,943	3,208
	M3	4,428	6,657	8,328	7,524	5,580
	AGT Citygate	508	508	0	0	0
	Storage	2,737	2,660	2,656	2,709	2,702
Liquid for Portables and Refill		907	223	181	0	0
LNG From Storage		1,001	1,060	961	867	867
Unserved	Valley	0	0	8	82	84
	Providence	0	0	512	1,931	2,084
	Warren	0	0	9	10	11
	Westerly	0	0	0	0	0
		0	0	529	2,023	2,179
TOTAL		47,328	48,118	48,861	48,883	49,363

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales and Customer Choice)
(BBtu)

		Normal Heating Season (Nov-Mar) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	4,614	4,694	4,823	4,816	4,862
	Providence	20,214	20,565	21,128	21,100	21,301
	Warren	751	764	785	784	792
	Westerly	432	440	452	451	456
Fuel Reimbursement		572	574	576	570	573
Underground Storage Refill		0	0	0	0	0
LNG Refill		191	123	140	0	0
TOTAL		26,774	27,160	27,904	27,721	27,984
RESOURCES						
TGP	Dawn PNGTS	2,497	2,565	2,459	2,459	2,486
	Dawn Iroquois	87	93	96	97	101
	Niagara	120	117	119	113	113
	Zone 4	4,624	5,044	5,489	5,512	5,523
	Dracut	179	140	443	678	700
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	6	24	225	0	0
	Storage	1,341	1,091	1,006	994	994
TET/AGT	M2	5,964	5,972	6,003	5,947	6,005
	Dominion South Point	82	83	83	82	83
	TCO Appalachia	4,651	4,550	4,321	4,109	4,135
	Transco Leidy	187	187	188	187	187
	AIM (Ramapo)	170	290	343	375	380
	AIM (Millennium)	1,365	1,365	1,374	1,365	1,365
	M3	1,551	1,701	2,042	2,212	2,238
	AGT Citygate	261	278	0	0	0
	Storage	2,616	2,622	2,658	2,616	2,603
Liquid for Portables and Refill		191	181	181	0	0
LNG From Storage		230	856	873	733	733
Unserved	Valley	0	0	0	6	7
	Providence	0	0	0	236	330
	Warren	0	0	0	1	1
	Westerly	0	0	0	0	0
		0	0	0	242	338
TOTAL		26,774	27,160	27,904	27,721	27,984

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales and Customer Choice)
(BBtu)

		Normal Non-Heating Season (Apr-Oct) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,855	1,890	1,902	1,919	1,935
	Providence	8,128	8,280	8,333	8,409	8,475
	Warren	302	308	310	313	315
	Westerly	174	177	178	180	181
Fuel Reimbursement		283	339	321	344	391
Underground Storage Refill		3,983	3,928	3,879	3,904	3,915
LNG Refill		173	867	867	867	867
TOTAL		14,898	15,788	15,791	15,935	16,079
RESOURCES						
TGP	Dawn PNGTS	25	75	77	29	29
	Dawn Iroquois	1	1	3	3	3
	Niagara	32	66	131	131	86
	Zone 4	2,246	2,698	2,771	2,829	3,127
	Dracut	808	539	284	288	61
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	211	212	215	217
TET/AGT	M2	7,327	5,445	5,367	6,030	7,805
	Dominion South Point	43	30	47	33	67
	TCO Appalachia	398	915	460	399	397
	Transco Leidy	34	51	51	52	55
	AIM (Ramapo)	59	58	54	58	58
	AIM (Millennium)	1,935	1,651	1,071	1,582	1,848
	M3	1,703	3,908	5,125	4,075	2,118
	AGT Citygate	0	0	0	0	0
	Storage	87	4	3	79	75
Liquid for Portables and Refill		66	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	0	0
TOTAL		14,898	15,788	15,791	15,935	16,079

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales and Customer Choice)
(BBtu)

		Normal Annual with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	6,469	6,584	6,725	6,736	6,797
	Providence	28,341	28,845	29,462	29,508	29,776
	Warren	1,053	1,072	1,095	1,097	1,107
	Westerly	606	617	630	631	637
Fuel Reimbursement		855	913	898	914	964
Underground Storage Refill		3,983	3,928	3,879	3,904	3,915
LNG Refill		364	990	1,007	867	867
TOTAL		41,672	42,948	43,695	43,656	44,063
RESOURCES						
TGP	Dawn PNGTS	2,522	2,640	2,536	2,488	2,515
	Dawn Iroquois	88	94	99	100	104
	Niagara	152	183	250	244	199
	Zone 4	6,870	7,743	8,260	8,341	8,650
	Dracut	987	679	727	966	761
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	6	24	225	0	0
	Storage	1,341	1,302	1,218	1,209	1,211
TET/AGT	M2	13,292	11,417	11,370	11,976	13,810
	Dominion South Point	125	113	130	115	150
	TCO Appalachia	5,049	5,465	4,780	4,508	4,532
	Transco Leidy	221	238	240	239	242
	AIM (Ramapo)	229	348	397	433	438
	AIM (Millennium)	3,300	3,016	2,445	2,947	3,213
	M3	3,255	5,610	7,168	6,287	4,357
	AGT Citygate	261	278	0	0	0
	Storage	2,702	2,626	2,661	2,695	2,678
Liquid for Portables and Refill		257	181	181	0	0
LNG From Storage		364	990	1,007	867	867
Unserved	Valley	0	0	0	6	7
	Providence	0	0	0	236	330
	Warren	0	0	0	1	1
	Westerly	0	0	0	0	0
		0	0	0	242	338
TOTAL		41,672	42,948	43,695	43,656	44,063

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Heating Season (Nov-Mar) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	4,839	4,923	5,056	5,051	5,099
	Providence	21,199	21,567	22,149	22,128	22,340
	Warren	788	802	823	822	830
	Westerly	453	461	474	473	478
Fuel Reimbursement		579	578	580	573	576
Underground Storage Refill		0	0	0	0	0
LNG Refill		194	152	96	0	0
TOTAL		28,052	28,483	29,178	29,047	29,324
RESOURCES						
TGP	Dawn PNGTS	2,516	2,575	2,461	2,460	2,487
	Dawn Iroquois	89	95	98	99	100
	Niagara	120	117	119	113	113
	Zone 4	4,624	5,044	5,489	5,512	5,523
	Dracut	338	519	666	678	700
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	70	517	834	0	0
	Storage	1,341	1,091	1,006	994	994
TET/AGT	M2	5,966	5,972	6,003	5,947	6,005
	Dominion South Point	82	83	83	82	83
	TCO Appalachia	4,649	4,550	4,321	4,109	4,135
	Transco Leidy	187	187	188	187	187
	AIM (Ramapo)	292	325	374	407	412
	AIM (Millennium)	1,365	1,365	1,374	1,365	1,365
	M3	1,726	1,825	2,169	2,338	2,360
	AGT Citygate	381	508	0	0	0
	Storage	2,618	2,622	2,658	2,616	2,604
Liquid for Portables and Refill		212	202	181	0	0
LNG From Storage		825	885	829	733	733
Unserved	Valley	0	0	12	113	105
	Providence	0	0	302	1,285	1,405
	Warren	0	0	10	11	12
	Westerly	0	0	0	0	0
		0	0	324	1,410	1,522
TOTAL		28,052	28,483	29,178	29,047	29,324

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Non-Heating Season (Apr-Oct) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,853	1,888	1,900	1,917	1,932
	Providence	8,118	8,270	8,323	8,399	8,465
	Warren	302	307	309	312	315
	Westerly	174	177	178	180	181
Fuel Reimbursement		283	339	321	344	391
Underground Storage Refill		3,985	3,928	3,879	3,904	3,916
LNG Refill		765	867	867	867	867
TOTAL		15,478	15,775	15,778	15,922	16,067
RESOURCES						
TGP	Dawn PNGTS	25	75	77	29	29
	Dawn Iroquois	1	1	3	3	3
	Niagara	32	66	131	131	84
	Zone 4	2,246	2,698	2,770	2,828	3,126
	Dracut	805	538	283	287	61
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	211	212	215	217
TET/AGT	M2	7,326	5,445	5,367	6,030	7,805
	Dominion South Point	43	30	47	33	67
	TCO Appalachia	400	915	460	399	398
	Transco Leidy	34	51	51	52	55
	AIM (Ramapo)	59	58	54	58	58
	AIM (Millennium)	1,935	1,651	1,071	1,582	1,848
	M3	1,696	3,898	5,115	4,065	2,108
	AGT Citygate	0	0	0	0	0
	Storage	86	4	3	79	75
Liquid for Portables and Refill		658	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	0	0
TOTAL		15,478	15,775	15,778	15,922	16,067

National Grid Rhode Island
Comparison of Resources and Requirements
Cold Snap (Sales and Customer Choice)
(BBtu)

		Cold Snap Annual with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	6,692	6,810	6,956	6,968	7,032
	Providence	29,317	29,837	30,473	30,527	30,806
	Warren	1,090	1,109	1,133	1,135	1,145
	Westerly	627	638	652	653	659
Fuel Reimbursement		861	916	902	916	967
Underground Storage Refill		3,985	3,928	3,879	3,904	3,916
LNG Refill		959	1,019	963	867	867
TOTAL		43,531	44,257	44,956	44,970	45,390
RESOURCES						
TGP	Dawn PNGTS	2,541	2,650	2,538	2,489	2,516
	Dawn Iroquois	90	96	101	102	103
	Niagara	152	183	250	244	198
	Zone 4	6,870	7,742	8,259	8,340	8,649
	Dracut	1,142	1,057	949	964	761
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	70	517	834	0	0
	Storage	1,341	1,302	1,218	1,209	1,211
TET/AGT	M2	13,292	11,417	11,370	11,976	13,810
	Dominion South Point	125	113	130	115	150
	TCO Appalachia	5,049	5,465	4,780	4,508	4,533
	Transco Leidy	221	238	240	239	242
	AIM (Ramapo)	350	383	428	464	470
	AIM (Millennium)	3,300	3,016	2,445	2,947	3,213
	M3	3,421	5,723	7,284	6,402	4,467
	AGT Citygate	381	508	0	0	0
	Storage	2,704	2,626	2,661	2,695	2,679
Liquid for Portables and Refill		870	202	181	0	0
LNG From Storage		959	1,019	963	867	867
Unserved	Valley	0	0	12	113	105
	Providence	0	0	302	1,285	1,405
	Warren	0	0	10	11	12
	Westerly	0	0	0	0	0
		0	0	324	1,410	1,522
TOTAL		43,531	44,257	44,956	44,970	45,390

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only)
(BBtu)

		Design Day with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	59	60	62	62	63
	Providence	259	264	270	273	276
	Warren	10	10	10	10	10
	Westerly	6	6	6	6	6
Fuel Reimbursement		5	5	5	5	5
Underground Storage Refill		0	0	0	0	0
LNG Refill		0	0	0	0	0
TOTAL		339	345	352	356	360
RESOURCES						
TGP	Dawn PNGTS	24	24	24	24	24
	Dawn Iroquois	1	1	1	1	1
	Niagara	1	1	1	1	1
	Zone 4	34	34	34	34	34
	Dracut	17	7	17	17	17
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	20	0	0	0	0
	Everett Swing	5	1	30	0	0
	Storage	11	11	11	11	11
TET/AGT	M2	40	40	40	40	40
	Dominion South Point	1	1	1	1	1
	TCO Appalachia	33	33	33	33	33
	Transco Leidy	1	1	1	1	1
	AIM (Ramapo)	6	6	6	7	7
	AIM (Millennium)	7	7	7	7	7
	M3	17	17	17	17	17
	AGT Citygate	14	14	0	0	0
	Storage	29	29	29	29	28
Liquid for Portables and Refill		0	0	0	0	0
LNG From Storage		79	119	95	117	119
Unserved	Valley	0	0	5	15	16
	Providence	0	0	0	0	1
	Warren	0	0	2	2	2
	Westerly	0	0	0	0	0
		0	0	7	17	19
TOTAL		339	345	352	356	360

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only)
(BBtu)

		Design Heating Season (Nov-Mar) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	4,426	4,503	4,633	4,633	4,684
	Providence	19,373	19,710	20,281	20,279	20,502
	Warren	735	748	770	770	778
	Westerly	416	424	436	436	441
Fuel Reimbursement		544	543	546	539	542
Underground Storage Refill		0	0	0	0	0
LNG Refill		212	153	156	0	0
TOTAL		25,706	26,080	26,822	26,656	26,946
RESOURCES						
TGP	Dawn PNGTS	2,018	2,065	1,978	1,982	2,008
	Dawn Iroquois	78	79	84	84	87
	Niagara	99	90	92	91	91
	Zone 4	4,457	4,842	5,187	5,204	5,237
	Dracut	245	333	621	628	649
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	18	189	686	0	0
	Storage	1,341	1,097	1,005	1,009	994
TET/AGT	M2	5,900	5,915	5,936	5,888	5,938
	Dominion South Point	82	83	82	82	82
	TCO Appalachia	4,503	4,421	4,317	4,076	4,096
	Transco Leidy	186	186	184	184	185
	AIM (Ramapo)	240	256	282	303	312
	AIM (Millennium)	1,116	1,116	1,123	1,116	1,116
	M3	1,161	1,226	1,517	1,713	1,740
	AGT Citygate	386	508	0	0	0
	Storage	2,582	2,609	2,648	2,610	2,599
Liquid for Portables and Refill		212	181	181	0	0
LNG From Storage		431	886	889	733	733
Unserved	Valley	0	0	5	49	54
	Providence	0	0	0	900	1,022
	Warren	0	0	4	4	5
	Westerly	0	0	0	0	0
		0	0	9	953	1,081
TOTAL		25,706	26,080	26,822	26,656	26,946

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only)
(BBtu)

		Design Non-Heating Season (Apr-Oct) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,502	1,528	1,542	1,558	1,574
	Providence	6,575	6,689	6,749	6,822	6,889
	Warren	250	254	256	259	262
	Westerly	141	144	145	147	148
Fuel Reimbursement		239	297	287	306	347
Underground Storage Refill		3,954	3,916	3,864	3,908	3,891
LNG Refill		354	867	867	867	867
TOTAL		13,015	13,695	13,710	13,867	13,978
RESOURCES						
TGP	Dawn PNGTS	16	65	68	24	24
	Dawn Iroquois	1	0	0	1	1
	Niagara	32	37	98	104	67
	Zone 4	2,069	2,456	2,480	2,542	2,773
	Dracut	624	433	227	229	46
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	205	206	208	209
TET/AGT	M2	6,457	5,278	5,258	5,801	7,533
	Dominion South Point	20	12	24	12	41
	TCO Appalachia	362	735	467	403	399
	Transco Leidy	21	41	41	41	45
	AIM (Ramapo)	38	54	33	36	35
	AIM (Millennium)	1,581	927	550	975	1,039
	M3	1,321	3,314	4,121	3,274	1,544
	AGT Citygate	0	0	0	0	0
	Storage	92	5	4	81	89
Liquid for Portables and Refill		247	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	0	0
TOTAL		13,015	13,695	13,710	13,867	13,978

National Grid Rhode Island
Comparison of Resources and Requirements
Design Year (Sales Only)
(BBtu)

		Design Annual with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	5,928	6,031	6,175	6,191	6,258
	Providence	25,947	26,398	27,029	27,101	27,391
	Warren	985	1,002	1,026	1,029	1,040
	Westerly	558	567	581	582	589
Fuel Reimbursement		783	840	834	845	889
Underground Storage Refill		3,954	3,916	3,864	3,908	3,891
LNG Refill		566	1,020	1,023	867	867
TOTAL		38,721	39,775	40,531	40,523	40,924
RESOURCES						
TGP	Dawn PNGTS	2,034	2,131	2,046	2,006	2,032
	Dawn Iroquois	79	79	84	85	88
	Niagara	131	127	190	196	158
	Zone 4	6,526	7,298	7,667	7,746	8,009
	Dracut	869	765	848	857	695
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	651	0	0	0	0
	Everett Swing	18	189	686	0	0
	Storage	1,341	1,302	1,211	1,217	1,204
TET/AGT	M2	12,357	11,193	11,194	11,689	13,470
	Dominion South Point	102	95	106	94	123
	TCO Appalachia	4,865	5,156	4,784	4,479	4,496
	Transco Leidy	207	226	224	225	230
	AIM (Ramapo)	278	309	315	339	347
	AIM (Millennium)	2,696	2,042	1,673	2,091	2,154
	M3	2,482	4,539	5,637	4,987	3,283
	AGT Citygate	386	508	0	0	0
	Storage	2,674	2,615	2,652	2,691	2,688
Liquid for Portables and Refill		458	181	181	0	0
LNG From Storage		566	1,020	1,023	867	867
Unserved	Valley	0	0	5	49	54
	Providence	0	0	0	900	1,022
	Warren	0	0	4	4	5
	Westerly	0	0	0	0	0
		0	0	9	953	1,081
TOTAL		38,721	39,775	40,531	40,523	40,924

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales Only)
(BBtu)

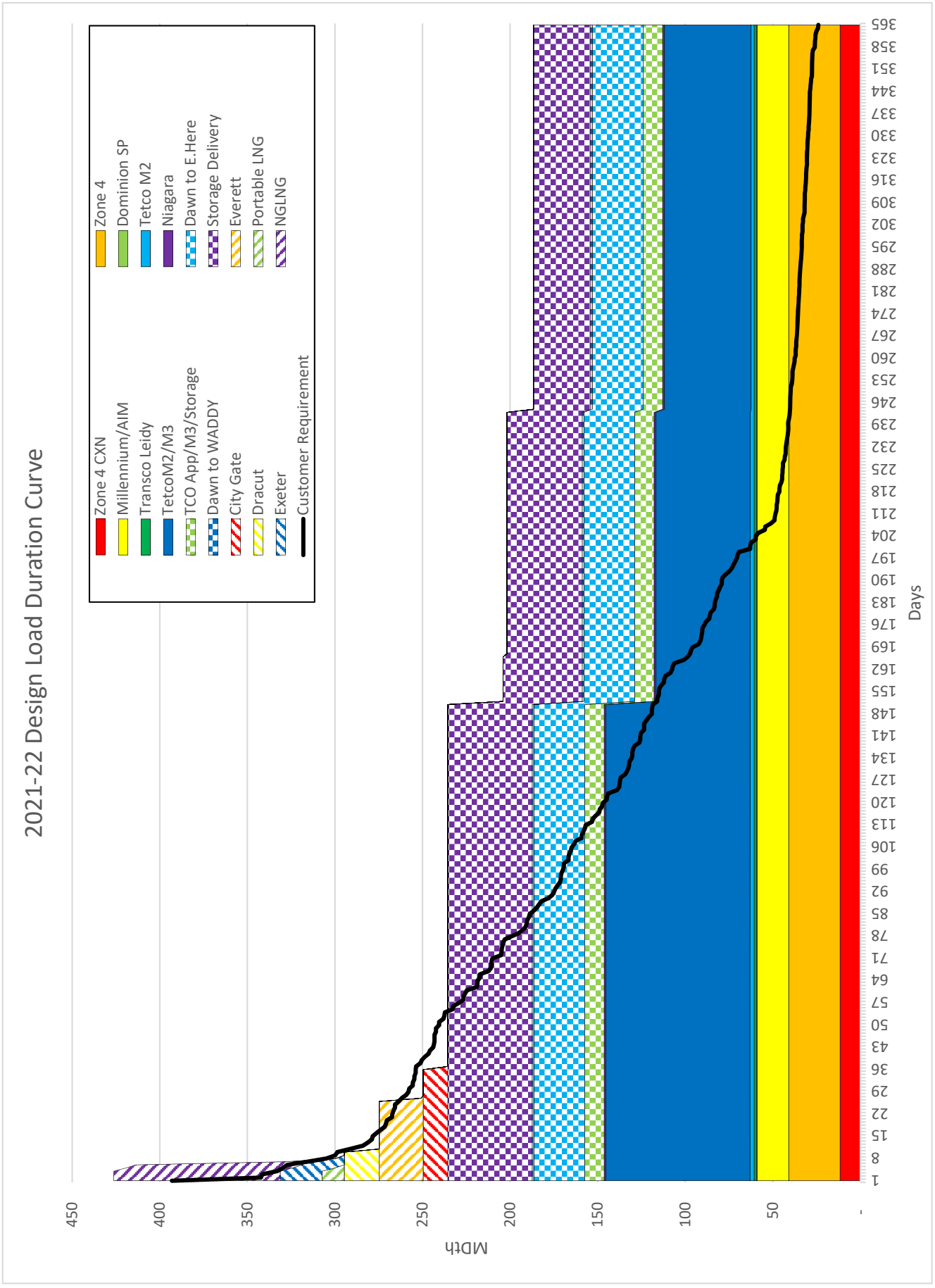
		Normal Heating Season (Nov-Mar) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	3,798	3,864	3,975	3,975	4,019
	Providence	16,638	16,927	17,415	17,416	17,607
	Warren	618	629	647	647	654
	Westerly	356	362	372	372	377
Fuel Reimbursement		500	498	503	499	504
Underground Storage Refill		0	0	0	0	0
LNG Refill		186	159	142	0	0
TOTAL		22,095	22,439	23,054	22,910	23,161
RESOURCES						
TGP	Dawn PNGTS	1,391	1,487	1,500	1,493	1,533
	Dawn Iroquois	48	50	58	58	60
	Niagara	87	70	75	75	75
	Zone 4	3,844	4,364	4,779	4,913	4,982
	Dracut	12	0	0	0	32
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	504	0	0	0	0
	Everett Swing	0	0	3	0	0
	Storage	1,341	1,125	1,005	1,037	994
TET/AGT	M2	5,857	5,861	5,820	5,805	5,861
	Dominion South Point	81	83	82	82	82
	TCO Appalachia	4,089	4,072	4,086	3,639	3,677
	Transco Leidy	183	183	178	176	177
	AIM (Ramapo)	46	34	60	130	174
	AIM (Millennium)	1,116	1,116	1,123	1,116	1,116
	M3	392	431	707	1,104	1,136
	AGT Citygate	42	0	0	0	0
	Storage	2,666	2,526	2,523	2,545	2,524
Liquid for Portables and Refill		186	181	181	0	0
LNG From Storage		210	855	875	733	733
Unserved	Valley	0	0	0	4	4
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	4	4
TOTAL		22,095	22,439	23,054	22,910	23,161

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales Only)
(BBtu)

		Normal Non-Heating Season (Apr-Oct) with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	1,387	1,411	1,424	1,439	1,454
	Providence	6,077	6,183	6,239	6,306	6,369
	Warren	226	230	232	234	237
	Westerly	130	132	133	135	136
Fuel Reimbursement		232	274	276	296	336
Underground Storage Refill		4,033	3,831	3,711	3,840	3,786
LNG Refill		158	829	867	867	867
TOTAL		12,243	12,890	12,882	13,118	13,184
RESOURCES						
TGP	Dawn PNGTS	1	39	40	10	11
	Dawn Iroquois	1	0	0	0	0
	Niagara	32	34	98	102	66
	Zone 4	1,998	2,321	2,359	2,434	2,622
	Dracut	556	411	208	209	33
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	0	0	0	0	0
	Everett Swing	0	0	0	0	0
	Storage	0	176	178	181	183
TET/AGT	M2	6,466	5,180	5,113	5,705	7,407
	Dominion South Point	18	12	20	12	37
	TCO Appalachia	296	658	373	339	342
	Transco Leidy	18	38	39	39	41
	AIM (Ramapo)	22	30	12	13	13
	AIM (Millennium)	1,581	873	521	960	1,012
	M3	985	2,979	3,782	2,902	1,198
	AGT Citygate	0	0	0	0	0
	Storage	86	3	5	77	86
Liquid for Portables and Refill		51	0	0	0	0
LNG From Storage		134	134	134	134	134
Unserved	Valley	0	0	0	0	0
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	0	0
TOTAL		12,243	12,890	12,882	13,118	13,184

National Grid Rhode Island
Comparison of Resources and Requirements
Normal Year (Sales Only)
(BBtu)

		Normal Annual with Proposed Resources				
		2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
REQUIREMENTS						
Firm Sendout	Valley	5,185	5,275	5,399	5,415	5,473
	Providence	22,715	23,110	23,653	23,722	23,976
	Warren	844	859	879	882	891
	Westerly	486	494	506	507	513
Fuel Reimbursement		731	771	778	795	840
Underground Storage Refill		4,033	3,831	3,711	3,840	3,786
LNG Refill		344	989	1,009	867	867
TOTAL		34,338	35,329	35,936	36,028	36,346
RESOURCES						
TGP	Dawn PNGTS	1,392	1,526	1,540	1,503	1,544
	Dawn Iroquois	49	50	58	58	60
	Niagara	119	105	173	177	142
	Zone 4	5,842	6,685	7,138	7,347	7,604
	Dracut	568	411	208	209	64
	TGP Citygate	0	0	0	0	0
	Everett Multi Year	504	0	0	0	0
	Everett Swing	0	0	3	0	0
	Storage	1,341	1,302	1,183	1,217	1,177
TET/AGT	M2	12,323	11,041	10,933	11,510	13,268
	Dominion South Point	98	95	102	94	120
	TCO Appalachia	4,385	4,730	4,459	3,978	4,020
	Transco Leidy	200	221	216	216	218
	AIM (Ramapo)	67	64	71	143	187
	AIM (Millennium)	2,696	1,989	1,644	2,075	2,127
	M3	1,377	3,410	4,489	4,006	2,333
	AGT Citygate	42	0	0	0	0
	Storage	2,752	2,529	2,528	2,623	2,610
Liquid for Portables and Refill		237	181	181	0	0
LNG From Storage		344	989	1,009	867	867
Unserved	Valley	0	0	0	4	4
	Providence	0	0	0	0	0
	Warren	0	0	0	0	0
	Westerly	0	0	0	0	0
		0	0	0	4	4
TOTAL		34,338	35,329	35,936	36,028	36,346


2021-22 Design Load Duration Curve
Zone 4 CXN
Millennium/AIM
Transco Leidy
TetcoM2/M3
TCO App/M3/Storage
Dawn to WADDY
City Gate
Dracut
Exeter
Zone 4
Dominion SP
Tetco M2
Niagara
Dawn to E.Here
Storage Delivery
Everett
Portable LNG
NGLNG
Customer Requirement
MDth
450
400
350
300
250
200
150
100
50
-
Days
1
8
15
22
29
36
43
50
57
64
71
78
85
92
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113
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141
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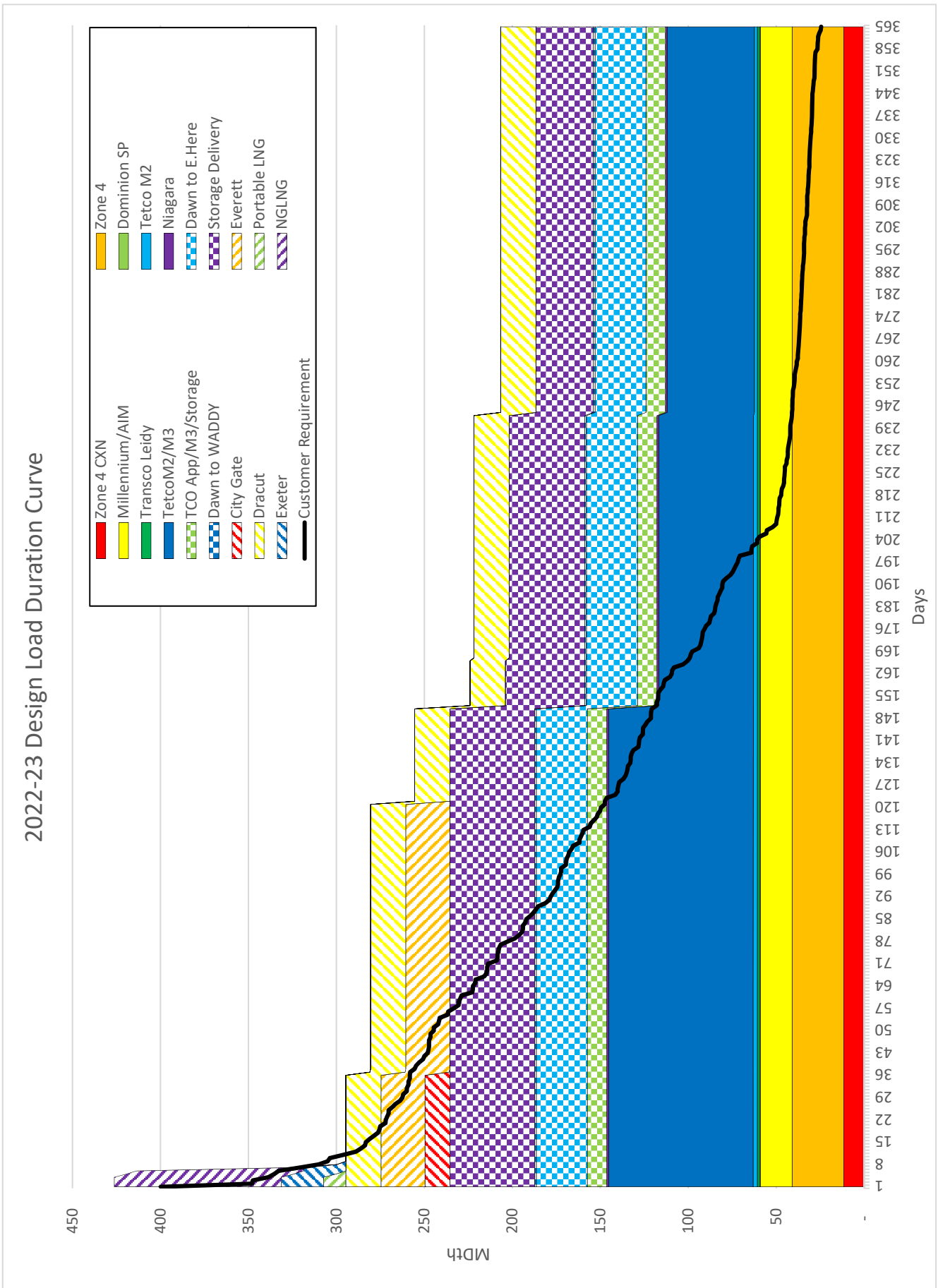
358
365


2022-23 Design Load Duration Curve
Zone 4 CXN
Millennium/AIM
Transco Leidy
TetcoM2/M3
TCO App/M3/Storage
Dawn to WADDY
City Gate
Dracut
Exeter
Customer Requirement
Zone 4
Dominion SP
Tetco M2
Niagara
Dawn to E.Here
Storage Delivery
Everett
Portable LNG
NGLNG
MDth
450
400
350
300
250
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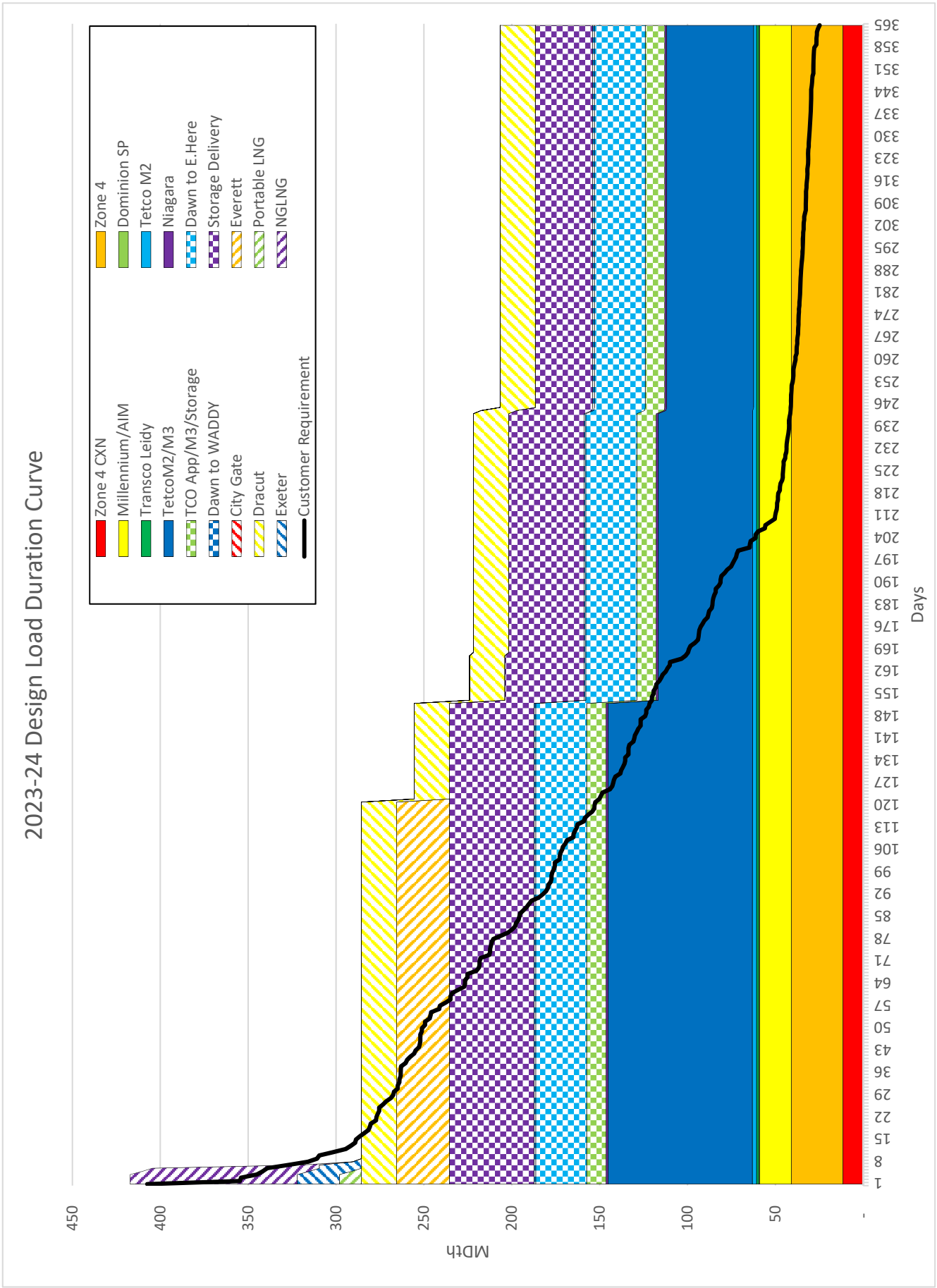
2023-24 Design Load Duration Curve
Zone 4 CXN
Millennium/AIM
Transco Leidy
TetcoM2/M3
TCO App/M3/Storage
Dawn to WADDY
City Gate
Dracut
Exeter
Customer Requirement
Zone 4
Dominion SP
Tetco M2
Niagara
Dawn to E.Here
Storage Delivery
Everett
Portable LNG
NGLNG
MDth
450
400
350
300
250
200
150
100
50
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Days
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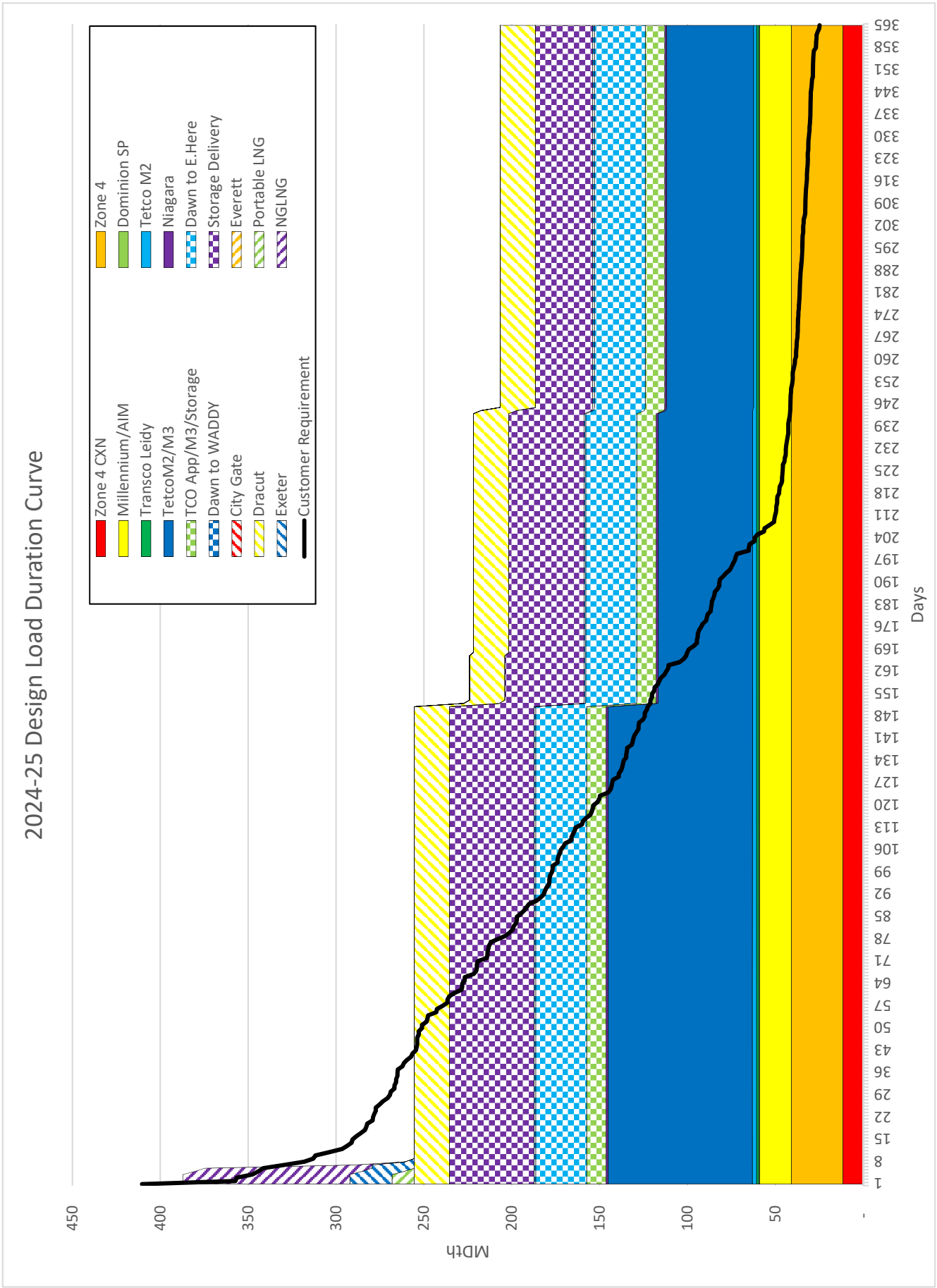
2024-25 Design Load Duration Curve
Zone 4 CXN
Millennium/AIM
Transco Leidy
TetcoM2/M3
TCO App/M3/Storage
Dawn to WADDY
City Gate
Dracut
Exeter
Customer Requirement
Zone 4
Dominion SP
Tetco M2
Niagara
Dawn to E.Here
Storage Delivery
Everett
Portable LNG
NGLNG
MDth
450
400
350
300
250
200
150
100
50
-
Days
1
8
15
22
29
36
43
50
57
64
71
78
85
92
99
106
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120
127
134
141
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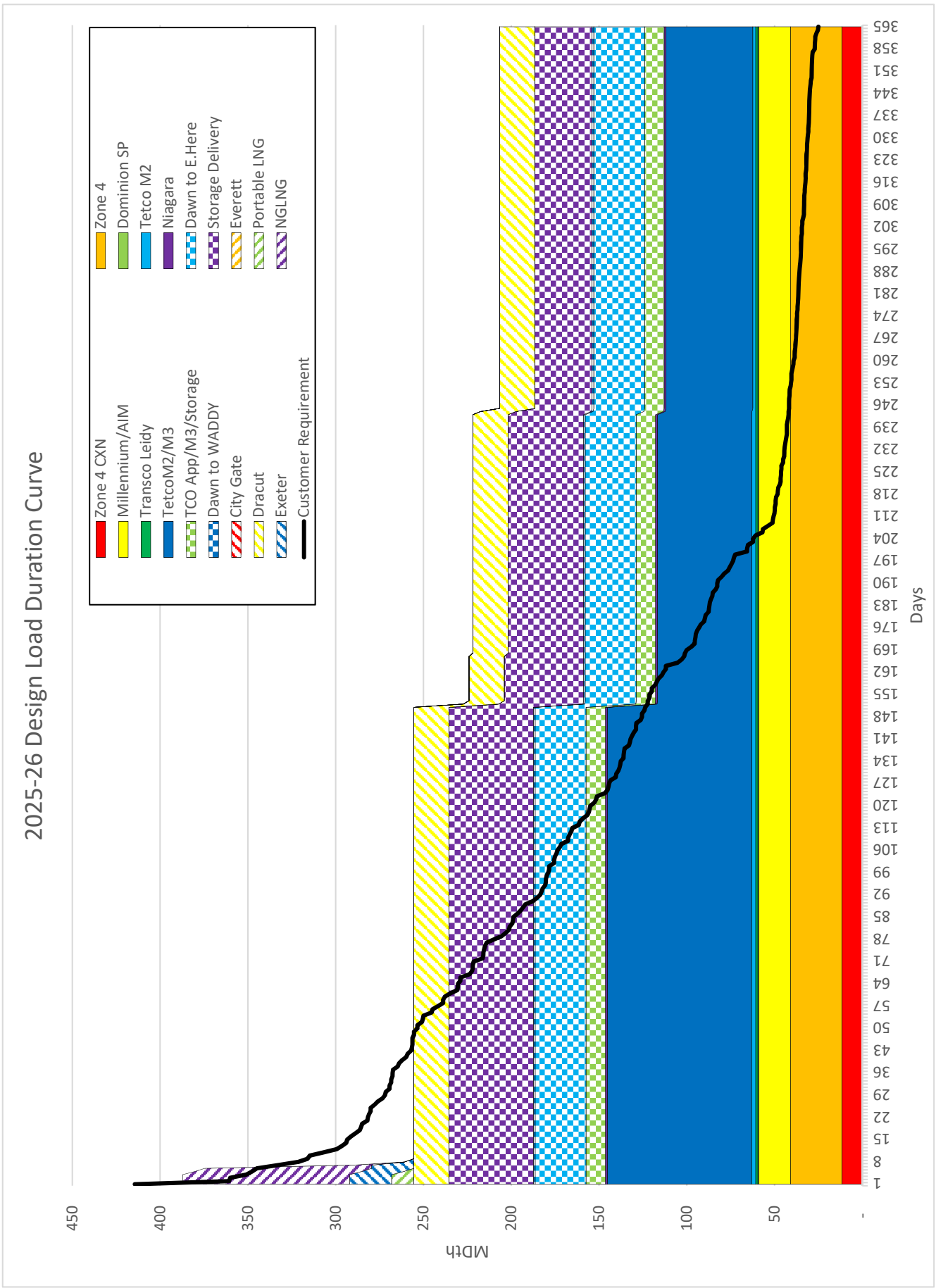
2025-26 Design Load Duration Curve
Zone 4 CXN
Millennium/AIM
Transco Leidy
TetcoM2/M3
TCO App/M3/Storage
Dawn to WADDY
City Gate
Dracut
Exeter
Customer Requirement
Zone 4
Dominion SP
Tetco M2
Niagara
Dawn to E.Here
Storage Delivery
Everett
Portable LNG
NGLNG
MDth
450
400
350
300
250
200
150
100
50
-
Days
1
8
15
22
29
36
43
50
57
64
71
78
85
92
99
106
113
120
127
134
141
148
155
162
169
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211
218
225
232
239
246
253
260
267
274
281
288
295
302
309
316
323
330
337
344
351
358
365

National Grid Rhode Island Gas Cost Recovery Cost of Gas ($000)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
Design Weather Scenario - SCC Adj FT1													
FIXED COSTS													
Total Transportation Fixed Costs	[redacted]												
Total Storage Delivery Fixed Costs													
Total Storage Fixed Costs													
Total Liquefaction Fixed Costs	$												
Total Supplier Fixed Costs													
LESS:													
AMA Credits	$												
Hourly Peaking Fixed Costs													
TOTAL FIXED COSTS												$	95,518.7
VARIABLE COSTS													
Commodity													
Commodity for Purchases to City Gate													
Commodity for Purchases to Injections													
Total Commodity Costs												$	123,518.8
Withdrawal													
Underground Storage Withdrawal Value	$												
LNG Storage Withdrawal Value													
Total Storage Withdrawal Value												$	12,770.4
Transportation	[redacted]												
Variable Costs for Purchases to City Gate													
Variable Costs for Storage Withdrawal													
Variable Costs for Storage Injection													
Total Transportation Variable Costs													
Total Storage Variable Costs													
LESS:	[redacted]												
LNG Trucking													
Storage Refill													
Liquefaction													
Total Storage and Liquefaction													12,439.7
TOTAL VARIABLE COSTS													128,105.6
TOTAL FIXED AND VARIABLE COSTS													223,624.3
NGPMP Credit													8,039.2
TOTAL GAS COSTS													215,585.1

REDACTED

Exhibit 18
Gas Long-Range Supply Plan
Forecast Period 2021/22 to 2025/26
Informational Filing
June 30, 2021
Page 1 of 4

Narragansett Electric Company
Volume & Cost Summary
Sendout Volumes (MDth)

Design Weather Scenario - SCC Adj FT1

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
Algonquin													
TETCO CDS Long Haul	1,099	1,145	1,139	1,029	1,139	1,086	1,151	878	864	976	1,102	1,151	12,759
TETCO SCT Long Haul	24	58	62	56	51	-	-	-	-	-	-	-	252
AIM	307	349	402	363	321	312	276	263	271	271	263	314	3,713
AGT M3	189	394	649	608	500	824	350	-	-	-	72	801	4,386
TCO Appalachia	733	998	998	902	997	215	21	49	51	51	32	111	5,158
Storage	383	535	558	526	209	86	-	-	-	-	-	-	2,296
Total Algonquin	2,736	3,479	3,808	3,483	3,217	2,523	1,798	1,190	1,186	1,298	1,468	2,377	28,564
Tennessee													
TGP Long Haul	676	725	729	664	689	335	4	-	-	106	-	185	4,114
TGP ConneXion	280	293	293	264	293	212	280	151	235	294	252	294	3,141
Storage	4	414	466	412	404	-	-	-	-	-	-	-	1,700
Total Tennessee	960	1,432	1,488	1,341	1,385	547	284	151	235	401	252	479	8,955
Other													
Dawn via PNGTS	153	704	848	733	613	38	-	-	-	-	-	-	3,088
Dracut	69	201	293	336	148	13	342	163	-	-	171	220	1,956
Dawn / Niagara / Waddington	20	48	61	55	50	34	1	-	0	-	-	-	269
Dominion / Transco Leidy	51	54	54	49	54	4	18	2	2	2	27	21	340
Everett	-	125	430	201	81	-	-	-	-	-	-	-	837
LNG Vapor	120	119	403	196	29	19	19	19	19	19	19	19	1,001
LNG Truck	95	-	-	-	181	93	94	108	83	112	63	77	907
City Gate	-	93	133	193	89	-	-	-	-	-	-	-	508
Total Other	508	1,343	2,221	1,764	1,246	201	475	292	105	134	281	337	8,906
Total Purchases	4,204	6,255	7,517	6,588	5,848	3,271	2,556	1,633	1,526	1,833	2,001	3,193	46,425
LESS:													
Liquefaction	-	-	-	-	(13)	-	-	-	-	-	78	29	94
LNG Truck	95	-	-	-	181	93	94	108	83	112	63	77	907
AGT Storage Refill	-	-	-	-	-	40	502	286	419	520	472	458	2,696
TGP Storage Refill	-	-	-	-	-	20	274	151	103	266	252	255	1,322
Total	95	-	-	-	168	153	870	546	605	898	865	819	5,019
Total Sendout	4,108	6,255	7,517	6,588	5,681	3,118	1,687	1,087	922	935	1,136	2,374	41,406
Datacheck	4,108	6,255	7,517	6,588	5,681	3,118	1,687	1,087	922	935	1,136	2,374	41,406
Delta	-	-	-	-	-	-	-	-	-	-	-	-	-

REDACTED

Narragansett Electric Company
Volume & Cost Summary
Cost of Gas ($000)

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
DEMAND													
[redacted]													
Total Demand													$ 101,564
Datacheck													$ 101,564
Delta													$ -

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
COMMODITY													
[redacted]													
TOTAL COMMODITY													$ 140,545
Datacheck													$ 140,545
Delta													$ -

REDACTED

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
TOTAL DC+CC	[redacted]												$ 242,109
LESS:													
Liquefaction													[redacted]
LNG Truck													
AGT Storage Refill													
TGP Storage Refill													
Total Liquefaction & Storage													$ 12,440
TOTAL GAS COST													$ 229,670
Commodity to Sendout													$ 128,106
Days/month	30	31	31	28	31	30	31	30	31	31	30	31	365
Unit Commodity Cost ($/MMBtu)	[redacted]												$3.094
NYMEX (06/08/2021)	$3.216	$3.332	$3.414	$3.352	$3.177	$2.773	$2.716	$2.744	$2.779	$2.784	$2.769	$2.795	

REDACTED

Exhibit 18
Gas Long-Range Supply Plan
Forecast Period 2021/22 to 2025/26
Informational Filing
June 30, 2021
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National Grid Rhode Island Gas Cost Recovery Cost of Gas ($000)	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
Normal Weather Scenario - Sales													
FIXED COSTS													
Total Transportation Fixed Costs	[redacted]												
Total Storage Delivery Fixed Costs													
Total Storage Fixed Costs													
Total Liquefaction Fixed Costs													
Total Supplier Fixed Costs													$ 15,903.8
LESS:													
AMA Credits	[redacted]												
Hourly Peaking Fixed Costs													
TOTAL FIXED COSTS	[redacted]												$ 82,766.6
VARIABLE COSTS													
Commodity													
Commodity for Purchases to City Gate	[redacted]												
Commodity for Purchases to Injections													
Total Commodity Costs													$ 75,882.3
Withdrawal													
Underground Storage Withdrawal Value	[redacted]												
LNG Storage Withdrawal Value													
Total Storage Withdrawal Value													$ 9,977.3
Transportation													
Variable Costs for Purchases to City Gate	[redacted]												
Variable Costs for Storage Withdrawal													
Variable Costs for Storage Injection													
Total Transportation Variable Costs													
Total Storage Variable Costs													
LESS:													
LNG Trucking	[redacted]												$ -
Storage Refill													
Liquefaction													
Total Storage and Liquefaction													$ 9,857.9
TOTAL VARIABLE COSTS	[redacted]												$ 79,119.3
TOTAL FIXED AND VARIABLE COSTS													$ 161,885.9
NGPMP Credit													$ 8,039.2
TOTAL GAS COSTS													$ 153,846.7

REDACTED

Narragansett Electric Company
Volume & Cost Summary
Sendout Volumes (MDth)

Normal Weather Scenario - Sales

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
Algonquin													
TETCO CDS Long Haul	1,089	1,145	1,139	1,029	1,139	1,037	1,063	687	678	793	949	1,106	11,852
TETCO SCT Long Haul	7	23	41	39	22	2	-	-	-	-	-	-	134
AIM	223	222	234	212	227	232	223	215	222	222	215	226	2,671
AGT M3	57	28	89	45	169	434	110	-	-	-	7	425	1,364
TCO Appalachia	364	910	986	873	851	87	4	49	51	51	32	18	4,275
Storage	393	538	556	531	209	83	-	-	-	-	-	-	2,311
Total Algonquin	2,133	2,866	3,044	2,728	2,617	1,875	1,400	950	950	1,066	1,203	1,775	22,607
Tennessee													
TGP Long Haul	376	427	653	582	374	208	-	-	-	56	-	105	2,781
TGP ConneXion	247	292	293	264	289	165	279	146	185	295	252	294	3,001
Storage	4	415	462	412	408	-	-	-	-	-	-	-	1,700
Total Tennessee	627	1,134	1,407	1,259	1,071	373	279	146	185	350	252	399	7,482
Other													
Dawn via PNGTS	22	194	485	432	233	1	-	-	-	-	-	-	1,367
Dracut	-	-	-	12	-	-	232	107	-	-	109	107	568
Dawn / Niagara / Waddington	5	17	50	44	17	33	-	-	-	-	-	-	166
Dominion / Transco Leidy	45	54	54	49	54	3	8	2	2	2	4	12	291
Everett	-	89	238	171	4	-	-	-	-	-	-	-	503
LNG Vapor	19	19	118	34	19	19	19	19	19	19	19	19	344
LNG Truck	5	-	-	-	181	3	5	8	6	8	6	15	237
City Gate	-	-	-	42	-	-	-	-	-	-	-	-	42
Total Other	96	374	946	784	509	58	265	136	27	30	139	154	3,518
Total Purchases	2,856	4,374	5,397	4,771	4,197	2,306	1,944	1,233	1,162	1,446	1,594	2,328	33,607
LESS:													
Liquefaction	-	-	-	-	-	-	-	-	-	-	78	29	107
LNG Truck	5	-	-	-	181	3	5	8	6	8	6	15	237
AGT Storage Refill	-	-	-	-	-	37	502	305	419	520	472	458	2,711
TGP Storage Refill	-	-	-	-	-	20	279	146	103	266	252	255	1,322
Total	5	-	-	-	181	59	786	459	527	794	809	757	4,377
Total Sendout	2,852	4,374	5,397	4,771	4,016	2,246	1,157	774	635	652	785	1,571	29,230
Datacheck	2,852	4,374	5,397	4,771	4,016	2,246	1,157	774	635	652	785	1,571	29,230
Delta	-	-	-	-	-	-	-	-	-	-	-	-	-

REDACTED

REDACTED

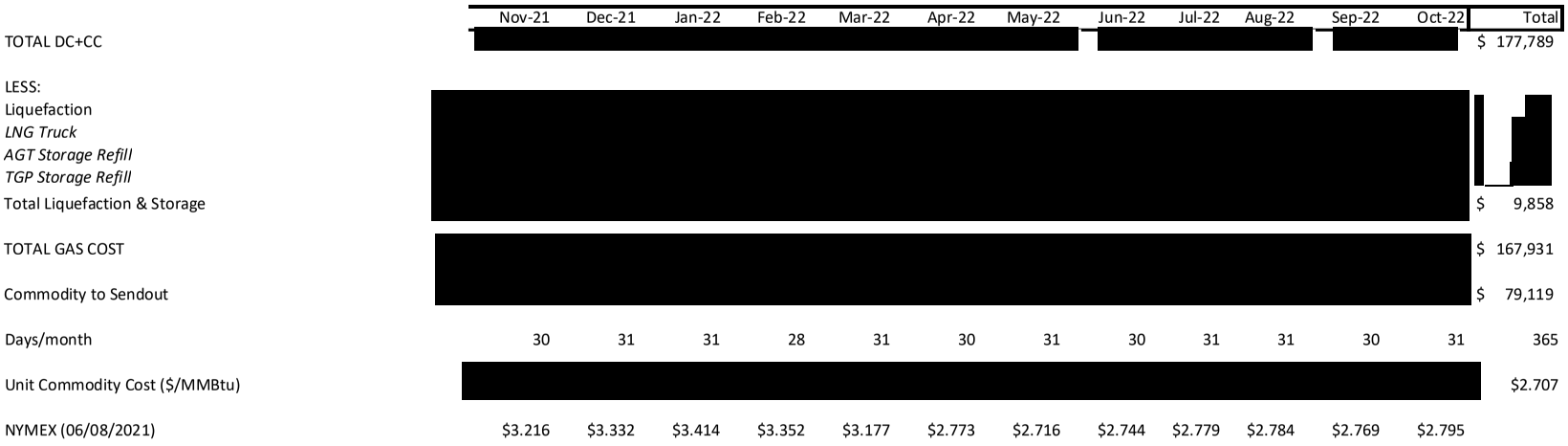
Narragansett Electric Company
Volume & Cost Summary
Cost of Gas ($000)

DEMAND

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
[redacted]													
Total Demand	$ 6,133	$ 9,725	$ 9,721	$ 9,721	$ 9,721	$ 6,162	$ 6,162	$ 6,162	$ 6,162	$ 6,162	$ 6,491	$ 6,491	$ 88,812
Datacheck	$ 6,133	$ 9,725	$ 9,721	$ 9,721	$ 9,721	$ 6,162	$ 6,162	$ 6,162	$ 6,162	$ 6,162	$ 6,491	$ 6,491	$ 88,812
Delta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

COMMODITY

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
[redacted]													
TOTAL COMMODITY	$ 7,183	$ 12,240	$ 16,545	$ 14,659	$ 12,137	$ 5,522	$ 4,244	$ 2,767	$ 2,599	$ 3,151	$ 3,228	$ 4,704	$ 88,977
Datacheck	$ 7,183	$ 12,240	$ 16,545	$ 14,659	$ 12,137	$ 5,522	$ 4,244	$ 2,767	$ 2,599	$ 3,151	$ 3,228	$ 4,704	$ 88,977
Delta	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -



	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Total
TOTAL DC+CC	[redacted]												$ 177,789
LESS:													
Liquefaction	[redacted]												
LNG Truck													
AGT Storage Refill													
TGP Storage Refill													
Total Liquefaction & Storage													$ 9,858
TOTAL GAS COST	[redacted]												$ 167,931
Commodity to Sendout	[redacted]												$ 79,119
Days/month	30	31	31	28	31	30	31	30	31	31	30	31	365
Unit Commodity Cost ($/MMBtu)	[redacted]												$2.707
NYMEX (06/08/2021)	$3.216	$3.332	$3.414	$3.352	$3.177	$2.773	$2.716	$2.744	$2.779	$2.784	$2.769	$2.795	

REDACTED

Exhibit 19
Gas Long-Range Supply Plan
Forecast Period 2021/22 to 2025/26
Informational Filing
June 30, 2021
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REDACTED

National Grid Rhode Island
Design Year
Fixed + Variable + Commodity Cost per Dth per Day by Path (100% Load Factor)
SCC Adj FT1
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Normal Year
Fixed + Variable + Commodity Cost per Dth per Day by Path (100% Load Factor)
SCC Adj FT1
Existing and Proposed Assets

Dollars per Dth per Day

Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Design Year
Fixed + Variable + Commodity Cost per Dth per Day by Path (100% Load Factor)
Sales
Existing and Proposed Assets

Dollars per Dth per Day

Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Normal Year
Fixed + Variable + Commodity Cost per Dth per Day by Path (100% Load Factor)
Sales
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Design Year
Effective Fixed + Variable + Commodity Cost per Dth per Day by Path
SCC Adj FT1
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Normal Year
Effective Fixed + Variable + Commodity Cost per Dth per Day by Path
SCC Adj FT1
Existing and Proposed Assets

Dollars per Dth per Day

Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
Design Year
Effective Fixed + Variable + Commodity Cost per Dth per Day by Path
Sales
Existing and Proposed Assets

Dollars per Dth per Day

Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

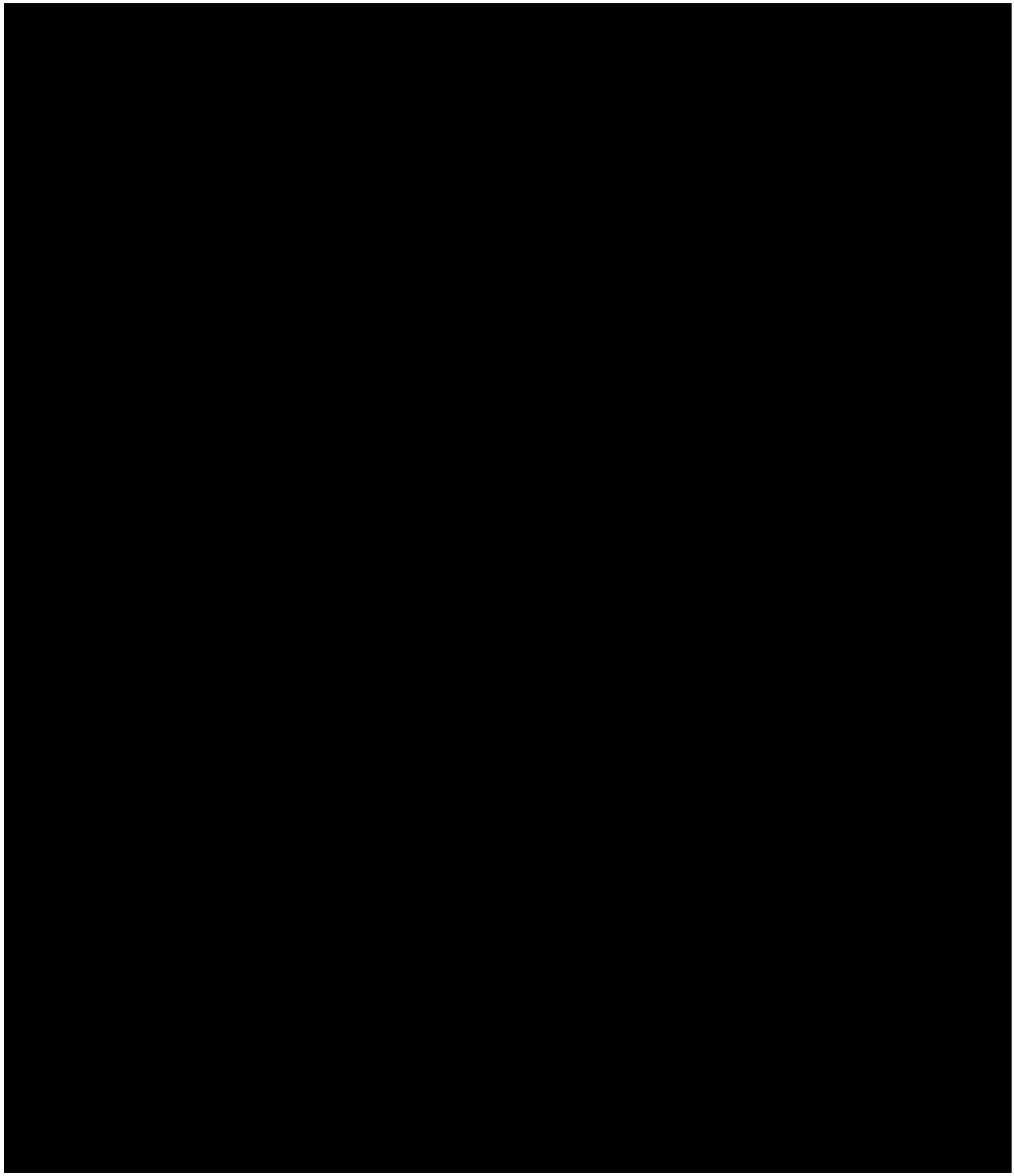
National Grid Rhode Island
Normal Year
Effective Fixed + Variable + Commodity Cost per Dth per Day by Path
Sales
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Path					
[redacted]					

REDACTED

National Grid Rhode Island
SCC Adj FT1
Fixed Cost per Dth per Day by Contract (100% Load Factor)
Existing and Proposed Assets

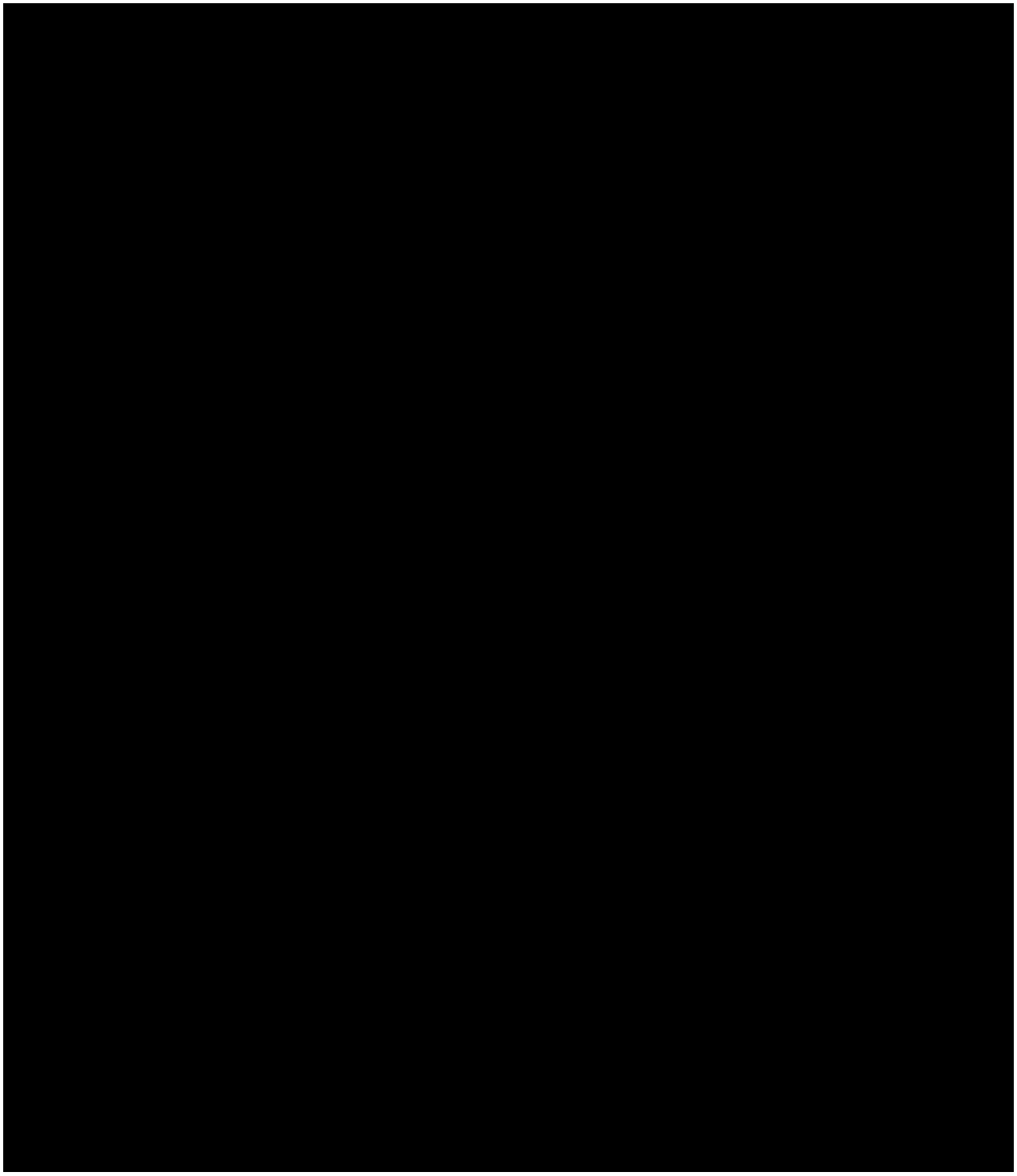
	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Contract					
[redacted]					

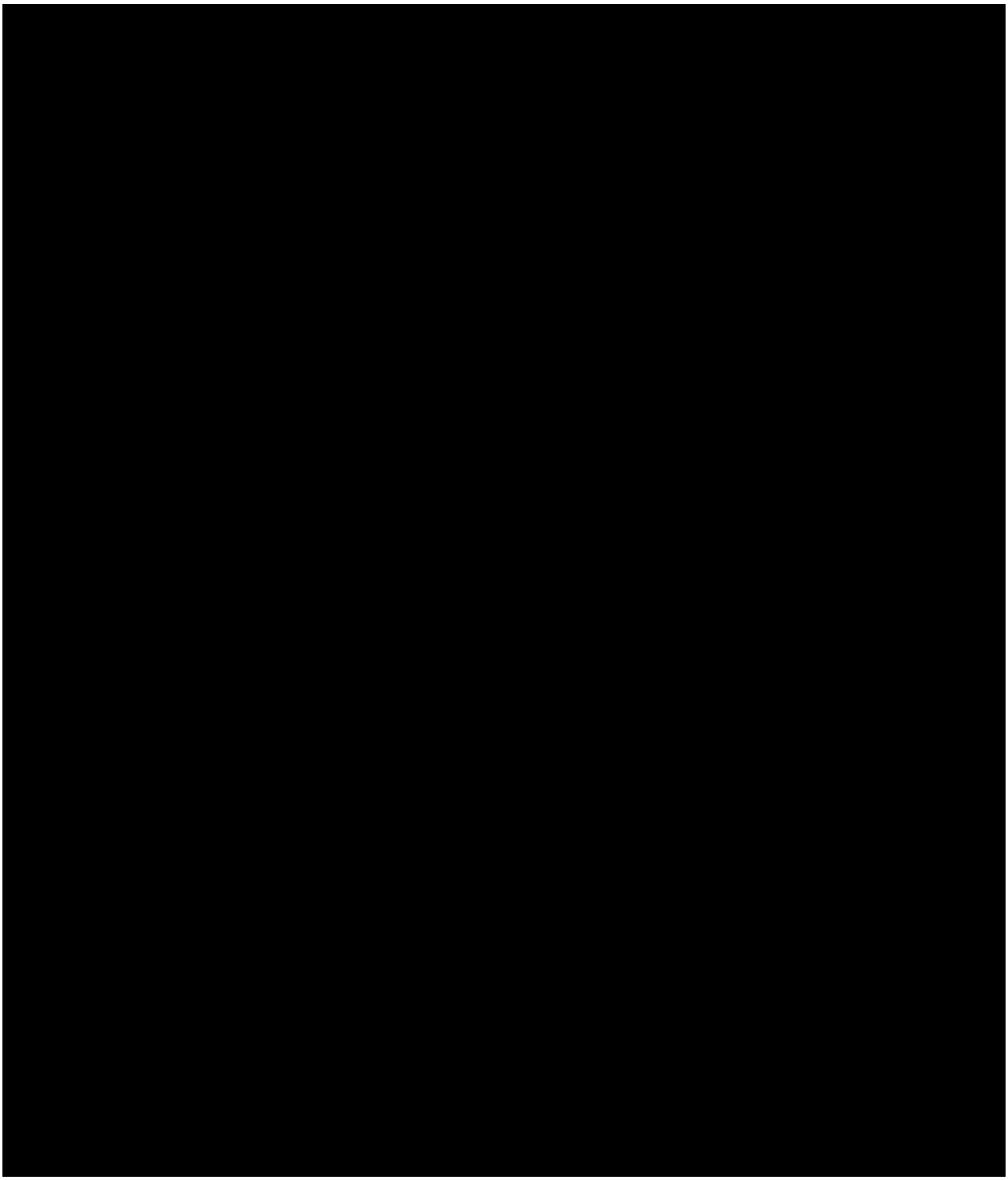


REDACTED

National Grid Rhode Island
Design Sales
Fixed Cost per Dth per Day by Contract (100% Load Factor)
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Contract					

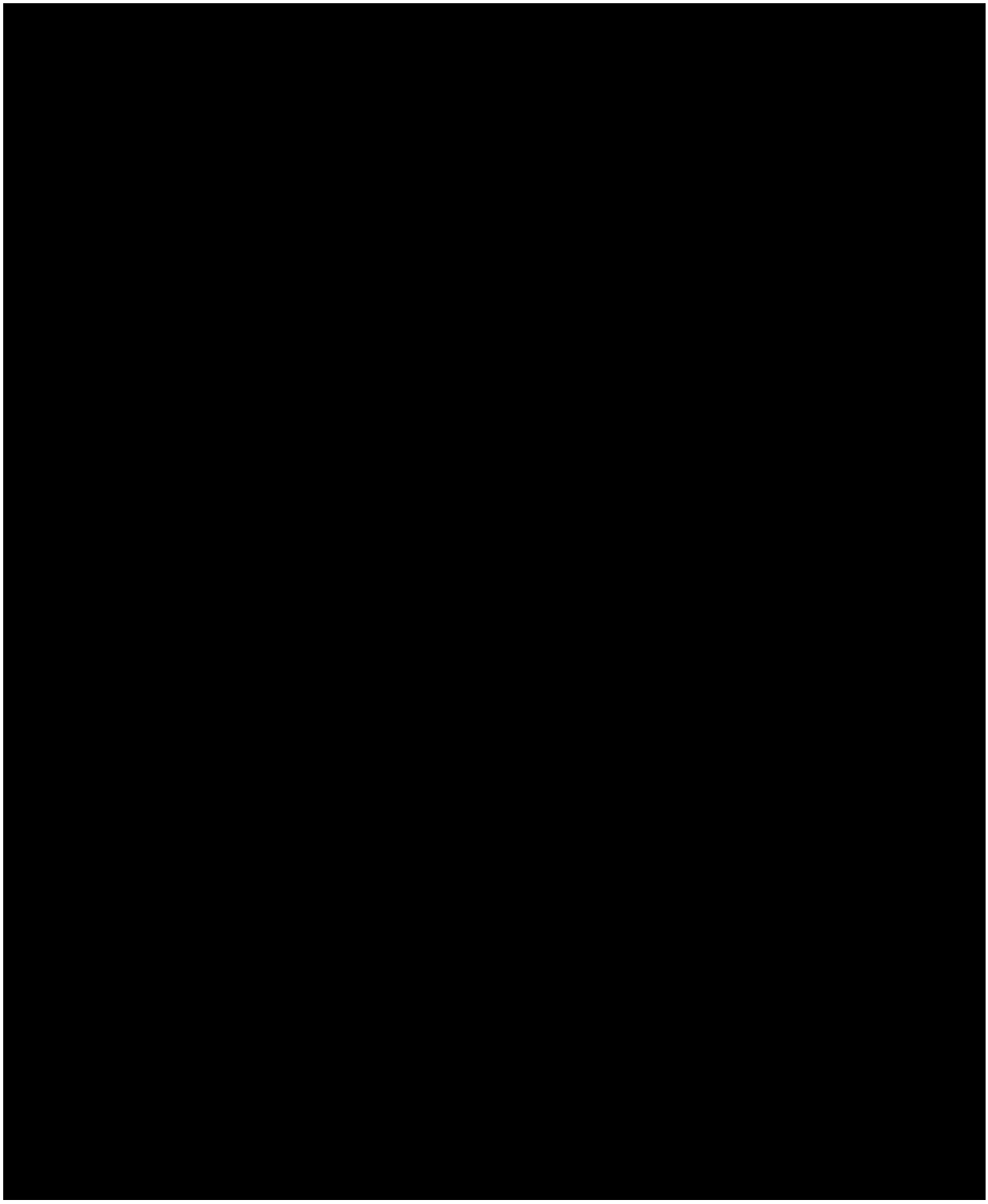




REDACTED

National Grid Rhode Island
Design Year
Effective Fixed Cost per Dth per Day by Contract
SCC Adj FT1
Existing and Proposed Assets

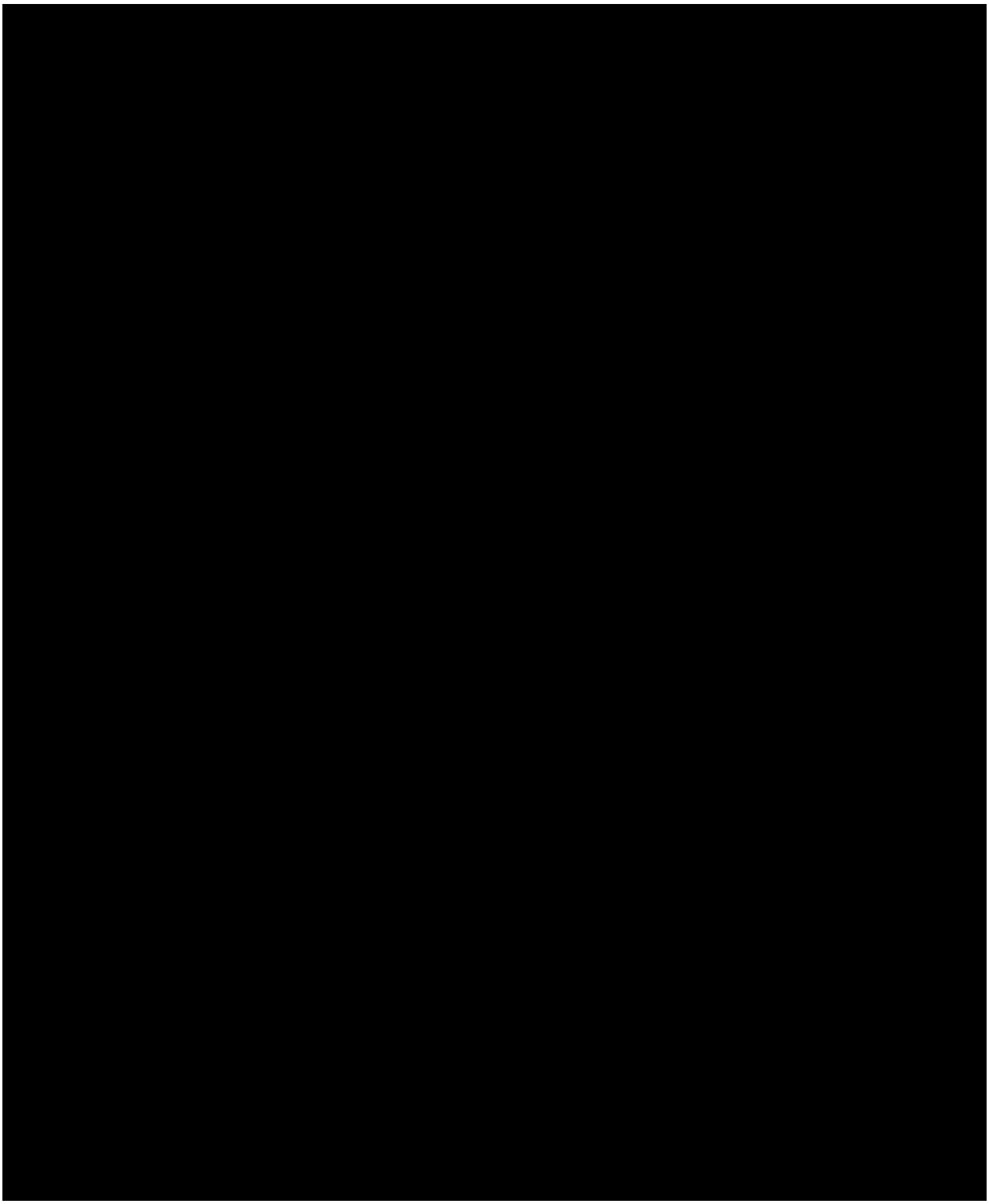
	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Contract					
[redacted]					



REDACTED

National Grid Rhode Island
Normal Year
Effective Fixed Cost per Dth per Day by Contract
SCC Adj FT1
Existing and Proposed Assets

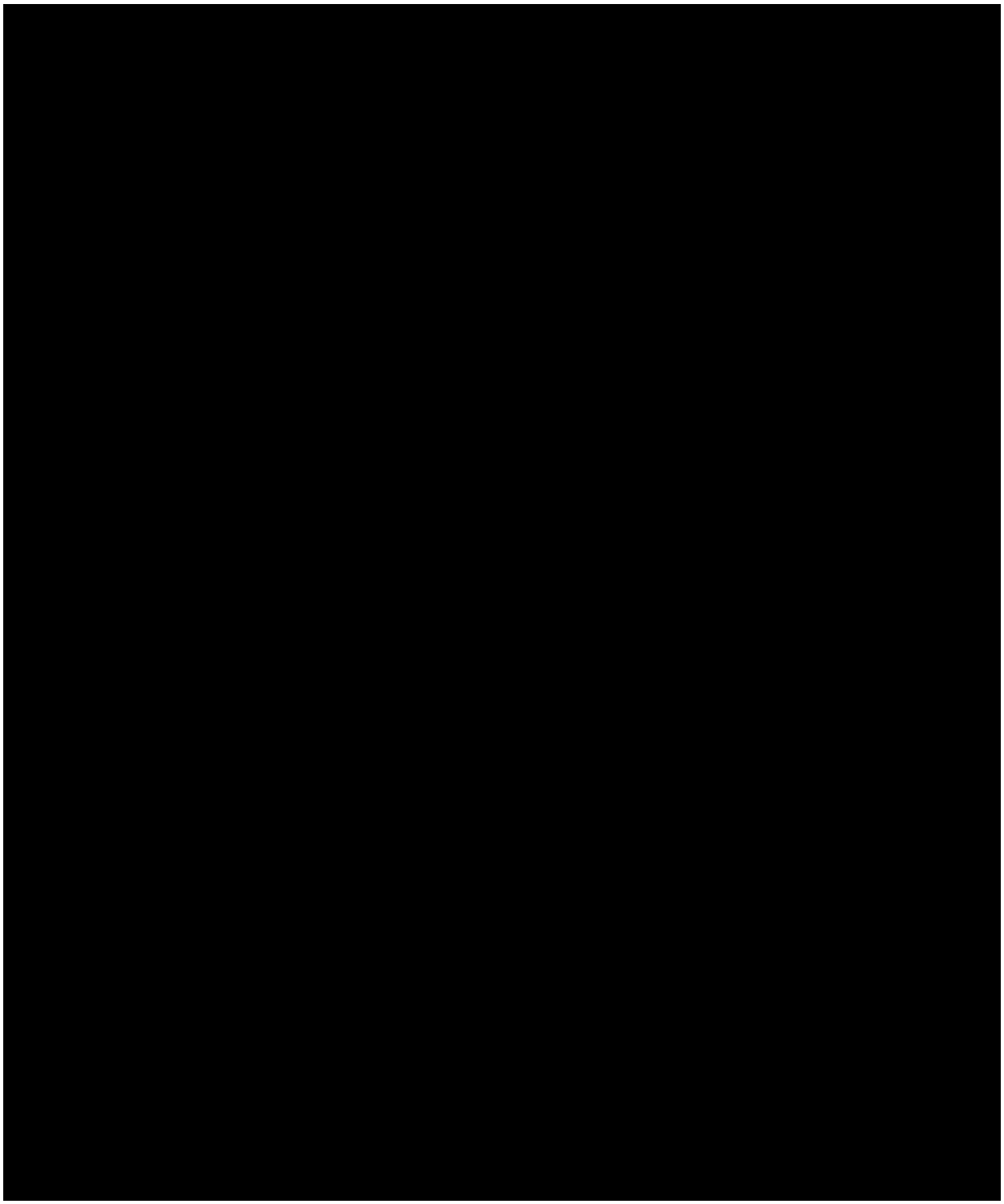
	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Contract					
[redacted]					



REDACTED

National Grid Rhode Island
Design Year
Effective Fixed Cost per Dth per Day by Contract
Sales
Existing and Proposed Assets

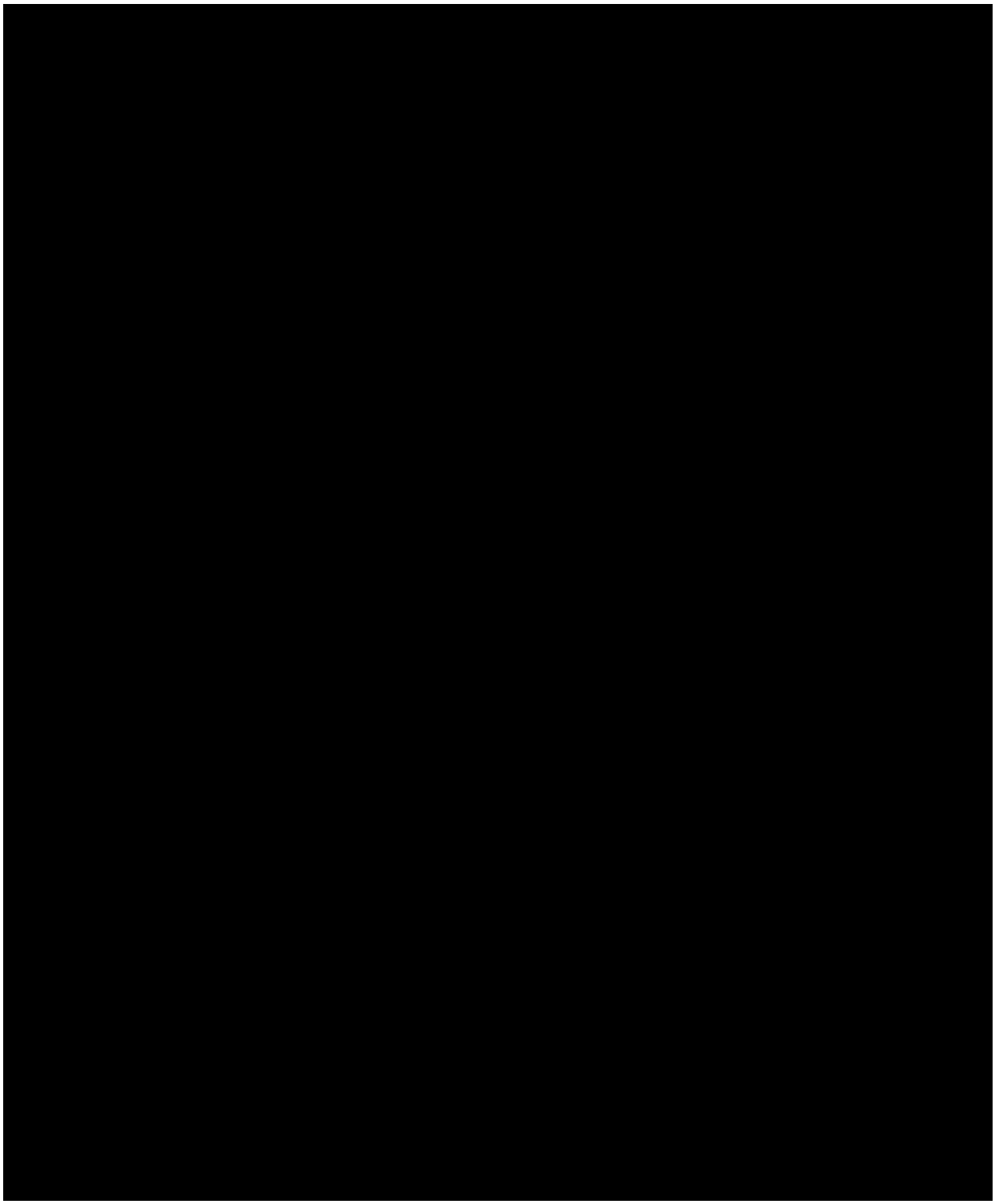
Gas Year	Dollars per Dth per Day				
Contract	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
[redacted]					



REDACTED

National Grid Rhode Island
Normal Year
Effective Fixed Cost per Dth per Day by Contract
Sales
Existing and Proposed Assets

	Dollars per Dth per Day				
Gas Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Contract					
[redacted]					



National Grid Rhode Island
Customer Choice Proposed Releases
2021/22

Paths	Peak Day City Gate MDQ (Dth/day)	Contract	Release % of Design Day Quantity	Release Volume (Dth/day)	City Gate Release (Dth/day)
TGP Long Haul	29,335	TGP 1597	13.7%	5,355	5,355
TGP ConneXion	11,600	TGP 64026	5.4%	2,117	2,117
Dawn via PNGTS	29,000	PNGTS 233317	13.5%	5,293	
		TCPL 64273	13.6%	5,304	
		Union M12274	13.6%	5,304	
		TGP 62930	13.5%	5,293	5,293
AIM	18,000	MPL 210165	4.2%	1,643	
		AGT 510801	8.4%	3,286	3,286
TETCO CDS Long Haul	45,934	TETCO 800303	21.5%	8,384	
		AGT 93011E	21.5%	8,384	8,384
		AGT 510985	21.5%	8,384	
TCO Appalachia	40,000	TCO 31524	18.7%	7,301	
		AGT 90106	18.7%	7,301	7,301
		AGT 510985	18.7%	7,301	
AGT M3	18,099	AGT 93011E	6.7%	2,599	2,599
		AGT 510985	8.5%	3,304	
		AGT 90107	1.8%	705	705
Dracut	20,000	TGP 62930	9.3%	3,651	3,651
TETCO SCT Long Haul	2,099	TETCO 800156	1.0%	383	
		AGT 93001ESC	1.0%	383	383

Customer Choice Design Day Transportation Requirement **39,074**

*Based on June 2021 Pools