NATURAL GAS LONG-TERM CAPACITY STATUS UPDATE FOR BROOKLYN, QUEENS, STATEN ISLAND AND LONG ISLAND ("DOWNSTATE NY")
AUGUST 2022

1. The Recommended Distributed Infrastructure Solution to Close the Demand-Supply Gap

In May 2020, National Grid published the Natural Gas Long-Term Capacity Supplemental Report, in which the Company presented the Distributed Infrastructure Solution ("DIS") to close the projected Design Day Demand-Supply Gap.[1] The DIS is a combination of energy efficiency ("EE") and demand response ("DR") programs and enhancement projects that expand the capacity of existing gas infrastructure. This solution is a portfolio approach that balances cost, reliability, and feasibility to address the projected Demand-Supply Gap. In June and August 2021, the Company refined the DIS and published the Second and Third Supplemental Reports, respectively. The Company submitted its first Long-Term Capacity Status Report for Downstate New York in December 2021, sharing progress to date on implementation of the DIS.

The following is an update on progress towards implementation of each of the components of the DIS since the last status report.

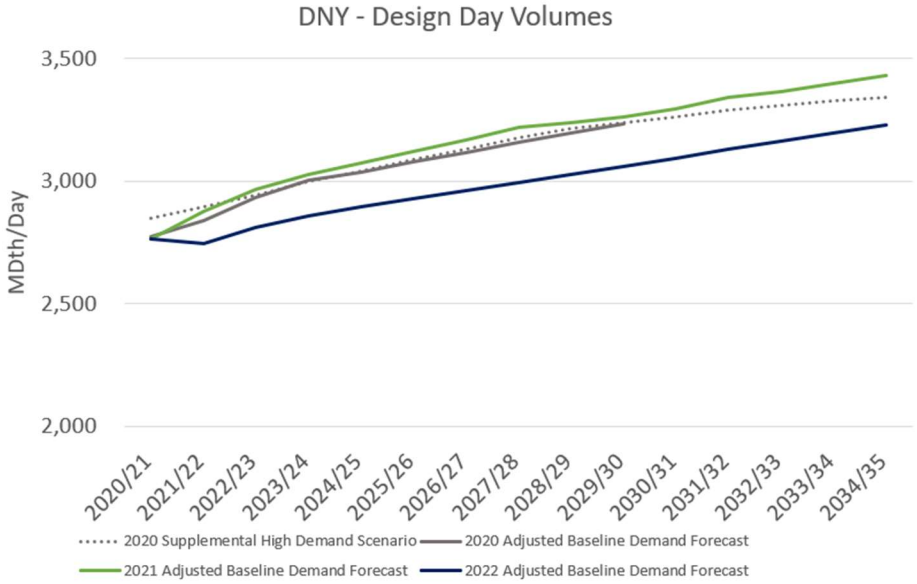
Forecast Update

The latest forecast, as shown in Figure 1-1 below, projects that Downstate New York Design Day gas demand will increase approximately 1.3% per annum, from 2,747 MDth/day in winter 2021/2022 to 3,230 MDth/day in the winter of 2034/2035. Growth in the baseline demand forecast adjusted for EE, DR, and heat electrification is significantly less than the average growth rate experienced over the historical period, which was 2.2% per year from winter 2007/2008 to winter 2020/2021.

National Grid's latest adjusted baseline demand forecast is lower than the 2021 adjusted baseline forecast and the forecast provided in the supplemental report. The decrease is largely driven by an expected decrease in commercial load, and reduced new construction load due to NYC Int. 2317, which will accelerate electrification in new construction.

[1] The Company's prior long-term capacity reports explain the Demand-Supply Gap and other relevant context and can be found at https://ngridsolutions.com/ as well as being filed in Case 19-G-0678 before the New York Public Service Commission.

Figure 1-1: Comparison of 2022, 2021, and 2020 Adjusted Baseline Demand Forecasts and 2020 Supplemental Report High Demand Scenarios



Note: Y-axis is broken to focus on changes at the margin

2. Distributed Infrastructure Solution Component Status

LNG Vaporizers 13/14 Project

National Grid is waiting on the final New York State Department of Environmental Conservation (DEC) State Air Facility permit to complete this project. Detailed engineering, procurement, and delivery of long lead materials have all been completed, environmental reviews and public meetings conducted, and fabrication is in progress, pending receipt of the necessary permit. Permits and approvals have been received from NYC Department of Buildings, NYC Department of Environmental Protection, and the Fire Department of the City of New York (FDNY). Cost recovery will be reviewed by the New York State Public Service Commission ("PSC") in a separate filing.

Iroquois Enhancement by Compression ("ExC") Project

On March 25, 2022, FERC issued an order authorizing the Iroquois Gas Transmission System's Enhancement by Compression ("ExC") Project's Certificate of Public Convenience and Necessity. The certificate authority is conditioned, in part, on the pipeline completing construction within three years of the date the order was issued. Additional approvals required include state air permits from the DEC and Connecticut Department of Energy and Environmental Protection.

Compressed Natural Gas (CNG) Transfer Stations

Since the December 2021 Status Report, the Company has selected Farmingdale as the fifth CNG site on Long Island. The Company has also commenced procurement of long-lead materials required for implementation of this solution and construction has begun. The Company is targeting to have the site constructed and ready for service during the 1st quarter of 2023 but continues to assess the required in-service date of the site to meet forecasted Design Day demand.

Demand-Side Solutions

The DIS relies on four major non-infrastructure options: EE, DR, heat electrification, and Non-Pipeline Alternatives ("NPAs"). The status of each element is further described in the sections that follow.

Many of the risks identified in the December 2021 Long-Term Capacity Status Report remain or have been realized, including supply chain issues and insufficient market resources, such as contractors and vendors to scale programs to the levels envisioned as part of the Distributed Infrastructure Solution. The Company continues to navigate these challenges to maximize the contributions of its Demand Side Management ("DSM") programs.

Energy Efficiency

In May 2022, the PSC issued an Order on the Companies' 2021 Annual DSM Filing that approved the funding recovery for certain energy efficiency programs for calendar year 2022 and set annual targets using the Companies' requested budgets. Those programs were launched in Fall 2021 and consist of a residential weatherization program and increased weatherization incentives for measures to commercial and multifamily customers through our existing Gas Commercial and Industrial Program. In July 2022, the Companies submitted their 2022 Annual DSM Filing[2], which requests approval of programs for calendar year 2023. The Companies are ramping up those programs, but continue to face significant headwinds to implementation and scaling – many of which were outlined in the Second Supplemental Report and the Companies' March 2022 update to the 2021 Annual DSM Filing[3].

Demand Response

Since the December 2021 Long-Term Capacity Status Report, the Companies have evaluated an additional winter season of program performance.[4] The Load Shedding Program is the largest of the four Gas DR programs that the Companies operate, accounting for approximately 95% of load reductions associated with the Companies' gas DR programs. For the winter 2021/22 season, 201 facilities enrolled with an aggregate commitment of 21.1 MDth of daily gas usage reduction (over the sum total of the eight-hour program event window) on a Design Day. Applying a reliability derating factor of 60% (i.e., with the assumption that only 60% of such enrolled load would perform under Design Day conditions), this translates to 12.7 MDth/Day of potential savings.

The Load Shifting Program is in its infancy, but closely mirrors the DR pilot that was instituted by the Companies that began in 2017 and closed in 2020. The program was first launched for the 2021/2022 winter season, resulting in 28 facilities enrolled with potential Design Hour reductions of 184 Dth/hour. This program is operated in total for four hours, which implies up to 736 Dth savings for the aggregate event window.

In the Residential/Small-and-Medium Business ("SMB") Program, customers enroll their smart thermostats and provide National Grid with the authorization to adjust their setpoints during event hours. Enrollment into this Bring Your Own Thermostat ("BYOT") program is on a rolling basis, and customers remain in the program unless they request to unenroll or are removed by National Grid for failure to adhere to program rules. As of this report, there are approximately 10,400 devices enrolled in the program, a more than 200% increase from the corresponding period last year.

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[2] Cases 19-G-0309 and 19-G-0310, *Annual Demand-Side Management Filing of the Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid*, July 15, 2022.
[33] Cases 19-G-0309 and 19-G-0310, *Supplemental Filing of the Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid for Approval of Incremental Demand-Side Management Programs*, March 25, 2022.
[4] Cases 20-G-0086 and 20-G-0087, *Gas Demand Response 2021-22 Annual Report*, filed June 14, 2022.

The Companies have received approval for proposed firm DR programs ("Gas DR Order").[5] The Companies are currently enrolling customers for the 2022/23 winter capability period and anticipate growth in program enrollment.

Heat Electrification

The Companies continue to explore pathways within their regulatory authority to support the targeted electrification of heat. In particular, they continue to collaborate with the electric distribution companies ("EDCs") (*i.e.,* Con Edison and PSEG-LI/LIPA) regarding prospective customers who are potential candidates for electrification, and to refer a minimum number of customers annually to EDCs to determine if the customers are interested in electrification. The Companies have met the number of referrals metric in each of their service territories.

The Companies have observed that the rate of "full-load" heat pump installations, which contribute to peak load gas reduction, is tracking below the assumptions included in the Supplemental Reports, largely due to customers electing to retain their gas heating systems for use on particularly cold days.[6]

Non-Pipeline Alternatives (NPAs)

In December 2021, National Grid first released a NPA Request for Proposals ("RFP"), which focused on securing a reduction of 5,600 Dth of design day demand in northern Queens. National Grid received only one bid that was able to deliver 17.6% of the required demand reduction. Since that time, the Company has issued a RFP for two locations in the KEDLI service territory. As these potential projects call for smaller Design Day reductions (165 Dth in Bayville and 250 Dth in Southeast Suffolk), and the demand reductions are sought outside of New York City, the Company anticipates that the result of this RFP will be different from the initial RFP.

Additionally, National Grid continues to actively collaborate with other gas utilities that are developing NPA programs to share learnings and best practices to improve likelihood of future success.

[5] Case 19-G-0086 and 19-G-0087, Order Authorizing Tariff Amendments To Effectuate Gas Demand Response Programs For Firm Gas Customers, October 07, 2021.
[6] "Full-load" heat pumps refer to heat pump installations that satisfy at least 90% of total system heating load at design conditions, but does not indicate that a customer has entirely replaced a pre-existing heating system (whether electric resistance, natural gas, propane, or fuel oil) with a heat pump system.

3. Contingency Plan Status

In the event certain circumstances prevent or delay the DIS from being fully implemented, National Grid has evaluated alternative approaches to solve the projected Demand-Supply Gap, including alternative infrastructure projects and additional non-gas infrastructure options.

LNG Barges

This project is currently conceptual and will be further evaluated pending the status of the ExC project.

Clove Lakes Loop

This project went through the Company's initial internal sanctioning process in February 2022. The conceptual project loops the existing Clove Lakes Line with approximately eight miles of new 30-inch steel main in two segments of approximately four miles each. This loop would increase deliverability from the existing Texas Eastern Transmission (TETCO) Goethals station by up to 80,000 Dth/day during cold weather and provide system resiliency on a year-round basis. Detailed studies regarding possible routes for the new gas main, along with possible tie-in locations near the 4-mile midpoint, will be undertaken to ensure a continuous route is feasible before detailed engineering takes place.

Accelerated Electrification of Heat and Additional Demand Response Options

Accelerated electrification of heat and additional demand response options over and above those included in the DIS will be further evaluated pending the status of the existing programs.