NATIONAL GRID MONITORSHIP: CLOSING REPORT (September 14, 2021)[1]

Pursuant to the Settlement Agreement of November 24, 2019 (the "Settlement") between the New York State Department of Public Service ("DPS") and National Grid USA, The Brooklyn Union Gas Company d/b/a National Grid NY and KeySpan Gas East Corporation d/b/a National Grid (collectively, "National Grid")

As the provider of natural gas to more than a million residential and commercial customers in New York City and Long Island, National Grid bears important responsibilities for maintaining ongoing service by designing and implementing plans to meet future customer needs. National Grid's failure to fulfill these obligations resulted in its placing a moratorium on new connections and increased gas service in 2018 and 2019. As part of the Settlement with New York State entered in November 2019, the moratorium was lifted, and National Grid agreed to implement a series of remedial steps and enhancements to its operations which, among other things, would reduce the risk of future denials of service through the development of improved contingency planning and options.

As the term of the monitorship of National Grid's compliance with the Settlement comes to an end, the Monitor finds that National Grid has enhanced its operations in several material respects. For example, National Grid has strengthened its internal processes by which its staff across multiple departments collaborate regarding the evaluation of demand forecasts, identifying any gap between demand and supply capacity, and developing scenario analyses and potential solutions to close any such gap. National Grid has improved the accountability of its executives and has undertaken to build out and maintain robust risk management and compliance organizations and tools. Although serious challenges and risks remain in implementing plans that will provide supply capacity in excess of forecasted demand in upcoming years, National Grid has successfully addressed potential shortfalls of supply over the last two winters and has improved the transparency, clarity, and depth of its evaluation of alternative future distribution options, and has shared that analysis broadly with public stakeholders and internally at the highest levels with its Board of Directors.

Despite substantive improvements on multiple fronts by National Grid, the alarming possibility nonetheless remains that National Grid's plans and projects underway toward meeting forecasted demand with sufficient supply capacity will fall short. Whether the potential cause be increases in customer demand for natural gas beyond forecasts, the failure to obtain required permits from federal, state or local government entities for planned distributed infrastructure projects, inadequate customer participation in demand side management efforts, an organizational or management failure by National Grid or other risks faced by National Grid and

[1] A draft of this Closing Report was provided for comment to National Grid and to DPS on September 1, 2021. Insofar as the Monitor independently deemed appropriate, their comments have been incorporated herein. Unless a later time is indicated, the Closing Report contains the Monitor's findings as of September 1, 2021, which date marks the end of the monitorship pursuant to the Settlement, except for the Monitor's subsequent filing of this Closing Report with the PSC. This Closing Report follows nine Reports respectively dated March 13, 2020, April 17, 2020, May 26, 2020, July 15, 2020, September 18, 2020, November 6, 2020, December 18, 2020, March 8, 2021, and May 5, 2021, familiarity with which is assumed.

more generally by the natural gas industry, numerous challenges pose potential stumbling blocks for National Grid's efforts to implement a long-term plan for meeting natural gas demand.

Furthermore, given the extensive forecasting, advance planning and time required to construct gas supply projects and to put into operation demand side management programs, critical additional actions are required with urgency. Put another way, although the currently forecasted gap between natural gas supply capacity and demand may be some years off, continuing efforts must be taken in the short term if that risk is to be mitigated effectively and with reasonable confidence. Despite the several projects and improvements already employed and underway by National Grid pursuant to the Settlement, the potential for a moratorium in future years remains a very real concern.

Accordingly, the Monitor urges National Grid and the DPS to move forward with continued and persistent vigilance. As described further below, core elements of National Grid's long-term plan for addressing supply capacity remain underway and face ongoing risks as to their successful implementation. Given that the monitorship is now terminating pursuant to the terms of the Settlement between DPS and National Grid, the Monitor recommends that:

1) National Grid produce periodic public reports on the status of its efforts to meet long-term demand, the first of which should be issued before the end of 2021, and should occur at least semi-annually though Winter 2023/2024.

2) National Grid's Chief Compliance Officer for the New York Service Territory hold meetings with the DPS staff, outside the presence of other National Grid executives, to discuss areas of actual or potential concern regarding National Grid's operations in the Service Territory. These meetings should occur at least quarterly through Winter 2023/2024.

3) The U.S. Chief Compliance Officer or his delegate in the compliance organization oversee annual compliance examinations at least through Winter 2023/2024, to assess whether executive annual performance reviews and compensation determinations have been linked to the successful and timely completion of material elements of the Settlement and the Monitor's recommendations, as discussed further below at 22-24, and, if not, to require remedial steps.

4) The U.S. Chief Compliance Officer or his delegate in the compliance organization oversee annual compliance examinations at least through Winter 2023/2024 to assess the progress of both the U.S. and New York Risk Committees and to ensure that they achieve full implementation.

5) Insofar as any CAP or Efficiency Plan funds are unspent after National Grid completes paying all eligible claims, National Grid allocate those funds to incremental EE and DR programs consistent with the spirit of the Settlement. Furthermore, the U.S. Chief Compliance Officer or his delegate in the compliance organization should conduct a compliance examination at the conclusion of Winter 2021/2022: (a) to ensure that the remaining eligible claims under the CAP were paid out; (b) to verify that any leftover funds were allocated to incremental EE and DR programs; and (c) to require, if necessary, remedial steps in order to ensure that any unspent funds are used for EE and DR programs.

6) The U.S. Chief Compliance Officer or his delegate in the compliance organization review at least semi-annually the progress on National Grid's efforts to update customer systems, with a specific focus on improvements made to address the particular deficiencies experienced during the moratorium, as discussed further below at 32. Within 30 days of substantially completing the relevant systems enhancements but in no event later than December 31, 2022, National Grid should certify to the PSC (via the Secretary to the Commission) that it has complied with this recommendation.

I. National Grid's Obligations

Under the November 24, 2019 Settlement between the State of New York and National Grid, National Grid was required to take various steps to address long-term natural gas supply capacity constraints, to meet immediate supply capacity needs through Winter 2020/2021, and to remediate harm caused by the moratorium to customers. The Monitor has written extensively about each of the elements of the Settlement and has issued twelve prior recommendations during the course of the monitorship.

This Closing Report: (1) reviews the key developments discussed in the Monitor's reports relating to National Grid's performance of its Settlement obligations and its implementation of the Monitor's recommendations during the monitorship; and (2) provides a final assessment of National Grid's compliance. The Settlement obligations and the Monitor's prior twelve recommendations are restated below.

A. Settlement Obligations

The Settlement encompasses the following elements:

1. Long-Term Capacity Report (Settlement ¶ IV)

A central component of the Settlement was the requirement that National Grid prepare and publicly release within three months of the Settlement "an analysis of the long-term capacity constraints affecting its downstate operations." The Settlement called for the Long-Term Capacity Report ("LT Report") to "present and analyze comprehensively and clearly all reasonably available options for meeting long-term demand, including but not limited to pipeline construction, LNG facilities, CNG facilities, renewable energy sources, conservation strategies, and inter-operable systems, and [to] include recommendations as well as an identification of actions needed (including but not limited to policy and regulatory changes) to implement each option or options."

National Grid further "agree[d] to work with [DPS] and local officials to conduct no fewer than four (4) public meetings to solicit public input" on the LT Report, the recommendations set forth in the report, and "any available alternatives," with the meetings taking place in Queens, Brooklyn, Nassau and Suffolk counties.

National Grid also "agree[d] that a long-term option or options should be identified and agreed to by the State of New York by June 2020 to allow a safe adequate construction and transition period and have the long-term option or options in place and functioning in approximately two years."

2. Action Plan (Settlement ¶ III)

In addition to presenting a report regarding long-term supply capacity issues, the Settlement further mandated that National Grid address immediate demand by providing to DPS "an action plan that shows how it will provide safe and adequate service to allow it to address the increased load associated with gas being provided" to customers previously denied service. "The action plan shall describe all supply, demand response, energy efficiency, and any other measures the Company will use to address such increased load and show how such measures will otherwise be employed to ensure it will meet the anticipated demands in its Service Territory."

3. Efficiency Plan (Settlement ¶ VI.a)

National Grid "agree[d] to fund" an energy efficiency plan with $8 million to deliver a package of new energy efficiency, demand response, and conservation measures to reduce peak-day gas usage among current customers to enable new customer connections.

4. Customer Assistance Plan (Settlement ¶ VI.b)

National Grid "agree[d] to fund" up to $7 million for a customer assistance plan to address hardships endured by customers affected by the moratorium, including hardships identified in complaints filed with the Office of the Attorney General of the State of New York.

5. Reconnecting Customers (Settlement ¶ VI.a)

National Grid was further required to "lift the [m]oratorium" and make "best efforts" within 30 days of the Settlement to contact and provide service to customers denied service between the imposition of the moratorium and early September 2019, except for customers who informed National Grid that they no longer want service. Within 45 days of the Settlement, National Grid also had to make "best efforts" to contact and provide service to any potential eligible customers who applied for and were denied service prior to the Settlement but after the imposition of the moratorium. For new customers and large commercial and industrial customers, National Grid "shall provide service" as soon as practicable.

6. Clean Energy Projects (Settlement ¶ VII)

National Grid initially agreed to "commit $20 million towards clean energy projects and/or investments in New York-based startup businesses and technologies to reduce reliance on non-renewable sources," to be paid by National Grid shareholders. On April 15, 2021, the PSC issued an order adopting an amendment to the Settlement whereby "National Grid will repurpose the $20 million of shareholder funding . . . to establish a deferral for the benefit of customers that will be used as a credit to offset the costs of National Grid's Commission-approved energy efficiency and demand response programs." (Order Adopting Second Amendment to Settlement Agreement. Att. A ¶ 2 (Apr. 15, 2021), Case 19-G-0678.)

B. The Monitor's Recommendations

In various Quarterly Reports issued throughout the monitorship, in addition to assessing National Grid's compliance with the above Settlement obligations, the Monitor made twelve recommendations relating to National Grid's operations.

First Quarterly Report. The Monitor's First Quarterly Report included four recommendations relating to the LT Report and public meetings and to National Grid's governance structure and forecasting processes.

- Recommendation 1 called for National Grid to provide greater clarity during the public meetings, and in the Long-Term Capacity Supplemental Report ("Supplemental LT Report") that would be issued after the public meetings, regarding "the feasibility, cost, and risk/benefit choices attached to the options (and potential combinations of options), including 'plain English' descriptions of the residual risk" of a moratorium with the options and the extent to which CNG would still be used, and "timeline(s) for pursuing and successfully executing upon various options," including permitting and construction.

- Recommendation 2 stated that: "National Grid should conduct a review of its governance structure and evaluate establishing the standalone role (with suitable staffing and resources) of a Chief Compliance Officer, having the responsibility (among other duties, to be structured in the consultation process recommended in 4 below) of ensuring that National Grid and its relevant departments and leadership take sufficient steps to anticipate and manage risks, test and monitor controls, and prepare contingency plans. The Chief Compliance Officer should be independent of the operational executives and report at least annually to the Board of the National Grid parent company or a committee thereof."

- Recommendation 3 provided for National Grid to "evaluate the benefits of retaining internal or external personnel qualified and capable of conducting periodic independent reviews and testing of the data development, modelling and forecasting processes utilized by National Grid in assessing whether future demand will exceed supply capacity, including providing recommendations for potential improvements to the assumptions, data inputs, models and other tools." Recommendation 3 further stated that "consideration should be given to whether the current Design Day standard . . . remains an appropriate standard for future planning by National Grid. Such independent reviews should be conducted in collaboration with the Chief Compliance Officer and the results incorporated into periodic examinations by the Chief Compliance Officer."

- Recommendation 4 stated that: "[i]n connection with Recommendations 2 and 3 above, National Grid should engage outside management consultants regarding the suitability and manner of structuring the new roles, defining their responsibilities, and similar steps, in consultation with DPS."

National Grid accepted each of these four recommendations.

Second Quarterly Report. The Monitor made four additional recommendations in the Second Quarterly Report, two of which again concerned the LT Report and public meetings. Another recommendation related to National Grid's systems for storing and managing data regarding applications for service, and the remaining recommendation addressed the Customer Assistance Program ("CAP") for remediating customer hardship caused by the moratorium.

- Recommendation 1 urged National Grid, in its Supplemental LT Report, to "specifically address concerns raised by the public regarding the integrity and accuracy of National Grid's demand forecast," including whether climate change or other factors affected the suitability of the current Design Day standard and whether economic changes from Covid-19 provided a basis to reevaluate future demand as set out in the LT Report.

- Recommendation 2 stated that, if social distancing restrictions from Covid-19 were alleviated while considerations continued regarding the options in the LT Report, National Grid should conduct one more in-person public meeting at that juncture in order to create further opportunity for the public to provide input, as the quality of certain public engagement could not be replicated in the virtual public meetings held after Covid-19 restrictions were put in place.

- Recommendation 3 called for National Grid to evaluate its systems for maintaining customer data and, "[i]n particular, in the event of a future moratorium, National Grid should ensure that its systems are capable of tracking applications, contacts and related data without significant manual intervention and reconciliation."

- Recommendation 4 recommended that: "[i]n light of the CAP's low utilization rate to date, National Grid should evaluate potential alternative uses for the funds allocated to the CAP consistent with the Settlement."

National Grid accepted three of these recommendations but rejected Recommendation 2 regarding conducting additional in-person public meetings after issuing the Supplemental LT Report, social-distancing restrictions permitting. As the Monitor observed in the Fourth Quarterly Report (at 4 n.5), National Grid's "unqualified unwillingness to hold another public meeting" represented a reversion "to its past rigidity, shortsightedness and resistance to providing increased transparency to the public." As described below, National Grid did subsequently accept another recommendation in the Monitor's Eighth Quarterly Report to conduct additional public engagement and, in this Closing Report, the Monitor recommends that National Grid issue ongoing public reports.

Eighth Quarterly Report. In response to delays which arose with the long-term options pursued by National Grid and performance issues previously raised by the Monitor, the Monitor issued two new recommendations in the Eighth Quarterly Report.

- Recommendation 1 found that, because of the delays to National Grid's long-term supply projects, "National Grid was at risk of failing to have these solutions in place and functioning within the approximately two-year timeline under the

Settlement." Therefore, the Monitor recommended "that National Grid engage in a further analysis and presentation of options to meet long-term demand, including working with DPS and local officials so that (building on the prior public engagement under the Settlement) National Grid receives public input on its recommendations and any available alternatives as of this time, to be completed no later than three months from National Grid's accepting this recommendation."

- Recommendation 2 recommended that, in connection with addressing concerns the Monitor had raised about "accountability within National Grid for performance failures such as failing to meet key project deadlines, National Grid should incorporate into annual performance reviews and compensation determinations for specific individuals beginning in 2021 the responsibility for the successful and timely completion of material elements of the Settlement and the Monitor's recommendations. These should include but not be limited to responsibility for the recruitment of an external CCO and the implementation of second-line-of-defense testing in the risk organization." The Monitor recommended that "[a]ny lapses or delays should result in articulable reductions in salary increases and bonus allocations to appropriate executives."

National Grid agreed to implement both recommendations.

Ninth Quarterly Report. In the Ninth Quarterly Report, the Monitor made two recommendations relating to: (a) the revision of confidentiality provisions in separation agreements used for departing National Grid executives; and (b) management's presentation of updates to the board of National Grid's parent company when implementing Recommendation 1 of the Eighth Quarterly Report.

- Recommendation 1 recommended that "any confidentiality provision in the separation agreements utilized by National Grid explicitly exempt communications by departing employees with the Monitor, DPS, or any other state or federal regulatory authority." As the Monitor explained in issuing the recommendation, such an exemption would "facilitate the receipt by the Monitor and DPS of candid perspectives from executives departing National Grid and to avoid any actual or apparent risk of their potentially jeopardizing their severance pay and benefits."

- Recommendation 2 provided that the board of National Grid's parent company should meet twice with the responsible National Grid executives in connection with the company's further analysis and presentation of options to meet long-term demand both in advance of National Grid's filing the report and in advance of its publishing feedback on that report. In addition, the Monitor should be invited to attend the two board meetings.

National Grid accepted both recommendations.

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The remainder of this Closing Report reviews National Grid's compliance with its Settlement obligations and its implementation of the Monitor's recommendations. Part II of this Report discusses National Grid's recently updated analysis of the long-term supply options for meeting natural gas demand and the Monitor's recommendations relating to that report. Part III surveys the status of National Grid's ongoing winter supply projects and the challenges that the company faces in achieving its long-term solution. Part IV discusses National Grid's continuing efforts to comply with the Monitor's recommendations concerning significant organizational issues within National Grid identified during the Monitor's investigation. Part V explains the short-term winter supply solutions National Grid implemented under its Action Plan to provide adequate supply capacity through Winter 2020/2021. Part VI reviews National Grid's incremental energy efficiency ("EE") and demand response ("DR") programs funded through the $8 million Efficiency Plan required by the Settlement. Finally, Part VII discusses the remaining Settlement items, such as National Grid's deployment of $7 million as required under the Settlement in order to assist customers harmed by the moratorium, and National Grid's effort to connect customers who were denied service during the moratorium.

II. Second Supplemental Long-Term Report and Public Engagement

A. Background and Recommendation

As required under the Settlement, National Grid issued the LT Report on February 24, 2020, analyzing potential options for meeting long-term demand. After receiving thousands of public comments and holding one in-person and five virtual public meetings, National Grid issued the Supplemental LT Report on May 8, 2020 (together with the LT Report, the "LT Reports"), in which, consistent with the Monitor's recommendations from the First and Second Quarterly Reports discussed above, National Grid sought to provide additional information regarding, among other things, the potential for future moratoria, reliance on CNG trucking in certain scenarios, and permitting and timing demands of the options recommended by National Grid. (See Third Quarterly Report at 6-14; Fourth Quarterly Report at 1-4.)

Of the options National Grid identified, National Grid has been taking steps to pursue LNG Vaporization (i.e., two new LNG vaporizers at National Grid's Greenpoint facility) combined with incremental EE, DR and electrification, and National Grid supports the ExC project being developed by the Iroquois Gas Transmission System. As highlighted in the Fourth Quarterly Report, "[a]s a practical matter, these items depend upon obtaining federal, state and local approvals at certain junctures," and "National Grid obviously cannot ensure its receipt of these various approvals from multiple authorities." (Fourth Quarterly Report at 3.) Indeed, delays have arisen in connection with both LNG Vaporization and the ExC project (discussed further below), which prompted the Monitor to issue Recommendation 1 in the Eighth Quarterly Report (at 2), that "National Grid engage in a further analysis and presentation of options to meet long-term demand including working with DPS and local officials so that (building on the prior public engagement under the Settlement) National Grid receives public input on its recommendations and any available alternatives as of this time."

Accordingly, on June 30, 2021, National Grid publicly released its Long-Term Capacity Second Supplemental Report ("Second Supplemental LT Report"). National Grid also held a public meeting on July 14, 2021, and received both oral and written public feedback, which informed National Grid's Long-Term Capacity Third Supplemental Report ("Third Supplemental LT Report") released on August 25, 2021. In addition, to ensure that these significant matters received attention at the highest levels of National Grid, the Monitor's Recommendation 2 in the Ninth Quarterly Report required that responsible National Grid executives meet twice with the board of National Grid's parent company to review the steps being taken. (Ninth Quarterly Report at 1.)

B. Dissemination of the Second Supplemental LT Report and Public Outreach

On June 30, 2021, National Grid publicly filed the Second Supplemental LT Report with the PSC and posted it on a website dedicated to information about the prior and new LT Reports.[2] The website included notice of the July 2021 public meeting discussed further below, as well as how feedback could be provided to DPS and to National Grid. In addition, National Grid took various steps to disseminate the Second Supplemental LT Report to the public, including: (1) sending e-mails to customers about the report; (2) providing on-bill messaging to customers; (3) posting on social media; (4) placing newspaper ads in Downstate New York papers and issuing a press release; and (5) providing hard copies of the report at seven public libraries in New York City, Nassau County and Suffolk County.

In advance of the report's release, National Grid also engaged state and local government officials to brief them on the then-forthcoming Second Supplemental LT Report. National Grid sent letters with copies of the Second Supplemental LT Report to several environmental advocacy groups before and after the report's release and, according to National Grid, it also sought meetings with those groups to discuss the material.

National Grid's efforts at outreach followed its hiring of a new Vice President, Corporate Affairs for the New York jurisdiction ("VP, Corporate Affairs NY") around the time National Grid eliminated the position of SVP, Corporate Affairs in connection with its corporate reorganization (discussed further below at 21-22). The VP, Corporate Affairs NY was initially hired on an interim basis, and his role has since been made permanent. While the new VP, Corporate Affairs NY does not have a background in the natural gas business, in an interview with the Monitor, the VP, Corporate Affairs NY acknowledged National Grid's missteps in the past and explained that he believed he understood how to navigate and build civic partnerships. The VP, Corporate Affairs NY has reporting to him approximately 160 employees who cover communications, economic development, transmission connection services, and customer community teams. In his interview with the Monitor, the VP, Corporate Affairs NY emphasized community-outreach efforts and initiatives designed to benefit customer communities such as neighborhood beautification projects. In the view of the Monitor, it remains too early to assess what positive impact, if any, such efforts may bring for National Grid's ability to deliver upon the key supply projects it pursues to meet gas demand in the future.

C. The Second Supplemental LT Report

Like last year's LT Reports, the Second Supplemental LT Report analyzes various aspects of the Service Territory's natural gas demand and supply capacity outlook. According to

[2] See https://ngridsolutions.com/.

National Grid, under its latest demand forecast and based upon existing supply capacity, a gap between demand and supply capacity would occur beginning in Winter 2022/2023.

The Second Supplemental LT Report provides an update on the long-term solutions that National Grid has been pursuing to close this forecasted gap -- i.e., Vaporizers 13 and 14, incremental EE, DR and electrification, and the ExC project -- and supplements them "to include incremental portable CNG capacity" to create what National Grid describes as its "Distributed Infrastructure Solution." (Second Supp. LT Report at 57.) As National Grid acknowledges and as the Monitor described in previous reports (see Fifth Quarterly Report at 5; Seventh Quarterly Report a 4; Eighth Quarterly Report at 3-6), significant uncertainty exists around obtaining necessary permits for Vaporizers 13 and 14, and the ExC project still requires FERC approval as well as state and local permits before Iroquois may proceed. As a result, National Grid concedes that its Distributed Infrastructure Solution "faces real risks in the form of permitting delays and denials." (Second Supplemental LT Report at 103.) In addition, National Grid itself highlights that risks involved in its effort to scale up "unprecedented" levels of EE and DR create uncertainty that National Grid will be able to provide adequate supply capacity during a cold weather event even if Vaporizers 13 and 14 and the ExC project are in place. (Second Supplemental LT Report at 67, 80-81.)

Given the uncertainty surrounding National Grid's ability to achieve its Distributed Infrastructure Solution (whether timely or at all), the Second Supplemental LT Report reviews contingency scenarios and additional options to address any delay or failure to deliver components of the Distributed Infrastructure Solution. National Grid evaluated potential additional options "to identify the most affordable, feasible and reliable options to address potential contingency scenario gaps," which would include some combination of the Clove Lakes Transmission Loop (which aims to expand National Grid's ability to receive additional gas in Staten Island at an existing gate), LNG barges, and potentially even more incremental EE and DR. (Second Supplemental LT Report at 95, 99.) While National Grid raises these contingency scenarios and additional options for public consideration, National Grid concludes that they would not be as workable as the Distributed Infrastructure Solution, caveating that "all of these contingency plans are far less favorable for our customers both from an affordability and feasibility perspective than the Distributed Infrastructure Solution." (Second Supplemental LT Report at 100.) In addition, National Grid acknowledges that, if these risks to the Distributed Infrastructure Solution materialize, there is a "substantial risk" that National Grid may not meet demand growth and will choose to impose another moratorium (which National Grid refers to as a "pause" in new customer connections) or to activate customer curtailment plans. (Second Supplemental LT Report at 100-01.)

D. National Grid Board Meetings

In compliance with the second recommendation contained in the Monitor's Ninth Quarterly Report, National Grid executives made presentations to the board of National Grid's parent company on June 21, 2021 and on August 20, 2021, and the Monitor attended both meetings. In advance of the June 21 meeting, the board received a detailed memorandum setting out the context and summarizing several topics to be covered in the Second Supplemental LT Report (subsequently published on June 30, 2021). These topics spanned National Grid's updated demand and supply forecasts, the progress in advancing the Distributed Infrastructure

Solution set out in National Grid's Supplemental LT Report of May 2020, potential alternative options to the Distributed Infrastructure Solution, contingency scenarios, stakeholder engagement, and related topics. The June 21 meeting lasted approximately one hour and included robust discussion by the board following the presentation by the National Grid executives. The board posed detailed questions to the National Grid executives spanning the breadth of topics at hand and displayed a high level of engagement and familiarity with the issues raised. In the opinion of the Monitor, the board exhibited a strong interest in reaching a long-term solution meeting the needs of its customers and engaging with stakeholders to achieve that goal.

Likewise, the board conducted another meeting on August 20, 2021, at which time National Grid executives provided further detail regarding public engagement around the issuance of the Second Supplemental LT Report and National Grid's preparation of the upcoming Third Supplemental LT Report (subsequently published on August 25, 2021). The August 20 meeting also lasted approximately one hour and included a number of questions posed by the board to National Grid executives revealing a high level of familiarity by the board with the relevant issues.

While the challenges faced by National Grid in implementing a long-term solution are complex, the Monitor observed at these two board meetings that National Grid's board is highly knowledgeable about the issues, is fully engaged, and is providing oversight as National Grid pursues a workable long-term solution.

E. Virtual Public Meeting and Public Feedback

On July 14, 2021, National Grid conducted a virtual public meeting regarding the Second Supplemental LT Report. Registration records indicate that more than 50 individuals not associated with National Grid attended the meeting, which lasted from approximately 5:30 pm to 7:00 pm.

During an initial 30-minute portion of the meeting, National Grid executives summarized the contents of the Second Supplemental LT Report, supported in part by a PowerPoint presentation. National Grid then received questions from approximately 15 members of the public, followed by an open forum during which approximately 14 members of the public made comments. All persons interested in asking questions or making comments had the opportunity to do so, and the meeting concluded only at that time.[3] National Grid later published a transcript of the virtual public meeting on its website and appended the transcript to the Third Supplemental LT Report.

In addition, National Grid's website dedicated to information about the prior and new LT Reports included a link for members of the public to provide feedback directly to the PSC. As of September 1, 2021, fewer than 10 public comments had been filed since National Grid publicly released its Second Supplemental LT Report.

[3] A comment submitted to the PSC indicated that some participants had been dropped from the call during the meeting when they pressed the number National Grid instructed them to dial in order to ask a question or to make a comment. When queried by the Monitor, National Grid reported that the telephone company managing the conference call found no indication of participants being dropped from the meeting.

National Grid undertook a survey of its customers following the public meeting, which queried topics related to the Second Report and the Distributed Infrastructure Solution. In contrast to the number of submissions to the PSC, National Grid received approximately 2,000 complete survey responses. While not endorsing the survey methodology or statistical significance, the Monitor observes that the results obtained by National Grid suggest that respondents who read the Second Supplemental LT Report reported a much greater understanding of the gap between natural gas demand and supply capacity than those who did not read the Second Supplemental LT Report, i.e., approximately 60% versus 35%, depending on whether they had read the Second Supplemental LT Report. In addition, while 38% of respondents indicated that the Distributed Infrastructure Solution should be pursued (53% were unsure, and 9% opposed), these figures shift if one focuses only on the subset of respondents who reported an understanding of the demand/supply gap (53% supported the Distributed Infrastructure Solution, 40% were unsure, and 7% opposed).

In comparing the public meeting conducted on July 14, 2021, to the several public meetings held by National Grid in early 2020, the Monitor observes that the circumstances in both contexts included the provision of substantive information from National Grid and robust engagement by the public in response. The number of participants in July 2021 was substantially less than in early 2020, and the strong divergence in views exhibited in the early 2020 meetings seemed somewhat to dissipate by July 2021. In the Monitor's view, this evolution may result in some part from the conduct of the several public meetings in March and April 2020 and National Grid's publication of the several LT Reports. National Grid's shift from strongly advocating the NESE pipeline solution in the past to pursuing at this time the mixed set of options contained in its Distributed Infrastructure Solution may also have factored into the improved civil dialogue.

Also providing greater clarity regarding the potential path forward, the PSC offered comments regarding the Distributed Infrastructure Solution when approving the KEDNY/KEDLI rate case on August 12, 2021.[4] Specifically, the PSC noted (at 76-77) National Grid's analysis that, as compared to relying solely on additional pipeline capacity, "adding Vaporizers 13 and 14, in conjunction with the Companies' proposed incremental energy efficiency, demand response, and electrification programs, would create 'global warming potential savings.'" The PSC also found (at 112) as to the vaporizers that, despite public opposition documented in the record of the rate case, "the record contains no evidence of any viable, short-term solutions that would take the place of the facility."

F. Third Supplemental LT Report

The Third Supplemental LT Report summarizes the feedback National Grid received from the public regarding the Second Supplemental LT Report, including the survey results discussed above. Apart from the survey, National Grid notes that relatively few comments on the Second Supplemental LT Report were submitted either orally during the virtual public meeting or in writing to the PSC, with a total of approximately 25 unique commenters in contrast with the more than 5,000 unique commenters on the LT Report in early 2020. National Grid

[4] Order Approving Joint Proposal, as Modified, and Imposing Additional Requirements, N.Y. Public Service Commission Case Nos. 19-G-0309 & 19-G-0310 (Aug. 12, 2021).

attributes the relatively few comments to its "increased stakeholder engagement between the original Long-Term Gas Capacity Report and the issuance of the Second Supplement Report," which National Grid believes allowed it "to keep its customers and key stakeholders informed and engaged in [its] business in the regular course." (Third Supp. LT Report at vi.)

More substantively, the Third Supplemental LT Report groups the comments into three topic areas: (1) criticism of the Distributed Infrastructure Solution as inconsistent with the CLCPA or achieving net zero greenhouse gas emissions; (2) opposition to gas infrastructure in favor of demand-side management; and (3) dissatisfaction with the pace of National Grid's efforts to implement EE and DR programs. (Third Supp. LT Report at 16.) The Third Supplemental LT Report also includes a section with National Grid's responses to the feedback received on these issues. (Third Supp. LT Report at 16-24.)

G. PA Consulting Report

As noted in the Third Supplemental LT Report, PA Consulting, working at the direction of DPS Staff, was engaged by National Grid to conduct an assessment of National Grid's demand forecast and the Distributed Infrastructure Solution. (Third Supp. LT Report at vii.) On September 10, 2021, PA Consulting filed its report with the PSC (the "PA Report").

As to National Grid's gas demand forecast, PA Consulting found the forecast to be "on the high side but it is within reason." (PA Report at 5.) The PA Report (at 10) further found that, as the Monitor has emphasized, the likelihood that the components of the Distributed Infrastructure Solution "are not operational without further delay or termination appears high." PA Consulting also stressed the substantial uncertainty around the adoption of National Grid's demand side management ("DSM") programs and the ability to achieve its savings targets. In light of these challenges, PA Consulting identified a "significant curtailment and moratorium risk within the next five years" if National Grid's infrastructure projects are further delayed or not implemented. (PA Report at 6.)

In sum, while the PA Report found National Grid's forecast and its Distributed Infrastructure Solution to be reasonable, the PA Report punctuates the Monitor's significant concerns that National Grid may not timely implement key components of the Distributed Infrastructure Solution and that National Grid may be unable to meet the Service Territory's future supply needs.

III. Status of Ongoing Winter Supply Projects

Significant challenges remain for National Grid in its efforts to implement its Distributed Infrastructure Solution and to meet demand in the Service Territory. This section reviews National Grid's ongoing winter supply projects, including the components of the Distributed Infrastructure Solution. A picture of a precarious work in progress emerges, and significant uncertainty remains as to whether the required permitting will be granted for key infrastructure projects and whether National Grid will succeed in reducing demand through EE and DR efforts to the extent that will be required in order to meet future customer demand.

A. Greenpoint LNG

Vaporizers 11 and 12. Under National Grid's Revised Action Plan to meet short-term demand (discussed below at 24-25), National Grid initially planned to replace two decades-old LNG vaporizers at Greenpoint (Vaporizers 3 and 4) with two brand new LNG vaporizers (Vaporizers 11 and 12) by Winter 2020/2021. (See Seventh Quarterly Report at 2.) In an update filed with the PSC on October 30, 2020, National Grid acknowledged that it would fail to implement Vaporizers 11 and 12 by Winter 2020/2021 because the electrical tie-ins for the vaporizers required greater coordination and planning than National Grid previously had contemplated. National Grid indicated that the Riverhead, Glenwood and Inwood CNG sites would provide adequate supply capacity needed to meet demand for Winter 2020/2021. The electrical tie-in work remains in progress, and National Grid currently plans to place Vaporizers 11 and 12 into service by October 18, 2021, for Winter 2021/2022.

Vaporizers 13 and 14. Key to National Grid's Distributed Infrastructure Solution are two new LNG vaporizers, the construction of which still requires receipt of an air permit from the New York State Department of Environmental Conservation ("DEC"). National Grid previously had projected its receipt of the air permit so that it could complete construction and have Vaporizers 13 and 14 in service by December 2021. (Seventh Quarterly Report at 4.) But the DEC air permit is required before major construction can begin, so National Grid pushed the in-service date to January 2023, aiming to have the new vaporizers operational during Winter 2022/2023. By National Grid's most recent calculations set out in the Second Supplemental LT Report (at 56-57, 64), the current need date for Vaporizers 13 and 14 is Winter 2023/2024, but National Grid plans to have Vaporizers 13 and 14 in service in advance in order to gain operational experience with the new vaporizers before the winter when they will be truly "needed."

National Grid's ability to deliver Vaporizers 13 and 14 before Winter 2022/2023 as planned remains in doubt as National Grid awaits an air permit. National Grid recently agreed to an extension of DEC's time to make a decision on the air permit until November 4, 2021 and, even assuming the air permit is granted, National Grid executives have described the required construction schedule to meet the planned January 2023 in-service date as a "high risk schedule," i.e., the schedule lacks any "float" and thus any additional delays in construction would delay the project's in-service date. Further underscoring the uncertainty around the air permit, on July 15, 2021, the DEC issued requests for additional information to National Grid calling for certain environmental information. What effect, if any, such information will have on the DEC's decision remains unknown. As acknowledged by National Grid, "the primary risk to implementation" of Vaporizers 13 and 14 "is not obtaining the necessary permitting for the project, or not obtaining them in a timely manner." (Second Supp. LT Report at 64.)

LNG Trucking Station. National Grid also plans to construct an LNG unloading station to replace an existing LNG unloading station at Greenpoint, which would enable National Grid to truck LNG to Greenpoint as a contingency measure to refill Greenpoint's LNG tanks in the event of an emergency situation. The LNG unloading station was originally included in the Supplemental LT Report as part of the LNG Vaporization option, but National Grid de-emphasized the trucking station in the Second Supplemental LT Report (at 63 n.39), stating that "the LNG unloading station is unrelated to and has no impact on the project to include

Vaporizers 13 & 14." According to National Grid, "[t]he function of the LNG Vaporization Project is to add peaking supply to the system to meet demand on the coldest days of the winter," and "[t]he function of the 'LNG Unloading Station Replacement Project' is to provide a contingency plan for an emergency situation requiring an extraordinary response, such as LNG trucking." Accordingly, National Grid asserts that replacing the LNG unloading station "plays no role in vaporization at the Greenpoint facility."

On July 23, 2021, Sane Energy Project and Cooper Park Resident Council, Inc. filed a lawsuit in New York state court against the City of New York, FDNY, and National Grid arguing that the construction of the LNG trucking station violated the State Environmental Quality Review Act and should be halted until certain environmental review requirements were met. On July 27, 2021, the court entered a temporary restraining order that halted construction of the trucking station pending the resolution of a motion for a preliminary injunction. The court held a hearing on August 16, 2021, and on September 3, 2021, the court issued a decision denying the preliminary injunction. In the meantime, due to the halt in construction of the LNG unloading station, National Grid currently projects that the LNG unloading station will not be in service by December 2021 as planned, but will instead enter into service in February or early March 2022. Even if the LNG trucking station is in service, National Grid still would need to obtain various waivers from New York City authorities prior to trucking LNG to the facility.

B. ExC Project

Another critical component of the Distributed Infrastructure Solution is the ExC project, which is designed to increase capacity on the Iroquois Gas Transmission System.

While National Grid's Supplemental LT Report (at 20) anticipated the ExC project to be in-service by November 2023, that deadline would have required a certification from FERC in early 2021. FERC, however, has not approved the application, and on May 27, 2021, FERC stated that it was going to prepare a supplemental Environmental Impact Statement of the ExC project. A decision by FERC currently is not expected until 2022, and then the ExC project will require state permits from New York and Connecticut before construction may begin. Accordingly, National Grid now expects that the delays in permit approvals will delay the project until Winter 2024/2025. National Grid acknowledges that if there are delays to the ExC project or the vaporizers, the electrification components of the Distributed Infrastructure Solution would need to be accelerated, carrying "significant execution risk given the amount of development work required and the scale at which [it] would need to be implemented." (Second Supp. LT Report at 77.) And if the ExC project were rejected, a gap between supply and demand would occur in Winter 2025/2026, even if Vaporizers 13 and 14 are achieved on time. (Second Supp. LT Report at 81.)

C. Fifth CNG Site

Given the extensive delays to the components of the Distributed Infrastructure Solution, National Grid's Second Supplemental LT Report contemplates the construction of a fifth CNG site for Winter 2022/2023, in order to forestall the projected gap between demand and supply capacity which is one year sooner than National Grid was projecting under its prior forecast.

(Eighth Quarterly Report at 5.) Although the selection process has proceeded, a specific site has not yet been selected.

While National Grid has the benefit of its experience managing the construction and operation of the four prior sites at Riverhead, Glenwood, Inwood and Barrett, National Grid nevertheless must seek local permits on an expedited basis, and prior permitting delays suggest that the timeline still carries risk. (See Fifth Quarterly Report at 2-4.) Indeed, at a recent internal National Grid meeting, National Grid's Gas COO rightly implored his reports to maintain a "sense of urgency" regarding the new CNG site and to "avoid complacency."

D. Long-Term EE/DR

Incremental DSM programs are essential to the Distributed Infrastructure Solution. DSM programs include EE, DR, and electrification of heat ("Electrification"). National Grid estimates the dekatherm ("Dth") savings to be achieved through DSM as basically a 'plug number' generated as the difference between National Grid's gas demand and its supply capacity. Accordingly, the Distributed Infrastructure Solution relies upon gas demand (load) reduction as part of a critical effort to meet the projected gap between gas demand and supply (Demand-Supply Gap). In addition, the Distributed Infrastructure Solution in the Second Supplemental LT Report includes no gas supply capacity expansions after Winter 2024/2025 and therefore wholly depends upon incremental DSM to offset all projected Design Day gas demand growth after Winter 2027/2028. At the same time that such reliance is placed on DSM programs, National Grid recognizes that its proposed DSM programs "face implementation challenges in terms of the need for regulatory approval and funding and the execution risk from the extraordinary magnitude and ramp up of these programs and the unpredictable nature of customer participation." (Second Supp. LT Report at 5.)

In the Second Supplemental LT Report, National Grid refined the EE, DR and Electrification components of the incremental DSM in its Distributed Infrastructure Solution. National Grid designed new intensive weatherization programs and a new "Energy Efficient Connections" program intended to facilitate EE at the time when new demand comes onto the National Grid system. National Grid plans to file for approval of these incremental EE programs at the PSC later in 2021. As to DR, the Second Supplemental LT Report includes three new programs focused on daily reductions in gas consumption and more targeted and pronounced hourly reductions in peak demand. National Grid filed for approval with the PSC on June 14, 2021, in Case 20-G-0086 and Case 20-G-0087.

On Electrification, National Grid is pursuing a collaboration with electric distribution companies ("EDCs") in New York State to study the best pathway to achieve incremental heat electrification targets, and National Grid is providing the EDCs with customer leads for heat pump adoption in an effort to meet their heat electrification targets, which can offset gas demand growth. National Grid is also advancing a new model for gas utility delivery of clean heating solutions, through renewable district heating networks using geothermal energy. A National Grid demonstration project in Riverhead, Long Island, used a shared geothermal loop system to provide lower-carbon heating and cooling service to a residential development; National Grid proposed an expanded demonstration program in its downstate New York gas distribution rate case. (Second Supp. LT Report at 29.) Last, National Grid plans to hold annual non-pipeline alternative ("NPA") solicitations to seek innovations to deliver DSM more cost effectively than traditional utility programs. (Second Supp. LT Report at 17.)

As noted above, National Grid acknowledges in the Second Supplemental LT Report that its DSM proposals are aggressive in scope and timing and face multiple risks. More specifically, each of the proposed incremental EE, DR and Electrification elements faces risks in the possible overestimation of market potential and of the ability to reach accelerated levels of adoption, as well as in the potential for failure to secure legal and regulatory approval of the programs and their costs. Indeed, heat electrification is currently uneconomical for many customers, and costs for heat electrification programs are higher than for all other DSM programs; heat electrification involves multiple incentive programs that would require multiple legal and regulatory approvals. Incremental EE and Electrification also risk the potential lack of market resources needed to execute the proposed projects. (Second Supp. LT Report at 18-19.)

In a bit of reverse-engineering, the amount of demand pursued by National Grid's incremental DSM programs -- i.e., efforts to close the gap between natural gas demand and supply capacity -- is driven largely by the difference between forecasted demand and the supply capacity provided by infrastructure components and city-gate peaking supplies. In August 2020, National Grid reported to the Monitor that it intended to submit in Fall 2020 a regulatory filing -- the Incremental Downstate NY DSM ("IDD") Filing -- to seek regulatory approval for future incremental demand-side program details and funding. In November 2020, National Grid reported to the Monitor that it was targeting submittal of the IDD Filing for January 2021, but that plan changed based on developments in the ongoing rate case (Case 19-G-309/Case 19-G-310). For Winter 2021/2022, National Grid is planning to use anticipated underspend of 2021/2022 NENY funds to cover costs of the weatherization program (a form of EE) and funding sought via the 2019 rate cases (Case 19-G-0309 and Case 19-G-301) to cover DR. (2021-2022 Gas DR Imp. Plan at 3).

Consistent with the process for incremental EE and DR formalized by the PSC in recently approved rated plans, National Grid currently contemplates proposing in the IDD Filing that an annual IDD filing be submitted in July of each year, as well as quarterly DSM program performance filings. The annual IDD filing would report on the past year's program performance, request cost recovery, and provide program details and budget for the following winter season. Thus, National Grid's ability to recover the costs of these programs will likely depend on their ongoing success. National Grid also may seek that DSM program costs for meeting long-term demand be funded through a surcharge, pending the inclusion of the costs in a rate case for recovery.

Whether National Grid will be able to achieve enough DSM to meet the demand reduction needed to cover the gap in future years is unclear. It will depend, in part, on National Grid's success in developing new EE programs for its various customer classes, including weatherization and other measures which reduce gas peak demand on a Design Day, as well as on National Grid's ability to increase participation in its DR programs and possibly to offer additional types of DR. In addition, National Grid is aware that it must keep 100% of its non-firm temperature-controlled customers on non-firm rates if it is to avoid any incremental Design Day gas consumption from these customers. This may be a challenge because, in past years, there has been significant customer interest in moving from non-firm to firm rates. Last, it will depend on National Grid's securing approval of funding at the levels needed to cover the costs of the DSM programs.

*   *   *

In the Monitor's opinion, National Grid has taken substantial efforts consistent with the Settlement Agreement and with the Monitor's recommendations in order to develop its long-term plan through an iterative process involving substantially greater transparency and public discussion than in the past. Having said that, the resulting Distributed Infrastructure Solution pursued by National Grid remains emergent -- permitting remains outstanding, complex facilities must be built, customers must engage on demand side management, etc. -- and cannot be relied upon with confidence to deliver the required supply capacity to meet demand in upcoming winters. Accordingly, additional focus on these developing projects should be given by all concerned, including National Grid, its customers, and the DPS.

IV. Organizational Matters

A. Risk

At the beginning of the monitorship, the Monitor identified deficiencies in National Grid's risk and compliance functions, as National Grid relied generally on reactive, ad hoc, crisis management tools -- such as short-lived committees populated by business executives operating without any independent risk/compliance leadership -- in order to address serious issues such as those leading to the moratorium and the Settlement. National Grid lacked a dedicated executive with the title of Chief Compliance Officer or Chief Risk Officer sitting with senior executive teams and having responsibility and resources to identify, examine and manage the key risks, suitable controls and contingency planning needed in order to avoid a future moratorium or other significant risks. Recommendation 2 in the Monitor's First Quarterly Report therefore called for a review of National Grid's governance structure around risk management, the monitoring and testing of controls, and the development of contingency plans, and also including the possible establishment of the role of Chief Compliance Officer. The Monitor further recommended that National Grid obtain support from outside management consultants for this review.

Over approximately the last year and a half, National Grid has taken meaningful steps to improve its risk management. In March 2020, National Grid's U.S. President established a new U.S. Risk Committee, which sought to establish a new enterprise risk management process. The U.S. Risk Committee, for example, has maintained a foundational risk register, has reviewed the reporting of regular testing of controls, has conducted deep dives into top risks, and has taken efforts to implement similar risk management best practices.

After National Grid transitioned to a more jurisdictionally-focused operating model in Spring 2021, National Grid instituted a New York Risk Committee. Thus, instead of a single risk committee addressing all U.S. operations, the U.S. Risk Committee meets quarterly, and a more New York-focused risk committee meets bi-monthly. At both the U.S. and New York levels, the risk committees continue to work toward establishing second-level control testing which had been absent when the Monitor first issued his recommendation and remains a key goal under development at National Grid.

As for the U.S. Chief Risk Officer role, National Grid appointed an interim U.S. Chief Risk Officer in April 2020 and subsequently appointed a permanent U.S. Chief Risk Officer in January 2021. In March 2021, the Monitor interviewed the U.S. Chief Risk Officer, who joined National Grid three years earlier in an internal audit function after working as an external auditor at a major accounting firm for 16 years, where his clients included a number of utilities. Recognizing the challenges still faced by National Grid, the U.S. Chief Risk Officer emphasized ongoing efforts to establish standardized processes for executing the self-assessment and testing of key controls, and to build a dedicated second-line team to carry out controls testing.

While National Grid has made meaningful progress in establishing the new risk committees and appointing a permanent U.S. Chief Risk Officer, the risk committees have not yet achieved full implementation and a steady state. Accordingly, the Monitor recommends that the U.S. Chief Compliance officer or his delegate oversee annual compliance examinations at least through Winter 2023/2024 to assess the progress of both the U.S. and New York Risk Committees and to ensure that they achieve full implementation.

B. Compliance

With respect to compliance, National Grid did not make timely progress in implementing Recommendation 2 from the First Quarterly Report and in addressing concerns about the compliance organization raised by the Monitor. In the First Quarterly Report (at 2), the Monitor recommended evaluating the establishment of a standalone U.S. Chief Compliance Officer "having the responsibility . . . of ensuring that National Grid and its relevant departments and leadership take sufficient steps to anticipate and manage risks, test and monitor controls, and prepare contingency plans. The Chief Compliance Officer should be independent of the operational executives and report at least annually to the Board of the National Grid parent company or a committee thereof."

National Grid worked with the Boston Consulting Group ("BCG") in order to identify ways in which to enhance regulatory compliance in the U.S. Ultimately, National Grid's effort with BCG did generate the outline of a process which should enable the Compliance team to identify high risk areas and then focus their testing and risk management plans. This process, in concept, should result in strengthening the design and effectiveness of controls such as management governance, policies and procedures, testing, training, and reporting of concerns.

Even so, National Grid's progress in implementing this plan has been lackluster. Some of National Grid's earlier efforts to meet Recommendation 2 were wholly inadequate. As detailed in the Sixth and Seventh Quarterly Reports, National Grid's initial plan to establish the U.S. Chief Compliance Officer position failed to address basic concerns such as independence and sufficient access to the board of National Grid's parent company. After the Monitor raised these deficiencies in the Sixth Quarterly Report, National Grid revised its plan in vital ways that more closely aligned with the Monitor's recommendation. First, the U.S. Chief Compliance Officer will not be the U.S. General Counsel as had previously been envisioned, nor will the role sit in National Grid's Legal Department. Second, the U.S. Chief Compliance Officer will report directly to the U.S. President of National Grid and will have direct access to the Board of its parent company, thereby placing the role in a position possessing the ability to raise concerns directly with leadership at the highest levels. Third, National Grid agreed to conduct a search including external candidates for the role of U.S. Chief Compliance Officer.

National Grid proceeded to work with an external recruiting firm in order to identify suitable external candidates for the role of U.S. Chief Compliance Officer. The Monitor attended several discussions between National Grid and the recruiting firm during which the respective qualifications of candidates and their progress through the interview process were reviewed. National Grid ultimately hired an external candidate as U.S. Chief Compliance Officer, who began on August 16, 2021. The Monitor interviewed the new U.S. Chief Compliance Officer and found him to be a knowledgeable and experienced compliance professional who has helped build compliance programs around the world. The U.S. Chief Compliance Officer stressed his goal of achieving a "continuous improvement model" within the compliance organization and throughout National Grid more broadly.

In the opinion of the Monitor, the U.S. Chief Compliance Officer is well qualified for his role and described several worthwhile efforts he seeks to pursue. Having said that, substantial effort will be required by the U.S. Chief Compliance Officer and National Grid as a whole before a mature and comprehensive compliance program might be fully implemented.

C. Gas Forecasting and Planning

Because several internal groups historically have held responsibility at National Grid for the forecasting of gas demand and supply capacity, Recommendations 3 and 4 in the First Quarterly Report called for National Grid to pursue reviews -- with the help of outside management consultants -- of how best to structure related roles and responsibilities. Accordingly, in April 2020, National Grid retained Ernst & Young ("E&Y") and Marquette Energy Analytics ("Marquette").

1. E&Y

E&Y drew conclusions consistent with the Monitor's findings in the First Quarterly Report. For example, National Grid in the past has operated with limited ability and agility to conduct scenario planning in its forecasting efforts, has not fully captured and incorporated demand-side solutions, and has lacked clear accountability and strategic direction in its decision-making process.

As a result of National Grid's engagement with E&Y per the Monitor's recommendation, National Grid has implemented several new capabilities including: a new Transformation Office and a gas scenario planning "process owner"; a significant expansion of scenario analysis; the evaluation of non-supply solutions; the creation of new roles (particularly for more demand-side expertise); and a series of new and enhanced interactions and inputs across departments for developing demand forecasts, identifying any gap with supply capacity, and proposing solutions in order to close any gap. In addition, the project has sought to incorporate this new operating model into National Grid's new risk management efforts, in order to identify and mitigate related risks in gas forecasting and planning.

The new Transformation Office offers significant improvements, and the Second Supplemental LT Report -- which was spearheaded by the "process owner" and incorporated multiple contingency scenarios -- reflects the greater ease and efficacy by which National Grid can assemble and digest inputs from multiple internal resources in order to present a more coherent analysis of demand and supply capacity. At the same time, National Grid operates via a broad mosaic of internal groups and committees having diverse ownership, across which the Transformation Office now provides helpful facilitation. Thus, while the Transformation Office provides valuable support to National Grid's operations, it is premature to conclude that the Transformation Office and the "process owner" -- even when viewed in combination with other controls and enhancements being pursued by National Grid -- will satisfactorily mitigate the gas supply risks faced by National Grid and its customers in the Service Territory.

2. Marquette

The Monitor's First Quarterly Report (at 2) recommended that "consideration be given as to whether the current Design Day standard . . . remains an appropriate standard for future planning by National Grid." This recommendation arose in part from the fact that the last Design Day -- currently defined as a 24-hour period with an average temperature of zero degrees in Central Park -- had not occurred since 1934 and therefore may no longer be the most appropriate gauge for forecasting and gas planning efforts. National Grid accepted the Monitor's recommendation and retained Marquette which performed an independent study of National Grid's data. In addition, on March 19, 2020, the PSC launched a proceeding in Case 20-G-0131 (the "PSC Gas Planning Proceeding") that has been reviewing gas planning processes at the utilities in order to produce proposals to modernize the system.

As discussed in the Fifth Quarterly Report (at 6-7), Marquette's analysis suggested that any adjustments that might be made to National Grid's methodology would result in an overall increase of the demand forecast. Differences between Marquette's methodology and National Grid's methodology included: Marquette incorporated both wind and temperature in its Design Day analysis while National Grid uses only temperature; Marquette utilized multiple weather stations while National Grid relies on Central Park; and Marquette used some different statistical methods than National Grid.

National Grid continues to evaluate the results of Marquette's analysis and has determined to defer implementing changes to its forecast methodology, such as whether to incorporate wind, pending the work with DPS and other utilities in the PSC Gas Planning Proceeding, in which design day criteria have been raised as an issue. Based on the feedback to date from Marquette's analysis, however, it appears that any adjustment that might later be made to the current Design Day standard used by National Grid is unlikely to reduce its demand forecast in a material way or otherwise to narrow the gap between forecasted demand and supply capacity.

D. Language in Former Employees' Non-Disclosure Agreements

In March 2021, National Grid decided to terminate the role of SVP, Corporate Affairs. According to National Grid, because the organization is now more focused on state-specific leadership, National Grid decided to rely upon two Corporate Affairs leads for the New York and New England jurisdictions; the more senior U.S.-level role therefore was eliminated.

Given the importance of the Corporate Affairs department to how National Grid manages obtaining sufficient gas supply capacity to meet demand, the Monitor sought further information regarding National Grid's decision to eliminate the role of SVP, Corporate Affairs. The Monitor had concern that National Grid had delayed the Monitor's receipt of substantive support for National Grid's justification in eliminating the position of SVP, Corporate Affairs, including by insisting upon having its counsel attend the Monitor's interview of the departing SVP, Corporate Affairs.

The Monitor therefore sought to ensure that interviews pursued by external authorities from departing executives in the future are not influenced, for example, by potential concern of those executives that their offering of candid and forthcoming assessments about National Grid might affect the financial or other terms of their separation. For this reason, Recommendation 1 in the Monitor's Ninth Quarterly Report provided that any confidentiality provision in National Grid's separation agreements contain exemptions for communications by departing employees with the Monitor, DPS, or any other state or federal regulatory authority.

National Grid accepted the Monitor's recommendation and has revised its form separation agreement consistent with the recommendation, including by clarifying that the departing executive need not notify or obtain approval from National Grid prior to communicating with regulators or other government agencies in connection with any investigation or proceeding. Accordingly, the form separation agreement now includes language that reads:

> The General Release does not, however, restrict the Executive's right to file a charge, testify, assist or participate in an investigation or proceeding before the Equal Employment Opportunity Commission, the National Labor Relations Board ("NLRB"), the U.S. Department of Labor ("DOL"), any state or federal regulatory body (e.g., the New York Public Service Commission), or any other federal, state or local agency charged with the enforcement of any laws, or their staffs and designated representatives, or from testifying truthfully in the course of any such regulatory, administrative, legal or arbitration proceeding. The Executive does not need to notify, or secure the approval of, the Company prior to communicating directly with regulators or other governmental agencies related to any such investigation or proceeding.

E. Performance Metrics for Settlement Items

In the Eighth Quarterly Report (at 2), the Monitor recommended that individual performance reviews and compensation determinations be linked to the successful and timely completion of material elements of the Settlement and the Monitor's recommendations. This recommendation was necessary because the Monitor had perceived a lack of individual accountability by management of National Grid in connection with implementation of the Settlement and the Monitor's recommendations.

In addressing the recommendation, National Grid initially incorporated goals related to the Settlement in the performance process for only six of its executive roles. In addition, these goals lacked concrete metrics and were only superficially described, e.g., executives were to "support" the long-term supply process. Further, National Grid did not review any of these six executives on these supposed metrics in fiscal year 2020 -- despite 2020 being a critical year for launching the implementation of virtually all aspects of the Settlement -- asserting that a confluence of the pandemic and its annual performance rating cycle caused it to focus on other priorities.

Although National Grid purported to accept the Monitor's recommendation, National Grid initially had failed to enhance its performance management plan in meaningful ways. National Grid subsequently filed a more expansive implementation plan with the PSC on April 15, 2021, which committed, for example, to incorporate "specific deliverables" and "specific, objective metrics" into the performance goals for fiscal year 2022 for those senior executives and management employees having responsibility for material elements of the Settlement. The plan also stated that the individual's "success performing his/her job responsibilities in furtherance of achieving these goals" will constitute a "material factor" in the performance review and any variable compensation award. Further, the performance goals were to be cascaded to reach individuals "with direct responsibility … including, at a minimum and without limitation, in the areas of Asset Management, CNG/LNG Operations, Project Management, Supply Procurement, Transformation, Customer, Future of Gas, and Legal."

In August 2021, National Grid provided the Monitor with revised performance metrics relating to the Settlement for 17 key executives with responsibility over items relating to implementation of the Settlement and the Monitor's recommendations. The metrics include overall objectives for each role, along with several corresponding "targets" the executive must achieve in furtherance of his or her objectives. For example, the New York President's objective is to "[d]evelop a long-term gas supply plan for downstate NY that continues to ensure system reliability and safety for all customers while incorporating non-pipe alternatives." One of the targets includes "[i]mplement[ing] the various components of the Company's long-term solutions on a schedule that avoids future service restrictions, including . . . LNG Vaporizers 13/14 and/or 5th CNG Site," as well as EE and DR programs. In other words, absent the successful and timely implementation of these actions, the target will not be achieved.

For executives reporting up to the New York President, several targets are similarly specific and objective. The VP, New York Compliance's targets include: "Bi-monthly risk and compliance forums are held with risk and control owners to monitor known risks, identify emerging risks, assess effectiveness of risks and controls, and develop action plans to improve controls to mitigate risks." The VP, LNG/CNG Operations must "[p]repare for future winter needs including (i) CNG Site #5 project development and sanctioning and (ii) securing necessary permits and advancing construction for Greenpoint Vaporizer 13/14, in each case on a schedule that supports the need-by date." Again, if these targets are not successfully accomplished, then the performance review should clearly reflect that fact.

Some executives' targets, however, continue to incorporate some inherently subjective elements. For example, one of the targets for the VP, Corporate Affairs NY is to "[s]upport to the satisfaction of the New York President the public engagement efforts on the refreshed long-term report (June/August 2021) as committed in the Company's April 15th Implementation Plan, including: (i) engaging key stakeholders pre/post publication in June-August, (ii) executing the public communications plan (website, social media, advertising, etc.) for the LT Report; and (iii) facilitating a public meeting on the report."

National Grid produced evidence to the Monitor that the performance metrics have been cascaded below the more senior executives to additional employees having direct responsibility in the relevant areas such as Gas Engineering, LNG/CNG Operations, Gas Complex Construction and Compliance.

As noted, the Monitor has expressed concern repeatedly regarding the accountability of National Grid executives for successfully and timely delivering on material components of the Settlement and the Monitor's recommendations. In the Monitor's opinion, establishing specific and objective goals for individual performance constitutes a direct means of ensuring that executives act with appropriate urgency and focus on achieving these goals. Accordingly, a recommendation of this Closing Report is that the U.S. Chief Compliance Officer oversee an annual examination to assess whether these performance reviews are operating in this matter and, if not, to require remedial steps.

V. **Action Plan (Winters 2019/2020 and 2020/2021)**

Pursuant to the Settlement ¶ III, National Grid was required to submit to DPS an action plan describing "how it will provide safe and adequate service to allow it to address the increased load associated with gas being provided" to customers previously denied service for Winters 2019/2020 and 2020/2021 (the "Action Plan"). In contrast to the solutions presented in the LT Reports designed to meet customer demand over the long term, the measures in the Action Plan were intended to provide a stop-gap in order to avoid a moratorium over the past two winters.

National Grid filed its original Action Plan with the PSC in December 2019 and later updated its plans with a Revised Action Plan in June 2020. Both versions of the plan relied heavily upon CNG as a source of supply in the form of trucking CNG from Pennsylvania to National Grid facilities in the Service Territory. This procedure raises risk and reliability questions, for example, because it involves trucking CNG from a distance during the coldest weather and requires National Grid and its vendors to coordinate effectively in inclement conditions. Engineering executives at National Grid in particular voiced concern about the dependability and large-scale reliance upon CNG for meeting Design Day needs over the long term. And while the Action Plan was aimed at only the last two winters, in reality the CNG components of the Action Plan will continue to be part of National Grid's supply portfolio and be employed in a Design Day scenario for the foreseeable future. Indeed, as discussed above (at 15-16), National Grid's Second Supplemental LT Report now incorporates building a fifth new CNG facility as part of the Distributed Infrastructure Solution.

As reviewed in prior monitor reports, National Grid completed the components of the Revised Action Plan for Winters 2019/2020 and 2020/2021, albeit with repeated delays and shifted deadlines. During Winter 2019/2020, National Grid's Action Plan called for the use of CNG at sites in Glenwood and Riverhead, New York, for up to 8 hours per day during a cold weather event, which would require approximately 42 truckloads of CNG per day.

As Winter 2020/2021 approached, National Grid needed to construct one additional CNG site and to expand the existing CNG site at Glenwood. The Action Plan also included the replacement of two vaporizers at Greenpoint (Vaporizers 11 and 12) for Winter 2020/2021. The addition of a third CNG site, however, required state and local permits, which presented risks for National Grid. Accordingly, National Grid pursued multiple CNG sites in parallel, and pursuant to the Revised Action Plan, National Grid ultimately focused its efforts on Inwood for the third site to be commissioned prior to January 2021. National Grid also continued to pursue simultaneously a fourth site at Barrett in the event that Inwood became delayed. The Revised Action Plan continued to plan for Vaporizers 11 and 12 to be in service for Winter 2020/2021.

The Monitor attended regular internal meetings among a large team of professionals responsible for the various elements of the Action Plan. The professionals utilized multiple tools to track, monitor and report on progress of the projects under the Action Plan. But the Monitor on multiple occasions expressed concern with National Grid's tendency to allow its deadlines to be shifted, which raised the prospect that such deadlines may not be viewed as actual deadlines and may not be acted upon with sufficient urgency. The Monitor had related concerns that senior management at National Grid may not have been receiving adequate insight and internal reporting about such shifts in the timeline. These concerns in part led to the Monitor's recommendation (discussed above at 22-24) that National Grid incorporate specific performance metrics relating to the Settlement items.

In October 2020, National Grid filed an update with PSC acknowledging that it would fail to implement Vaporizers 11 and 12 by Winter 2020/2021 (see above at 14) and that the Riverhead, Glenwood and Inwood sites would provide adequate supply capacity needed to meet demand for Winter 2020/2021. National Grid did succeed in commissioning the expanded Glenwood site and new Inwood facility into service for Winter 2020/2021, albeit with virtually no margin for error in the schedule. National Grid also continued its work on the Barrett site and commissioned the fourth CNG site in June 2021.

In sum, despite repeated permitting delays and the failure to complete Vaporizers 11 and 12 by Winter 2020/2021, National Grid added or expanded three CNG sites by Winter 2020/2021, which National Grid determined would supply enough CNG in order to meet Design Day demand, consistent with the Revised Action Plan.

VI. Efficiency Plan

Pursuant to Settlement ¶ VI.a, National Grid developed an Efficiency Plan to deliver a package of EE, DR and other gas conservation measures designed to reduce peak-day gas usage among current customers. As described below, National Grid historically has operated EE and DR programs, and the Settlement accordingly required National Grid to spend $8 million to fund the Efficiency Plan for Winters 2019/2020 and 2020/2021 by enhancing the existing EE and DR programs with supplemental efforts. As of August 19, 2021, National Grid had spent approximately $7,478,000 on the Efficiency Plan, and it is possible a portion of the Efficiency Plan funds will remain unspent. If that is the case, then National Grid should allocate those unspent funds to future incremental EE and DR programs consistent with the spirit of the Settlement.

A. Incremental EE and DR for Winter 2019/2020

1. Enhanced EE

The new EE programs include an enhanced EE incentive for commercial and industrial ("C&I") customers and various incentive programs for residential customers. These EE programs include intense weatherization measures for buildings and homes such as air-sealing and maximized insulation that reduce customer heating needs. For Winter 2019/2020, National Grid invested approximately $682,000 to achieve savings equal to approximately 1,221,700 therms.[5]

C&I Customers. Under the enhanced C&I customer program, National Grid increased the payments offered to C&I customers by $1.00/therm in order to get them to participate in EE efforts, subject to a limit that the incentive be not more than 50% of the total project cost. Eighty-one customers participated in the C&I enhanced EE program.

Residential Customers. For residential customers, the EE programs included a high efficiency heating equipment initiative which offers incentives for replacing natural gas heating equipment with high efficiency equipment such as hot water boilers, furnaces and water heaters as well as a marketplace bundles program which aggregates a variety of products from the National Grid "Marketplace," an online store that facilitates the purchase of energy-saving products (e.g., thermostats, low-flow shower heads) and services while offering instant rebates at the point of sale for certain products.

The residential heating EE initiative was launched on the National Grid and vendor website on November 15, 2019, and consumer marketing started in early December 2019. Customers began taking advantage of the enhanced incentive by December 6, 2019 and the initiative continued to grow through March 2020. Of the EE product bundles offered in the Marketplace, National Grid increased by $25 its incentive for energy saving thermostats that can be operated remotely (i.e., wi-fi thermostats), and National Grid increased by $5 its discount for water saving measures such as energy efficient shower heads or faucet aerators. Manufacturers also offered additional discounts on Marketplace products.

2. Enhanced DR

The enhanced DR program focuses on load (demand) shedding to reduce the amount of gas needed over a 24-hour period. The enhanced DR program includes both C&I and residential programs. National Grid invested approximately $2,931,000 in the Winter 2019/2020 enhanced DR program.

C&I Customers. The C&I program involved 6-hour events during which participating customers would switch to back-up fuel, change their process, or disable gas-fired equipment in order to reduce demand during an event. National Grid enrolled 123 customers in the expanded gas DR program for C&I customers. Under this program, DR events were to be called when the

[5] A therm is a unit of heat equal to the amount of heat required to raise one pound of water one degree Fahrenheit at one atmosphere pressure.

temperature was forecasted to be at or below 10° F. For each event, participating customers receive an incentive based on the reduction in usage they produce during the peak hours of the gas system (4 AM to 10 AM) that results in a reduction in total gas consumption, relative to their expected baseline over the course of a day. National Grid targeted a reduction of 3,000 Dth per event with a $3.6 million budget. Due to the relatively mild winter, the temperature did not reach the level required to call an event. National Grid called a test event on January 22, 2020, and had an overall customer compliance of approximately 94%. The total consumption during the period was 229 Dth as compared to predicted usage of 4,632 Dth by those same customers if an event had not been called. This results in a reduction of 4,403 Dth by participating customers for the test event and was higher than National Grid's target of 3,000 Dth per event.

Residential Customers. National Grid offered a behavioral (no-incentive) residential and small-medium business ("residential/SMB") program whereby National Grid would send email messages to customers prior to days forecasted for cold weather, alert them that the system would be experiencing high levels of use, and provide tips on how they could manage (reduce) their energy use. National Grid called a test event for the non-incentivized residential/SMB program on February 19, 2020. On February 18, 2020, National Grid sent email messages to 443,547 customers asking them to turn back their thermostats on the following morning. Although 134,580 (30%) of those customers opened their emails, National Grid was unable to determine an amount of load reduction from the event.

National Grid also offered a residential bring-your-own-thermostat ("BYOT") program, whereby customers who had wi-fi thermostats connected to a gas heating system could allow National Grid to turn down the temperature set point by 4 degrees for a 4-hour period in the morning or afternoon. National Grid estimated the total number of potential participants at 15,000 on Long Island and set a target of 2,500 participants. The BYOT program was launched in late February 2020 and as of March 23, 2020, 70 participants had enrolled in the program. Due to Covid-19, National Grid decided not to call a test event for the BYOT program.

B. Incremental EE and DR for Winter 2020/2021

In an order issued in January 2020, DPS approved significant increases for EE in the New Efficiency New York ("NENY") budget for National Grid. Based on that increased funding, National Grid determined to use the increased NENY EE budget to fund the incremental EE for Winter 2020/2021 under the Efficiency Plan, and National Grid allocated the unspent portion ($4.16 million) of the $8 million in the Efficiency Plan Settlement funds to incremental DR. In addition, consistent with Section VI.b. of the Settlement, National Grid and DPS Staff agreed to move $1 million from the Customer Assistance Plan to the Efficiency Plan for funding incremental DR. This $1 million reallocation of funds between the Plans did not actually occur; National Grid received requests for significantly more CAP payments near the end of the program, and its total costs for incremental DR in 2020/2021 were within the amount of available Efficiency Plan funding.

National Grid used the same types of DR for Winter 2020/2021 that it had used in Winter 2019/2020: a C&I DR program; a BYOT incentivized program; and a behavioral non-incentivized program. The costs for National Grid to operate the DR programs in Winter 2020/2021 totaled approximately $3,865,000, with the bulk of costs coming from customer incentives. National Grid explained that total costs were less than the projected total costs due to the sub-100% performance of daily DR resources, a low number of DR events and slightly less than expected enrollments in the BYOT program. (2020-2021 DNY DR Annual Rpt. at 18.)

C&I Expanded DR. National Grid revised the C&I program by expanding the options for customers that participate in the program. Customers were allowed to choose between curtailing their gas usage for one six-hour period (4 AM to 10 AM) during a DR event or curtailing their gas usage for two four-hour periods (6 AM to 10 AM and 5 PM to 9 PM) during the day of a DR event. Customers also had the option of allowing National Grid to remotely control certain heating equipment, known as Direct Load Control ("DLC"). National Grid would continue to call DR events for its C&I program when the forecasted low temperature was at or below 10° F (at LaGuardia Airport for KEDNY and at Republic Airport for KEDNY) and would provide customers at least 20 hours' notice of a DR event by sending notices by 8 AM the day prior to an event.

The payment structure for the C&I DR program was changed to include three components. First, a reservation payment would be applied to the Dth reduction that National Grid calculated for the customer when it joined the program. The reservation payments are in $/Dth/Month and increase based on which option the customer selected and whether the customer opted for DLC. Second, National Grid offered a performance payment for the volume of natural gas actually curtailed by a customer during a DR event or test event. The per Dth performance payment is the same for all customers. Last, National Grid included a performance factor that will be based on a three-event rolling average of performance, i.e., the volume of natural gas curtailed by a customer during a DR event or a test event as compared to the volume reduction that National Grid had calculated for that customer.

National Grid targeted 10,000 Dth per DR event from the C&I Expanded DR program and assumed a reliability value of 60% given historical data regarding gas DR. Therefore, National Grid needed to enroll 16,667 Dth/day to ensure it would meet the 10,000 Dth target. The program reached a total of 17,970 Dth/day in Design Day enrollments for the Winter 2020/2021 season, consisting of 156 individual facilities. Over 90% of customer accounts that had participated in the Winter 2019/2020 season returned for the Winter 2020/2021 program.

Similar to Winter 2019/2020, temperatures did not reach the level necessary to call an actual DR event. Therefore, National Grid conducted two separate test events for participating customers, with no overlapping participation. The first test event was held on December 2, 2020 from 6:00 AM-9:00 AM, with 133 customer accounts participating. The second test event was held on December 22, 2020, during the same time window and had 26 participating accounts.[6] Both test events occurred under the same weather conditions. A total of 15 accounts did not have functional or accurate hourly usage data at the time of the events. Those customers were still asked to curtail usage during the test events, but their performance could not be calculated or validated. Of the accounts with functional active hourly metering, National Grid measured a total customer performance of 83% for the test events relative to the weather-adjusted baseline.

[6] Three accounts that participated in the December 22 event discovered that they did not possess working back-up heating equipment and subsequently dropped from the program.

National Grid calculated a weather-adjusted load drop of 2,568 Dth[7] over the course of the 3-hour test events, or an average of 856 Dth/hr.

BYOT Program. Under the BYOT program, residential customers were offered a $25 incentive to enroll their Wi-Fi connected smart thermostats in the program. Customers could sign up through their thermostat vendor or directly with National Grid. Customers are eligible to receive an additional $25 incentive if they participate in the program in subsequent years, provided they participated in at least 70% of the DR event hours.

BYOT events can be called each winter season between November 1 and March 31, when temperatures are forecasted to be far below seasonal averages. National Grid expects to call ten to fifteen BYOT events per season. During an event, National Grid will reduce temperature setpoints on enrolled devices by 4° over a 4-hour period, either from 6 AM to 10 AM or from 5 PM to 9 PM. Customers retain the ability to override the temperature setbacks with no penalty, although future incentives may be withheld from customers that do not meet a certain performance threshold. The BYOT program is intended to achieve peak hour reductions and allows customers to shift their load from peak consumption periods to an earlier or later part of the day. Although National Grid expected to enroll 2,500 devices for Winter 2020/2021, it enrolled 2,251 devices or 90% of its projection.

National Grid designed the Winter 2020/2021 BYOT program as a test case for estimating program potential and capability. To estimate statistically valid results, National Grid developed a "treatment and control" design for the Winter 2020-21 BYOT program. Customer devices were randomly assigned to 3 different treatment groups, of which 1-2 groups could be dispatched during an event (treatment), with the non-dispatched group(s) serving as the control groups. National Grid conducted four events for the Winter 2020-2021 season. The events demonstrate that, despite the increases in consumption for the pre-heating and snapback periods, the BYOT program can achieve reductions in net daily gas consumption in addition to the hourly reductions.

Behavioral Incentivized DR Program. National Grid continued the Behavioral DR Program for residential and small customers. Under the Behavioral DR Program, emails are sent to customers alerting them of pending cold weather and offering tips on ways to reduce gas consumption during peak hours. No incentives are provided to customers that receive the emails, and customers are not obligated to follow the suggestions offered in the emails.

National Grid conducted one large Behavioral DR event on January 29, 2021, and sent email messages to 489,969 residential and small commercial customers with tips on ways to temporarily reduce gas consumption in the early morning hours. The email message also included a call to action for customers. Customers committed to participating in the event by selecting a link in the e-mail. Those commitments were tallied with over 2,894 customers saying they would participate in the Behavioral DR event. If National Grid pursued automatic metering infrastructure, National Grid might more accurately determine the contribution of customers participating in DR programs to reduce peak day load.

[7]This figure is the sum of the load drops across all three hours from each of the two events.

In order to obtain accurate information on customer reductions during Behavioral DR events, National Grid provided 900 customers with devices capable of reading hourly gas consumption from traditional drive-by meters. Due to delays in implementation, these devices were largely inactive during the Behavioral DR event on January 29, 2021. National Grid is continuing to work with customers to complete the connections of these devices, which will be utilized to measure impacts of Behavioral DR events in Winter 2021/2022.

VII. Other Obligations

A. Investment in Clean Energy Projects (Settlement ¶ VII)

Under the Settlement ¶ VII, National Grid and its affiliates agreed to commit $20 million of shareholder funds toward clean energy projects and/or investments in New York-based startup energy businesses and technologies to reduce reliance on non-renewable energy sources. On April 15, 2021, the PSC issued an order adopting an amendment to the Settlement providing that "National Grid will repurpose the $20 million of shareholder funding . . . to establish a deferral for the benefit of customers that will be used as a credit to offset the costs of National Grid's Commission-approved energy efficiency and demand response programs." (Order Adopting Second Amendment to Settlement Agreement. Att. A ¶ 2 (Apr. 15, 2021), Case 19-G-0678.) In other words, the repurposed $20 million of National Grid shareholder dollars will be used for advancing EE and DR programs and minimizing the impacts on customer bills. The Monitor accordingly finds that the PSC's order adopting the amendment effectively satisfies this element of the Settlement.

B. Customer Assistance Program ($7 million)

Under Settlement ¶ VI.b, National Grid "agree[d] to fund" up to $7 million for a customer assistance plan to address hardships endured by customers affected by the moratorium, including hardships identified in complaints filed with the Office of the Attorney General of the State of New York. National Grid developed several programs under its CAP to assist customers in connection with different types of hardships, which National Grid initially intended to make available for one year following the Settlement date (i.e., until November 2020) but later extended to March 31, 2021. Specifically, National Grid established a Customer Inconvenience Credit (a $200 bill credit to customers affected by the moratorium), a Residential Customer Assistance Fund (to address more significant financial hardships caused by the moratorium), and a Small and Medium-Sized Business ("SMB") Assistance Fund (a similar assistance fund for SMB customers).

National Grid initially placed caps on claims of both residential and SMB customers of $2,500 and $50,000, respectively, but raised the residential cap to $20,000 because relatively few claims had been submitted. After the Monitor raised concerns that customers might not be aware that assistance was available, National Grid added information about the CAP to its website that disseminated the LT Report, and to the Summary of the LT Report, and revised its talking points for the public meetings to specifically inform attendees about the CAP during the program. Further, because Settlement ¶ IV.b. provided that if the CAP "funds are not needed in their entirety for the Assistance Plan, such monies will be used to increase funds available for the Efficiency Plan," and due to the relatively few claims early in the program, the Monitor recommended in the Second Quarterly Report (at 11) that National Grid evaluate potential alternative uses for any leftover funds consistent with the intent of the Settlement.

National Grid subsequently removed the limits on the value of the CAP claims it would pay out. However, National Grid continued to scrutinize higher-value claims more closely, including by working with an outside accounting firm to obtain and review documentation relating to more complex claims such as those claiming lost profits by commercial customers. Even after lifting the claim limits, National Grid might still have some portion of the $7 million left unspent. Thus, National Grid planned to allocate any leftover funds to the Efficiency Plan.

On October 2, 2020, the PSC approved an amendment to the Settlement which, among other things, authorized $500 thousand from the CAP to be allocated to continue the Monitor's engagement. In addition, as Winter 2020/2021 approached (along with the November 2020 end of the program), National Grid observed an uptick in claims. More high-dollar claims were filed and approved, and National Grid currently is on track to spend the bulk of the $6.5 million (after the PSC's October 2, 2020 approval of the amendment) under the CAP to address customer hardships. To date, National Grid has paid nearly 220 claims totaling approximately $5.4 million, and additional claims are pending approval. Coupled with the approximately $330 thousand National Grid paid out as Customer Inconvenience Credits, National Grid has spent approximately $5.7 million under the CAP.

Even after the final claims are paid out, it is still possible some portion of the $7 million allocated to the CAP will remain unspent. Insofar as any CAP funds are leftover, National Grid should allocate those funds to incremental EE and DR programs consistent with the spirit of the Settlement. Furthermore, the U.S. Chief Compliance Officer or his delegate in the compliance organization should conduct a compliance exam at the conclusion of Winter 2021/2022: (a) to ensure that the remaining eligible claims under the CAP were paid out; (b) to verify that any leftover funds were allocated to incremental EE and DR programs; and (c) to require, if necessary, remedial steps in order to ensure that the funds are spent on EE and DR programs.

C. Reconnecting Customers

The Monitor previously found that National Grid complied with its obligation under the Settlement to make "best efforts" within 45 days of the Settlement to contact and provide service to applicants who were denied service during the moratorium and to connect new customers and large commercial or industrial customers "as soon as practicable." (Second Quarterly Report at 7-9; Fifth Quarterly Report at 10-11.)

Within 30 days of the Settlement date, National Grid undertook the following efforts to contact denied applicants:

- Outbound calling.
- An e-mail to applicants with an e-mail address on file.
- If no e-mail address was on file or National Grid determined that an e-mail was not opened or bounced back, National Grid sent a certified letter to the physical address on file.

- If National Grid received no response from the call, e-mail or letter, National Grid sent a second certified letter.

- Extended customer call center hours and dedicated call lines for denied applicants. The phone number for the dedicated line was provided on the e-mails and letters to customers.

- Emails to plumbers with whom National Grid partnered in order to assist customers with natural gas conversions. The e-mails notified the plumbers that their mutual customers could be eligible for connections.

- Web banners on the National Grid website.

National Grid tried additional methods of communication to reach customers who had not responded to the above attempted contacts, such as going door-to-door and leaving door hangers on the premises. National Grid continued its efforts to contact and connect customers beyond the 45-day period under the Settlement. As of August 30, 2021, approximately 4,100 of the approximately 5,500 customers who were denied service ultimately had been connected.

D. Data Systems Regarding Applications for Service

Recommendation 3 from the Monitor's Second Quarterly Report recommended that National Grid ensure that, in the event of a future moratorium, "its systems are capable of tracking applications, contacts and related data without significant manual intervention and reconciliation." In its June 1, 2020 letter to the PSC, National Grid accepted the recommendation and acknowledged that "[t]racking applications and customers inquiries received through various channels during the 2019 moratorium presented a challenge that required significant resources to manage day-to-day."

Multiple National Grid personnel involved in the customer-tracking processes developed high-level ideas for enhancing National Grid's systems in order to improve the tracking of applicants in the case of a future moratorium. The Monitor observed the workshop and found it to be a productive session that elicited thoughtful feedback by participants about past challenges and possible solutions going forward. For example, participants discussed their desire for better integration between the systems that track billing, customer contacts, and work management. Participants also proposed various additional process and governance improvements.

National Grid has long had multiple long-term initiatives underway to overhaul data systems and processes within its organization. National Grid has sought to incorporate requirements for its customer-management systems to address the deficiencies that National Grid experienced in connection with the moratorium as it continues with these long-term projects. Because of the longer time horizon associated with these projects, the Monitor recommends that the U.S. Chief Compliance Officer or his delegate in the compliance organization review semi-annually progress on the efforts to update customer systems, with a specific focus on improvements made to address the particular deficiencies experienced during the moratorium. Within 30 days of substantially completing the relevant systems enhancements but in no event later than December 31, 2022, National Grid should certify to the PSC (via the Secretary to the Commission) that it has complied with this recommendation.