# Table of Contents

1.0 Executive Summary .......................................................................................... 1
2.0 Highlights Since Previous Quarter ................................................................. 1
   2.1 Major Task Activities ............................................................................. 1
   2.2 Challenges, Changes, and Lessons Learned........................................... 3
3.0 Next Quarter Forecast....................................................................................... 4
4.0 Work Plan and Budget Review ....................................................................... 5
   4.1 Updated Work Plan .............................................................................. 5
   4.2 Current Budget.................................................................................... 5
5.0 Quarterly Report Template............................................................................... 6
Appendix 1.............................................................................................................. 7
Appendix 2............................................................................................................ 11
1.0 Executive Summary

On February 14, 2017, Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid" or the "Company") filed a proposal for the Distributed Generation Interconnection REV Demonstration Project (the "Project") in Case 14-M-0101.1 The Project is designed to test alternative solutions for increasing the pace and scale of interconnecting distributed generation ("DG") systems above 50 kW through upfront investments by the Company coupled with a cost-allocation methodology aimed at removing barriers for DG interconnection applicants. The Company proposed to test these solutions at two of its substations, Peterboro and East Golah (the "Demonstration Areas"). By letter dated April 24, 2017, New York State Department of Public Service Staff ("DPS Staff") approved the Project with modification, and directed the Company to file an implementation plan, which the Company subsequently filed on May 24, 2017 (the "Implementation Plan"). The Company filed a quarterly update for the third quarter of 2017 on November 17, 2017, indicating that the Project was proceeding on schedule. The purpose of this quarterly report is to provide an update on the Project for the fourth quarter of 2017, ended December 31, 2017. As explained below, the Project is continuing to proceed on schedule, with overall construction work now complete. The Company has started Project closeout activities and anticipates completing them by the end of the Project term.

2.0 Highlights Since Previous Quarter

2.1 Major Task Activities

The Project is proceeding on schedule. Below are Project milestones included in the Implementation Plan updated to include changes and adjustments reflected in the Q3 report and this report, as well as the current status of each milestone.

<table>
<thead>
<tr>
<th>General Project Milestones</th>
<th>Date</th>
<th>Milestone</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date (Month/Year)</td>
<td>Milestone</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>March 2017</td>
<td>Begin general outreach</td>
<td>Commenced</td>
<td></td>
</tr>
<tr>
<td>April 2017</td>
<td>Provide funding numbers</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Begin marketing the Project</td>
<td>Commenced</td>
<td></td>
</tr>
<tr>
<td>May 2017</td>
<td>Order long-term materials</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop cost per kW</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>August 2017</td>
<td>Begin site-specific outreach to developers</td>
<td>Commenced</td>
<td></td>
</tr>
<tr>
<td>October 2017</td>
<td>Mapping Portal (feeder)</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Develop mapping portal (land use)</td>
<td>Commenced</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Design Developer Survey</td>
<td>Completed</td>
<td></td>
</tr>
</tbody>
</table>

---

The Company has completed all construction work in the Demonstration Areas. With construction complete, the Company’s Customer Energy Integration – NY (“CEI”) department has continued to market the Project to DG developers seeking to interconnect in the Demonstration Areas.

On November 9, 2017, CEI made a Project presentation to developers as part of the New York State Energy Research and Development Authority’s (“NYSERDA”) monthly conference call. Likewise, on December 6, 2017, CEI hosted a Project webinar with more than 14 developers participating. In total, National Grid received follow-up inquiries from eight different developers with interest in interconnecting approximately 8-10 MWs of capacity in the Demonstration Areas.
In addition to the outreach efforts, CEI also completed a mapping portal to help identify interconnection locations that should have minimal impact on the Company's distribution system. The Company’s Economic Development department also identified parcels of land in the Demonstration Areas that have the potential to accommodate large-scale DG projects.

### 2.2 Challenges, Changes, and Lessons Learned

The table below lists the challenges, changes, and lessons learned since submittal of the Implementation Plan.

<table>
<thead>
<tr>
<th>2017</th>
<th>Issue or Change</th>
<th>Resulting Change to Project Scope/Timeline?</th>
<th>Strategies to Resolve</th>
<th>Lessons Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3</td>
<td>Mapping Portal</td>
<td>The Company developed a mapping portal to assist developers seeking to interconnect in the Demonstration Areas by providing feeder and land-use information.</td>
<td>The feeder portion of the portal has been completed and is available to developers. The Economic Development department is continuing work on the land-use portion of the portal.</td>
<td>Additional information and tools may facilitate interconnections.</td>
</tr>
<tr>
<td>Q3</td>
<td>Survey Implementation and feedback</td>
<td></td>
<td>Review the evaluation survey to gather feedback from developers who chose to locate DG projects in Demonstration Areas, as well as those who chose not to.</td>
<td>Create a new strategy to help overcome barriers to DG development.</td>
</tr>
<tr>
<td>Q4</td>
<td>Disseminate information about the Project to a broader audience.</td>
<td>Additional efforts to engage with developers regarding the Project.</td>
<td>Hosted a webinar in December and participated in NYSERDA call to provide additional</td>
<td>The Company is seeking new and innovative opportunities to make the developer community</td>
</tr>
</tbody>
</table>
information and facilitate interconnections in the Demonstration Areas.

CEI working with Jurisdictional Managers to facilitate in-person meetings with local officials in the Demonstration Areas.

aware of the Project and its potential benefits.

3.0 Next Quarter Forecast

During the fourth quarter of 2017 the Project team completed construction in the Demonstration Areas, while continuing outreach efforts. For the next quarter, National Grid will begin surveying DG developers in its upstate New York service territory to gather feedback on developers’ interest in interconnecting DG, as well as barriers that may prevent them from pursuing projects. A copy of the survey email, attachments, and survey instrument are included as Appendices 1 and 2. The Company commenced the survey in January 2018, and anticipates a second survey near the end of the Project term.

As set forth in the Implementation Plan, the Company must also adjust its billing for DG applicants based on the specifics of their respective projects. To do that, the Company initiated an effort to automate the billing process. This includes adjustments for remote net metering volumetric logic automation, which the Company implemented in July 2017. The Company anticipates completing its remote net metering monetary and community logic in the next quarter.

In addition, the Company’s CEI department and its Jurisdictional Managers are coordinating in-person meetings with local officials within the Demonstration Areas to provide information about the Project and the interconnection opportunities. The Company also hopes these meetings will provide an opportunity to better understand local ordinances and permitting requirements, which will help the Company provide guidance to DG developers interested in interconnecting in the Demonstration Areas. A revised schedule is provided in Section 4.0.
4.0 Work Plan and Budget Review

4.1 Updated Work Plan

Please refer to the updated Gantt chart below.

4.2 Current Budget

A current budget is provided in the table below.

<table>
<thead>
<tr>
<th>Project Task</th>
<th>4th Quarter Actual Spend</th>
<th>Project Total Spend to Date</th>
<th>Project Budget</th>
<th>Remaining Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CapEx</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering, Material and Construction</td>
<td>$539,000</td>
<td>$1,117,000</td>
<td>$1,237,100</td>
<td>$120,100</td>
</tr>
<tr>
<td>In Service Liabilities &amp; Closeout</td>
<td>$79,395</td>
<td>$164,534</td>
<td>$188,700</td>
<td>$24,166</td>
</tr>
<tr>
<td><strong>OpEx</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing</td>
<td>$4,500</td>
<td>$4,500</td>
<td>$12,000</td>
<td>$7,500</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$622,895</strong></td>
<td><strong>$1,286,034</strong></td>
<td><strong>$1,437,800</strong></td>
<td><strong>$151,766</strong></td>
</tr>
</tbody>
</table>
# 5.0 Quarterly Report Template

The quarterly report template is provided below.

<table>
<thead>
<tr>
<th><strong>Quarterly Report Template</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milestones:</strong></td>
</tr>
<tr>
<td>Last Project Milestone:</td>
</tr>
<tr>
<td>Next Project Milestone:</td>
</tr>
<tr>
<td><strong>Tasks/Timeline:</strong></td>
</tr>
<tr>
<td>Completed Project Tasks Since Last Quarterly Report:</td>
</tr>
<tr>
<td>Changes or Impacts to Schedule Since Last Quarterly Report:</td>
</tr>
<tr>
<td>Lessons Learned:</td>
</tr>
<tr>
<td><strong>Risks:</strong></td>
</tr>
<tr>
<td>Identified Risks:</td>
</tr>
<tr>
<td>Risk Mitigation Plan:</td>
</tr>
<tr>
<td><strong>Finance:</strong></td>
</tr>
<tr>
<td>Total Spend to Date:</td>
</tr>
<tr>
<td>Forecast Spend:</td>
</tr>
<tr>
<td><strong>Queue Status Update:</strong></td>
</tr>
<tr>
<td>East Golah</td>
</tr>
<tr>
<td>Peterboro</td>
</tr>
</tbody>
</table>
Appendix 1

National Grid Distributed Generation Interconnection REV
Demonstration Project – Draft Survey Email with Attachments
National Grid is committed to working with our Distributed Generation (DG) stakeholders to grow the amount of Distributed Energy Resource facilities interconnected to our system.

We would like your feedback on the most recent Distributed Generation Demonstration Project, where National Grid is upgrading transformers at two existing substation locations, Peterboro and East Golah, with 3V_0 protection. As part of the project, the cost for these upgrades will be charged at a pre-determined, pro-rating fee to all applications with DG systems above 50kW connected to the transformer.

Whether you have heard of this project or not, please take a minute or two to fill out the following survey so that we can better assist you in the future. Your responses will be confidential. You can link to the survey here or type in the following URL:

https://nationalgrid.qualtrics.com/jfe/form/SV_cU9oRhppzjQhCPb

Thank you,

Keri Doyle
Reforming the Energy Vision (REV)
Distributed Generation Interconnection Project


Developer Contribution towards 3V0 under Current NYSIR cost sharing mechanism
Peterboro Substation, Transformer Bank 1

Based on 3V0 cost of $425,000.
Customer 1 pays full cost of 3V0 until second customer arrives.
Customer 2 required to pay their pro-rata share which is refunded to Customer 1.
If Customer 3 arrives, they would pay their pro-rata share which would be refunded to Customer 1 and 2 accordingly.

<table>
<thead>
<tr>
<th>Customer No</th>
<th>Size (kW)</th>
<th>Pro-Rata Share (%)</th>
<th>Calculated Collected Amount ($)</th>
<th>Initial Collected Amount ($)</th>
<th>Refund</th>
<th>Final Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
<td>66.67%</td>
<td>$425,000</td>
<td>$425,000</td>
<td>$140,250</td>
<td>$284,750</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>33.33%</td>
<td>$140,250</td>
<td>$140,250</td>
<td>-</td>
<td>$140,250</td>
</tr>
</tbody>
</table>

Developer Contribution towards 3V0 under Pilot Demonstration Project
Peterboro Substation, Transformer Bank 1

Savings based on 3V0 cost of $425,000 at this location
*Customer 1 savings remain the same with or without Customer 2 participation.

<table>
<thead>
<tr>
<th>Customer No</th>
<th>Size (kW)</th>
<th>Developer Contribution towards 3V0 under current NYSIR cost sharing mechanism</th>
<th>Developer Contribution towards 3V0 under Pilot</th>
<th>Pilot Savings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
<td>$425,000</td>
<td>$110,520</td>
<td>$314,480</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>$140,250</td>
<td>$55,260</td>
<td>$84,990</td>
</tr>
</tbody>
</table>

Developer Contribution towards 3V0 under Pilot Demonstration Project
East Golah Substation, Transformer Bank 1

Savings based on 3V0 cost of $365,500 at this location
*Customer 1 savings remain the same with or without Customer 2 participation.

<table>
<thead>
<tr>
<th>Customer No</th>
<th>Size (kW)</th>
<th>Developer Contribution towards 3V0 under current NYSIR cost sharing mechanism</th>
<th>Developer Contribution towards 3V0 under Pilot</th>
<th>Pilot Savings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
<td>$365,500</td>
<td>$64,000</td>
<td>$301,500</td>
</tr>
<tr>
<td>2</td>
<td>1,000</td>
<td>$120,615</td>
<td>$32,000</td>
<td>$88,615</td>
</tr>
</tbody>
</table>
Reforming the Energy Vision (REV)
Distributed Generation Interconnection Project


Peterboro Substation Feeders

East Golah Substation Feeders

PETERBORO STATION - CANASTOTA, NY 13032
EAST GOLAH STATION - RUSH, NY 14543
Appendix 2

DG Interconnection REV Demonstration Project
Survey Instrument
Q1 Thank you for taking the time to provide feedback on the National Grid DG 3V₀ Demonstration Project in New York. Your feedback will help us improve this and future projects.

Note: the survey will only take a minute or two and your responses will be confidential.

Q2 How familiar are you with this 3V₀ Demonstration Project?

- Very familiar
- Somewhat familiar
- Not at all familiar

Q3 As noted in the email, National Grid is upgrading transformers at two existing substation locations, Peterboro and East Golah, with 3V₀ protection. As part of the Demonstration Project, the cost for these upgrades will be charged at a pre-determined, pro-rated fee to all applications with DG systems above 50kW connected to the transformer.
Q4 How interested are you in this type of project?

- Very interested
- Somewhat interested
- Not at all interested

Q5 Please explain your previous answer, as well as leave your name and contact information if you would like us to contact you.

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

End of Block: Not Familiar

Start of Block: Block 6

Q6 Thank you for your time. Please click the >> below to submit your responses.

End of Block: Block 6

Start of Block: Second set of questions
Q7 How satisfied in general are you with the 3V₀ Demonstration Project?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

Q8 Why did you say you were "$\id{QID5}/ChoiceGroup/SelectedChoices$" with the 3V₀ Demonstration Project?

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
Q9 How would you rate the following elements of the project and their importance to you?

<table>
<thead>
<tr>
<th></th>
<th>Very Unimportant</th>
<th>Unimportant</th>
<th>Neutral</th>
<th>Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictable costs</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Time to receive cost estimate</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Equal share of project cost</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Location</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Faster connection time</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q10 Please select your involvement with the 3V₀ Demonstration Project:

- ○ I have submitted an application to participate
- ○ I decided NOT to submit an application
- ○ I have not yet decided whether to submit an application

End of Block: Second set of questions

Start of Block: Submitted Application
Q11 What are the reasons you chose to submit an application for the project?

☐ The land was easily financed

☐ The land was affordable

☐ The land was easily obtained

☐ The interconnection process is anticipated to take less time than current standards

☐ The utility interconnection cost was lower than costs at other National Grid locations

☐ The utility interconnection cost was lower than costs at other utility locations

☐ Other ____________________________________________
Q12 What was the main reason you submitted an application for the 3V₀ Demonstration Project? (select one)

- The land was easily financed
- The land was affordable
- The land was easily obtained
- The interconnection process is anticipated to take less time than current standards
- The utility interconnection cost was lower than costs at other National Grid locations
- The utility interconnection cost was lower than costs at other utility locations
- Other ________________________________

Q13 Please share any additional thoughts about the Demonstration Project.

________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________
________________________________________________________________

End of Block: Submitted Application

Start of Block: Did Not Submit Application
Q14 What are the reasons you chose NOT to submit an application for the 3V\textsubscript{0} Demonstration Project?

- [ ] Unable to obtain financing
- [ ] Unable to find affordable land
- [ ] Unable to find easily accessible land
- [ ] The interconnection process was anticipated to take too long
- [ ] Cost of 3V\textsubscript{0} was too high
- [ ] Utility costs were anticipated to be too high
- [ ] Project costs, excluding utility costs, were anticipated to be too high
- [ ] Found a more cost effective site at another location within National Grid territory
- [ ] Found a more cost effective site at a location outside of National Grid territory
- [ ] Other ________________________________
Q15 What was the main reason you chose not to submit an application for the Demonstration Project? (select one)

- Unable to obtain financing
- Unable to find affordable land
- Unable to find easily accessible land
- The interconnection process was anticipated to take too long
- Cost of 3V0 was too high
- Utility costs were anticipated to be too high
- Project costs, excluding utility costs, were anticipated to be too high
- Found a more cost effective site at another location within National Grid territory
- Found a more cost effective site at a location outside of National Grid territory
- Other ____________________________________________________________________________

Q16 What, if anything, could National Grid have done differently to enable you to submit an application for the 3V0 Demonstration Project?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
End of Block: Did Not Submit Application

Start of Block: Undecided About Application

Q17 Why are you undecided about whether to submit an application for the 3V₀ Demonstration Project (select all that apply)?

☐ The ability to secure financing

☐ Finding affordable land

☐ Finding accessible land

☐ The time for the interconnection process

☐ The high cost of 3V₀

☐ The high utility costs

☐ The project costs, excluding utility costs

☐ Need to learn more about the program

☐ Other _________________________________
Q18 What was the main reason you are undecided about submitting an application for the project? (select one)

- The ability to secure financing
- Finding affordable land
- Finding accessible land
- The time for the interconnection process
- The high cost of 3V₀
- The high utility costs
- The project costs, excluding utility costs
- Need to learn more about the program
- Other ____________________________

Q19 Please share any additional thoughts about the 3V₀ Demonstration Project.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

End of Block: Undecided About Application