

October 31, 2017

**VIA ELECTRONIC DELIVERY**

Honorable Kathleen H. Burgess  
Secretary  
New York State Public Service Commission  
Three Empire State Plaza, 19<sup>th</sup> Floor  
Albany, New York 12223-1350

**RE: Case 14-M-0101 – Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision (REV)**

**NIAGARA MOHAWK POWER CORPORATION d/b/a NATIONAL GRID: CLIFTON PARK DEMAND REDUCTION REV DEMONSTRATION PROJECT- Q3 2017 REPORT**

Dear Secretary Burgess:

Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid”) hereby submits for filing its quarterly update to the Clifton Park Demand Reduction REV Demonstration Project Implementation Plan covering the period of July 1, 2017 to September 30, 2017 (“Q3 2017 Report”) as required by the REV Demonstration Project Assessment Report (“Assessment Report”) filed by the New York State Department of Public Service Staff (“Staff”) with the Commission on December 1, 2016 in Case 14-M-0101.

Please direct any questions regarding this filing to:

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Hon. Kathleen H. Burgess, Secretary  
National Grid: Clifton Park Demand Reduction REV Demonstration Project  
Q3 2017 Report  
October 31, 2017  
Page 2

National Grid looks forward to continuing to work collaboratively with Staff as it proceeds with the implementation of the Clifton Park Demand Reduction REV Demonstration Project.

Respectfully submitted,

*/s/ Karla M. Corpus*

Karla M. Corpus  
Senior Counsel

Enc.

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**Demand Reduction  
REV Demonstration Project  
in  
Clifton Park  
Q3 2017 Report**

October 31, 2017

**Table of Content**

- 1.0 Executive Summary ..... 1
- 2.0 Highlights Since Previous Quarter ..... 4
  - 2.1 Major Task Activities ..... 4
    - 2.1.1 Advanced Metering Functionality ..... 4
      - 2.1.1.1 Information Services (“IS”) Activities ..... 5
      - 2.1.1.2 Meter Installation Activities ..... 5
    - 2.1.2 Volt/VAR Optimization (“VVO”) Device Installations ..... 6
    - 2.1.3 Customer Outreach ..... 7
    - 2.1.4 Peak Time Rewards (“PTR”) ..... 13
    - 2.1.5 Advanced Data Analytics (“ADA”) ..... 15
    - 2.1.6 Voluntary Time-of-Use (“VTOU”) Rate ..... 15
    - 2.1.7 Distributed Energy Resource (“DER”) Service ..... 16
    - 2.1.8 Community Choice Aggregation (“CCA”) ..... 16
    - 2.1.9 Project Management Group ..... 17
    - 2.1.10 Challenges, Changes, and Lessons Learned ..... 18
- 3.0 Next Quarter Forecast ..... 19
  - 3.1 Check Points/Milestone Progress ..... 19
    - 3.1.1 Summary ..... 19
    - 3.1.2 Work Stream – 4<sup>th</sup> Quarter 2017 ..... 19
- 4.0 Work Plan and Budget Review ..... 22
  - 4.1 Updated Work Plan ..... 22
  - 4.2 Updated Budget ..... 23
- 5.0 Progress Metrics ..... 24

# 1.0 Executive Summary

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On January 17, 2017 Niagara Mohawk Power Corporation d/b/a National Grid (“National Grid” or the “Company”) filed an implementation plan for the Demand Reduction REV Demonstration Project in Clifton Park (the “Project”), which is designed to provide residential customers in the Town of Clifton Park (“Clifton Park” or the “Town”) with price signals, tools and information, enabled by infrastructure investments and distributed energy resources (“DER”), to reduce electric demand during peak times and inform the Reforming the Energy Vision (“REV”) Proceeding.<sup>1</sup>

The Project aligns with the New York Public Service Commission’s (“Commission”) *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework* (“REV Track Two Order”) wherein the Commission asserts “[o]ne of the most important objectives of REV is improving overall system efficiency including the efficiency of capital investment to create value for customers. Toward that objective, electric peak reduction is among the most immediate priorities for REV implementation.”<sup>2</sup> National Grid believes that it is possible to create more responsive relationships with customers by leveraging critical infrastructure, customer outreach and engagement, deep energy insights and actionable information, as well as price signals and DER products and services, which incentivize customers to reduce peak electric load and overall electric and gas energy use. Toward that end, the following elements are included in the Project:

- Infrastructure
  - Advanced Metering Functionality (“AMF”)
  - Volt/VAR Optimization (includes Conservation Voltage Reduction) (“VVO”)
- Customer Outreach & Engagement
- Deep Energy Insights & Actionable Information
- Price Signals
  - Peak Time Rewards (“PTR”)
  - Voluntary Time-of-Use (“VTOU”) Rate
- DER Services
- Utility supported Community Choice Aggregation (“CCA”)

The premises of customers participating in the Project are contained within the town limits of Clifton Park as shown below. The total number of impacted customers is approximately 14,400.

Key Activities and Milestones accomplished this quarter are as follows:

- Completed AMF installations for electric and gas meters. Ninety-one point eight percent (91.8%) of Project participants accepted the switch, which exceeds the National Grid’s initial target of ninety percent (90%).
- Software integration between new metering, billing systems, and the customer portal were completed for all Project participants that received AMF technology.

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<sup>1</sup> Case 14-M-0101, *Proceeding on Motion in Regard to Reforming the Energy Vision* (“REV Proceeding”), National Grid Demand Reduction REV Demonstration Project in Clifton Park Implementation Plan (filed January 17, 2017)(“Implementation Plan”).

<sup>2</sup> REV Proceeding, *Order Adopting a Ratemaking and Utility Revenue Model Policy Framework* (“REV Track Two Order”)(issued May 19, 2016), p. 72.

- PTR demand response events were launched using automatic email alerts. A total of seven (7) events were scheduled during July through September. Initial participation rates and impacts are being evaluated.

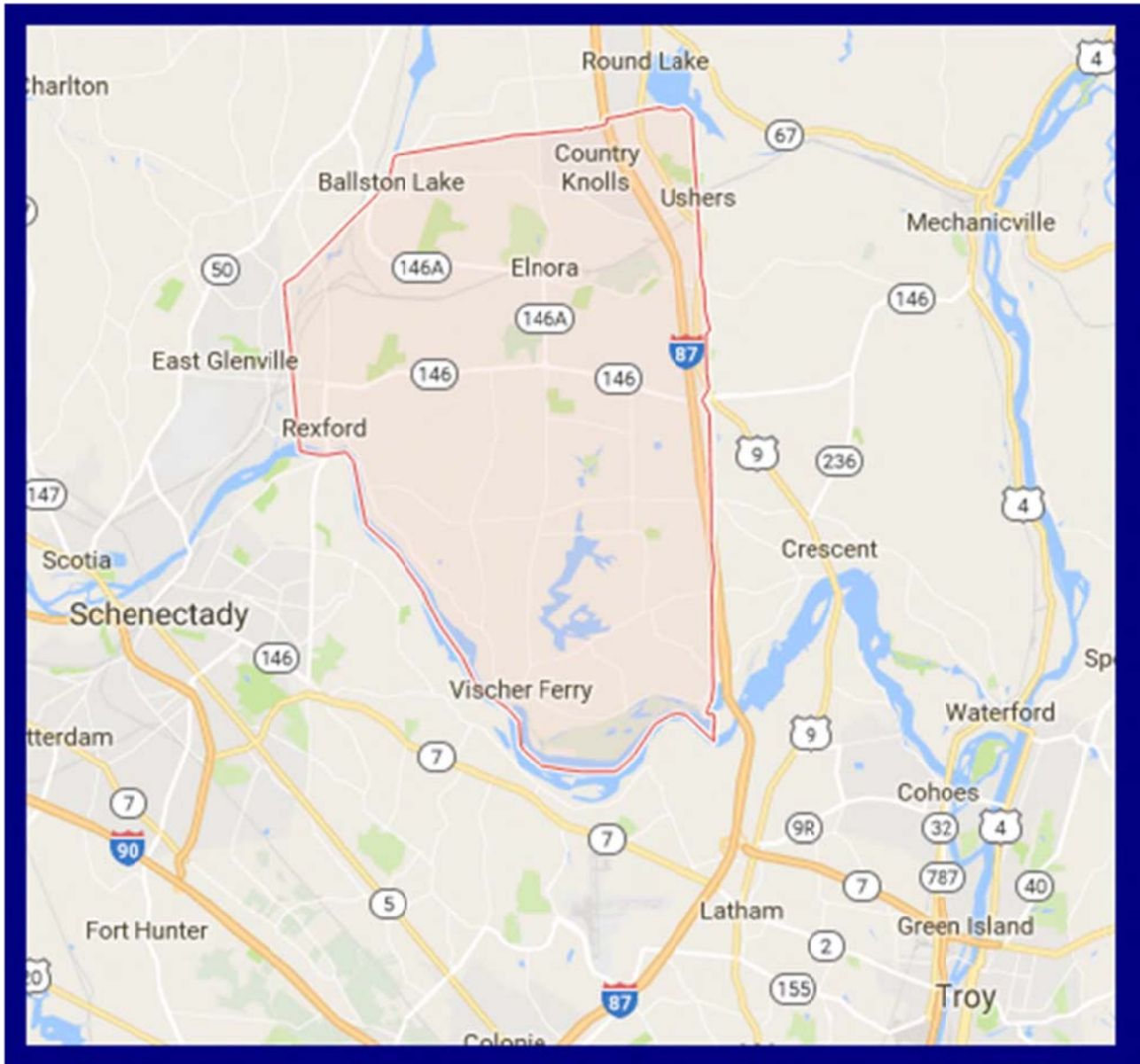
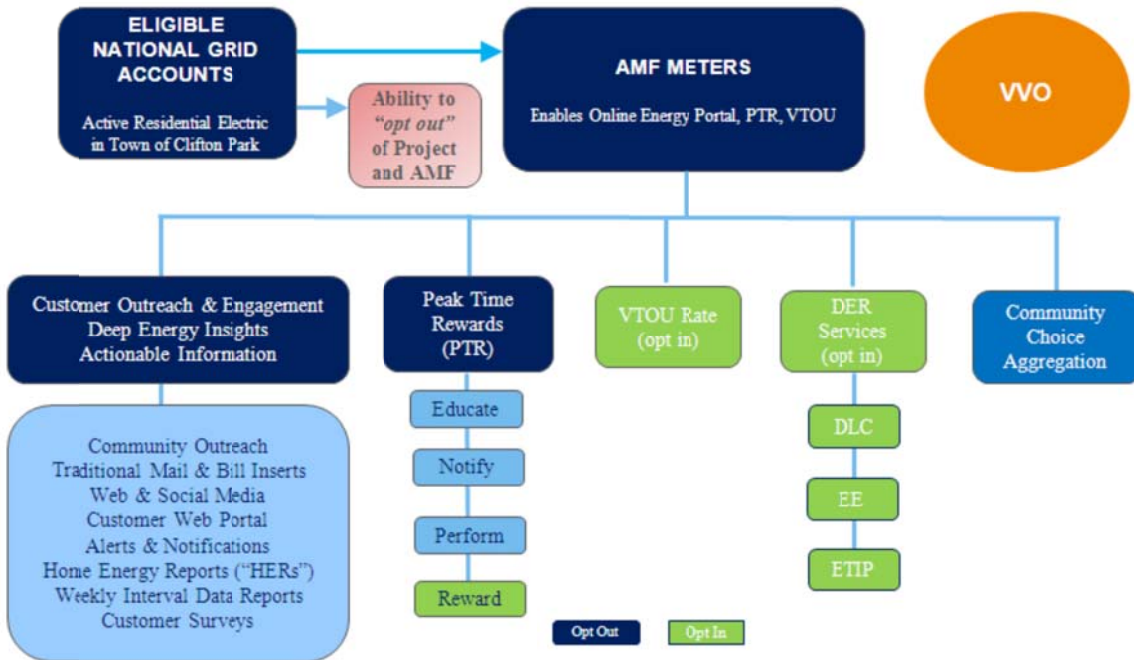


Figure 1: Town of Clifton Park

**Project Elements**

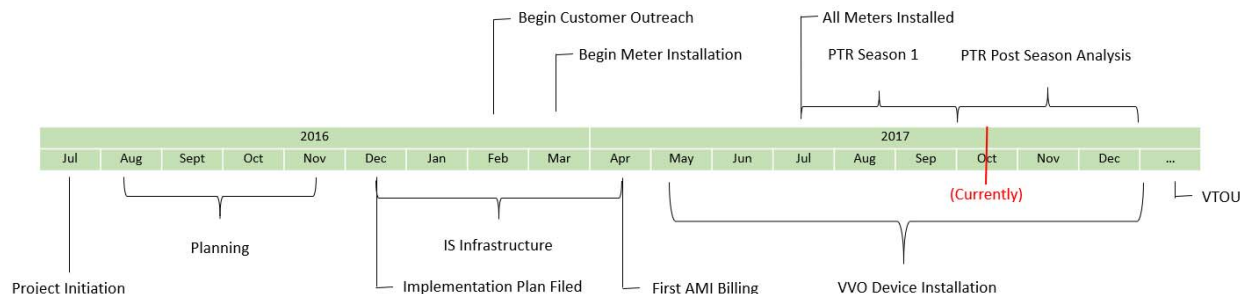
A visual of the Project’s key services and offerings are provided below. Except for VVO, customers can opt in or opt out of each Project element. A description of each Project element is included with the individual sections of this quarterly report.



**Figure 2: Project Elements**

## 2.0 Highlights Since Previous Quarter

The following highlights key activities accomplished to date on the Project, as well as key activities planned for the next quarter.



**Figure 3: Work Plan Summary**

### 2.1 Major Task Activities

#### 2.1.1 Advanced Metering Functionality

AMF deployment in Clifton Park has replaced existing National Grid electric and gas meter reading and billing processes for customers that have not opted out of the Project. AMF meters are read and select portions of data are transferred over the cellular network to National Grid for utility billing. Portions of data are also transferred to the Project’s partners over secure networks to enable various elements of the Project, including the customer web portal. Interval data is used for deployment of PTR, all customer billing, and to support authorized Project evaluation activities.

AMF deployment commenced at the end of the first quarter of 2017. Letters introducing Clifton Park customers to Smart Energy Solutions and postcards alerting customers of the AMF installation timeframe were distributed prior to installations. This allowed for a period during which customers could opt out of the AMF metering technology, as well as certain other aspects of the Project.

Customers choosing not to have AMF installed have been directed to a specialized team at the National Grid Contact Center, which in turn directs Customer Meter Services (“CMS”) not to install an AMF technology for those customers. Those customers will instead retain their existing automatic meter reading (“AMR”) meter, or if they had previously elected the “AMR Opt-Out Option”, retain a non-AMR meter. Additionally, during the Project term, customers have the option to have their AMF meter removed and replaced with an AMR meter at no cost to the customer.



The initial AMF opt-out rate is eight point eight percent (8.8%). AMF meter opt-outs include customers that: 1) called into the National Grid Customer Contact Center; 2) informed CMS field workers in-person that they did not want the meter; or 3) where National Grid was unable to gain access to account premises after three (3) attempts at access were made without success.

National Grid will continue to monitor AMF opt-outs as the Project continues and new customers move into the Town of Clifton Park and others move out. The National Grid Customer Contact Center will continue to accept customer requests to install or remove the AMF technology and process orders.

### 2.1.1.1 Information Services (“IS”) Activities

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• User Acceptance testing was completed in July for Customer Service System (“CSS”) and all interfaces.</li> </ul>
	<ul style="list-style-type: none"> <li>• On August 4<sup>th</sup> the IS portion of the Project formally went live with all elements including additional network bandwidth.</li> </ul>
	<ul style="list-style-type: none"> <li>• During the month of August, the IS Project team identified and corrected various issues (<i>e.g.</i>, with metering and billing).</li> </ul>
	<ul style="list-style-type: none"> <li>• Retired meter field deployment management (“FDM”) devices and switched to using National Grid’s mobile work tool (“MWORK”) for ongoing support.</li> </ul>
	<ul style="list-style-type: none"> <li>• Increased the bandwidth at Itron’s data center via Verizon circuit increase, to accommodate AMF data.</li> </ul>
	<ul style="list-style-type: none"> <li>• Transitioned Project to National Grid’s IS Support team.</li> </ul>

### 2.1.1.2 Meter Installation Activities

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• Installed the remaining 2,871 Electric meters and 2,388 Gas ERTs.</li> </ul>
	<ul style="list-style-type: none"> <li>• Total CMS orders installed: 24,601               <ul style="list-style-type: none"> <li>• Total electric meters installed 13,152</li> <li>• Total Gas ERTs installed 11, 449</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>• Transitioned to support normal business practices related to move-in/out of customers.</li> </ul>

## 2.1.2 Volt/VAR Optimization (“VVO”) Device Installations

National Grid will enhance the efficiency of the electric distribution system through the installation of software and devices that better regulate the voltage of the distribution system. These system enhancements will benefit all customers connected to those substations being upgraded. Working with the Project’s VVO partner, Utilidata, National Grid will install devices on the electric distribution system that monitor voltage along with advanced controllers for voltage regulators and reactive capacitors.

National Grid will evaluate the extent to which optimized regulation of the voltage and power factor of the electric distribution system benefits customers, ultimately reflected by improved feeder power factor, flatter voltage profiles, reduced feeder losses, reduced peak demand, and reduced energy consumption by customers. National Grid’s targeted efficiency gain through the VVO portion of the Project is approximately three percent (3%).

VVO installation scope includes:

- Three (3) substation transformer load tap changers;
- Eleven (11) feeders, including:
  - Eleven (11) estimated, twelve (12) actual line voltage monitors;
  - Thirty-nine (39) estimated, thirty-one (31) actual advanced switching capacitors; and
  - Eight (8) estimated, six (6) actual pole top regulators
- A central controller and data concentrator installed at the National Grid Control Center in Liverpool, New York;
- Supervisory control via National Grid’s Supervisory Control and Data Acquisition (“SCADA”) and Energy Management System (“EMS”); and
- Cellular connectivity between all field, substation devices, and the data concentrator.

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• Installed five (5) of thirty-one (31) Advanced Capacitors (14% of total VVO field equipment).</li> </ul>
	<ul style="list-style-type: none"> <li>• Resolved technical issue regarding cellular communications and end of circuit monitoring devices involving low voltage monitors (“LVMS”).</li> </ul>
	<ul style="list-style-type: none"> <li>• Revised voltage regulating device count included in Project scope, resulting in minor redesign work.</li> </ul>
	<ul style="list-style-type: none"> <li>• Designed seventy-five percent (75%) of circuit monitoring device locations.</li> </ul>
	<ul style="list-style-type: none"> <li>• Ordered additional Project equipment.</li> </ul>

### 2.1.3 Customer Outreach

National Grid has engaged residents of the Clifton Park community to learn about the Project and solicit input. The strategies include:

- Community outreach;
- Mail and bill inserts; and
- Web and social media.

#### **Community Outreach**

Prior to moving ahead with community outreach, National Grid conducted research in November 2016 to better understand customers' awareness of Smart Energy Solutions and to understand what would drive them to participate. Based on the research, some high-level findings include:

- Thirty-seven (37%) of the residents in Clifton Park are aware of Smart Energy Solutions;
- Saving money is a key driver for participation;
- Forty-nine (49%) of customers were interested in Smart Energy Solutions when they learned it was "free;" and
- Segmented messaging by age group allows National Grid to deliver relevant and motivating information specific to each defined age group.

National Grid will conduct annual surveys to gain knowledge on progress towards the Project's hypotheses questions, as well as information to assess the quality of customer engagement activities.

To effectively engage the Town, National Grid worked to engage community leaders through coordination with Town officials and by hosting community meetings, such as those held at the Clifton Park-Halfmoon Public Library.

#### **Mail and Bill Inserts**

Prior to the installation of AMF, National Grid delivered a set of communications via standard mailings to introduce Clifton Park customers to Smart Energy Solutions and notify them of the imminent arrival of the AMF meter technology. Customers were asked to contact National Grid if they did not want to receive a new AMF meter. Each letter spoke to the key benefits of the Project and touched upon key Project elements available immediately and in the future.

These communications were sent in the form of direct mail and bill inserts.

National Grid also sent out a series of meter installation notifications letting customers know when their new meters would be installed. Included in these communications was an invitation to attend one of the Company's customer outreach and education meetings to learn more about the Project, ask questions, and interact with the National Grid team.

Following the installation of an AMF meter, customers receive educational materials focused on the various Project elements, such as enrolling in PTR. Bill inserts will be incorporated four (4) times per year as new Project elements are rolled out, and media updates will be on-going

throughout the year. Additionally, video tutorials have been created and will soon be made available on the National Grid website.



The advertisement features a dark blue background with a green mountain-like shape at the bottom. On the right side, the National Grid logo is displayed with the tagline 'HERE WITH YOU, HERE FOR YOU.' The main text is centered and highlights three key benefits: CONTROL, REWARDS, and CHOICE. A large headline on the right states 'With Smart Energy Solutions, you can now better manage your energy use.' Below this, it says 'That's life on the grid.' At the bottom left, it provides contact information: 'We're here to help. Visit ngrid.com/cliftonpark to view our Frequently Asked Questions or call 1-877-466-3433 (Monday-Friday, 8am-6pm) for more information.' A small disclaimer is located at the very bottom left.

**Smart Energy Solutions provides you with:**

**CONTROL**  
Better manage your energy use with detailed information, reports, alerts and tips.

**REWARDS**  
Earn eGift Cards and contribute to a greener community when you reduce your electric energy use.

**CHOICE**  
Select how and when to manage your energy use, pick an electric pricing plan that is right for you and participate in energy-efficiency improvements.

**nationalgrid**  
HERE WITH YOU, HERE FOR YOU.

**With Smart Energy Solutions,  
you can now better manage  
your energy use.**

That's life on the grid.

**We're here to help.**  
Visit [ngrid.com/cliftonpark](http://ngrid.com/cliftonpark) to view our  
Frequently Asked Questions or call  
1-877-466-3433 (Monday-Friday, 8am-6pm)  
for more information.

\*National Grid does not guarantee savings. Savings and energy-efficiency experiences may vary. Some restrictions may apply. National Grid will share your energy use data with a third party partner to provide you with energy management recommendations. Your information will not be used for solicitation of goods and services. © 2017 National Grid USA Service Company, Inc.

Today, we have so many ways to better manage our lives. Like mobile phones – where you can track your use and make informed choices. Or, online banking, where you instantly know how and where you are spending your money. **With Smart Energy Solutions, you get that and so much more. You'll be able to make informed choices, take control of your energy use and earn rewards.**

**It's easy to get started!**

**Create an online profile**

To access Smart Energy Solutions, you will need to have a National Grid online profile.

- 1 Go to [ngrid.com/cliftonpark](http://ngrid.com/cliftonpark)
- 2 Click on [Join/Sign In](#) located at the top of the screen
- 3 Click on [Join Now](#)
- 4 Fill out the form and click on [Continue](#)
- 5 Verify the information and click on [Add an account to my profile](#)
- 6 Fill out the form and click on [Add this account](#)
- 7 Confirm the information and click on [Continue](#)

*Note: you will need your National Grid account number to create your online profile.*

**Log in**

After you have created an online profile, it's simple to access your account.

- 1 Go to [ngrid.com/cliftonpark](http://ngrid.com/cliftonpark)
- 2 Click on [Join/Sign In](#) located at the top of the screen
- 3 Enter username and password then click [Sign In](#)

**"I am very satisfied with the program and I have saved a lot of money."** – *Smart Energy Solutions Customer in Worcester, MA*

Smart Energy Solutions has helped customers in Worcester, MA collectively save a total of 2,300 megawatt-hours – enough to power a local library in Worcester, MA for nearly a year

**Now you can better manage your energy use.**

**Access Smart Energy Solutions, anywhere and any time.**

**Track your energy use.**



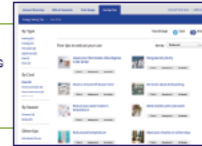
You will be able to view monthly energy use data. However, in approximately one month, you will be able to view daily information.

**Go to:** Track Usage

**Get energy-saving tips.**

Receive personalized recommendations on how to reduce your energy use.

**Go to:** Saving Tips and Rewards



**Earn rewards.**

Get rewarded with points that can be redeemed for eGift Cards when you reduce your energy use during Conservation Days. These are the times when energy use in our community reaches its highest levels.

**Go to:** Saving Tips and Rewards



**An average customer can expect to earn over \$20 per year!**

**Earn 150 points when you create your online profile!**

**Figure 4: Bi-fold Flyer**

## Web and Social Media

National Grid continues to expand the existing Clifton Park micro-site, a component of the Company's current <http://www.nationalgrid.com> website, to include information on the Project for all Clifton Park residents.

The Project website includes the following information:

- Frequently Asked Questions Video overview of the Project:
  - <https://vimeo.com/209611691/bd2127692f>;
- Frequently Asked Questions pdf:
  - [https://www.nationalgridus.com/media/pdfs/resi-ways-to-save/cp\\_faqs.pdf](https://www.nationalgridus.com/media/pdfs/resi-ways-to-save/cp_faqs.pdf);
- Information about PTR and the VTOU rate as the Project elements are rolled out;
- DER product and service options available (e.g., PTR); and
- <http://www.ngrid.com/cliftonpark> will be updated throughout the year to announce the rollout of new products and services.

National Grid also proactively monitors open social media sites to join any conversations regarding the Project and to help answer questions about it.

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• Sent bill Inserts to customers for August 2017 and September 2017.</li> </ul>
	<ul style="list-style-type: none"> <li>• Sent email communications to customers regarding “Conservation Days,” as those PTR events were called.</li> </ul>
	<ul style="list-style-type: none"> <li>• Conducted online bulletin boards (<i>i.e.</i>, online focus groups) to explore customer barriers to using the portal. This was for the segment of customers that created an online ID and have engaged with the portal.</li> </ul>
	<ul style="list-style-type: none"> <li>• Launched functionality on the web portal in July 2017 to allow Clifton Park customers to engage with their electric interval data.</li> </ul>
	<ul style="list-style-type: none"> <li>• Performed AMF opt-out monitoring);               <ul style="list-style-type: none"> <li>○ 1,265 total opt-outs (<i>i.e.</i>, eight point eight percent (8.8%) of residential customers);</li> <li>○ 890 occurred during field installations; and</li> <li>○ 375 were the result of customer notification to National Grid's Contact Center.</li> </ul> </li> </ul>

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HERE WITH YOU. HERE FOR YOU. | Change Location >

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Home > Ways to Save > Energy Saving Programs > Introducing Smart Energy Solutions

## Introducing Smart Energy Solutions

National Grid is committed to providing Clifton Park residents with more control over your energy use.



National Grid: Clifton Park Lunch and Learn

Questions?

Email us for more information.

Latest News

- Clifton Park Proposal
- Press Release

National Grid Smart Energy Solutions is an innovative energy management program developed specifically for our Clifton Park customers to help you manage energy use and potentially save money. Smart Energy Solutions will provide you with:

**CONTROL:** Better manage your energy use with near real-time information, detailed reports, alerts and tips.

**REWARDS:** Earn gift cards and contribute to a greener community when you reduce your electric energy usage.

Figure 5: Web Portal Landing Page

**CURRENT BILL**

<b>DETAIL OF CURRENT CHARGES</b>					
<b>Delivery Services</b>					
<b>Electricity Delivery</b>					
Service Period	No. of days	Current Reading	-	Previous Reading	= Total Usage
Feb 8 - Mar 10	30	79007 Actual		78336 Actual	671 kWh
METER NUMBER 1234567		NEXT SCHEDULED READ DATE ON OR ABOUT Apr 12			

**BILL ONCE NEW METERS ARE INSTALLED**

<b>DETAIL OF CURRENT CHARGES</b>	
<b>Delivery Services</b>	
<b>Electricity Delivery</b>	
	Energy-kWh
Metered Usage	670 kWh
Billed Usage	671 kWh
METER NUMBER 1234567	NEXT SCHEDULED READ DATE ON OR ABOUT Apr 12
SERVICE PERIOD Feb 9 - Mar 10	NUMBER OF DAYS IN PERIOD 29

**Figure 6: Example of Bill with AMF Meter**



## 2.1.4 Peak Time Rewards (“PTR”)

Through a single marketing message, “Reduce Your Energy Usage and Earn a Gift Card Reward,” National Grid seeks to incentivize Clifton Park customers to reduce electric use during specified peak times. Participating customers are rewarded for curtailing electric load through behavioral actions such as turning off lights and adjusting their thermostats, or utilizing customer-controlled technology.

Key elements of PTR include:

- Event performance analytics performed on all customers with AMF;
- No penalties for failure to reduce load during PTR events;
- Pre-event and post-event email notifications;
- Rewards earned by those enrolled in “Points and Rewards”; and
- Rewards awarded based on participation in up to twenty (20) PTR events per year.

National Grid analyzes New York Independent System Operator (“NYISO”) system and load forecasts for Zone F (which includes Clifton Park), as well as local Clifton Park weather forecasts, to determine whether to call a PTR (a/k/a “Conservation Day”) event. PTR events are entered into two (2) systems; one triggers customer event notifications to Clifton Park customers and the other sets in motion the energy use predictive model, which will be compared to actual AMF metered usage, to determine curtailment participation. Each customer electric service account is assigned a value of ‘true’ or ‘false’ for each event, based on its curtailment determination. Those accounts enrolled in the PTR program which are assigned a value of ‘true’, are then awarded points.

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• Officially launched PTR Season 1 on 7/17/2017, and concluded Season 1 on 9/29/2017.*</li> </ul>
	<ul style="list-style-type: none"> <li>• Utilized peak event model and associated criteria regarding NYISO load forecasts, as well as weather data, to trigger PTR event calls.</li> </ul>
	<ul style="list-style-type: none"> <li>• Monitored web portal login activities by customers, which indicated up to twenty-five point three percent (25.3%) of customers accessed the system during the PTR season.</li> </ul>
	<ul style="list-style-type: none"> <li>• Called seven (7) PTR events during first season; 7/20, 8/2, 8/15, 8/16, 8/22, 9/18, and 9/26/2017.</li> </ul>
	<ul style="list-style-type: none"> <li>• Called three (3) non-customer facing PTR events for baseline evaluation purposes; 8/23, 8/31, and 9/14/2017.</li> </ul>
	<ul style="list-style-type: none"> <li>• 1,710 Clifton Park customers enrolled in the PTR program (a/k/a Points &amp; Rewards). Customers signing up for the program and participating in PTR events were rewarded with a total of 1,481,275 points for Season 1.</li> </ul>

\*To ensure customer privacy is protected, vendor contracting took longer than anticipated, which resulted in a delay of the PTR launch date and hence a shortened first season.

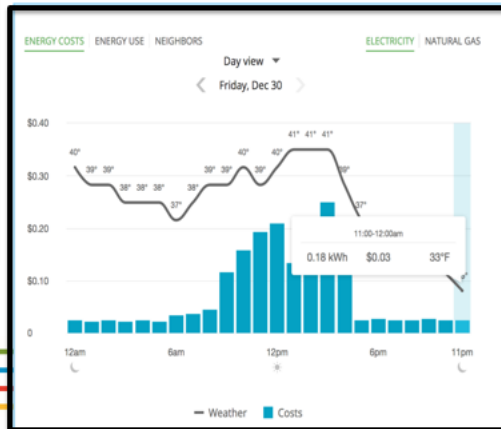
# Track Energy Usage

nationalgrid  
HERE WITH YOU. HERE FOR YOU.



Customers will be able to track their energy usage, compare previous bills and will receive tips on how to reduce their energy usage.

**Note:** Presentation of data on the track usage page will look different for customers in Clifton Park come June (see below)



This is a Mock up-not FINAL

Figure 7: Sample Energy Tracking Web Portal for PTR

### 2.1.5 Advanced Data Analytics (“ADA”)

National Grid’s Advanced Data Analytics Project team developed the residential energy use predictive model to determine the expected energy use during a PTR event. The predictive model uses prior customer level energy consumption data and event weather conditions to predict customers’ energy consumption during events. The predicted values are compared to the actual AMF data to determine whether curtailment has occurred and to ascertain which customers are to be awarded points. The results of these analyses will be used to determine if the aggregated community load meets certain threshold requirements for bidding into the NYISO wholesale electricity market.

Timeframe	Completed Milestones
3 <sup>rd</sup> Quarter 2017	• Performed post-event calculations for analysis by Project team.
	• Provided post-PTR go-live support throughout the season.

### 2.1.6 Voluntary Time-of-Use (“VTOU”) Rate

The VTOU rate will be tested in Clifton Park on an opt-in basis. The VTOU rate, which became effective December 1, 2016,<sup>3</sup> includes three (3) rate periods for supply; on-peak, off-peak and super-peak, as well as an on-peak and off-peak period for delivery.

National Grid recognizes the VTOU rate will not be advantageous for all customers. It is primarily intended for high energy consumption residential households with plug-in electric vehicles (“PEVs”). VTOU particularly caters to PEVs, as it includes a make-whole provision for PEV owners in the first twelve (12) months of adoption, thereby reducing the risk of opting into VTOU.

To broaden the appeal of the VTOU rate, options are being investigated that would allow customers to perform an online rate analysis specific to their historic AMF energy consumption levels, in order to determine if the VTOU rate would be a good fit for them.

Timeframe	Completed Milestones
3 <sup>rd</sup> Quarter 2017	• Began conversations with third-party contractor relating to the potential use of an online customer interactive rate analysis tool.

<sup>3</sup> See National Grid’s Electricity Tariff, PSC No. 220, Service Classification No. 1, Special Provision L, “Residential Time of Use Delivery and Commodity Rate.”

Timeframe	Completed Milestones
	<ul style="list-style-type: none"> <li>• Determined that VTOU was a good fit for PEV owners.</li> </ul>
	<ul style="list-style-type: none"> <li>• Created targeted marketing strategies.</li> </ul>
	<ul style="list-style-type: none"> <li>• Discussed VTOU and Smart Home Rate with Lawrence Berkeley National Laboratory to glean insights particular to Clifton Park.</li> </ul>

### 2.1.7 Distributed Energy Resource (“DER”) Service

National Grid seeks to animate the market by facilitating DER provider services as part of the Project. DER products and services will be opt-in offerings to customers, publicized via the customer engagement channels outlined above, as well as community outreach. DER services may include energy efficiency, demand response, or renewable distributed generation opportunities.

National Grid is continuing to consider additional DER providers and will investigate each to determine their appropriateness for inclusion in the Project.

### 2.1.8 Community Choice Aggregation (“CCA”)

National Grid engaged with Clifton Park officials and community members on the potential for adoption of a utility-supported CCA. After the filing of the Project’s Implementation Plan, the Town decided to not pursue a CCA.

## 2.1.9 Project Management Group

The National Grid Project Management Group is a construct of individuals who strive to keep the Project on track regarding scope, schedule and budget, while lending visibility into processes, accomplishments, and financial tracking. This group regularly engages in, and promotes, the following:

- Weekly Core Team Status Reporting;
- Monthly Steering Committee Meetings;
- Monthly General Staff Meetings;
- Quarterly Commission Reporting;
- Issues Tracking;
- Lessons Learned Recording and Review;
- Change Log Processes; and
- Financial Reporting activities.

Timeframe	Completed Milestones
<b>3<sup>rd</sup> Quarter 2017</b>	<ul style="list-style-type: none"> <li>• Conducted weekly status reviews with core team leads, monitoring progress, providing corrective measure(s), and escalating issues, as needed.</li> </ul>
	<ul style="list-style-type: none"> <li>• Provided weekly updates to National Grid's Finance Department regarding the Project for management review.</li> </ul>
	<ul style="list-style-type: none"> <li>• Conducted monthly status updates for broader National Grid audience to raise level of awareness.</li> </ul>
	<ul style="list-style-type: none"> <li>• Documented lessons learned to date regarding the Project.</li> </ul>

**2.1.10 Challenges, Changes, and Lessons Learned**





Qtr	Issue or Change	Resulting Change to Project Scope/Timeline?	Strategies to Resolve	Lessons Learned
Q3.17	Delay in securing internal Project signoff for deliverables.	Deliverable and meter installation dates were extended beyond the original timeline.	None.	Create an internal statement of work (“SOW”) that directors from both teams agree to and sign off on. This would provide a paper trail for responsibilities. Late or missed dates can be escalated for resolution.
Q3.17	Longer than anticipated meter approval process.	Commission meter approval process was longer than estimated, resulting in extension of installation dates beyond the original timeline.	None.	Involve National Grid’s Meter Engineering team earlier in the Project planning process, and build in sufficient time for the meter approval process.

## 3.0 Next Quarter Forecast



During the 4<sup>th</sup> Quarter of 2017, the Project team will continue Phase 2 of the Project.

### 3.1 Check Points/Milestone Progress

#### 3.1.1 Summary





Checkpoint/Milestone	Anticipated Start-End Date	Revised Start-End Date	Status
1 Phase I: Network Configuration and Meter Deployment; PTR Operations	1/2/17 – 6/16/17	1/2/17 - 7/17/17	Complete
2 Phase 2: VVO; VTOU; REV Operations and Evaluation	6/19/17 – 9/30/19	6/19/17 – 9/30/19	
<b>Key</b>  On-Track  Delayed start, at risk of on-time completion, or over-budget  Terminated/abandoned checkpoint			

#### 3.1.2 Work Stream – 4<sup>th</sup> Quarter 2017

Work Stream	Future Milestones	Status
<b>Information Systems (“IS”)</b>	<ul style="list-style-type: none"> <li>Resolve any remaining production issues identified in Itron systems.</li> </ul>	
	<ul style="list-style-type: none"> <li>Implement changes to correct data gap in the gas readings between Itron and OPower.</li> </ul>	
	<ul style="list-style-type: none"> <li>Implement “Green Button” download capability for AMI electric meters.</li> </ul>	
<b>Meter Installation</b>	<ul style="list-style-type: none"> <li>Support normal business practices related to move-in/out of customers.</li> </ul>	

Work Stream	Future Milestones	Status
<p><b>VVO</b></p>	<ul style="list-style-type: none"> <li>• Install seventy-five percent (75%) of VVO field equipment.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Commission twenty-five percent (25%) of VVO field equipment.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Design one hundred percent (100%) of circuit monitoring device locations.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Install fifty percent (50%) of circuit monitoring devices.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Install VVO server at National Grid facility in Liverpool, New York.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Complete Elnora Substation transformer controller upgrade.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Complete Grooms Substation transformer #2 controller upgrade.</li> </ul>	
<p><b>Customer Outreach</b></p>	<ul style="list-style-type: none"> <li>• Conduct in-person focus groups to explore customer barriers to using the portal such as motivation, lack of knowledge, and understand potential barriers to utilization.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Conduct community outreach meeting in Clifton Park.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Develop communications strategy for rollout of VTOU and other DER promotions based on newly developed product roadmap.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Kick-off segment-based portal engagement marketing campaign via email and digital channels.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Develop first customer case study.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Complete annual portal research survey.</li> </ul>	
	<ul style="list-style-type: none"> <li>• Launch functionality on the web portal in to allow Clifton Park customers to engage with their gas interval data.</li> </ul>	
	<p><b>PTR</b></p>	
<ul style="list-style-type: none"> <li>• Conduct analysis of PTR participation by customers, as well as customer feedback on the Project.</li> </ul>		



Work Stream	Future Milestones	Status
	<ul style="list-style-type: none"> <li>Propose changes needed prior to commencing PTR Season 2.</li> </ul>	
<b>ADA</b>	<ul style="list-style-type: none"> <li>Provide post-PTR Season 1 data analysis support to Project team.</li> </ul>	
<b>VTOU</b>	<ul style="list-style-type: none"> <li>Complete vendor contracting for rate analysis tool.</li> </ul>	
	<ul style="list-style-type: none"> <li>Promote VTOU to PEV owners in Clifton Park.</li> </ul>	
<b>DER</b>	<ul style="list-style-type: none"> <li>Roll out a PEV campaign.</li> </ul>	
	<ul style="list-style-type: none"> <li>Market E-Commerce web page to Clifton Park residents to further engage them on energy efficiency and technology benefits.</li> </ul>	
<b>Project Management Group</b>	<ul style="list-style-type: none"> <li>Conduct weekly and monthly Project update meetings.</li> </ul>	
	<ul style="list-style-type: none"> <li>Monitor and report Project success Key Performance Initiatives.</li> </ul>	
	<ul style="list-style-type: none"> <li>Continue tracking, monitoring and controlling the Project schedule, tracking on a weekly basis.</li> </ul>	
	<ul style="list-style-type: none"> <li>Continue tracking, monitoring and controlling the Project financials, tracking on month-by-month basis.</li> </ul>	
	<ul style="list-style-type: none"> <li>Continue to identify, monitor and manage risks and issues as they arise.</li> </ul>	
	<ul style="list-style-type: none"> <li>Continue weekly status reporting.</li> </ul>	

# 4.0 Work Plan and Budget Review

## 4.1 Updated Work Plan

ID	Task Name	Start	Finish	2017												2018		
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Clifton Park Integrated Program Plan	8/22/2016	9/23/2019	[Gantt bar from Aug 2016 to Sep 2019]														
2	IS	3/31/2017	8/4/2017															
3	ADA	4/17/2017	6/30/2017															
4	Design	5/8/2017	5/31/2017															
5	Initial Testing	5/31/2017	6/15/2017															
6	Development	5/30/2017	5/31/2017															
7	Testing	4/17/2017	6/15/2017															
8	Meters	3/17/2017	7/28/2017															
9	VVO	2/24/2017	9/7/2018															
10	Field Devices	7/28/2017	1/26/2018															
11	Substations	2/24/2017	9/7/2018															
12	Elnora Substation	2/24/2017	12/29/2017															
13	Grooms Substation	2/24/2017	12/29/2017															
14	Xformer 1	4/28/2017	6/30/2017															
15	Xformer 2	11/30/2017	12/29/2017															
16	Utilidata Server	8/18/2017	12/1/2017															
17	PTR	4/28/2017	10/6/2017															
18	Phase 1	4/28/2017	5/29/2017															
19	Phase 2	7/17/2017	10/6/2017															
20	Outreach (O&E)	8/22/2016	1/12/2018															
21	Phase 1 Marketing Communications	2/13/2017	10/20/2017															
22	Direct Mailings Traditional Mail and Inserts	2/2/2017	2/13/2017															
23	Points and Rewards Enrollment	5/16/2017	6/6/2017															
24	Conservation Day letter	6/19/2017	6/19/2017															
25	Bill Inserts	7/6/2017	7/6/2017															
26	Pricing	1/12/2018	1/12/2018															
27	Meter Installation Notifications	3/3/2017	6/2/2017															
28	Community Outreach Meeting	4/27/2017	1/8/2018															
29	Contact Center Training	5/10/2017	5/10/2017															
30	Opt-out Monitoring	6/30/2017	9/29/2017															
31	AMO	6/5/2017	9/30/2019															
32	Project Management Operations	2/20/2017	9/30/2019															
33	Procurement	1/2/2017	8/21/2017															

## 4.2 Updated Budget

The overall Project budget remains unchanged from that reported in Q1 2017 and Q2 2017 reports. However, \$13,063,123 has been shifted from fiscal year 1 (2017) to fiscal year 2 (2018) given additional time needed to set up the network and configure meters prior to commencement of the installation process<sup>4</sup>.

	Budget	Revised Forecast	Actuals
<b>Fiscal Year 1 (2017)</b>	\$16,693,536	\$3,630,413	\$3,630,413
<b>Fiscal Year 2 (2018)</b>	\$6,037,345	\$19,100,345	\$10,203,613
<b>Fiscal Year 3 (2019)</b>	\$4,222,477	\$4,222,477	
<b>Total*</b>	\$26,953,235	\$26,953,235	

\*A difference between the Implementation Plan budget (\$26,819,336)<sup>5</sup> and the current revised budget (\$26,953,235) exists due to an increase in actual meter costs and associated fees. The overall difference is \$133,899.

<sup>4</sup> Fiscal year 1 consists of April 1, 2016 through March 31, 2017; fiscal year 2 consists of April 1, 2017 through March 31, 2018

<sup>5</sup> Case 14-M-0101, *supra* note 1, p. 33.

## 5.0 Progress Metrics

Checkpoint <sup>6</sup>	Progress / Target Completion
<b>Infrastructure</b>	
AMF Acceptance vs. Opt Out	Continuing to monitor opt-out rates as Project progresses. On-going through life of the Project. Current opt-out rate is eight and eight tenths percent (8.8%).
VVO System Benefits	Establishing infrastructure required to enact VVO and monitor progress. Completion of equipment installation targeted for 2017 Q4.
<b>Customer Outreach and Engagement / Deep Energy Insights and Actionable Information</b>	
Customer Outreach and Engagement	Mailings and flyers sent to customers in 2017 Q1. Continuing engagement through life of the Project. Annual surveys tracked against initial baseline survey.
Customer Energy Portal Engagement	Portal accessible in 2017 Q1. Continued customer engagement metrics related to portal use, PTR participation, etc.
<b>Price Signals</b>	
PTR	Began PTR in July 2017; continue evaluation through life of the Project regarding participation rates and curtailed load.
VTOU Rate	National Grid will update its customer outreach approaches and targets for VTOU adoption.
<b>DER</b>	
DER Opportunities	National Grid continues to consider additional DER opportunities for Clifton Park customers and will investigate appropriateness of prospective providers during 2017 Q4.

<sup>6</sup> See Implementation Plan, pp. 24-26, for specific metrics.