

What was the problem the Old Forge RFP was aiming to solve?

Old Forge: The NWA project seeks to improve reliability on a radial, 46 kV sub-transmission line that feeds five substations in three New York counties.

Which protocols and physical layers are national grid considering?

Old Forge: We are developing protocols based on our REV demo projects.

What advice do you have about determining the best messaging for end users?

Tiverton: 1) Provide hard data: Customers like to see hard data, they like to see that they are having an impact with their actions and it helps gamify, in a way, the effort. The customers feel less like they are being patronized (if they were given vague wording) and more like they are engaged.

2) Specific and relatable: The messaging must be as specific as possible, within context. And the messaging must definitely be relatable to the customer: is the solution convenient, how does it impact the customer's life, does it target where they live, etc."

Old Forge: (See Tiverton NWA Pilot response for answer)

How did Matt and team explain the project to the end user/customer?

Tiverton: The Tiverton NWA Pilot project team performed customer outreach via email, telemarketing/phone calls, through incentive programs, direct mail, print advertising, social media, and in-home energy assessments.

National Grid also maintained a customer-facing webpage with language that highlighted the region specifically, encouraged participation to reduce energy consumption and costs, and contribute to the community need. The webpage also explains how summer electricity demand is increasing and how customers can participate in the demand response program to reduce the need for new electric investment. <https://www.nationalgridus.com/LittleCompton-Tiverton>.

The language on the webpage is the same messaging theme that National Grid expressed throughout other outreach media/avenues.

Were costs in NY recovered in NYISO transmission rate base? Were there jurisdictional issues?

Old Forge: No costs to be recovered as no NWA Solution has been installed yet. Generally speaking, the recovery mechanism is outlined in Appendix 13 of our NYPC rate case.

Are customers ok with the utility cutting off the Window AC Units completely during an event call?

Tiverton: We've historically seen the majority of enrolled customers participate in the DR peak events that were called during the duration of the Tiverton NWA Pilot.

That said, we have noted that customers are generally uncomfortable with an external party having control of their thermostat.

Customers had complete control of whether they wanted to participate in a demand response event. The demand response program was opt-in, unenrolled customers were not automatically signed up to participate without their consent. The program was also opt-out, if enrolled customers did not want to participate in the demand response pilot program anymore, they had the option to request to not be included in DR events. And, customers that stayed enrolled for the duration of the Tiverton NWA Pilot had the option to opt-out of a single DR event simply by adjusting their thermostat anytime during the event.

What were the \$ and kw upgrade avoided? What was the \$NWA investment?

Tiverton: The Tiverton NWA Pilot deferred a \$2.9M substation upgrade with the goal of 1MW load reduction. The NWA investment was \$3.6M and provided approximately \$5.1M in benefits, thereby resulting in a BCA of 1.4.

Old Forge: We evaluated several options for traditional solutions, all of which had different investments associated with it. We are still evaluating alternative solutions.

What levels of system benefits (distribution, transmission, supply) were considered when analyzing the battery installation?

Tiverton: The system benefits considered were at the distribution level for the Tiverton NWA Pilot, with the main wires need stemming from loading constraints in the area of Tiverton, RI and Little Compton, RI.

Old Forge: The system benefits considered were at the distribution level for the Old Forge NWA Project, with the main wires need developing from reliability concerns.

What is the project identification process and how does it integrate (or not) with traditional investment planning?

Tiverton: Yes, the NWA opportunity identification process does integrate with traditional investment planning. NWA opportunities are identified by the engineering/planning group itself, so the process is intrinsic to transmission/distribution planning. The NWA Team is included in the area study kickoff to begin the analysis of the potential NWA opportunity, to determine whether a potential NWA opportunity is feasible. If a potential NWA opportunity is deemed feasible, per set NWA screening criteria (need is not an asset condition, is within predetermined cost parameters, allows an acceptable timeframe for NWA solution development, and is within a predetermined percentage limit of load reduction), then the NWA progresses to the RFP stage.

Old Forge: (See Tiverton NWA Pilot response for answer)

What have been the greatest challenges to integrating smart inverter data for DER management?

Tiverton: (See Old Forge response for answer)

Old Forge: Establishing a communication protocol with cyber security to communicate between a customer owned inverter and utility owned equipment.

What factors shall be considered to mitigate the risk in financial model in Battery Energy Storage Deployment?

Tiverton: (See Old Forge response for answer)

Old Forge: Leveraging the use of customer-owned equipment for utility monitoring and control.

If EE/DR: what load shapes were sourced for measures used to meet the distribution peak need? How was load forecast?

Tiverton: In the data sourcing for distribution planning and the NWA analysis for the Tiverton NWA Pilot, National Grid assessed historical weather patterns, historical coincident summer peak demands, load forecast projections for the local area and substation, and the customer (commercial, industrial, residential) demographic for the area.

How does NWA projects work to address NERC N-1-1 requirements?

Tiverton: (See Old Forge response for answer)

Old Forge: Generally, NWA are evaluated under the same planning criteria and requirements applicable to traditional infrastructure projects. There are a number of scenarios depending on technologies, that we could utilize NWA. Still, in any case, we would be required to meet NERC, NPCC, and NYSRC standards.

How did the economics of the DER solution compare to a traditional grid upgrade? How do you suggest valuing future projects?

Tiverton: For the Tiverton NWA Pilot, the NWA solution (a portfolio solution of EE and DR) was cost-effective and scored an average BCA of 1.4 over the project lifetime.

Projects proceed with an NWA solution only if the ratio of the benefits to costs are greater than 1.0 while meeting the distribution grid need and the solution does not compromise the integrity of the electric grid.

Old Forge: (See Tiverton NWA Pilot response for answer)

Does having the CTA-2045 socket on new appliances help to enable use of any type of communication technology to appliances?

Tiverton: (See Old Forge response for answer)

Old Forge: We do not currently have any programs using CTA-2045 appliances (or any residential devices outside of thermostats and battery storage). Standards such as CTA-2045 do allow for greater potential for appliance DR to grow by minimizing the number of communication protocols required to operate a grid-interactive appliance program.

Are you doing business in Rwanda? MBITA is now working in the educational aspect of Rwanda's 'electrification for rural Rwanda'.

Tiverton: (See Old Forge response for answer)

Old Forge: No. Our US business serves customers in NY, MA, and RI.