Non-Wires Solutions

Spring 2019 Program Update

April 17, 2019
Agenda

• About Con Edison
• Non-Wires Solutions (NWS) Program Overview
• Current and Potential Future NWS Programs
• Current NWS Incentives
• Energy Storage RFP
• Market Solicitation & Portfolio Development Takeaways
• Q & A
## Consolidated Edison Company of New York

<table>
<thead>
<tr>
<th>Customers</th>
<th>Infrastructure</th>
<th>Service Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric</td>
<td>3.4 million</td>
<td>One of the largest underground systems in the world</td>
</tr>
<tr>
<td>Gas</td>
<td>1.1 million</td>
<td>4,333 miles of gas mains and services</td>
</tr>
<tr>
<td>Steam</td>
<td>1,600</td>
<td>Largest district steam system in the world</td>
</tr>
</tbody>
</table>

Con Edison, Inc. also includes:
- Orange & Rockland Utilities – Gas and Electric
- Con Edison Clean Energy Businesses
- Con Edison Transmission – Electric transmission and gas midstream
New York’s Reforming the Energy Vision (REV)

- Reduction of Greenhouse Gas Emissions
- Electricity from renewable energy sources
- Decrease in building energy consumption

Non-Wires Solutions contribute to the ambitious REV framework
Deferral/Replacement of Traditional Solutions with DERs

A portfolio of DER technologies are needed to shave the peak.
Distributed Energy Resources (DERs): Customer Choice and a Utility Tool

Annual Load Forecast

- Analyze impacts to area substation, primary feeders, etc.
- Forecasted load expected to exceed capability of area/network

Traditional Solution
- Upgrade transformers, add new feeders, etc.

Non-Wires Solutions
- Pursue demand reduction strategies
Non-Wires Solutions
Process Overview

Identify System Needs
NWS Suitability
Competitive Solicitation
Benefit Cost Analysis (BCA) Evaluation & Procurement
Current & Potential Future NWS Programs

Active/Procurement
Brooklyn
Queens
Demand
Management

Active/Procurement
Water St./Plymouth St.

Potential Future NWS Programs

Not Pursuing
Columbus Circle, Hudson, Flushing

Evaluation
W. 42\textsuperscript{nd} St. & Newtown
Active Programs in Brooklyn & Queens

To verify site eligibility email Con Ed account # to DSM@coned.com
Current Programs: NWS In-progress

**Water St. / Plymouth St.**

- **Networks**: Borough Hall, Prospect Park, Williamsburg
- **Load relief need**: 32 megawatts (MW) by 2021
- **Traditional projects**: Feeder replacement and transformer cooling
- **Status**: Active / Procurement

**BQDM**

- **Networks**: Crown Heights Ridgewood, Richmond Hill
- **Load relief need**:
  - 52 MW completed 2018
  - ~11 MW by 2021
- **Traditional projects**: New Substation/Load Transfer
- **Status**: Active / Procurement
Current Programs: NWS In Development

West 42nd Street

- **Networks:** Pennsylvania
- **Load relief need:** 42 MW over 10 years
- **Traditional projects:** Load transfer
- **Status:** Evaluation

Newtown

- **Networks:** Borden, Sunnyside
- **Load relief need:** 24 MW over 10 yrs.
- **Traditional projects:** New transformer and sub-transmission feeder
- **Status:** Evaluation
Current NWS Programs & Incentives
# NWS Portfolio Incentives

<table>
<thead>
<tr>
<th>Customer Sided Solutions</th>
<th>BQDM</th>
<th>Water St. / Plymouth St.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Energy Efficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Small Business</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Commercial &amp; Industrial</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Distributed Generation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined Heat &amp; Power</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fuel Cells</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Energy Storage Systems</strong>*</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

*RFP procurement only*
Energy Efficiency: Residential

Con Edison Neighborhood Program

We offer residents in single-family homes or multifamily buildings with up to 4 units:

- Free LED lightbulbs and installation
- Refer a neighbor incentive
- Rebate of up to $210 on a smart thermostat

More than 30,000 customers have replaced over 600,000 light bulbs with energy efficient LEDs

conEd.com/Neighborhood
Energy Efficiency: Multifamily

Con Edison Multifamily Energy Efficiency Program

Multifamily buildings with five or more residential units are eligible for:

- Free installation of approved energy-efficient lighting and controls upgrades in building common areas
- Free in-unit LEDs
- Find qualified Participating Contractors online

More than 2,500 buildings and 9,000 residential units in BQDM and Water Street have participated to date

Learn more and sign up at: conEd.com/NeighborhoodMultifamily
Energy Efficiency: Small Business

Con Edison Commercial Direct Install Program

Small businesses are eligible for:

• Free energy assessment
• Free lighting upgrades
• $160 rebate on a smart thermostat

Energy efficient upgrades have been installed at more than 7,500 small businesses

Learn more and sign up at: conEd.com/NeighborhoodCommercial
## Energy Efficiency: Commercial & Industrial

### Con Edison Commercial & Industrial Program

- Pre & post installation inspection required
- Custom measures require additional Measurement & Verification
- Incentive paid after post installation inspection

<table>
<thead>
<tr>
<th>Interior LED Lighting</th>
<th>15% over core existing C&amp;I Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible Custom Measures</td>
<td>$800/kW</td>
</tr>
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</table>
Distributed Generation: Combined Heat & Power

Program offered through:
Con Edison Incentives

- May 1, 2020 Target Installation
- ½ incentive at install, remainder performance-based
- NYSERDA PON 2568 Closed but technical assistance still available
- Must report system data to NYSERDA website to qualify for incentives
- Black start capability optional

<table>
<thead>
<tr>
<th>Incentive</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ per kW</td>
<td>Up to $1,800*</td>
</tr>
<tr>
<td>Incentive cap</td>
<td>$1.5 million</td>
</tr>
</tbody>
</table>

*Incentive rate based on base rate from NYSERDA PON 2568 Incentive Calculator

Source: manageenergy.coned.com
Distributed Generation: Fuel Cells

Program offered through:
Con Edison & NYSERDA Incentives

- May 1, 2020 Target Installation
- ½ incentive at install, remainder performance-based
- NYSERDA technical assistance available
- Must report system data to NYSERDA website to qualify for incentives
- See NYSERDA PON 3841 for additional requirements

<table>
<thead>
<tr>
<th>Incentive</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYSERDA PON 3841 Incentive</td>
<td>$1,000</td>
</tr>
<tr>
<td>Matching Con Ed Incentive</td>
<td>$1,000*</td>
</tr>
<tr>
<td>Incentive cap</td>
<td>$1 million</td>
</tr>
</tbody>
</table>

* Matching base incentive only
NWS Energy Storage System (ESS) Request for Proposals

Water Street and Plymouth Street
Water St / Plymouth St ESS RFP

- **9 - 14 MW** targeted load reduction via ESS
- Minimum 4 hour system duration
- RFP Released: **April 8**
- Responses Due: **May 10**
- ESS needed operational starting:
  - May 2020 and May 2021
Water St / Plymouth St ESS RFP: Key Program Terms

• Con Ed will purchase full ESS dispatch rights for 10 Summer Capability Periods

• NWS ESS projects not eligible for Con Ed’s Demand Response or Demand Management programs for duration of contract

• Day-ahead notification of ESS dispatch need

• Con Ed NWS incentive paid 50% at Operational Date; 5% annually for 10 Summer Capability Periods

• Potential future market revenues to be shared between Con Ed and vendor
Water St / Plymouth St ESS RFP: Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>April 8, 2019</td>
<td>Release Water St. /Plymouth St. NWS ESS RFP</td>
</tr>
<tr>
<td>April 17, 2019</td>
<td>NWS Update Webinar</td>
</tr>
<tr>
<td>April 19, 2019</td>
<td>Respondents submit clarification questions</td>
</tr>
<tr>
<td>April 26, 2019</td>
<td>Con Edison responds to clarification question</td>
</tr>
<tr>
<td>May 10, 2019</td>
<td>RFP Response deadline</td>
</tr>
<tr>
<td>May 31, 2019</td>
<td>RFP Award/Notification</td>
</tr>
<tr>
<td>July 16, 2019</td>
<td>Expected contract execution date</td>
</tr>
<tr>
<td>August 16, 2019</td>
<td>Security Requirement due for awarded proposals.</td>
</tr>
<tr>
<td>November 1, 2019</td>
<td>Customer Acquisition Deadline for May 1 2020 projects</td>
</tr>
<tr>
<td>January 15, 2020</td>
<td>Customer Acquisition Deadline for May 1, 2021 projects</td>
</tr>
<tr>
<td>May 1, 2020</td>
<td>Deadline for guaranteed ESS capacity installed and operational for summer performance</td>
</tr>
<tr>
<td>May 1, 2021</td>
<td>Deadline for guaranteed ESS capacity installed and operational for summer performance</td>
</tr>
</tbody>
</table>
Water St / Plymouth St ESS RFP:
Energy Storage Market Acceleration Incentives
Implementation Plan

• **Eligibility:**
  - Customer must contribute to System Benefit Charge (SBC)
  - See detailed implementation plan for additional eligibility requirements

• **Incentive:** Descending starting at $350/kWh

• More information: www.nyserda.ny.gov/energystorage
Market Solicitation & Portfolio Development Takeaways
Recommendations to Potential RFP Respondents

• Ensure that you are qualified in Con Edison Oracle system
• A project will typically not be selected to address all needs
• Complete all RFP requirements and ensure requested attachments are fully completed
• Reach out to dsm@coned.com if you’d like to verify a customer is eligible (Account Number, name and address needed)
• Utilize additional revenue streams to propose a more cost-effective solution
• Documented customer letter of support and/or Solutions providing more load relief at network peak hour and/or overload period are prioritized
• Lower costs favored to maximize ratepayer benefit
## Portfolio Development Learnings

<table>
<thead>
<tr>
<th>Disqualification reasons</th>
<th>Selection reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Insufficient information provided</td>
<td>• Complete, clear proposal</td>
</tr>
<tr>
<td>• Little to no reduction impact to times of need</td>
<td>• Helps to address overall portfolio needs</td>
</tr>
<tr>
<td>• High costs compared to other solutions</td>
<td>• Customer support/understanding of demographics</td>
</tr>
<tr>
<td>• Technology proposed not yet proven</td>
<td>• Cost competitive offering</td>
</tr>
<tr>
<td></td>
<td>• Proven technology</td>
</tr>
</tbody>
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Program Development Approach

1. Review RFP Responses
2. SME Review & Scoring
3. Portfolio Development
4. DPS Staff Engagement
5. Program Launch
Some May Also Be Wondering.....

- Why are some projects that have been through an NWS solicitation not moving forward?
- Why are some projects that were initially identified on the Non-wires webpage no longer moving forward?
- How are you providing feedback on a solutions response?
- How long does the program development process last?
- Can a customer respond directly to an RFP?
Non-wires solutions have the potential to reduce customers’ electric bills, improve reliability, and defer capital infrastructure. We’ve identified several opportunities to create such change.

### Current Opportunities

<table>
<thead>
<tr>
<th>Projects</th>
<th>Current Status</th>
<th>Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Feeder Relief - Chelsea</td>
<td>Project deferred due to decrease in the projected load</td>
<td>Project Description</td>
</tr>
<tr>
<td>Parkchester No. 1 Cooling Project</td>
<td>Project deferred due to decrease in the projected load</td>
<td>Project Description</td>
</tr>
<tr>
<td>Newtown Transformer Installation Project</td>
<td>No longer accepting proposals</td>
<td>RFP</td>
</tr>
<tr>
<td>Primary Feeder Relief - Williamsburg</td>
<td>No longer accepting proposals</td>
<td>RFP</td>
</tr>
<tr>
<td>Water Street Cooling Project</td>
<td>No longer accepting proposals</td>
<td>RFP</td>
</tr>
<tr>
<td>Plymouth Street Cooling Project</td>
<td>No longer accepting proposals</td>
<td>RFP</td>
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</table>
Other Helpful Links

- Con Edison Non-Wires Solutions: www.coned.com/nonwires
- NYSERDA: www.nyserda.ny.gov/
- National Grid Metro NY (Gas): www.nationalgridus.com/NY-Home/
Q&A