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Regulatory, Legislative, Collaborative & Organic Drivers for NWA in the US

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Dr. Carl Linvill
Principal
The Regulatory Assistance Project (RAP)®

50 State Street, Suite 3
Montpelier, Vermont
United States

+1 802 498 0723
clinvill@raponline.org
raponline.org
Regulatory Driven Process

New York

Distribution System Implementation Plans

- Approve utility-specific BCA Handbook
- Utility proposes any project that passes its BCA
- Streamlined approvals, premium return possible
## Central Hudson Proposals

<table>
<thead>
<tr>
<th>Project Name/Description</th>
<th>Project Type</th>
<th>Need Timing</th>
<th>Project Size</th>
<th>Procurement &amp; Development Timeline</th>
<th>Estimated RFP Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coldenham / Distribution Feeder Upgrade</td>
<td>Load Relief</td>
<td>Dec 2019</td>
<td>Small</td>
<td>34 months</td>
<td>Mar 2017 (NWA Currently Underway)</td>
</tr>
<tr>
<td>Philips Road / Substation</td>
<td>Load Relief</td>
<td>May 2018</td>
<td>Large</td>
<td>42 months</td>
<td>Nov 2014 (NWA Currently Underway)</td>
</tr>
<tr>
<td>Northwest Corridor / Transmission Upgrade</td>
<td>Load Relief</td>
<td>May 2019</td>
<td>Large</td>
<td>54 months</td>
<td>Nov 2014 (NWA Currently Underway)</td>
</tr>
<tr>
<td>Merritt Park / (2) Distribution Feeder Upgrades</td>
<td>Load Relief</td>
<td>May 2019</td>
<td>Small</td>
<td>54 months</td>
<td>Nov 2014 (NWA Currently Underway)</td>
</tr>
</tbody>
</table>
Central Hudson Case Study

Phillips Road Project

• This system need and project was identified during the 2015 planning process.
• To successfully defer a new substation, 5 MW of load relief is needed by 2018.
• Solicitation occurred in 2014, leading to the implementation of a targeted demand management program.
NY Microgrid Example

Orange and Rockland, NY

- 17 MW microgrid defers substation
- Solar, Fuel Cells, EE, DR and storage solicited
- 60 minute responsiveness required
Regulatory Driven Process

California

Distribution Resource Plan

- CPUC defined demonstration project scope
- Utilities required to include distribution investment deferral process
- Competitive procurement, capitalize contract cost at modest return (~4%)
Collaborative PG&E and EBCE Project

• The PG&E and East Bay Clean Energy project, the Oakland Clean Energy Initiative (OCEI)
• Replaces a retiring 165 MW Dynegy gas peaker, obviates need for 115 kV and 230 kV transmission
• Combination of resources includes:
  • 25-40 MW combination of EE, DR, PVDG (minimum 19 MW of load reducing response)
  • 10 MW/40 MWh storage
  • Substation upgrades and line re-ratings
Competitive solicitation determines compensation

- PG&E gets to build and dispatch the storage, as well as the distribution system upgrades
- 25 to 40 MW of DERs procured through competitive solicitation and compensated according to bids

... Saving Ratepayers Money and Reducing Emissions
Legislatively Driven Processes

NWA requirements and inferences

- Vermont (2006) – 10 Year Forecast of Load Growth Driven T&D with NWA trigger
- Rhode Island (2006) – NWA assessment for all Reliability Upgrades
- Illinois Future Energy Policy Act (2016) – Cost effective DER requirements can motivate NWA investigations
BPA South of Allstom –
- 100 MW of Transmission flow relief needed
- Non-wires process => 89% generation re-dispatch, 11% DR
- Lesson: EE, DR and DER require plan ahead
Organic Process: Public Power

Anza AZ G&T member in southeastern CA

- At the end of a radial line, load growing
- 500 kW, 1 to 4 MWh of storage
- Defers much more expensive upgrades to 2024.
Organic Process: Transactive Market

Avista Shared Energy Economies Pilot

• Spokane’s University District

• Solar, Building Management Systems, Battery Storage

• Shared Economy Energy Pilot – Toward Local Transactive Energy
About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org