Power Supply Outlook

Steve Molodetz
Vice President of Business Development
HQUS
Significant Demand for Clean Renewable Energy in the Northeast

- Clean Bridge fuel for Nuclear Refurbishment
- MA Clean Energy and Offshore Wind RFPs
- GWSA and GHG goals in NE
- MA Clean Energy Standard
- Integration of Renewable Energy
- Coal Retirement
- WCI
- RI 1000MW by 2020
- CT 30% by 30 Proposed RPS
- 3.2 GW Offshore Wind
- 50% Renewables & 40% GHG Reduction by 2030

Significant Demand for Clean Renewable Energy in the Northeast
# Class I Renewables in the Northeast

<table>
<thead>
<tr>
<th>Region</th>
<th>Existing</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solar: 2416 MWs</td>
<td>Solar: 700 MWs</td>
</tr>
<tr>
<td></td>
<td>Wind: 1379 MWs</td>
<td>Wind: &gt;5000 MWs</td>
</tr>
<tr>
<td>New England</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Solar: 927 MWs</td>
<td>Solar: &gt;800 MWs</td>
</tr>
<tr>
<td></td>
<td>Wind: 1827 MWs</td>
<td>Wind: &gt;4500 MWs</td>
</tr>
<tr>
<td>New York</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Solar: 366 MWs</td>
<td>Solar: 201WMs</td>
</tr>
<tr>
<td></td>
<td>Wind: 5 MWs</td>
<td>Wind: 3.5 MWs (MACERFP)</td>
</tr>
<tr>
<td>Connecticut</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Global Warming Solutions Act Targets in New England will require substantial additions of clean energy resources by 2025.

~21 TWh of additional clean energy will be required by 2025.
All Clean Energy Will be Needed

Nameplate Capacity (MWs) Needed to Meet Energy Goals

- Hydro (90%): 2664 MWs
- Offshore Wind (45%): 5327 MWs
- Onshore Wind (35%): 6849 MWs
- Solar (15%): 15982 MWs
The Path Forward: Balance

Markets
Cost to Ratepayers
System Resilience and Reliability
Transmission Cost

Procurements
Public Policy Goals
Renewable Development
Transmission Siting
Hydro Quebec: A Clean Energy Partner for New England

SIX OPTIONS FOR MASSACHUSETTS

3 potential transmission lines

For each line:

> A 100% hydropower option
> A hydro-wind option