Green Energy
IEEE Green Energy Conference
March 22, 2024
## Today’s Discussion

<table>
<thead>
<tr>
<th>Start</th>
<th>End</th>
<th>Description</th>
</tr>
</thead>
</table>
| 2:40  | 3:05 | Decarbonizing Electric Power.  
     Rick Rys P.E. (Chemical)  
     Engineer (R2Controls)  
     Consulting for ARC (Market Research)  
     Prosumer  
     Light commissioner |
HERS rating was -3, but!!! New patterns and EV > Net Zero
Princeton MA, Light Department

WELCOME TO
PRINCETON MUNICIPAL LIGHT DEPARTMENT!
PMLD is very small

• ~1500 customers, 0 industrial, few commercial
• 4 linemen
• 2 office workers
• 1 General Manager
• 3 elected commissioners
2008 Ice storm
2008 Ice storm
Firsthand Experience: Regulation influence on MA Utility

- PMLD (Princeton (MA) Municipal Light Department) one of 41 Muni’s in the state- I’m the Chairman of the light board
- Comprehensive Clean Energy and Climate Change Policy Act (Section 99) requires each municipal utility to purchase a specified percentage of their electricity from renewable energy sources.
  - 50% non carbon emitting by 2030
  - 75% non carbon emitting by 2040
  - 100% non carbon emitting by 2050
PMLD System

- Wind Turbines
- Town Hall, Fire, Police
- Prince School
- Future? Solar field
- Battery Location 2025

Current POC (National Grid) → Future POC (SMLD)
1984 – eight 40kW Enertech on 100-foot towers (until 2004)
Met tower and construction 2009
Two 1.5 MW Furlander installed 2009 – running today
7-acre (+15 acres with DCR land swap) solar farm? ~1-4 MW
2MW – 8MWh (4 containers) To be installed in 2024
Summary

• Connection with Sterling opens opportunities to collaborate
• Wind Site nearing end of life (replace turbines)
• New Solar PV has obstacles
• Battery replaces diesel rentals for reducing transmission and capacity tariffs computed from power used during peak hour each month.
• Will adjust PPA’s to meet 50% non-carbon, with hydro, wind, nuclear, solar, batteries, retiring wind RECs, purchasing other RECs if needed
• Long term we need Transmission to Quebec Hydro and offshore wind (with capacity factors over 50%). Smart Meters with AMI to implement demand response using VPP or other programs.
• PMLD prefers EaaS – I.e. private firm own and operate assets
Thank You.
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