Ask the Experts: Solar + Storage PPAs

Massachusetts Climate Week 2021
Leading by Example Program

Agenda

- 12-12:05: Welcome and Introductions
  - Catie Snyder, DOER

- 12:05-12:20: Opportunities, Sample Projects, Third-Party Financing
  - Walter Gray, PowerOptions
  - Alex Keally, Solect Energy

- 12:20-1:00: Q&A -- Ask the Experts!

Leading by Example - Renewable & Clean Energy Resources

Currently over **29 MW solar capacity at state facilities**, generating millions of kWh of electricity per year

Growing number of installations serving **distributed energy resource** integration role (e.g., pairing of solar with battery storage and electric vehicle charging stations)

Results in **electricity cost and demand charge savings** for state government operations + direct contributions to the declining emissions of the regional grid

Identifying Good Solar & Energy Storage Opportunities

- Introductions
- Qualifying Opportunities
- Sample Projects
- Third-Party Financing
- Q&A

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PowerOptions

Alex Keally
SVP Energy Solutions

Walter Gray
Solar Program Manager

- **Mission driven nonprofit**
- **A trusted advisor to our members since 1998**
- **450+ Members**
- **70+ MW Solar**
- **Programs supplied via rigorous RFP process**
- **Public entities may participate in programs without conducting own RFP**

Somerset Berkley Regional High School

Stonehill College Parking Canopies

Haverhill City Hall

solect energy™

- Founded in 2009

- Headquartered in Hopkinton, MA

- Develop, finance, install, and manage Solar Roofs, Canopies, Ground, Storage in MA, RI, and CT

- 11 years | 600 installations | 125 MW

- 75+ employees

- Service team monitors and manages 650 projects

- PowerOptions RFP Award winner

- DCAMM certified

PowerOptions

solectenergy

**Cape Cod Regional Transit Authority
Hyannis, MA**

- 6 years

- 100+ Projects

- 20+ MW

- $40MM+ term savings

- 47 municipalities and school districts

- 10 state projects

- Private colleges, schools, YMCAs, community service, cultural, houses of worship

Identifying Solar & Storage Opportunities

Solar

- Rooftops of >10,000SF with roofs <10 years old or soon to be replaced with minimal shading
- Parking lots in Eversource East territory with at least 100 parking spaces and minimal shading
- Ground lots with no other development planned, ideally previously developed and relatively flat

Energy Storage

- Works best under the SMART program paired with >300kW solar
- Best with peak demand >250kW most months
- Best in Eversource Greater Boston area where demand charge rates are highest
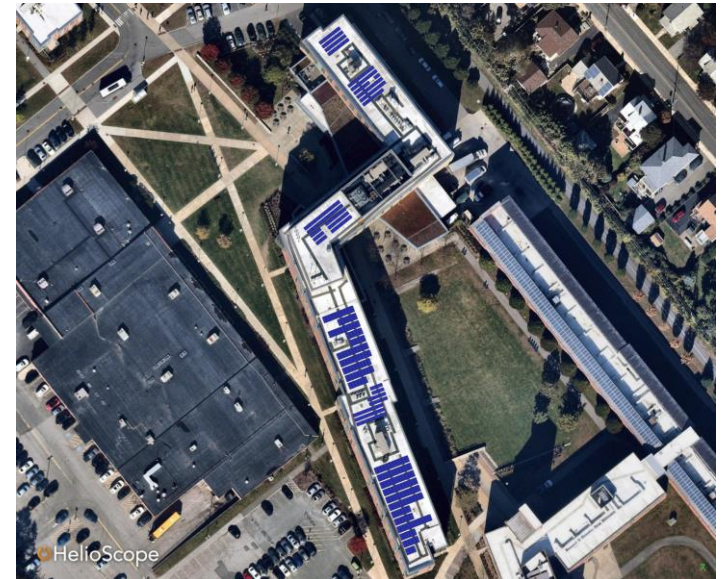
Sample Projects

SALEM STATE UNIVERSITY

3 Buildings (*completed so far*):
- Berry Library (176kW)
- Marsh Hall (102kW)
- Gassett Fitness Center (101kW)

Projects installed and operating. One more ready to start construction and another being contracted.

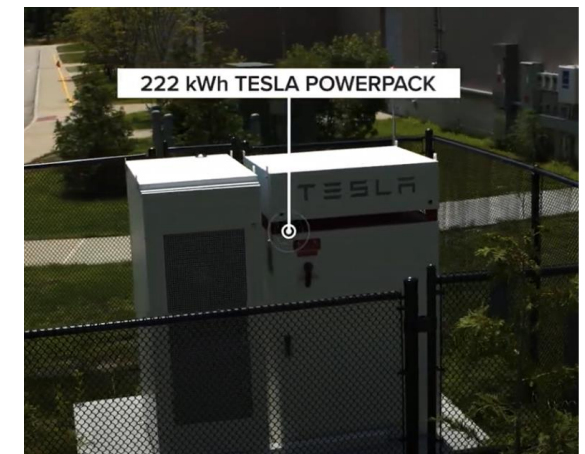*Savings of almost $1MM and 7,000 tons of CO_2 for the 20-year term.*

Sample Projects

Hopkinton Public Schools

New Marathon K-1 School

- Installed 313kW of solar
- Paired with 222kWh of Energy Storage
- "Hybrid" PPA = Solar Power Purchase Agreement + Shared Savings Agreement for Energy Storage
- Solar and battery installation complete and operating

Estimated savings over $1MM for the 20-year term.

222 kWh TESLA POWERPACK

Third-Party Financing

➔ No Capital needed

➔ Utilize available tax credits through public-private partnership

➔ No maintenance responsibility

➔ Can avoid individual RFP by participating in PowerOptions' already completed RFP

➔ Standard DCAMM-reviewed contract available

Power Purchase Agreement (PPA)

Customer pays a flat rate for power created by solar system

Benefits:
- Simple payment structure
- Discount to utility rates

Hybrid Power Purchase Agreement (hPPA)

Customer pays a reduced flat rate for solar power and agrees to benefit-share for storage system

Benefits:
- Discount to utility rates for solar power
- Incentives aligned on energy storage performance

Questions?

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