

Pelham School District

Solar Photovoltaic Discussion



BEACON
INTEGRATED SOLUTIONS

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Beacon Integrated Solutions

Our Mission

- ❖ Beacon is a Massachusetts-certified woman-owned energy management solutions firm helping clients optimize energy economics, optimize energy infrastructure, invest in environmental sustainability solutions and participate in traditional and renewable energy markets.
- ❖ **Our Core Focus:**
 - ❑ Energy Efficiency and Energy Management Support
 - Energy savings and utility efficiency program support
 - Performance contracting support
 - Energy analysis and project development support
 - Demand Response program support
 - ❑ Renewable Energy Solutions
 - Solar energy project support under public or private ownership
 - Net metering project support
 - ❑ Commodity advisory and procurement support
 - Electricity, natural gas, fuels, propane and renewable energy certificates



Renewable Energy Solutions

Key Considerations

- ❖ **On-site renewable energy solutions are successful when three important objectives are achieved:**
 - ❑ Economic benefits
 - ❑ Environmental benefits
 - ❑ Educational benefits

- ❖ **Siting on Rooftops:**
 - ❑ Orientation toward south and east
 - ❑ Age of roof and remaining life and warranty
 - ❑ Reserve weight capacity beyond snow load
 - ❑ Penetrations

- ❖ **Behind-the-Meter Benefits and Considerations:**
 - ❑ “Spin the meter backwards” – Avoided cost
 - ❑ Exported electricity to Grid – Net Metering
 - ❑ Utility metering requirements

Renewable Energy Solutions

Key Considerations

❖ **Competitive Electricity Supply:**

- ❑ Pelham School District is under contract for competitive electricity supply through November 2023.
- ❑ Need to confirm that behind-the-meter systems do not trigger any material change/deviation provisions if solar projects are implemented prior to November 2023.
- ❑ Need to confirm whether electricity accounts are required to return to utility default service if participating in the Net Metering Program.

❖ **Environmental Attributes:**

- ❑ Ownership of environmental attributes is usually the typically of the solar array.

❖ **Educational Benefits:**

- ❑ Electronic web-based dashboard with near-real time generation data and calculated environmental benefits
- ❑ Workshops and demonstrations

Strategy Development

Key Considerations

❖ **Establish a Solar Energy Task Force with representation as follows:**

- School Board Member
- Town Official
- Parent
- Student
- Teach/Educator
- Superintendent
- Business Administrator
- Director of Facilities
- Owner's Agent

❖ **Critical areas of focus:**

- Project goals
- Collaboration considerations with the Town of Pelham
- Ownership considerations (District versus third-party)
- Siting considerations
- Economic requirements
- Operational considerations and schedules
- Educational requirements
- Procurement options (sole source versus competitive procurement)

Pelham High School

Conceptual Design– 720 kW DC



Existing Pelham Memorial School

Conceptual Design– 199 kW DC



Pelham Elementary School

Conceptual Design – 312.9 kW DC



Next Steps

- ❖ Authorize and establish the Solar Energy Task Force.
- ❖ Report recommendations through the Superintendent for School Board consideration.
- ❖ Meet budgetary schedule deadlines for fiscal year 2023.

Thank You!

Beacon Integrated Solutions

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