

# Town of Sudbury Solar Energy Presentation

October 4, 2021



# Agenda

- Review PowerOptions' Solect Solar & Storage program
- Sudbury Engagement to Date
- Review Sudbury Projects
- Discuss Project Designs, Economics
- Next Steps





- Founded in 2009, Headquarters in Hopkinton, MA
- Develop, Finance, Design, Build, Operate, Service Solar and Energy Storage in MA, RI, CT
- 70 MA employees
- 600+ commercial projects, 130MW to date
- Solect Services manages 650 projects in MA, RI, CT
- 100+ PPAs completed with Public and Not for Profit clients under the PowerOptions RFP Award and Standard Contracts
- DCAMM Certified
- Solect.com



# PowerOptions

- PowerOptions is the largest energy buying consortium in New England for public entities and non profits
- PowerOptions performs competitive RFPs for its members, to provide energy solutions including: Electricity, Natural Gas, Solar & Energy Storage, and EV charging. Solect has been awarded the solar and storage program.
- Public entities can leverage the PowerOptions RFP in lieu of conducting individual solicitations, and comply with state regulations (M.G.L. Ch. 164 S. 137). MA Clean Energy Center (MassCEC) Board of Directors authorized PowerOptions to conduct energy procurements on its behalf.
- PowerOptions delivers cost savings and predictability to nonprofits and the public sector in Massachusetts, Connecticut and Rhode Island.
- PowerOptions' Solar Program Manager serves as the advocate and advisor to support members' decisions on contracting with providers under its programs.
- PowerOptions audits proposals, project pro formae, and contracts for every project.



# Town of Sudbury - Solar Savings

Town of Sudbury - Solar Summary Table										
Building Location	System Type	System Size kW (DC)	Year 1 - Production	PPA Term (Years)	Block 5			Block 6		
					SMART Incentive Amount	PPA Rate	Est. Savings	SMART Incentive Amount	PPA Rate	Est. Savings
Noyes School	Rooftop	351.9	393,000	20	0.12098	0.075	\$738,556	0.12041	0.084	\$671,327
Nixon Elementary School	Solar Canopy	367.2	371,000	25	0.17969	0.135	\$235,207	0.17103	0.147	\$150,632
<b>Total</b>		<b>719.1</b>	<b>764,000</b>				<b>\$973,763</b>			<b>\$821,959</b>
Ephaim Curtis Middle School	Solar Canopy	293.3	344,000	25	0.18753	0.113	\$393,457	0.17887	0.123	\$312,980
Ephaim Curtis Middle School	Rooftop + Up Front Lease	373.2	444,000	25	0.14673	0.174	\$636,584	0.13807	0.182	\$553,403
<b>Total</b>		<b>666.4</b>	<b>788,000</b>				<b>\$1,030,041</b>			<b>\$866,383</b>
Department of Public Works	Rooftop + Up Front Lease	278.8	309,000	25	0.13889	0.135	\$607,711	0.13023	0.143	\$560,641
Josiah Haynes	Rooftop + Up Front Lease	358.7	401,000	25	0.14673	0.185	\$512,974	0.13807	0.193	\$437,799
<b>Total</b>		<b>637.5</b>	<b>710,000</b>				<b>\$1,120,685</b>			<b>\$998,440</b>
<b>Combined Total</b>		<b>2,023</b>	<b>2,262,000</b>				<b>\$3,124,489</b>			<b>\$2,686,782</b>

## Assumptions

System sizes subject to final engineering based on utility review and/or specifications of confirmed roof system

Open shop labor (3rd party owned)

Rates assume a PILOT of \$5.00 per kW

Rates do not include utility network upgrade or study costs

Bonding not included as system is 3rd party owned

Assumes Block 5 or Block 6 SMART Incentives

Utility electric rates escalate at 2.0%



# PILOT Amounts for Sudbury Projects




Town of Sudbury - Solar PILOT Table							
Building Location	System Type	System Size kW (DC)	PPA Term (Years)	PILOT \$/kW	Escalation Rate	PILOT Payment Year 1	Total PILOT Payment
Noyes School	Rooftop	352	20	\$5.00	-3%	\$1,760	\$26,756
Nixon Elementary School	Solar Canopy	367	25	\$5.00	-3%	\$1,836	\$27,920
Ephaim Curtis Middle School	Solar Canopy	293	25	\$5.00	-3%	\$1,466	\$26,052
Ephaim Curtis Middle School	Rooftop + Up Front Lease	373	25	\$5.00	-3%	\$1,866	\$33,150
Department of Public Works	Rooftop + Up Front Lease	279	25	\$5.00	-3%	\$1,394	\$21,198
Josiah Haynes	Rooftop + Up Front Lease	359	25	\$5.00	-3%	\$1,794	\$31,866
<b>Combined Total</b>		<b>2,023</b>				<b>\$10,116</b>	<b>\$166,942</b>

## Discussion Points:

- 2021 Climate Bill Exempted Certain projects
- Sudbury's confirmation and approval of PILOT Values






# Sudbury's Solar-Ready locations

Noyes School – Rooftop	Ephraim Curtis – Canopy	Nixon School – Canopy
Solar 351.9kW (DC) Generation: 393,000kWh/Yr	Solar 293.25kW (DC) Generation: 344,000kWh/Yr	Solar 367.2kW (DC) Generation: 371,000kWh/Yr
		

## Assumptions

System sizes subject to final engineering based on utility review and/or specifications of confirmed roof system

# Sudbury's Locations for Rooftop Solar + Upfront Lease

Department of Public Works	Josiah Haynes	Ephraim Curtis
Solar 278.8kW (DC) Generation: 309,000kWh/Yr	Solar 358.7kW (DC) Generation: 401,000kWh/Yr	Solar 373.15kW (DC) Generation: 444,00kWh/Yr
		

## Assumptions

System sizes subject to final engineering based on utility review and/or specifications of confirmed roof system



# Recommendation to secure IA & SMART Incentives for Solar-Ready locations

To secure the incentive and protect the projects' savings, Solect recommends that sign the LOI needed we proceed with the solar system to be located at The Noyes School (Roof), Ephraim Curtis Middle School (Canopy), and Nixon School (Canopy)

- INTERCONNECTION AND INCENTIVE PROCESS
  - Prepare electric engineering, submit SMART incentive applications and interconnection applications for each site. Utility response may require engineering studies.
  - Letter of Intent. This is required by DOER in order to assign the SMART incentives
- STRUCTURAL AND SITE FEASIBILITY AND PERMITTING
  - Confirm structural feasibility & weight-loading capacity for each building based on the systems ballast plan.
  - For canopies, conduct civil engineering and engage the Planning board to gain project approvals.
- PILOT CONFIRMATION:
  - Execute PILOT agreements




## Recommendation to engage Procurement to confirm Sudbury's process for including the new roofs

Subject to Sudbury's approval, Solect proposes to evaluate the following process for paying for the roof replacement at The DPW Facility, Josiah Haynes School, and Ephraim Curtis School.

- Solect proposes to make an up-front lease payment to Sudbury.
- Solect will provide input to Sudbury to ensure that the new roofs will be solar-ready
- Sudbury will then issue an RFP for the roofs and hire with the roofing contractor and replace the roofs
- Once the roofs are installed, Solect will install the solar projects.





# Discussion, Questions Thank you!

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