

# Solsect Energy & PowerOptions Power Purchase Agreement

Southern Berkshire Regional School District  
March 21<sup>st</sup>, 2022



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# Agenda

- PowerOptions and Solect Energy's **Solar Program**
- Massachusetts SMART 2.0 Incentive Program
- Project Summaries
- Questions and Next Steps



# About PowerOptions

PowerOptions is a nonprofit energy buying consortium that delivers cost savings and predictability to nonprofits and the public sector in Massachusetts, Connecticut and Rhode Island.

Our mission is to save our members time and money on energy so more resources can be directed toward their own important missions. With nearly 500 members, our collective buying power and energy expertise yields optimal pricing and stability for organizations both large and small.



The graphic is divided into four quadrants. The top-left quadrant features a blue-tinted image of a person's face with the text 'THE ENERGY TEAM THAT WORKS FOR YOU' in white. The top-right quadrant has a dark blue background with the text 'A NONPROFIT ENERGY CONSORTIUM POWERING NONPROFITS SINCE 1998' in light blue, and three icons: a lightning bolt for 'ELECTRICITY', a flame for 'NATURAL GAS', and a sun for 'SOLAR'. The bottom-left quadrant shows an aerial view of a large building with solar panels on its roof. The bottom-right quadrant has a dark blue background with the word 'SOLAR' in yellow, followed by three numbered points in yellow circles: '1 No upfront capital costs', '2 No responsibilities for operations and maintenance', and '3 Transparent pricing methodology'.

**THE ENERGY TEAM THAT WORKS FOR YOU**

A NONPROFIT ENERGY CONSORTIUM POWERING NONPROFITS SINCE 1998

**ELECTRICITY**

**NATURAL GAS**

**SOLAR**

**SOLAR**

- 1 No upfront capital costs
- 2 No responsibilities for operations and maintenance
- 3 Transparent pricing methodology



# PowerOptions: Strength in Numbers

- Since 1998, PowerOptions has served nonprofits with competitive RFPs for Gas, Electric, Solar, and Storage
- Competitive bids yield energy Providers to contract with Members and comply with Procurement Regulations and Best Practices
- Nearly 500 members in the consortium
  - All Massachusetts, Connecticut and Rhode Island nonprofits and public entities are eligible
- \$200 million annual sales of energy supply through Provider Programs
  - 1 billion kWh of electricity / 200 MW demand
  - 11 million dekatherms of gas
  - 90 MW of solar projects
  - Totaling more than \$2 billion in energy commodity purchases
- Full time staff focused on members' needs
  - Experts on utilities, renewables, efficiency, competitive supply, and Incentive markets available to Members
  - Strong board of energy veterans, stable of consultants



# PowerOptions Awards Solar + Storage Program RFP to Solect

- Solect awarded RFPs for onsite solar PPAs, including Rooftop, Canopy, Ground, and Storage
- A competitive RFP process leveraged the volume of the Members, and expertise of PowerOptions to yield:
  - Standard DCAMM-approved Power Purchase Agreement (PPA) with *attractive Terms and Conditions*
  - Managed Cost and Price structure that yields *low fixed PPA kWh rates*
- To date Solect has completed for Members:
  - 110 projects exceeding 18 MWs
  - Municipalities, Schools, State Agencies, Non-Profits
- Solect and PowerOptions make going solar *fast and competitive and deliver savings for Members!!*



# PowerOptions & Solect Solar + Storage Program



No upfront cost



Fixed per-kWh price for  
20 years



20-Year Power Purchase  
Agreement (PPA)



PowerOptions as an advisor,  
advocate, and facilitator



Solect to install, finance, operate  
and maintain system



Pre-negotiated favorable  
contract terms and conditions



Public entities may participate without  
conducting individual procurement  
(MGL Ch. 164, Sec. 137)





# About Solect Energy

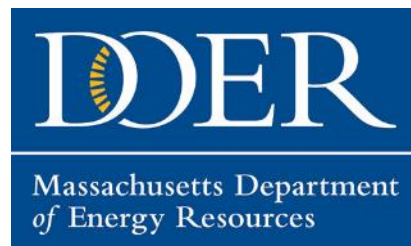
- Founded in 2009
- Headquartered in Hopkinton, MA
- Develop, finance, install, and manage solar Roofs, Canopies, Ground & Storage in MA, RI, and CT
- 12 years | 630 installations | 130 MW
- 80+ employees
- Service team monitors and manages 700 projects
- PowerOptions RFP Award winner
- Exclusive provider of Solar + Storage to towns, schools, agencies and non-profits in MA, RI and CT
- DCAMM certified





# Solar Massachusetts Renewable Target (“SMART”): Incentive 225 C.M.R. 20.00

- A 20-year fixed tariff program that provides incentives for distributed solar and storage
- Behind-the-meter applications to offset your energy usage
- Standalone applications – compensation direct from the utility for 20 years
- Declining incentives as capacity is awarded – earlier projects secure higher incentives
- Effective April 2020 “SMART 2.0” – Additional capacity and increased incentives for priority customers and project locations:
  - Public entities (can apply before utility approval)
  - Roof-mounted systems
  - Parking canopies
  - Energy storage systems



# Federal Tax Benefits

- As a for-profit company, Solect is able to monetize federal tax benefits to offer low PPA rates that are fixed for 20 years, including:
  - The Federal [Investment Tax Credit \(ITC\)](#)
  - Modified Accelerated Cost-Recovery System (MACRS) depreciation
- Through the Solect PPA, non-tax-paying customers can benefit from these federal tax incentives, for which they would otherwise not be eligible.



# Rooftop | Canopies | Ground PV



## ROOFTOP

- Reduce your electric bills
- Put unused space to use



## CANOPIES

- Reduce your electric bills
  - Covered parking
- Get more from your property

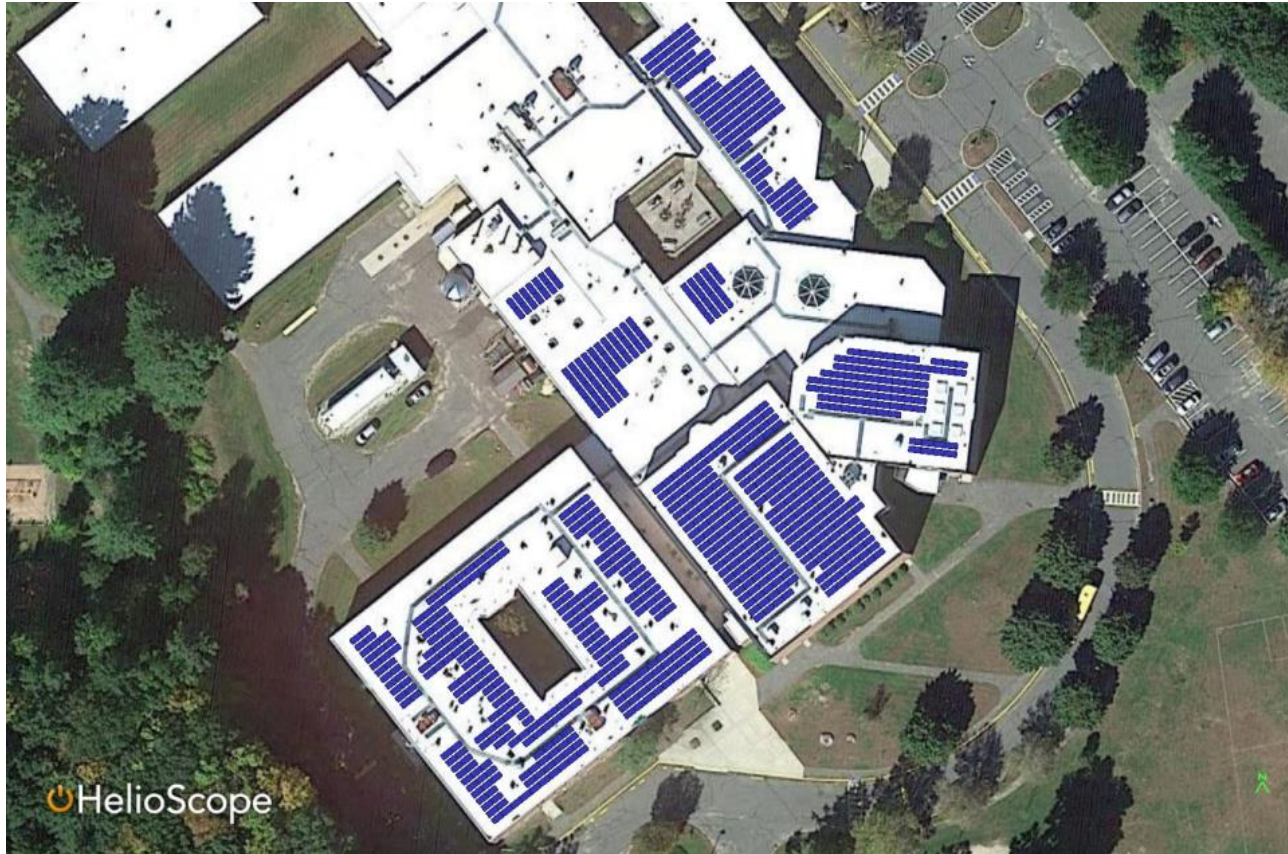


## GROUND PV

- Reduce your electric bills
- Highest Production (tilt)
- Put unused space to use



## 373.35kW Roof-Mounted Solar



# System Design Summary

- (786) Hanwha Q-Cells High-Efficiency Solar Panels (475 Watts each)
- (3) SolarEdge Inverters with Optimizers
- Ecolibrium flat-roof ballasted solar racking (no roof penetrations)
- SolarEdge & Solect/DiaSpark Solar Monitoring (accessible to students & staff with educational training included)
- Roof warranties maintained with roofer & manufacturer pre- and post-installation inspections and manufacturer documentation filed





## PPA Savings Summary Block 10

PV System Capacity (kW DC)	373.4
Year 1 PV Output (kWh)	424,000
Percent of Usage	39%
Avoided kWh Electric Cost	\$0.1357
Solar PPA kWh Rate	\$0.0670
PPA Rate Escalator	0.0%
Term (Yrs)	20
Savings per kWh (Year 1)	51%
Year 1 Forecast Savings	\$29,100
Term Savings	\$783,000
Annual Avoided CO <sub>2</sub> (lbs)	408,000
Term CO <sub>2</sub> Avoided (tons)	3,900

### Assumptions

Open shop labor (3rd party owned)  
 Rates assume PILOT of \$0.00 per kW  
 Rates do not include utility network upgrade or study costs  
 Bonding not included as system is 3rd party owned  
 Assumes SMART block 10  
 Utility electric rates escalate at 2.0%  
 Avoided emissions calculated based on 2020 EIA MA State Electricity Profile

Year	Solar Production (kWh)	Grid-Delivered Electricity Cost (\$/kWh)	Electric Savings	Solar PPA Rate (\$/kWh)	PPA Payment	Net Savings
1	424,126	\$0.1357	\$57,533	\$0.0670	\$28,416	<b>\$29,116</b>
2	421,793	\$0.1384	\$58,361	\$0.0670	\$28,260	<b>\$30,100</b>
3	419,473	\$0.1411	\$59,200	\$0.0670	\$28,105	<b>\$31,096</b>
4	417,166	\$0.1440	\$60,052	\$0.0670	\$27,950	<b>\$32,102</b>
5	414,872	\$0.1468	\$60,916	\$0.0670	\$27,796	<b>\$33,120</b>
6	412,590	\$0.1498	\$61,793	\$0.0670	\$27,644	<b>\$34,149</b>
7	410,320	\$0.1528	\$62,682	\$0.0670	\$27,491	<b>\$35,191</b>
8	408,064	\$0.1558	\$63,584	\$0.0670	\$27,340	<b>\$36,244</b>
9	405,819	\$0.1589	\$64,499	\$0.0670	\$27,190	<b>\$37,309</b>
10	403,587	\$0.1621	\$65,427	\$0.0670	\$27,040	<b>\$38,387</b>
11	401,368	\$0.1654	\$66,369	\$0.0670	\$26,892	<b>\$39,477</b>
12	399,160	\$0.1687	\$67,324	\$0.0670	\$26,744	<b>\$40,580</b>
13	396,965	\$0.1720	\$68,293	\$0.0670	\$26,597	<b>\$41,696</b>
14	394,781	\$0.1755	\$69,275	\$0.0670	\$26,450	<b>\$42,825</b>
15	392,610	\$0.1790	\$70,272	\$0.0670	\$26,305	<b>\$43,967</b>
16	390,451	\$0.1826	\$71,283	\$0.0670	\$26,160	<b>\$45,123</b>
17	388,303	\$0.1862	\$72,309	\$0.0670	\$26,016	<b>\$46,293</b>
18	386,168	\$0.1899	\$73,350	\$0.0670	\$25,873	<b>\$47,477</b>
19	384,044	\$0.1937	\$74,405	\$0.0670	\$25,731	<b>\$48,674</b>
20	381,931	\$0.1976	\$75,476	\$0.0670	\$25,589	<b>\$49,887</b>
<b>Total</b>						<b>\$782,814</b>



## PPA Savings Summary Block 11

PV System Capacity (kW DC)	373.4
Year 1 PV Output (kWh)	424,000
Percent of Usage	39%
Avoided kWh Electric Cost	\$0.1357
Solar PPA kWh Rate	\$0.0700
PPA Rate Escalator	0.0%
Term (Yrs)	20
Savings per kWh (Year 1)	48%
Year 1 Forecast Savings	\$27,800
Term Savings	\$759,000
Annual Avoided CO <sub>2</sub> (lbs)	408,000
Term CO <sub>2</sub> Avoided (tons)	3,900

### Assumptions

Open shop labor (3rd party owned)  
 Rates assume PILOT of \$0.00 per kW  
 Rates do not include utility network upgrade or study costs  
 Bonding not included as system is 3rd party owned  
 Assumes SMART block 11  
 Utility electric rates escalate at 2.0%  
 Avoided emissions calculated based on 2020 EIA MA State Electricity Profile

Year	Solar Production (kWh)	Grid-Delivered Electricity Cost (\$/kWh)	Electric Savings	Solar PPA Rate (\$/kWh)	PPA Payment	Net Savings
1	424,126	\$0.1357	\$57,533	\$0.0700	\$29,689	\$27,844
2	421,793	\$0.1384	\$58,361	\$0.0700	\$29,526	\$28,835
3	419,473	\$0.1411	\$59,200	\$0.0700	\$29,363	\$29,837
4	417,166	\$0.1440	\$60,052	\$0.0700	\$29,202	\$30,851
5	414,872	\$0.1468	\$60,916	\$0.0700	\$29,041	\$31,875
6	412,590	\$0.1498	\$61,793	\$0.0700	\$28,881	\$32,912
7	410,320	\$0.1528	\$62,682	\$0.0700	\$28,722	\$33,960
8	408,064	\$0.1558	\$63,584	\$0.0700	\$28,564	\$35,020
9	405,819	\$0.1589	\$64,499	\$0.0700	\$28,407	\$36,092
10	403,587	\$0.1621	\$65,427	\$0.0700	\$28,251	\$37,176
11	401,368	\$0.1654	\$66,369	\$0.0700	\$28,096	\$38,273
12	399,160	\$0.1687	\$67,324	\$0.0700	\$27,941	\$39,383
13	396,965	\$0.1720	\$68,293	\$0.0700	\$27,788	\$40,505
14	394,781	\$0.1755	\$69,275	\$0.0700	\$27,635	\$41,641
15	392,610	\$0.1790	\$70,272	\$0.0700	\$27,483	\$42,790
16	390,451	\$0.1826	\$71,283	\$0.0700	\$27,332	\$43,952
17	388,303	\$0.1862	\$72,309	\$0.0700	\$27,181	\$45,128
18	386,168	\$0.1899	\$73,350	\$0.0700	\$27,032	\$46,318
19	384,044	\$0.1937	\$74,405	\$0.0700	\$26,883	\$47,522
20	381,931	\$0.1976	\$75,476	\$0.0700	\$26,735	\$48,741
<b>Total</b>						<b>\$758,653</b>





# Next Steps for SBRSD

- **LETTER OF INTENT**

- Sign LOI to secure SMART incentives, Utility Interconnection, and structural engineering with no cost or risk to SBRSD – Solect covers all development and due diligence costs

- **SIGN PPA AND SITE LEASE**

- **IMPLEMENTATION AND NEXT STEPS**

- Final Construction Design and town building and electrical permit applications
- Pre-construction meetings and tight coordination with school operations
- Project Schedule that works for school operations
  - Timing – Systems should be installed within 6 months of PPA execution, 1 month onsite
  - Utility reviews, metering, and documentation are required post-installation
  - Solect Services Transition Meeting - monitoring and management services – included in PPA rate
- Value:
  - No RFP, no capital, no maintenance
  - Renewable energy to directly power the school & energy savings
  - Web-based project monitoring access
  - Educational opportunity – implement solar monitoring data as part of curriculum
  - Marketing / Communications / PR



# Similar Project References with Contact Information

- **Keith Lavoie**, Director of Operations, Northborough Southborough Regional School District
  - Phone: 508-486-5115 ext. 71216 Email: [klavoie@nsboro.k12.ma.us](mailto:klavoie@nsboro.k12.ma.us)
- **Dave Dunkley**, Director of Facilities, Woburn Public Schools
  - Phone: 781-937-8233 Email: [ddunkley@woburnps.com](mailto:ddunkley@woburnps.com)
- **Austin Faison**, Town Manager, Winthrop, Winthrop Middle-High School
  - Phone: 617-846-1705 Email: [afaison@town.winthrop.ma.us](mailto:afaison@town.winthrop.ma.us)
- **John Londa**, Director of Facilities & Grounds, Lunenburg Public Schools
  - Phone: 978-582-4100 Email: [jlonda@lunenburgonline.com](mailto:jlonda@lunenburgonline.com)



# General References

- Solect has performed solar installations, financing, and management for dozens of public entities and nonprofits through the PowerOptions Solar Program.
- Municipalities: Millis, Hopkinton, Holliston, Milford, Grafton, Sherborn, Sharon, Fitchburg, Lunenburg, Haverhill, Winchester, Woburn, Stoneham, Medford, Chelsea, Winthrop, ...
- Regional School Districts: North Middlesex, Manchester Essex, Wachusett, Somerset Berkley, Upper Cape Tech, Southeastern Tech, Richmond, Fitchburg, ...
- State Agencies: Salem State University, Cape Cod Transit Authority, Bridgewater State University, ...
- Proud Members and Sponsors:



# Solect's COVID-19 Safety Program

- Strict adherence to all state and local guidelines
- Company-wide COVID-19 training
- Site-specific COVID-19 planning and coordination
- Hand washing stations
- Isolated work areas
- Documented Job site cleaning and personal hygiene training
- Daily temperature checks and self-certifications
- Social distancing training
- Personal Protective Equipment training for all employees
- Staggered shifts and maximum capacities on all job sites



# Solect's OSHA Compliant Safety Program

- Written site-specific safety planning and coordination
- We prioritize passive fall protection systems (safety rail)
- Electrical Hazardous Control (Arc-flash) controls
- Personal Protective Equipment training and inspection
- Frequent, random, unannounced safety inspections



# Discussion and Next Steps

## Thank you!



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