Town of Truro
MASSACHUSETTS

Solar Implementation Opportunity Review
PowerOptions Program

March 17, 2025

solectenergy
Power Your Tomorrow

PowerOptions

We give our members "peace of mind"

A Trusted Advisor Since 1998

Originally created by the Commonwealth of Massachusetts to serve state agencies, PowerOptions has been serving nonprofits and public entities for 25 years.

A Mission-Driven Nonprofit

PowerOptions' mission is to empower nonprofits and public entities with solutions to reduce the cost, carbon, and complexity of energy.

Consortium Leverage

PowerOptions members benefit from the collective buying strength of over 490 members including some of the largest nonprofits in Massachusetts, Connecticut, and Rhode Island.

Flexible Programs

PowerOptions' programs are intentionally and thoughtfully designed to serve members of any size and circumstance

Your Energy Team

PowerOptions' on-call energy team provides guidance throughout the contracting process, so you feel supported and resourced to make smart and proactive energy decisions.

Electricity & Gas Supply | Solar & Renewables | Vehicle Electrification| Energy Efficiency | Analytics & Sustainability Planning

Certified WBE Women's Business Enterprise

490+ members

85+ MWs SOLAR

25 years serving nonprofits

1B kWh ELECTRICITY

$120m ANNUAL ENERGY SUPPLY SALES

7M Dth NATURAL GAS

PowerOptions Program

- Since 2010, PowerOptions has conducted rigorous competitive RFPs on behalf of its members to the solar and energy storage provider communities with installation pricing, rate of return caps, a standard set of contract templates, and rules of engagement to work with PowerOptions members required by the solicitation.

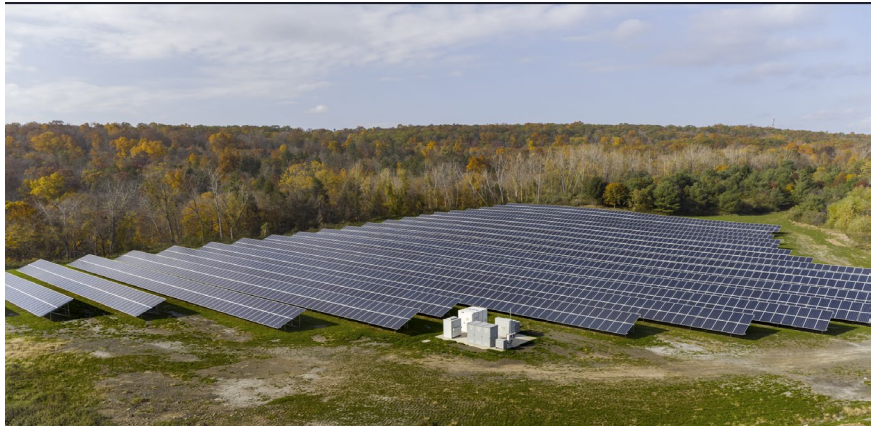
- Procured pricing reflects the enormous purchasing potential of the nearly 500 members in the consortium; all Massachusetts, Connecticut and Rhode Island nonprofits and public entities are eligible to join.

- Highly efficient and best-in-class alternative to traditional public procurement methods (25A, 30B, 149).
  - Reviewed and verified by the MA Inspector General and Attorney General.
  - Standard contracts for nonprofits, municipal, and state entities (purchase, PPA, bill credit, lease).
  - Reduced time, effort, complexity, and cost for the solar and storage procurement process.

- PO Program Manager reviews EVERY proposal and contract for pricing and compliance to RFP.

About Solect Energy

- Leader in Commercial & Industrial solar in the Northeast
- Founded in 2009; headquartered in Hopkinton, MA
- Wholly owned subsidiary of Pattern Energy Group
- Full service solar and energy storage:
  - Design, Finance, Install, Monitor, Maintain
- 700+ installations | 130+ MW I 104+ employees
- Services team monitors and manages 700+ installations
- DCAMM certified
- PowerOptions Consortium RFP Award winner
  - Solar and storage provider to towns, schools, municipal agencies, and non-profits in MA, CT, RI



Projects

Schools

Including Public School Districts, Higher Education, Private Schools, and more

State Agencies

Including Transit Authorities, State and Community Colleges, and more

Municipal Buildings

Including City Halls, DPWs, Public Safety, Libraries, and more

Nonprofits

Including health and human services, religious organizations, and more

Truro Landfill Ballasted Ground Solution
1.484 kWDC / 990 kWAC

Project Overview with Funding Options

Equipment Lease

PV System Size (DC)	1484.1 kW		
Annual Electric Production	1,769,196 kWh		
Energy Storage Size	N/A		
Project Cost	$ 4,435,121	$	2.99
ITC Transfer (Net)	$ (1,884,926)		43%
Net System Cost	$ 2,550,195		

Tax Exempt Bond

PV System Size (DC)	1484.1 kW		
Annual Electric Production	1,769,196 kWh		
Energy Storage Size	N/A		
Project Cost	$ 4,435,121	$	2.99
ITC Transfer (Net)	$ (1,602,187)		36%
Net System Cost	$ 2,832,934		

Project Economics Revenues

Cost and Revenue Assumptions

- Prevailing Wage
- Performance Bond
- Eversource CIP Fee $357 per kWAC
- Eversource Utility Interconnection and Service Upgrade Costs
- ITC - 40% for Energy Community
- ITC - 10% Adder Using Domestic Content
- Tax Exempt Bond triggers a 15% Reduction in ITC Value
- ITC Transfer vs. Direct Pay Grant - One Year Waiting Period for Direct Pay Grant (Grants are unstable)15% Processing Fee to Transfer ITC
- Net Metering Credit Agreement with a PowerOptions Municipal Member – Increases SMART Incentive
- SMART 3.0 Incentives
- Value of Net Metering Credit Yr 1 - $.269 per kWh
- 2.5% Annual Increase Forecast

Revenue				
Year	Solar Production (kWh)	Generation Revenue	Net Metering SMART Incentive	Total Revenue
1	1,769,196	$ 475,914	$ 79,260	$ 555,174
2	1,759,465	$ 485,128	$ 66,992	$ 552,120
3	1,749,788	$ 494,522	$ 54,562	$ 549,083
4	1,740,164	$ 504,097	$ 41,967	$ 546,064
5	1,730,593	$ 513,858	$ 29,203	$ 543,060
6	1,721,075	$ 523,807	$ 16,266	$ 540,073
7	1,711,609	$ 533,949	$ 3,154	$ 537,103
8	1,702,195	$ 544,288	$ -	$ 544,288
9	1,692,833	$ 554,827	$ -	$ 554,827
10	1,683,523	$ 565,570	$ -	$ 565,570
11	1,674,263	$ 576,520	$ -	$ 576,520
12	1,665,055	$ 587,683	$ -	$ 587,683
13	1,655,897	$ 599,062	$ -	$ 599,062
14	1,646,790	$ 610,662	$ -	$ 610,662
15	1,637,732	$ 622,486	$ -	$ 622,486
16	1,628,725	$ 634,538	$ -	$ 634,538
17	1,619,767	$ 646,825	$ -	$ 646,825
18	1,610,858	$ 659,349	$ -	$ 659,349
19	1,601,998	$ 672,115	$ -	$ 672,115
20	1,593,187	$ 685,129	$ -	$ 685,129
21	1,584,425	$ 698,395	$ -	$ 698,395
22	1,575,710	$ 711,918	$ -	$ 711,918
23	1,567,044	$ 725,702	$ -	$ 725,702
24	1,558,425	$ 739,754	$ -	$ 739,754
25	1,549,854	$ 754,077	$ -	$ 754,077

Project Economics Operating Cost and Cash Flow

Assumptions

- O&M Includes:
- Energy Managers Salary Allocation
- Maintenance Contract
- “Sinking Fund” for End of Warranty Replacement Costs
- Insurance
- Interest Rate on Bond 4.5%
- Interest Rate on Lease 8.75%
- 5% Annual Cost Increase for Inflation

Operating Costs			Total	
Forcasted O&M	Equipment Lease Payments	Total Costs	Net Cash Flow	Cumulative
$ (80,000)	$ (393,010)	$ (473,010)	$ 82,164	$ 82,164
$ (84,000)	$ (393,010)	$ (477,010)	$ 75,111	$ 157,274
$ (88,200)	$ (393,010)	$ (481,210)	$ 67,874	$ 225,148
$ (92,610)	$ (393,010)	$ (485,620)	$ 60,444	$ 285,592
$ (97,241)	$ (393,010)	$ (490,250)	$ 52,810	$ 338,402
$ (102,103)	$ (393,010)	$ (495,112)	$ 44,961	$ 383,363
$ (107,208)	$ (393,010)	$ (500,217)	$ 36,886	$ 420,249
$ (112,568)	$ (393,010)	$ (505,578)	$ 38,710	$ 458,959
$ (118,196)	$ (393,010)	$ (511,206)	$ 43,621	$ 502,580
$ (124,106)	$ (393,010)	$ (517,116)	$ 48,454	$ 551,034
$ (130,312)	$ -	$ (130,312)	$ 446,209	$ 997,243
$ (136,827)	$ -	$ (136,827)	$ 450,856	$ 1,448,099
$ (143,669)	$ -	$ (143,669)	$ 455,394	$ 1,903,492
$ (150,852)	$ -	$ (150,852)	$ 459,810	$ 2,363,302
$ (158,395)	$ -	$ (158,395)	$ 464,091	$ 2,827,393
$ (166,314)	$ -	$ (166,314)	$ 468,224	$ 3,295,617
$ (174,630)	$ -	$ (174,630)	$ 472,195	$ 3,767,812
$ (183,361)	$ -	$ (183,361)	$ 475,987	$ 4,243,799
$ (192,530)	$ -	$ (192,530)	$ 479,586	$ 4,723,385
$ (202,156)	$ -	$ (202,156)	$ 482,973	$ 5,206,359
$ (212,264)	$ -	$ (212,264)	$ 486,131	$ 5,692,490
$ (222,877)	$ -	$ (222,877)	$ 489,041	$ 6,181,531
$ (234,021)	$ -	$ (234,021)	$ 491,681	$ 6,673,212
$ (245,722)	$ -	$ (245,722)	$ 494,032	$ 7,167,244
$ (258,008)	$ -	$ (258,008)	$ 496,069	$ 7,663,313

Operating Costs			Total	
Forcasted O&M	Bond P&I Payments	Total Costs	Net Cash Flow	Cumulative
$ (80,000)	$ (196,049)	$ (276,049)	$ 279,124	$ 279,124
$ (84,000)	$ (196,049)	$ (280,049)	$ 272,071	$ 551,195
$ (88,200)	$ (196,049)	$ (284,249)	$ 264,834	$ 816,030
$ (92,610)	$ (196,049)	$ (288,659)	$ 257,404	$ 1,073,434
$ (97,241)	$ (196,049)	$ (293,290)	$ 249,771	$ 1,323,205
$ (102,103)	$ (196,049)	$ (298,152)	$ 241,922	$ 1,565,126
$ (107,208)	$ (196,049)	$ (303,257)	$ 233,846	$ 1,798,973
$ (112,568)	$ (196,049)	$ (308,617)	$ 235,671	$ 2,034,643
$ (118,196)	$ (196,049)	$ (314,246)	$ 240,581	$ 2,275,224
$ (124,106)	$ (196,049)	$ (320,155)	$ 245,414	$ 2,520,639
$ (130,312)	$ (196,049)	$ (326,361)	$ 250,160	$ 2,770,798
$ (136,827)	$ (196,049)	$ (332,876)	$ 254,807	$ 3,025,605
$ (143,669)	$ (196,049)	$ (339,718)	$ 259,345	$ 3,284,950
$ (150,852)	$ (196,049)	$ (346,901)	$ 263,761	$ 3,548,710
$ (158,395)	$ (196,049)	$ (354,444)	$ 268,042	$ 3,816,752
$ (166,314)	$ (196,049)	$ (362,363)	$ 272,175	$ 4,088,927
$ (174,630)	$ (196,049)	$ (370,679)	$ 276,146	$ 4,365,073
$ (183,361)	$ (196,049)	$ (379,411)	$ 279,938	$ 4,645,011
$ (192,530)	$ (196,049)	$ (388,579)	$ 283,537	$ 4,928,548
$ (202,156)	$ (196,049)	$ (398,205)	$ 286,924	$ 5,215,472
$ (212,264)	$ -	$ (212,264)	$ 486,131	$ 5,701,603
$ (222,877)	$ -	$ (222,877)	$ 489,041	$ 6,190,644
$ (234,021)	$ -	$ (234,021)	$ 491,681	$ 6,682,326
$ (245,722)	$ -	$ (245,722)	$ 494,032	$ 7,176,357
$ (258,008)	$ -	$ (258,008)	$ 496,069	$ 7,672,427

Current Project Impact to Revenues, Costs and Timeline

- Interconnection Service Agreement (ISA); Eversource - Cape Cod Impact Study; then results of the study has proposed a Construction Improvement Project (CIP) fee of $357 per kWAC to pay for the utility improvements required to handle the forecast Net Metering requirements. There is still an opportunity for this project to "trigger" an additional study based on the size of the project and if a battery is required for the solution. Solect has a bi-monthly standing meeting with the utility to manage the process for reducing the time it take to move through the ISA process, as Solect has more ISA filed in the state.

- Municipal Net Metering and SMART 3.0 updates;
  - Alternative On-Line Bill Credits; can only be used in conjunction with SMART Incentives
  - Net Metering Credits; can be used with or without SMART 3.0 incentives
  - SMART 3.0; rates are published and scheduled for release in Q4 2025 or Q1 2026 after final review by Department of Public Utilities
  - Requirement for Batteries

- Investment Tax Credits (ITC); This project is eligible to receive as much as 50% ITC that can either be turned into a Direct Pay Grant or can be transferred and sold. Using a Tax-Exempt Bond reduce the value of the ITC by 15%. Transferring the ITC can come with 10-20% fee for servicing the transfer. Direct Pay Grant is issued One year from Commissioning date.

SMART 3.0

SMART is the program developed and implemented by the MA Department of Energy and Resources (DOER) to provide for a stable and consistent value for Renewable Energy Certificates (REC's),

- The program establishes the value of the REC based on type and size of the system in which the utility "must" purchase and make payments directly to the service/meter owner. The rate had a declining scale based on the amount of MW of capacity came online in each of the three public held utilities,
- SMART 2.0 no long provides a significant value per kWh that can affect the project economics resulting in the utilities receiving the REC's with very little compensation and in the case of a landfill/ground project result in no compensation.
- SMART Battery Requirements:
  - SMART 2.0 requires a battery on all projects 500 kWAC or greater
  - SMART 3.0 requires a battery on all projects 1000 kWAC or greater

SMART 3.0 – Net Metering Option

SMART 2.0 and 3.0 have two options that provide different financial impact:

- Net Metering Credits; the utility is required to “purchase” kW at a posted rate for kW over produced.
  - Payment for the production is received in the form of a Bill Credit which can be applied to any metered service in the Utility Load Zone. Under 2.0 the client can only make a change to the switch/change metered service accounts once every six months,
  - Updates to this program provides for municipality to make changes once every month and now Net Metering Credits can be applied to other municipalities metered service across load zones and to another utility metered service,
  - Municipalities get to receive the Full Value of the posted Net Metering Credit where Commercial project receive credits at a discount.
  - Net Metering Credits Cap increased; under 2.0 there is a municipal cap of 10 MW. Under 3.0 that will be drastically increased.

SMART 3.0 – Alternate On-Line Billing Credits Option

Alternative On-Line Billing Credits (AOBC);

- As with Net Metering this is a program designed to establish a “class” of net metering credits than can provide an alternate to restrictions under Net Metering. Under 2.0 these AOBC were of greater value than net metering. Under 3.0 Net Metering Credits for municipalities are great than AOBC’s.

- SMART 2.0 no long provides a significant value per kWh that can affect the project economics resulting in the utilities receiving the REC’s with very little compensation and in the case of a landfill/ground project result in no compensation.

- SMART Battery Requirements:

    - SMART 2.0 requires a battery on all projects 500 kWAC or greater
    - SMART 3.0 requires a battery on all projects 1000 kWAC or greater

O&M Breakdown