

Sustain Mid Maine Coalition



Welcome and Introduction to SMMC Energy Programs

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Agenda

- ▶ Who/What is Sustain Mid Maine Coalition
 - ▶ Mission
 - ▶ Energy Team
- ▶ Solarize Mid Maine
 - ▶ Maine Solarize Movement
 - ▶ Why?
 - ▶ Definitions
 - ▶ The Process
 - ▶ What You Can Do

What is Sustain Mid Maine Coalition (SMMC)?

- ▶ Mission is to foster sustainability in the mid Maine region. That means fostering public policy and taking action to reduce waste and to support more local energy, food, transportation.
- ▶ Teams include:
 - ▶ Public Policy
 - ▶ Local Food/Agriculture
 - ▶ Permaculture
 - ▶ Rethink Reduce Reuse Recycle
 - ▶ Energy
 - ▶ Education and Public Outreach
 - ▶ Transportation

Energy Team - Two Areas of Focus

- ▶ Conservation
 - ▶ **Weatherization** - Providing **FREE** energy assessments with trained volunteers to help home owners and small business determine opportunities to **reduce energy cost and improve comfort**
 - ▶ **WindowDressers** - Providing **low cost**, community built window inserts to **improve window performance, reduce energy cost and home comfort**
- ▶ **Local Energy Generation** - Supporting the expansion of **local energy infrastructure** and the **local generation** of alternative **power** sources including biomass, hydro, solar, and other local sources.

Solarize Mid Maine



Local Energy Generation - Solarize Mid Maine

- ▶ Solarize Mid Maine - providing a reduced rate for solar panel purchase and installation.
 - ▶ Built on the previous experience of the Vermont/New Hampshire upper Connecticut River valley's "Vital Communities" and Freeport, Maine's experience this year.
 - ▶ Residents sign up if they had any interest in adding solar photovoltaics and heat pumps to their homes (Freeport had 200 interested residents)
 - ▶ Issued a Request for Proposals to local Solar Contractors, with 19 contractors responding, and one contractor team selected
 - ▶ Completed site surveys and estimates for 400 locations
 - ▶ 40 homes completed the installation with more still planned

What might it include?

- ▶ Photo voltaic (PV) installations
- ▶ Community Solar Farms
- ▶ Solar Thermal Systems (Solar Hot Water)
- ▶ Heat Pump

What is Mid Maine



SMCC Solarize Mid Maine Colby College 9/16/15

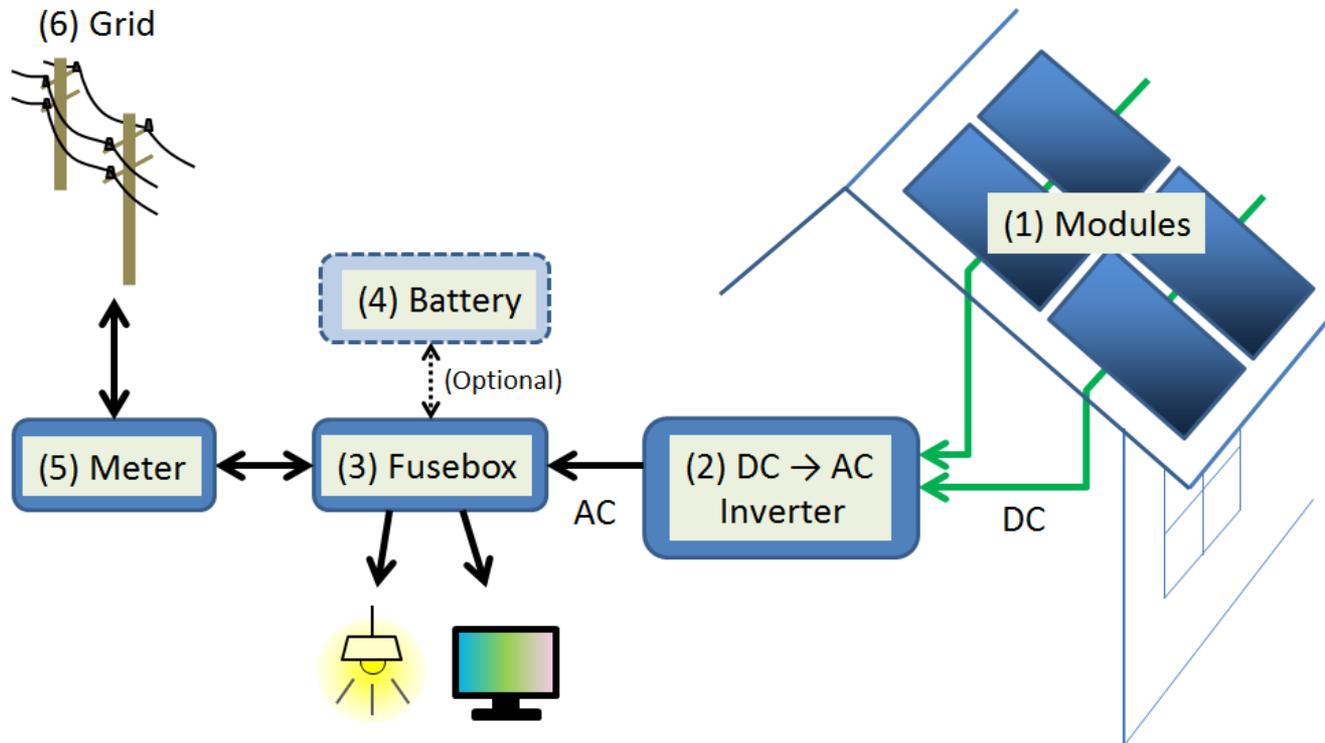
Questions to answer

- ▶ Does solar work in central Maine?
- ▶ How do I know if my home or business is a good candidate for solar?
- ▶ What type of solar energy system is available through Solarize Mid-Maine?
- ▶ Do the PV systems offered through Solarize Mid-Maine use batteries?
- ▶ How does my electrical system change after a PV is installed?
- ▶ Will my electric bill be \$0?
- ▶ If I generate more electricity than I use in a month, can I use it the following month?
- ▶ Can I sell excess power back to CMP?
- ▶ Can I sell excess power back to CMP?
- ▶ What other reasons are there for installing solar?
- ▶ Are there any incentives available?
- ▶ What is the payback?

Create your own energy by installing Solar Panels

- ▶ Sustain Mid Maine is organizing a group buy on Solar Panels for this region to reduce the cost of solar panels and their installation to improve your return on investment.
- ▶ State of Maine has no incentive programs for solar
- ▶ Sustain Mid Maine is creating our own incentive program
- ▶ You can reduce your annual costs and take advantage of a Federal 30% tax deduction in 2015 and 2016.
- ▶ If you are a small business you may also be allowed to take an accelerated depreciation to reduce your taxable income.

Photovoltaic Components

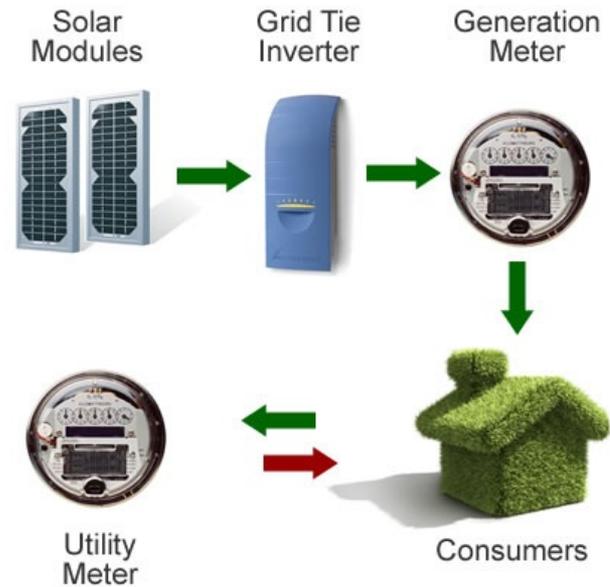


Key Points about Solar in Maine

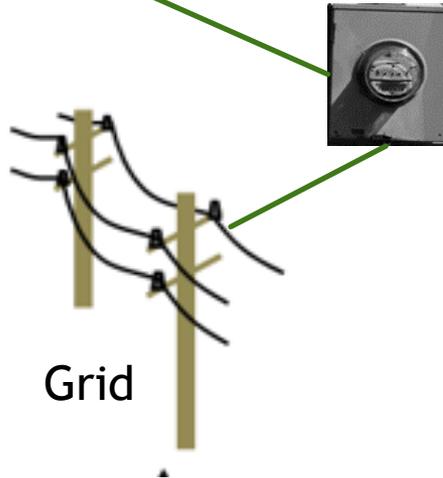
- ▶ Plenty of sunshine
- ▶ Grid connected using Net Metering
- ▶ Banking kWh credits when the sun shines
- ▶ 12 month cycle
- ▶ No place to put a solar array, consider a solar garden
 - ▶ Neighborhood Community Solar Farm
 - ▶ 9 electric meter (participant) limitation
 - ▶ Can be complicated and legal costs may drive up overall costs
- ▶ 400 potential sites needed

Grid Tie Net Metering

- ▶ What is it?
- ▶ How does it work?
- ▶ Why do we have to use it?



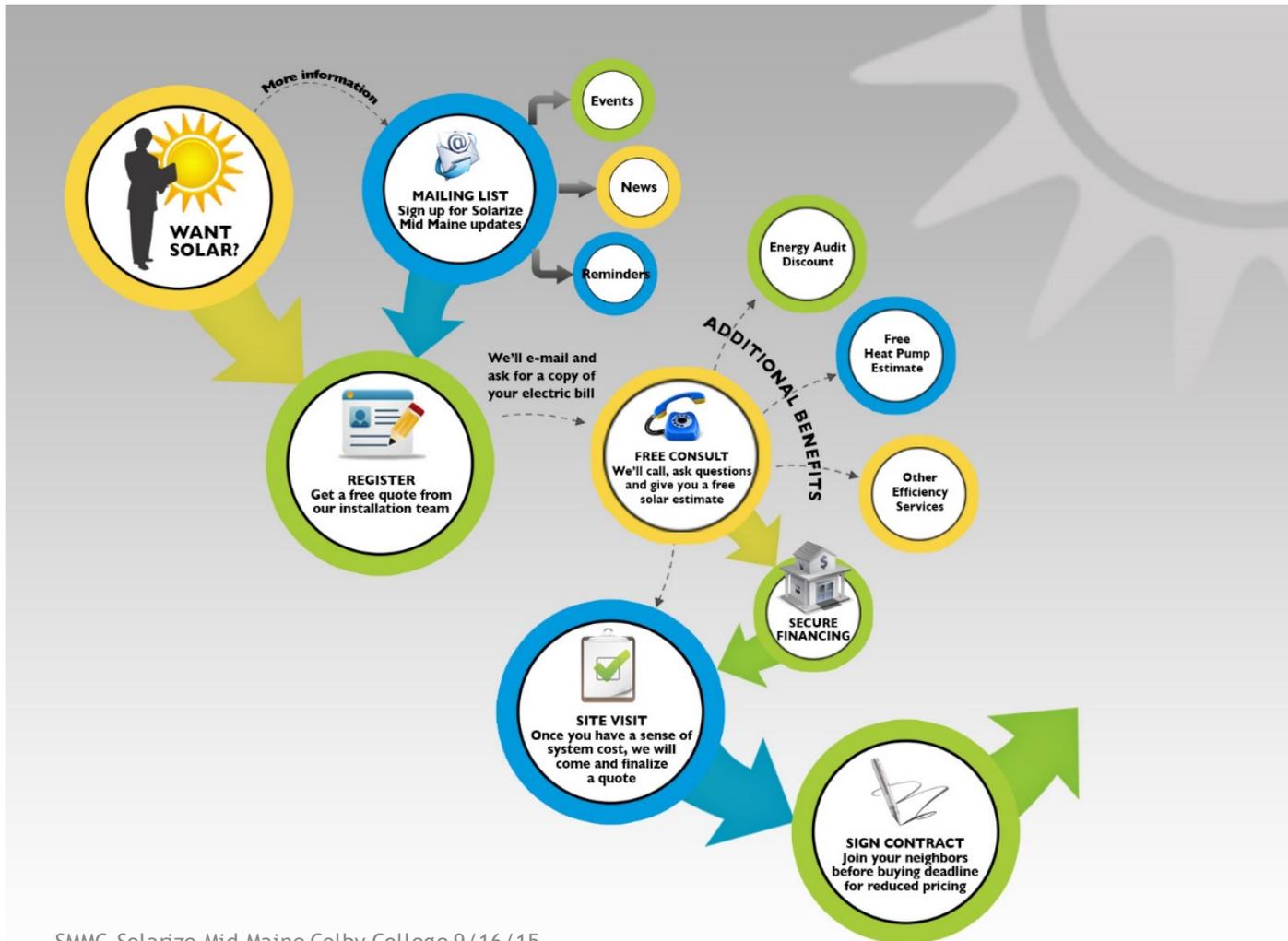
Community Solar Farm



Grid

- Up to 9 members
- Net Metering
- Power produced distributed based on % of ownership
- Could have higher costs but can solve some problems
- Insurance and legal costs a distraction

The Process



What do we need to make this possible?

- ▶ 400 plus homes or businesses who have genuine interest
- ▶ We need your help!
- ▶ Must have reached this number by October 31
- ▶ RFP will be issued Nov 1
- ▶ Vendor(s) selected January 2, 2016

Financial Considerations

- ▶ Efficiency Maine Trust Loans (Note: Energy Assessment Required)
 - ▶ Power Saver
 - ▶ PACE
- ▶ 30% Federal Tax Credit
 - ▶ Expires December 2016 Generally must be taken in year received
 - ▶ No State Tax Credit
- ▶ Considered a capital expenditure and amount remaining after Tax Credit eligible for accelerated 5 year depreciation
- ▶ 10-17 year payback (driven by electricity costs)

Heat Pump Costs

Fuel Source	Cost	Unit	Cost/Million Btus	Heating efficiency	Typical Home Assume heat load of 125 mill Btu/yr	Notes	
#2 Heating Oil	\$3.70	Gal	\$37	72%	\$4,608	139,400	Btu/Gal
#2 Heating Oil	\$2.70	Gal	\$27	72%	\$3,363	139,400	Btu/Gal
#2 Heating Oil	\$2.00	Gal	\$20	72%	\$2,491	139,400	Btu/Gal
Propane	\$2.75	Gal	\$35	85%	\$4,415	91,600	Btu/Gal
Propane	\$2.75	Gal	\$32	94%	\$3,992		Btu/Gal
Natural gas	\$2.00	100 CF	\$23	85%	\$2,853	1031	Btu/CF
Electric Heat	\$0.15	kWh	\$44	100%	\$5,495	3,412	Btu/kWh
Heat Pump	\$0.15	kWh	\$18	250%	\$2,850	Assume \$50/month/kWh for 6 months	

What You Need to Do!

- ▶ Sign up at no obligation
- ▶ We need 400 residents in the Mid Maine Area before we can issue a request for proposals
- ▶ Freeport initially had 200 sign up over 40 eventually signed contracts.
- ▶ Do your homework?
 - ▶ Is your usage >500 kWh monthly)?
 - ▶ Do you have a heat pump(s) or electric water heater?
 - ▶ Why do I want to do it? Cost savings? Environmental reasons
 - ▶ How long do I anticipate staying in my home?

Ways You Can Support Sustain Mid Maine Coalition

- ▶ **Share the SMMC Energy Team programs with your friends and families AND employees.**
 - ▶ **Invite Energy team members**
 - ▶ Into other service organizations where you are a member.
 - ▶ To meet with your employees
 - ▶ Offer Holiday gifts to be used towards window inserts, solar panels, or if suggested by the free consultation - an **energy audit**.
 - ▶ **Participate yourself** in one or all of our Energy Team programs
- ▶ **Become a member or consider a tax deductible donation** to this non-profit organization. It is not a government organization, even though it has support from Waterville and Winslow municipalities. We are a bunch of volunteers working to improve the quality of life for our region.