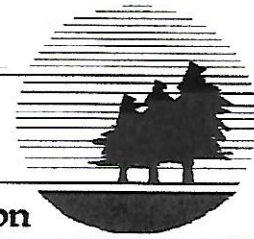


Spring 2017



# THE MAINE SUN

NEWSLETTER of the Maine Solar Energy Association

## Solar Community Land-trust Development

In times of confusion, getting back-to-the land may help us gather our thoughts.

"In recognizing the humanity of our fellow beings, we pay ourselves the highest tribute." -Thurgood Marshall  
So true, and we are the ones who can communicate for all of life on this planet. We are the ones who can think of the ways to save the planet and the precious life that is here. We are the ones who can act with conviction for a future and the future generations. Thank you for your support and consideration. We are not alone, we are all 'one community'. We have all the resources available to us and we can think, learn and communicate with each other. SEADS of Truth, Inc.

[www.dadsolar.com](http://www.dadsolar.com), non-profit solar Ed.Corp. (See pg 2)  
<https://www.facebook.com/donate/10207443706799748/10207905159135768/>



## Anti-Solar Legislation in Maine May Affect Our Future and the Future Generations

More than 2,100 Maine people joined with NRCM, solar companies, and other environmental groups in calling on the PUC to reconsider and rewrite its misguided rule that would phase out net metering, charge a new fee for generating and using solar energy, and leave existing, arbitrary limits on solar in place. Our "motion to reconsider" explains why the PUC was dead wrong in adopting the most radical, anti-solar rule in America. Maine already is in last place in terms of solar jobs per capita in our region, and Mainers want to turn that situation around. While pressing for the PUC to reconsider its solar rule, we also urge the Legislature to pass a pro-solar bill that creates solar jobs, increases solar power, and helps reduce climate-changing air pollution. Thank you NRCM. ([www.nrcm.org](http://www.nrcm.org))

## Is A Rethink on Energy Subsidies Needed, and Just How Does This Affect Mainers?

The hidden toll that subsidies for electricity, fossil fuels, and transport have on social welfare, economic growth and technological innovation needs to be exposed through better research says a new paper by Benjamin K Sovacool.

Energy subsidies, which have mostly supported fossil fuels and nuclear power over the previous half century, have historically kept energy prices low, compared to market rates. But they come at a high cost to governments and taxpayers.

Mainers are directly affected by these subsidies, which raise the energy costs for all families. Many here are dependent on fossil fuels for heat and find it hard to switch to another energy source, such as solar. The effort to use solar is now under attack from the 'carbon establishment' and oil companies.

Environmentally, energy subsidies tend to have "substantial carbon footprints" because they tend to favor fossil fuels, such as coal and petroleum. As subsidies lower the price of electricity and fuel, they generally lead to higher levels of consumption. They also generally diminish efforts to promote energy efficiency or to conserve energy, as well as the health effects which affect society as a whole.

As we are lucky that Maine Yankee nuclear plant has been closed for years, most Mainers are still using grid power, which includes nuclear power, as well as fossil fuel and hydro-electric. We can move to more renewable energy sources for a clean pollution free energy future.- Thanks to Energy Daily.

## INSIDE:

Coming Events .....Pg 2  
Solar Industry in Maine .....Pg 3  
Solar Farm Comes 'On-line' ..... Pg 3  
Microhydropower in Maine ..... Pg4

-----  
**Maine Solar Energy Association is the  
Maine State Chapter of ases.org**



## The Maine Sun

### Newsletter of the Maine Solar Energy Association

The Maine Sun is published four times a year by the Maine Solar Energy Association (MeSEA), a non-profit organization.

The Maine State chapter of ASES.org (American Solar Energy Society)

#### Our Mission:

We are dedicated to promoting the public awareness and use of:

- solar energy
- energy conservation
- other renewable non-polluting energy sources
- environmental and health awareness building practices throughout the state of Maine

Opinions expressed by authors or editors do not necessarily reflect the views of MeSEA. The publisher reserves the right to refuse advertising which is not consistent with the goals of this organization. Acceptance of advertising does not constitute endorsement of the advertiser, its products or services.

The Maine Sun welcomes articles, submissions, photographs, and letters. Please send editorial materials to the following address: MeSEA

P.O. Box 184

Harrington, Maine 04643

Phone: 207-546-1639

E-mail: [dadsolar@yahoo.com](mailto:dadsolar@yahoo.com)

Website: [www.mainesolar.org](http://www.mainesolar.org)

[www.dadsolar.com](http://www.dadsolar.com)

Maine Solar Energy Association

Board Members

Richard Komp, President

Claudia Lowd, Vice-President

John Burke, Secretary

Soni Biehl, Treasurer

Receive the Maine Sun by e-mail or at our website to be green.



Printed on recycled paper.

## Coming Events!

pg2

Check our website, [www.mainesolar.org](http://www.mainesolar.org), for more information.

### Spring 2017 –

## Solar PV Assembly Workshop

MESEA & DADS (Downeast Alternative Design Solar), will present a low-cost solar PV assembly workshop, Spring 2017, June 2, 3 and 4. Fri, Sat. and Sunday.

Your attendance is what will help us continue and **'Working On What's Been Spoiled'** will be the focus this spring and summer 2017.

One day or all three days, will give you 'hands-on' experience assembling a 65W solar PV module. Call John (207) 546-1639 - and check [dadsolar.com](http://dadsolar.com)

(We are a non-profit corporation - donations are tax deductible). Fri evening FREE lecture, Sat & Sun @ \$50. / day, includes lunch. RSVP & deposit required! Scholarships may be available, first come first served... at the Jonesport Solar Home, thanks! Dr. Richard Komp is invited !

\*\* The community in Washington County, Maine, the 'Sunrise County', need your support to help establish the re-birth of the Solar Community Land-trust, at the 60 acre property in Columbia, Maine. A renewed effort, since the property is now fully owned and paid for, by the non-profit educational corporation SEADS of Truth, will evolve with the ideas of families and individuals, interested in a future for the children of the community and the world. We need funding as well as energetic participation in the re-building of the Solar-powered Seminar Center as well as the construction of five solar homes with the families and community members. There will be 'time-share' and full-time opportunities available, in this 'back-to-the-land', organic solar experience. We have finally connected with you here today and need to allow you to take the time to think of just how you may help yourself, your family and the community! **SEADS Solar Community Land-trust.** We all have knowledge and skills we can share with others. Are we able to get these important aspects to people that really want to learn? "Education is the most powerful weapon which you can use to change the world." — Nelson Mandela

<https://www.facebook.com/donate/10207443706799748/10207905159135768/> ...\*\* Call (207) 546 -1639 or see [www.dadsolar.com](http://www.dadsolar.com)



## The Ups and Downs of Maine's Solar Energy Industry — Green Energy Maine

The news on Maine's solar industry is mixed these days and shows no sign of settling on a clear trajectory, at least this week. While we like to think of Maine's solar star as rising steadily, some impediments are slowing it down, at best.

In July of 2016, a report which showed that Maine lags behind 4 of the 6 New England states for cumulative solar capacity, despite having both the technological and solar resources to outshine our neighbors. "The question is: will Maine capitalize on the growing clean energy economy with more clean energy and more local jobs, or will we fall further behind?" **Continued on page 7 ...**



Solar Installation in Maine (photo credit – NRCM)

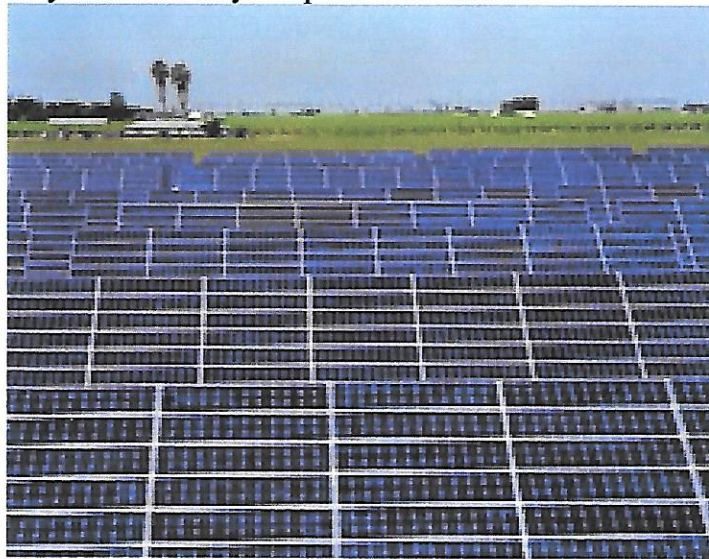
## 'Old Farmer's Almanac' Publisher Announces Move to Solar Power

Geiger, the family-owned publisher of the "Old Farmer's Almanac" celebrated its 200th consecutive issue this year by announcing some changes to its headquarters in Lewiston, Maine.

The company announced in September that it plans to invest \$12 million to convert its former manufacturing space in Lewiston into a distribution center and offices. The renovated facility will have up to 90% of its power needs met by a 620-panel, ground-mounted solar array. - Thanks to, MaineBiz and Green Energy Maine for the story.

## 5 Mw Solar Farm Comes On-line in Rural Maine, Madison Electric Works

On December 29, 2016, Madison Electric Works announced that its municipally-owned solar farm is ready to start powering homes and businesses. The project in Somerset County, being called the largest in Maine, was built and is owned by Ohio-based IGS Solar. ISG will sell the power to MEW at 7.99 cents per kWh for the first six years, at which time the utility may decide to buy the plant.



Madison Electric Works is a department of the Town of Madison, serving electric customers in the downtown area, Madison Business Gateway, and Backyard Farms. It is a Member of North East Public Power Association (NEPPA). Thanks Morning Sentinel

## Our Solar Education Friend Peter Zack is Back With More for Local Schools

Peter Zack, who for many years provided energy education activities to Maine schools through the former Maine Energy Education Program, has announced recently that Sacopec Energy & Climate Activities (SECA) is open for business. Zack will be available to present just about all the activities that were offered through the Maine Energy Education Program (MEEP). The fee is \$34 per classroom hour and \$0.44 per mile travel. If cost is an issue, please contact SECA to negotiate. Program blackout dates are from February 17 to March 20, so please plan accordingly. SECA – (207) 625-7833 – Thanks, Kay Mann and G.E.M.

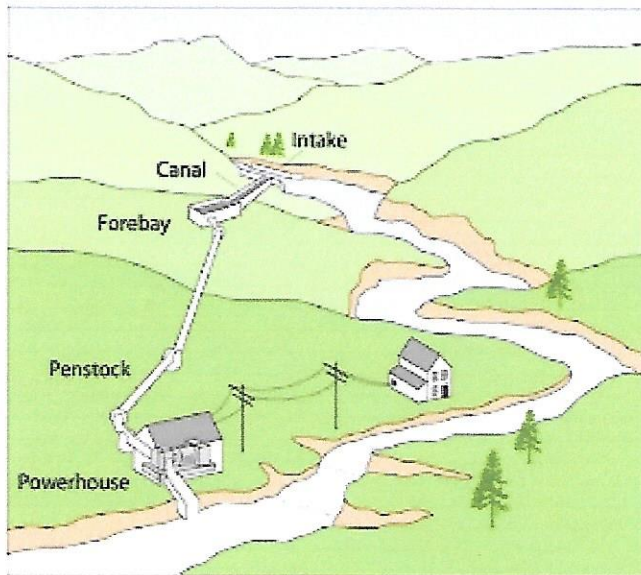


## Maine Microhydropower (MHP) Systems

Maine is riddled with opportunities to generate power from streams, rivers and tidal inlets. Our forefathers hitched these power sources up and used them to great advantage. What happened? More importantly, how soon can we go back to using this resource? Here's a brief primer on some of the ways.

### How does a Microhydropower System Works?

Hydropower systems use the energy in flowing water to produce electricity or mechanical energy. Although there are several ways to harness the moving water to produce energy, run-of-the-river systems, which do not require large storage reservoirs, are often used for MHP systems. For run-of-the-river MHP systems, a portion of a river's water is diverted to a water conveyance -- channel, pipeline, or pressurized pipeline (penstock) -- that delivers it to a turbine or waterwheel. The moving water rotates the wheel or turbine, which spins a shaft. The motion of the shaft can be used for mechanical processes, such as pumping water, or it can be used to power a generator for electricity. An MHP system can be connected to an electric distribution system (grid-connected), or it can stand alone (off-grid).



In this microhydropower system, water is diverted into the penstock. Some generators can be placed directly into the stream.

### What Is New In Micro-Hydro Technology?

One company from Canada is offering a small, portable, in-stream turbine for rivers and streams. According to Idénergie, rivers offer the best energy

potential compared to other renewable sources of energy. Providing constant energy 24 hours a day, Idénergie's river turbine can meet the electric needs of a residence by producing, at maximum capacity up to 12 kWh daily, depending on the water velocity of the river. The reliability of the river turbine offers a cleaner alternative to gas generators for remote or backup power needs.

### Community-Sized Hydro Power Systems

On a somewhat larger scale, the RivGen® Power System from Maine's own Ocean Renewable Power Company (ORPC) is specifically designed for generating reliable, renewable electricity in rivers near remote, "islanded" communities with no access to large, centralized power grids. Whether surrounded by expanses of uninhabited land or water, these communities pay up to 15 times more than the cost of power from a utility grid because of their reliance on expensive, polluting diesel fuel generators.

The RivGen® Power System connects directly into existing community grids and provides automatic fuel-switching so that whenever the RivGen® System is generating power, the diesel generator automatically turns down or off.

### Tidal Mills

A tide mill is a water mill driven by tidal rise and fall. A dam with a sluice is created across a suitable tidal inlet, or a section of river estuary is made into a reservoir. As the tide comes in, it enters the mill pond through a one way gate, and this gate closes automatically when the tide begins to fall. When the tide is low enough, the stored water can be released to turn a water wheel.

Tide mills are usually situated in river estuaries, away from the effects of waves but close enough to the sea to have a reasonable tidal range. These mills have existed since the Middle Ages, and some may go back to the Roman period. According to historian Bud Warren of Topsham, there were at one time up to 150 tidal mills in operation along the coast of Maine, including one at Stroudwater.

Warren is a member of the Tide Mill Institute at Dorchester Historical Society, an organization for the study of tide mills and tide mill sites that puts on an annual conference with international participation -Thanks to Green Energy Maine for this story.



### Maine's Solar Energy Industry - The Ups and Downs ... (Continued from Page 3)

Owen Mansfield, campaign organizer with Environment Maine, said in a released statement.

"We've got plenty of sunshine but we need leadership at all levels with a commitment to clean energy policies."

Limestone, Maine may be home to the largest single solar power plant in New England if plans to through for a 100,000-panel array on 600 acres at the site of the former Loring Air Force Base. The plant would produce up to 100 megawatts of power, according to a report from the [Bangor Daily News](#).

Aaron Svedlow of Ranger Solar is quoted as saying that if the project is permitted, "We feel this project is a great fit for Loring Commerce Centre, as it will utilize previously impacted lands and does not conflict with other uses of the property".

As we [reported last month](#), Maine's Public Utilities Commission (MPUC) is considering changes to the net metering rules that make grid-tied solar power economically feasible for Maine ratepayers. The proposed rule changes would gradually phase out many of the benefits of net metering over the next 15 years. Advocates such as the Natural Resources Council of Maine (NRCM) [refer to the proposal](#) as "gutting" the present net metering policy.

### Coming: The Third Edition

Now 36 pages with new material

## The Maine Solar Primer

A compilation of  
practical information and diagrams  
from past issues of  
THE MAINE SUN

The Maine Solar Energy association has published a sourcebook for solar and other renewable energy resources in Maine and New England.

This booklet includes do it yourself plans and basic solar information for everybody.

The Maine Solar Primer is available for \$12 inc. postage from MESEA, PO Box 184, Harrington ME 04643

## MeSEA Membership Form

Annual membership includes: a subscription to the quarterly MeSEA publication - *The Maine Sun*, 10% discount on workshop fees and MeSEA-sponsored events, networking with other like-minded people in Maine, contribution to the sustainability of our program, and the right to declare your donation to a 501(c)(3) on your taxes.

**Special Joint MESEA – ASES Membership: \$60** (*Go to the [www.ases.org/join/](http://www.ases.org/join/) website to sign up with a credit card.*)

Name(s): \_\_\_\_\_

Individual MESEA membership - \$30.

Address: \_\_\_\_\_

☐ new      ☐ renewal      ☐ upgrading

\_\_\_\_\_

Family MESEA membership - \$50. ☐

Phone: \_\_\_\_\_

Lifetime MESEA membership - \$1000. ☐

E-mail: \_\_\_\_\_

Corporate MESEA membership - \$150. ☐ \*\*

Would you prefer to receive your Maine Sun by e-mail? ☐ **yes**    ☐ **no** E-mail saves us \$4 per year.

\*\* This includes a business card – sized ad in each *Maine Sun*, and promo on our website, as well.

**Please make out your check to MeSEA. and mail to: MeSEA, PO Box 184 Harrington ME 04643**

**Skyheat** associates

17 Rockwell Rd SE  
Jonesport ME 04649  
Phone: 207-497-2204  
[sunwatt@juno.com](mailto:sunwatt@juno.com)

[www.skyheat.org](http://www.skyheat.org)

Director Richard Komp PhD. Cell: 207-450-1141

New mailing address:

PO Box 184, Harrington ME 04643

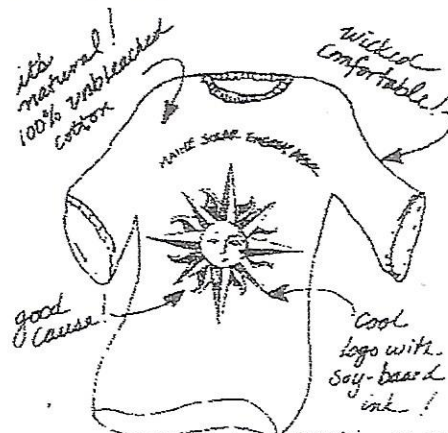


60 Campbell Street  
Boothbay Harbor Maine 04538  
[www.heliotropicttech.com](http://www.heliotropicttech.com)  
[coolsolarguy@yahoo.com](mailto:coolsolarguy@yahoo.com)

Providing 21st-century, green  
energy engineered solutions  
from Mid-coast Maine since  
1980.

Renewable Energy  
(Solar Systems), and  
Super-efficient Energy System  
Installations, & Energy Efficiency  
Engineering Services  
(207) 633-1061

Michael J. Mayhew, PE, GBE, CEM  
President, Energy Engineer  
Cell phone: (207) 315-0990

**SOLAR (EM)POWERED T-SHIRT!**

\$17.00 S,M,L

\$18.00 XL

NOW: MADE IN  
NICARAGUA BY A  
WOMAN'S COOP

**New England Solar Electric, Inc.**

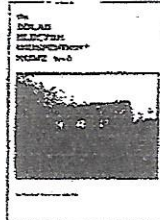
We have the Solar Electric Kits, components, gas  
refrigerators, other appliances and information you  
need to live independently with Solar Electricity. We  
also wrote the most popular book on it.

**The Solar Electric Independent  
Home Book** (\$16.95 + \$3 UPS - includes catalog)

New England Solar Electric, Inc.  
403 Huntington Road • P.O. Box 435  
Worthington, MA 01098

413-238-5974

64 page catalog / design guide \$3



Printed on recycled paper

**THE MAINE SUN**

NEWSLETTER of the Maine Solar Energy Association



Maine Solar Energy Association  
PO Box 184  
Harrington ME 04643