

Renewable Energy Olympic Energy Systems, Inc. 907 - 19th Street Port Townsend, WA 98368 (360) 379-2536

Solar Electric
Solar Thermal
Wind
Hydro
Ocean
Geothermal
Biomass/fuels
Efficiency

Solar2007 inCleveland PuttingAmerica ToWork [Again]

The annual ASES Solar Conference is held in a different city every year.

The theme of this year's annual solar energy conference in July in Cleveland, Ohio—Solar 2007—*Putting America To Work*—was JOBS, as media raged with news about Global Warming. This author (and OES, Inc. founder) attended the conference in his home state of Ohio. He remembers his first conference, Solar 1999, in Portland, Maine, when the theme was Global Warming and the news was reporting lots of jobs and a strong and growing economy. Things have sure turned around...

What happens at the annual solar conference? You...

- 1) Meet people new or who you already know,
- 2) Hear uplifting speeches by politicians, environmentalists, and leaders,
- 3) Attend lectures and workshops on energy topics,
- 4) Gather relevant literature,

- 5) Meet exhibitors with a range of products, ideas, and services,
- 6) See technical displays, such as fuel cells,
- 7) Attend solar sites nearby,
- 8) Buy books & publications on solar and related topics.

Solar 2007 was not just a nice destination but a journey for this author—on Amtrak's *Empire Builder* and *Capitol Limited*. Observed along the 2500 mile route were about 5 or 6 wind turbines, 2 rooftop solar hot water panels (both in Chicago), and **no** solar PV panels, aside from the small ones on traffic signs and RVs.

Well, at least Cleveland is on board the renewable energy bandwagon, as its Lake Erie waterfront is graced with a towering wind turbine/generator, which spun during the entire conference.

Observed at the conference—more solar space heating and



hot water system developers, more Asian solar manufacturing firms, and a variety of support organizations, in consulting, analysis, hardware, tools, and education. The American Solar Energy Society (ASES) has done another wonderful job, with the staunch support from its *Green Energy Ohio* chapter.



The *Heliodon*—a handy tool for assessing the sun's incidence on structures, inside and out, at different times of the year.

HANDY ENERGY TIDBITS

- **1 kWh = 3,413 BTUs**
A unit of energy, or power over time
1 BTU = Heat 1 lb H₂O 1 deg F
- **85,000 BTUs/gallon**
Propane; 115,000 BTUs in Fuel Oil
- **3.2M BTUs per m²**
per year collectable in the Pacific Northwest (1000 Watts/m² in the sun's rays)

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News and Announcements

WHAT	WHEN	WHERE
Quimper Grange Meeting	1st/3rd Mondays 7:00 pm	1219 Corona in PT
Jefferson County Fair	2nd Fri-Sun in August 2007	Fairgrounds in PT
Northwest RE Festival	September 2007	Walla Walla, WA

WHO WE ARE—Olympic Energy Systems, Inc.

Olympic Energy Systems, Inc. was founded by an electrical engineer in 2001 as a renewable energy consulting firm specializing in solar photovoltaic design. The company can assist in the application of a variety of alternative and clean energy technologies—solar, wind, micro-hydro, fuels, energy efficiency and energy management. Company goals are common to all clients:

Optimum Performance

Positive Economic Return

True Sustainability

Company operations are located in Port Townsend, Washington and primarily serve the North Olympic Peninsula and other portions of the state. Olympic Energy Systems uses local licensed contractors for installation. Fees are paid only upon successful project completion, which reduces the inherent risks of high tech solar to the clients.

The founder and former Boeing engineer, Jonathan Clemens, relocated from Texas, where he was involved in renewable energy activities. Serving on the board of the Texas Solar Energy

Society (TxSES) proved a valuable experience for him. TxSES and the Texas Renewable Energy Industries Association (TREIA) hosts the annual Renewable Energy Roundup and Sustainability Fair in Fredericksburg, TX, where Jonathan has spoken about the Economics of Energy.

FREE Site, Cost, and Economic Assessments. Let our **System Architects** help you. For more information, contact:

Olympic Energy Systems, Inc.
907—19th Street
Port Townsend, WA 98368
(360) 379-2536 or 301-5133



Jonathan, when he is caught watching contractors install PV panels on roofs

Website:
www.olympicenergysystems.com
www.olympicenergynetwork.com

E-mail:
OlympicEnergy@aol.com

The Olympic Energy Network works for all of us

The multi-faceted role of Olympic Energy Systems, Inc. (OES) in developing renewable energy systems—as consultant, client advocate, and system architect—has led to the natural formation of the **Olympic Energy Network** (OEN). OES connects the potential system owners with licensed contractors—general, electrical, heating, and plumbing—for installation.

The expressed goal of the Olympic Energy Network is the participation of as many expert and skilled profession-

als as possible in the expanding solar energy industry, thus providing solar knowledge, options and expertise to as much of the public as possible.

Solar energy is by definition in the public realm, available to all, and amenable to the principles and essence of democracy. Thus, solar energy development should not be left to an exclusive few to exploit in monopolistic ways, but should be grasped, studied, understood, and led by the inclusive many.

Do we want Solar Trusts?

Think of how the oil and lead trusts, and the big industries like automobiles, oil, coal, and nuclear power have dictated the “rules of the game”. Imagine how fair, balanced, and reasonable solar energy policies and development approaches could pacify humanity’s tendencies toward over-consumption and conflict over the earth’s limited resources!

Olympic Energy Systems urges the public to be diligent and ask questions, of themselves and of those trying to sell them something. That diligence will pay off someday.



A network of experience and licensed professionals who install solar energy systems. Recent additions include: Jarmuth Electric, Current Electric, H2O Plumbing Contractors, Extra Mile Tech & Electric, and more

Check out the great workshops at Solar Energy International’s website:

www.solarenergy.org

The San Juan Series occurs in Spring and Fall annually.

Climate Change in the News—“Tackling it?”

“Tackling Climate Change in the U.S.”—Potential Carbon Emissions Reductions from Energy Efficiency and Renewable Energy by 2030, released from ASES, Charles F. Kutscher, Editor, January 2007

This report should be read by anyone interested in the science and strategy of dealing with the link between our energy regime and climate change. The report is compiled from several papers presented at the Solar 2006 con-

ference in Denver, Colorado, and represents ideas, plans, and goals, but not predictions per se.

Here are some numbers that represent reasonably thought out plans for reducing carbon emissions, on the path to more reductions by 2050, with the renewable source and resulting **reductions** by 2030:

[Million Tons of Carbon per year]

- Energy Efficiency 688
- Concentrating Solar 63
- Solar PV 63
- Wind 181
- Biofuels 58
- Biomass 75
- Geothermal 83

It will take a 500 fold increase in the installed PV by 2030...some 250 GW, above industry predictions of 200 GW.

Notice how important efficiency will be!

See next page for snapshots of recent projects...

Two can travel round trip cross country with a Sleeper room and meals included for about \$1500—on Amtrak!

Solar Energy Projects in 2007



These Sanyo 200 Watt panels in Kirkland are of the highest efficiency (17%) available on the commercial market. There are two parallel strings being added one year after the first set, totaling 4000 Watts.



Sequim Bay can be seen in the background of this grid-tied solar electric system. The Evergreen 190 Watt Spruce Line PV Panels work quite well.



The 360 Watt PV system is modest, for sure, but this weekend cabin is happy, for it is supplied by a 10 KWh sealed battery bank through an Outback inverter.



The new main office of Olympic Energy Systems, Inc. is still keeping warm with about 8 KWh per day in Winter, with curtains to keep the summer sun out!



The Gobi 3366 flat plate collector provides a heated glycol and water solution circulated with an adjacent solar energized DC pump. This 4 x 7 collector supplies a preheat system in Sequim.



Installation is already underway to put a 3200 Watt PV array on this roof, above and to the east of a 30 evacuated tube solar hot water collector for a preheat system in Sequim.



A clean installation performed by a local contractor. Right: a new solar system owner with an electrician from Cascade Electric.



The Heliodyne external heat exchanger heats the domestic water in the unwired electric hot water tank via thermo-siphoning. The heating loop is a glycol/water mix, under modest pressure, circulated with a solar energized DC pump next to the roof-top collector.



This 12 x 16 SIP (Structural Insulated Panel) building is very energy efficient and useful. The panels were made in Port Angeles.

A solar electric system, tied to the utility grid, in the Olympic city of Port Angeles. The 1440 Watts can provide 10 KWh/day.



A new solar electric system goes up in the foothills west of Port Angeles, WA.; the system has battery backup.

A Port Townsend resident got his first solar electric system this year...the 1440 Watts, grid-tied, cost less than \$11,000.

The second phase of this project resulted in an additional 1750 Watts of grid-tied solar energy production, for a total 3500 Watts.



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(360) 379-2536

E-mail: OlympicEnergy@aol.com

The solution on the horizon

JOIN THE
AMERICAN SOLAR ENERGY SOCIETY
WWW.ASES.ORG

The Grange Faces Decline, Mission Still Relevant

[A Letter to the Editor of the PDN]

When the Grange (formally known as the Patrons of Husbandry) was formed in the 1860's, its founder Oliver Hudson Kelley had in mind the mending of the devastation and North-South divide left the by Civil War. A similar sense of distress and despair seems to exist today, which is why the Grange's role is just as important now as in years past.

Founding the Patrons of Husbandry in 1867, Mr. Kelley set out to promote the equality of all people and eliminate ill-will, largely through the value of family and education. Those principles embody the Grange to this day.

Initially patterned after the Masons, the

Grange today is a non-partisan, populist organization, open to men and woman of any faith or religion. Looking out for the interests of rural people, who have traditionally faced under-representation in politics, the legislative oversight role of the Grange is evidenced by its yearly publication of Legislative Handbooks, which cite the official positions of members on relevant issues. Every member has a voice and a vote.

The Washington State Grange membership stands at about 20,000. Our Jefferson County Granges – Quimper, Chimacum, and Rhododendron – each have dozens of members, but have faced declining membership. Putting the advancing age of members aside, the reason for the decline

is likely the public's misperceptions about the Grange. We all have seen the old, quaint Grange halls, but most believe that they are merely places where farmers meet. The Grange is not just about farmers. Most of us are not farmers, but we share common interests and challenges – water rights, land use, food security, energy, environment, etc.

The Grange is one of the few social and educational organizations in America that are relevant and suitable for membership by anybody from anywhere. As a Grange member myself, I can say that we have failed to portray the relevance of the Grange to the public. The Grange must become less mysterious to our citizens. I invite every citizen to take note of the area's Granges, ask around, and consider joining.

Over its 140-year history, Grange membership has waxed and waned to the changing issues of the day. Help yourself and society by bringing your important issues and concerns to the Grange and finding an organization capable of real change. The non-partisan nature of this populist organization is just the cure. Check out www.wa-grange.org.

Jonathan A. Clemens, Quimper Grange

North Olympic Peninsula News



FOR SALE—A Southwest Windpower *Whisper H40* wind turbine system, including mounting pole, **\$1500...**call



Port Townsend in **Jefferson** County in the State of Washington