



Solar Washington Newsletter

WINTER SOLSTICE 2005

WWW.SOLARWASHINGTON.ORG

What's in this issue:

- ☀ [Solar panels that rock](#)
- ☀ [Roofs go green](#)
- ☀ [The off-grid challenge](#)
- ☀ [President's column](#)
- ☀ [Electric bill "be gone"](#)
- ☀ [Webmaster](#)

Seattle City Light reaches climate-neutral goal

Seattle City Light has reached its 10-year-old goal of releasing no "net emissions" of greenhouse gases. Although the utility still releases 200,000 metric tons of greenhouse gases each year, it spends about \$756,000 a year to reduce an equivalent amount of emissions elsewhere. (*Seattle P-I*)

Public buildings go green

Washington is the first state in the nation to require new schools, offices and other publicly funded buildings to meet a national environmental standard. (Law signed in April by Gov. Christine Gregoire that is expected to affect billions of dollars of construction on public buildings larger than 5,000 square feet.)

Organic crops save fuel

It takes 30 percent less fossil fuel to grow corn and soybeans organically. Yields of organic crops are equal to conventionally grown crops, but require less water and cause less erosion and environmental damage. (*Science Daily*)

Solar panels that will rock your socks

Today's new thin-film solar modules turn only 6 percent of sunlight they see into electricity, and even the snazzy single-crystal panels are just 15 percent efficient? But change is in the wind.



The hottest solar modules coming out of local labs are 35 percent efficient. Some new-tech panels concentrate the power of 500 suns on solar cells. They use multiple layers, trackers and mirrors. And you won't believe the Cassegrain module, which is half solar panel and half telescope. These panels are made right here in Issaquah by local scientist/hero Dr.

Lewis Fraas and the gang at JX Crystals. You're not likely to see one on your neighbor's roof, but China has just bought \$2 million worth. Find out where solar is going and why America has a leadership crisis, not an energy crisis. See [<http://www.solarwashington.org/newsletters/0512/1-Fraas.pdf>]

The moss is welcome on green roofs

The green roof is an old concept that will keep your house cool in the summer and warm in the winter. It reduces storm run-off, cuts pollution and saves energy. It costs less than a metal roof and will last for 40 years. This is no infomercial. It's Val's story on a building technique that makes sense. See [<http://www.solarwashington.org/newsletters/0512/2-Roof.pdf>]

The dark side of off-grid solar systems

OK, we're Solar Washington, and that means we're really, really big fans of off-grid solar. That's our story, and we're sticking to it. And it's true. Off-grid solar is wonderful. We even love it today, the darkest day of the year. But there is a dark side, and we're not talking about the solstice. Off-grid solar is challenging for the novice to design, install and operate – sometimes even when the novice gets technical help. Read all the gory details in Marlene and John's stories. We are not pulling punches on this one. (But there are happy endings.) See [<http://www.solarwashington.org/newsletters/0512/3-OffGrid.pdf>]



Era of easy oil is over

"It took us 125 years to use the first trillion barrels of oil. We'll use the next trillion in 30... One thing is clear: The era of easy oil is over." (David J. O'Reilly, chairman and CEO of Chevron Corp., as part of the company's current \$40 million PR campaign, which acknowledges that the world is consuming two barrels of oil for every barrel discovered.)

World RE growth booms

The world's investment in renewable energy hit a record \$30 billion in 2004, although that's still less than the third-quarter profits of the world's Big Five oil companies. Nonetheless, power from solar, wind, biofuel, geothermal and other renewable technologies makes up 4 percent of the world's total energy production. (Worldwatch)

Oil production vulnerable

The world's oil fields are working at full capacity and are fragile to even small disruptions. An impact that reduces output by as little as 4 percent – such as political unrest in Nigeria or a terrorist attack in Saudi Arabia – could send oil prices soaring to \$161 a barrel. (National Commission on Energy Policy)

We're Solar Washington

Solar Washington is a chapter of the American Solar Energy Society. We're a private, not-for-profit association for people and organizations interested in solar power, energy efficiency and renewable energy.

Website and email:

www.solarwashington.org

info@solarwashington.org

Phone: (206) 222-7113

Next meeting: January 19.
Please watch our website for more information. We hope to see you then.

Our president's column

Decathlons, zero-energy house and more

The 2005 Solar Decathlon results are in, and the college kids did incredible work, including our own students at WSU. Some 100,000 people saw the latest in energy-efficient home designs. Pam has the lowdown. She also has lots to say about her and Jeremy's zero-energy house, a super-insulated Craftsman powered by a whopping 6-kilowatt solar system.

For details, see [<http://www.solarwashington.org/newsletters/0512/4-Prez.pdf>]

Solar project cuts electricity bill to \$0

What do you get when you wire a solar system to the home of an engineer? You get some really good numbers, which is how we know that Steve Zenovic and Nina Pitts can now power their large, almost all-electric home in Port Angeles for free, thanks to the array of solar panels that they bolted to the roof of their garage. See

[<http://www.solarwashington.org/newsletters/0512/5-Couple.pdf>]



SW's website taking lots of hits

Webmaster George Meyer reports that the action on our website is smokin'. We're getting double the action of a year ago – probably because of all the great new features that George has added. Check out his report for full details. See [<http://www.solarwashington.org/newsletters/0512/6-Web.pdf>]

The last word

The Kyoto Protocol expires in 2012, and America's leaders have just walked out of climate talks in Montreal, agreeing only to discuss the looming crisis so long as that dialog specifically rules out "negotiations leading to new commitments." This position is what the Canadians call "the horror show down south." And climate scientists such as Michael Oppenheimer of Princeton say, "If we don't get a serious program in place for the long term in this post-Kyoto phase, we will simply not make it."

And early last month, oil company executives were allowed by Congress to testify without swearing to tell the truth. So they said they didn't talk to Dick Cheney's energy task force; the *Washington Post* said they did.

What connects these two events is leadership – or lack thereof. Dr. Lewis Fraas sees this issue clearly. [[See our lead story.](#)] His company is sitting on solar technology that could revolutionize our energy policy. China is funding this technology, but American leaders have no interest. *Forbes* magazine carried a story recently calling solar subsidies, such as the ones featured in our story [above] about Steve and Nina's solar home – a "boondoggle." I asked the reporter why tiny subsidies for climate-friendly solar power are a boondoggle, while massive subsidies for oil, nuclear and coal are fine. She declined to give a reason. I think the reason is clear: Our leaders and corporate media cater to powerful special interests rather than the common welfare.

As always, if you want to make your voice heard in this newsletter, contact us at newsletter@solarwashington.org.

– Josey Paul, editor