

Clean Energy Matters

newsletter



ARE YOU LEADING THE WAY?

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2010 - Volume I

Check out Pfister Energy's website

www.PfisterEnergy.com

Project Highlight

GSA Federal Courthouse

Trenton, NJ

Pfister Energy, Inc. is nearing completion on a unique 2 part project for the General Service Administration at the C.S. Fisher Federal Courthouse in Trenton, NJ. The project consists of the installation of an 11.968 kW SOPRASOLAR integrated photovoltaics-roof system, alongside a solar thermal installation. These technologies will together provide both electrical and thermal energy from the sun, in order to help lower utility bills and improve the carbon footprint at the courthouse.

The Solar Integrated Roofing System installed by Pfister is comprised of thin-film photovoltaics integrated with a new 2-ply SBS-Modified Bitumen roofing system.

The system offers the following principal advantages:

- UNI-SOLAR® PV modules provide more energy production (kWh per rated Watt) when compared to conventional glass panels.
- The Soprema 2-Ply SBS Modified Bitumen roofing system has a longer lifespan compared to a single-ply roofing system and each SOPRASOLAR system is backed by SOPREMA's unique 20 year single-source warranty that covers both the water tightness of the roof membrane and the energy output of the UNI-SOLAR® panels.

ABOUT PFISTER ENERGY

Pfister Energy is a renewable energy company providing innovative power solutions and energy efficiency measures for commercial, industrial, and institutional facilities. The company is a national provider and installer of turnkey renewable energy and on-site distributed power generation systems.

As a total solutions provider, Pfister Energy offers customized alternative energy systems and assists clients with the implementation of the latest technologies, with an emphasis on building-integrated applications. The company's "green solutions" presently encompass a host of complementary systems, including Solar Photovoltaics, BIPV, Natural Daylighting, Fuel Cells, Wind Turbines, Solar Lighting, and Building Envelope Improvements.

Pfister's vision is to become a trusted design-build partner enabling more corporations, as well as public and private enterprises to better reap the benefits of these progressive and sustainable forms of energy.

Visit us everyday:
www.pfisterenergy.com

- The application of thin-film entails no brackets, roof penetrations, or mounting hardware (enabling the avoidance of any potential roof leaks through PV related-penetrations), and reduces the overall amount of labor to install the system.
- Tax laws allow any supporting structures for the solar panels and integral parts (including a portion of the basic roof system) to be included in the federal tax incentives for solar, yielding an improved return on investment.
- Amorphous silicon PV is deposited on a substrate of stainless steel in three separate layers, which enables these modules to utilize all ends of the light spectrum to produce electricity. Thin-film products therefore produce more energy under low light conditions than conventional glass panels.
- Due to their multi-junction construction, amorphous silicon PV modules do not de-rate at high temperatures to the same extent as crystalline panels. This means that they yield relatively improved energy production under high-heat conditions.



Solar Thermal collectors harness the radiant energy from the sun and convert it to heat for the generation of hot water, significantly reducing water heating bills. In addition to saving energy and money, Solar Thermal systems are clean, safe and long-lasting technologies, with life cycles of 25 years or more.



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This renewable energy project will save the facility approximately 1,100,000 kilowatt-hours (1,100 Megawatt-hours) of energy usage over a 25 year period.

We are delighted to have been selected to design and install this exciting project for the Federal Government. It is an excellent showcase of what can be achieved by combining multiple clean-energy technologies.

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Wow!

Pfister Energy Ranks No. 343 on the 2009 Inc. 500 with Three-Year Sales Growth of 720.9%

Inc. Magazine Unveils 28th Annual List of America's Fastest-Growing Private Companies-the Inc. 500

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NEW YORK, November 18, 2009 -- Inc. magazine ranked Pfister Energy No. 343 on its 28th annual Inc. 500, an exclusive ranking of the nation's fastest-growing private companies. The list represents the most comprehensive look at the most important segment of the economy-America's independent-minded entrepreneurs. Companies such as Microsoft, Zappos, Intuit, GoDaddy, Under Armour, Jamba Juice, American Apparel, Oracle, and hundreds of other powerhouses gained early exposure as members of the Inc. 500.

"If you want to know which companies are going to change the world, look at the Inc. 500," said Inc. editor Jane Berentson. "These are the most dynamic, fast-growth companies in the nation, the ones finding innovative solutions to problems, creating smart systems, and inventing products we soon discover we can't live without. The Inc. 500 list is Inc. magazine's tribute to American business ingenuity and ambition."

Pfister Energy, based in Paterson, NJ with an office in Baltimore, MD, is a renewable energy company providing innovative power solutions and energy efficiency measures for commercial, industrial, and institutional facilities. The company is a national provider and installer of turnkey renewable energy and onsite distributed power generation systems. As a total solutions provider, Pfister Energy offers customized alternative energy systems and assists clients with the implementation of the latest technologies, with an emphasis on building integrated applications.

The 2009 Inc. 500 companies, unveiled in the September issue of Inc. magazine and on Inc.com, reported aggregate revenue of \$18.4 billion-up significantly from last year's \$13.7 billion-and a median three-year growth rate of 880.5 percent. The companies on this year's list are also responsible for creating more than 55,000 jobs since their founding, making the Inc. 500 perhaps the best example of the impact private, fast-growing companies can have on the overall U.S. economy.

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Highlight: Green Roofs

What is a green roof?

Green roofing systems are becoming more popular in the United States today, serving as a solution to some of the problems arising from large-scale urbanization.

Benefits of Green Roofs are three part: Environmental, Economical and Psychological.

Environmental Benefits include:

- Reduction of the Urban Heat Island Effect, a condition in which city and suburban developments absorb and trap heat. Because green roofs reach significantly lower temperatures than traditional black roofs, they improve air quality, making it easier to breathe.
- Reduction in storm water runoff. Green roofs absorb excess storm water, potentially lessening the need for complex and expensive drainage systems and reduce flooding. Because the roofs are made from natural components, the plants capture and hold rainwater.
- Green Roofs also filter out fine, airborne particulate matter (such as dust and smog) as the air passes over the plants. Airborne particulates tend to get trapped in the surface areas of the greenery and bound within the soil. Plants also absorb gaseous pollutants through photosynthesis and sequester them in their leaves.

Economical Benefits include:

- Green roofs last longer than conventional roofs, the vegetative roof protects the surface from UV rays and hail.
- Reduction in energy costs with natural insulation.
- Because green roofs reduce the surface temperature of a roof by minimizing heat-absorbing surfaces, a green roof helps to reduce energy costs inside the building as well.
- Reduction in costs associated with installation of stormwater detention and treatment systems.
- Enhancing retail value of the property.

Psychological Benefits include:

- The creation of a peaceful retreat for people and animals. Possibilities include rooftop gardens, cafes, or sporting areas.
- With balconies or terraces in urban areas, people are less susceptible to illness due to improved oxygen levels and humidity and therapeutic benefits.
- Post Operative studies show:
 - Views into landscaped courtyards versus masonry walls shortened recovery.
 - Fewer painkillers were used to treat patients.
 - Fewer negative evaluations of nurses and staff were given.

Below are some images of green roofs around the world.



The Solaire, NYC (Image: Metropolis Magazine)



School of Art and Design, Singapore (Image: Green Roofs)



Geno Haus, Germany (Image: Metropolis Magazine)

For more information on the benefits of Green Roofs, please visit: www.igra-world.com.

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Mid Size Solar Grants

www.energy.maryland.gov

Mid Size Solar Grants

Program Note November 6, 2009:



The Maryland Energy Administration (MEA) is pleased to announce the launch of the Mid-Sized Solar Energy Grant Program, providing incentives for businesses to install appropriately sized solar photovoltaic and solar hot water systems on their premises.

The Mid-Sized Solar Energy Grant Program is made possible by funds provided by the American Recovery and Reinvestment Act of 2009, Public Law 111-5 (ARRA or Recovery Act). Limited funding is now available to Maryland businesses, and Non-Profits who intend to install qualified solar photovoltaic or solar hot water systems between now and the end of October, 2010.

Program Budget:

Proposed funding for this program is up to \$1.45 Million through the end of fiscal year 2011.

Program Structure:

Solar Photovoltaic:

\$500/ kW for the first 20 kilowatts (of DC capacity)

\$250/ kW for kilowatts 21 - 50

\$150/ kW for kilowatts 51 - 100

System must be between 20 and 100 kilowatts to be eligible; maximum grant amount is \$25,000.

Please Note:

If you wish to receive a Mid-Size Solar Grant for installation of a ground-mounted PV system with a rated capacity over 60 kW, please contact Mike Hartley at 410-260-7543 or mhartley@energy.state.md.us to discuss National Environmental Policy Act compliance.

Solar Hot Water:

15% of the installed cost up to \$25,000 maximum grant.

Systems must be larger than 100 sq ft to be eligible.

For more information, please visit

www.energy.maryland.gov

[see full article](#)

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Industry News

www.renewableenergyworld.com

This Year in Clean Energy - What a Ride

The year 2009 started off with a bang for the clean energy industries -- encompassing energy efficiency, renewable energy, clean distributed generation -- for manufacturers, project developers, installers -- the whole family of industries. President Obama assumed office in January '09 and by February the Stimulus Bill (ARRA) was signed into law, extending the portfolio of clean energy tax credits, but also setting in motion billions of dollars of loan guarantees and grants.

President Obama has made clean technology and cleantech jobs a centerpiece of his Administration, and I attended one public meeting during the first week of December where Secretary of Interior Salazaar, VA Governor Kaine (also head of the Democratic National Committee), and Cathy Zoi, USDOE Assistant Secretary EE/RE, all waxed eloquently on why fast adoption and scale-up of clean technologies are essential in order to create jobs, supplant energy imports and reduce emissions.

Congressional leadership has driven both energy and climate

legislation; and even allowing a temporary installation of two U.S.-made wind turbines (one by Mariah Power and the other by Southwest Windpower) to remain at the base of the U.S. Capitol on the grounds of the U.S. botanical gardens - clearly symbolic of the commitment to clean energy technologies.

[see full article](#)

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Industry News

[*American Solar Energy Society*](#)

Report: Tackling climate change nets 4.5 million jobs

ASES/MISI analysis shows that renewable energy and energy efficiency can reduce U.S. carbon emissions 60-80%, generate millions of jobs and are revenue neutral or better

A new report suggests that tackling climate change will be a major net job creator for the U.S. economy. According to the report, aggressive deployment of renewable energy and energy efficiency can net up to 4.5 million new U.S. jobs by 2030 and provide the greenhouse gas emission reductions necessary to tackle climate change.

The report entitled, *Estimating the Jobs Impact of Tackling Climate Change*, was released today during a news conference in Washington, D.C. The study was released by the nonprofit American Solar Energy Society (ASES) based in Boulder and Management Information Services, Inc. (MISI) based in Washington, D.C.

According to the analysis, renewable energy and energy efficiency deployment costs would be revenue neutral (or better), as costs to implement the technologies are offset by savings from lower energy bills, making total net costs near zero.

"The twin challenges of climate change and economic stagnation can be solved by the same action-broad, aggressive, sustained deployment of renewable energy and energy efficiency," said Brad Collins, ASES' Executive Director, "the solution for one is the solution for the other."

This jobs report offers the most detailed analysis yet on the potential role of the new energy economy in tackling climate change.

Report findings show that:

- Aggressive deployment of renewable energy and energy efficiency can net 4.5 million new jobs by 2030.

These jobs are not limited to certain regions or sectors - they are widely dispersed throughout the U.S. in virtually all industries and occupations.

- Hot jobs spurred by this new economic growth span a diverse range of skills and experience and include: electricians, plumbers, carpenters, administrative assistants, machinists, cashiers, management analysts, civil engineers, and sheet metal workers.
- Renewable energy and energy efficient technologies could displace approximately 1.2 billion tons of carbon emissions annually by 2030 - the amount scientists believe is necessary to prevent the most dangerous consequences of climate change.
- Approximately 57% of carbon emissions reductions would be from energy efficiency and 43% would be from renewable energy.
- Energy efficiency measures can allow U.S. carbon emissions to remain about level through 2030, while renewable technologies can provide large reductions in carbon emissions below current levels
- Industries showing the largest job gains include: construction, farming, professional services, public sector, retail, truck transportation, fabricated metals and electrical equipment.
- The construction industry directly benefits from almost all the growing renewable energy and energy efficiency sectors as well as from improvements in overall economic growth due to energy savings. Farming directly benefits from biomass and biofuel technology growth.
- Many of these jobs can not be easily outsourced due to the on-site nature required by these roles.
- The greatest numbers of renewable energy jobs are generated by solar photovoltaics, biofuels, biomass, and concentrating solar power sectors.

The report suggests that policy can play a significant role in both generating jobs and mitigating carbon emissions.

"For job growth the status quo is no match for innovation," said Mr. Collins. "Congress can help get the economy back on track with smart energy policy - reduce energy consumption in buildings by 50%; adopt an aggressive national renewable portfolio standard; commit to end dependence on foreign oil by 2025; and implement an upstream cap and auction system to manage greenhouse gases at the points where they first enter the energy economy."

This report analyzed the job potential of improving energy efficiency in buildings, transportation, and industry, and assessed six renewable energy technologies: concentrating solar power, photovoltaics, wind power, biomass, biofuels, and geothermal power. Estimates in this report refer to net jobs since advancing new energy technologies can both create new jobs and displace jobs from less efficient industries. This report suggests that, in total, more than 4.5 million more jobs can be created by tackling climate change than would be lost.

This new report builds on the findings of ASES' groundbreaking report Tackling Climate Change in the U.S.: Potential Carbon Emissions Reductions From Energy Efficiency and Renewable Energy by 2030 edited by Chuck Kutscher.

[see full article](#)

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Monthly Tips

www.smart2begreen.com

Rain Collection Barrels & Tanks

It is time for all of us to become proactive in residential water conservation. A great way to do this is to install a rain barrel or rain tank at your home. Rain barrels and rain tanks are an extremely effective way in which you can easily harvest and store your own pure rainwater to use later for lawn and garden watering. They offer many economic and ecologic benefits.

- Conserve water and help lower residential utility costs.
- Reduce storm water runoff by greatly decreasing the amount of rainwater pouring off rooftops or through gutter downspouts. Storm water runoff can contain many pollutants such as oil, grease, and bacteria.
- Available in a wide array of shapes, sizes, styles, and colors to suit any residence. They are commonly constructed from rustproof and chemical-resistant plastic, concrete, galvanized steel, or fiberglass.
- Inexpensive and easy to build, customize, and install.

Reduce your Heating Bill

Just because the weather outside is frightful, doesn't mean your energy bills have to be scary too! Keep warm this winter the green way and watch as your heating bill gradually begins to shrink.

First and foremost, winterize your home. Repair all cracks and holes near windows and doors and make sure your house is properly insulated. If you can't afford the construction necessary to re-insulate your whole house, consider this easy, cost-effective bubble wrap method for your windows.

Digital programmable thermostats are the latest tools being added to new homes (and to older ones with eco-friendly owners!). Set the thermostat to lower the temperature when you're at work or fast asleep. You won't notice the difference, but your heating bill will!

Installing solar panels may be a little expensive at first, but the warmth they provide at no monthly cost to you will soon make up for the initial charge...and tax credits may be

available. If solar panels aren't in the realm of possibilities in your home, simply open up the drapes and blinds during cold winter days to allow the sunshine, and its heat, into your home.

For more information on Rainwater Recovery or Solar Solutions, call Pfister Energy today!

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Interesting Facts

Did you know?

The U.S. wind energy industry installed **1,649 megawatts** of new power generating capacity in the third quarter, bringing the total capacity added this year to date to over **5,800 MW**, according to the American Wind Energy Association.

Featuring an anaerobic digester that consumes **300 tons of manure** a day, China's largest chicken waste biogas to energy plant has three of GE Energy's Jenbacher biogas engines generating three megawatts from chicken waste.

source: enerG Alternative Sources Magazine

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Upcoming Pfister Events

March 24-25, 2010

GlobalCon 2010

Philadelphia Convention Center

Philadelphia, PA

[see event details](#)

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[Click to see all of Pfister Energy's Job Postings](#)

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