American Solar Energy Society's

Solar@Work

Apple Given All-Clear To Sell Energy From Solar Farm

Electronics giant Apple has been granted permission to sell energy generated at its $850m (£645m) solar farm in California. Last year, the tech firm acquired a 2,900-acre power facility in Monterey County, giving it 130 megawatts of solar energy capacity. Now it has the go-ahead to sell that energy into wholesale markets. Apple said renewable energy generated at the site could power 60,000 California homes.

One expert says power generated from solar farms is not consistent. Dr Niall Mac Dowell, a lecturer in energy and environmental technology at Imperial College London, told the BBC that "just because Apple has invested in that capacity does not mean they'll get the same level of energy from it."

There is a big difference between installing solar panels and generating electricity from them, he said. "Today, on a sunny August afternoon in the UK, we are getting about 0% energy from solar power." He added: "It's awesome that Apple is investing in renewable power when it can, but that doesn't mean it's about to go off-grid." More

Google's Project Sunroof Puts Solar Energy Within Reach

Letting natural energy sources lend a hand can help homeowners save money on their energy bills. But while you may have the will to install solar panels, you might be in the dark about how to acquire them. Google wants to use its wealth of maps, data, and computing resources to shed some light on the wonderful world of solar energy. With Project Sunroof, homeowners can calculate the best solar plan for their property. The online tool can "help you calculate your roof's solar energy potential, without having to climb up any ladders," wrote Carl Elkin, Engineering Lead for Project Sunroof. Estimate and next steps. After plugging in your address, the online platform will show you how much sun your roof gets. The tool can then answer all your burning questions about the project itself, such as how big of an installation would be most practical, how much it would cost, and how much money it could save you annually. After you've gotten a better understanding of your home's solar potential, Project Sunroof can help you get the ball the rolling. More

6 Signs The Big Global Switch To Solar Has Already Begun

China has installed 20 gigawatts of new solar power just in the first half of this year. This achievement beats analysts' expectations by a wide margin. China wants to add 20 GW of new solar every year for the next four, but apparently could do twice that. At the end of 2015, China had about 40 gigawatts of

"Our future is what we build it to be. The jobs and industries of the 21st century will be centered around clean renewable energy."

President Barack Obama

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installed solar power, so in just six months it has added half as much again. It already surpasses the previous solar champ, Germany. The Crescent Dunes "concentrating solar power" plant in Nevada, operated by a Santa Monica firm, is using molten salt as a battery so that it can generate electricity 24/7. It is the first such plant to use solar energy to melt the salt directly instead of via oil, which is a huge advance in efficiency. All electricity plants are just a way to turn turbines using boiling water. If you can turn the turbines with molten salt heated hours ago by the sun, then you can make electricity all day and all night. The Crescent Dunes plant can power 75,000 homes. All those critics of solar power who maintain that it needs gas or nuclear for baseload generation when it is dark or very overcast can now find some other talking point. Solar can do it all. Concentrating solar power costs as little as 10 cents a kilowatt hour, making it competitive with nuclear both in cost and in non-intermittency. Photovoltaic cells plus battery storage may ultimately be cheaper but this means that at the very least we have a relatively inexpensive solar technology that isn't intermittent. More

Bill To Slash Taxes On Rooftop Solar Panels Advances

The legislation aims to encourage individual investment in the renewable energy sector, as an alternative to using power generated by polluting power plants. A bill eliminating taxes on home wind and solar energy installations received initial Knesset approval in a plenary vote on Wednesday night. The legislation, which earned cabinet approval on Sunday, aims to encourage individual investment in the renewable energy sector, as an alternative to using power generated by polluting power plants, according to the Finance Ministry. Proposed by Finance Minister Moshe Kahlon, the bill includes an exemption from paying taxes and from opening a Tax Authority file typically associated with renewable energy installations at home - like solar rooftops or wind turbines. In addition to the tax exemption, the bill also provides tax benefits for owners who rent out spaces for the purpose of installing renewable energy facilities. By reducing the bureaucratic hurdles typically linked to renewable energy production, the hope is to reduce morbidity from air pollution, boost financial savings and increase electricity production during peak demand hours, the Finance Ministry said. More

Large Windows Could Capture Solar Energy

Solar cells have been around since the 1950s. But now there is a race to develop transparent solar cell that can cover windows of buildings and still capture the sun's light for electricity. Different kinds of light from the sun. There are three kinds of light that reach our planet from the sun. They are ultraviolet light, or UV, visible light, and infrared light. Together they make up what is called the solar spectrum. Troy Townsend is a solar cell researcher at St. Mary's College of Maryland. He says working with the transparent solar technology for windows means you cut the efficiency in half. That is because you are letting visible light-light you can see-pass through the solar cells instead of capturing and using that light to make electricity. That leaves only light from the ultraviolet and infrared parts of the light spectrum to make electricity. He spoke to VOA via Skype. "One of the major challenges with transparent solar cells is developing a system that would allow you to absorb the maximum amount of UV and the maximum amount of infrared." More

NASA Is Pushing for Solar Power, But It Can't Get Us Past Jupiter

Juno, NASA's biggest outer-planet spacecraft venture since New Horizons, has proven that solar power can match nuclear power. But not in deep space. "If you want to go beyond the sphere

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defined by the radius of Jupiter's orbit, solar power is going to severely constrain what you can do," said Kevin Rudolph, the lead systems engineer at Lockheed Martin, NASA's go-to spacecraft developer. As we've recently learned from Philae Comet lander, which the European Space Agency was forced to shut down, solar powered spacecrafts quickly lose power without the Sun's light. Juno is also the first solar-powered spacecraft to explore the outer planets, which raises the question: why solar power? Like most things, the answer has to do with money. NASA has made significant investment in Earth-bound solar panels, but beyond the political impetus to go green is the economic bind NASA faces when it asks Congress for funding. "Juno is sponsored by NASA's New Frontiers program-which has a cost cap. If we designed a spacecraft that was too expensive, they wouldn't approve it," Rudolph said. More

If Tesla Acquires SolarCity, Success Will Depend on Energy Storage

When Elon Musk unveiled his intent to acquire the solar installer SolarCity, many observers and investors balked.
Some have wondered if the deal amounts to nothing more than a bailout for the Musk-supported SolarCity at Tesla's expense. After all, what does a car company have to do with putting modules on people's roofs? The business models are very different. Here's how MJ Shiao, GTM Research's director of solar, captured that skepticism shortly after the announcement: "The sales pitches for a three- to five-year lease or loan on a premium car versus a 10- to 20-year lease or loan on energy services don't match," he said. "Is the average person going to walk into the store expecting to buy one and then suddenly get up sold on the other?" A business model based on the combined solar-plus-storage-plus-luxury-EV package might find more customers than an electric Lear jet startup, but not by much. And although SolarCity will get a publicity boost from the association with Tesla -- and a physical presence in its 190 retail stores -- it's harder to see how SolarCity benefits Tesla financially right away. More

States in US Northeast Prioritize Renewable Energy

New York and Massachusetts this week took steps to aggressively push for more renewable energy in their power portfolios. The New York State Public Service Commission (PSC) approved a mandate issued last fall by Gov. Andrew Cuomo that New York supply 50 percent of its electricity from renewable energy sources by 2030. In Massachusetts, the state legislature passed a measure that, if signed by Gov. Charlie Baker, would require the state's utilities to obtain a total of 1,600 MW of power from offshore wind farms. The bill also includes an increase in mandates for other clean energy resources, including hydropower. New York Energy Standard
According to a statement from Cuomo's office, the initial phase of New York's new Clean Energy Standard (CES) will require utilities and other energy suppliers to procure and phase in new renewable power resources starting with 26.31 percent of the state's total electricity load in 2017 and grow to 30.54 percent of the statewide total in 2021. More

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AMERICAN SOLAR ENERGY SOCIETY

RenewableUK 2016
October 12-13, 2016 Liverpool, UK

Exhibitor: The Green Expo 2016
October 28, 2016 Mexico, Mexico

Solar Power PV Conference & Expo
November 9, 2016 Chicago, IL

AWEA Wind Energy Fall Symposium 2016
November 15-17, 2016 San Antonio, TX

SOLARTR 2016
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