American Solar Energy Society's

Solar@Work

World's Largest Solar Power Plant Unveiled in India

India has become home to the world's largest solar power plant thanks to a 648-megawatt (MW) facility that has come online in the southern part of the country. The previous record holder belonged to the Topaz Solar Farm in California that has a capacity of 550 MW. India has been fast-tracking solar power projects in the past few years thanks to a goalof having 20 gigawatts (GW) of solar power capacity installed by 2022. That goal has spurred some very large solar projects, including a 4 GW plant slated to be built over the next 7 years.

Planned solar power projects have grown in size, but each plant takes years to pass through different phases of approval, receive funding and ultimately be built. That's why as we hear about plans for solar power plants with capacities in the thousands of megawatts, the largest ones actually built and running are in the hundreds of megawatts. None of that should take away from the impressiveness of this new power plant though. The facility, funded by the Adani Group, is located in Kamuthi, Tamil Nadu and covers 10 square kilometers. It consists of 2.5 million individual solar modules and it's estimated that it will generate enough electricity to power 150,000 homes. More

Elon Musk's Tesla Powers American Samoan Island With Solar Energy

The Ta'u Island in American Samoa in now completely run with Tesla power packs. In a tweet published Tuesday, Tesla Motors announced that the island now runs on nearly 100 percent solar energy, thanks to more than 5,300 solar panels and 60 Tesla Powerpacks. After the successful $2.6 billion acquisition of SolarCity in Nov. 21, Tesla utilized SolarCity's microgrid system to provide sustainable solutions to energy generation. Before the introduction of solar energy, the island used to rely on 109,500 gallons of diesel per year or $8 million in fuel costs. Ta'u is the largest island in the Manu'a Group and the easternmost volcanic island of the Samoan Islands. With only 600 residents, they used to depend on imported oil from the U.S., Asia, Central America, and Australia to run its generators. Now, the island can have electricity 24/7 with 1.4 megawatts (MW) of solar energy generation capacity (5,328 SolarCity solar panels) and 6 megawatt hours (MWh) of energy storage capacity (60 Tesla Powerpacks). The project was funded by the American Samoa Economic Development Authority, the Department of the Interior, and the Environmental Protection Agency. A report from Business Insider stated how the project promotes cleaner energy sources in Dubai and Hawaii. With this new technology, the residents in the area hope to decrease the global carbon footprint around the globe. More

Where Will The Next Solar Breakthrough Come From?

Solar power is starting to crop up in some unexpected places. Take one of Tesla's new initiatives for instance. Following Tesla's closing of the acquisition of Solar City, the company has jumped on board one of the newest areas in utilities;

"It's time for the human race to enter the solar system" Dan Quayle, 44th Vice President of the United States of America.

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microgrids. Microgrids are intended to reduce reliance on a larger electrical grid by decentralizing power generation, thus increasing durability of the system. Solar power is particularly effective for this type of application because it can be easily scaled up or down to fit the size of the need. Tesla's microgrid application is running the island of Ta'u, in American Samoa, on a solar energy microgrid. The Tesla grid's 1.4 megawatts, can cover "nearly 100 percent" of its 600 residents' electrical needs. Granted that grid is tiny, but that's not really the point. Instead the broader point is demonstrating uses of solar power in novel settings; in this case on a remote island. Moreover, solar power alone is not enough, storage is also needed. The Ta'u system consists of 5,328 solar panels plus 60 Tesla Powerpacks that offer a total of 6 megawatt-hours of energy storage. This is a system that would have been impossible a decade ago. A second example of novel applications of solar panels comes out of France and has spread to four continents. French firm, Wattway, a unit of Colas SA and Bouygues SA has designed rugged solar panels, capable of withstand the weight of an 18-wheeler truck. These solar panels have been through five years of research and laboratory tests, and are now being used in constructing 100 outdoor test sites. More

Researchers Improve Production of Thin, Efficient Solar Cells

Researchers in the Air Force Research Laboratory are making strides in material development that may open up new possibilities for thin, wearable electronics and other vital power applications. Photovoltaics, or solar cells, are a key component in next-generation power applications, but integrating them into Air Force systems has been difficult because the materials that are being used to make those cells are typically thick, opaque, rigid, and heavy. Attempts to make thinner, lighter, and flexible cells greatly reduced their efficiency, making them impractical for today's advanced technologies such as flexible electronics and wearable sensors. To address this issue, first AFRL researchers needed to find an inherently flexible material that could harvest solar energy efficiently. Then they had to find a way to make solar cells thinner, but better able to convert the energy to electricity. Using an inexpensive material called inorganic-organic hybrid perovskite, the team was able to make thin, transparent cells. However, the thinning of this material presented its own challenges. More

AEP Seeks $52 Million to Build up to 10 Ohio Microgrids

American Electric Power is asking regulators for $52 million to build eight to 10 microgrids in Columbus, Ohio. Microgrid Knowledge reports the proposal was filed this week as part of an update to the utility's Electric Security Plan. The Columbus microgrids are to be installed at critical facilities, such as hospitals, shelters, water plants, grocery stores and gas stations. AEP intends to allow other nearby customers to connect to the on-site generation for a fee. The proposal is part of a plan to decarbonize the power supply and transport in Columbus. In June, the Department of Transportation awarded the state capital a $40 million grant for smart city development. As a project partner, AEP Ohio pledged to install several microgrids, 250 electric-vehicle chargers, smart light controls and other power-related improvements.The microgrids will be powered by solar and energy storage, with natural-gas turbines serving as the marginal system resource. AEP expects this design to reduce

AMERICAN SOLAR ENERGY SOCIETY

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Solar Energy - Group Leader Technical Support National

The Group Leader of Technical Support National is a member of the Solar Energy Management Team. Along with other duties, the Group Leader has (3) three major areas of focus: First and most important is Customer Support. The Group Leader is responsible for implementing and maintaining processes that will optimize the Fronius customer's experience. Second, the Group Leader supervises a large team of technicians. Motivating, training, and growing these technicians knowledge is the responsibility of the Group Leader. Third, is Customer and Service Provider Trainings. The Group Leader should be constantly engaged with customers and service providers; maintaining open channels of communication and being responsive to customer's needs. The Group Leader along with the Master Trainer, works together to coordinate and create customer training programs for those who uses Fronius products throughout the Solar Energy Industry.

Requirements:
*Minimum 2 years' technical experience
*Bachelor's Degree in a hard science from an accredited university
*Possess a valid Passport; ability to travel throughout the U.S. and internationally
*Technical understanding of electronics technology and renewable energy integration
*Strong knowledge of the National Electrical

greenhouse gases by 3,176 tons per year. In addition to the $52 million, AEP is seeking approval to recover $1.5 million per year for microgrid operations and maintenance. If approved, costs would be recouped through a distribution technology rider on customers' bills. The eight to 10 proposed microgrids would be rolled out over four years, with plans for the utility to deploy additional projects at a later date. More

Sharing the Wealth: Providing Access to More Solar Data

Lawrence Berkeley National Laboratory (Berkeley Lab) recently published the ninth edition of its Tracking the Sun report, a SunShot Initiative-funded summary of trends in the installed price of residential and non-residential solar photovoltaic (PV) systems. The report finds what you would expect of this booming industry: solar energy system pricing is at an all-time low. But what's also exciting is that this year, for the first time, Berkeley Lab publicly shared the data used in the report analysis, making fully accessible all non-confidential data from the approximately 800,000 solar energy systems tracked in the latest edition of the report. This now public data includes more than 60 data fields including size, location, date of installation, installed price, equipment specifications, and other details. No personally identifiable information about individuals who own or host solar energy systems is published. The data can be accessed through the National Renewable Energy Laboratory's Open PV Project, along with a user guide that describes the data sources and data fields. More

EVENTS

SOLARTR 2016
December 6-8, 2016 Istanbul, Turkey

REA Event - Delivering Sustainable Road Transport to 2030 and Beyond
December 7, 2016, London, UK

Power-Gen International
December 13-15, 2016 Orlando, FL

MIREC Week
May 8-12, 2017, Mexico City, Mexico

SOLAR 2017 and the Solar Decathlon
October 9-12 and October 5-15, 2017 Denver, CO

ISES Solar World Congress 2017
October 29 - November 2, 2017 Abu Dhabi, UAE

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SOLAR TODAY Magazine
SOLAR 2017: The 46th National Solar Conference
ASES National Solar Tour

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Codes, electrical safety and AC/DC fundamentals
*Training in mechanical and electrical/electronic repair

Solar Energy - Junior TPO Account Manager

This position supports Third-Party-Owner accounts by facilitating sales and post-sale support. The Junior TPO Account Manager works closely with the Key Account Management and Product Management Teams; serving as an onsite dedicated resource. The Junior TPO Account Manager has discretion to provide onsite technical support, installation trainings, FSP trainings, and design & engineering assistance, as deemed necessary.

Requirements:
- Engineering degree preferred. Minimum technical Bachelor's Degree
- Minimum of 3 years' of Solar PV technical experience in an installation and design role
- Experience providing technical support, both on-site and remote locations
- Experience providing technical trainings
- Knowledge of NEC Code, and UL and IEEE Solar PV standards
- Knowledge of communication protocols, including ZigBee and WiFi, is preferred
- NABCEP Certified required

Solar Energy - Technical Sales Advisor(s)

Looking to fill multiple positions.Individual(s) selected must live and work in the designated servicing areas:

-Southeast Region
-Midwest Region
-Southern California - LA, Riverside, Orange County, San Diego

This position will work from a remote office location. The successful candidate will possess excellent communication skills, a high level of organization, and ability to work independently. Requires frequent travel to customer sites, installation sites, and meetings. This position reports to the Team Leader - Sales Management. This position is responsible for identifying technical issues with product in the field or potential product, and implementing strategies and designs that will optimize the solar system.

Requirements

- Bachelor Degree or Associates Degree from an accredited university in a hard science field
- Engineering and/or power electronics background
- Ability to travel up to 80%, (valid motor vehicle license and passport)
- 2 years of Solar PV installation experience
- Experience providing technical and product trainings
- Formal solar training/NABCEP Entry Level or Certified
- Knowledge of NEC Code, UL and IEEE Solar PV standards

To see the full job descriptions and apply, visit:
https://careers.fronius.com/Jobs/All

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