

Preparing modules for long life

Encapsulation and back sheet market surveys show new, better and lower cost products



Cell doping

Diffusion tools prefer tubes and low pressure for higher-efficiency cells

Powerful new module

US start-up announces record 355 W standard panel using MIS mono c-Si cells

Inverter testing

PHOTON Laboratory gives »B« grades to inverters from China and France

Intersolar Europe review

The Continent's flagship solar show was the smallest in years – but still worth a visit

Grid-scale energy storage: the ideal complement to expanded solar deployment

As solar energy deployment rapidly increases, we're focused on accelerating renewable generation without sacrificing reliability. We view battery storage as an exciting technology with the potential for tremendous innovation and growth.

The Solar Energy Industries Association (SEIA) and the Electricity Storage Association (ESA) recently entered into a new partnership to help grow solar energy markets and accelerate the deployment of grid-scale energy storage systems across the country. This will help facilitate the modernization of the electricity grid and make it more efficient, balanced and cost-effective.

Both organizations are focused on collaborating to achieve mutually beneficial goals that'll help expand renewable energy deployment. The alignment of our two industries aims to modernize our energy system for the 21st century by focusing on reliability – while making the grid clean, resilient, efficient and cost-effective.

SEIA and ESA have been working on codifying an Energy Storage Investment Tax Credit, which is gaining support in Congress. Expanding our partnership will help highlight the value proposition of energy storage for integrating renewables into our electricity system.

There is now more than 8,500 MW of cu-

mulative solar electric capacity installed in the US – enough to power more than 1.3 million American homes. What's more, in the first quarter of 2013, more than 48 percent all new electricity added to the grid was solar. America's solar industry now employs nearly 120,000 workers at 5,600 companies – most of which are small businesses spread across every state in the union.

Energy storage is growing at a similarly quick pace; storage already accounts for 24,000 MWh of installed energy storage capacity (the majority of which is pumped hydroelectricity) that serves Americans in almost every state. As outages from unreliable portions of our grid cost Americans \$130 billion annually, more and more leaders are turning to storage. By 2017, grid-scale energy storage will reach an astounding 185.4 GWh and represent a \$113.5 billion incremental revenue opportunity for an industry that currently generates sales of \$50 to \$60 billion a year.

This new effort will help further solidify solar as an increasingly mainstream part of our nation's energy portfolio. Once we've perfected the pairing of solar energy with battery storage – from residential through utility-scale deployment – the possibilities are limitless. ● rr



Solar Energy Industries Association (SEIA)

▲ Rhone Resch, president of the US Solar Energy Industries Association (SEIA), writes a monthly column on solar power in the US.

Lempa River Executive Hydroelectric Commission (CEL) published an RfP for the construction of a 14.2 MW PV power plant. The project, due to be located on land owned by CEL, is expected to be completed in mid-2014.

Mexico, Central America and the Caribbean

Costa Rica

The Costa Rican Institute of Electricity (ICE), Costa Rica's government run electricity and telecommunications services provider, has asked Costa Rica's Regulatory Authority for Public Services (Aresep) to introduce a special tariff for the sale of electricity generated by large-scale solar projects. According to local newspaper Prensa Libre, several private companies have said they would be interested in developing PV projects ranging from 5 to 20 MW in Costa Rica if the country were to introduce a solar incentive for large-scale PV. For one of these projects, the Costa Rican government recently signed an agreement with China under which the Chinese government will lend Costa Rica \$30 million to finance the purchase of 50,000 PV modules. The module supplier was not named. The modules will be used to build a 10 MW PV power plant at an unspecified location and for residential PV projects in remote areas. Costa Rica currently has just 1 MW of grid-connected solar capacity. The 1 MW Miravalles solar park was sponsored by the country's Ministry of Environment and the Japanese government, which donated \$10 million for the construction of the plant.

Dominican Republic

The President of the Dominican Republic Danilo Medina inaugurated a 1.5 MW solar park at Cibao International Airport. Local company Trace International SRL developed the project in the frame of the Dominican Republic's renewable energy law, which includes tax incentives and a net-metering scheme to encourage the deployment of small-scale residential and commercial renewable energy systems. Several large-scale PV projects are also being planned in the Dominican Republic.

El Salvador

El Salvador's National Energy Council (CNE) will issue a Request for Proposals (RfP) for the installation of 100 MW of wind and solar power plants in September, according to local newspaper El Mundo. The German Society for International Cooperation (GIZ) will assist CNE to develop the bidding process for the RfP. In May 2012, El Salvador approved new regulations aimed at encouraging the deployment of renewable energy generation projects up to 20 MW in size. The RfP is one element of this new strategy. Currently, there is just one utility-scale PV project under development in El Salvador. In February, Salvadorian public energy company

Jamaica

Jamaica's Minister of Science, Technology, Energy and Mining Phillip Paulwell intends to include solar energy projects in the Rural Electrification Programme (REP), which aims to extend electricity to rural Jamaica as part of the Government of Jamaica's commitment to providing the entire island with access to electricity. The minister has asked the national utility Jamaica Public Service Company (JPS) to facilitate the development of PV systems across the country in the frame of the program. Furthermore, Paulwell invited Jamaican private companies to enter the solar module production business.

In a separate development, the Government of Jamaica said it was cooperating with Cuba to develop solar module production facilities in both countries, with no further details provided.

Petroleum Corporation of Jamaica, owned by the Ministry of Science, Technology, Energy and Mining, has issued a Request for Proposals (RfP) for the installation of 18 grid-connected rooftop PV systems at 15 schools and three public sector agencies in Jamaica. The bidding will be conducted through an International Competitive Bidding.

Mexico

Struggling Chinese solar manufacturer Suntech Power Holdings Co. Ltd. has agreed