

## 2018 Solar Power International Conference Takeaways

### Key Information

- The conference is no longer only about solar. Energy storage was put on equal footing.
- The meeting made clear that the solar industry has transitioned into a mature industry that seeks to provide optimized solutions to utilities.

### What has changed?

During the last week of September, energy professionals gathered in Anaheim, CA at the *2018 Solar Power International* conference to demonstrate technological innovation and share ideas of how the industry will continue to evolve. The conference has evolved along with the solar industry. In the past, the conference focused mainly on solar PV. This year's event made a point to show that the solar industry is marching in step with other distributed energy resources, such as battery energy storage systems and electric vehicles. For instance, this is the first year that energy storage vendors had a dedicated area of the show room. In other words, the solar industry is evolving to provide optimized solutions.

### What is the impact on cooperatives?

From conversation with vendors and other industry professionals, solar will likely be deployed along with a battery energy storage system. This has the potential to be an opportunity as well as a threat to electric cooperatives. On one hand, combined solar and battery systems can provide more predictable, firm power to consumer members, mitigating some concerns about the intermittency of solar energy. These combined systems are likely to become more economical and common as battery costs come down in price. On the other hand, combined solar and battery energy storage systems may begin to be deployed behind-the-meter, which without co-op participation, can lead to increased cost shifting between consumer-members.

### What do cooperatives need to know or do about it?

At the “Reimagining Innovation in the Utility of the Future” session of the conference, Exelon defined the producer-consumer connections of the “Utility of the Future” as four layers: 1) The physical asset base, 2) system operation and planning, 3) transactive commodity exchange, and 4) services and solutions marketplace. These four layers outline potential, future interactions with both active and passive consumers. A big takeaway from the session is that **utilities are in the business of owning consumer relationships, not just the poles and wires**. These relationships will continue to evolve along with the evolution of technology.

Electric vehicles hold promise for strengthening co-op consumer-member relationships as well as increasing electricity sales. During the “Unpacking the Future of EVs” session of the conference, speakers emphasized the **impending transition to the electrification of transportation**. Automakers seem to be in agreement

with this projection, as they have committed upwards of \$100 billion to electric vehicle manufacturing. Within the next few years, the number of electric vehicle models in the U.S. market is expected to double.

Vehicle-to-grid integration of EVs was also predicted to provide more value within the next decade. As battery technologies continue to advance, they will have the capability to handle more cycling. Utilities may even start to model the degradation of EV batteries for consumers. Multiple ideas of utility involvement in advancing adoption of this technology were discussed, including the possibility for utilities to own the EV batteries outright. Utilities in this case would take on the additional role as a service provider to the battery and/or EV, thereby reducing risk and making the technology economical for more people. Evolution of electric vehicles and residential energy storage will continue to depend on the advancement of battery technologies.

The main takeaway at the “Residential Energy Storage Outlook” session of the conference was that **geography is a major driver in purchasing residential storage systems**. Consumers in east coast states, especially in Florida, choose to purchase batteries for backup power during hurricane season, while California residents opt for batteries to take advantage of time-of-use rates in addition to providing backup power. These systems will likely continue to be adopted across the U.S. for geographic-specific reasons.

### Additional Resources:

- [SUNDA Project](#)
- [Battery Energy Storage Overview](#)
- [Rate Options to Serve EV Programs](#)

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