CASE STUDY

Tailem Bend first solar farm approved for self-forecast of generation by the Australian Energy Market Operator

Tailem Bend Solar Project, a 95 MW solar farm in South Australia, is using Proa's operational forecasting services to forecast its energy production and was the first solar farm self-forecast to be approved by AEMO for NEM dispatch.

Tailem Bend is owned and operated by Vena Energy Australia, which is part of Vena Energy, one of Asia-Pacific's leading independent power producers, with over 11,000 MW of renewable assets in operation, under construction, and in development in Australia, Japan, India, Indonesia, the Philippines, Taiwan, South Korea and Thailand. In Australia, Vena Energy is progressing over 2,400 MW of renewable energy projects across the country including Collinsville North Solar Project and Wandoan Solar Project, both in Queensland.

Tailem Bend Solar Project began operations April 2019, sending up to 95 MW to the South Australian electricity market each day. As an innovative company with a focus on reducing costs, Vena Energy was eager to provide self-forecasts for Tailem Bend. Previously only AEMO's Australian Solar Energy Forecasting System was permitted to forecast solar generation for NEM dispatch, but recently AEMO permitted solar and wind farms to provide their own self-forecasts. Accurate forecasts help to integrate solar farms into the NEM and also provide significant financial benefits. For solar farms in the NEM, generation forecasts determine their Causer Pays Regulation FCAS costs, which are the solar farm's share of the cost of maintain system frequency close to 50 Hz during normal operations. More accurate forecasts reduce those costs, and the rise of Regulation FCAS prices have risen over create a strong business case for solar self-forecasting.

"Proa is a leading solar forecast provider. Vena Energy is very pleased with the financial savings from Proa's forecasts, and we have been pleased to partner with Proa for Tailem Bend Solar Farm. To achieve the first self-forecast approved by AEMO is also a great result".

Miro Tischljar, Executive General Manager Project Execution & Operations, Vena Energy

Vena Energy chose Proa, an Australian solar forecasting company, as their self-forecast provider. Proa's forecasts are provided by the Proa Forecasting System (PFS), which optimally combines on-site cloud images, geostationary satellite images, and other data to provide highly accurate forecasts of solar generation from 5 minutes up to 7 days ahead.

Results

Proa installed their skycam forecasting equipment at Tailem Bend in late May 2019, working collaboratively with Vena Energy's own technical specialists to calibrate and tune their forecast algorithms for Tailem Bend.

Before self-forecasts are accepted into NEM dispatch, they are required to pass a rigorous assessment process by AEMO for forecast accuracy and reliability. Tailem Bend's forecasts began the AEMO forecast assessment on 15 July and successfully completed in the minimum possible 8 weeks on 9 September, becoming the first self-forecast to be accepted by AEMO for NEM dispatch. Mike Davidson, AEMO's Manager of Operational Forecasting, described the milestone as "a great achievement".

Victor Depoorter, Proa Technical Director said: "Proa gratefully acknowledges our partner Vena Energy Australia. Companies like Vena Energy are leading the clean energy transition, and on innovative projects such as this are working make that transition faster and more secure for all."

Proa is now working to integrate other solar farms into AEMO dispatch, whilst also continuing to deploy and improve its forecasting algorithms.

Contact

For more information, contact Proa at proa.energy and contact@proaanalytics.com

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