

Press release

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Siemens Energy's reactive power compensation technology helps advance CO₂-free power supply in California

- Reactive power compensation plant based on SVC PLUS technology
- Project execution time of only 16 months
- Enables smooth integration of large amounts of wind and solar power into the grid

Siemens Energy will supply a reactive power compensation plant to the Los Angeles Department of Water and Power (LADWP). The plant will enhance operations at Barren Ridge Switching Station, LADWP's renewable energy transmission facility in Kern County, California, about 80 miles north of Los Angeles. The plant will be based on Siemens Energy's SVC PLUS technology that combines the benefits of static synchronous compensation (STATCOM) and modular multilevel converter (MMC) technology. The fast response of the STATCOM stabilizes the transmission system when the amount of power generated by solar, wind or hydro generation changes. The MMC technology allows the implementation of this complex technology in a very small footprint compared to traditional solutions. The new ± 200 megavolt ampere (MVar) SVC PLUS will provide the necessary voltage support needed in the area, where LADWP has significantly increased renewable energy generation.

"Constantly increasing the share of CO₂-free, climate-neutral electricity in our grid is one of our most important challenges," said Reiko Kerr, Senior Assistant General Manager, Power System Engineering and Technical Services at LADWP. "In addition to building new wind and solar power plants, targeted investments in our electricity transmission infrastructure are crucial to achieving our renewable energy goals. Barren Ridge will provide long-term grid stability for our customers while supporting increasing amounts of renewable energy in our portfolio."

"The great advantage of our SVC PLUS technology is that it is even faster than conventional solutions," said Beatrix Natter, Executive Vice President Transmission at Siemens Energy. "In addition, it offers high flexibility regarding design and layout of converters and substations. Its modularity and low number of system components also reduce commissioning time compared to

complex conventional SVC systems. This enables a short execution time of only 16 months for the Barren Ridge project so that the reactive power compensation is ready in time to prevent voltage collapses or even blackouts.”

The heart of the SVC PLUS will be two three-phase step-down transformers with 230-kilovolt (kV) and 200-MVA capacity and an industrial-class insulated gate bipolar transistors (IGBT) based converter. This important installation supports LADWP’s ongoing network enhancement by the application of robust technology that continues to prove its value in more than 120 installations worldwide. In addition to the plant, Siemens Energy will provide extended warranty that will maximize availability and operating flexibility for LADWP. Commissioning of the plant is planned for summer 2022 after an execution time of only 16 months.

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This press release and a press picture are available at

<https://press.siemens-energy.com/global/en/pressrelease/siemens-energys-reactive-power-compensation-technology-helps-advance-co2-free-power>

For further information on Siemens Energy Transmission, please see <https://www.siemens-energy.com/global/en/offerings/power-transmission.html>

For further information on Siemens Energy SVC PLUS , please see <https://www.siemens-energy.com/global/en/offerings/power-transmission/facts/portfolio/svcplus.html>

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