APS Existing Large-Scale Battery Systems

Energy storage is vital to a clean-energy future. APS currently owns three large-scale battery systems serving customers in its service territory. Batteries can help deliver cleaner energy to customers and more fully capture the benefits of solar energy. These facilities were also developed to understand the potential benefits of energy storage for customers and evaluate how it works with other advanced technologies and the grid.

Festival Ranch

Location: Buckeye, Arizona, near the Festival Ranch development (52 miles northwest of downtown Phoenix)

Technology: Lithium-ion battery

Capacity: 2 megawatts/2 megawatt-hours

System integrator: Fluence

In-service date: March 2017

Primary functions: Integrating solar energy resources in an area with high rooftop solar penetration, and grid services including voltage regulation and power quality.

McMicken

Location: Surprise, Arizona, near the APS McMicken substation (28 miles northwest of downtown Phoenix)

Technology: Lithium-ion battery

Capacity: 2 megawatts/2 megawatt-hours

System integrator: Fluence

In-service date: March 2017

Primary functions: Integrating solar energy resources in an area with high rooftop solar penetration, and grid services including voltage regulation and power quality.

Punkin Center

Location: Punkin Center, Arizona (90 miles northeast of downtown Phoenix)

Technology: Lithium-ion battery

Capacity: 2 megawatts/8 megawatt-hours (two units with 1 MW/4 MWh capacity each)

System integrator: Fluence

In-service date: March 2018

Primary functions: Supplies extra capacity to relieve congestion on the area's primary distribution line, enhancing reliability in the area. Batteries were a cost-effective alternative to rebuilding the 20-mile line with new poles and wires, enabling APS to defer investment in a traditional electric infrastructure solution.

APS recently announced one of the largest battery storage initiatives in the country, with plans to add 850 megawatts of battery storage and at least 100 megawatts of new solar generation by 2025, for a total of 950 megawatts of new clean-energy technology.