The role of Virtual Power Plants and Microgrids within SMUD's 2030 Zero Carbon Plan

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SMUD's Zero Carbon Plan



Virtual Power Plant Transformation

Accelerate the transition away from fossil fuels by providing alternative sources for grid services like resource adequacy.



Reduce transmission system constraints by managing energy locally.





Create jobs and build the community by keeping the value local.

Distribution Substation

Reduce the need to replace or upgrade infrastructure by managing local load.



Virtual Power Plants

•My Energy Optimizer Thermostat Program

•My Energy Optimizer Residential Battery Storage Program

•Peak Conserve

•Commercial Battery Storage

•Managed EV Charging Pilot

School-Hosted Community Resiliency Center



A shelter for community members when the grid is down during extreme weather events/emergencies Combines community solar and community resilience

Innovative design:

- Front-of-the meter solar
- Behind-the-meter energy storage
- Electric school buses with V2B capability

Status of Community Solar Plus

Hiram Johnson High School, Sacramento City Unified School District



- CA's OPR Grant 750K awarded to SCUSD (SMUD is a major sub with \$360K.)
- Expected design completion in 2026
- Completed economic analysis of the school's opportunity cost.

Grant Union High School, Twin Rivers Unified School District



- To be fully funded by SMUD; GRIP TA-2 grant not awarded; Potential source of funding is AB 32.
- Site walk completed in Jan 2025; analyzed consumption data and solar sizing; to finalize the design based on stakeholders' inputs.
- Designated by the American Redcross as an emergency shelter