

Synchrophasors

This project is a five-year effort to acquire, install, test and implement synchronized Wide Area Measurement (WAM) and control technology at BPA. Synchrophasors are precise grid measurements available from monitors called phasor measurement units (PMUs). Real time information collected through this new capability enables the grid to be operated more efficiently and reliably through visualization of trends and quick reactions to disturbances.

This project is part of a larger program, called the Western Interconnection Synchrophasor Project (WISP) led by the Western Electricity Coordinating Council (WECC). The program will build a synchrophasor network that serves as a foundation for applications to improve system reliability, enable wind integration and unlock stability-limited capacity in the West.

Phase 1 spans three years and includes installation of approximately 120 PMUs at about 50 sites, installation of field and control center infrastructure, design and testing of real-time response-based controls, and development and implementation of engineering and situational awareness applications. Phase 2 will last an additional two years and include full operational deployment of the response-based controls tested in phase 1, the installation of additional PMUs, and the addition of more situational awareness applications.

The project's capital cost, including AFUDC and overheads, is estimated to be \$25.1 million. The two-phased project is expected to be completed by September 2015.