

Power Restored After Biggest Outage in SDG&E History (from [1])

In what is being dubbed the most widespread electricity outage in California history, millions of customers were left without power on Sept. 8 including the entirety of San Diego Gas & Electric's service territory.

The blackout began at about 3:30 p.m. on Thursday, Sept. 8, and SDG&E restored power about 12 hours later.

According to Arizona utility Arizona Public Service, the cascading power outages, which impacted customers in Southern California, Arizona and Baja, Mexico, appear to be related to a procedure an APS employee was performing at the North Gila Substation near Yuma, Ariz.

The work being done at the substation apparently caused the North Gila-Hassayampa 500 kV transmission line to trip off line. SDG&E reported that the 500 kV Southwest Powerlink—its main import path from the east— went off line, as did its 230 kV lines running north to the San Onofre Nuclear Generating Station.

Investigations in California and Arizona are underway to determine the cause of the outages, and why they were so widespread.

“Operating and protection protocols typically would have isolated the resulting outage to the Yuma area,”

APS stated in a press release. “The reason that did not occur in this case will be the focal point of the investigation into the event, which is already under way.”

The transmission-line outage, in addition to causing 56,000 APS customers to lose power, triggered cascading blackouts throughout Southern California and forced Cal-ISO to suspend its wholesale market and declare a statewide “Flex Alert” to ease strain on the grid.

As a result of losing a key connection with San Onofre, all of SDG&E's customers (3.5 million consumers through 1.4 million electric meters) lost power, causing the most widespread power outage in the company's history.

“SDG&E did not have adequate resources on its system to keep power on across its service territory,” the utility noted.

SDG&E was able to restore power to all of its customers by 3:30 a.m. on Sept. 9.

“Restoring power in the aftermath of the loss of the entire local grid serving San Diego and southern Orange counties was a monumental task,” the company said.

The Imperial Irrigation District also experienced a system-wide power outage on Thursday that affected approximately 146,000 customers in Imperial County and parts of Riverside and San Diego counties. The public utility's power system was fully re-energized by the end of the day.

As of Friday morning, San Onofre remained in a stable shutdown condition, Edison's press office reported.

Cal-ISO announced Friday that it has initiated a joint task force to investigate the blackout, and that it will be working in close coordination with the Western Electricity Coordinating Council and all the affected utilities.

“Our first priority was to help restore electricity to customers in the San Diego area who were hard hit by this devastating blackout and we appreciate all the entities that teamed up to perform Herculean efforts overnight,” said Cal-ISO President and CEO Steve Berberich in a press statement. “We now turn our focus to root-cause analysis to investigate the reason for the series of events that triggered the widespread power outage.” Cal-ISO said the task force will conduct “a full investigation in a thoughtful, collaborative and transparent fashion to guard against it happening again” and that findings will be made public.

The Federal Energy Regulatory Commission and the North American Electric Reliability Corporation also announced a joint inquiry in cooperation with Cal-ISO, WECC, and the utilities and state regulators in California and Arizona.

WECC also announced that it will conduct an “event analysis” with participation from Cal-ISO.

The investigations in California will likely focus on why the grid-protection systems that are in place did not keep the outages from cascading to the extent that they did, said David Brooks, manager of the Electric Power Research Institute's grid operation and planning research programs.

“There’s going to be a lot of people doing a lot of analysis over the next few weeks,” Brooks observed.

Brooks also pointed out, however, that the outage could have been much worse given the interconnectedness of the Western electricity system, which covers everything west of the Rockies except Texas.

“Obviously there were protection systems that worked,” he said.

Given the hot temperatures this week in Southern California and high peak demand (43,290 MW on Sept. 8), utility customers are thankful the outages were short-lived.

“Yeah, we’re relieved,” commented Michelle Sabala, a food server at Famous Dave’s BBQ restaurant in El Centro, where temperatures reached 103 degrees on Sept. 9. “It’s hotter than hell here” [*Leora Broydo Vestel*].