

Power shortages possible in California this summer

By Naureen S. Malik and Lynn Doan, Bloomberg

California may face the biggest regional power shortages in more than a decade this summer, sending wholesale prices higher, as idled nuclear reactors and low hydroelectric output cut generating capacity.

The California Independent System Operator Corp. said last month that managing the state grid, especially in parts of Southern California, will prove “difficult” because the system will be operating without Edison International’s San Onofre nuclear power plant and two natural gas-fired units, while hydroelectric output will be at a three-year low.

The nuclear plant, California’s single largest source of base-load power, accounts for 3.7 percent of the state’s capacity.



Lake of snow in the Sierra this winter, as evidenced during the March snow survey, will impact hydropower in California.
Photo/LTN file

Southern California wholesale electricity for July through

September already is at the highest price for this season since 2008 on the expectation of a shift to costlier, more volatile fossil fuels. A strain on the grid could lead to power failures reminiscent of the state's worst energy crisis in 2000 and 2001, when generation shortfalls and market manipulation by traders at companies including Enron Corp. sent prices to record highs and triggered blackouts that affected millions of customers.

"California may see the biggest test since Enron manipulated the market," said Stephen Schork, president of Schork Group, an energy consulting group in Villanova, Pa.

"If you have a reactor down and you don't have as much hydro, your fuel for air conditioning is going to have to come from gas."

Electricity at Southern California's SP15 hub for July through September rose \$1.40, or 2.3 percent, to \$61.25 per megawatt-hour this week, a five-year seasonal high.

Electricity at the SP15 hub for next-day delivery has averaged \$49.70 per megawatt-hour this year through Thursday on the Intercontinental Exchange, the most for the period in five years. Northern California's NP15 hub has averaged \$41.99 this year, the most since 2010.

The shutdown of the San Onofre reactors boosted prices at the southern hub to an average premium of \$7.81 per megawatt-hour over the northern hub, the most in 12 years. The five-year average is 95.6 cents.

Abundant hydroelectric generation made up for the lost nuclear output in the Los Angeles basin last year, said Michael Blaha, the principal analyst of North American power at Wood Mackenzie in Houston.

"There is always a threat of brownouts and blackouts, and I think it's higher this summer because of San Onofre being out

and you're not putting hydro into the basin," he said.

Final snowpack measurements, which are used to predict the output at hydropower dams, will be 45 to 50 percent of normal, according to Maurice Roos, chief hydrologist with the state's Department of Water Resources in Sacramento. Only six years in the past 60 have been that low, he said.

Low water levels in the Pacific Northwest may also cut electricity exports to California this summer, according to the Bonneville Power Administration, a federal agency that manages Columbia River basin power supplies.

Transmission lines across the Oregon-California border have a combined capacity of 7,500 megawatts.

The snow-water equivalent in the region was 89 percent of normal this week, the lowest level for the time of the year since 2010, U.S. Agriculture Department data show.

Unless there is a surge in precipitation in April through June, the amount of water available for hydro in the Pacific Northwest will be lower than it has been in the past two years, said Doug Johnson, a spokesman for the BPA in Portland, Ore. Water levels exceeded historical norms by 30 percent in 2011 and 20 percent last year, he said.

California, with a population of 38 million, struggled with similar hydropower shortages during the electricity crisis of 2000 and 2001.

The state, the world's ninth-largest economy, was also dealing with unplanned power-plant shutdowns, a natural-gas pipeline rupture, unseasonably high temperatures and price manipulation by Enron and other companies.

The shortages prompted regulators to overhaul state energy policy, which now requires utilities to show they've contracted enough power to meet demand.