

Supply & Demand

[11] Calif. Outage Timing 'Suspicious'; PGE Battered by 'Ill-Advised' Trades • from [1]

California's rolling blackouts and price spikes have caused financial damage to at least one Northwest utility, and raised concerns about the integrity of the California ISO's wholesale market.

Robert McCullough, principal at Portland-based McCullough Research and prominent figure in exposing Enron's market manipulation during the Western energy crisis of 2000-2001, told Clearing Up the number of forced outages in the ISO just before and during the August heat wave was "suspicious."

McCullough cited CAISO's outage report showing that over 5,400 MW of generation was taken off line Aug. 14 as the heat was building. That same day CAISO declared a Stage 3 emergency and started shedding load.

The ISO report showed 462 different units as being in "forced" or "limited" outages.

"In the real world, you would never turn off a plant during a heat wave," McCullough told Clearing Up. "Those are 2001 [Western] energy crisis levels. We would not expect to see any major outages in California during this time."

He said the ISO is a 50,000 MW system, with a NERC-approved 17 percent reserve margin, so CAISO should have had 8,500 MW in reserve on the day the first Stage 3 emergency was declared.

Load grew by 2,000 MW from the heat, he said, theoretically leaving plenty of generation to serve load, except that 5,400 MW was off line.

"This wasn't a load problem, it was a resource problem," McCullough said. "If they had had normal [generation] outages that day, they would not have had a Stage 3 emergency."

He questioned whether CAISO's 17 percent reserve margin is capable of "preserving such a large system."

"If California's reserve margins are inaccurate, that is catastrophic. We are talking about the most populous state with a Third World electrical system," McCullough said.

On Aug. 18, CAISO suspended convergence bidding, which allows participants to take a financial position in the day-ahead market and liquidate it in the real-time market. Convergence bids are virtual, in that no physical energy is delivered or consumed, nor are they backed by physical assets.

McCullough alleges the owners of the plants taken off line could have made more money by playing in the convergence market before trading was suspended.

"It's possible to bet the farm that prices will go up, even if you have a forced outage or planned outage the next day and aren't making money with the plant," he said. "You can make vastly more money in the day-ahead market—40 to 50 times leverage—in that market. So with just 1 MW in the convergence market, you can make the profits of trading 50 MW in a traditional market."

"The fact is, our risk management software is not all that good and our ability to forecast the ISO is worse," he added. "The CAISO convergence market is fundamentally abstract, and far from any real-life fundamentals."

CAISO spokeswoman Anne Gonzales said in an email to Clearing Up that "the outage reports are of value to operators because they show resources available to us. They can be misinterpreted, however, to those not using them for operational purposes."

For example, the report actually includes both generating units physically located in CAISO's balancing authority and nonphysical import capabilities that are located outside of it.

"In that matter, the term 'forced' doesn't always necessarily mean the resource is not physically producing. It simply means it is not available to CAISO to serve load inside CAISO BA, either because it is contracted elsewhere or because of 'ambient de-rating.'

(Ambient de-rating is when a unit doesn't perform as well in 105-degree heat as it does in 60-degree temps, or it can mean it is operationally limited under EPA and DOE environmental rules.)," Gonzales said.

Convergence bidding enables "financial supply and demand positions in the day-ahead market that are settled based on day-ahead prices and are liquidated in the real-time market based on real-time prices," Gonzales

wrote. "These positions serve to better align day-ahead prices with expectations of real-time prices."

However, in anticipation of the grid operator needing to implement load curtailments in the real-time, the operators may need to cut day-ahead export schedules. "Based on market results for the day-ahead market for the Aug. 18 trade date, in combination with other factors, the suspension of convergence bidding contributed to the reduction of over 1,500 MWs of exports schedules," CAISO said.

California Gov. Gavin Newsom has called for an investigation into the rolling blackouts, and the CAISO Board of Governors held an executive session Aug. 28 to discuss the issue.

The rolling blackouts and power market price spikes in California took its toll on at least one Northwest utility.

Portland General Electric announced Aug. 24 it suffered "significant losses as wholesale electricity prices increased substantially at various market hubs due to extreme weather conditions, constraints to regional transmission facilities, and changes in power supply in the West."

The company reported its energy portfolio lost \$104 million, along with unrealized mark-to-market losses of \$23 million. Total third quarter losses in PGE's energy portfolio are estimated to be up to \$155 million subject to market conditions, the utility said in an SEC filing.

PGE said it would not include the losses in rates, and slashed its earning guidance for 2020 from \$2.20 to \$2.50 per diluted share to \$1.30 to \$1.60 per diluted share due to the impacts of higher net variable power costs.

'We are talking about the most populous state with a Third World electrical system.'

“Certain PGE personnel entered into a number of energy trades during 2020, with increasing volume accumulating in the second quarter and into the third quarter, resulting in significant exposure to the company,” Maria Pope, president and CEO of PGE, said in an email to employees. “Simply put, these were ill conceived trades.”

Two energy traders were placed on administrative leave and senior executives took control of power trading and risk management. Power operations are now reporting to Jim Lobdell, senior VP of finance, CFO and treasurer; Pope will oversee risk management.

PGE’s board of directors formed a [special committee](#) to review the energy trades that led to the losses and the company’s procedures and controls related to the trading, and to make recommendations to the board for appropriate action.

The board also hired outside counsel to advise the committee.

Energy traders around the West have been speculating on what the “ill-advised trades” were.

“\$155 million is an amazing amount of money to lose,” said a former energy trader, who spoke on condition of anonymity. He noted that PGE typically meets its peak needs with market purchases, so it’s hard to imagine the utility was so exposed in August.

“You’d have a hard time racking up those kind of losses in just one week,” another trader told Clearing Up. “There must be a much broader explanation or an underlying problem. How could you have been long in the market up until this month? I don’t know for sure, but this sounds like speculative trading that wouldn’t be covered under rates. Makes me think they were just not keeping up with risk management protocols.”

Tim Belden, principal at Energy GPS in Portland and former Enron trader, said the losses could have been from “spread trades” rather than outright long or short positions.

A spread trade involves selling one instrument such as August Palo Verde and buying another one against it such as August Mid-C, Belden said. Traders use this technique to bet on relative value rather than absolute value. That is, one would sell Palo Verde and buy Mid-C because one thinks Mid-C will be cheap compared to Palo Verde, Belden explained in Energy GPS’ [daily newsletter](#).

Typically, different WECC markets tend to move together—not in perfect lockstep but in generally the same direction. Such a spread trade would be banking on that happening, Belden wrote.

But the Mid-C, Northern California, Southern California and Palo Verde trading hubs all separated when CAISO’s troubles started, and when that happened there was no reliable way to move additional energy between regions. CAISO also cut exports to the Southwest. For Aug. 18 deliveries, the Palo Verde cash price cleared at \$1,401/MWh and on Aug. 19 cleared at \$1,640/MWh.

It is reasonably clear the short position must have been in the southern portion of the WECC grid because Mid-C did not spike and NP15 had much more muted spikes, Belden wrote.

“If indeed the losses associated with August and September positions totaled in excess of \$100 million, it is likely they were short large volumes at either Palo Verde or

SP15,” he wrote. “Any long positions that they had against those shorts simply didn’t perform. This is a sad situation for PGE. That said, this also seems to be something that PGE can easily put into the rearview mirror. They can settle their trades, take their losses, and move forward.”

McCullough and Belden are both veterans of the 2000-2001 Western energy crisis. McCullough’s research helped expose Enron, and Belden headed Enron’s trading desk.

Both agreed PGE probably isn’t the only utility to feel the financial pain from California’s price spikes.

“Based on the information flow that comes across the Energy GPS wires, PGE was not the only company on the wrong side of August Palo Verde trade,” Belden wrote. *[Steve Ernst]*

[12] NWPP Programs Helped Keep Lights On During Heat Wave • from [2]

The Northwest Power Pool’s reserve contingency sharing and interim resource adequacy programs helped prevent Northwest blackouts during the recent heat wave.

As temperatures were pushing past 90 F in the Northwest on Aug. 21, and West Coast utilities were scrambling to find capacity, one Northwest utility faced a 700 MW deficit and was preparing to shed load. Instead, the utility met that deficit with the help of the Power Pool’s reserve contingency sharing program.

Frank Afranji, president of the Northwest Power Pool, declined to name the utility, but said the utility had “armed their load shedding program.”

“But they were able to fill a portion from the market, and picked up about half of their need from the reserve sharing program, which is designed for that specific reason,” Afranji said.

He said another utility accessed 50 MW of capacity from the Power Pool’s recently enacted interim resource adequacy program that went live July 31, and two utilities stepped up to fill the 50 MW gap.

“The combination of the reserve sharing and interim RA program worked very nicely together to meet the needs within the Northwest Power Pool’s footprint, and helped avoid any load shedding,” he said.

The Northwest’s wind fleet was generating about 300 to 400 MW at the time the unnamed utility went to the Power Pool for help, Afranji said, and the region’s hydroelectric generation was strong.

A good water year, coupled with a late seasonal runoff, provided BPA plenty of water to generate power during the heat wave. Power generation was also helped by the agency’s flexible spill agreement, which calls for increased spring spill at certain times to help juvenile fish migrate, but allows the agency to generate more power in August.

Northwest hydro production in August has averaged about 1,000 MW above normal, according to Energy GPS. BPA had federal hydro project turbines humming during the heat wave, including those at the four lower Snake River dams, which were working at capacity to help meet peaks.

“Stated simply, the Northwest grid was healthy and exports to the south were constrained by limited southbound transmission,” Energy GPS said.