**Restructuring in the Rearview Mirror – a 10-Year Retrospective of California's Doomed Experiment with Electric Deregulation. By The Energy Overseer**

## Early Power Exchange Overnight Price Swings Were No Joke

During last month's market simulation tests for the new California Power Exchange, some marketers pointed to a transient spike in peak-hour prices to 75 mills/KWh as illustrative of the potential for volatility in peak-period prices. On the very first day of PX operations, participants observed the reverse dynamic as market clearing prices for the initial few off-peak hours ranged between zero and 0.25 mills/KWh. Then, during the next three days, off-peak prices varied between 12 mills and 20 mills/KWh--proving that just about anything is possible.

PX daytime market clearing prices have generally been steady in the 23 mills to 27 mills/KWh range, not far from prices set in non-PX bilateral trading at the California/Oregon Border or within Northern California. Overnight prices, however, are initially showing wider diversity, as traders try to figure out the best strategy for bidding into the new system.

George Sladoje, chief operating officer of the PX, told CALIFORNIA ENERGY MARKETS that since December there had been about 90 different daily market simulations--with occasional price spikes above 50 mills/KWh--but never such low overnight numbers.

**"You just don't know what is going to happen until there's money changing hands,"** he said. Sladoje said about 30 participants were active in the first few days of Exchange trading. "Now we've had three days, but three days doesn't make a trend. It's hard to tell much of anything. We'll wait to see how we do as we go through a weekend," he said.

Several factors appeared to play into the initial off-peak price swings, according to observers. First is the fact that many utility generation units and independent power projects are acting as "price takers"--bidding zero into the Exchange and accepting whatever market clearing price results on the PX. The combined capacity of these "must take" resources might occasionally completely fill the slack demand experienced during the night, especially in April, which is one of the lowest demand months for California utilities. That nukes and qualifying facilities (QFs) would bid zero is not surprising; they do not depend on PX price for their output; instead, the revenues they receive have been established by contract or by incentive pricing regimes approved by the California Public Utilities Commission. Costs above the PX price are the "uneconomic" portion of their operations, which will be recouped through stranded-cost charges from customers.

Other fossil-fueled generators also appeared to be bidding low or zero simply to assure that they will be consistently scheduled and avoid the costs of shutting down facilities for a few hours. With a better sense of market demand after the first day, sellers then seemed to shift to bidding numbers that are closer to their marginal costs of operating--thus bringing the higher prices.

That may change again this month if Northwest hydroelectric sellers begin "fish-flush" releases that result in a flood of low-cost hydroelectricity during all hours of the day. "The fish flush can start any time," observed Todd Torgerson, a power trader with El Paso Energy Marketing. "I think there's going to be so much water it will push prices down."

Overnight loads served by the Power Exchange this week have generally been between 16,500 MW and 17,500 MW per hour. Daytime peak loads have hit as much as 24,800 MW. For the most part, that represents demand from utilities Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric. In the past, California's utilities have declared "hydro spill" conditions that allow them to curtail deliveries from QFs rather than back down nuclear plants. Whether this year's hydro potential leads to a similar condition remains to be seen.

**If there are other buyers of PX power,** they appear to be doing so on a very limited basis to gain experience. Even a few of the in-state and extra-regional power sellers contacted by CEM said they are participating a relatively limited way.

Dan O'Hearn, a short-term trader with Powerex, the marketing affiliate of BC Hydro, said the firm has arbitrarily limited its sales offers into the PX to 50 MW. His initial reaction to the Exchange daytime pricing was that it appeared slightly lower than prices being set in non-PX bilateral trading at the California/Oregon Border. That is a bit of a surprise, he said, because the risks of dealing with the new California market are expected to lead to slightly higher prices on the Exchange.

The biggest risk is putting in a bid and securing transmission to deliver power, then finding that your schedule has been cut because of constraints. "Right now we're participating each day, just to be a player. We're willing to sell at slightly lower prices and take the opportunity losses just to learn the system," he said.

According to Bonneville Power Administration commercial practices manager for operations and planning Paul Arnold, marketers complained about financial risks not of their doing. For instance, if transmission goes out in the Northwest, a marketer is still financially obligated to deliver that energy. The California Independent System Operator (ISO) will step in and will generate for them and then charge the marketer a (likely) higher price "when the inability to deliver might not be their fault."

Philip Allen, a manager of bulk power trading at Enron's Portland trading center, noted that PX nighttime prices were "a little erratic" but not unusual. "Water has been a little tight in the Northwest this week," leading to higher off-peak prices. Out-of-state traders also noted that a portion of their proposed schedules into California were cut by the California Independent System Operator, and others said their ability to sell during a few high-priced hours was limited by the prescheduling of transmission capacity.

"Some were standing at the gate willing to sell cheaper, but couldn't get in," Allen said. The result was the some economic power was pushed out of the market by higher priced California-based energy.

**"That's not the way markets are supposed to work,"** observed Bobby Campo, a marketer with Southern Company Energy Marketing based in Northern California. "That's the regulatory side of things that the ISO and Power Exchange represent." Southern conducted sales outside of the PX, on a schedule coordinator to schedule coordinator (SC/SC) trading basis, and experienced no problems delivering into what could be a constrained area along Transmission Path 15. "We haven't had any congestion yet, but we'll have to wait to see how this thing works for everyone," Campo said.

Southwestern sellers also stuck their toes a wee bit into California's new market. Toby Voge, a wholesale trader with Tucson Electric, said TEP had a first-day bid for an 8 MW off-peak sale accepted into the PX at a 5 mills/KWh clearing price.

"There's a disequilibrium in off-peak prices," Voge noted, with bilateral trades coming in at 13 mills to 14 mills/KWh, while the PX ranges between 9 mills and 19 mills/KWh. "The off-peak prices will have to settle down a bit" before he feels comfortable selling on a regular basis.

A limiting factor in TEP's participation as a buyer of PX power is the need to deposit escrow funds equal to a month-and-a-half's worth of purchases. "We didn't want to tie up a lot of working capital," he said. This time of year, TEP is a net seller of power. "We don't see an urgency to buy from the PX," Voge said.

Steve Maestas, a short-term trader for Arizona Public Service, said he expects the utility will use the PX "more to sell than to buy. It's a last resort to buy from." So far, APS has been scheduling less than 100 MW into California both in its capacity as a wholesaler and as a direct access provider for a few customers.

Within California, a few municipal utilities said they successfully avoided dealing with either the PX or the ISO by relying on their own generation or by using existing contract transmission pathways that do not fall under ISO pricing.

**If there were some hang-ups** noted by new market participants, they came in the form of added complexity in complying with transaction "tagging" requirements imposed for reliability purposes, and in the interactions between the ISO and extra-regional control area operators. The Power Exchange has been pretty good about meeting its timelines, most participants pointed out, but it's been taking a long time to close out prescheduling for transmission into the ISO, which should be complete by 6 pm. In the early days of the new market, out-of-state operators worked past 9 pm to close their next-day schedules.

Though proud of the Power Exchange's ability to meet its deadlines within reason, Sladoje said he expects no time to rest on any laurels. The hour-ahead market is supposed to begin in May, with intra-day bid iterations soon to follow. More complexity and more training lie ahead for California's new market structures **[Arthur O'Donnell].**

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