

## **RESPONSE OF THE STAFF OF THE FEDERAL ENERGY REGULATORY COMMISSION TO QUESTIONS POSED AT DECEMBER 20, 2000 WESTERN GOVERNORS ASSOCIATION DENVER MEETING**

At the Western Governors Association's December 20, 2000, meeting, the five Western governors in attendance<sup>1</sup> asked Chairman Hoecker:

to investigate why Western electricity prices have been so high; who has benefitted from these high prices; and whether generating capacity has been held back; and

to prepare an immediate staff report on the implications and potential consequences of regional price caps and bilateral contracts, both of which had been described by some conference speakers as means to reduce electricity prices.<sup>2</sup>

### **Western Electricity Prices**

With the exception of California, retail suppliers in the West (indeed, nationwide) rely on a mixture of resources (ownership of generation and long and short-term forward contracts, and spot market purchases) to meet their requirements. In choosing a combination of resources, each retail supplier will consider many factors. For example, while long-term resources provide greater price certainty, they can also limit the opportunity to take advantage of lower cost options that become available in the future. And while short-term resources maximize the flexibility to consider cost saving opportunities in the future, they also create an exposure to future cost increases.<sup>3</sup> While uncertainties about weather, demand growth, resource availability, and fuel costs add to

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<sup>1</sup>Governor Geringer (WY), Governor Kitzhaber (OR), Governor Leavitt (UT), Governor Owens (CO), and Governor Locke (WA).

<sup>2</sup>However, the attending governors' action plan recognizes that increasing generation supply and energy conservation are critical.

<sup>3</sup>It is important to recognize that a decision to accept the risk of cost exposure can often be the best economic decision. For example, some retail suppliers may face extremely high peaks only during a few hours a year. The cost to install a generator to self-supply to meet this needle peak would be in the range of \$7,000 - \$8,000/MWh. Relying upon the spot market to purchase power during a few peak hours may be the cheaper alternative in this situation.

the complexity of these power procurement decisions, sophisticated and well-understood risk management tools are available to retail suppliers to limit their exposure to unacceptable uncertainties.

When California restructured its retail electricity market, its three major investor-owned utilities (IOUs) were severely constrained in their ability to manage risk. By regulatory fiat, California consumers who opted to continue service from the IOUs were required to be served solely through spot market purchases (real-time and day-ahead purchases).<sup>4</sup> Consumers were supposed to have the ability to protect themselves from spot market volatility by purchasing from competitive retail suppliers who were not restricted to spot market purchases. Unfortunately, the competitive retail market failed to materialize due, in large measure, to the low level at which the IOUs' rates were frozen by state rules. As a result, California's power needs were met almost exclusively through spot markets.

Until the spring of 2000, California's spot market prices were significantly below historical levels. However, as indicated in the Commission staff's November 1, 2000, report, Western markets were stressed by a confluence of events, including one of the hottest summers and one of the lowest water years in the record books as well as by the impact of several years of strong and unanticipated load growth.<sup>5</sup>

The Commission staff recently released a supplemental report on Northwest power markets which focuses on rapidly increasing power prices during November and December, 2000.<sup>6</sup> Staff identified the following factors as contributing to increasing spot market prices:

- ▶ November 2000 was the coldest November nationwide since 1911, with the coldest temperatures in the West and Northwest;

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<sup>4</sup>Within the last year, these prohibitions were relaxed to a limited degree, but state rules established a regulatory bias in favor of spot market purchases by maintaining advance prudence approval for spot market purchases only.

<sup>5</sup>Staff Report to the Federal Energy Regulatory Commission on Western Markets and the Causes of the Summer 2000 Price Abnormalities, November 1, 2000. This report is available on the Commission's Internet site [www.ferc.fed.us](http://www.ferc.fed.us) and can be found on the home page by clicking "Bulk Power Markets".

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- ▶ California generation was unavailable to supply normal winter exports to the Northwest;
- ▶ low water levels and precipitation limited the amount of energy available from hydro generation;
- ▶ very little generation was added in the West, particularly in Washington, Oregon and California during the last decade;
- ▶ environmental restrictions limited the full use of power resources in the region;
- ▶ scheduled outages, many delayed from prior schedules to meet summer and fall demands, removed large amounts of capacity from service;
- ▶ forced outages increased, particularly many old and inefficient generating units which were called into service at unprecedented levels during the summer and fall months; and
- ▶ natural gas prices increased dramatically, due to higher commodity prices nationwide, increased gas demand, low storage, and constraints on the delivery system. Based on a statistical analysis of available data, staff confirms that 94% of the power price variation can be explained by temperature, precipitation or stream flow levels, and the presence of emergency conditions in California (evidencing serious demand/supply imbalances).

Demand/supply imbalances will, as a matter of course, affect spot market prices and, indeed, create the price signals required to ensure an efficient market. However, as discussed above, utilities will typically rely on spot markets for only a small portion of their needs, with the precise spot market exposure determined through the power procurement decisions made by each utility. California's over-reliance on the spot market exacerbated the pressures that were already placed on Western spot prices by the severe weather and hydro conditions.

The dollars spent for spot market purchases went directly or indirectly to all sellers of power in Western North America, including the three California IOUs. The distribution of these dollars extends to public power entities such as the California Department of Water Resources, municipals including the Los Angeles Department of

Water and Power, the Bonneville Power Administration (BPA) as well as some of BPA's industrial customers who shut down their operations in order to return power to the grid, out-of-state IOUs, Canadian sellers of power, power marketers, and merchant generators within and outside of California. Moreover, many of the transactions involve a series of buyers, sellers, and brokers, which spread the dollars over an even greater number of players. Because any attempt to trace all of these dollars would be a time-consuming, if not impossible, exercise, the Commission has focused its efforts in western markets on operating procedures and fixing structural flaws in the underlying market design.

Commission staff also recently made publicly available details of an audit of generating plant outages in California, focusing on unplanned maintenance and forced outages.<sup>7</sup> Staff reviewed about 60% of the outages identified in the ISO's outage reports. The audits disclosed that the outages occurred at generating plants that were 30 to 40 years old and which were operated more heavily in 2000 than in previous years. Most of the generating facilities were out-of-service because of significant equipment failures, including tube or turbine seal leaks, turbine blade wear, valve failure, and pump or pump motor failures. Staff did not discover any evidence suggesting that the audited companies were scheduling maintenance or incurring outages in an effort to influence prices or to obtain leverage in price negotiations with the ISO. Rather, the audit indicates that the companies took whatever steps were necessary to bring the generating facilities back on-line as soon as possible by accelerating maintenance and incurring additional expenses. Also, the audit report observed a relationship between prices and outages that is consistent with prices being driven by demand, not the companies' maintenance practices.

## **Bilateral Contracts**

Bilateral contracts, or forward contracts, refer simply to wholesale power contracts negotiated in advance. Forward contracts can be long- or short-term. They can be developed as part of an RFP process, through a trading service (such as Automated Power Exchange), or simply negotiated one-on-one. While some forward contracts may offer standardized terms, they can also incorporate transaction-specific terms, for example, provisions which apportion fuel risk between buyer and seller, or which provide options for contract extensions. Forward contracts are a critical component of

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an efficient, competitive wholesale power market. They have been, and will continue to be, an important component of a diversified generation portfolio.

As noted in the Commission's December 15 order, the primary flaw in the market rules in California was the prohibition on forward contracts, and the primary remedy is the re-establishment of forward contracts. Unfortunately, many opportunities to enter into forward contracts for California loads at attractive prices have been missed, and each month's delay has exposed California consumers to ever-increasing forward power costs as the cost of electricity inputs (e.g., fuel, emission allowances) have increased. Until significant amounts of California load are covered under forward contracts, spot markets will continue to reflect the added pressure of meeting extraordinary load requirements on an hour-to-hour basis.

### **Regional Price Caps**

Many who ask for caps on spot market prices actually want spot prices to be set at levels that mimic the long-term prices that suppliers would be likely to charge if they weren't relying solely on spot markets for revenues, e.g., a levelized price which smooths out fixed cost recovery over a guaranteed number of sales hours during each year and which reflects the price of long-term fuel procurement by suppliers based on long-term fuel contracts that were available before last summer. Without this levelized revenue stream, spot prices will be higher than long-term prices when supply is tight, and lower than long-term prices when supply is plentiful. As a result, much of the debate on capping spot prices has been based on comparing spot prices to long-term prices. It is in fact the divergence of prices in these two fundamentally different markets at any given point in time which forms the essence of hedging.<sup>8</sup>

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<sup>8</sup>At any given point in time, spot prices may be higher than or lower than the price that could have been obtained for that same point in time by arranging a forward contract in advance. Forward prices will reflect expectations about spot prices and, on average, there may be little difference between spot and forward prices over an extended period of time. Also, consumers who are risk-averse will pay a premium for forward products that allocate risks to their supplier. On the other hand, locking in forward prices could reduce prices generally in the market (spot and forward), because it reduces the profitability of manipulating spot prices and increases the number of market participants that control generation output. It also can help pay for stand-by capacity that can ameliorate supply shortage events.

More importantly, artificially depressing spot prices exacerbates supply shortages. The danger, as evidenced during the last year when California operated under price caps, is that we turn a pricing problem into a reliability problem. In this regard, price caps cannot be enforced unless buyers are willing to go without electricity if supply is unavailable at the cap level. California's reliance on emergency purchases at prices above the caps imposed during last summer reflect an unwillingness by buyers to abide by the supply consequences of price caps.

In addition, price caps that protect consumers from the signals of higher spot prices do not create any incentive to reduce demand, leading to higher costs in the long run. Price caps will also deter new entry at a time when new entry is the essential long-term solution. Finally, price caps could reinforce any reluctance of California or other states to deal with long-term solutions.<sup>9</sup>

Regional price caps raise additional concerns. Many sellers in Western markets are not subject to the Commission's jurisdiction and would not be covered by such a cap. Moreover, only California operates organized spot markets which sell electricity hour-by-hour under standardized pricing algorithms that are susceptible to a uniform price cap. Elsewhere in the West, short-term sales are effected through bilateral contracts which generally cover periods longer than an hour and which often include a reservation or capacity payment. It would be impossible to design a uniform price cap for these bilateral agreements.

Regional price caps would also ignore the fact that many wholesale purchasers in the West chose to protect themselves from the volatility of spot markets by entering into medium and long-term purchase power contracts. Only California prohibited its utilities from long-term contracting. Others in the West have access to forward contracts and an unfettered choice of how to exercise that access. Consequently, others in the West rely on spot purchases for perhaps 10%-15% of their needs. Capping spot prices would unravel the economic decisions, rewarding those who did not exercise their choice to hedge and penalizing those who did. This will have a chilling effect on hedging in the future.

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<sup>9</sup>California spent the entire summer embroiled in controversy over the price cap level and lost precious time to identify and deal with the true problems facing the market in a timely manner. If California had negotiated forward contracts last summer, or even last fall, it is likely that billions of dollars would have been saved and its two largest utilities might not be facing bankruptcy today.

Finally, under the Federal Power Act, imposition of a regional price cap would require the Commission to initiate a separate proceeding under Section 206 with a new notice and comment period, providing an opportunity for all affected parties to support or oppose it. This process would be time-consuming and contentious.