

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**State Policies and Wholesale Markets Operated by ISO
New England, Inc., New York Independent System
Operator, Inc., and PJM Interconnection, L.L.C.**)
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Docket No. AD17-11-000

**PRE-TECHNICAL CONFERENCE STATEMENT OF
THAD HILL, PRESIDENT AND CEO,
CALPINE CORPORATION**

Calpine Corporation (“Calpine”) is an independent power provider with a national portfolio of 80 power plants in operation or under construction, representing approximately 26,000 megawatts (“MW”) of generating capacity. Calpine is the largest geothermal power producer and the largest operator of combined heat and power facilities in the U.S. Through our wholesale operations and retail business, we serve customers in 25 states, Canada, and Mexico.

I would like to thank the Commission staff for arranging this technical conference to address the most challenging issues facing competitive markets today. Due to various goals and pressure from incumbent generators, state policymakers have been increasing their efforts to impact the generation makeup in their respective states. While these policy goals may be well intended, they nevertheless are having a significant, negative impact on the wholesale energy markets that are subject to the Commission’s exclusive jurisdiction. If left unchecked, these state efforts threaten the continued viability of wholesale energy markets, making the discussions during the technical conference extremely relevant and timely.

Notwithstanding our significant concern about recent state efforts to intervene in the Commission’s wholesale markets, we believe that the Commission, working with the ISOs, RTOs and stakeholders, can and will find solutions to these challenging issues.

The Success of Competitive Wholesale Markets

Before addressing whether and how we can accommodate state policy goals, it is important to recall that competitive markets have been phenomenally successful and continue to function quite well. The wholesale energy and capacity markets in ISO New England (“ISO-NE”) and PJM Interconnection, L.L.C. (“PJM”) have attracted new investment when needed, in both new and existing resources, and encouraged the retirement of resources that are no longer economic. In PJM, for example, approximately 29,000 MW of new generation has cleared the capacity market since 2010.

As a result of these successful market forces (as well as historically low natural gas prices), the average 2016 locational marginal price (“LMP”) per megawatt hour at the ISO-NE Internal Hub is down approximately 40 percent since 2003, and investment is still continuing. In fact, while other components of bundled retail rates have increased over the last several years, primarily due to the success of transmission and distribution companies achieving aggressive rate base growth, the wholesale energy price component of that rate has declined. In Ohio, for example, the wholesale generation rate has decreased 17 percent, even while the transmission and distribution component of the rate has increased 27 percent, blunting the consumer benefit that would otherwise occur.

Nuclear Subsidies Are Not Warranted

We should not lose sight of the fact that many nuclear units have already had their initial capital investment returned at least once, and possibly twice. The units were paid for through stranded cost recovery during restructuring. Then, during the years when natural gas prices were very high (before the shale gas revolution) and were setting wholesale market clearing prices, the nuclear facilities again were paid handsomely. However, now that the market is challenging the economics of these units, their owners are seeking ratepayer subsidies to guarantee their continued profitability, as well as a return of their capital for a third time.

Diversity of Supply

Much has been said about our country's changing generation mix and the loss of diversity in the supply portfolio, but the facts do not support this narrative. In fact, the changes wrought by competitive markets have contributed to supply diversity. In PJM, for example, competition has resulted in the supply portfolio becoming *more diverse*, not less. According to PJM's 2016 State of the Market Report, the fuel diversity of generation, measured by the Fuel Diversity Index for Energy ("FDIe"), increased 0.9 percent over the 2015 FDIe. In 2016, coal units constituted 33.9 percent of the supply portfolio, nuclear units 34.4 percent, and natural gas 26.5 percent. As a result of competitive markets, PJM's generation mix has become more diverse.

Carbon Reduction

Proponents of nuclear subsidies claim that subsidies are necessary to meet carbon reduction goals. They overlook the fact that competitive markets have delivered dramatic environmental benefits by allowing cleaner, lower-cost technology to displace older, inefficient, dirtier resources whenever it makes economic sense. The competitive power markets have led the nation to carbon reductions – not because of governmental mandates, but because competition drives technological improvements.

Out-of-Market Subsidies Crush Competitive Markets

Out-of-market subsidies have been growing in the East. If not addressed, these subsidies will undermine the competitive wholesale markets, turning the Eastern markets into a command and control structure much like California is today – *i.e.*, the states mandate when and where new generation will be built and the technology type that will be used for that generation.

In California, essentially all investment, including investment in new conventional generation, is supported by mandate-driven long-term contracting schemes. Because the policies that bring about this substantial investment are divorced from competitive wholesale markets, it has led to the paradox that while retail rates are rising rapidly to reflect the costs of mandates, wholesale prices are so low that the economic

viability of the remaining generation that is dependent on competitive wholesale markets (generally existing conventional generation resources without long-term contracts, many of which are critical for reliability) is increasingly threatened. Addressing the revenue shortfall for existing units that are needed for reliability likely will entail additional out-of-market mechanisms.¹

Not only do out-of-market subsidies undermine competitive wholesale markets, they also frequently have harmful and unanticipated follow-on effects. For example, the overreliance on solar, encouraged by the implementation of California's renewable portfolio standard ("RPS"), is leading to the growing curtailment of renewable generation and thus is limiting its environmental benefit.² Because solar generation is concentrated in the middle of the day (when the sun is shining), the California grid cannot absorb all of it, so it must be curtailed, *i.e.*, thrown away, or wholesale prices turn negative, meaning that California effectively pays customers, including those in other states, to take this expensive power that California customers already paid for through long-term contracts. This problem is especially acute in the spring when demand for electricity is low and hydro generation is high. Given the end of California's drought and the return to normal hydro conditions, California's grid operator expects to curtail up to 8,000 MW at a time this spring due to the over-generation conditions caused in part by solar.³ In our case, we are investing capital to waste energy in the middle of the day so that we will not be forced to dispatch into a market where prices have increasingly become negative.

California is a cautionary tale – high consumer costs and layered subsidies – for what could happen in the Eastern markets without a commitment to non-discrimination and competition.

Decisive Commission Action is Needed

While state intervention is a very real threat to the future of competitive electric markets, this does not need to be the case. There is still time to act, but the time to act is now. The Commission can and must take

¹ For example, see <https://energyathaas.wordpress.com/2017/02/21/breaking-news-california-electricity-prices-are-high/>

² According to the CEC, as of October 2016, the state had 13 GW of solar PV generation, including both supply-side and behind-the-meter resources. (http://www.energy.ca.gov/renewables/tracking_progress/documents/renewable.pdf)

³ <http://www.caiso.com/Documents/CEOReport-Feb2017.pdf>

decisive action to defend its jurisdictional markets. Calpine offers the following suggestions for the Commission's consideration:

Provide Clear Guidance to the Courts When State Intervention is Being Challenged

Energy market regulation is complex. Federal court judges are unfamiliar with the industry and would benefit from the Commission sharing its views with the court. It is important that the Commission educate the courts on the scope of the Commission's jurisdiction and the harm that will be caused to competitive markets if states are permitted to interfere in the markets. The Commission should clearly explain to the courts its roles and responsibilities in overseeing these markets.

Approve Mechanisms that Prevent State Actions from Damaging Wholesale Markets

The courts are the appropriate forums to address impermissible state interference in competitive wholesale markets. However, the legal process is lengthy, and it will take the courts considerable time to work through these issues. The Commission should not wait for the courts to act, but instead, the Commission should be prepared to act quickly and decisively when viable proposals are brought before it for consideration and approval. The Commission already has pending before it a complaint to apply the PJM minimum offer price rule ("MOPR") to existing, subsidized units. Additionally, ISO-NE and PJM are currently working on other solutions to address state intervention. We understand that both intend to develop and file within the next several months proposals to address state actions. While the Commission must conduct a fair and open hearing of the issues, it is imperative that the Commission move as quickly as possible in order to put in place meaningful mechanisms that protect competitive wholesale markets from the detrimental impact of state subsidies.

Conclusion

Calpine appreciates the opportunity to participate in this very important industry process. We look forward to the technical conference and the follow up that will come from it.