

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

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

COMMENTS OF WILLIAM W. HOGANⁱ

May 2, 2017

“Subsidies are contagious. Competition in the markets could be replaced by competition to receive subsidies.” (Monitoring Analytics, 2017, p. 2)

Introduction

The Commission organized this technical conference “to discuss long-term expectations regarding the relative roles of wholesale markets and state policies in the Eastern RTOs/ISOs in shaping the quantity and composition of resources needed to cost-effectively meet future reliability and operational needs.” The context includes increasing actions by states and others to implement policies designed to affect investment and operating decisions in electricity markets. Commission policy is and has been summarized on its web page:

“National policy for many years has been, and continues to be, to foster competition in wholesale power markets. In each major energy bill over the last few decades, Congress has acted to open up the wholesale electric power market by facilitating entry of new generators to compete with traditional utilities. As the third major federal law enacted in the last 30 years to embrace wholesale competition, the Energy Policy Act of 2005 strengthened the legal framework for continuing wholesale competition as federal policy for this country. The Commission has acted quickly and strongly over the years to implement this national policy.”¹

The cornerstone of this policy has been to provide non-discrimination and open access for transmission networks. The increasing impact of Federal and state policies to support particular technologies, or specific facilities, raises questions about the viability of wholesale power markets. There are regular expressions that the Commission and competitive wholesale power markets are not up to the task.

A discussion of these concerns should separate the short term efficient markets and the longer term implications for efficient entry and exit.

¹ <https://www.ferc.gov/industries/electric/indus-act/competition.asp>.

Efficient Short-Term Markets

It took a great deal of effort to survive the many mistakes made in implementing open-access and non-discrimination in electricity markets. Now all organized wholesale markets in the United States are built around the essential elements of bid-based, security-constrained, economic dispatch with locational prices and financial transmission rights. (Hogan, 2014) The success and wide adoption of this market design reflects the basics of the underlying electricity system and the requirements of open markets. In short, this successful market design is the only way to organize a short-term electricity market that adheres to the principles of open access and non-discrimination.

As the Commission digests the results of the present conference on the growing effects of various subsidy programs, the most important thing to remember is the critical role of this fundamental market design. There is no other way to organize system operations and adhere to the Commission's mandate. Furthermore, the broad policy objectives of the green energy agenda only serve to reinforce this conclusion. (Hogan, 2010) The penetration of intermittent resources, such as solar and wind, often located far from load, increases the need for real-time coordination of dispatch across larger regions. Most notably, we see in the west the expansion of the Energy Imbalance Market (EIM) is a case in point that reinforces the vibrancy and the importance of real-time markets organized around the principles of economic dispatch.

This energy market is a work-in-progress, and the Commission has been addressing the challenges, particularly in the continuing emphasis on improving price formation to avoid the need for subsidies and out-of-market interventions. A central challenge is to improve scarcity pricing to "get the prices right." This work agenda should be accelerated to follow the principles of efficient pricing.

The challenges of increasing interventions in the market, and calls for a fundamental redirection, should not conflate the short-run operations and long-run investments. The current short-run markets are not perfect, but they are arguably improving and expanding. Above all, they are necessary.

Efficient Investment

Efficient short-term markets provide some but not all the incentives for investment and retirement decisions. Many of the growing list of subsidies for select technologies or facilities have some impact on short term operations. For example, the Federal Production Tax Credit alters the perceived marginal cost and produces negative offers and prices in the short-term market. But the main purpose of the subsidies is to change investment and retirement decisions, covering generation, load and transmission.

The emphasis on entry and competition for both investment and, by implication, retirements is appropriate. But the idealized case of pure markets is certainly beyond the Commission's reach. In his last comments about the Minimum Offer Price Rule, Commissioner Bay summarized:

"The premise of the MOPR appears to be based on an idealized vision of markets free from the influence of public policies. But such a world does not exist, and it is impossible to mitigate our way to its creation. The fact of the matter is that all energy resources receive federal subsidies, and some resources have received

subsidies for decades.” (Commissioner Norman Bay concurrence) (Federal Energy Regulatory Commission, 2017, p. 2)

The factual premise is well founded. They are myriad subsidies, many beyond the Commission’s jurisdiction. It is also true that the Commission cannot, by itself, unwind all these subsidies to create the idealized vision of pure markets.

Not all the changes creating stress in the electricity market are the result of subsidies. For instance, lower natural gas prices driven by the shale revolution are certainly disruptive, but disruptive in a way that is intended by the openness to competition and improvements in overall efficiency. Such larger market forces tend to move in the same direction as subsidies to renewables, and the effect on competitors is largely the same. But these two driving forces are fundamentally different from the perspective of the Commission’s mandate.

Likewise, the choices that customers make are not necessarily the issue. If Walmart wants to spend its own money and sign expensive long-term agreements for green power, that should not present a policy problem for the Commission. The problem comes when governments spend other people’s money, using their power to mandate, that is a public policy concern.

It is also true that these subsidies and various market interventions have unintended consequences.

“Subsidies pose a more general problem in this context. They attempt to discourage carbon-intensive activities by making other activities more attractive. One difficulty with subsidies is identifying the eligible low-carbon activities. ... A recent study by the National Academy of Sciences looked at the impact of several subsidies on GHG emissions. It found a vast difference in their effectiveness in terms of CO₂ removed per dollar of subsidy. None of the subsidies were efficient; some were horribly inefficient; and others such as the ethanol subsidy were perverse and actually increased GHG emissions. The net effect of all the subsidies taken together was effectively zero!”

So in the end, it is much more effective to penalize carbon emissions than to subsidize everything else.” (Nordhaus, 2013, p. 266)

The “competition to receive subsidies” is costly to the nation. The lack of national carbon pricing is not likely to be solved by the Commission. However, the obvious fact that the Commission cannot do everything does not indicate that the Commission cannot or should not do anything.

A Commission Framework

The technical conference will produce information of interest. In advance, three broad themes may help guide the discussion. These define a framework for the Commission.

- Preserve and extend the open-access and non-discrimination framework for electricity markets. This is the most important task, as discussed above.
- Guard against market manipulation, defined as actions to change market prices and shift burdens onto others. The Commission has a mandate to preserve the integrity of markets. Whenever possible, policy should undertake to prevent or undo the effect of market manipulation, whether by market participants or governments.

- Eliminate as much as possible all cost socialization that creates incentives for actions that shift costs onto others even without affecting market prices.

A Commission Agenda

Applying these general principles would produce an action agenda. Some of this is already underway at the Commission. Other steps would be important, sooner rather than later. The major focus is on pricing and cost allocation.

- Fix energy pricing and prevent or minimize the extent that those who make uneconomic decisions can avoid the costs of their actions. By definition, inefficient subsidies raise the overall cost in the system. In the idealized model with fully efficient pricing, inefficient actions increase costs for those creating the subsidies, but lower the aggregate costs for the rest of the market participants. The subsidy redistributes the costs and benefits for the non-participants, so not everyone is happy. But at least efficient pricing helps keep the aggregate cost increase as the responsibility of those providing the subsidy. This is necessary, albeit not sufficient, to providing good incentives.
- The cost allocation and related investment rules under Order 1000 are among the more egregious examples of cost socialization that violate basic market principles. Despite the Commission's avowed intent, the rules at present are very far away from a true beneficiary-pays system. The "Artificial Island" case is my candidate for the "straw that should break the camel's back" and reopen the whole issue of how to make transmission investment, which is under the Commission's jurisdiction, more compatible with market choices.
- Subsidized pricing of demand response under the rules of Order 745 comes as a close second in being both egregious and under the Commission's jurisdiction. The Supreme Court spoke about the jurisdiction, but the Commission could correct the pricing rules. (Hogan, 2016)
- Minimize the role of capacity markets. The Commission, and the various organized markets, have devoted too much time and attention to capacity markets. The painful exercise of the recent "pay-for-performance" initiatives that struggle to isolate the incentives from the real-time market is a case in point. Better scarcity pricing, long overdue, would help here. As Commissioner Bay said, look to ERCOT. (Commissioner Norman Bay concurrence) (Federal Energy Regulatory Commission, 2017, p. 7)
- Strengthen anti-manipulation efforts such as the MOPR. The avowed purpose of capacity markets is to correct for defects in energy pricing. If this is the case, the Commission should have no obligation to accommodate subsidized resources that, in effect, make the problem worse. The Commission can and should limit access and discriminate against those subsidized resources that are adding to the problem of inadequate pricing in energy markets.

Electricity markets are under stress. The adjustments will not be easy. Such adaptation is an integral part of the story of competition and changing economic conditions. The Commission's cannot and should not do everything. But the Commission can and should do a great deal.

References

- Federal Energy Regulatory Commission. Order granting complaint in part and denying in part re New York State Public Service Commission et al vs. New York Independent System Operator, Inc. under EL16-92. (2017). Retrieved from <https://elibrary.ferc.gov/IDMWS/common/opennat.asp?fileID=14483864>
- Hogan, W. W. (2010). Electricity Wholesale Market Design in a Low-Carbon Future. In B. Moselle, J. Padilla, & R. Schmalensee (Eds.), *Harnessing Renewable Energy in Electric Power* (pp. 113–136). Washington, DC: RFF Press. Retrieved from <http://www.amazon.com/Harnessing-Renewable-Energy-Electric-Systems/dp/1933115904>
- Hogan, W. W. (2014). Electricity Market Design and Efficient Pricing: Applications for New England and Beyond. *The Electricity Journal*, 27(7), 23–49. <http://doi.org/10.1016/j.tej.2014.07.009>
- Hogan, W. W. (2016). Demand Response: Getting the Prices Right. *Public Utilities Fortnightly*, (March), 20–23. Retrieved from <http://www.fortnightly.com/fortnightly/2016/03/demand-response-getting-prices-right>
- Monitoring Analytics. (2017). *2016 State of the Market Report for PJM* (Vol. 2). Retrieved from http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2016/2016-som-pjm-volume2.pdf
- Nordhaus, W. (2013). *The Climate Casino: Risk, Uncertainty, and Economics for a Warming World*. New Haven: Yale University Press. Retrieved from http://books.google.com/books?hl=en&lr=&id=YfzYAQAAQBAJ&oi=fnd&pg=PT7&dq=The+Climate+Casino:+Risk,+Uncertainty,+and+Economics+for+a+Warming+World&ots=g2lR0lTh_s&sig=FMS8QxAOSGvw7pfCZugeOwjoX-E

ⁱ William W. Hogan is the Raymond Plank Professor of Global Energy Policy, John F. Kennedy School of Government, Harvard University. The author is or has been a consultant on electric market reform and transmission issues for various organizations. The views presented here are not necessarily attributable to any of those mentioned, and any remaining errors are solely the responsibility of the author. (For details see www.whogan.com.)