

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Conference on Competition in Wholesale
Power Markets

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**PREPARED STATEMENT
OF
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FOR THE
STEEL MANUFACTURERS ASSOCIATION**

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The Steel Manufacturers Association appreciates the chance to speak at today's forum. SMA is the trade group that represents North American steel-makers that primarily use electric arc furnaces to melt and recast recycled scrap steel, and I wanted to take just a minute to describe that process.

Making steel with an electric furnace and recycled scrap uses about one-third the energy and a corresponding fraction of the direct carbon emissions of making steel from iron ore and coke. Of the roughly 100 million tons of steel produced in the U.S. last year, almost 60% was made using electric arc furnace technologies. That percentage grows every year as the steel industry continues to become more efficient and reduce its emissions.

We operate in globally competitive steel commodity markets. In addition to the 100 million tons of steel produced here last year, another 45 million tons were imported

from China, India, Brazil and other nations. Every two years, China alone adds enough new steel-making capacity to replace the entire U.S. steel industry.

SMA's members, as you might expect, are this country's biggest recyclers. They are by no means confined to the Rust Belt, but operate facilities in 37 states from California to Connecticut.

More importantly for today's discussion, they operate quite a number of manufacturing facilities in areas covered by the organized markets. This includes states that have attempted retail restructuring and those that have organized markets layered over traditional cost of service based retail regulation. They also operate steel mills in states that are not in the organized markets where utilities, municipals and cooperatives have retained much of their integrated utility character but purchase and sell energy under market based wholesale contracts.

Energy amounts to roughly 15% of a steel mill's total operating costs, and the cost and availability of electric power is critical to our ability to remain competitive. Steel-makers are agnostics when it comes to the politics of wholesale power markets, but have an intense interest in the cost and availability of power to our facilities.

There have been quite a few studies lately describing the failings or benefits of competitive markets. SMA has not performed such a study. I can only tell you that steel mill operators in Alabama feel a lot better about their power supplier and the rates they charge than those operating in New York or New Jersey. I can also tell you that increasing the operating costs of a steel mill by \$20/ ton due to rising electric rates makes a pivotal difference in the economic competitiveness of that mill.

In preparing for this conference, I came across a comment in a 2003 EPRI report that is entitled “Electricity Sector Framework for the Future” in which one interviewed stakeholder noted this about the developments in power markets:

In the old public service model, it was always better to be 100 megawatts oversupplied rather than one kilowatt undersupplied. Today the reverse is true, and the incentive for system improvement has been lost.

We now have enough experience with market based pricing to acknowledge the succinct accuracy of the second part of the observation in the EPRI report. In the organized markets, we are working with a system that encourages as much scarcity as regulators can tolerate. The Demand Curve, FCM and RPM, price caps, market power mitigation, and reliability must-run contracts are all testaments to those limits.

I have no doubt that grid reliability will be preserved, particularly with the implementation of mandatory and enforceable reliability standards. The challenge for the Commission going forward is to establish sustainable structures to mitigate the scarcity incentive of market participants. Two key pieces required for any strategy to have a chance of being successful for consumers are (1) greatly enhanced demand response and (2) efficient approaches to alleviating transmission congestion.

1. Demand Response

The biggest impediment to properly functioning wholesale power markets is the absence of demand response. In competitive markets, supply and demand are supposed to interact around price. That interaction drives the market and technological innovation. In the organized electric markets, that interaction hardly ever happens, and certainly not in the quantities required to establish price discipline among the suppliers. Much of this is

beyond Commission control because states determine the kind of price signals that end users receive, and retail rate structures for most end users focus more on other factors than they do on efficient price signals. The fact that most loads never receive a relevant price signal, along with the lack of any real energy storage, makes market based pricing in many areas suspect from the outset.

The Commission knows that greater demand response is needed for the power markets to function properly, has commented on it numerous times, and has approved a number of changes in the markets it oversees to recognize load as a resource that is comparable to, and is compensated like, supply. Order 890 expands the role of demand resources in the provision of ancillary services and as part of the regional transmission planning process, and SMA applauds those actions in the Order.

SMA has supported the Commission's initiatives to promote greater demand response in electric markets. As I discussed at last year's technical conference on demand response, SMA's members offer more megawatts of curtailable load than are produced by the New York and New England ISO demand response programs combined. In fact, SMA steel mills offer over 1,600 MWs of load that is curtailable on 10 minutes notice or less.

In addition to retail curtailable load programs, when they are permitted, our members participate in the ISO emergency, capacity, and economic day ahead bidding program. They also participate in ancillary service programs, such as the PJM batch loads for synchronized reserves. Significantly, SMA's members have been willing to provide these services even though steelmaking is a high volume, low margin business and the last thing a mill manager wants to do is cut production. They get paid for making steel.

The key to this is not just the willingness of a steel mill to offer demand response, but the willingness of the state to allow it, and for other RTO stakeholders to support reasonable demand response program designs that will invite load participation.

As a consumer, trying to get all the regulators and the RTO stakeholders to agree on appropriate expansion of demand response in the wholesale markets is an exhausting process. Sometimes the Commission wants to go in one direction, the states in another, and the market participants that dominate RTO governance always need to be dragged along.

Last year, PJM attributed \$650 million in system energy savings to demand response in a single week in August which the Commission's State of the Markets report notes reduced market prices by \$300 / Mwh. PJM secured this benefit for something like \$5 million in payments to participants. However, this consumer savings also represents lost revenues to generators selling in the PJM markets. That financial disincentive for other market participants, along with the RTO governance structures that heavily favor market participants over end users, explains the RTO interest in demand response programs that help avoid system emergencies but rarely otherwise affects wholesale prices. That concern is not hard to understand, but adopting policies that confines demand response to such a narrow scope does not serve the public interest either.

While everyone nominally is for efficiency and demand response, one example of what loads must contend with at an RTO should suffice. Last year, the Commission finally approved a PJM settlement that allows manufacturers that operate batch processes, like a steel mill, to participate in its synchronized reserve program. This was a very positive development. A number of steel mills provide that service elsewhere and are

perfectly capable of providing the service, but they had been excluded from the program unnecessarily prior to the program change.

The problem is, it took more than a year and a half to get there, PJM took 8 months to design a program that excluded these loads, and the batch load rules were developed only after the Commission forced PJM to include these loads in the spinning reserve program.

By offering the ability to chop 50 to 120 MWs of load by hitting a single breaker, with no ramp-up as generators require, and no incremental emissions, curtailable EAF loads are in many respects perfect peakers, especially for spinning reserve, voltage support and related system reliability reasons.

In fact, for years previously, several of the PJM members that have steel customers offered retail interruptible service tariffs that took advantage of an EAF's short notice operational flexibility to help preserve grid integrity in an emergency. AEP, for example, used to offer an "IRP-Operating Reserve" tariff designed for an EAF. The load could be curtailed on 5 minutes' notice for no more than an hour when AEP experienced a system contingency in the form of a generator trip or major transmission line outage. In practice, other utilities, even without applicable tariff provisions, regularly have asked EAF operators to adjust production schedules to head off a potential grid emergency.

Given the utilities' experience in curtailing steel loads on short notice for voltage support and other reliability reasons in the past, why was it so hard and why did it take so long for PJM to agree to offer a comparable program at wholesale? To us, the inescapable answer is that the market participants that dominate RTO activities were reluctant to allow non-supply resources into this market.

Looking forward, the organized markets in the Northeast all face a serious challenge in meeting forecasted peak load growth. The RTOs should be doing all that they can to promote demand response and manage peak load growth. Our concern is that each layer at the state, RTO and Commission is a barrier unless they all can be persuaded to design and implement programs that align consumer financial interests with demand response objectives. Collectively, the current process has stifled innovation in retail rates and has led to very slow progress in the organized markets.

The states clearly have to take hold of the issue and adopt some real pricing reforms, particularly for the weather sensitive loads that drive electric system peaks.

The Commission has done a commendable job of opening the door on demand response. The actions taken in Order 890 are particularly important in this regard. The Commission, however, has relied too much on demand response ideas to bubble up from the RTOs. The dominance of market participants in RTO governance ensures that progress will be slow and largely confined to demand response at times of system emergencies.

To change this dynamic, RTO governance structures have to be modified to increase the voting presence of loads to match market participants. Absent that reform, the Commission and the states have to take a more aggressive role in developing demand response as a resource. At this point, we would support an expanded Commission directed demand response initiative, and the staffing to go with it. As noted earlier, we are agnostics on how it gets done, but a basic change is needed.

The collaborative discussions on energy efficiency and demand response with state regulators at the NARUC meetings have been a good idea, but are only a start. The recently announced technical conference on demand response in wholesale markets also is a good idea, but these meetings need to be translated into effective policies. Ultimately, we need regulatory initiatives to develop demand response as a resource because we cannot rely on RTOs to fully explore this resource as those organizations now operate.

2. Transmission Planning and Congestion

The lack of consistent and effective federal and state policies on regional transmission planning and expansion ranks with insufficient demand response as a serious and persistent impediment to genuinely competitive wholesale power markets. The Commission's decision in Order 890 to require congestion studies to support regional transmission planning is a significant and potentially very constructive development in this regard.

Taking this issue back in time, in 1978, Congress authorized the Commission to order transmission service ("wheeling") of electric power under Section 211 of the Federal Power Act, but required that any such order "would reasonably preserve existing competitive relationships." [P.L. 95-617, sec. 203.] This restriction pretty much precluded wheeling orders for about a decade.

Once interest in wholesale markets began to emerge, the Commission started requiring transmission access, including the obligation to make system upgrades to accommodate transmission service requests, as a condition of mergers and other

discretionary rulings. The intent was that a lack of transmission would not impede market based pricing.

One of these involved the Commission's 1992 approval of the Northeast Utilities merger with Public Service New Hampshire.¹ The Commission ordered NU to provide transmission service to all third parties, and to expand its system to accommodate all such requests. This requirement forced the question of what would happen if an expansion could not be approved because NU encountered an "immutable constraint," meaning a state or states would not approve the expansion.

At first, the Commission indicated that it would call a technical conference, including the relevant state officials, to resolve the constraint, and the Commission suggested it might reallocate transmission capacity among third parties and native load as a last resort. On rehearing the Commission reconsidered that approach and concluded that constraints were not really immutable; they really were matters of estimating the incremental cost of relieving the constraint that the Commission was prepared to address through pricing since it had no generation or transmission facility siting authority.

The point is not that it was ever feasible to eliminate all transmission constraints, but that the Commission recognized at the beginning of this process that it had to address the role of state siting decisions. That focus has been lost as the Commission has come to rely on the RTOs. As with demand response, the Commission more recently has looked to RTOs to perform regional grid planning rather than working with state rate and siting authorities. This approach has significant limitations that need fixing.

¹ *Northeast Utilities Service Company (Re: Public Service Company of New Hampshire)*, Opinion No. 364, 56 FERC p. 61,269 (1991); order on reh'g, Opinion No. 364-A, 58 FERC p. 61,078 (1992).

Each of the ISO/ RTOs now perform regional grid planning and expansion for reliability purposes. In fact, the NYISO takes pains to assert that it is not planning transmission for economic purposes lest it be accused of meddling with the competitive markets. As the market rules stand now, transmission congestion adds to the value of local generation, and relieving that congestion has the opposite effect. That does not create a lot of interest in most market participants to relieve those constraints. Also, the distinction between reliability and economic grid upgrades is a slippery one, so objections can be expected to any upgrades that will upset the existing market participants.

This leaves us not far from where we were twenty five years ago, when the Commission's wheeling authority was hamstrung by a mandate to preserve existing competitive relationships, or fifteen years ago when the Commission recognized that supportive state action on transmission expansion was central to competitive markets working. Regional grid planning at the RTOs today focuses on reliability instead of congestion for the same reason, to avoid disturbing existing competitive relationships. The forum has changed but we do not seem to be making much progress.

In contrast to the cautious approach to transmission, each of the northeast RTOs has aggressively pursued capacity pricing mechanisms to boost generation investment, even if it undermines needed transmission investment. With transmission expansion taking a back seat to energy pricing at the RTOs, it is not surprising that most states in the PJM footprint originally opposed the reliability pricing model, or that Connecticut continues to fight the Commission's capacity pricing orders while the state pursues transmission upgrades.

There is a very serious problem here. Regional transmission planning and expansion are not just about reliability upgrades. The need for a more efficient, less congested grid is the difference between a network that is sufficient for the “old” public service model discussed in the EPRI report and a network that is up to the task of accommodating a competitive market place. Apart from the relative merits of any of the RTO capacity pricing models, the Commission should re-assess the wisdom of policies that seem consistently at odds with state resource initiatives.

Order 890 takes a major step in requiring regional transmission planning to include congestion studies and encouraging greater state participation in that process. Following up on this part of the planning process needs to be a Commission priority.

At the same time, the requirements of Order 890 are not nearly enough. We encourage the Commission and staff to re-visit a 2002 National Governors’ Association task force report on “Interstate Strategies for Transmission Planning and Expansion.” This report focused on the jurisdictional tensions that commonly apply to major transmission upgrades, and argued for adopting various strategies to avoid or mitigate the impasse that often occurs. Key recommendations of the report included:

- Aggressive pursuit of low impact upgrades that allow more power and better performance from existing electric pathways, because in many areas of the country transmission rights-of-way are a region’s scarcest energy resource.
- Establish a strong state role in regional planning.
- Seek to avoid impasse among regulators

The Commission should be re-directing its transmission incentive rates policy to focus more on these recommendations and getting more performance from existing electric pathways. The Commission also should consider suspending market based pricing in highly congested areas if that policy conflicts with an approved state resource plan.

At last weeks' Power Delivery Forum, Chairman Kelliher discussed the need for the Commission to strike an appropriate balance between regulatory practices and competitive models. To strike that balance in a period of significant infrastructure expansion, the Commission must engage the states on grid planning and expansion. The RTO regional planning process certainly has a role, but it remains the wrong tool for the job. This function cannot be delegated to the RTOs having only state advisory input. The planning process must give greater weight to state resource planning decisions

In summary, the Commission must make a basic decision to integrate state regulatory and resource planning decisions into its wholesale market policies. In particular, the Commission should work closely with the states to gain their support for load participation in wholesale market demand response programs. The Commission also needs to continue to expand demand response participation in wholesale markets. It should take a dim view of any RTO policies that aim to restrict that participation, and should assess changes in RTO governance structure that are impeding this development.

Next, the Commission needs to reconcile its market pricing policies and approved state resource planning objectives in order to avoid, or at least minimize conflicting policies that are impeding needed grid modernization. This should begin with the regional planning and congestion studies required by Order 890, extend to re-directing its transmission incentive rates policies, and move to the recommendations outlined in the National Governors Association report.

I look forward to any questions you may have. Thank you.