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"Powering America: Examining the State of the Electric Industry through Market Participant Perspectives"

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Introduction

Mr. Chairman, Members of the Subcommittee, I appreciate the opportunity to testify today and offer my perspective on competitive wholesale power markets and the challenges facing those markets. I applaud the Subcommittee for its attention to this subject. I offer the perspective of a former Chairman of the Federal Energy Regulatory Commission (FERC), Executive Vice President of NextEra Energy, Inc., and a former Counsel of this Committee who was responsible for electricity issues. I appear today on behalf of NextEra Energy, one of the largest electric generators in the U.S., the third largest investor in American infrastructure, behind only AT&T and Verizon, and one of the very few electric energy companies that operates in every regional power market in the country.

NextEra Energy is a leading clean energy company with consolidated revenues of approximately $16.2 billion, approximately 45,900 megawatts of generating capacity, and approximately 14,700 employees in 30 states and Canada. Headquartered in Juno Beach, Florida, NextEra Energy's principal subsidiaries are Florida Power & Light Company, which serves approximately 4.9 million customer accounts in Florida and is one of the largest rate-regulated electric utilities in the United States, and NextEra Energy Resources, LLC, which, together with its affiliated entities, is one of the nation’s largest natural gas generators and the world's largest generator of renewable energy from the wind and sun. Through its subsidiaries, NextEra Energy generates clean, emissions-free electricity from eight nuclear power units in Florida, New Hampshire, Iowa and Wisconsin.

U.S. Electricity Markets

There are two basic electricity markets in the United States, wholesale markets regulated by the Federal Energy Regulatory Commission (FERC) and retail markets subject to state jurisdiction and regulation by state public utility commissions. There are two types of wholesale power markets, organized markets administered by regional transmission organizations (RTO) and independent system operators (ISO), and bilateral markets governed by bilateral power purchase contracts between generators and utilities. Roughly two-thirds of U.S. electricity consumption occurs in the RTO and ISO markets, while bilateral markets are concentrated in the southeast and non-California West.

Of course, wholesale and retail markets interact with each other, and the legal and jurisdictional boundaries between these markets are not always clear. Because of that inter-relationship there has always been some tension between federal and state electric regulation, but my experience is that both federal and state regulators work very hard to respect each other's responsibilities in a manner that minimizes conflict.

Wholesale Competition

Wholesale markets are competitive, both in the organized RTO and ISO markets and bilateral markets. Competition policy has its roots in policy decisions made by FERC in the 1980s and 1990s, relying on authority granted to it by Congress in 1935. FERC promoted competition in wholesale power markets in order to lower rates to customers, in the belief that competitive markets provide greater efficiencies than traditional cost-based rate regulation. FERC believed competition would lower costs and shift risk from customers to competitors.

FERC encouraged competition by authorizing wholesale power sellers to charge market-based rates instead of cost-based rates. It further encouraged competition by requiring open access to the transmission grid, preventing grid owners from discriminating against competing wholesale sellers.

While wholesale markets are competitive, they are not deregulated. That is, wholesale sellers are subject to a panoply of market rules, as well as anti-manipulation rules issued under authority granted by Congress in the Energy Policy Act of 2005. In other words, wholesale markets are governed by both competition and regulation, a form of hybrid competition.

FERC understands that while competition may lower costs and deliver customer benefits, it will not always be kind to competitors. From the beginning, FERC recognized that competition will penalize sellers that are inefficient or have higher cost generation facilities. In short, competition policy does not necessarily benefit all competitors, and the exit of high cost generators is a necessary feature of competitive wholesale power markets.

State of U.S. Electricity Industry

The U.S. electricity industry is undergoing a fundamental transition. The market fundamentals driving this transition include a dramatic increase in U.S. natural gas production, the resulting sharp and sustained decline in natural gas prices, significant declines in wholesale power prices, displacement and retirement of inefficient coal, natural gas and oil-fired generation, lower than anticipated electricity demand, the addition of modern, efficient natural gas generation, and improvements in the efficiency and cost of new wind and solar generation. Contributing to these market forces are federal and state policies encouraging renewables, and stricter controls on emissions from fossil generation facilities.

Of these factors, the most important by far have been low natural gas prices in concert with the addition of highly efficient new gas generation. When combined with lower demand growth, the result is low wholesale power prices, rendering generation from older, inefficient facilities uneconomic. Importantly, the sharp decline in natural gas prices changed the longstanding relationship between coal and gas generation, making gas generation significantly lower cost than coal for the first time – that is the real game changer.

There has been sizeable retirement of inefficient and uneconomic older coal and natural gas generation facilities, some retirement of uneconomic nuclear units, and large additions of modern, efficient natural gas and renewable energy generation. As a result, the U.S. electricity supply mix has changed significantly over a relatively short period, and there is now more diversity in U.S. electricity supply than ever before. The coal share of our electricity supply mix declined from 47% in 2005 to 31% in 2016, the natural gas share rose from 22% to 33% over the same period, and wind and solar now account for 7% of our supply. Overall, the mix of U.S. electric generation facilities is younger, more efficient, more varied in size and technology, and more flexible than ever before.

These changes have been so significant to have raised concerns about whether generation retirements are being driven by market fundamentals or by federal or state policy, and whether the retirement of uneconomic generation poses a threat to electric system reliability. The evidence strongly suggests that the primary factor driving retirements has been market fundamentals, not regulatory policy, and there is no evidence to suggest the retirement of uneconomic generation poses a threat to electric reliability. Because the transition is driven by market fundamentals, it can be expected to continue.

While there are concerns in some quarters that future retirements may result in a loss of electricity supply diversity, the reality is the ongoing transition is likely to result in even greater diversity through the addition of electricity storage and distributed resources.

The retirement of inefficient and uneconomic generation is a natural aspect of a competitive market, and the exit of uncompetitive assets produces consumer benefits. Given the outlook for U.S. natural gas supply and prices and continued improvements in wind and solar efficiency and cost, the pressure for uneconomic facilities to exit may not relax.

Wholesale competition policy played a role in this transition. Lowering costs was the primary goal of competition policy and competition has helped maximize the benefits of the shale gas revolution. Competition policy also successfully shifts risk away from customers to market participants, and competitive markets facilitate deployment of new technologies.

Challenges Facing Competitive Wholesale Markets

While wholesale markets are working to drive down prices and to drive out inefficiencies, there are some who argue there is systemic "market failure" that must be corrected. Some critics who allege market failure fault competitive markets for not achieving goals these markets were never designed to meet in the first place. Markets were not designed to encourage diversity, retain uneconomic facilities, or achieve environmental goals – they were designed to result in an efficient outcome for consumers – they were designed to result in lower power costs and shift risks from consumers to competitors.

Though competitive markets are working, they face a number of challenges. The organized RTO and ISO markets are governed by complex market rules, and critics focus on that complexity, but complexity alone is not a sign of market failure. These markets are dynamic, so

RTOs and ISOs must continuously consider the need for market rule improvements intended to produce the correct outcomes, an aspect of their duty to protect market integrity. To the same end, FERC directs RTOs and ISOs to reform their rules from time to time.

There is always some tension between federal and state electric regulation. States have long had responsibility for integrated resource planning of electric generation in their states, particularly in states with vertically integrated utilities. As a general matter, FERC respects state policy decisions when they pose little harm to wholesale markets. But proposals by some states to prevent the exit of uneconomic generation not needed for electric reliability threaten the integrity of wholesale markets. States have different rationales for these programs.

To be clear, the fundamental "market failure" addressed by these proposals is low wholesale power prices, but low prices by themselves cannot be considered market failure if driven by market fundamentals, as they appear to be. The "solution" to the "problem" of low prices is to raise prices charged by a select few, which would tend to suppress prices for everyone else, discouraging the entry of new, more efficient economic generation.

In the end, these types of proposals shift risk away from generators back to customers, contrary to a primary goal of competition policy. In effect, the owners of uneconomic generation facilities get a safe haven from the risk of competitive markets.

As you can imagine, these state programs and proposals are controversial. They have been challenged in the courts, and some have been preempted by federal law or otherwise found unlawful. Currently, there are legal challenges pending in federal and state courts. Because of the tendency of these programs to suppress wholesale power prices, FERC is presented with difficult decisions on how to balance respect for state policy choices with its

duty to protect market integrity and assure just and reasonable prices. It remains to be seen how FERC will balance these important interests.

Conclusion

In conclusion, I believe our electricity markets are working well and are workably competitive. U.S. electricity markets are undergoing a fundamental transition driven primarily by economics, the result of low cost natural gas produced by the shale gas revolution combined with increased energy efficiency, lower demand growth, and low wholesale power prices. The transition has been marked by an increase in new, more efficient natural gas generation, a significant increase in ever-lower cost wind and solar generation, and the retirement of inefficient, uneconomic generation. This transition is likely to continue, producing an increasingly diverse and more reliable electricity supply. We should keep the consumer in mind. While painful for many competitors, this transition has delivered significant benefits to the consumers in the form of lower prices. We have to accept the fact that, while low wholesale prices can be painful for the owners of uneconomic generation facilities, they are ultimately good for consumers and great for America.