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FEDERAL POWER ACT AND ORGANIZED ELECTRICITY MARKETS

INTRODUCTION

Organized electricity markets that allow competition have evolved considerably since their inception in the late 1990s. A host of policy, market and technological developments have altered their outcomes and performance. Such changes make it both timely and important to review the structure and performance of these markets in an evolving policy and economic environment.

In its June 10, 2016 letter to Federal Energy Regulatory Commission (FERC) Chairman Norman Bay about the state of organized, competitive electricity markets, the House Energy and Commerce Committee asked whether such markets are equipped to adapt to technological advances, new market forces, shifts in consumer expectations and changes in the regulatory and policy landscape. The committee noted these shifts could result in litigation over the distinction between federal (wholesale) and state (retail) jurisdiction, citing two recent court decisions over the reach of the Federal Power Act. This marked the beginning of the committee's long-term

review of electricity markets and the suitability of the Federal Power Act in an evolving electricity sector.

THE ROAD TO ELECTRICITY COMPETITION

Energy regulation began at the state and local levels in the late 19th century. Local authorities granted private companies monopoly franchises in exchange for regulating their rates and services. These regulated monopoly utilities owned all aspects of electricity production, transfer and delivery (generation, transmission and distribution). State legislatures later pre-empted local regulation by creating state public utility commissions (PUCs) to regulate rates based on the cost to serve customers.

In 1920, Congress established the Federal Power Commission (FPC) through what is now known as the Federal Power Act (FPA). The law was intended to better coordinate hydroelectric development by granting the FPC authority to establish hydroelectric projects, which previously fell to the states. With this exception, most energy resources remained regulated at the state and local levels until the New Deal era.

The New Deal marked the beginning of contemporary federal energy regulation. The FPA amendments of 1935 established a bipartisan five-member commission to run the FPC as an independent regulatory agency. It also gave the commission authority to regulate wholesale (sales for resale) electricity rates in interstate commerce, as well as oversight of utilities' interconnections that increasingly tied transmission systems together across state boundaries. Interconnection enabled utilities to sell power to other utilities bilaterally, at rates determined by the FPC on a cost-of-service basis.

In 1977, the FPC was renamed the Federal Energy Regulatory Commission (FERC) and placed within the newly created Department of Energy.¹ Congress took the first step toward electricity competition by passing the Public Utility Regulatory Policy Act (PURPA) of 1978. The law helped create a market for some forms of non-utility electricity producers by requiring utilities to buy power from lower-cost independent producers. This also gave rise to the broader concept of generation independent of regulated monopolies. Sometimes inaptly described as "deregulation," this "restructuring" allowed generators and transmission owners to compete in an open wholesale marketplace. Restructuring limited the monopoly-utility model to distribution services, leaving customers to choose their electricity supplier. It also fostered a competitive market to determine wholesale rates in lieu of cost-of-service regulation.

About half the states initiated restructuring in the 1990s; Texas, Illinois, Ohio and most mid-Atlantic and Northeast states retained it. While the decision to restructure rests

with states, it calls for reliance on competitive wholesale markets under FERC authority.² Competition requires generators to have open access to the transmission system, but regulated utilities initially could restrict other entities from using their transmission lines. The Energy Policy Act of 1992 amended the FPA to give FERC authority to grant transmission access on request. In 1996, FERC issued the “open access” rule (Order No. 888), which required transmission owners to provide nondiscriminatory transmission access. This encouraged the development of centrally organized electricity markets, where independent system operators (ISOs) would operate the transmission system to facilitate open-access competition.

ORGANIZED WHOLESALE MARKETS

In 1999, FERC issued Order No. 2000, which encouraged utilities to join an ISO or regional transmission organization (RTO).³ RTO/ISOs are independent, nonprofit organizations responsible for wholesale grid reliability and transmission planning and operation. States and industry participants have voluntarily formed seven jurisdictional RTO/ISOs, six of which are FERC-jurisdictional.⁴ All restructured states joined an RTO/ISO, as did many regulated-monopoly utilities. Today, RTO/ISOs manage more than two-thirds of the nation’s electricity volume and they continue to expand.

RTO/ISOs use centrally operated, “organized” spot markets to balance supply and demand in real time.⁵ They also send long-term price signals to balance the supply and demand of generation and transmission-infrastructure investment. Some RTO/ISOs use capacity markets to “patch up” deficiencies in the spot markets, which would ensure adequate resources exist to meet infrastructure-planning needs.” Markets enable grid operations and infrastructure investment to respond nimbly to changes in market fundamentals, such as declining natural-gas prices or shifts in electricity demand.

RTO/ISO markets are technology-neutral and designed to select supply and demand resources that provide grid reliability at the lowest cost. This has sometimes led to the selection of politically unpopular resources, especially in restructured states, where markets have replaced state-approval processes as the means to decide infrastructure investment. Federal and state policymakers have enacted a variety of subsidies and mandates for politically preferred technologies in ways that often conflict with the efficient and reliable functioning of organized markets.

State-imposed decisions to build new power plants or retain unprofitable plants can distort organized markets. Some of these have led to jurisdictional disputes. For example, the U.S. Supreme Court’s April 2016 ruling in *Hughes v. Talen Energy Marketing LLC* found the Federal Power Act pre-empted a

Maryland subsidy for a new power plant that intruded on FERC’s authority over interstate wholesale rates.

The performance of organized electricity markets depends on the quality of their design. The physical challenges of maintaining electric supply-demand balance necessitate complex market mechanisms that require FERC approval. Initial market designs and rules were scripted around prevailing technologies, which has required adjustments as those technologies evolve. Proposed changes typically come from FERC, the RTO/ISOs, individual RTO/ISO stakeholders or independent market monitors.⁶

Numerous market-rule changes implemented this decade have aimed to improve the efficiency and reliability of the organized markets. Some of these come through one-size-fits-all FERC rulemakings, such as compensation for demand-response resources.⁷ Many occur on an RTO/ISO-specific basis to account for regional differences. For example, RTO/ISOs have pursued differing market-design approaches to integrate variable renewable resources, which depends in part on the expected market penetration of wind and solar generation in each region. The increase in distributed-energy resources (DERs) presents unique operational and market-integration challenges for RTO/ISOs. The reliable and efficient integration of DERs in organized markets will require cooperative federalism, as FERC and the states have jurisdiction over different aspects of DERs.

ISSUES

The following issues may be examined in the House Energy and Commerce Committee’s review of the state of organized electricity markets:

- The performance of organized electricity markets as gauged by market efficiency and reliability;
- How non-FERC jurisdictional federal and state actions affect the performance of organized markets;
- The ability of organized markets to promote innovation and efficiently adapt to new technologies, market forces, policies and shifts in consumer expectations; and,
- Whether the Federal Power Act is well-suited for the electricity system of the future.

CONTACT

The R Street Institute will provide further educational materials and perspective pieces on issues raised by the committee. If you have questions regarding these subjects, please contact Electricity Policy Manager Devin Hartman or Outreach Director Lori Sanders at the R Street Institute at 202-525-5717.

ENDNOTES

1. This was the result of the Department of Energy Organization Act of 1977.
2. The exceptions to FERC wholesale-market authority are Hawaii, Alaska and most of Texas, whose transmission systems are not connected with other states.
3. RTOs perform the same core functions as an ISO.
4. These include the California ISO (CAISO); the Southwest Power Pool (SPP); the Midcontinent ISO (MISO); New York ISO (NYISO); New England ISO (ISO-NE); and the PJM Interconnection (PJM). The Electric Reliability Council of Texas (ERCOT) is not FERC jurisdictional.
5. These are known as energy and ancillary service markets.
6. RTO/ISOs are membership-based organizations. FERC usually prefers RTO/ISO stakeholder processes to develop market-rule changes.
7. This refers to Order 745, which standardized energy-market compensation for demand-response (DR) resources. DR is the reduction in electricity usage by customers from their normal consumption patterns.