

AMERICAN ANTITRUST INSTITUTE

**Annual Energy
Roundtable**

ELECTRIC TRANSMISSION: THE EVOLVING LANDSCAPE

Tuesday, April 23, 2013

National Rural Electric Cooperative Association
4301 Wilson Blvd. Arlington, Virginia

SUMMARY OF PROCEEDINGS

I. Introduction

The American Antitrust Institute (AAI) held its 13th annual Energy Roundtable on April 23, 2013 at the National Rural Electric Cooperative Association (NRECA) in Arlington, Virginia. The AAI greatly appreciates the generous assistance and sponsorship of both NRECA and the American Public Power Association (APPA) in making the Roundtable possible. The AAI's Annual Energy Roundtable seeks to bring together various stakeholders and perspectives to discuss current competition policy issues in electricity markets, particularly the intersection between antitrust and regulation. This year's Roundtable focused on transmission planning, access, traditional and emerging transmission ownership models, and the competitive implications of transmission consolidation. More than 40 participants from the academic, advocacy, consulting, government, industry, and trade association sectors participated in the Roundtable. AAI Vice President, Diana Moss, developed the agenda and presided over the discussion. The proceedings themselves were off the record and not transcribed. This report briefly summarizes the presentations. It also encapsulates the accompanying discussion, without attribution to any individual participant or group of participants.

The following speakers made presentations:

1. David Mohre, Executive Director, Energy and Power Division, National Rural Electric Cooperative Association
2. Jennifer Vosburg, President, Louisiana Generating LLC, Senior Vice President for the Gulf Coast Region, NRG Energy, Inc.
3. Mason Emmett, Deputy Director of the Office of Energy Policy and Innovation, Federal Energy Regulatory Commission

4. Sue N. Kelly, Senior Vice President of Policy Analysis and General Counsel, American Public Power Association
5. Sharon K. Segner, Assistant Vice President, LS Power Development, LLC
6. Jade Eaton, Attorney, Transportation, Energy and Agriculture Section, U.S. Department of Justice Antitrust Division
7. Paul M. Sotkiewicz, Chief Economist, Markets, PJM Interconnection
8. **Johannes (Hannes) Pfeifenberger**, Principal, The Brattle Group

II. Year in Review

David Mohre opened the Roundtable with a recap of the year's major events in electricity and energy and a forecast of coming issues. Coal-fired generation is likely to experience a "death from a thousand cuts" in coming years. Twenty-five percent of total coal capacity will be shut down in the near future, and remaining facilities will require costly environmental retrofits to comply with new regulations. Low natural gas prices, arising from the boom in shale gas production, have encouraged the shift from coal to gas. As a result, the percentage of power generated by coal has declined from 51% to 38% between 1992 and 2012. It remains to be seen whether these low prices will persist. The low price of natural gas may result in a manufacturing renaissance in the U.S., gas exports, or some combination of both. In addition to the decline in natural gas prices, technological advances have made natural gas combined cycle generation the technology of choice for dispatchable resources. Load growth is expected to remain low due to weak economic growth and also efficiency and productivity gains. Because of the weaker correlation today between growth in GDP and electricity demand, load is not likely to increase significantly even when the economy recovers.

In the regulatory arena, 29 states, the District of Columbia, and two territories have renewable portfolio standards. Some states are considering efficiency standards as well. If Congress becomes a functioning body again, the federal government could enact policies like carbon taxes, cap-and-trade, and a national renewable portfolio standard. FERC, however, is not at present restricted by the political impasse. It is reviewing Order 1000 compliance filings and recently issued a policy statement on third party transmission. The latter policy carries competition risks because merchant investors may not have to comply with formal regional planning and open access requirements required of incumbent transmission owners. FERC is also active on the enforcement front with completed or pending actions against Barclays, Constellation, and JP Morgan.

III. Highlights of the Morning Presentations

A. Morning Panel: Recent Transmission Developments and Their Implications for Wholesale Competition

Jennifer Vosburg examined the developments in transmission from the perspective of the nation's largest Independent Power Producer (IPP). Transmission has not changed significantly, even as generation markets have been opened to competition over the past several decades. Although FERC issued Orders 888 in 1996 and 890 in 2007, IPPs still allege discriminatory access to the grid and

believe that it is a barrier to competitive wholesale markets. In the Entergy footprint, a significant fraction of the natural gas combined cycle capacity constructed by IPPs were not profitable, allegedly because of discrimination in transmission access. Subsequently, much of this capacity was sold at “fire sale” prices to Entergy. Vosburg noted that ITC’s acquisition of Entergy’s transmission grid in the four-state footprint on the Gulf Coast should be treated with caution. It is unclear what authority the Midwest Independent System Operator (MISO) and FERC will be able to assert over ITC.

Ms. Vosburg went on to discuss renewable resources, noting that the regions of the country with the greatest renewable potential are generally far from load centers. Third party transmission development can help integrate these remotely located renewable resources. The danger is that one monopoly may be replaced by another monopoly, except with less regulation. In the coming decades, microgrids will gain importance with the development of distributed generation like solar. The key for regulators and stakeholders is to focus on the next twenty years rather than dwell on the past twenty years.

Mason Emmett discussed the scope and status of the implementation of Order 1000. Merchant and cost-based participant funded transmission projects are not covered by Order 1000. This was a conscious policy choice on the part of FERC. The agency has begun reviewing compliance filings. Most submissions have merely formalized existing regional planning bodies. The right of first refusal (ROFR) for incumbent transmission owners has been the biggest issue in RTO regions. Emmett noted that given the resources involved, and the decades-long lifespan of transmission assets, getting the details right is critical. For merchant and cost-based participant funded transmission lines, anchor tenants are permitted to control up to 50% of total capacity initially. Merchant project developers can allocate 100% to a single customer after an open solicitation process. Very few merchant projects have been developed without these types of long-term capacity commitments. FERC has mandated open solicitation, accompanied by back-end reporting showing that the process was open and fair.

Sue Kelly stressed that non-discriminatory grid access and development is a necessary, though not sufficient, condition for competitive markets. Regional transmission planning is desirable, but Order 1000 has serious shortcomings. It does not eliminate ROFR for incumbent transmission owners and does not incorporate FERC’s statutory obligation to support the transmission needs of load-serving entities. FERC’s recent policy statement on merchant and cost-based participant funded projects exempts these lines from Order 1000’s mandates. Given the “one-and-done” nature of transmission planning and siting, Kelly stressed that regional planning is essential to expand in the grid in a fashion that benefits consumers. And, for merchant projects, FERC’s recent policy statement troublingly replaces an open season with an open solicitation and post hoc reporting requirement. Merchant developers have to demonstrate that the open solicitation process was not biased, but only *after* they have allocated capacity. This could erode open access and undermine the nearly thirty-year-old protection accorded to transmission customers. Moreover, the reporting requirement could sacrifice the confidentiality of participants’ business information. In diluting its long-standing

commitment to open access, FERC is promoting the interests of transmission developers over those of consumers.

B. Morning Discussion

The morning discussion centered on Order 1000, the wisdom of FERC's approach to merchant transmission, the power of incumbents to frustrate grid expansion, and the benefits of transmission investment.

- Order 1000: One participant suggested that FERC could now be in a key position to “pick winners and losers” in the industry. Order 1000 does not resolve challenges over project selection and cost allocation. Disputes will be easier to decide in RTO regions, which handle 75% of the load in the United States. Yet, critical terms like “cost efficient” are not defined. One participant noted that regional transmission planning and development should have happened before the creation of competitive wholesale markets, not twenty-five years after the fact.
- FERC's treatment of merchant projects: One participant commented that the 100% allocation of capacity aligns the interests of the transmission customer and developer. A generator with market power could pay to prevent competing generators from accessing a line, for example. Another participant said that imposing centralized regulation on independent transmission would be fatal to the merchant model. Notwithstanding all the debate about merchant transmission, very few merchant projects have been built or are even on the drawing board. Some participants contended that merchants will be permitted to do an end-run around open access and regional planning, which would create the risk of both discriminatory access and undersized transmission lines. Another participant responded that the threat of undersized lines is more apparent than real.
- Power of incumbents: Several participants discussed the conflicting incentives of vertically integrated utilities. On the one hand, transmission investment offers a guaranteed, and often generous, rate of return. On the other hand, new transmission capacity can eliminate load pockets and reduce profits on generators that currently possess market power. Merchant transmission projects, in theory, could compensate for the unwillingness of incumbents to upgrade the grid.
- Benefits of transmission: The distinction between reliability- and economics-driven projects was discussed at length. While projects required by reliability must be built, economic projects do not carry a similar obligation. One participant noted that, in addition, that reliability projects can socialize their costs whereas economic projects recover their costs from beneficiaries. This favors reliability projects. Another participant said that the option value from transmission capacity benefits all stakeholders over the long term. For example, inadequate transmission capacity prevented utilities in the Southeast from purchasing power from the generation-rich Midwest during recent hot summers.

IV. Luncheon Address

Sharon Segner's luncheon address focused on LS Power's involvement in transmission and the Order 1000 compliance process. LS Power is involved in both generation and transmission development. It owns a 250 mile long regulated line in Texas and is developing a 250-mile long merchant line in Nevada. Because the details will determine the success of its transmission business, LS Power is closely following the implementation of Order 1000 across the country.

Segner said she anticipated a series of filings for each region. The first round has just concluded with FERC offering feedback. She noted that the next 120 days will see important developments. It is essential that the regions apply the "cost-effective" criteria in selecting projects. Initial filings have offered little clarity on how regions will determine cost effectiveness. The concern is that cost effectiveness will amount to a "beauty contest" rather than a more robust evaluation of competing projects. A careful cost-effectiveness determination could allow new entrants to thrive.

Segner explained the FERC criticisms of the Order 1000 compliance filings and shared her views on potential improvements. FERC held that the California Independent System Operator (CAISO) and MISO need to go further in justifying that their processes are not unduly discriminatory. In MISO, the 30% weighting of cost in its selection formula was found to be insufficient. LS Power has called for the removal of ROFRs in regional planning policies and a robust qualification process for bidders based on financial and technical ability. It believes that costs should receive the predominant weighting in a selection formula but recognizes that FERC won't accept a 100% weighting for cost. LS Power has filed a protest in nearly every compliance proceeding to share its views. A company like LS Power can succeed if the rules are right because it is willing to accept lower rates of return and focus on cost reduction in general.

V. Highlights of the Afternoon Presentations

A. Antitrust Issues Involving Transmission

Jade Eaton examined the question of whether competition actually exists in the transmission sector. In the 1980s, regulators applied the contract path model and viewed parallel lines as competitors. In reality, electrons flow where they want, and electricity does not conform to the point-to-point paradigm of other infrastructure industries like oil and gas pipelines. Lines must have identical shift factors – how changes in output and demand affect flows on the larger system – to be substitutes. In as highly interconnected system two parallel lines are very unlikely to have identical shift factors. In the very short run, competition is therefore not very important. Moreover, RTO control and tariffs reduce the theoretical need for competition between transmission lines. In the long run, however, competition may be important. Developers compete to obtain the right to build the next line – competition for the monopoly. This is an important area to study. The competitive process must be safeguarded for future transmission development to ensure that new entrants and new technology can compete on the merits.

Paul Sotkiewicz analyzed the role of competition in transmission operation and development. In general, horizontal market power is not a major worry. Dominant stakeholders may, however, wield disproportionate influence in an RTO – a “softer risk” that is not easy to capture in models. On the issue of vertical market power, Orders 888, 890, and 2000 and the creation of RTOs have remedied this problem in large measure. Horizontal competition is likely to be significant in the construction of new transmission lines. Dr. Sotkiewicz noted that competition-for-the-monopoly is well-established in many countries in Latin America but relatively new in the United States. A company like LS Power may have competitive advantages over incumbents in this process. In Chile, however, some companies have submitted “lowball” bids on projects and realized afterward that it was not profitable to build the line. A solution to this risk is to have companies bid on return on equity. Economic projects can be built by non-incumbents in PJM. The beneficiary pays principle, however, and that frustrates the development of economic-driven projects. Instead, developers wait until reliability rules trigger mandatory construction of the project, which allows them to socialize costs across a broader geographic footprint.

Johannes (Hannes) Pfeifenberger offered a skeptical view of merchant transmission and discussed market power in transmission. He suggested that transmission is a public good that generates widely dispersed benefits. For a transmission developer building an AC line, it is hard to capture these benefits, which explains the dearth of merchant development. The comparatively few successful merchant developers have either relied on cost-of-service rates or built DC lines that allow for the exploitation of sustained price differences between the connected nodes. Independent transmission comes in three primary forms. First, some companies are focused on individual merchant projects. Second, other companies own and operate existing regulated transmission systems. Third, some incumbents have sought to develop projects outside their geographic footprint. Short-run horizontal and vertical market power have been addressed successfully through regulation and RTOs. Incumbents, however, still have the ability to frustrate beneficial transmission development. Vertically integrated utilities often have the incentive to block new transmission projects because they threaten to reduce profits on their generation assets. With the ROFRs that exist in many RTOs, incumbents often also have the ability to thwart transmission development.

B. Afternoon Discussion

The afternoon discussion examined competition between RTOs and the distinction between reliability and economic transmission projects

- Competition between RTOs: Some participants noted that utilities that play RTOs off against each other for rent-seeking reasons. They feared a “race to the bottom” in terms of RTO practices and rules as RTOs compete to attract members. This type of competition benefits utilities but hurts consumers. With this “RTO hopping,” load-serving entities may be put in the awkward position of being in a different RTO than nearby generators. Another participant noted that this is not a traditional horizontal market power problem. Others offered a more positive take on inter-RTO competition and cited, for example, how Duke and First Energy moved from MISO to PJM to participant in the latter’s capacity markets.

- Reliability versus economic transmission projects: One participant argued that reliability projects are based on objective engineering criteria and benefit all parties whereas economic projects create winners and losers. State public utility commissions will grant siting permits for reliability projects but generally not for economic projects. A criticism of MISO's "multi-value projects" was that it considers economics before reliability, which does not make intuitive sense. Several participants noted that the distinction is artificial and a recipe for underinvestment. Typically, a reliability project changes the competitive landscape among generators and offers benefits beyond just enhanced reliability. Many participants agreed that vertically integrated utilities have an incentive to constrain grid upgrades, thereby preserving the status quo that supports supracompetitive profits for their generators.