



UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Technical Conference on Environmental Regulations and Electric Reliability, Wholesale Electricity Markets, and Energy Infrastructure Docket No. AD15-4-000

**PRELIMINARY COMMENTS OF WIRES
FOR THE FEBRUARY 19 TECHNICAL CONFERENCE IN WASHINGTON**

For purposes of this proceeding, WIRES¹ neither supports nor opposes the Clean Power Plan (“CPP”), an carbon reduction program proposed by the Environmental Protection Agency (“EPA”) under Section 111(d) of the Clean Air Act (“CAA”). In our estimation, today’s technical conference is primarily about whether the CPP will work as proposed in light of technical aspects of the electric system and whether the Federal Energy Regulatory Commission (“Commission”) can constructively assist CPP implementation to protect the reliability and economic efficiency of power markets, ensure the efficacy of Commission policies, and help emphasize the importance of electric transmission investment to the CPP.

WIRES contends that the Commission can provide constructive assistance that will help states and the industry implement this unprecedented process, *even though the ultimate outcome of the Administration’s low-carbon initiatives do not ultimately lie within the Commission’s jurisdiction*. The Commission’s interests under both the Federal Power Act and the Federal Power Act are affected by the CPP. It is in these areas that we focus our brief comments.

¹ WIRES is an international non-profit association of investor-, member-, and publicly-owned electric transmission providers, renewable resource developers, regional transmission organizations, and economic, technology, and policy consultants whose sole mission is promotion of investment in the high-voltage electric transmission. A description of its membership, its principles, and its activities are available at www.wiresgroup.com. WIRES educational efforts include several studies of the operational, environmental, and economic benefits of transmission and the regulatory barriers to development as well as public briefings about transmission operations and policies. A forthcoming study conducted by The Brattle Group will further elucidate the costs and risks of not making transmission investment sufficient to obtain the flexibility and other benefits of a stronger transmission grid. WIRES submitted to EPA more extensive comments on the Clean Power Plan, which we attach here.

WIRES believes that planning for adequate electric transmission under the auspices and guidance of Order No. 1000² and the growth and integration of the bulk power markets that figure so prominently in the Commission's agenda are also important to the CPP. Indeed, well-planned transmission may eliminate some of the risk and cost of the CPP. However, without fully exploring electric transmission expansion and upgrades as part of the CPP Building Blocks that state implementation plans ("SIPs") will employ, the EPA assumes that planners will provide sufficient transmission capacity to ensure reliable service and the feasibility of Block 2 and 3, because they always have, regardless of when and where high carbon emitting plants are retired or replaced by lower carbon alternatives.³ Despite the probability that the CPP will require new transmission additions, the CPP does not encourage states to consider transmission in their various implementation plans or to consider that transmission planning oftentimes is a multi-state enterprise, under both normal and extraordinary circumstances. Finally, the achievement of carbon targets presumes that transmission projects can be planned, authorized and permitted, sited, and constructed within the confines of the EPA's expectations.

A great deal of uncertainty will be created by the CPP and the potentially diverse outcomes the CPP may produce. Transmission planners do not know with certainty the future state for which they are planning. The uncertainty that they and policy makers experience flows from not knowing with confidence the schedule under which fossil plants will be retired or which additional non-fossil resources will be marshalled to sustain reliable service. While often taken as a reason not to consider transmission solutions or strategies that would strengthen regional and interregional systems, uncertainty is in reality precisely why transmission investment now is so important. A strong grid can help ensure that the transformative impacts of the CPP on the generation mix and system flows do not undermine electric reliability while also ensuring that the CPP itself is achievable as a practical matter. In other words, transmission provides the optionality and flexibility to accommodate the various possible end-states that the rule will drive and about which we now can only speculate. This entails thinking strategically about transmission.

This comment provides some basic responses to the questions posed by the Commission in its January 6, 2015 Supplemental Notice:

² *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, FERC Stats. & Regs. ¶ 31,323, at PP 484 (2011), order on reh'g, Order No. 1000-A, 139 FERC ¶ 61,132, order on reh'g, Order No. 1000-B, 141 FERC ¶ 61,044 (2012), *aff'd sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. Aug. 15, 2014) ("Order No. 1000").

³ "The third consideration supporting a conclusion regarding the adequacy of the infrastructure is that pipeline and transmission planners have repeatedly demonstrated the ability to methodically relieve bottlenecks and expand capacity." 79 *Fed. Reg.* at 34864.

1. What mechanisms can be used to identify potential infrastructure needs and ensure that adequate infrastructure will be built in sufficient time to comply with the proposed rule? Are additional mechanisms needed?

Any fundamental improvements to the CPP itself will have to be the EPA's responsibility. Like other EPA programs, the CPP's implementation process relies on individual state implementation. However, its proposal also acknowledges the importance of the interconnected nature of the electric system and, to the extent that compliance necessitates the development of transmission, the regional planning and cost allocation mechanisms devised under Order No. 1000 in anticipation of realignments in the generation and transmission sectors may prove useful to states, individually or in regional collaboration. The Commission's regional and interregional processes for planning which transmission projects should be constructed and how the costs should be allocated and recovered, based on the benefits that projects provide, including those that incorporate the results of state integrated resource planning, are particularly suited to the challenges of implementing the CPP. Given the demonstrable need for new and upgraded transmission in most regions of the country and the widely anticipated switch to natural gas generation, the CPP's ambitious agenda cannot work without ensuring that changes in the type and location of generation is also accompanied with the necessary delivery capability. To our knowledge, only initial steps have been taken to study the specific impacts of the CPP on the grid. The Commission may find that its policies require it to convene regional stakeholders to systematically explore those potential impacts.

One of the major objectives of Order No. 1000 is to ensure that utilities are able to meet public policy requirements in a cost-effective manner, so that low-cost but location-constrained renewable energy resources are able to access markets and thereby contribute to meeting renewable portfolio standards. Since the goals of Building Block 3 are based on the amount of in-state resources, it is not clear how any imports of renewable energy from outside the state or region will be counted toward individual state goals. The EPA explicitly recognized that states may develop state-only compliance plans or collaborate with other states to develop multi-state plans, which suggests that a regional or interregional consideration of transmission needs may be required. More to the point, Order No. 1000 purposely incorporated planning for public policy objectives into its thinking and there is no greater, more impactful public policy currently challenging planners than the CPP itself. In addition, the location of, availability of, and operational characteristics of the new natural gas-fired generation that will replace higher-emitting facilities and/or augment variable sources of generation that the CPP also encourages tends to create another set of uncertainties.

As this Commission recognized in reviewing the record submitted in the Order No. 1000 proceeding, "No commenter has contested the need for additional transmission." Since the lengthy downturn in investment since 1980, the industry has responded with increased transmission investment. The tangible evidence of

grid modernization is growing and can be seen in the Texas Competitive Renewable Energy Zone projects (“CREZ”), the Multi-value Project portfolio in the Midcontinent ISO, the California Renewable Energy Transmission Initiative (“RETI”), the 20-year Integrated Transmission Plan Assessment in the Southwest Power Pool, and numerous incremental grid expansions and improvements. That should be just the beginning. Even though the planning, siting, and cost allocation impediments to transmission persist in varying degrees, there undoubtedly exists a need to overcome those impediments because there is a need for sustained investment to address a variety of operational and policy challenges. However, the CPP is an extraordinary challenge that the Commission could not have anticipated but it is one that makes transmission investment all the more important.

WIRES submits that, in Order No. 1000, the Commission has already helped establish mechanisms that the EPA, and the states it charges with implementing the CPP, can use to address the need for transmission. However, it will be important for the states within Regional Transmission Organizations (“RTOs”) and in non-RTO markets to coordinate within the emerging regional and inter-regional planning processes and even to utilize those processes to convene stakeholders to help develop the SIPs in response to the CPP. We acknowledge that the methods of responding to the CPP may vary, depending on the preferences of the states. Accommodating state and regional needs and characteristics is important, but the SIPs will be more effective to the extent that states collaborate to use the technical knowledge available from state and federal economic regulators and development personnel as well as the industry expertise brought to bear through the transmission planning and cost allocation processes that the Commission has promoted.

2. What are the primary challenges, if any, in coordinating planning processes to evaluate energy infrastructure needs?

Thanks to the Commission, the difficulties inherent in coordinating the multiple interests in any RTO or non-RTO transmission planning processes are quite familiar. As noted above, Order No. 1000 is designed to facilitate the evaluation of project proposals, whether through competitive processes, integrated resources planning, or other state, regional, and interregional planning processes. Planning and cost allocation methods and outcomes under that rule nevertheless tend to be very different. Better coordination at the regional and interregional levels would yield important benefits – resilience, cost savings, liquid markets, resource diversity, and potential emissions reductions.

WIRES submits that, beyond the mere availability of planning mechanisms, the EPA must become as aware, as is this Commission, that challenges remain. Those challenges require the EPA to make a purposeful effort to incorporate transmission solutions into the CPP. Among the challenges are these:

- A. Major transmission development will lag other developments for identifiable reasons. To restate the obvious, the pathway to planning, approval, and construction of interstate transmission projects under state and federal law is more complex than that for natural gas pipelines, which are authorized principally by this Commission, without regional planning. Because the increase in transmission investment in recent years may represent the low-hanging fruit, leaving larger, more regionally and inter-regionally significant projects with longer planning, permitting, and construction cycles yet to be done, the current levels of transmission investment may not be sustainable. Transmission's 5-10 year development cycle will not fit comfortably within the CPP compliance "glide path."
- B. Interregional coordination under Order No. 1000 is still in its infancy. It has not advanced any significant transmission solutions across regional "seams." However, even major projected transmission developments may be in danger of stalling. MISO has not planned another portfolio of transmission expansions since the MVP portfolio in 2011, even though it acknowledges that projected coal plant retirements could be as high as 26.6 GW. SPP has made clear that there will be a hiatus in major project development. The CPP will require reassessment of such conclusions.
- C. As the forthcoming study by The Brattle Group will show, much of the current transmission planning process fails to incorporate consideration of the wide range of economic benefits of individual projects or portfolios of projects or to approach transmission from a risk management perspective that accounts for the high cost and risks of not building adequate transmission infrastructure. This failing approach militates against larger, regional or interregional transmission solutions that are not solely justified on reliability grounds.
- D. Order No. 1000 requires public policy projects to be considered but it does not require stakeholder processes to arrive at early resolution of cost allocation issues for that category of projects. Cost allocation is a gateway issue but, for public policy projects, a lack of stakeholder resolution of the issue upfront could slow fair consideration such projects in an RTO planning process. It is axiomatic that in most regional planning processes, projects classified as reliability projects move faster through the process and competitive projects face greater delays. In those states and regions where cost allocation has not been settled for this category of projects, the Commission should correct the apparent problem that CPP-driven transmission may be seriously disadvantaged in this regard.

These and other factors cast doubt on the ability of transmission planning to contribute to the CPP's emissions reduction targets *within the time constraints* EPA establishes. The timing and sequencing of SIPs development should be established with a greater appreciation of regulatory lag in transmission development than is

now reflected in the CPP. Any hope of utilizing transmission as a means of implementing Building Block 3, and perhaps Building Block 2, to achieve individual state or regional emissions targets will likely depend on the an awareness of the time it takes to expand or upgrade the system and the kind of coordination represented by the Commission's Order No. 1000 processes. Although it is not empowered to help implement the CPP, this Commission must continue to emphasize, through its policies and consultation with EPA, the importance of transmission to addressing and ultimately overcoming the uncertainties that states and planners will confront.

3. How could various compliance approaches impact the need for additional infrastructure?

The CPP leaves to the states, individually and in collaboration, to decide which of the approaches articulated in the four Building Blocks, individually or in combination, will work most effectively to meeting the CPP's carbon targets. The Building Blocks will work more or less well for individual states or regions, depending on each state's indigenous resource base and a combination of other factors. However, the outcomes may not be easy to predict. For example, it is not entirely clear how credit for compliance with any Building Block will be allocated, especially given the dynamics of multi-state energy markets and cross-border energy delivery. Additional transmission investment may therefore be more or less important in specific cases if compliance depends on access to new, perhaps distant, resources.

It is nevertheless clear that transmission provides flexibility, optionality, insurance, and a variety of benefits in any market. It will be critical to delivering high quality, low carbon, and often lower cost renewable energy that is far from customers and currently barred from development because of lack of market access. The National Renewable Energy Laboratory ("NREL") estimates that there exists 11,000 GW of utility scale photovoltaic solar potential in the U.S. Even today, major U.S. wind power resources remain untapped. A great deal of it is unrealizable without transmission. Most of these resources are beyond the reach of today's transmission system. Where meeting carbon targets requires heavy reliance on Building Block 3, transmission is therefore especially critical.

Building Block 2 describes the potential benefits of re-dispatching the system from higher- to lower-emitting generation resources. WIRES believes natural gas generation will be increasingly important, in part because of current fuel prices and in part because of the CPP. The potential increase in natural gas-fired generation from both existing and new units as well as the increased possibility of new pipeline expansion suggests that the flows on the electric system will change, in some cases fundamentally. This development implies that transmission upgrades and expansion will be a major part of accommodating those changes.

Finally, the recent London Economics study⁴ of alternative technologies such as distributed generation, demand response, and energy efficiency makes clear that, as important as these technological developments are to grid resilience, reliability, and efficiency, they do not obviate the need for a strong transmission system. We therefore conclude that, while transmission is central to parts of the CPP's methodology, the range of benefits that transmission is capable of providing should not be ignored regardless of which Building Blocks come into play in particular circumstances.

4. Are adaptations to current Commission policies needed to facilitate the infrastructure needed for compliance with the proposed Clean Power Plan?

WIRES does not advocate basic changes in Commission policy. While implementation of Order No. 1000 continues to unfold and the Commission has a better appreciation of how it is working, the heretofore unknown impacts of the CPP on the bulk power system may suggest new ideas and approaches to the Commission. We can say now that any new (not currently constructed) transmission development that may be necessary for Building Blocks 2 or 3 is not likely to be ready to operate within the earliest performance expectations of the CPP. If the Commission can resolve to address the several pending issues under Order No. 1000 and to hold fast to, and if need be clarify, its policies on equity returns which remain subject to repeated challenges, it would send more positive signals about the transmission outlook. The CPP potentially requires significant adjustments for both policy makers and for the industry. WIRES believes that current Commission policies can be adapted or applied, potentially with EPA's cooperation, to help rationalize the transmission and power market aspects of the CPP so that the chances of a sustained effort to expand the Nation's transmission system will be immeasurably improved. Whether the CPP goes forward as proposed or not, a persistent focus on the need for infrastructure, and for regulatory measures that will advance investment in that infrastructure, will be critical to the Commission's own pro-competition, pro-market policies.

⁴ Frayer and Wang (London Economics LLC, for WIRES), *Market Resource Alternatives: An Examination of New Technologies in the Electric Transmission Planning Process*, October 2014. Available at www.wiresgroup.com.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "James Hoecker". The signature is stylized and cursive.

James Hoecker
Counsel to WIRES
James.Hoecker@huschblackwell.com
Phone: 202-378-2300

Dated: February 18, 2015