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**COMMENTS  
OF  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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This afternoon's panel is intended to provide input on the suitability of tariffs and rules as renewable resources increase on the grid. It should include some discussion of operational or dispatch aspects of renewables and whether those are adequately addressed, if there are additional technologies or market considerations that could accommodate the necessary integration. Also to be discussed is current cost recovery and management of additional costs. Lastly, we are to look at sharing lessons learned.

First, let me state that Ohio has much at stake in moving forward. We passed legislation last year that has a very aggressive Alternative Energy Portfolio Standard. Senate Bill 221 requires 25% (of total kWh) by 2025. Half of this may be from advanced energy resources, and at least half from renewable resources, with a .5% solar requirement. While at least half of the renewable requirement must be through facilities located in the state, the remainder must be deliverable to the state. (Alan, our current green rules are as follows: power is assumed to be deliverable from contiguous states and must

be shown (proven) by a study that it is deliverable from non-contiguous states.) So it is critical to us, that we are able to get transmission built to substantiate that the power is deliverable to us.

We need to keep in mind that the transmission system is being required to perform functions that it was not designed to do. Remember that the current transmission grid is reliably performing the function it was designed to do and further, has enabled the development of competitive priced wholesale markets products. Adding new transmission to allow renewable resources such as wind generation to reach markets should not cause the transmission grid to fail to continue to perform in a reliable manner even though it will increase the size, volume and complexity of the transmission systems due to the transactions on the transmission grid. These electric transmission systems have become the enabler of markets. In moving forward in building our future system, we need to be cognizant of the anomalies and complexities that will come with the new and different system as well as integration with the legacy of the existing infrastructure. We must take care in integrating new and different, and possibly remote resources, to the system. To further complicate

matters, environmental policy must be an equivalent goal to economic and energy policy needs as we move forward.

Let me start by indicating the some of the characteristics of the renewable resources that must be taken into consideration apriori. Many of our renewables are generally intermittent and highly variable. This puts an increased emphasis on planning and forecasting, which I will get to later. This intermittency and variability must be adequately addressed to assure power is available to the end use customer at all times. Due to the nature of this variable resource, we need to address potential frequency imbalances that may occur. Dispatching generation units must be done with care, and aggressive steps must be taken to incorporate demand response as a substitute when necessary. Careful integration of SmartGrid deployment and integrating price responsive demand can aid the transmission system operator's dispatch and assist in the integration of renewables into the current fleet of generation resources.

Another characteristic that needs thoughtful consideration is the potential long distances that the energy has to travel. If the resource is very remote to load, which is prevalent in much of the renewable deployment, VAR support may become an issue. If that is the case,

critical processes and procedures must be available to the dispatcher to protect against any cascading events on the grid.

Energy storage facilities could be an essential component to the successful deployment cost effective renewable resources use while minimizing some of the challenges associated with the resource intermittency. Without the storage capability, the system could require back-up and spinning reserve facilities, depending on the location of the resource and the load. Therefore, an effective ancillary service market is necessary.

There are also still interconnection issues to be resolved. While FERC and the RTOs have attempted to alleviate the backlog, the queue is still onerous.

We must also recognize that the industry is laden with large lumpy investments, externalities and coordination challenges. With the current scarcity of capital resources on Wall Street, investment risk can be high and we need to carefully consider accounting schemes and cost recovery efforts. While assurance of cost recovery is important to the developers, utilities and investors, it is also important to assure that our ratepayers are treated fairly. In discussion of transmission build, there are a number of issues at hand. In doing a

build-out of the system, it is important to do adequate planning, and that planning should reach into the future. The “used and useful” test could clearly discourage needed and optimal investment over the long term. It is often cost effective to overbuild transmission now for future use. However, that can’t be expected to be paid for by today’s customers. Perhaps some federal monies could be considered to assist in covering any prudent investment to meet future needs.

I mentioned planning. Planning is becoming an extremely difficult process with the numerous interests that are now necessary to consider. States have Integrated Resource Planning requirements and RTO’s are planning on a regional and multi-regional basis. The bigger the geographic area becomes, the more difficult and subjective are our decisions. However, energy flow does not recognize state or RTO boundaries. FERC laid out Planning Principles in Order 890 for new projects. Those principles include the following: Coordination, Openness, Transparency, Information Exchange, Comparability, Dispute Resolution, Regional Participation, Economic Planning Studies, and Cost Allocation for New Projects. These principles should be adhered to. I want to talk about the last principle identified above.

We are talking about an enormous amount of money to be spent in supplementing the existing transmission system to integrate renewables. The PUCO supports a position that reflects that costs should be shared by those who benefit. Ohio would support a regional rate across an entire RTO footprint if it could be demonstrated, for example, that congestion relief is achieved, or that service reliability is increased. However, the large RTO geographic footprints are generally too expansive for such a consideration to be assumed without a completion of an impact analysis. In fact, at FERC's very first Technical Conference on transmission cost allocation in 2006, it was pointed out by the panelists that, typically, reliability investment benefits the neighborhood where it is built and is meant to address local needs. Reliability benefits to the system as a whole are likely to be small given the geographic scope of the RTOs. This should be recognized in transmission upgrades due to reliability needs. This concept affords the economic parity between utilities and states that have historically invested in high voltage transmission systems to assure that reliability standards were met and those utilities and states that have not.

The PUCO has been a member of MISO's Regional Expansion Criteria and Benefits ("RECB") task force since its creation in March 2004. Members of this task force have continued to work on the criteria and methods for allocating and recovering the cost of projects in MISO's baseline reliability Transmission Expansion and Planning ("MTEP") report. We have also participated in PJM's workgroups, discussions and proceedings. The PUCO has advocated the following positions.

The PUCO believes that high voltage bulk transmission projects can provide a benefit to more than just the local transmission owner who may construct the facility. The costs of bulk transmission projects should be recovered from transmission users that *benefit* from a project based upon load flow modeling. PUCO believes only this concept could support the just and reasonable standard set out in section 205a of the Federal Power Act and followed by the Commission and also used by state commissions for retail rate cost recovery determination.

Section 205a:

All rates and charges ... received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and

reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.

The PUCO is a strong advocate for costs being allocated only to cost causers and to those who are shown to benefit from a project. This could include a region-wide rate, if, in fact, the benefits are demonstrated to be region-wide. It is our position that the cost of each new project should be allocated only to cost causers and to those that can be shown to benefit. While some argue that is a difficult task, it is in fact performed for designated voltages. (MISO utilizes the Line Outage Distribution Factor (LODF) evaluation; PJM utilizes the distribution Factors (DFAX) methodology.)

Consumers in Ohio represent approximately 17% of the MISO's footprint load and could be required to pay a disproportionate share of any system-wide postage stamp rate. While the Ohio Commission will support cost recovery by our customers for projects that are shown to benefit Ohio and its customers, we are currently paying a disproportionate share of MISO costs. In the recent Transmission Expansion Plans of 2007 and 2008, our companies in MISO, FE and Duke, have only shared \$3.5 million in projects to others, but they have had to pay \$100 Million for other projects in the MISO footprint. Transmission costs in FirstEnergy have increased \$100 million,

resulting in increases to transmission rates to a typical residential customer of 60% to 109%, depending on the service company. And there were no demonstrated benefits to Ohio ratepayers.

Ohio's load in the PJM footprint is approximately 10%. AEP has been hit with a double whammy. When AEP joined PJM, there was a long protracted proceeding regarding the elimination of through and out rates. The Ohio Commission supported that elimination, based on the understanding that the through and out rates would be replaced by regional rate designs that properly aligned the costs with the beneficiaries and not the rate designs that the FERC has allowed to be implemented to date. That elimination resulted in a revenue shortfall that entities outside of AEP's footprint no longer have to pay to use the system that was made up by AEP ratepayers. And with FERC's approval of a postage stamp allocation on PJM's new build, the increases to a typical residential customer in transmission service in AEP's territory is 87-97% in the last couple of years (not including the through and out rate elimination). Dayton Power and Light's transmission rates have increased 66%. And

again, no demonstrated benefits were accrued to Ohio. In fact, the load flow analysis performed by PJM indicated quite the contrary.

Currently, all the projects in the MTEP are projects that were submitted to MISO from the transmission owners. Projects were either identified as planned or proposed. Projects that are planned are considered to be projects that are scheduled for construction. Proposed projects are scheduled for additional study to see if they actually need to be constructed. In the MTEP 2005 report, MISO listed a total of 615 projects, 402 planned and 213 proposed, representing an estimated investment of \$2.91 billion through 2009. There was much debate in the RECB task force about which projects should receive cost recovery under the proposed tariff. Some MISO members have little or no planned transmission upgrades in the MTEP report while others have projects costing a substantial amount. Ohio, for instance, has very little planned upgrades. Much of the upgrades in MISO have been driven by the need for investment for reliability parity. There has been difficulty, for instance in the western MISO states, getting the needed transmission upgrades. This has not been problematic in Ohio (for instance, the Ohio Power Siting Board has approved and the Ohio companies have invested approximately \$250

million in transmission lines and substations since de-regulation), and therefore, there is currently little need for new investment in upgrades in Ohio for reliability reasons. Typically, reliability investment benefits the neighborhood where it is built and is meant to address local needs. Reliability benefits to the system as a whole are likely to be small given the geographic scope of the RTOs.

To further understand the impact of these costs, it should be pointed out that Ohio's industrial sector ranks second electricity consumption in 2007. In the FirstEnergy Company alone, which represents most of the 17% of Ohio's MISO load, nearly half of that load is carried by Ohio industrial customers. Recent surveys have shown that electricity prices for that past 12 months for large customers have increased 8% in States like Ohio which have restructured their retail markets. Industry is the bedrock of Ohio's economy. While many argue that transmission is a nominal portion of a customer's total energy bill, given the dire situation of the current economy, any increase in the cost of delivering electricity to these customers has the potential to put the State's economy at further serious risk.

It is critical to state regulatory agencies that they are in a position of justifying transmission rate increases to their jurisdictional companies. Unless benefits can be demonstrated, the state commissions will be placed in a difficult position of allowing these costs. The prudence and need requirements of state regulatory agencies led a significant number of states to conclude a beneficiary test is warranted.

Certain parties support formula-type allocation methodologies as an attempt to avoid contentious and lengthy hearing proceedings on the allocation of project costs. Ohio supports the expansion of the system where needed, but we cannot simply create a method that allows certain regions with adequate transmission systems to subsidize those regions that have fallen behind, rescuing them through the application of postage stamp rates. A methodology that allocates a project cost to an entire region regardless of the location of the project and regardless of who is benefiting from the project is not acceptable and should not be acceptable to FERC. FERC cannot let its desire for transmission system expansion for renewables to trump the underlying principles of ratemaking.

The Commission approved the Going Forward Principles in Docket No. EL02-111. These principles state “An important factor in determining whether these standards have been met in any long-term transmission pricing structure is the degree to which cost responsibility for facilities is assigned to those who use or benefit from such facilities, regardless of whether those users or beneficiaries are located inside or outside the transmission owners’ footprint.”<sup>1</sup> In its 1994 Transmission Policy Statement, the Commission stated that greater pricing flexibility is appropriate “in light of the significant competitive changes occurring in the wholesale generation markets, and in light of our expanded wheeling authority under the Energy Policy Act of 1992 (EPAct).” The Commission noted those recent events underscored “the importance of ensuring that our transmission pricing policies promote economic efficiency, fairly compensate utilities for providing transmission services, reflect a reasonable allocation of transmission costs among transmission users, and maintain reliability of the transmission grid.”<sup>2</sup> In that same Policy

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<sup>1</sup> Midwest Independent Transmission System Operator, Inc., 106 FERC ¶ 61262 (2004) (Order Accepting Agreement Establishing Going-Forward Principles and Procedures, and Extending Dates at n. 10) (March 19, 2004).

<sup>2</sup> Inquiry Concerning the Commission’s Pricing Policy for Transmission Services Provided by Public Utilities Under the Federal Power Act; Policy Statement, FERC Stats and Reg., ¶ 31,005 at 31,136 (1994) (“Transmission Pricing Policy Statement”).

Statement the Commission recognized that the industry is evolving rapidly “in response to changes in institutions, competitive pressure, and technological innovations.” The Commission specifically pointed to flow-based pricing structures as innovations to be encouraged:

For example, various forms of flow-based pricing structures are beginning to be considered in conjunction with electronic transmission information systems. We seek to encourage this process and will in the future entertain non-discriminatory tariff innovations to accommodate new pricing proposals.<sup>3</sup>

Regional differences need to be taken into consideration; Ohio can not overstate the importance of recognizing the difference in geographic size between MISO and SPP, for instance. Obviously, just because regional postage stamp rates may be justified in these smaller regions does not justify the use of postage stamp rates in the expansive MISO region. Remember, Ohio has to demonstrate that a renewable is “deliverable”. If in fact a transmission line benefits Ohio by enabling that the resource is now deliverable to our state, we would be willing to pay.

We don't want to find ourselves in a "field of dreams". Let's be sure the entire resource plan make sense – and that the generation will be there if the transmission is built. Combined

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<sup>3</sup> Transmission Pricing Policy Statement at 31,734

renewable and transmission development needs to be carefully sequenced and should also consider least cost approaches. Investments are dependant on state regulations and federal regulations but also on the willingness of the financial community to share a portion of the risk associated with the environmental and societal (cost) impacts on the generation locations and transmission build. These considerations need to embrace the notion of a carbon-constrained future in which emissions will be reflected not only in the wholesale market price of electricity, but more importantly in the cost to the local consumers on their electricity bills. We can't afford undesirable consequences for any further deterioration of the industrial health of the Midwest.

Ohio commends and thanks FERC for providing parties the opportunity to weigh in on such an important issue. The Ohio Commission strongly urges FERC to further explore and encourage flow-based modeling and pricing structures to provide for effective and efficient pricing and resulting in efficient and effective expansion investment as we accommodate new generation resources. FERC should assure costs track with benefits, enabling adequate protection for customers. Carefully evaluate the configuration, robustness and

reliability of the interconnected electric system. We also encourage you to provide better resolution in interconnection procedures and look forward to working with you on enabling advanced technologies that make renewable resources more viable and cost effective. Don't lose sight of long-term benefits and goals in attempting to achieve near-term results.