

**Kook, G.K.**

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**From:** Alyssa Frederick [AFrederick@environmentaldefense.org]  
**Sent:** Friday, June 08, 2007 5:50 PM  
**To:** Harris, P.G.; Herling, Steven R.; RTEP; McGlynn, Paul  
**Cc:** Mark Brownstein; mleone@cleanair.org  
**Subject:** Comments Re: PJM's May 9 Transmission Expansion Action Committee Report

PJM Board  
c/o Philip G. Harris  
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Dear Mr. Harris:

Please find comments attached from Environmental Defense and the Clean Air Council in response to the May 9 Transmission Expansion Action Committee (TEAC) Report. We would welcome the opportunity to work with you on any of the issues we raise. Thank you for the opportunity to submit these comments.

Respectfully,

Mark Brownstein  
Environmental Defense

Michael Leone  
Clean Air Council

6/18/2007

COMMENTS ON PJM'S 2006 REGIONAL TRANSMISSION EXPANSION PLAN

SUBMITTED BY ENVIRONMENTAL DEFENSE AND THE CLEAN AIR COUNCIL

JUNE 8, 2007

SUMMARY

Environmental Defense and the Clean Air Council submit these comments in response to the May 9 Transmission Expansion Action Committee (TEAC) Report, which raises general questions about PJM's Regional Transmission Expansion Plan (RTEP) process and implementation. We welcome any questions about the concerns laid out below, and would further welcome the opportunity to work with PJM's Transmission Expansion Advisory Committee on any of the issues we raise. Our comments can be summarized as follows:

- We are concerned that PJM fails to account for environmental impacts of its transmission planning process. In particular we are concerned about the failure to take into account CO2 impacts that may follow from increasing interstate transmission capacity, with its attendant effect on regional coal use.
- We are concerned that disconnects between PJM forecasts for demand, fuel pricing, new generation capacity and generation retirements all lead to bias toward new transmission. This prejudices market conditions for other options like energy efficiency and locally-sited clean generation.
- We believe it would be most beneficial, and most efficient for all parties concerned, for PJM to incorporate environmental considerations into its own analysis, though there is a strong argument that FERC must issue a cumulative environmental impact assessment of the RETP under the National Environmental Policy Act (NEPA).

ANALYSIS

- I. **PJM fails to account for environmental impacts of its transmission planning process. In particular we are concerned about the failure to take into account CO2 impacts that may follow from increasing interstate transmission capacity, with its attendant effect on regional coal use.**

**A. PJM's Own Operating Agreement, the Federal Power Act, and FERC Order 2000 Support Taking Environmental Impacts into Account**

PJM Interconnection, L.L.C.'s 2006 Regional Transmission Expansion Plan (RTEP) fails to account for the environmental costs and benefits of the projects it proposes. This is despite the statement of purpose set forth in PJM's FERC-approved Operating Agreement that "the Regional

Transmission Expansion Plan to be developed shall enable the transmission needs in the PJM Region to be met on a reliable, economic and environmentally acceptable basis.” PJM Interconnection, L.L.C., Operating Agreement, Schedule 6 § 1.1 (June , 2007), <http://www.pjm.com/documents/downloads/agreements/oa.pdf>.<sup>1</sup> The Operating Agreement restates the importance of environmental considerations again when it provides that the substance of the RTEP be “assessed on the bases of maintaining the reliability of the PJM Region in an economic and environmentally acceptable manner and in a manner that supports competition in the PJM Region.” *Id.* at Schedule 6, § 1.4(a). PJM’s current Plan appears to have ignored the environmental prong of this mandate entirely.

This environmental component of PJM’s Regional Transmission Planning Protocol in the Operating Agreement reflects the purpose of Congress when it first authorized FERC to create regional transmission districts. Section 202 of the Federal Power Act encourages the creation of such districts in order to ensure “an abundant supply of electric energy throughout the United States with the greatest possible economy *and with regard to the proper utilization and conservation of natural resources* [emphasis added].” Federal Power Act § 202, 16 U.S.C.A. 824 (1920). FERC Order 2000, which authorizes RTOs to conduct regional transmission planning, also emphasizes energy efficiency, stating that the Commission’s goal in issuing the order is to “promote efficiency in wholesale electricity markets and to ensure that electricity consumers pay the lowest price possible for reliable service.” Regional Transmission Organizations, 18 CFR Part 35, 1 (1999).

Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) including PJM, have the potential to facilitate renewable energy and demand response development while promoting electric system reliability and wholesale competition. PJM has furthered these goals through non-discriminatory interconnection policies, adaptation to the

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<sup>1</sup> This Operating Agreement, Schedule 6 “codifies the provisions under which PJM executes its Regional Transmission Expansion Planning Protocol.” PJM Interconnection L.L.C., *Regional Transmission Expansion Plan*, 5 (Feb 2007) <http://www.pjm.com/planning/reg-trans-exp-plan.html>.

technical characteristics of intermittent resources, and active participation in demand side management initiatives. Unfortunately, we are concerned that PJM's failure to take into consideration the environmental impacts of the RETP represents a backslide off the path toward energy sustainability, undermining the purposes of Congress and of FERC. We strongly urge PJM to fulfill its responsibility under FERC Order 2000 and its FERC-approved Operating Agreement to incorporate energy efficiency and larger environmental considerations into the 2006 RTEP.

### **B. The Magnitude of PJM's Plan Will Affect the Environment Significantly**

PJM's expanded 15-year planning horizon, and the sheer magnitude of generation demanded by PJM's district means that any region-wide transmission plan will have significant impacts on the environment. PJM is the giant among RTOs. As noted in the RTEP, PJM serves 51 million people, and nearly 20% of the US economy, in a region that includes 13 states and the District of Columbia. PJM Interconnection L.L.C., *Regional Transmission Expansion Plan (RTEP)*, 166 (Feb 2007) <http://www.pjm.com/planning/reg-trans-exp-plan.html>. PJM is in the process of further expanding its reach. The RTEP reported in February 2007 that PJM was engaged in discussions with TVA and other systems to the south of AEP and Dominion to pursue interregional assessments and plan development. *Id.* at 37. The PJM planning process will thus have an even more significant impact on the direction of our nation's energy policy in the near future.

PJM's fuel mix contributes a significant portion of the total greenhouse gases emitted by the United States. Most of PJM's region runs on coal, producing more than a fifth of the total electricity generated by coal in the United States.<sup>2</sup> This 411,581 MW was 57% of the PJM region's total energy output in 2006. Nuclear produced 35%, or 250,995 MW of PJM's power that year, natural gas produced 6%, and hydro, solid waste, oil and wind produced the rest. PJM,

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<sup>2</sup> Calculated from data issued by the US Energy Information Administration. Fred Freme, US Energy Information Administration, *US Coal Supply and Demand* (2007), <http://www.eia.doe.gov/cneaf/coal/page/special/feature.html>.

*RTEP* at 44, Figure 3.3. A survey of the interconnection requests in all PJM queues shows renewables taking a bigger piece of the pie. Wind projects make up 24.6% or 16,240 MW of installed energy in the queues, compared to coal at 25.7% or 16,952 MW, and natural gas at 33.0% or 21,814 MW. *Id.* at 45, Figure 3.4.<sup>3</sup> This represents a significant increase in renewable energy capacity, as well as a significant increase in the use of pollution-intensive fuels.

In PJM's long term plan coal seems to be the dominant fuel. Large base-load Midwest coal plants, and new backbone transmission facilities to access those plants are a major component of the new 15-year plan. As soon as 2012, 6,000 MW of new coal-fired units, including some using "clean coal" technology, will be built in PJM's territory in western Pennsylvania, western Maryland, eastern Kentucky, Ohio and West Virginia. Other multi-state projects in the 15-year plan include nuclear generation in Maryland and Northern Virginia, Appalachian Ridge wind farms, and natural gas pipeline access projects. *Id.* at 11. In the face of increasingly dire scientific and economic assessments of the impact of global climate change, PJM failed to even mention the issue of climate change in its 15-year plan.

This glaring oversight is all the more troubling since two states within the PJM region have moved to adopt regulations aimed at reducing carbon dioxide pollution from power plants, and national legislation of carbon dioxide and other greenhouse gas pollution appears imminent. Whatever PJM may think of the science surrounding the climate change issue, the decision to ignore the impact of CO<sub>2</sub> regulation or probable national CO<sub>2</sub> legislation in assessing transmission projects and their alternatives is simply not acceptable.

**II. Disconnects between PJM forecasts for demand, fuel pricing, new generation capacity and generation retirements all lead to bias toward new transmission. This prejudices market conditions for other options like energy efficiency or locally-sited clean generation.**

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<sup>3</sup> It is important to note that this installed capacity could still result in a majority of energy being produced by coal – in 2006 the previously mentioned 57% of PJM's electricity produced by coal came from plants that represented only 26% of the region's installed capacity.

In order to meet its forecasted 1.6% growth in demand each year for the next 10 years, PJM has prescribed transmission upgrades to facilitate the flow of new generation from the West to load centers in the East. In 2006 alone, the PJM Board approved \$2.3 billion worth of transmission upgrades and additions. *Id.* at 8. PJM states in several sections of the RTEP that new environmental regulations in the East have intensified the need to locate generation farther away from load centers and thus construct new transmission facilities. *E.g., id.* at 126, 132 and 134. This orientation of planning around the circumvention of public policy decisions legislated in Eastern states represents a stark abdication of PJM's environmental responsibility. It is especially troubling in light of the potential for leakage of coal-fired power from states that have not signed onto the Regional Greenhouse Gas Initiative (RGGI) into those that are now seeking to implement the consensus-driven regional climate change mitigation plan. This problem of leakage could significantly undermine RGGI's efficacy.

This is particularly critical with regard to the 2011 and 2016 PSS/E power-flow base cases, which were used to support the decision to build the 502 Junction – Loudoun 500-kV line. From 2011 to 2016 the assumed generation mix included the following changes: over 4,500 MW of new generation in AEP and Western Pennsylvania, and in the east, a net *decrease* in generation in JCPL, PSEG, AE, PENELEC, METED, PL, PECO, UGI BGE, PEPCO, DP&L, and VAP. With such assumptions, it is no wonder that the reliability analysis showed a need for this line.

Building this line and the Amos-Kempton 765-kV line will make these assumptions self-fulfilling prophecies. Should the lines be built, it will be very difficult for new or existing generation in eastern PJM to compete with the conventional coal-fired generation in western PJM, which will continue for the foreseeable future to make up the bulk of generation there. So new plants will not be built in the East.

PJM's analyses and decisions regarding these lines need to be revisited with less biased assumptions.

PJM's RTEP also discounts the contribution of demand side resources (DSR) in analyses of each of its sub-regions, concluding that without a metric for translating demand response commitments into equivalent transmission capability "DSR must be conservatively evaluated to ensure that reliability is not jeopardized." *Id.* at 121. New transmission, from the moment it is approved, itself prejudices market conditions against energy efficiency and distributed generation solutions, which tend to be cleaner than the options most often facilitated by interstate transmission. Failure to factor DSM into PJM's analysis thus biases the decision-making against environmentally sound responses to congestion, resulting in an abdication of PJM's responsibilities to maintain truly competitive markets, improve energy efficiency, and operate our energy infrastructure in an environmentally acceptable manner.

We understand that PJM cannot "order" new generation or DSM initiatives in the same sense that it can "order" new transmission. Nonetheless, an appropriately structured market will provide the needed generation and load management, and PJM does have certain influence over the market structure and offerings. ISO New England has had great success in soliciting new demand management for its initial Forward Capacity Market auction. It is incumbent upon PJM to consider similar strategies.

PJM has identified seven metrics that it will utilize in evaluating the efficacy of a particular economic transmission project. None of these metrics take into account environmental attributes or impacts. Perhaps most importantly, PJM has failed to properly model environmental externalities as a metric. It is unclear whether PJM included carbon as a sensitivity in its analysis. In any case, PJM appears to have left a national carbon cap and trade program out of its analysis altogether. The Regional Greenhouse Gas Initiative ("RGGI") has already been enacted in two of the states in PJM's eastern region, so CO<sub>2</sub> regulation has already become a baseline assumption that should to be considered in any cost/benefit analyses of economic transmission that will stream coal generation into those eastern states.

### **III. There Is a Strong Argument That NEPA Requires an Environmental Impact Statement of the RETP**

PJM was authorized by FERC to conduct and implement its own Regional Transmission Expansion Plan. PJM thus operates in a quasi-governmental role with a major effect on public energy policy, unbounded by the procedures Congress has prescribed to federal agencies such as the Administrative Procedures Act (APA) and the National Environmental Policy Act (NEPA).

FERC did conduct an environmental impact assessment when it issued Order 2000, which authorized RTOs to conduct regional transmission plans, in 1999. The resulting environmental impact statement (EIS) seems not to have taken into account the prospect of large-scale generation additions coming from coal, as PJM now proposes, or the extent of wind energy development currently under way. While recognizing that coal would remain the dominant fuel source under an open access system, FERC assumed in its Order 2000 EIS that RTO transmission planning would result in virtually all future capacity additions coming from gas-fired combined cycle or combustion turbines. *Regional Transmission Organizations*, 18 CFR Part 35, 690 (1999). Eight years since that statement was issued, times have changed. An up-to-date assessment of the true environmental impact of PJM's RETP is crucial to an understanding of its impacts on human health and our environment.

Though FERC has delegated power to PJM to approve and implement its own RETP, there is a strong argument that FERC can still be held responsible for an environmental impact statement measuring the cumulative environmental impact of the plan. NEPA requires federal agencies to include a detailed environmental impact statement in every recommendation or report on proposals for major Federal actions "significantly affecting the quality of the human environment." National Environmental Policy Act, 42 U.S.C.A. § 4332 (1969). The US Department of Energy has been held responsible in the past for an environmental assessment of the impacts of a power plant that would indirectly result from the permitting of transmission lines. *See Border Power Plant Working Group v. Dep't of Energy*, 260 F.Supp.2d 997 (S.D.Cal. 2003).

Also, a general principle of NEPA law holds that segmentation of a project into smaller components does not allow an agency to avoid the preparation of an EIS on the cumulative impacts of the project. Certain situations where several proposed actions are pending at the same time may require a comprehensive environmental impact statement, depending on how "interrelated" the various projects are. *Kleppe v. Sierra Club*, 427 U.S. 390, 409 (1976) (holding that DoI's permitting of a set of coal mining projects did not require DoI to issue a cumulative EIS for regional coal development, since the projects were not part of any comprehensive plan).

The fact that PJM's RTEP will have significant implications for its region's energy and environmental policies makes it even more likely that FERC would be required to issue a comprehensive EIS. *See Trident v. Rumsfeld*, 555 F.2d 817, 826 (C.A.D.C. 1976). PJM's failure to do its own environmental impact assessment of the RTEP, or incorporate any environmental considerations into the plan thus threatens to slow the ultimate objective of sensible transmission planning and expansion by entangling the plan in possible NEPA claims against FERC.

#### CONCLUSION

For all of the foregoing reasons we strongly urge PJM to incorporate energy efficiency and environmental considerations into the 2006 RTEP. We would welcome the opportunity to work with PJM on ways to do this.

Respectfully,

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### **About Our Organizations**

Environmental Defense is a leading national nonprofit organization representing more than 500,000 members. Since 1967 we have linked science, economics and law to create innovative, equitable and cost-effective solutions to society's most urgent environmental problems.

Clean Air Council is a member-supported, non-profit environmental organization dedicated to protecting everyone's right to breathe clean air. The Council works through public education, community advocacy, and government oversight to ensure enforcement of environmental laws.