

The Secretary

From: Philip Morin [MorinP@upstate.edu]
Sent: Monday, November 05, 2007 3:24 PM
To: The Secretary
Subject: Rehearing request for 2007-OE-1 sent via fax 11/05 2007 NOV -5 A 9:41

Attachments: Morin-DOE NIETC Nov 05 2007 submission request for rehearing of DOE Decision & Order Docket 2007-OE-01 Mid-Atlantic NIETC - re Chenango Co. , NY.doc



Morin-DOE NIETC
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Thank you.

OE

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05 Nov. 2007

Attn: Docket No. 2007-OE-01

Philip C. Morin requesting rehearing of the order in Docket No. 2007-OE-01, on the Mid-Atlantic Area National Interest Electric Transmission Corridor

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The Secretary of Energy should reconsider and reverse the decisions to designate a Mid-Atlantic Area National Corridor that includes within New York State the County of Chenango. The Secretary should remove Chenango County, NY from the Mid-Atlantic Area National Corridor, irrespective of the other arguments for or against the designation of a Mid-Atlantic NIETC.

The basis for this request for a rehearing on this issue is the same issues conveyed in my 06 July 2007 objection to inclusion of Chenango County NY in the draft Mid-Atlantic NIETC corridor designation. That is, Chenango Co, NY does not appear to satisfy the inclusion criteria set forth in the enabling legislation but is designated, while Oswego County, NY does appear to fit the inclusion criteria and is conspicuously not designated. Also, no consideration appears to have been given to locating the NIETC to serve the eastern seaboard load just offshore on the Continental shelf, where if an eastern NIETC is justified, it may well be best placed.

To reiterate:

Specifically, FPA section 216(a) (4) sets forth 5 conditions (A-E) which the Secretary may consider in determining whether to designate a corridor. **Inclusion of Chenango County within the polygon of a Mid-Atlantic Area National Corridor (NIETC) counters tenets of each of the five designation criterion specifically authorized for the Secretary to consider when deciding whether to designate a corridor, as enabled in the statutory framework:**

Tenet (A):

“A) the economic vitality and development of the corridor,...., may be constrained by lack of adequate or reasonably priced electricity;”

Chenango County is not an electricity source node when evaluated against the Secretary’s source and load-sink designation methodology. In Chenango County, there is no electric generation at the 1000 MW “source worthy” geographic threshold used in the draft designation’s supporting analysis by the firm of CPA (1) , and there is no appreciable installed renewable electricity generation from wind or solar sources in Chenango County (2). The Mid-Atlantic NIETC maps generated with the draft designation notice will confirm the low feasibility of wind-generated electricity sites in Chenango County. In addition, Chenango County’s location Southeast of Lake Ontario at the fringes of the “Great Lakes effect weather pattern” means that the annual available sunlight for solar-generated electricity is below average. On the other hand, Chenango

County is an economically depressed polygon of upstate New York where the cost of electricity already is among the nation's most expensive, and the cost of energy is already a constraint when attempting to attract new industry or retain existing firms and population. Studies generated in 2006 and 2007 by NYISO, and others submitted to the New York State Public Service Commission in an incomplete transmission facility siting application by New York Regional Interconnect, Inc., each indicate relieving transmission congestion in New York City and the lower Hudson Valley via transmission conduit from sources of electricity generated further North (in the US/Canadian grid) will raise electricity prices in upstate new York generally, and thus specifically in Chenango County, and further will distribute no electricity for consumption within Chenango County.

Therefore, as regards the portion of the draft Mid-Atlantic Area Corridor that now includes Chenango County, NY, that County is requested to be removed from the draft corridor polygon on the basis that such inclusion of Chenango County confounds two thirds of the intent of NIETC designation criterion A. That is, (A) the economic vitality and development of the corridor [*i.e. the draft portion constituting Chenango County*], or the end markets served by the corridor [*primarily Quebec, Canada and Ontario, Canada, and metropolitan New York City, NY*], may be constrained by lack of adequate or reasonably priced electricity. [*Chenango County, NY will be further constrained as to supply and price when price congestion to electrical sink areas within a Mid- Atlantic Area National Corridor is relieved.*]

Tenet (B):

(B)(i) economic growth in the corridor, or the end markets served by the corridor, may be jeopardized by reliance on limited sources of energy; and (ii) a diversification of supply is warranted;

Chenango County and the balance of the United States Counties currently included in the draft Mid-Atlantic Area National Corridor, are not documented to have economic growth jeopardized specifically by reliance on limited sources of energy, and diversification of energy supply to generate electricity is expanding due to market forces within the New York State portion of the designated Mid-Atlantic Area National Corridor [gas, wind, biomass] without the presence of a Mid-Atlantic Area National Interest Electric Transmission Corridor. Electricity is currently generated within the designated Mid-Atlantic Area National Corridor using coal, oil, gas, wind, hydro, and atomic nuclear energy sources. Experimentally, efficient-species biomass sourcing to generate electricity is under study as well (e.g. Siemens Inc., and Cornell U. /NYS College of Environmental Science and Forestry). Within the designated Mid-Atlantic Area National Corridor, preserving diversification of energy supply for electrical generation would be much better served alternatively via encouraging states (i.e. reauthorization of NYS Article X) and Federal relicensing of existing generating plants, and through incentives to site new generating plants of varied fuel classes. The current trend in the New York portion of the designated Mid-Atlantic Area National Corridor, that designation by the Secretary will only exacerbate, is abeyance in construction to bring licensed sites for electrical generation on-line, and retirement of older electricity generation plants rather than their refurbishment. On the other hand, the designation of Chenango County within

the Mid-Atlantic Area National Corridor may well contribute to the jeopardy of economic growth in one of the end markets [source end] of the corridor, due to reliance on limited sources of energy [hydro, in preponderance]. That is, the Provinces of Ontario and Quebec, with over 30 million consumers of electricity. Each of these Canadian provinces are integral infrastructurally within the North American electrification grid, have poor homeland grid reliability within the population /electrical sink areas in the southern portion of the provinces, rely disproportionately on hydro generated electricity, and are poorly interconnected East-West within Canadian territory. However, each province's large, and in the case of Quebec, only half-developed (3) capacity in hydro electricity generation is tied into the USA grid North-South via HVDC and HVAC transmission now in service. Other HVDC segments of an apparent HVDC over-grid now being planned, proposed for licensing, or are under construction for superimposition over the existing AC grid [e.g. Neptune HVDC along New Brunswick/ NE continental shelf, NYRI, Inc., Hydro-one/Hydro Que.inter-ties.] For example, Hydro-Quebec generated electricity can be wheeled controllably from upper Quebec and then via HVDC into the NEISO, and, currently less effectively, into the NYISO. Other USA domestic transmission projects including the NYRI HVDC line proposed to traverse 44 miles of Chenango County in the Mid-Atlantic Area National Corridor, will be able to collaboratively wheel electricity controllably, including Canadian hydro now paradoxically constrained within Canada's poorly interprovincially inter-tied grid, back into lower Quebec and Ontario via the NYISO/ New York State portions of the Mid-Atlantic Area National Corridor.

Therefore, as regards the portion of the Mid-Atlantic Area National Corridor that now includes Chenango County, NY, a rehearing is requested so that County may for a second time be requested to be removed from the corridor polygon on the basis that such inclusion of Chenango County would abet clearly imminent and counter-productive investment in the long-term sense, in HVDC transmission infrastructure in the Mid-Atlantic Area National Corridor that would ultimately have (i) a net effect of jeopardizing economic growth in the end markets served by the corridor due to over-reliance on limited sources of energy (i.e. hydro). That is, unless Chenango County is removed from the designation list of Counties in the Mid-Atlantic Area Corridor, the 9 million consumers of electricity in the New York City price-congested market are likely to become overly reliant on proportionally increased imports of relatively cheap Canadian Hydro-generated electricity wheeled from Extreme Northern Canada, and likewise, the 30 plus million residents of Ontario and Quebec are likely to become even more acutely reliant on hydro generated electricity as a class-limited source of energy within the already relatively unreliable Eastern Canadian portions of the NERC *de facto* regulatory territory. It could be a Canadian dream, but ultimately a North American nightmare, for US tax dollars enabled in EPACT 2005 and appropriated via DOE, to guarantee Return On Investment to Canadian government funding agencies and private Canadian investors for electricity transmission lines across Chenango County useful in the larger part for increased access and consumption of Northern Canadian hydro-generated electricity within lower Ontario and lower Quebec. That is, the designation drafts Chenango County, NY into an emerging economically more-secure scheme for the Canadian investors whereby Northern Canadian hydro-generated electricity is wheeled not

between poorly inter-tied southern Quebec and Ontario, but rather from northern Quebec through Vt., Mass, Conn., and NY and then back across the border for consumption in Ontario and Quebec. While a credible argument can be made that the Mid Atlantic Area National Corridor may increase access to hydro generated electricity in the price- congested New York City metropolitan area, paradoxically, the co-requisite (B) (ii) tenet of increased diversification of supply would be violated both in the Mid-Atlantic Area National Corridor and in the Canadian end market [that was not explicitly designated in the Draft Regulation (Fed. Reg. v.72 (87) May 7, 2007.] For example, Hydro-Quebec may ultimately be able to produce up to 44,000 MW of hydro-generated technical potential. (3). Further, the New York Power Authority has relied on hydro generated electricity for example from its Niagara Falls facility, as a proportionately significant source of electricity for the now price congested, metropolitan New York area within the draft Mid-Atlantic Area National Corridor since at least the 1950's.

Tenet (C):

(C) the energy independence of the United States would be served by the designation;

Chenango County should be removed from designation in the Mid-Atlantic Area National Corridor because this Central New York State County has no existing renewable energy infrastructure or identified reserves of renewable energy sources, of sufficient magnitude to contribute to the energy independence of the United States. Its appearance on the designation appears to be by virtue of a relative absence of large, county-transecting tracts of State- owned land, which as a class of ownership is not available to

FERC's power of eminent domain to site transmission projects under the statute. At present the only electric transmission project in Chenango County nearing application to the NYS Public Service Commission for consideration of siting in the 1000 MW threshold level of significance is a 190 mile intrastate HVDC project (New York Regional Interconnect, Inc.) reported to be planned for construction by moneys under the control of Hydro-Quebec and private Canadian investors. This project and the chosen HVDC technology appear cogent only as a node on a sequential- build scheme to extend the HVDC grid built under the aegis of the Canadian Provincial Governments of Quebec and Ontario (via government-owned Hydro-Quebec and Hydro-One, respectively) to by-pass the Canadian poorly- interprovincially -tied and poorly- reliable AC grid, and wheel northern Canadian hydro- generated electricity controllably to the markets in the US and back into the Southern Canadian markets. The HVDC technology chosen by NYRI is not new and so would not contribute to the frank modernization of the US electrification grid, as Congress envisioned would be a second tangible benefit of FERC's administration of the process of regulating new infrastructure in place as enabled by EPACT 2005. Furthermore, the HVDC technology chosen by NYRI in its intent to traverse Chenango County is an artifact of the poor suitability of Chenango County to be designated as a portion of a Mid-Atlantic Area National Corridor. Chenango County has a long (40 mile) North-South transverse glacial-cut U-shaped valley, generally only a couple of miles wide, that is relatively highly- populated and that offers the only continuous, relatively level topography attractive for above ground electric transmission facilities in the otherwise highly- eroded Alleghany Plateau. The proposed transmission project is HVDC ostensibly because that technology can be configured with a more-

narrow installed footprint than the prevalent AC facilities. The Chenango Valley is not a corridor, but a glacial rut. Chenango County simply does not have the topological carrying capacity to contribute as a designated locus for the multiple, collocated energy related infrastructural projects Congress envisioned, and FERC must deliver through regulation, in a National Interest Electric Transmission Corridor”

Therefore, Chenango County is requested to be removed from designation in a Mid-Atlantic National Corridor because it has no natural resources or current man-made infrastructure relevant to furthering the energy independence of the United States, and it is topologically unsuitable to contribute to emplacement of new, collocated energy related infrastructures of significant magnitude to meet the objective of the designation of Chenango County in the Mid-Atlantic Area National Corridor (NIETC).

Tenet (D):

(D) the designation would be in the interest of national energy policy;

The designation of the Chenango County New York polygon in the Mid-Atlantic Area National Corridor would not incrementally contribute materially (i.e. greater than 1000MW equivalent) to the amount of available extractable, renewable, or transmissible energy from any energy source indigenous to Chenango County, in the domestically produced market basket of energy resources available to further the goals of national energy policy. Further, Chenango County has no existing substantial electricity transmission capacity that could preferentially be upgraded or augmented, as was the intention of Congress in the enabling legislation. The ability of a corridor-designated county to provide incremental energy into the corridor-based system of synthesis and

transmission and consumption (Source and Sink designation methodology) appears to have been top of mind when the Secretary intentionally did not designate Oswego County New York in the draft Mid Atlantic Area National Corridor. While Oswego County has three atomic energy plants (Fitzpatrick facility) and a fourth under consideration, and has Lake Ontario windward shore that was mapped in DOE's supporting documents as amenable to commercially viable renewable wind energy development, OE officials at a public hearing in Rochester, NY apparently indicated to another attendee's query that Oswego County was not designated because its electricity generation infrastructure was delivering electricity at capacity. This must mean Oswego County was determined not to have sufficient incremental excess (surplus) energy generation capacity available to contribute to relief of price congestion (4).

Therefore, given the apparent precedent that a county like Oswego with established atomic and developable wind-generated renewable electricity failed the designation test, and Oswego County's inclusion is therefore not in the interest of national energy policy because it cannot supply some threshold surplus energy level to the grid, Chenango County also fails the designation test and its inclusion in a Mid-Atlantic Area National Corridor is therefore not be in the interest of national energy policy because it has no within county-based commercial facilities to produce any surplus electricity to the grid.

Tenet (E):

and; (E) the designation would enhance national defense and homeland security.

Designation of Chenango County New York within the Mid-Atlantic Area National Corridor would bring no distinguishing attributes to the corridor that would enhance a Mid-Atlantic Area National Corridor's contribution to national defense or homeland security. Indeed Chenango County is characterized by poor telecommunications facilities, poor East-West transportation routes and average North-South transportation routes along its entire breadth and length, and no airports likely to be capable of supporting national defense or homeland security scale equipment or operations, even those designed to preserve the energy infrastructure emplaced in the corridor itself! Indeed, among designated Mid-Atlantic Area National Corridor counties, Chenango County could probably be shown quantitatively and qualitatively to be a national defense and homeland security logistical deployment liability to the reliable utility of a Mid-Atlantic Area National Corridor.

Therefore, as designation of Chenango County within a Mid-Atlantic Area National Corridor would not enhance national defense or homeland security, the Secretary is requested to grant a rehearing, one issue of which should be to remove Chenango County from the roster of counties in the draft Mid-Atlantic Area National Corridor, and possibly to explain why Oswego County, NY should not be designated in the Mid-Atlantic NIETC.

Alternative Proposed:

The Secretary invited comments for alternatives to the published draft Mid-Atlantic Area National Corridor. Further, he cited in his remarks presented at the First Annual Grid

Week Conference 26 April 2007 that new transmission capacity must be considered as part of the solution. In response to that invitation I noted in my 06 July communication the entire eastern seaboard near offshore continental shelf a possible corridor that is not designated currently and that could substitute for the Mid-Atlantic Area National Corridor, and perhaps some as yet to be announced corridors in the future. The alternate corridor would have the added advantages of capability to support clearly newer renewable wind and wave electricity generation, modern transmission technology, as well as for the transnational transmission of Canadian hydro and US Nuclear sources. A strong benefit of this corridor is that siting such infrastructure would, as I currently understand it, obviate the politically an capital intensive use of Eminent Domain in populated areas and involve accommodation of only one US Federal Agency, the Army Corp of Engineers. A 21st century upgrade of the electrification grid should logically provide for an Atlantic Continental Shelf Area National Corridor. Nearly the entire near offshore Atlantic coastline is open for generation and transmission projects that can deliver electricity inland to the population centers. The continental shelf is a proven site for various forms of electricity generation using ocean kinetics, and as a bed for electrical transmission technology. Further, the near offshore continental shelf areas are already the object of intense national security and homeland security programs, which means the net expense of developing the corridor and the technology emplaced therein could be subsidized by the pre-existing and overarching needs to provide for the national and homeland security needs of such an Atlantic Continental Shelf Area National Corridor.

Thank you for the opportunity to request of DOE Office of Electricity Delivery and Energy Reliability and the Secretary of Energy, a rehearing on the designation of Chenango County , NY , and of the non-designation of Oswego County, NY , or the eastern seaboard near continental shelf, in the designation decisions resulting in the Mid-Atlantic National Interest Electric Transmission Corridor Designation.

Selected References:

- (1) Appendix A , CPA analyses: <http://anl.gov/nationalcorridor/index>
- (2) Appendix B: <http://anl.gov/nationalcorridor/index>
- (3) Pierre Fortin Canadian Hydropower Assn, in International Water Power and Dam Construction, July,2006 p.14
- (4) Rochester, NY public meeting on the draft designation at RIT Inn and Conference Center, attended by DOE's Meyer and Morton

Sincerely,

Philip C. Morin