WHITMAN BREED ABBOTT & MORGAN LLC

100 Field Point Road
P.O.Box 2250
Greenwich, Connecticut 06830
(203) 869-3800
Telecopier: (203) 869-1951

Writer's E-Mail Address:
amacleod@wbamct.com

Writer's Direct Dial Number:
(203) 862-2458

January 10, 2006

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, Connecticut 06051

Re: **Docket No. Life Cycle-2006 -- Connecticut Siting Council Investigation into the Life Cycle Costs of Electric Transmission Lines**

Dear Mr. Phelps:

Enclosed for filing in the above-referenced docket are an original and 20 copies of the Responses of ISO New England Inc. to Pre-Hearing Interrogatories, Set One.

Sincerely,

s/*Anthony M. Macleod*

Anthony M. Macleod

AMM:dcs
Enclosures

cc: Service List

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

1. Provide an overview of ISO-NE's regional transmission planning process and discuss how this process influences the transmission plans of transmission-owning utilities in Connecticut.

Response:

The ISO's regional system planning process (*i.e.*, review of system loads, resources, and transmission), and identification of Reliability Transmission Upgrades and Market Efficiency Transmission Upgrades is described in detail in Section II.48 ("Regional System Planning Process") of the ISO New England Inc. Transmission, Markets and Services Tariff, FERC Electric Tariff No. 3 ("ISO Tariff").[1] The planning process results in a Regional System Plan ("RSP") which is published annually and includes a list of ISO-supported transmission projects.[2] While the transmission-owning utilities in Connecticut are the appropriate entities to describe how any ISO actions may influence them (either in developing generic transmission plans or in developing an individual transmission proposal), the ISO below provides its summary of how transmission is developed in Connecticut, and New England generally.

As an overview, the ISO meets regularly throughout the year with interested regional stakeholders (which includes, for example, NEPOOL Participants and State Regulators) to review its assessment of regional system needs. This assessment includes a review of ISO's load forecasts as well ISO's review of system resources or capacity. As the ISO identifies system needs, the ISO works with Transmission Owners throughout New England to develop the most regionally cost-effective regulated transmission solutions to address those system needs, consistent with long-term system expansion plans. Ultimately, this process leads to the development of a detailed design (from the perspective of systems operation performance) of a transmission project. The ISO reviews such transmission designs pursuant to Section I.3.9 of the ISO Tariff to determine whether the transmission project may have a significant adverse effect upon the reliability or operating characteristics of the Transmission Owner's transmission facilities, the transmission facilities of another Transmission Owner, or the system of any Market Participant. The ISO makes its final decision as to whether or not to approve the transmission design after receiving the input of the NEPOOL Reliability Committee.

Finally, if market-based resources (*e.g.*, demand response, generation or merchant transmission) are developed to address the system need identified in the RSP, then the ISO may withdraw its support for the transmission project that the ISO had previously identified as responsive to the system need. In such an event, the Transmission Owner may recover its prudently-incurred costs in developing any such transmission proposal.

---

[1] The Tariff is available at: http://www.iso.ne.com/regulatory/tariff/index.html.
[2] RSP05 is available at: http://www.iso.ne.com/trans/rsp/2005/102005_RSP05_Final_redacted.pdf

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

2. Are member utilities transmission plans reviewed and approved by ISO-NE? If so, what aspects of these plans are subject to ISO-NE's review and approval?

Response:

The ISO does not broadly review generic transmission plans that transmission-owning utilities may develop on their own to meet either corporate objectives or state regulatory requirements. As discussed above, the ISO works with transmission-owning utilities to develop regionally effective transmission plans and their component transmission projects that address system needs identified in ISO's annual RSP.

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

3. Are all transmission plans reviewed by ISO-NE or does this apply only to higher-voltage facilities. If only certain facilities are subject to approval, what are the bases for determining which lines are subject to approval?

Response:

As described in response to Question 1 above, the ISO works with transmission owners to develop transmission solutions that address regional system needs. Typically, these are networked higher-voltage (115-kV or above) facilities, because regional system needs (whether reliability-based or market-based) usually require networked higher voltage transmission projects. Pursuant to Section I.3.9 of the ISO Tariff, the ISO ultimately, however, reviews all transmission projects that are to be constructed by transmission-owning utilities that may have a significant adverse effect upon the reliability or operating characteristics of the Transmission Owner's transmission facilities, the transmission facilities of another Transmission Owner, or the system of any Market Participant.

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

4. Identify and discuss any ISO-NE Planning Standards that could influence member utilities' transmission line capital costs.

Response:

As discussed in response to Question 1, the transmission-owning utilities in Connecticut are the appropriate entities to describe how any ISO actions may influence them. The ISO notes that CL&P and UI have responded to Siting Council interrogatories by responding, generally, that ISO-NE Planning Standards (referred to in ISO-NE as "Planning Procedures")[3] would not appear to impact lifecycle costs. The ISO would also note that its Planning Standards are generally directed to enforcing National, Northeastern, and New England-specific reliability requirements and efficiency, as well as good utility practice generally.

[3] ISO-NE Planning Procedures are publicly available at: http://www.iso-ne.com/rules_proceds/isone_plan/index.html.

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

5. Identify and discuss any ISO-NE Operating Standards that could influence member utilities' transmission line operating and maintenance costs.

Response:

As discussed in response to Question 1, the transmission-owning utilities in Connecticut are the appropriate entities to describe how any ISO actions may influence them. The ISO notes that CL&P and UI have responded to Siting Council interrogatories by responding, generally, that ISO-NE Operating Standards (referred to in ISO-NE as "Operating Procedures")[4] would not appear to impact lifecycle costs. The ISO's Operating Standards are generally directed to enforcing National, Northeastern and New England-specific reliability requirements and efficiency, as well as good utility practice.

[4] ISO-NE Operating Procedures are publicly available at: http://www.iso-ne.com/rules_proceds/operating/index.html.

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

6. Identify and discuss any ISO-NE Maintenance Standards that could influence member utilities' transmission line operating and maintenance costs.

Response:

Any ISO-NE procedures relating to maintenance would be referenced in its Planning Procedures or Operating Procedures. As such, please see responses to Questions 4 and 5 above.

Responses to ISO-NE Pre-Hearing Interrogatories, Set One

7. What is ISO-NE's position on the appropriate role of High Voltage Direct Current (HVDC) transmission facilities in the New England transmission system?

Response:

The ISO directs the Council to the reports filed with the Council in Docket 272 by the Reliability and Operability Committee (the "ROC") on August 16, October 8 and December 20, 2004 (the "ROC Reports"). ISO was a member of the ROC and concurs in the statements made in the ROC Reports regarding the use of HVDC (see particularly the December 20, 2004 ROC Report, pp. 29-31), which may be summarized as follows:

The use of HVDC lines is well suited for the interconnection of two electric systems (e.g., the inter-tie of New England and New York via the Cross Sound Cable, or the line that connects New England to hydroelectric energy from Hydro-Quebec). These uses in New England are consistent with the use of HVDC outside of New England and around the world, which is to link systems of different frequencies and for scheduled point-to-point deliveries from one system to another. While HVDC technology can thus work for applications such as power transfers between regions, and works best to optimize a single factor, it has never been applied to address multiple factors such as thermal, stability, voltage, short circuit and harmonic issues in multiple locations within a sub-region in a practical and reliable manner. There has been little, if any, integration of HVDC within AC systems, primarily because HVDC lines do not automatically respond to changing system conditions. In contrast, AC lines will respond to changing system conditions, and automatically support the system during contingency events and load cycling without operator intervention. Due to their inherent complexity and large number of components, HVDC facilities in general have lower availability and reliability than AC facilities. Converter station failure modes can also be quite extensive and result in lengthy outages.

HVDC is not readily expandable for either the integration of load stations or versatility in generation interconnection and operation. HVDC increases the complexity and decreases the flexibility to address future system expansion. For example, HVDC does not allow system planners to add a load serving substation without the use of a new HVDC converter, and interconnecting new generation is also likely to require the generator to purchase a new converter. High generator interconnection costs could hinder the development of a competitive market.

As a result, in circumstances where the primary purpose of a transmission addition is to move power from one place to another (even possibly within a region), uncomplicated and limited application of HVDC lines may be a reasonable transmission alternative. Factors such as the complexity of operation and the availability of complementary facilities to support the integration of generation and load stations would need to be considered on a case-by-case basis.

Status Granted	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Party	Northeast Utilities Service Company	Robert E. Carberry Maqnager, Transmission Siting & Permitting Transmission Engineering and Operations Northeast UtilitiesService Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-6774 carbere@nu.com Elizabeth A. Maldonado, Esq. Associate General Counsel Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5664 (860) 665-5504 - fax maldoea@nu.com Anthony M. Fitzgerald, Esq. Robert S. Golden, Jr., Esq. Carmody & Torrance LLP 50 Leavenworth St., P.O. Box 1110 Waterbury, CT 06721-1110 (203) 573-1200 (203) 575-2600 - fax afitzgerald@carmodylaw.com rgolden@carmodylaw.com
Party	The United Illuminating Company	Michael A. Coretto Director, Regulatory Strategy & Retail Access The United Illuminating Company 157 Church Street New Haven, CT 06506-0901 (203) 499-2969 (203) 499-3625 - fax uiregulatory@uinet.com Linda L. Randell, Esq. Bruce L. McDermott, Esq. Wiggin & Dana LLP One Century Tower New Haven, CT 06508-1832 (203) 498-4322 (203) 782-2889 - fax lrandell@wiggin.com bmcdermott@wiggin.com

	Connecticut Municipal Electric Energy Cooperative	Maurice R. Scully, Executive Director CMEEC 30 Stott Avenue Norwich, CT 06360-1526 (860) 889-4088 (860) 889-81589 - fax mscully@cmeec.org
	Department of Public Utility Control	-INTERDEPARTMENTAL- Cindy Jacobs, Research Department of Public Utility Control Ten Franklin Square New Britain, CT 06051 cindy.jacobs@po.state.ct.us
	Connecticut Center for Advanced Technology (CCAT)	Joel M. Rinebold Connecticut Center for Advanced Technology 111 Founders Plaza, Suite 1002 East Hartford, CT 06108 (860) 291-8832 (860) 291-8874 - fax jrinebold@ccat.us paresta@ccat.us
Intervenor	Connecticut Energy Advisory Board (CEAB) c/o Gretchen Deans CERC 805 Brook Street, Bldg. 4 Rocky Hill, CT 06067 860-571-7147 860-571-7150 (fax) gdeans@cerc.com	Mary J. Healey Consumer Counsel Ten Franklin Square New Britain, CT 06051 (860) 827-2900 (860) 827-2929 – fax mary.healey@po.state.ct.us Heather Hunt, Esq. 242 Whipporwill Lane Stratford, CT 06614 (203) 380-1477 hfhunt@optonline.net Mr. Brian Abbanat LaCapra Associates 20 Winthrop Square Boston, MA 02110 (617) 367-6500 babbanat@lacapra.com
	Environment Northeast (ENE)	Roger Koontz, Esq. Environment Northeast 15 High Street Chester, CT 06412 860-526-4852 rkoontz@env-ne.org
Party	Attorney General Richard Blumenthal	Michael C. Wertheimer Assistant Attorney General Office of the Attorney General 10 Franklin Square New Britain, CT 06051 (860) 827-2603 (860) 827-2893 michael.wertheimer@po.state.ct.us