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July 11, 2005

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

Re: <u>Docket No. F-2005 – 2005 Ten Year Forecast Of Electric Loads And Resources</u>

Dear Mr. Phelps:

On behalf of ISO New England Inc. ("ISO"), I am enclosing herewith ISO's responses to interrogatories propounded to The Connecticut Light and Power Company ("CL&P") and ISO by the Connecticut Energy Advisory Board ("CEAB") on June 20, 2005. ISO has not responded to certain interrogatories (CEAB 7, 16, 28-31, 33-34 and 61) which appear to be directed toward CL&P.

Many of the interrogatories request information which is beyond the scope of this proceeding, is already publicly available or would be unduly burdensome to provide. ISO has accordingly registered appropriate objections to the interrogatories. However, despite its objections and without waiving them, ISO has nevertheless tried to provide what information it can to CEAB under the time constraints of this proceeding.

Pursuant to discussion with Siting Council staff regarding bulk filing, we are submitting an original and one copy of certain of ISO's responses and accompanying materials.

Please contact me if you have any questions or need additional information.

Sincerely,

s/Anthony M. Macleod

Anthony M. Macleod

#### **Enclosures**

cc: Matthew Goldberg, Esq.

Mr. David Ehrlich Mr. Eric Johnson Service List

# **CERTIFICATE OF SERVICE**

This is to certify that a copy of the foregoing has been sent via email or first class mail, postage prepaid, on July 7, 2005, to:

	Status Holder	Representative
Status Granted	(name, address & phone number)	(name, address & phone number)
Party	Northeast Utilities Service Company	Stephen Gibelli, Counsel Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5513 (860) 665-5504 - fax gibels@nu.com
		Chris Bernard Senior Regulatory Planning Analyst Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-5957 (860) 665-3314 - fax bernacr@nu.com
Party	The United Illuminating Company	Michael Coretto Director – Regulatory Strategy & Retail Access The United Illuminating Company 157 Church Street New Haven, CT 06506-0901 (203) 499-2000 (203) 499-3664 – fax  Linda L. Randell, Esq. Wiggin & Dana LLP One Century Tower New Haven, CT 06508-1832 (203) 498-4322 (203) 782-2889 - fax lrandell@wiggin.com
Party	Connecticut Municipal Electric Energy Cooperative	Maurice R. Scully, Executive Director Connecticut Municipal Electric Energy Cooperative 30 Stott Avenue Norwich, CT 06360-1526 (860) 889-4088 (860) 889-81589 - fax

	Status Holder	Representative
Status Granted	(name, address & phone number)	(name, address & phone number)
Party	Bridgeport Energy LLC	Brad Porlier General Manager Bridgeport Energy LLC 10 Atlantic Street Bridgeport, CT 06604 (203) 332-8694 (713) 627-5992 - fax
Party	PSEG Power LLC	Harold W. Borden Vice President and General Counsel PSEG Power LLC 80 Park Plaza Newark, NJ 07102-4194 (973) 430-6968 (973) 643-6026 – fax h.borden@pseg.com
Party	NRG Energy, Inc.	Judith E. Lagano NRG Energy, Inc. P. O. Box 1001 1866 River Road Middletown, CT 06457 (203) 854-3626 (203) 854-3658 - fax
Party	Northeast Generation Company (NGC)	Frederic Lee Klein, Esq. Assistant General Counsel Select Energy 107 Selden Street Berlin, CT 06037 (860) 665-2926 (860) 665-2330 – fax
Party	Department of Public Utility Control	-INTERDEPARTMENTAL- Cindy Jacobs, Research Department of Public Utility Control Ten Franklin Square New Britain, CT 06051
Party	Lake Road Generating Company, L. P	James T. Carlton, General Manager Lake Road Generating Company, L. P. 56 Alexander Parkway Dayville, CT 06241 (860) 779-8300 (860) 779-8360— fax
Party	PPL Wallingford Energy LLC	Lee Hoffman, Esq. Pullman & Comley, LLC 90 State House Square Hartford, CT 06103-3702 (860) 424-4346 (860) 424-4370 - fax <a href="mailto:lhoffman@pullcom.com">lhoffman@pullcom.com</a>

	Status Holder	Representative
Status Granted	(name, address & phone number)	(name, address & phone number)
Party	Connecticut Resources Recovery Authority	Christopher J. Fancher Facilities Engineer Connecticut Resources Recovery Authority 100 Constitution Plaza, 17 <sup>th</sup> Floor Hartford, CT 06103-1722 (860) 757-7700 (860) 727-4141 – fax
Intervenor	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 <u>jrinebold@ccat.us</u> <u>paresta@ccat.us</u>
Intervenor	Connecticut Energy Advisory Board (CEAB) Office of Policy and Management 450 Capitol Avenue ATTN: CEAB Hartford, CT 06106	Mary J. Healey Consumer Counsel Ten Franklin Square New Britain, CT 06051 (860) 827-2900 (860) 827-2929 – fax occ.efile@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  Mr. John Hutts GDS Associates, Inc. 1850 Parkway Place, Suite 800 Marietta, GA 30067 (770) 425-8100 x 112

CEAB-1: Please identify and provide a copy (including supporting documentation) of ISO

New England's most recent load forecast, as will be used for purpose of planning generation and/or transmission infrastructure improvements in Connecticut. Provide specific information that details all assumptions included in this forecast pertaining to existing and planned demand-side management, conservation, demand-response,

or interruptible load measures.

Response: ISO's most recent load forecast is attached to the pre-filed testimony of David

Ehrlich. The forecast and supporting documentation can be found on ISO's website.

Please see <a href="http://www.iso-ne.com/trans/celt/fsct">http://www.iso-ne.com/trans/celt/fsct</a> detail/index.html.

CEAB-2. Please provide a copy of ISO New England's draft Regional System Plan 2005

recommendations for Connecticut, with any supporting analyses and documentation

that is available.

Response: The Regional System Plan 2005 Report ("RSP05") is not yet available. ISO can

provide a copy to CEAB when it is available.

CEAB-3: Please provide a copy of the most recent "FERC 715" report(s) addressing

transmission issues in Connecticut.

Response: Data contained in the FERC 715 Report contains critical energy infrastructure data

which is subject to security precautions. While ISO therefore declines to provide the report, the text in the recently-filed FERC 715 documents references the Regional System Plan (formerly the Regional Transmission Expansion Plan) with respect to transmission issues in Connecticut and is posted on a password-protected location

on the ISO New England website at http://www.iso-

ne.com/trans/sys studies/pwr sys info/ferc 715/2005/index.html#top. Access to

this information is available by contacting ISO-NE Customer Service at

custserv@iso-ne.com.

CEAB-4:

Please provide copies of the most recent studies performed by ISO New England that assess the need for additional transmission infrastructure in the 2005 to 2014 period in (a) Connecticut and (b) central and western Massachusetts and Rhode Island (to the extent that such needs have the potential to influence Connecticut's needs or infrastructure, or the ability for Connecticut generation or load serving entities to import/export power from/to the rest of New England). This response should include the most recent studies related to the Southern New England Reinforcement project and any associated studies that would integrate the Lake

Road facility into the Connecticut system.

Response:

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, The Southern New England Transmission Reinforcement Analysis, which is studying ways to better integrate load and resources within western and southeastern Massachusetts, Rhode Island and Connecticut, is in progress and a report will not be available until early 2006. The integration of the Lake Road facility into Connecticut is part of that study.

CEAB-5:

(a) Please provide a copy of ISO New England's current assessment (including supporting documentation) of (i) Southwest Connecticut's and (ii) the rest of Connecticut's need for additional capacity resources based on consideration of Connecticut's share of installed reserves necessary to meet the New England region's "objective capability." To the extent that there are any limitations on where such additional capacity can be added to be effective in meeting the identified need, indicate all such limitations and provide supporting analyses that form the basis for determining those limitations. (b) Please describe whether, how, and in what quantity the contributions (i.e., MW's) from existing and planned demand-side and distributed resources are included in that need calculation.

Response:

The RSP05 Report is not available at this time.

CEAB-6:

(a) Please provide a copy of ISO New England's current assessment (including supporting documentation) of (i) Southwest Connecticut's and (ii) the rest of Connecticut's need for additional capacity resources based on consideration of operating capacity standards. To the extent that there are any limitations on where such additional capacity can be added to be effective in meeting the identified need, indicate all such limitations and provide supporting analyses that form the basis for determining those limitations. (b) Please describe whether, how, and in what quantity the contributions (i.e., s) from existing and planned demand-side and distributed resources are included in that need calculation.

Response:

The RTEP04 report is available on the ISO's password-protected website. Access to this information is available by contacting ISO Customer Service at custserv@iso-ne.com.

The Connecticut Energy Plan Framework is available on the ISO website at: <a href="http://www.iso-">http://www.iso-</a>

ne.com/nwsiss/pr/2005/CT Energy Report 01 04 05.pdf

CEAB-8:

(a) Please indicate whether (i) CL&P, (ii) U1, (iii) ISO New England, or (iv) some other entity has completed (or is completing) a recent study of opportunities for distributed generation resources to be sited in Southwest Connecticut or Connecticut. If so, please provide a copy of any and all such studies performed by or in the possession of CL&P or ISO New England. (b) Please indicate whether CL&P, UI or ISO-NE possesses or has access to such a study performed b any other entity. If so, please provide a copy of such study or studies.

Response:

ISO has not done a study of opportunities for distributed generation

resources to be sited in SWCT or CT.

CEAB-9: Please provide a copy of the most recent study of the maximum

achievable cost effective potential for demand response programs to be

implemented in Connecticut.

Response: Section 5 of the Independent Assessment of Demand Response Programs

of ISO New England filed with the FERC on December 31, 2004,

provides an estimate of the market potential for demand response for all of New England, but it does not provide any separate breakdown for the

State of Connecticut. The report is available at ISO's website at

http://www.iso-ne.com/regulatory/ferc/filings/2004/ER02-2330 12-30-

<u>04.pdf</u>

CEAB-10: Please provide a copy of the most recent study of the maximum

achievable cost effective potential for electric peals load management

programs in Connecticut.

Response: ISO has not conducted such a study.

CEAB-11: Please provide a copy of the most recent study of the maximum

achievable cost effective potential for renewable energy resources to be

implemented in Connecticut.

Response: ISO has not conducted a study of the maximum achievable cost effective

potential for renewable energy resources to be implemented in

Connecticut.

CEAB-12:

Please identify the name, capacity (), status and expected completion date (or approval dates) of all requests for system impact studies for (a) generation resources and (b) transmission infrastructure that have been filed with ISO New England in relation to facilities to be located in Connecticut and regarding which construction has not yet begun. In responding to this question, please provide full information relative to the status of the (i) Meriden, (ii) Towantic and (iii) Kleen facilities (among others) and state the milestones that must be met (e.g., ISO New England approvals) before for developers can begin commercial operation.

Response:

The status of all interconnection studies can be found on the ISO website

at <a href="http://www.iso-">http://www.iso-</a>

ne.com/trans/nwtrns inter/Interconnection Study status%206-27-05.xls. See also http://www.iso-ne.com/trans/nwtrns inter/nw inter/index.html.

CEAB-13: (a) Has ISO New England initiated, or does it plan to initiate, a study to

determine the amounts (MWs) of generation that could be added in Southwest Connecticut prior to the completion of the Bethel to Norwalk (Phase I) or the Middletown to Norwalk (Phase II) Please explain. (b) If

so, please provide a copy of such study.

Response: ISO has not initiated, and does not plan to initiate, a study to determine the

amounts of generation that could be added in Southwest Connecticut prior to the completion of the Bethel to Norwalk or the Middletown to Norwalk

lines.

CEAB-14: Please identify and provide a copy (with supporting documentation) of (a) the ISO load forecast (including supporting documentation) and (b) other analyses used to establish the need for proposed transmission projects described in Table of CL & P's March 1, 2005 filing in the instant

docket.

Response: (a) See information provided in response to CEAB-1.

(b) ISO defers to CL&P for a response to this question.

CEAB-15:

Please confirm (a) that the CELT04 load forecast is used in transmission planning in RTEP04, and (b) that the CELT05 forecast will form the basis for transmission planning in RTEP05. (c) Please provide a copy of each of the above-referenced documents.

Response:

- (a-b) All study cases are based on the CELT forecast that is current at the time the study is first scoped out and the study cases are first created. If a significant change in the CELT forecast occurs, the projects are reevaluated based on the new data.
- (c) The 2005 CELT is available on the ISO's Web site at: <a href="http://www.iso-ne.com/trans/celt/report/index.html">http://www.iso-ne.com/trans/celt/report/index.html</a>.

The 2004 CELT is available at: <a href="http://www.iso-ne.com/trans/celt/report/2004/index.html">http://www.iso-ne.com/trans/celt/report/2004/index.html</a>

CEAB 17:

Regarding the RTEP04 Executive Summary, at 4: How does ISO New England determine when "adequate market solutions" have not developed "in a timely manner," such that "regulated transmission solutions" may be required to ensure reliability or wholesale market efficiency? Please explain, for example, the criteria for identifying market failures and haw far in advance (or after) of a reliability problem ISO New England acts to implement a regulated solution.

Response:

The transmission planning process determines the transmission plans needed to address reliability concerns based on how resource development has responded to the New England market environment. Implementation must begin with sufficient lead-time for a transmission solution to be in service when it is needed. The ISO tariff contains provisions to address transmission upgrade deferral or cancellation when a market response subsequently addresses the need that justified the upgrade.

CEAB-18: Regarding RTEP04 Key Findings, at 6 (n.3): Please identify the analysis

by which ISO New England determined that additional capacity was needed beginning June 1, 2004 through the Summer of 2007 "to help fill a reliability gap until a long-term solution to Southwest Connecticut's

reliability problem is in place."

Response: The report 'Final Report on Evaluation and Selection of Resources in

SWCT RFP for Emergency Capability: 2004-2008" is available on the

ISO Web site at http://www.iso-

ne.com/genrtion resrcs/reports/rmr/swct gap rfp fnl rpt10-05-04.doc.

CEAB-19: Please confirm that all of ISO New England's plans for transmission

infrastructure improvements in Connecticut are identified in its RTEP04

summary report.

Response: All of the plans for transmission infrastructure in Connecticut that ISO has

currently identified are included in the project listing associated with the RTEP04 report. This listing includes the full range of projects – from conceptual (very little or no study work completed) projects to projects recently placed in service. Currently this listing is updated three times a

year. However, this does not suggest that all of Connecticut's

transmission needs have been fully identified; additional on-going studies may likely identify other needed transmissions system reinforcements.

**CEAB-20:** 

(a) Please identify the major components and locations of the Southern New England Reinforcement Project ("SNERP") and their locations. (b) Please identify which of these are needed to ensure system reliability and which are needed to ensure market efficiency. (c) Please provide the analysis that establishes the need for each major component of the SNERP. (d) Please identify the currently projected in-service date for each major component of the SNERP. (e) Please provide an analysis that provides a current projection of Connecticut's need for additional capacity resources with and without the SNERP. (f) Please provide a current critical path schedule that describes the permitting and other milestones that must be achieved to bring each major component of the SNERP into service, and describe the progress to date relative to those milestones.

Response:

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, ISO responds that, as stated in response to CEAB-4, the Southern New England study work has not progressed to the point where specific projects have been determined, and a subsequent sequencing plan established. At this time, it is anticipated that all projects resulting from this analysis will be reliability-based.

CEAB-21: (a) Please provide (a) the 2004 annual load duration curve and (b) the

associated hourly peak load data for (i) Connecticut and (ii) Southwest

Connecticut.

Response: The 2004 hourly data for Connecticut is available on ISO's website at

http://www.iso-ne.com/markets/hstdata/znl\_info/hourly/index.html.

The annual load duration curve can be developed with the hourly data available at this site and therefore, the load duration curve is not submitted

with this response.

The 2004 hourly data for SWCT is not publicly available.

CEAB-22:

(a) Please provide, for each year through 2014, an analysis that demonstrates the number of hours per year during which operable capacity levels are projected to be below the established NERC standards in (i) Connecticut and (ii) Southwest Connecticut. (b) Please provide, for each year through 2014, an estimate of the costs of unserved load that would be incurred (e.g., at the "societal" level) if load shedding were necessary to preserve operable capacity at appropriate levels at all times (e.g., so as to avoid any below-standard levels identified in the response to Part (a), above). (c) Please provide copies of the load shedding policies that would apply if operable capacity levels fall below established standards.

Response:

- (a-b) No such analysis or estimate has been performed or calculated.
- (c) Please see ISO New England Operating Procedure 7 at http://www.iso-ne.com/rules proceds/operating/isone/index.html

CEAB-23: Please provide a copy of ISO New England's January 4, 2005 report

entitled "Connecticut Energy Plan Framework: Recommended Solutions

and Actions for the State of Connecticut."

Response: ISO's January 4, 2005 report entitled "Connecticut Energy Plan

Framework: Recommended Solutions and Actions for the State of Connecticut" (the "Connecticut Energy Plan") is available at

http://www.iso-

ne.com/nwsiss/pr/2005/CT Energy Report 01 04 05.pdf

CEAB-24:

Refer to ISO New England's January 4, 2005 report entitled "Connecticut Energy Plan Framework: Recommended Solutions and Actions for the State of Connecticut," at 7: (a) Please provide a copy of the "operable capacity analyses conducted during RTEP04" that resulted in a projected shortfall of 134 MW in Southwest Connecticut in 2044 to meet the 90114 summer peak load forecast plus operating reserve requirements. (b) Please identify the peak load forecast, including the assumptions regarding existing or planned demand-side measures, on which the "operable capacity analyses conducted during RTEP04" is based (e.g., is it the same peak load forecast as is presented in the April 2044 CELT Report?). (c) Please explain the basis for deriving the distribution of peak loads as a function of weather conditions.

Response:

- (a-b) Please contact ISO Customer Service at <u>custserv@iso-ne.com</u> for access to the password protected website location for the RTEP04 Report.
- (c) The distribution of loads is based on a distribution of the weather for that week of the year and the regression coefficient on weather from the short-run peak model. The distribution of weather is based on over 35 years of historical weather data.

**CEAB-25**:

Response:

In regard to ISO New England's January 4, 2005 report entitled "Connecticut Energy Plan Framework: Recommended Solutions and Actions for the State of Connecticut," at 7: (a) Please indicate whether certain resource proposals submitted in response to a "GAP RFP" were rejected because it was determined that the location(s) of the proposed resource(s) was problematic relative to the identified need. (b) Please identify the specific areas in which GAP RFP resources were found to be needed, or not, (c) Please explain how the suitability of locations for GAP RFP resources were identified.

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, ISO makes reference to the information at

http://www.iso-

ne.com/genrtion resrcs/reports/rmr/swct gap rfp fnl rpt 10-05-04.doc

**CEAB-26**:

In regard to ISO New England's January 4, 2005 report entitled "Connecticut Energy Plan Framework: Recommended Solutions and Actions for the State of Connecticut," at 8: (a) Please describe The "aggressive demand response and conservation programs" that Connecticut electric companies are implementing in order to hedge against a possible delay in the installation of new transmission facilities. Please indicate how those programs are reflected in the need for capacity analysis included in that report. (b) Are any of these demand response or conservation programs targeted specifically at reducing summer peak electric demand? Please explain.

Response:

- (a) The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, ISO refers to conservation and load management programs approved by the Department of Public Utility Control in Docket No. 03-11-01, DPUC Review of The Connecticut Light and Power Company and The United Illuminating Company Conservation and Load Management Programs and Budgets for 2004. ISO defers to Connecticut's electric companies for further response as the marketing of demand response and conservation programs to retail customers is directly under their control.
- (b) Information about demand response resources that are part of the Southwest Connecticut "Gap" RFP is provided in the response to CEAB-25. The "Gap" RFP demand response resources respond to capacity deficiencies when certain actions of ISO New England Operation Procedure No. 4 are implemented. These demand response resources are not targeted specifically at reducing summer peak electric demand.

**CEAB-27**:

In regard to ISO New England's January 4, 2005 report entitled "Connecticut Energy Plan Framework: Recommended Solutions and Actions for the State of Connecticut," at 8 (Figure 1, Note 2): (a) Please describe, for each year through 2014, the generating capacity (i.e., MWs) that will be "unbottled" with the implementation of the Southwest Connecticut Reliability Project (Phase 1 and/or Phase 2). (b) Please explain how this "unbottled" capacity is different from the "Southwest CT Reliability Project" Phase 1 and Phase 2 capacity represented in Figure 1.

Response:

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, ISO responds as follows:

- (a) Please see Attachment D to the "Connecticut Energy Plan Framework: Recommended Solutions and Actions for the State of Connecticut" referenced in the interrogatory.
- (b) The "unbottled" capacity in Appendix D is the same as the "Constrained MW Relief" represented in Figure 1.

**CEAB-32:** 

In regard to CL&P's filing dated March 1, 2005, at I-3, 4: Please provide each electric utility's and ISO New England's current projection of base case electricity prices (i.e., for all components of retail rates) in (a) Southwest Connecticut and b) for the rest of Connecticut. Please provide the price of electricity projections used as input to the most recent CL&P and ISO New England load forecasts presented in this proceeding and include the date and source for those projections. Please indicate whether the price of electricity inputs in the load forecasts include the effects of LICAP.

Response:

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. However, without waiving such objection, ISO's forecast of energy holds electricity prices constant at the last available historical year based on data from the US Department of Energy.

CEAB-35:

(a) Must Connecticut have sufficient resources to meet operating capability standards in order to ensure a reliable supply of electricity? Please explain. (b) Please provide a document that describes how operating capability requirements are determined for (i) Southwest Connecticut and (ii) the rest of Connecticut. (c) Please indicate whether and to what degree Connecticut has any current or projected deficiencies in operating capability requirements. (d) Would any penalties accrue to Connecticut entities (e.g., load serving entities) if Connecticut fails to meet established operating capability standards (i) now, or (ii) in the future. Please explain.

Response:

- (a-c) Operating capacity analysis is not a standard. ISO's operable capacity analysis as presented in RTEP 04 was conducted to determine whether an area of the system has adequate resources for system operators to operate the system viably given a defined set of system conditions. Please contact ISO-NE Customer Service (<a href="custserv@iso-ne.com">custserv@iso-ne.com</a>) for access to the password-protected website location for the RTEP04 Report. Also see ISO New England Operating Procedure 19 at <a href="http://www.iso-ne.com/rules\_proceds/operating/isone/index.html">http://www.iso-ne.com/rules\_proceds/operating/isone/index.html</a> and ISO New England Planning Procedure 3, Section 3 at <a href="http://www.iso-ne.com/rules\_proceds/isone\_plan/index.html">http://www.iso-ne.com/rules\_proceds/isone\_plan/index.html</a>.
- (d) Currently there are no penalties and there are no established operating capability standards. ISO cannot state what penalties or standards there may be at any time in the future.

**CEAB-36**:

In regard to ISO New England's LICAP proposal (i.e., as approved by FERC's administrative law judge in an Initial Decision issued on June 15, 2005: (a) Has ISO New England assessed the implications for existing Connecticut generation of investments in new capacity that are intended to "move" the total capacity serving Connecticut from (i) the capacity target (i.e., "CTarget"), to (ii) a point further to the right along the demand curve (i.e., representing even greater system capacity levels, as may be necessary to achieve both operating capability requirements and system reliability). In short, has ISO New England evaluated whether investments can be made to satisfy operating capability requirements without undermining revenues to existing Connecticut generation, and thus Connecticut capacity markets? (b) Please explain the response to Part (a). (c) Please provide copies of all studies that address this issue.

Response:

The information requested is beyond the scope of this proceeding, and ISO therefore objects to the foregoing interrogatory. Notwithstanding this objection, ISO has not conducted such an assessment.

Please provide a copy of ISO New England's Short-Run. Forecast of Energy Peak Load (April 2005). CEAB-37:

See the information provided in response to CEAB-1. Response:

Please identify the time period on which the statistics for the net energy CEAB-38:

for land model on page 6 of the report were derived.

The short-run net energy for load model was based on data from first quarter 1980 to the  $4^{\rm th}$  quarter 2004. Response:

Please identify the software package used to generate the model coefficients presented on page 6 of the report. CEAB-39:

Response: Metrix ND.

CEAB-40: Please provide a copy of the computer output pages from the model

specification presented on page 6 of the report.

Response: These materials are not publicly available and the information contained

therein is subsumed by information contained in the report itself and would be duplicative of such information. ISO therefore objects to this

request.

CEAB-41:

(a) Please indicate if ISO New England breaks its projections of net energy for load and peak demand down by individual state or sub-regions.(b) If so, please describe the process and provide all electronic files or working papers that present the steps taken to break the forecast out by area.

Response:

- (a) ISO forecasts state net energy for load and peak demand. Sub-area forecasts are developed using the state forecasts and data provided by the Transmission Owners.
- (b) Please see the website reference provided in response to CEAB-1.

#### CEAB-42:

(a) Regarding the economic outlook, were projections of disposable income and number of households obtained from any sources other than Economy.com? (b) If so, how do they compare to those developed by Economy.com. (c) If projections of income and number of households were not collected from other sources, please explain why they were not.

### Response:

- (a) Projections of households and disposable income were obtained from Global Insights and the New England Economic Project.
- (b) The New England Economic Project projections were consistent with Economy.com's projections. The Global Insight income projections were higher than Economy.com's projections for all states. The Global Insight household projections were higher than Economy.com's projections for some states and lower for others.
- (c) ISO believes the sources from which its projections were obtained are reliable and serve as a reasonable cross-check for forecasting purposes.

CEAB-43:

(a) Please identify and provide the heating and cooling degree day values collected from the eight weather stations referenced on page 3 of the report. (b) Provide the weights used to compute the New England aggregates and a description of how the weights were derived.

Response:

The eight weather station heating and cooling degree day values for 2004 and 2005 are available on the ISO website at <a href="http://www.iso-ne.com/markets/hstdata/rpts/degree">http://www.iso-ne.com/markets/hstdata/rpts/degree</a> days/index.html

The weighted value for the New England averages is calculated using the following factors derived from historical electricity sales data:

Station	State	Code	Closest Load Zone	NE Winter Weight	NE Summer Weight
Boston	MA	BOS	NEMASSBost	0.201	0.214
Bridgeport	CT	BDR		0.070	0.075
Burlington	VT	BTV	VT	0.046	0.040
Concord	NH	CON	NH	0.058	0.055
Portland	ME	PWM	ME	0.085	0.082
Providence	RI	PVD	RI & SEMASS	0.049	0.048
WindsorLks	CT	BDL	CT	0.277	0.277
Worcester	MA	ORH	WCMASS	0.214	0.209

**Note:** The weather station corresponding to each load zone is presented as the "best selection" based on geographical proximity to the load zone and does not represent "actual weather" for the load zone but only for the listed weather station. No analysis of these weather stations to determine the appropriateness of the station location for each load zone was conducted by ISO New England nor are these weather stations used in analyses or load zone forecast other than the eight station weighted New England average used for NEPOOL.

CEAB-44:

(a) Please discuss the assumption that real electricity prices in the New England area are projected to remain flat throughout the forecast period. (b) Upon what information is the assumption based, and did the assumption include input from staff at the individual electric utilities?

Response:

ISO does not have a price of electricity forecasting model and therefore assumes flat electricity prices. The assumption was reviewed and discussed by the NEPOOL Load Forecasting Committee.

CEAB-45:

(a) Please provide the data used to estimate the peak demand model coefficients presented in ISO\_NE\_2005 Forecast\_Data.xls [Short\_Run\_Model\_Coefficients]. (b) Also identify the software used to estimate the summer and winter peak demand models, and provide the computer outputs from the regression process.

Response:

Insofar as the data and computer outputs are not publicly available and such information is subsumed in the forecast information already provided in the referenced document, ISO objects to the foregoing interrogatory. However, without waiving such objection, ISO makes reference to the basic daily peak and associated weather data available on the ISO website at <a href="http://www.iso-ne.com/markets/hstdata/znl">http://www.iso-ne.com/markets/hstdata/znl</a> info/daily/index.html.

The coefficients were estimated from an ISO computer program written in PROMULA.

CEAB-46: Please explain how ISO-NE forecasts peak loads for years beyond the

short-run forecast horizon.

Response: The long-run peak loads are calculated using the long-run energy forecasts

and the peak to energy ratio from the last year of the short-run forecast.

CEAB-47: Please explain how the short-run and long-run load forecasts are

integrated.

Response: See the response to CEAB-46.

CEAB-48: Regarding the peak load models, please explain how the summer CLI and

C-BLI indexes are developed and provide the data necessary to compute

the values for years 1992-2004.

Response: The CLI and C-BLI (and HLI and H-BLI) are discussed in the forecast

documentation referenced in the response to CEAB-1. The link to the data

is referenced in the response to CEAB-45.

CEAB-49: Regarding the peak load models, please explain how the winter HLI and

H-BLI indexes are developed and provide the data necessary to compute

the values for years 1992-2004.

Response: See the response to CEAB-48.

Please provide a copy of ISO New England's Long-Run Forecast of Net Energy For Load (April 2005). CEAB-50:

See the forecast documentation link provided in response to CEAB-1. Response:

CEAB-51: In the report, there is no description of how long-run peak load is

forecasted. Please describe the methodology and process used to produce the reference peak demand forecast (50% range) for years 2005-2014

presented in the spreadsheet ISO\_NE\_2005\_Forecast\_Dataxls

[Peak Load\_Forecast\_Distribution].

Response: See the response to CEAB-46.

CEAB-52: Please identify all adjustments made to the peak demand forecast to

account for impacts associated with demand-side management activities. Identify what DSM programs are included, how the associated DS impacts are derived, and how the peak demand impacts were accounted

for in the final peak load forecast.

Response: The energy and peak savings from DSM programs for the New England

region are documented in the ISO website link provided in response to CEAB-1. The ISO long-run forecast is for energy and peaks before the savings from DSM programs, and the energy and peak savings are

deducted from that forecast.

CEAB-53: Please indicate if ISO has evaluated end-use sales forecasting techniques

to supplement its current econometric approach.

Response: ISO is beginning the process of evaluating a model methodology that

combines econometric and end-use techniques (Statistically Adjusted End-

use Models).

CEAB-54: Please provide a copy of ISO New England's Sub-Area Forecast of

Peak Load & Energy (April 2005).

Response: See the information provided in response to CEAB-1.

CEAB-55: Regarding the April 2005 'ISO New England Sub-area Forecast of Peak

Load and Energy," at 2 of 3: (a) Please confirm that Connecticut electric utilities do not develop a "bottom up" forecast (i.e., based on local requirements, rather than some allocation of a state- or region-wide forecast) of needs for incremental transmission or capacity resources at (i) the bus level, or (ii) at the sub-area level. (b) If such "bottom up forecasts are developed by the electric utilities or ISO New England, please provide a discussion of the (i) forecast methodologies and (ii) results.

Response: ISO defers to the Connecticut electric utilities for response to this

interrogatory.

CEAB-56: Please provide the spreadsheet developed (rules included in cells) that

computes the projections presented on page 2 of 3 of the report.

Response: The projections were not developed in the spreadsheet.

CEAB-57: Please provide the spreadsheet developed (rules included in cells) that

show the calculations of net energy for load, summer pears, and winter peaks, for the values presented in the table entitled ISO-NE RSP Sub-area Energy and Peak Load Forecast Summary Table, on page 3 of 3 of the

report.

Response: The projections were not developed in the spreadsheet.

CEAB-58: Please describe any efforts made by ISO and identify any results available

that correspond to the development of energy and peak load forecasts at the sub-area level rather than at the utility level and subsequently broken

down to the sub-area level.

Response: None.

CEAB-59: Please provide the bus level load (MW and MWAR) for each bus in the power flow models (summer and winter peals) fled as part of the most recent FERC-715 filing located within the state of Connecticut for the years 2045-2020. Please include the following data:

- (a) Bus Number;
- (b) Bus Name;
- (c) Bus Voltage;
- (d) PSS/E Zone;
- (e) PSS/E Area; and
- (f) Bus load total MW and MWAR.

Please identify the source of the projections and describe how the projections were developed.

Response:

Bus level detail is only available for cases provided as part of the FERC 715 filing and can be found in the FERC 715 report referenced in response to CEAB-3.

CEAB-60: Please identify and provide any information collected by ISO from local

land use planners or local zoning commissions that was incorporated by

ISO in development of sub-area toad forecasts or that support the

projected energy and peak demand growth rates developed by ISO by sub-

area.

Response:

None.

CEAB-62:

(a) Does ISO develop forecasts at the sub-area level that are independent of the bus load projections developed by the individual electric utilities or available from FERC? (b) If so, identify them and provide a copy of the report(s), including a complete description of the methodologies employed.

Response:

- (a) No.
- (b) Not applicable.