July 11, 2005

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

Re: Docket No. F-2005 – Connecticut Siting Council Review of the Ten-Year Forecast of Connecticut Electric Loads and Resources

Dear Mr. Phelps:

The United Illuminating Company hereby submits an original and twenty (20) copies of its responses to Set Two of The Connecticut Energy Advisory Board's (CEAB) Pre-Hearing Interrogatories 1 - 5. Copies have been sent to all persons on the service list for this proceeding.

Respectfully submitted,

THE UNITED ILLUMINATING COMPANY

by _____
Michael A. Coretto.
Director – Regulatory Strategy &
Retail Access

Response to Pre-Hearing Interrogatory Question 1 – Set Two

Q–CEAB-1: Please provide a copy of the most recent "FERC 715" report(s) addressing transmission issues in Connecticut.

A–CEAB-1: UI's most recent FERC 715 report is attached.

Response to Pre-Hearing Interrogatory Question 2 – Set Two

Q–CEAB-1: Please provide the bus level load (MW and MVAR) for each bus in the power flow models (summer and winter peak) filed as part of the most recent FERC-715 filing located within the state of Connecticut for the years 2005-2020. 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 MVAR.

Please provide a map of the service area that identifies each bus location. Please identify the source of the projections and describe how the projections were developed.

A–CEAB-1: UI files the load flow portion of its FERC 715 report through ISO-NE (see Part 2 of the attached report). As such, the required information should be requested from ISO-NE.

Response to Pre-Hearing Interrogatory Question 3 – Set Two

Q–CEAB-3: Has UI, during the process of developing load projections at the bus level, incorporated information from land use planners or local zoning commissions that would support load growth in specific areas of Connecticut? If so, please provide copies of all documents, working papers, or electronic files that contain such information.

A–CEAB-3: UI does not include information from land use planners or local zoning commissions to develop load projections.

Response to Pre-Hearing Interrogatory Question 4 – Set Two

Q–CEAB-4: Please identify a listing of the largest customers on the system (i.e., those with peak loads that exceed 0.5 MWs). Include in that listing (i) identification of the town in which each such customer is located, (ii) the business type of each such customer, (iii) the hour in which the customers' load typically achieves its daily peak, and (iv) the magnitude of the peak load (MWs). Please note that it is not necessary to reveal customer names, and other sensitive information.

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A–CEAB-4: This interrogatory requests confidential customer information.

# UNITED ILLUMINATING COMPANY

## FERC Form No. 715

## Annual Transmission Planning
## And
## Evaluation Report

**April 1, 2005**

# FERC Form 715
# Annual Transmission Planning and Evaluation Report

## April 1, 2005

Submitted for the United Illuminating Company (UI), which is a participant of the New England Power Pool (NEPOOL).

## Part 1: Identification and Certification

Identification

This report is submitted by THE UNITED ILLUMINATING COMPANY, which is a transmitting utility in New England and a participating member of the New England Power Pool. Any questions regarding information about the regional bulk power system or particular electric system data should be directed to the following designated agent of The United Illuminating Company:


Richard A. David
Lead Engineer, Transmission Infrastructure
The United Illuminating Company
801 Bridgeport Ave.
Shelton, CT 06484
Telephone: (203) 926-4602
Fax: (203) 926-4664
Email: richard.david@uinet.com


Certification

I certify that the information and data submitted on behalf of The United Illuminating Company is complete and accurate, to the best of my knowledge.

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Richard A. David
Lead Engineer, Transmission Infrastructure

## Part 2: Power Flow Base Cases

The power flow base cases have been submitted by ISO New England, Inc. (ISO-NE) staff on behalf of The United Illuminating Company. For additional information regarding the power flow base cases, please contact the following designated agent:


Mr. Rich V. Kowalski
Manager, Transmission Planning
ISO New England, Inc.
One Sullivan Road
Holyoke, MA 01040-2841
Telephone: (413) 535-4127
Fax: (413) 540-4203


Hard copy of the power flow base cases has not been provided as that requirement has been waived by the FERC.

## Part 3: Transmitting Utility Map and Diagrams

The following diagram/map is included in this submittal as Attachment A:

1. The United Illuminating Company's one-line diagram showing the 345-kV and 115-kV bulk power system along with some 13.8-kV facilities (4 sheets). The diagram has not been changed from last year as there were no changes to the UI electric system.

The regional maps showing neighboring bulk power systems are included in the ISO New England, Inc. filing, on behalf of the New England Power Pool.

## Part 4: Transmission Planning Reliability Criteria

The United Illuminating Company's Transmission Planning Criteria, which have been in effect since the April 1, 1994 filing of FERC Form 715, have been substantially revised. Further revision, review, and finalization are expected to be completed by December, 2005.

## Part 5: Transmission Planning Assessment Practices

There have been no changes to the United Illuminating Company's Transmission Planning Assessment Practices since the April 1, 1998 filing of FERC Form 715.

## Part 6: Evaluation of Transmission System Performance

### UI Bulk Power System Performance

The United Illuminating Company serves a largely urban and suburban area in Southern Connecticut, including the cities of Bridgeport and New Haven and their environs. Comprising a strong 115-kV transmission system with some 345-kV facilities and a dense distribution network, the UI electric system also has several 115-kV tie lines and a 345-kV link with neighboring Northeast Utilities.

Deregulation and other mandated changes in the electric industry have resulted in UI's system operations being overseen by ISO-NE, the independent system operator of NEPOOL. ISO-NE's objectives are basically to maintain reliability and operability of the New England bulk power system.

**Expected System Performance**

As stated previously in the April 1, 1994 filing, there are two critical interfaces for the area, namely,

(1) Southwest Connecticut Area Interface
(2) Norwalk-Stamford Area Interface

These interfaces are continuously monitored through planning studies which are utilized to review the security and adequacy of the bulk power system under varying present and future system conditions. These include new generation and substation additions within the area. Due to rapid growth in area load and increasing congestion costs, such studies have revealed that even with some planned reinforcements, the 115-kV system within Southwest Connecticut is no longer expected to remain adequate for the next five years. Reliability studies being conducted in conjunction with ISO-NE have indicated the need for expanding the 345-kV transmission system into the area. This would ensure the adequacy of the Southwest Connecticut transmission system beyond the five-year horizon. A 345-kV expansion plan has been proposed for the area and is currently in the permitting stages. The targeted completion date for this project is December 2009. Regarding the UI electric system, in order to maintain established transmission and/or distribution system voltage levels, reactive compensation at UI bulk substations continues to be planned.

Response to Pre-Hearing Interrogatory Question 5 – Set Two

Q–CEAB-5: (a) 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. (b) Please provide a copy of the most recent study of the maximum achievable cost effective potential for electric peak load management programs in Connecticut. (c) Please identify any renewable energy resources that are expected to interconnect to the UI system.

A–CEAB-5: The most pertinent studies that pertain to demand response programs and potential peak load reductions are:

1) "An assessment and report of Load Management Opportunities in Southwest Connecticut" ISE-June 4, 2003.
2) "An Assessment and Report of Distributed Generation Opportunities in Southwest Connecticut" ISE-January 2003.

These studies are available at the ISE website www.sustainenergy.org

UI has recently completed interconnections for 5 kW of renewable resources and has interconnection requests for 2 kW of renewable resources pending.