

Interrogatory CEAB-1

The United Illuminating Company  
Docket No. CSC F2008

Witness: Robert Manning  
Page 1 of 3

Q-CEAB-1: Please provide a detailed description of the methodology by which the energy and peak load forecasts contained in your filing in this proceeding were prepared.

A-CEAB-1: The energy forecast was developed by beginning with the previous year's weather corrected sales. Added to this was the net load additions and deletions that are based on UI's Economic Development Forecast. For years with minimal or no projected economic development activity, a fixed forecast sales figure was used. Projected Conservation & Load Management (CLM) activity was also taken into account. Next, historic sales growth figures were used to predict sales growth by customer class. Next, leap years were adjusted due to the additional one day of sales. Finally, additional adjustments were made for CLM Integrated Resource Plan (IRP) and Distributed Generation (DG).

The energy forecast and the system peak load forecasts use different models and are used for different purposes. The energy forecast is used for financial planning purposes whereas the system peak load forecast is used to plan for the sufficiency of T&D infrastructure.

The methodology used for the 2008 System Peak Load Forecast is necessarily conservative to assure the system infrastructure will meet extreme conditions (e.g., hottest year in ten years). The method uses economic and demographic factor-driven econometric models of sales-by-class and then transforms these sales results into peaks through separate load factor projections. A corroborative "direct peak" econometric model forecasts system peaks directly using historical weather normalized system peaks and key econometric drivers.

The 2008 System Peak Load Forecast methodology forecasts sales-by-class as one of interim steps in the development of the System Peak Load Forecast. These forecasted sales are then used in conjunction with system losses and a system load factor to calculate the system peak forecast. However the forecasted sales created in this System Peak Forecast methodology uses a different forecast method, different segmentation of customers and results in different forecasted sales than the sales forecast used for financial planning. The remainder of this response addresses only the methodology, and associated forecasted sales used to develop the 2008 System Peak Load Forecast.

The methodology used for the 2008 System Peak Load Forecast utilizes historical sales by customer class and system peak load information to estimate the models that ultimately drive the forecast. Additionally, the most recent 10-year history of

### Interrogatory CEAB-1

The United Illuminating Company  
Docket No. CSC F2008

Witness: Robert Manning  
Page 2 of 3

peak-related 12-hour average daily temperature humidity index<sup>1</sup> (THI) data and the 1976-2005 monthly average temperature data is used to compute the weather normals for the system peak and energy sales, respectively.

After collecting the needed historical data, the next step in this process is to normalize historical system peak and monthly sales-by-class data for weather. Weekday peak loads are normalized using corresponding 12-hour average THI prior to the peak hour data over the period from July 1 through August 31. This timeframe is the period during which the UI peak load typically is reached each year. Monthly energy are normalized using adjusted average monthly temperature data. The temperature data are "adjusted" for billing cycles by using the average of the temperature of the current month and the prior month. This "adjusted" temperature more closely matches the temperature of the sales period corresponding to the billing cycle-affected monthly sales data.

The peak normalization develops a "90/10"<sup>2</sup> System Peak Load forecast, as well as a "normal" or "50/50" forecast. This forecast and peak normalization approach is consistent with ISO-NE's peak normalization and forecast approach.

The 2008 sales-by-customer class weather normalization methodology used the average temperature variable rather than heating and cooling degree days. This method provides a more precise measure of heating and cooling weather sensitivity than using heating and cooling degree days. This is due to the fact that different customer classes switch from heating load to cooling load at different temperatures..

Multiple regression models are then employed to estimate sales-by-customer class forecasts using the weather normalized data. The modeling approach employed logically causal economic and demographic data. The process tests the statistical significance of these data in explaining growth in normalized historical quarterly energy sales. Several datasets and sources were tested in this process using regression techniques. Only the variables that best explain sales-by-customer class growth are used in the final forecast models.

Monthly sales-by-customer class normalized data are compressed into quarterly datasets in order to minimize the use of intervention variables and more easily facilitate the use of lagged variables.

---

<sup>1</sup> Temperature Humidity Index is an index to determine the effect of summer conditions on human comfort, combining temperature and humidity. A full definition and equation of THI is described in a later section of this response.

<sup>2</sup> "90/10" means that the data provides a 90% confidence, from a statistical perspective, that the 12-hour average THI used in the normalization of the annual System Peak will only be exceeded 10% of the time on the system peak day. This is consistent with ISO-NE's approach of identifying a "90/10" WTHI for use in the ISO Weather Normalization. Similarly "50/50" means that the data provides a 50% confidence that the 12-hour average THI used in the normalization of the annual System Peak will only be exceeded 50% of the time on the system peak day.

Interrogatory CEAB-1

The United Illuminating Company  
Docket No. CSC F2008

Witness: Robert Manning  
Page 3 of 3

Various economic and demographic data were analyzed for statistically-significant relationships with the weather normalized energy sales data by customer class (also tested for statistically significant lags). All variables that were ultimately used were highly significant (i.e., 80% Confidence Level<sup>3</sup> or better).

UI's latest ten-year forecast of Demand-Side Management (DSM) from the data used for the UI January 2008 Integrated Resource Plan for Connecticut (IRP)<sup>4</sup> was utilized in developing the load scenarios. The Base and Heavy-DSM forecasts include the load impacts from both the energy efficiencies programs, and load response programs.

UI also forecasted a significant impact from DG programs. UI's latest forecast of new DG sources was utilized in developing the normal weather peak load scenarios.

Identified new customer load data is used to develop load scenarios with the new loads added to the forecast models' results. The identified new customer loads included a peak load contribution, the time of year they are anticipated to connect to UI's system, the substation that would provide electric service, and a probability of their connection. A portion of the new loads are considered part of normal system growth and are considered as included in the econometric model-based forecast. UI's system has a history of customer growth and the regular gain and loss of individual customers. These historical trends become part of the forecast system growth rates by the use of the historical data and econometric models. To reduce the potential of double-counting these new loads (i.e., adding new loads to the econometric model-based results that were already embedded in the growth rates), the new loads were screened to eliminate the new loads that were consistent with normal system growth based on the size, customer class and location.

---

<sup>3</sup> The confidence level describes the uncertainty of a sampling method, the higher the percentage the greater the confidence.

<sup>4</sup> The joint UI and Connecticut Light & Power (CL&P) Integrated Resources Plan for Connecticut, dated January 1, 2008 was filed with the Connecticut Energy Advisory Board on January 2, 2008.

Interrogatory CEAB-2

The United Illuminating Company  
Docket No. CSC F2008

Witness: Michael A. Coretto  
Page 1 of 1

Q-CEAB-2: Please provide your normal weather and economic activity ("50/50") 2008-2017 forecast without conservation and load management impacts from continued funding or implementation of programs in the period 2008-2017 and no reductions from anticipated distributed generation from the Department of Public Utility Control's DG Grant Program for (a) total systems energy requirements and (b) summer peaks.

A-CEAB-2:

UI's energy forecast excluding conservation and load management, CLM IRP and distributed generation.

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Gwh	5,986	6,021	6,092	6,173	6,279	6,339	6,422	6,514	6,632	6,727

UI's system peak load forecast based on normal weather and economic activity ("50/50") 2008 – 2017 forecast without conservation and load management impacts from continued funding or implementation of programs in the period 2008 – 2017 and no reductions from anticipated distributed generation is as follows:

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MW	1,356	1,415	1,516	1,586	1,641	1,689	1,735	1,781	1,830	1,866

Interrogatory CEAB-3

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 1

Q-CEAB-3: Please provide the number of MW and customers in your service territory that are currently enrolled in ISO-NE Demand Response Programs.

A-CEAB-3: UI currently has 93.2 MW of enrollment in the ISO-NE Demand Response Programs. These MWs are the result of the enrollment of 194 customers in the program.

UI has no information on enrollments by third parties.

Interrogatory CEAB-4

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 1

Q-CEAB-4: Please provide the number of MW and customers in your service territory that (a) cleared in FCA1 as a result of real time demand response or profiled response customer, or (b) cleared in FCA1 as an other demand resource (ODR) customer.

A-CEAB-4: UI has enrolled 42.803 MW of Demand Response and 30.631 MW of Other Demand Resources in FCA1. UI is unaware of any other enrollments that may occur in our service territory.

Interrogatory CEAB-5

The United Illuminating Company  
Docket No. CSC F2008

Witness: Robert Manning  
Page 1 of 1

Q-CEAB-5: Please describe and show the calculations underlying the load factor forecasts found in CL&P's Table 2-1, UI's Exhibit 1, and CMEEC's Table I.

A-CEAB-5: The calculations underlying the load factor forecasts found in UI's Exhibit 1 divides the average System Energy Requirements in Megawatt-hours by the system peak in Megawatts (either normal or extreme weather scenario). The calculation is given as:

$$\text{Load Factor} = \frac{(\text{System Energy Requirements in GWHrs})}{(1000 * 8760 \text{ hours} * \text{System Peak in MW})}$$

The sales and system energy requirements forecast is based on a different model than the system peak load forecast. The system energy requirements and sales forecast is used for financial planning purposes whereas the system peak load forecast is used for capacity infrastructure planning purposes. As a result, the load factor presented in UI's Exhibit 1 only ties the system energy requirements and system peak load forecast together mathematically. A separate sales forecast is developed to create the system peak load forecast. The system peak load forecast for the normal and extreme weather scenarios is calculated using a normal weather factor (52.3%) and an extreme weather factor (47.9%).

Interrogatory CEAB-6

The United Illuminating Company  
Docket No. CSC F2008

Witness: Robert Manning  
Page 1 of 1

Q-CEAB-6: Please indicate whether the load factor forecasts found in CL&P's Table 2-1, UI's Exhibit 1, and CMEEC's Table I are an input (along with energy requirements) to the peak forecasts or are an output of the summer peak forecasts.

A-CEAB-6: The load factors found in UI's Exhibit 1 are an output of the summer peak forecasts. The system energy requirements along with the summer peak forecasts are taken together to calculate the load factors. However, as stated in the response to Q-CEAB-5, the sales and system energy requirements forecast is based on a different model than the system peak load forecast. The system energy requirements and sales forecast is used for financial planning purposes whereas the system peak load forecast is used for capacity infrastructure planning purposes. As a result, the load factor presented in UI's Exhibit 1 is calculated from the system energy requirements and system peak load forecast. A separate sales forecast is developed to create the system peak load forecast. The system peak load forecast for the normal and extreme weather scenarios is calculated using load factors as an input – a normal weather factor (52.3%) and an extreme weather factor (47.9%).



Interrogatory CEAB-7

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 1 of 1

Q-CEAB-7: Please indicate which of the transmission improvements described in your initial filings in this proceeding are to serve planned or anticipated generating facilities.

A-CEAB-7: None of the transmission improvements described in UI's initial filing in this proceeding have been planned for the sole purpose of interconnecting planned or anticipated generating facilities. However, UI believes that certain transmission improvements, in particular the Grand Avenue Rebuild Project, will be necessary to allow for the interconnection of proposed generating facilities. Other transmission improvements such as 115 kV Circuit Breaker Replacements at East Shore and Water Street may also be necessary to allow for the interconnection of proposed generating facilities.

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 1 of 6

Q-CEAB-8: Please provide a copy of your ten year plan for infrastructure improvements in Connecticut.

A-CEAB-8: The following provides the infrastructure improvements necessary to support UI's ten-year plan.

The Ten Year Transmission Planning Study identifies projects that are required to assure continued reliable service to our customers in the 2008 – 2017 timeframe. These projects are grouped into three categories of reliability drivers that establish need. These reliability-based project categories are:

1. Distribution Capacity – New 115/ 13.8 kV distribution substations that are required to provide capacity in an area that has been forecast to have a deficiency of available substation capacity based on the 90/10 peak demand load forecast. Feasible distribution solutions are identified and exhausted before the need for a new substation is considered. These distribution solutions seek to take advantage of available capacity on nearby distribution circuits through 13.8 kV feeder level load transfers, or they look to add capacity, where practical, at existing 115/ 13.8 kV substations.
2. Aging Infrastructure – Component replacement/upgrade projects or larger scale substation rebuild projects that are required to assure the reliable operation of the electric system, based on the condition of the equipment, its impact on system performance and the increased failure risks associated with aging infrastructure.
3. Standards Compliance – Projects that are required to meet national and regional transmission planning reliability standards. As a Transmission Owner (TO) and member of New England Power Pool (NEPOOL), UI is required to meet reliability standards defined by the North American Electric Reliability Council (NERC), Northeast Power Coordinating Council (NPCC), and the Independent System Operator – New England (ISO-NE). Projects identified in this category are primarily driven by transmission reliability standards related to the thermal, voltage, short circuit and stability performance of the transmission system as impacted by UI's transmission elements.

The following list of transmission infrastructure reliability projects in the 2008 - 2017 timeframe are considered to be planned, proposed or conceptual in nature. Planned projects have received Connecticut Siting Council (CSC) approval, if required, and are in the detail engineering design phase preparing for construction. Proposed projects have been identified by UI as the recommended solution and are in detailed study or in the CSC approval process, as required.

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 2 of 6

Conceptual projects have an identified need that requires further detail analysis, and further solution development and evaluation. Projects currently under

construction or recently completed are not included in this listing. These include the Middletown-Norwalk 345 kV Reliability Project (M-N Project) which is planned to be in-service in early 2009 and the Trumbull 115/13.8 kV Substation which was placed into service in the 2<sup>nd</sup> quarter of 2008.

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 3 of 6

Reliability Projects: Distribution Capacity

<u>Project</u>	<u>Reliability Project Type</u>	<u>Projected (or Actual) Project Start</u>	<u>Projected In-Service Year</u>	<u>Status</u> (Conceptual, Proposed, Planned)
New Shelton 115/ 13.8 kV Substation	Distribution Capacity	2007	2010	Conceptual
New New Haven-I 115/ 13.8 kV Substation	Distribution Capacity	2008	2010	Conceptual
New Fairfield 115/ 13.8 kV Substation	Distribution Capacity	2009	2012	Conceptual
New Metro-North 115/ 27.6 kV Substation	Distribution Capacity	2008	2010	Proposed
New Orange 115/ 13.8 kV Substation	Distribution Capacity	2009	2013	Conceptual
New Hamden 115/ 13.8 kV Substation	Distribution Capacity	2010	2014	Conceptual
New North Branford 115/ 13.8 kV Substation	Distribution Capacity	2010	2014	Conceptual
New New Haven-II 115/ 13.8 kV Substation	Distribution Capacity	2011	2015	Conceptual

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 4 of 6

Reliability Projects: Aging Infrastructure

<u>Project</u>	<u>Reliability Project Type</u>	<u>Projected (or Actual) Project Start</u>	<u>Projected In-Service Year</u>	<u>Status (Conceptual, Proposed, Planned)</u>
Mix Avenue Substation 115 kV Oil Circuit Breaker Replacement	Aging Infrastructure	2006	2008	Planned
115 kV Disconnect Switch Replacements – Ash Creek Substations	Aging Infrastructure	2006	2008	Planned
New Haven Area 115 kV High Pressure Fluid Filled (HPFF) Cable Pumping Plant Technology Upgrade	Aging Infrastructure	2008	2009	Conceptual
Substation Control House Expansions –Ash Creek Substations	Aging Infrastructure	2009	2009	Conceptual
East Shore 115 kV Oil Circuit Breaker and Disconnect Switch Replacements	Aging Infrastructure	2008	2011	Conceptual
Grand Avenue 115 kV Transmission Substation Rebuild	Aging Infrastructure	2008	2012	Conceptual
Substation Control House Expansions – Elmwest Substations	Aging Infrastructure	2011	2012	Conceptual
Baird 115/ 13.8 kV Substation Rebuild	Aging Infrastructure	2008	2012	Conceptual
Sackett 115/ 13.8 kV Substation Rebuild	Aging Infrastructure	2008	2013	Conceptual

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 5 of 6

Reliability Projects: Aging Infrastructure (continued)

<u>Project</u>	<u>Reliability Project Type</u>	<u>Projected (or Actual) Project Start</u>	<u>Projected In-Service Year</u>	<u>Status (Conceptual, Proposed, Planned)</u>
New Haven Area 115 kV Low Pressure Oil Filled (LPOF) Underground Cable System Replacement	Aging Infrastructure	2008	2013	Conceptual

Note: An assessment of certain existing 115/ 13.8 kV substations is being performed to ascertain the full extent of needs related to system and equipment reliability concerns driven by equipment obsolescence and aging. It is possible that this assessment will identify the need for additional component replacements/ upgrades or larger scale substation rebuild projects later in the ten-year period examined in this study.

Interrogatory CEAB-8

The United Illuminating Company  
Docket No. CSC F2008

Witness: Christian Bilcheck  
Page 6 of 6

Reliability Projects: Standards Compliance

<u>Project</u>	<u>Reliability Project Type</u>	<u>Projected (or Actual) Project Start</u>	<u>Projected In-Service Year</u>	<u>Status</u> (Conceptual, Proposed, Planned)
East Shore 115 kV Capacitor Bank Transient Recovery Voltage (TRV) Mitigation	Standards Compliance	2008	2009	Conceptual
Water Street Substation 115 kV Circuit Breaker Fault Duty Mitigation	Standards Compliance	2008	2009	Conceptual
Devon Tie 115 kV Switching Station Bulk Power System (BPS) Compliance Upgrades	Standards Compliance	2008	2010	Conceptual
Naugatuck Valley 115 kV Reliability	Standards Compliance	2007	2012	Conceptual
Pequonnock 115 kV Circuit Breaker Fault Duty Mitigation	Standards Compliance	2007	2012	Conceptual

Interrogatory CEAB-14

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 1

Q-CEAB-14: Please compare your assumptions for CL&M impacts in both your 50/50 and 90/10 cases, in terms of GWh and peak MW savings, to the reference and DSM focus levels described in the electric distribution companies' Integrated Resource Plan submitted to the CEAB on January 2, 2008.

A-CEAB-14: The GWh and peak MW savings assumptions for C&LM impacts in the UI forecasts correspond to the reference level DSM in the Integrated Resource Plan submitted to the CEAB by the electric distribution companies on January 2, 2008. The 50/50 case includes the DSM focus levels from the IRP plan and the 90/10 case includes only the base DSM case from the plan.



Interrogatory CEAB-15

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 2

Q-CEAB-15: Please provide the forecast of impacts resulting from distributed generation projects for which the Department of Public Utility Control has approved grants pursuant to the DG Grant Program in the period 2008-2017 on (a) total system energy requirements and (b) summer peaks. Please provide a list of the DG units and their anticipated in service dates.

A-CEAB-15: UI's normal weather peak load scenario forecast and the system requirements include projections for distributed generation pursuant to Public Act 05-01. UI's extreme weather peak load forecast scenario does not include projections for distributed generation.

a) The impacts on system energy requirements from DG projects (GWhs) :

<b>Year</b>	<b>(GWhs)</b>
2008	38
2009	58
2010	135
2011	0
2012	0
2013	0
2014	0
2015	0
2016	0
2017	0

b) The annual and cumulative summer peak amounts are included in the table below:

<b>Year</b>	<b>Annual Amount (MW)</b>	<b>Cumulative (MW)</b>
2008	8	8
2009	32	40
2010	2	42
2011	0	42
2012	0	42
2013	0	42
2014	0	42
2015	0	42
2016	0	42
2017	0	42

Interrogatory CEAB-15

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 2 of 2

The following is a list of distributed generation units that have received grants in UI service territory. This list does not include emergency engines. The proposed ANGEN DG is a grid side unit and its full capacity is not included as a reduction to system energy requirements or a reduction in system peak. Only the amount of distribution load curtailed is included as a reduction to system energy requirements and system peak.

CUSTOMER	DOCKET	TYPE	PROJECT SIZE KW	PLANNED DATE OF OPERATION
Fairfield University	06-05-12	CHP		Dec-07
Town of Fairfield	07-03-07	Fuel Cell	200	Dec-08
YMCA-MLFD	07-07-18	CHP	49	Dec-08
Sargent	06-12-22	CHP	500	Dec-08
SCG	07-11-33	CHP	75	Jun-08
Woodview Elderly Housing	08-01-18	CHP	73	Sep-08
YMCA-HMDN	07-07-19	CHP	49	Dec-08
YMCA-NH	07-07-20	CHP	69	Dec-08
YMCA-BPT	07-07-21	CHP	49	Dec-08
U.S. Surgical Corp.	07-06-51	CHP	4,797	Dec-08
GNH WPCA	07-03-23	CHP	708	Dec-08
Latex Foam	07-04-19	CHP	1,500	Dec-08
Schick	07-05-16	CHP	5,207	Jun-09
ANGEN	06-11-08	CHP	57,932	Jan-10
Yale University	07-04-21	CHP	14,486	Oct-09
St. Raphael's	07-06-78	CHP	1,784	Dec-09
Sikorsky Aircraft	07-04-22	CHP	7,520	Dec-09

Interrogatory CEAB-16

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 1

Q-CEAB-16: Please provide the forecast of conservation and load management (C&LM) impacts from continued funding or implementation of programs in the period 2008-2017 on (a) totals system energy requirements and (b) summer peaks. Provide data in the following form: total C&LM, conservation impacts only, and load management impacts only.

A-CEAB-16: The following are the MW and GWh impacts for the base DSM programs. The GWh impacts from Load Response are small and are not included.

CL&M, Load Response Programs (LRP)

<b>Annual Amount MW</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
C&LM - Base DSM	9.7	11.6	12.5	13.1	13.5	11.7	12.0	12.4	12.8	13.1
LRP - Base DSM (excluding OP-4)	0.0	0.0	41.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total DSM- Base Level	9.7	11.6	54.1	13.4	13.9	12.1	12.4	12.8	13.2	13.5

<b>Cumulative Amount MW</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
C&LM	9.7	21.3	33.7	46.8	60.3	72.0	84.1	96.5	109.3	122.4
LRP - Base DSM (excluding OP-4)	0.0	0.0	41.7	42.1	42.5	42.8	43.2	43.6	44.0	44.4
Total - Base DSM	9.7	21.3	75.4	88.9	102.8	114.9	127.3	140.1	153.3	166.8

<b>Sales Impact GWh</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
CLM	(56)	(65)	(70)	(74)	(75)	(55)	(56)	(57)	(60)	(61)

Interrogatory CEAB-17

The United Illuminating Company  
Docket No. CSC F2008

Witness: Michael Coretto  
Page 1 of 1

Q-CEAB-17: Please provide the "loss factor" referenced on page 5 of your April 10, 2008 filing that was applied to the Company's sales forecast in order to develop the system requirements forecast.

A-CEAB-17: The "loss factor" referenced on page 5 of the April 10, 2008 filing is 5.1%.

Interrogatory CEAB-18

The United Illuminating Company  
Docket No. CSC F2008

Witness: Michael A. Coretto  
Page 1 of 1

Q-CEAB-18: Please submit a copy of the Integrated Resource Plan completed by the electric distribution companies and submitted to the CEAB in January 2008 as referenced on page 9 of your April 10, 2008, filing.

A-CEAB-18: Due to the size of the Plan, UI is filing hard copies only with the CEAB and the Council. Parties and intervenors may obtain a copy of the Plan at [http://www.ctenergy.org/pdf/REVIRP.pdf?bcsi\\_scan\\_4915F3EBBE8861A9=0&bcsi\\_scan\\_filename=REVIRP.pdf](http://www.ctenergy.org/pdf/REVIRP.pdf?bcsi_scan_4915F3EBBE8861A9=0&bcsi_scan_filename=REVIRP.pdf)

Interrogatory CEAB-19

The United Illuminating Company  
Docket No. CSC F2008

Witness: Pat McDonnell  
Page 1 of 1

Q-CEAB-19: Please provide the forecast of conservation and load management (C&LM) impacts from funding or implementation of programs in the period of 2008-2017 that would support “aggressive levels of DSM savings,” as stated on page 10 of your April 10, 2008 filing on (a) total system energy requirements and (b) summer peaks. Provide data in the following form: total CL&M, conservation impacts only, and load management impacts only.

A-CEAB-19: “Aggressive levels of DSM savings” include both the base DSM case and the DSM focus levels from the Integrated Resource Plan. The incremental MW impacts from the DSM Focus case are:

**CL&M, Load Response Programs (LRP)**

Annual Amount	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
C&LM - Heavy DSM Increment	0.0	1.3	5.0	9.3	13.0	13.0	13.0	13.0	13.0	13.0
LRP - Heavy DSM Increment	3.5	14.0	4.0	4.0	5.5	0.0	0.0	0.0	0.0	0.0
Total DSM - Heavy Level	3.5	15.3	9.0	13.3	18.5	13.0	13.0	13.0	13.0	13.0

**Cumulative Amount Not Including 2007**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
C&LM - Heavy DSM Increment	0.0	1.3	6.3	15.5	28.5	41.5	54.5	67.5	80.5	93.5
LRP - Heavy DSM Increment	3.5	17.5	21.5	25.5	31.0	31.0	31.0	31.0	31.0	31.0
Total - Heavy DSM Increment	3.5	18.8	27.8	41.0	59.5	72.5	85.5	98.5	111.5	124.5

The GWh impacts from the DSM focus case:

	<b><u>IRP Base and DSM Focus GWh Impacts</u></b>									
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CLM	(56)	(65)	(70)	(74)	(75)	(55)	(56)	(57)	(60)	(61)
CLM IRP *	-	(7)	(28)	(52)	(73)	(73)	(73)	(73)	(73)	(73)

The GWh impacts from LRP programs are small and were not included.

Interrogatory CEAB-20

The United Illuminating Company  
Docket No. CSC F2008

Witness: Michael A. Coretto  
Page 1 of 1

Q-CEAB-20: In relation to the statement on page 12 of your April 10, 2008 filing concerning the development of in state renewable resources, please indicate the renewable projects that been selected to date for long term contracts under Project 150, including their planned capacity and in service dates.

A-CEAB-20: The following renewable projects have been selected for long term contracts under Project 150:

Project	Capacity Under Contract (MW)	In-Service Date
1. Watertown Renewable Power, LLC	15.0*	November 1, 2010
2. Clearview Renewable Energy, LLC	30.0	December 1, 2011
3. Clearview East Canaan Energy, LLC	3.0	June 1, 2010
4. Plainfield Renewable Energy, LLC	30.0	November 1, 2010
5. Hospital Energy Development, LLC (Waterbury Hospital Fuel Cell CHP)	2.4	June 9, 2009
6. DFC-ERG Milford, LLC	9.0	December 1, 2008
7. South Norwalk Renewable Generation, LLC	30.0	March 1, 2010
8. Hospital Energy Development, LLC (Stamford Hospital Fuel Cell CHP)	4.8	October 1, 2009
	TOTAL 124.2	

\* annualized

Interrogatory CEAB-21

The United Illuminating Company  
Docket No. CSC F2008

Witness: Michael A. Coretto  
Page 1 of 1

Q-CEAB-21: Please indicate whether the 500 MWs of fast start peaking units submitted by UI and NRG in March 2008, pursuant to Docket No 08-01-01, was included in the "279 MW of new combustion turbines to meet the fast start requirement" described in the Integrated Resource Plan filed with the CEAB in January of 2008, noted on page 9 of your April 10, 2008 filing.

A-CEAB-21: The 500 MWs of fast start peaking units submitted by UI and NRG was not included in the "279 MW of new combustion turbines to meet the fast start requirement". The 279 MW were not identified as to ownership and represented generic fast start resources that were installed to meet the Locational Forward Reserve Market need that was calculated at the time.