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May 30, 2013



CONNECTICUT
SITING COUNCIL

Mr. Robert Stein
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. F-2013/2014 - Connecticut Siting Council Review of the Ten-Year Forecast of Connecticut Electric Loads and Resources

Dear Mr. Stein:

This letter provides the response to requests for the information listed below.

Response to CSC-01 Interrogatories dated 05/20/2013
CSC-001, 002, 003, 004, 005, 006, 007, 008, 009

Very truly yours,

Janet R. Palmer
Manager
Regulatory Policy - CT
NUSCO
As Agent for CL&P

cc: Service List

Witness: Charles R. Goodwin
Request from: Connecticut Siting Council

Question:

Provide the actual and weather-normalized annual peak historical loads for CL&P's service area for 2003 through 2012.

Response:

The table below shows the actual and weather-normalized annual historical peaks, in MW, for CL&P for 2003 - 2012.

Year	Actual (MW)	Normal (MW)
2003	4,980	5,093
2004	4,818	5,056
2005	5,402	5,277
2006	5,512	5,084
2007	5,209	5,209
2008	5,289	5,184
2009	4,873	4,935
2010	5,345	4,994
2011	5,516	5,279
2012	5,280	5,039

Witness: Charles R. Goodwin
Request from: Connecticut Siting Council

Question:

As a comparison, provide the predicted weather-normalized (i.e. 50/50) loads for 2003 through 2012 from the 2003 CL&P forecast report.

Response:

The table below shows the forecasted weather-normalized (i.e., 50/50) annual peaks, in MW, for CL&P for 2003-2012 as shown in CL&P's "2003 Forecast of Loads and Resources for 2003 - 2012".

Year	Peak Normalized (MW)
2003	5,049
2004	5,056
2005	5,112
2006	5,145
2007	5,169
2008	5,194
2009	5,235
2010	5,320
2011	5,399
2012	5,479

Witness: Charles R. Goodwin
Request from: Connecticut Siting Council

Question:
Explain the methodology of how historical actual peak load data is converted to weather-normalized historical peak load data.

Response:
Historical actual peak load data is converted to weather-normalized peaks by multiplying weather factors (developed from an historical analysis of MW load per degree day), times the difference between actual and normal temperatures, and adding or subtracting this product to or from the historic peak to yield the estimated normalized peak load.

Temperature differences from normal are calculated for three weather variables: mean daily temperature for the peak day, mean daily temperature for the day before the peak day and a THI (Temperature Humidity Index).

An example of the calculation for 2006 is below:

Actual Peak	5,512 MW	Weather Variables Temperature (Normal - Actual)	Weather Factor MW/Degree * Factor
Peak Day	-190 MW	=(83 - 88)	* 38
Day Before	-124 MW	=(81 - 87)	* 20.6
THI	<u>-114 MW</u>	=(83 - 86)	* 37.9
Normalized	5,084 MW		

The Connecticut Light and Power Company
Docket No. F-2013/2014

Data Request CSC-01
Dated: 05/20/2013
Q-CSC-004
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Witness: Charles R. Goodwin
Request from: Connecticut Siting Council

Question:

Explain why electric energy consumption is expected to decrease with a compound annual growth rate of 0.4 per year over the forecast period.

Response:

CL&P electric energy consumption is expected to decline 0.4% annually through 2022 primarily due to increased company sponsored energy efficiency programs along with the implementation of the Low and Zero Emission Renewable Energy Credits (LREC/ZREC) program. CL&P has included an assumption of a three year ramp up to reach the expanded energy efficiency plan. Further, the LREC/ZREC impacts are new to this forecast.

Witness: Charles R. Goodwin
Request from: Connecticut Siting Council

Question:

On page 6 of the 2013 CL&P Forecast, CL&P notes that, "This forecast includes explicit additions to the electrical energy output requirements due to electric vehicles." Provide any assumptions made regarding electrical energy consumption by electric vehicles.

Response:

The table below shows both the forecasted annual energy consumption and the forecasted number of new electric vehicles.

Year	EV Adder GWH	Incremental EV Vehicles	Cumulative EV Vehicles
2013	9	1,450	1,450
2014	15	2,309	3,759
2015	22	3,352	7,111
2016	31	4,513	11,624
2017	42	5,706	17,330
2018	54	6,906	24,236
2019	68	8,131	32,367
2020	84	9,378	41,745
2021	102	11,348	53,093
2022	122	12,651	65,744

The Connecticut Light and Power Company
Docket No. F-2013/2014

Data Request CSC-01
Dated: 05/20/2013
Q-CSC-006
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Witness: Vinay K. Ananthachar
Request from: Connecticut Siting Council

Question:

On page 10 of the 2013 CL&P Forecast, there are no gigawatt-hours (GWh) reported from ISO-NE's Load Response Program (ISOLRP). Is this because the limited number of houses that the ISOLRP is in use results in a negligible energy savings?

Response:

Yes. In the forecast, Connecticut Light and Power assumed that Commercial and Industrial customers who are in the ISOLRP will only be called to curtail load a few times each year so the impact on energy output is minimal.

Witness: Vinay K. Ananthachar
Request from: Connecticut Siting Council

Question:

Provide the basic underlying assumptions associated with the distributed generation (DG) included in Table 2-2 of the 2013 CL&P Forecast, including but not limited to the DG projects approved, number of megawatts of each DG project, the number of units expected to go into service or the assumed probability that they will go into service, etc.

Response:

Distributed Generation ("DG") projects listed in Table 2-2 are developed in accordance with Public Act 05-01, *An Act Concerning Energy Independence* ("PA 05-01"). The forecast in Table 2-2 is comprised of 1) presently commercial DG projects forecast at 100% of their MW capacity and 2) not-yet-commercial DG projects forecast at less than 100% of their MW capacity, because their estimated in-service dates were further into the forecast period. There are 78 projects in the first group totaling 128 MWs, which are shown on pages 2 and 3. There are 18 projects in the second group in varying degrees of development that account for an additional 4.3 MWs of DG capacity and are shown on page 4.

The Kimberly Clark DG unit has a capacity higher than the current peak demand of the Kimberly Clark facility. The peak load forecast presented in CL&P's FLR represents the peak load demand of its own customers. Thus, the DG forecast presented in Table 2-2 of the CL&P Forecast excludes Kimberly Clark DG generation in excess of its own needs which is sold into the New England energy market.

The DG that is presented in Table 2-2 reflects the projected load reduction at the time of the system peak, and thus, is lower than the sum of the non coincident probability weighted capacity of the projects shown on pages 2 - 4.

Projects forecast at 100% in-service	
Project Name	MW
Algonquin Power (CH Dexter)	14.544
ASML Lithography, Inc.	1.878
Avon Convalescent Home, Inc	0.074
Avon Old Farms School	0.085
Biopur Inc.	0.225
Bradley Home- Cogen	0.074
Branford High School	0.240
Cabela's Retail Inc./Rentschler Field	0.800
Carla's Pasta	0.300
Cellu-Tissue	2.920
Central CT Coast YMCA (Soundview Family)	0.060
Cheshire Biotech Acquisition LLC (Alexion)	0.260
City of Danbury - High School	0.072
City of Hartford - Mary Hooker School	0.060
City Of Middletown - New High School	0.200
Coca Cola Refreshments USA Inc	0.800
Component Technologies, Inc	0.295
Connecticut Assoc II LP aka Wilby Apartments	0.075
Connecticut Central State University (CCSU)	1.400
Connecticut Natural Gas	0.072
Ct Center For Science & Exploration	0.200
Ct Department Of Transportation Aviation And Ports	1.222
Danbury Hospital	4.117
Darien Community YMCA	0.075
DHA Housing Corp Hotel	0.075
Duncaster Inc (1)	0.148
Duncaster Inc (2)	0.148
Duncaster Inc (3) Aquatic Center	0.074
East Hartford Public Schools	0.240
Elim Park Baptist Home Inc.	0.074
Executive Square (Winn Properties)	0.074
Flanagan Industries (1)	0.640
Flanagan Industries (2)	0.157
Frito Lay Inc	3.772
Greenwich Hospital	0.280
Hamilton Sundstrand	5.190
Hartford Steam Company	3.510
Hartford Transit Authority (CT Transit)	0.400
Hebrew Home & Hospital	0.150
Hughes Health and Rehabilitation	0.075
International Skating Center Of Conn LLC	0.134
Jerome Home	0.074
Kimberly Clark	33.485
King's Daughters & Sons Hsg (Kingsway Apts)	0.075
Mandell Jewish Community Center	0.150
Mashantucket MPTN Foxwoods	15.000

Projects forecast at 100% in-service	
Project Name	MW
Mashantucket Pequot Tribal Center	0.074
Northern Middlesex YMCA	0.075
Northwestern Connecticut YMCA	0.049
Norwalk High School (City Of Norwalk)	0.250
Pepperidge Farm (1)	1.198
Plainville Electric Products Co. (Pepco)	0.375
Pratt & Whitney (UTC) (1)	7.520
Pratt & Whitney (UTC) (3)	2.100
Pratt & Whitney (UTC) (4)	0.800
Price Chopper/Golub Corporation Store #232	0.400
Rand Whitney Realty, LLC.	14.200
Saint Mary Home	0.075
Saybrook Point Inn (2) - Stephen Tagliatela	0.075
Sheffield Laboratories (1)	0.250
Sheffield Laboratories (2)	0.325
Smithfield Gardens (Sha Corp)	0.074
Southington Care Center	0.074
Southington-Cheshire Community YMCA	0.074
The Stop & Shop Supermarket Company, LLC	0.400
Town Of Mansfield (Community Ctr)	0.100
Town Of Mansfield (Middle School)	0.075
United Technologies - CSC Data Center	1.170
University of CT (Depot Campus)	0.400
UTC Fuel Cells	0.400
UTC Fuel Cells (2)	0.400
Wesleyan University	2.366
West Hartford Health & Rehabilitation (Brookview Corp)	0.074
West Hartford Housing Authority (Alfred E. Plant Elderly Housing)	0.075
West Hartford Housing Authority (Alfred E. Plant Elderly Housing)	0.075
Westover School	0.068
Whole Foods Market	0.200
Windham Community Memorial Hospital	0.325
	<u>128.088</u>

Projects forecast at <100%			
Project Number	Estimated in-service	Probability	Estimated MW
1	Jun-13	6%	0.132
2	Jul-13	6%	0.144
3	Jun-13	6%	0.024
4	Oct-13	10%	0.107
5	Mar-13	25%	0.016
6	Nov-13	25%	0.085
7	Mar-13	25%	0.033
8	Dec-12	50%	0.200
9	Dec-12	50%	0.038
10	Dec-12	50%	0.038
11	Dec-12	50%	1.000
12	Dec-12	50%	1.000
13	Mar-13	50%	0.300
14	Dec-12	75%	0.300
15	Oct-13	90%	0.068
16	Dec-12	90%	0.068
17	Oct-13	99%	0.396
18	Oct-13	99%	0.396
Total Estimated MW's			<u>4.343</u>

Witness: Vinay K. Ananthachar
Request from: Connecticut Siting Council

Question:

In the context of the Conservation and Load Management Program (C&LM Program), explain the difference between passive and active resources.

Response:

Active resources are dispatchable resources (demand response and some distributed generation) that respond during specific shortage events. For example, resources entered into the ISO Demand Response Program are active resources because they may be called to perform during shortage events.

Passive resources are non-dispatchable resources (energy efficiency, plus a small amount of distributed generation) that reduce load whenever those resources are in operation. For example, energy efficient lighting will reduce load for many hours throughout the year based on the usage pattern for that technology.

The Connecticut Light and Power Company
Docket No. F-2013/2014

Data Request CSC-01
Dated: 05/20/2013
Q-CSC-009
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Witness: Vinay K. Ananthachar
Request from: Connecticut Siting Council

Question:
Is CL&P's C&LM Program limited to passive resources?

Response:
No. Connecticut Light and Power's ("CL&P") Conservation and Load Management ("C&LM") programs have both "passive" and "active" resources. C&LM's Energy Efficiency resources are defined as passive. CL&P's C&LM Demand Response Resources (Real Time Emergency Generation and Real Time Demand Response) are defined as active.