

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC UTILITY CONTROL

DPUC Investigation of Measures
To Reduce Federally Mandated
Congestion Charges

Docket No. 05-07-14PH02
December 5, 2006

Connecticut Department of
Public Utility
Control
Request for Proposals
to reduce impact of FMCCs

DECEMBER 5, 2006 ADDENDUM
UPDATED LOAD FORECAST

1 Introduction and overview

As per Section 5.5.1.3 of the RFP (*see* page 51 of the RFP issued on September 15, 2006 or the “RFP”), the demand assumptions to be used in the Bid Evaluation rely on ISO-NE’s projections for demand under the reference case (50/50) and high and low economic cases.¹ These forecasts were published by ISO-NE as part of Regional System Plan (RSP) 2006. ISO-NE’s forecast extends for ten years, while the Bid Evaluation will look over a longer time period in order to accommodate contract terms of up to fifteen years. For each year after 2015, the estimated annual average load growth rate from ISO’s load projection between 2006 and 2015 was applied to determine the projected demand levels in this period.

Using this constant load growth rate over the long term (2016 through 2021) does not capture the underlying year-on-year declining growth trend in the ISO-NE’s projected peak demand growth rate. Consequently, the demand forecast was revised after 2015 to incorporate a declining growth rate. There were no changes in the demand forecast over the next ten years. The changes in peak demand forecasts after 2015 do change the Installed Capacity Requirement (ICR) and Local Sourcing Requirement (LSR), which impacts the total deficit in capacity in the long term, as presented in the Needs Assessment and in the Section 2.2 of the RFP.

This document presents the updated demand forecasts (i.e. updated Figure 17 of the RFP) and briefly summarizes the resulting changes in Needs Assessment (i.e. updated Figure 1 of the RFP) for potential bidders. This document should be read in conjunction with the September 15, 2006 RFP.

2 Demand Forecast

Figure 1 on the next page presents the updated demand forecast for the reference, high, and low economic cases, effectively replacing Figure 17 on page 52 of the RFP. The demand forecast was not modified for the initial nine years (2007 through 2015), as those figures are based on ISO-NE projections.² The lower demand growth rate discussed above reduces peak demand and total energy projections across New England and in each of the RSP regions only after 2015.

¹ The September 15, 2006 RFP and related addendums and documents are posted on the RFP website - <http://www.connecticut2006rfp.com/index.php>.

² Figure 1 contains a correction to the table summaries in the RFP in relation to the forecast for the ISO-NE control area through 2015. The ISO-NE numbers in Figure 17 in the RFP were based on a summation of the sub-regional forecast from the draft RSP for the Reference Case. The ISO-NE forecasts for the RSP zones do not sum precisely to the control area forecast. Therefore, the original Figure 17 had annual peak demand and energy figures that are 5 MW to 25 MW higher than in our presentation below for the initial ten years, 2007-2015, for New England. The demand projections for Connecticut are unaffected by the accounting. Furthermore, in the Bid Evaluation modeling and in the Needs Assessment we do not use the sum of the RSP zone demand forecasts but the specific numbers for the control area forecast, consistent with that is presented below, hence, the correction is for clarification purposes only and does not affect any of the analysis.

Figure 1. Projected demand for New England and Connecticut³ under ISO-NE's reference case (50/50), high economic case, and low economic case, 2007 - 2021

<u>Reference case</u>															
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ISO-NE															
Peak demand (MW)	27,355	27,900	28,540	29,185	29,885	30,515	31,020	31,480	31,895	32,274	32,609	32,922	33,207	33,477	33,725
Energy (GWh)	133,975	135,775	138,020	140,330	142,790	145,160	147,225	149,185	151,085	152,933	154,721	156,465	158,178	159,863	161,531
Growth in peak demand		2.0%	2.3%	2.3%	2.4%	2.1%	1.7%	1.5%	1.3%	1.2%	1.0%	1.0%	0.9%	0.8%	0.7%
CT (rest of CT)															
Peak demand (MW)	3,630	3,695	3,780	3,865	3,955	4,050	4,115	4,175	4,230	4,280	4,327	4,369	4,408	4,443	4,475
Energy (GWh)	17,105	17,320	17,600	17,915	18,235	18,565	18,825	19,080	19,310	19,526	19,725	19,909	20,080	20,237	20,382
Growth in peak demand		1.8%	2.3%	2.2%	2.3%	2.4%	1.6%	1.5%	1.3%	1.2%	1.1%	1.0%	0.9%	0.8%	0.7%
SWCT															
Peak demand (MW)	3,650	3,720	3,805	3,895	3,990	4,070	4,125	4,175	4,225	4,273	4,320	4,365	4,409	4,452	4,493
Energy (GWh)	17,190	17,415	17,715	18,040	18,370	18,650	18,860	19,065	19,250	19,424	19,583	19,731	19,868	19,994	20,111
Growth in peak demand		1.9%	2.3%	2.4%	2.4%	2.0%	1.4%	1.2%	1.2%	1.1%	1.1%	1.0%	1.0%	1.0%	0.9%
<u>High economic case</u>															
ISO-NE															
Peak demand (MW)	27,579	28,513	29,418	30,327	31,294	32,185	32,954	33,678	34,355	34,993	35,588	36,145	36,666	37,152	37,605
Energy (GWh)	136,655	140,393	143,967	147,581	151,339	154,988	158,342	161,586	164,752	167,829	170,824	173,737	176,571	179,328	182,010
Growth in peak demand		3.4%	3.2%	3.1%	3.2%	2.8%	2.4%	2.2%	2.0%	1.9%	1.7%	1.6%	1.4%	1.3%	1.2%
CT (rest of CT)															
Peak demand (MW)	3,646	3,756	3,865	3,978	4,096	4,215	4,307	4,395	4,477	4,554	4,626	4,694	4,757	4,816	4,871
Energy (GWh)	17,387	17,801	18,221	18,662	19,104	19,564	19,950	20,326	20,695	21,055	21,408	21,752	22,088	22,415	22,735
Growth in peak demand		3.0%	2.9%	2.9%	3.0%	2.9%	2.2%	2.0%	1.9%	1.7%	1.6%	1.5%	1.3%	1.2%	1.1%
SWCT															
Peak demand (MW)	3,666	3,778	3,891	4,008	4,130	4,240	4,320	4,395	4,466	4,533	4,596	4,655	4,710	4,762	4,811
Energy (GWh)	17,476	17,902	18,335	18,790	19,246	19,657	19,992	20,314	20,629	20,934	21,231	21,519	21,798	22,069	22,331
Growth in peak demand		3.1%	3.0%	3.0%	3.0%	2.7%	1.9%	1.7%	1.6%	1.5%	1.4%	1.3%	1.2%	1.1%	1.0%
<u>Low economic case</u>															
ISO-NE															
Peak demand (MW)	27,133	27,279	27,641	28,029	28,466	28,833	29,071	29,269	29,415	29,532	29,627	29,705	29,769	29,822	29,866
Energy (GWh)	131,295	131,143	132,054	133,132	134,330	135,451	136,252	136,968	137,582	138,133	138,621	139,057	139,447	139,798	140,114
Growth in peak demand		0.5%	1.3%	1.4%	1.6%	1.3%	0.8%	0.7%	0.5%	0.4%	0.3%	0.3%	0.2%	0.2%	0.1%
CT (rest of CT)															
Peak demand (MW)	3,610	3,635	3,688	3,749	3,813	3,878	3,915	3,949	3,974	3,995	4,011	4,024	4,034	4,042	4,048
Energy (GWh)	16,822	16,825	16,978	17,170	17,356	17,557	17,683	17,809	17,911	18,003	18,082	18,151	18,211	18,264	18,309
Growth in peak demand		0.7%	1.5%	1.7%	1.7%	1.7%	1.0%	0.9%	0.6%	0.5%	0.4%	0.3%	0.3%	0.2%	0.2%
SWCT															
Peak demand (MW)	3,629	3,657	3,714	3,778	3,845	3,899	3,926	3,950	3,964	3,974	3,981	3,986	3,990	3,992	3,994
Energy (GWh)	16,908	16,921	17,084	17,288	17,486	17,641	17,719	17,799	17,854	17,901	17,938	17,969	17,993	18,014	18,030
Growth in peak demand		0.8%	1.6%	1.7%	1.8%	1.4%	0.7%	0.6%	0.4%	0.3%	0.2%	0.1%	0.1%	0.1%	0.0%

3 Impact on needs assessment

Section 2.2 of the RFP (see pages 12-15 of the RFP) summarizes the Needs Assessment for Connecticut, as detailed in the revised August 25, 2006 Needs Assessment.⁴ As stated above, the clarifying changes to the demand forecast for the first nine years years, 2007 through 2015, do not affect the Needs Assessment presented for Connecticut. However, incorporating the updated growth trends in peak demand forecast in the longer term, does impact the total

³ Connecticut's statewide demand forecast is composed of the 'rest of CT' and 'SWCT' sub-regions documented in Figure 1 above.

⁴ The revised Needs Assessment report (August 25, 2006) and related documents are posted on the RFP website - <http://www.connecticut2006rfp.com/index.php>.

magnitude of the shortfall in generating capacity vis-à-vis the projected procurement target in the Forward Capacity Market (FCM) in the outer years of the forecast time horizon, because the lower demand growth expectations decrease the levels of ICR and LSR. As described in detail in the Needs Assessment and RFP, the ICR and LSR is based on the peak demand forecasts, adjusted for the planning reserve margin and other components.⁵

In summary, the lower demand growth rate in the longer term reduces the cumulative investment needs for Greater Connecticut, as documented in the figure below.

Figure 2. Summary of cumulative investment needs for Greater Connecticut assuming optimization of complementarity between product markets (MW)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Greater Connecticut															
Scenario 1	629	629	625	626	626	623	624	623	623	624	624	624	687	792	891
Scenario 2	629	626	626	624	623	625	625	625	625	624	624	624	687	792	891
Scenario 3	629	625	623	629	625	629	624	624	624	625	621	624	625	625	629
Scenario 4	629	631	631	631	633	693	716	723	812	974	1,126	1,285	1,418	1,559	1,692

= Investment needs driven by LFRM
 = Investment needs driven by FCM
 = Investment needs changed from the August 25, 2006 Needs Assessment because of change in peak demand forecast

There are no changes under scenario 3 (the Accelerated Entry with Low Economic Growth Demand Case), as compared to Figure 1 of the RFP and revised August 25, 2006 Needs Assessment report. However, with the lower peak demand levels in the long term, the cumulative investment need by 2021 is reduced by 518 MW for the Connecticut as a whole under scenario 1 (the Modified Market Outcome with Reference Demand Case) and scenario 2 (the Delayed Entry with Reference Demand Case), and by 791 MW under scenario 4 (the Delayed Entry with High Economic Growth Demand and Tighter Environmental Restrictions Case).

⁵ See the "Briefing Note on LSR Methodology revised August 25 Needs Assessment" on the RFP website - http://www.connecticut2006rfp.com/other_docs.php#1 for a detailed discussion on the methodology to compute LSR.