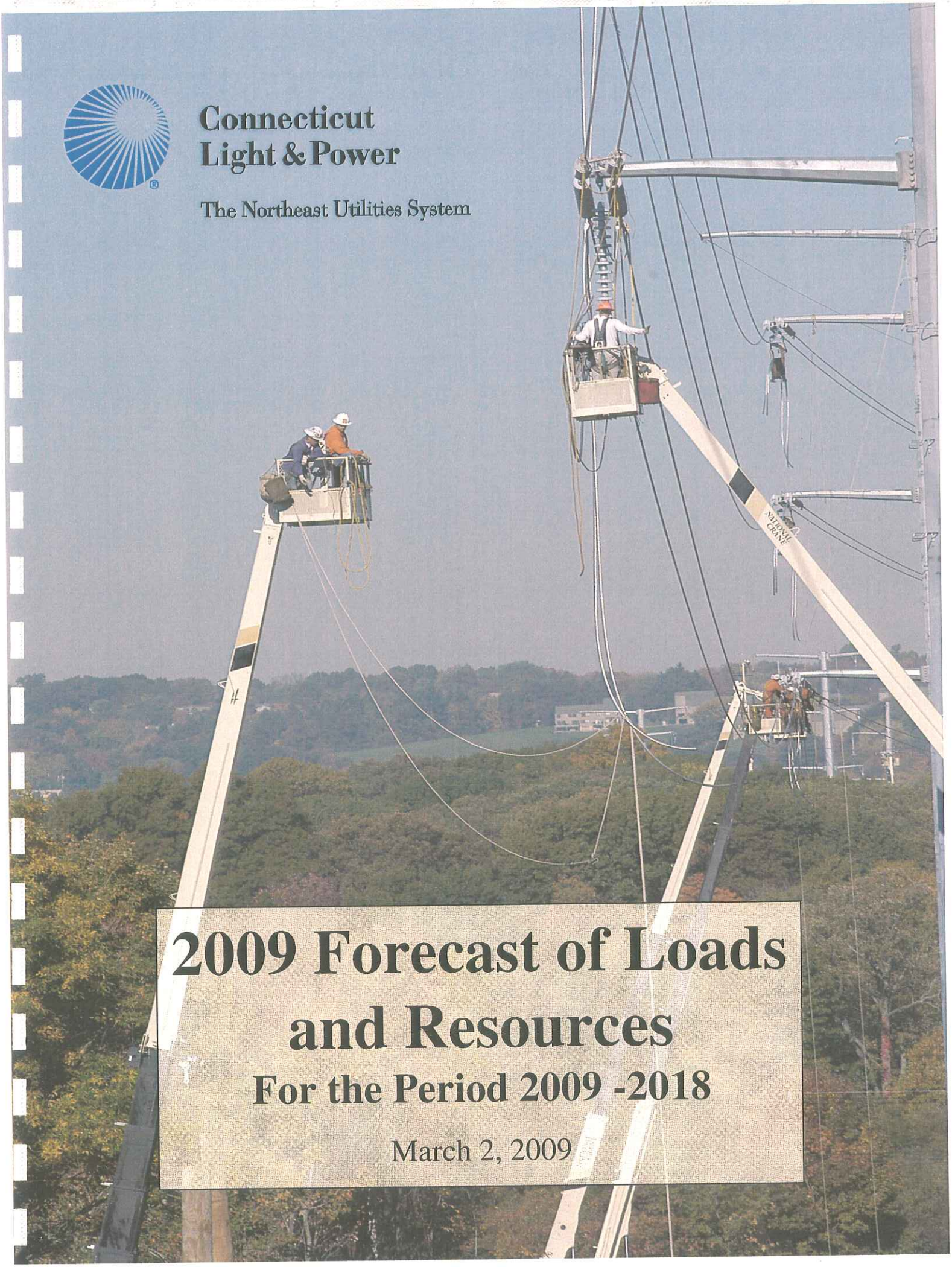

Connecticut
Light & Power

The Northeast Utilities System

2009 Forecast of Loads and Resources

For the Period 2009 -2018

March 2, 2009

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EXECUTIVE SUMMARY

CL&P's Responsibility for a Reliable Electric Delivery System

The Connecticut Light and Power Company ("CL&P" or "Company") is an electric operating subsidiary of Northeast Utilities ("NU"). CL&P is the largest electric utility in Connecticut, delivering electricity to over 1.2 million customers.

Prior to the restructuring of the electric industry in Connecticut, CL&P was a vertically integrated electric utility company, with planning and operating responsibility for generation, transmission and distribution infrastructure. CL&P has since sold off its generation facilities, and its customers have been provided the opportunity to purchase their electricity from retail suppliers. In general, other parties now determine how, when and where generation resources are built and operated to meet customers' needs, while CL&P remains responsible for the safe and reliable transportation and distribution of electricity. The generation landscape has changed from one focused on large central dispatch to a competitive generation market with more distributed resources and less predictable performance.

The transmission system planning process takes a long-term view of needs, reflective of the many years it takes to plan and build transmission facilities. The state's transmission infrastructure delivers the electric energy that fuels the state's production lines, commercial lights, desktop computers and electric equipment vital to a vibrant economy. Transmission infrastructure is built to ensure a reliable system. In contrast, generation facilities' behaviors in the wholesale electric markets are driven by short-term issues including market prices for energy and capacity, changing environmental regulations, economic performance, fossil fuel prices and renewable energy goals. CL&P is required to accommodate a myriad of possible operating scenarios in providing electricity to its customers while meeting mandatory North American Electric Reliability Corporation ("NERC") reliability requirements.

The national economy suffered one of its worst downturns in 2008, and there is much uncertainty about how much worse it will get and when it will recover. The peak demand forecast is based on an economic forecast that was developed in November and assumes that the recovery will begin in late 2009. The economy is expected to improve. Even though electric loads are forecasted to be low, a reliable infrastructure is fundamental to the state's economy and it is prudent for CL&P to prepare for future potential load growth and for imports from northern New England and Canada to meet carbon emission and renewable energy goals.

Connecticut Faces Challenges to Reliable Electric Service on Several Fronts

From a forecast of loads and resources perspective, CL&P foresees that electric service reliability is facing challenges on several fronts over the next ten years, such as:

1. Uncertainty about the current economic downturn and the timing of the recovery.
2. Declining load factor.
3. Funding reliance of CL&P's successful Conservation and Load Management ("C&LM") programs.
4. Unpredictable retirements and additions of generation facilities.
5. Insufficient generation fuel diversity.
6. Increased global focus on climate change.

1. Uncertainty about the current economic downturn and the timing of the recovery.

- In 2008 and into 2009, the country has been experiencing its worst economic decline in decades, fueled by a collapse of the financial markets, which continue to worsen.
- Connecticut has experienced a reduction in jobs, a corresponding rise in unemployment, increased home foreclosures and a decline in productivity.
- The Federal Reserve predicts unemployment will rise in 2009 before things begin to get better, possibly in 2010.
- The cost of capital has increased.
- Connecticut needs the electric system infrastructure necessary to hit the ground running once the economy begins to turn itself around. A lack of investment or delay of investment in the state's transmission system can hamper operation of a reliable electric system needed to support the state's economy.

2. Declining load factor.

- On a weather-normalized basis, over the past five years CL&P customers' total energy consumption has decreased by an average of 1.1% per year, while summer-peak demand increased by 0.6% per year.
- For the ten-year forecast period, under the most likely conditions, the annual growth in energy consumption is projected to decrease by 0.5% with an annual growth in summer-peak demand of 0.9%.
- Under extreme conditions of very hot weather, peak load in any given year, even next year, could increase by up to 10%.
- Two factors contributing to the reduction in forecast annual consumption are the continued implementation of CL&P's successful C&LM programs and the loss of industrial load.
- Peak demand continues to grow due to customers' use of electronics and reliance on residential air conditioning on hot and humid summer days.

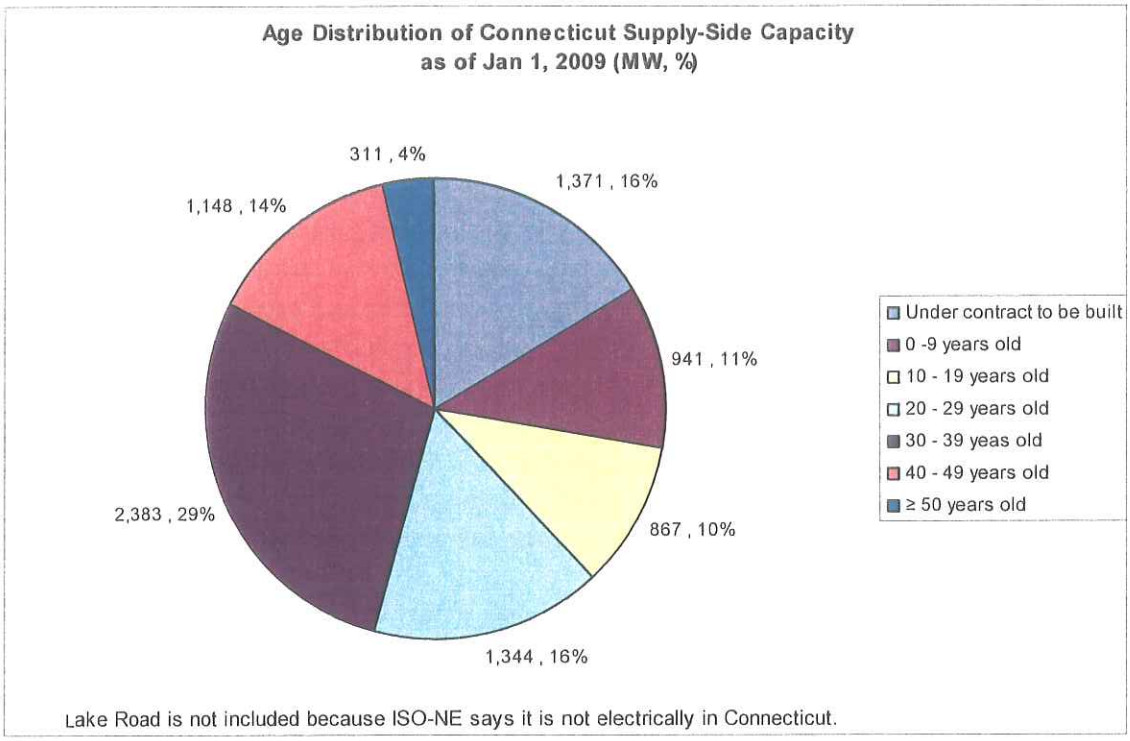
3. Funding reliance of CL&P's successful Conservation and Load Management programs.

- The projected cumulative energy savings from CL&P's nationally recognized C&LM programs, assuming stable funding, will increase from 68 gigawatt-hours ("GWhs") in 2009 to over 2,563 GWhs in 2018.
- Annual peak-demand reductions are forecast at approximately 191 megawatts ("MWs") in 2009 and reach 600 MWs by the end of the forecast period in 2018.
- Energy efficiency devices installed as part of CL&P's C&LM programs reduce the bills of participating customers and provide savings to all customers with savings through a reduction in peak demand and the associated congestion charges. Energy efficiency devices provide savings for the duration of their operable life.

- Demand-Response ("DR") programs provide all customers with net savings through a reduction in peak demand. However, customers can choose to leave DR programs which would result in an increase in peak demand.
- A reduction in C&LM funding can happen at any time. Any reduction in C&LM funding can reduce the number of new energy efficiency devices installed, the amount of DR program participation, and can affect forecasted energy and peak demands.

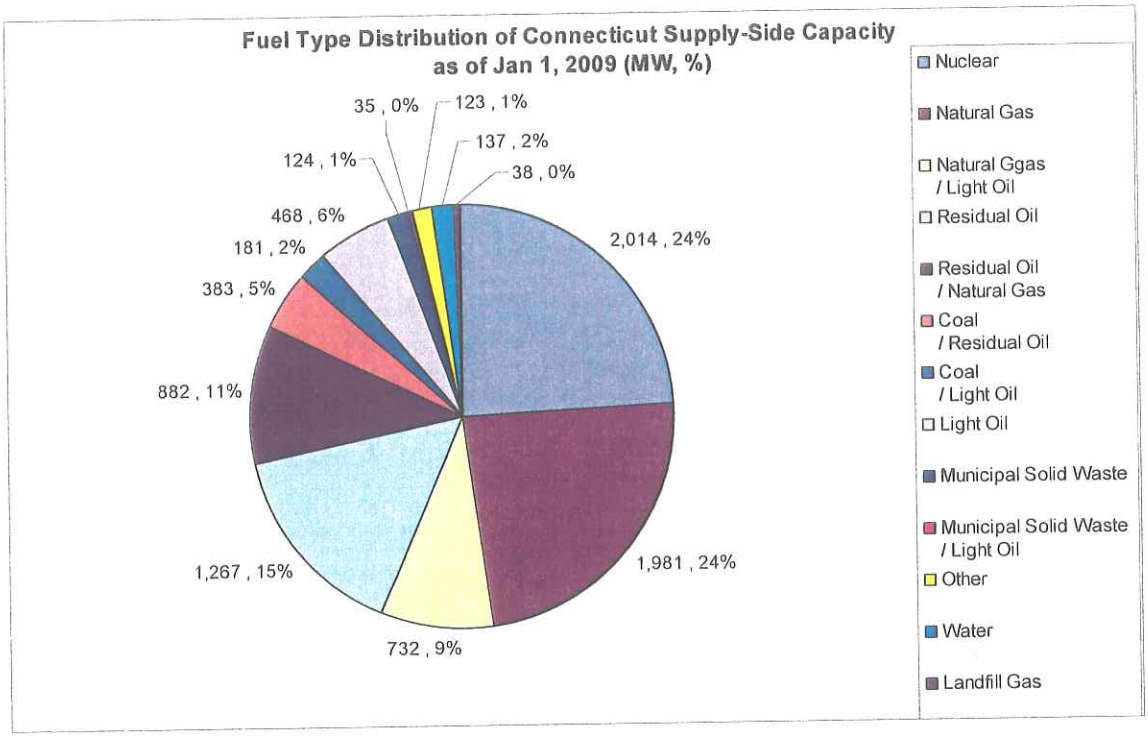
4. Unpredictable retirements and additions of generation facilities.

- Connecticut's generation resources are highly varied in age.
- Connecticut faces the potential retirement of some older generating plants. The Electric Distribution Companies' ("EDC") 2009 Integrated Resource Plan ("IRP"), filed with the Connecticut Energy Advisory Board ("CEAB") on January 2, 2009, identified 1,267 MW of oil-only fired generation that may likely retire if emission controls are tightened beyond what they are now.
- The 2009 IRP includes 1,371 MW of new resources expected to come on-line in the near future as a result of state-sponsored arrangements such as the capacity request for proposals ("RFP"), the peaking generation RFP, Project 150 and the monetary grant program.
- The ISO New England ("ISO-NE") interconnection process for new generation provides a "queue" of proposed new generation. A project's presence in the ISO-NE queue does not guarantee a facility will be built.



5. Insufficient generation fuel diversity.

- While Connecticut's capacity mix is somewhat diverse, as shown below, the vast majority of the time the clearing price for energy in Connecticut and ISO-NE wholesale market is set by natural gas-fired facilities. Natural gas-fired resources have higher variable costs and lower fixed costs than other types of generation, such as coal and nuclear. To the extent these higher energy margins for coal and nuclear more than offset their higher fixed costs, coal and nuclear units are receiving substantial premiums.
- Overall energy prices will only de-link from natural gas when natural gas-fired units are no longer the marginal energy market resources.
- The large-scale import of low- or no-carbon generation, including renewables, into the region and into Connecticut—provided there is enough transfer capability—can impact the wholesale energy market prices.
- This fuel diversity picture will markedly change if the 1,267 MW of oil-only fired generation identified above as potentially retiring do retire, especially if the regional trend continues and new generation is entirely fired by natural gas.



6. Increased global focus on climate change.

- The state, region, and country are quickly developing and adopting regulations to combat global warming and reduce reliance on fossil fuels.
- Connecticut and other New England states have instituted Renewable Portfolio Standards ("RPS") that aggressively seek to annually increase the percentage of renewable energy consumed and the federal government is considering instituting a nationwide RPS.
- In 2009, generators larger than 25 MW in a ten-state region, including New England, will be required to comply with the Regional Greenhouse Gas Initiative ("RGGI"), a regional cap and trade program to reduce carbon emissions. The federal government is also considering regulating carbon emissions.
- New and future environmental regulations at the federal, regional, and state levels directly affect the economic viability of older, oil-fired generators.
- Connecticut's requirement for renewable energy is rising, and much of the region's planned renewable resources are located in northern New England and eastern Canada.

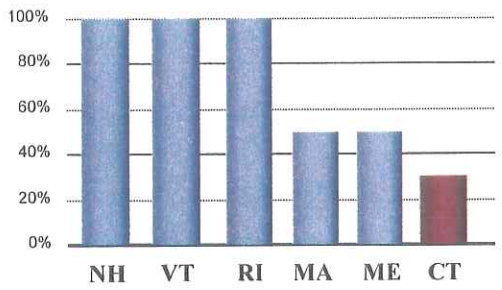
The State of Connecticut's Transmission System and Serving Load

CL&P plans, builds and operates transmission infrastructure with a long-term vision to safely and reliably deliver power to its customers, under a wide variety of supply and demand conditions. The Federal Energy Regulatory Commission ("FERC") mandates reliability requirements for CL&P to comply with while transmitting power from local generators and import points to local customer load.

- CL&P has the responsibility to meet the mandatory reliability standards managed by NERC and overseen by the FERC and faces severe financial penalties of up to $1 million per day for *each* non-compliance occurrence.

- Among New England states, Connecticut is the least able to serve peak load using power imports.
- Connecticut imports are limited by its transmission system up to 2,500 MWs, about 30% of the state's peak load.
- Consequently, at least 70% of the electricity needed to serve customer peak demand must be generated in Connecticut.

Percentage of Peak Load that Could Be Served by Transmission Imports



Note: Chart uses approximate values based on known interface limits.

- The potential to develop large quantities of renewable resources, like wind and hydro power, are very low in Connecticut, but have greater probability in northern New England and Canada.
- The prospect of transporting renewable energy from northern New England and Canada to New England is particularly promising. Northeast Utilities is currently developing a solution with NStar and Hydro-Quebec that would import up to 1,500 MW of renewable generation from Canada.

Increasing Transmission Capability is a Part of the Overall Solution to Ensure Reliability and Market Access

CL&P's transmission system plays an important role in ensuring electric service reliability, and it must be robust enough to accommodate an ever-changing wholesale generation market, quickly developing environmental regulations and the economy. The transmission system also plays a critical supporting role in the economic growth of Connecticut by providing access to diverse and competitively-priced electrical energy resources. It is the critical link between merchant power generation and Connecticut consumers.

Strengthening Connecticut's transmission capability requires:

- Strengthening its transmission interconnection with the rest of New England, providing an opportunity to share in the region's access to Canada's projected surplus summer power and other renewable resources in northern New England.
- Supporting the construction of needed New England transmission facilities that are required to reinforce and accommodate large electric power transfers and regional imports.
- Continued support to site and build needed electric transmission infrastructure such as the New England East-West Solution ("NEEWS") Projects, to remove bottlenecks addressing both reliability needs and the needs of a robust competitive wholesale generation market.

CL&P is committed to meeting the many challenges in providing safe and reliable electric service to its customers. CL&P is investing in Connecticut's future by strengthening the regional transmission infrastructure.

Chapter 1: INTRODUCTION

1.1 Report Overview

CL&P is a company engaged in electric distribution and transmission services, as defined in Conn. Gen. Stat. §16-1. As such, CL&P has prepared this Ten-Year Forecast of Loads and Resources ("FLR") pursuant to Conn. Gen. Stat. §16-50r. This 2009 FLR includes the following information:

1. A tabulation of the peak loads, resources, and margins for each of the next ten years, using CL&P's 50/50 financial forecasting methodology;
2. Data on energy use and peak loads for the five preceding calendar years, including C&LM programs;
3. A list and discussion of planned transmission lines on which proposed route reviews are being undertaken or for which certificate applications have already been filed;
4. For each generating facility that generated more than one megawatt from which CL&P purchased power, a statement of the name, location, size, type of the generating facility, fuel consumed by the facility, and the by-product of the consumption.

1.2 Evolving Load and Resource Influences

As part of the state's restructuring of the electric industry, which began in 1998, CL&P was ordered to sell its generation assets, while remaining a Connecticut electric distribution and transmission company. Since that time, the state has enacted a number of policies and programs which affect the developing wholesale electric market in the region.

In 2007, the Connecticut legislature passed PA 07-242, *An Act Concerning Electricity and Energy Efficiency ("PA 07-242")*, mandating the annual development of an Integrated Resource Plan ("IRP") for Connecticut. CL&P and The United Illuminating Company ("UI", and together with CL&P "the Companies"), along with their consultant and with input from the CEAB, submitted the second annual IRP to the CEAB, dated January 1, 2009. The CEAB is presently reviewing the 2009 IRP and is expected to forward it to the DPUC in April 2009. The DPUC will render a decision on the CEAB's and EDC's recommendation actions in mid-2009. The 2009 IRP made the following six findings:

1. Connecticut has sufficient resources installed or under contract to meet reliability-based capacity requirements for the next 10 years. Connecticut resources are sufficient even with 1,267 MW of retirements, based on environmental and economic analysis. New England also has no incremental capacity needs.
2. Although there is no need from a resource adequacy perspective, there are other policy-related needs that will drive new resource development.
3. Connecticut has very limited in-state renewable resource potential other than fuel cells, although outside resources can help meet Renewable Portfolio Standards ("RPS"). There is substantial uncertainty whether there will be sufficient resources developed to meet region-

wide demand for renewables. New transmission could enable the development and integration of out-of-state resources.

4. Connecticut is a national leader in energy efficiency programs. Additional energy efficiency programs are a cost-effective and environmentally responsible way to meet Connecticut's increasing energy needs.
5. Current and proposed transmission projects will mitigate reliability deficiencies, further integrate Connecticut into the regional grid, reduce congestion, and provide improved access to diverse generation.
6. Transmission planning involves multiple regional and state processes which offer numerous opportunities for state participation and influence.

Section 2.3 discusses the results of the most recent capacity auction in the ISO-NE wholesale electricity market. In addition, the state of Connecticut has taken action to procure renewable, peaking and capacity resources (see Section 2.2).

Chapter 4 describes the evolution of the transmission system's role since the industry has been restructured and how the current focus is to provide safe, reliable power that in turn will continue to support a competitive market.

This mix of complicated market pressures and market participants is different from the landscape upon which the legislation was written originally requiring utility companies to provide an FLR. CL&P appreciates the challenge set before the Connecticut Siting Council ("CSC") in reviewing the numerous forecasts it will receive in 2009 and looks forward to participation in its review.

Chapter 2: FORECAST OF LOADS AND RESOURCES

Chapter Highlights

- There is uncertainty in any forecast, and even more so this year because of the recession; however, the impact of the recession on the long-run forecast is expected to be minimal.
- Although electric energy usage is expected to decline by 0.5% per year over the forecast period, peak demand is expected to grow by 0.9%.
- While CL&P uses its own Reference Plan Forecast for financial forecasting, the Company uses ISO-NE's load forecast for transmission planning purposes.

2.1 Electric Energy and Peak-Demand Forecast

The energy and peak-demand forecasts contained in this chapter are collectively called the Reference Plan Forecast and are described below. The Reference Plan Forecast is used for the Company's budget forecast, which was prepared in December 2008 and is based on CL&P's total franchise area. The forecast excludes wholesale sales for resale and bulk power sales.

CL&P's Reference Plan Forecast is based on the results of econometric models, adjusted for CL&P's forecasted C&LM programs, as discussed in Chapter 3 of this report. It includes projected reductions resulting from distributed generation ("DG") projects developed in accordance with Public Act 05-01, *An Act Concerning Energy Independence* ("PA 05-01"). The peak demand forecast also includes projected reductions due to ISO-NE's load response program, which are also shown in Chapter 3.

Although the Reference Plan Forecast is used for CL&P's financial planning, it is important to note that it is not used for transmission planning. As ISO-NE is responsible for regional transmission planning and reliability, it independently develops its own forecast which CL&P utilizes to construct its transmission system. Section 2.1.3 discusses ISO-NE's forecast in general terms and how it conceptually compares to CL&P's forecast.

The Reference Plan Forecast projects a weather-normalized compound annual growth rate ("CAGR") in total electrical energy output requirements of -0.5% for CL&P from 2009-2018. Without the Company's C&LM programs and DG resources, the forecasted growth rate would be 0.7%.

The normalized CAGR in summer peak demand in the Reference Plan Forecast is forecasted to be 0.9%. Similarly, if CL&P's C&LM and DG programs, along with the ISO-NE load response programs, were excluded, the forecasted CAGR would be 2.0%.

Table 2-1 provides historic output and summer peaks, actual and normalized for weather, for the 2004-2008 period, and forecast output and peaks for the 2009-2018 period. The peak load forecast is the maximum sum of the hourly forecasts of load for each customer class, company use and associated transmission and distribution losses. The sum of the class hourly loads for each year, including company use and associated losses, is the annual forecast of system

electrical energy requirements or output. This is the amount of energy which must be supplied by generating plants to serve the loads on the distribution system.

The Reference Plan Forecast is a 50/50 forecast that assumes normal weather throughout the year, with normal peak-producing weather episodes in each season. The forecasted mean daily temperature for the summer peak day is 83° Fahrenheit ("F") and is based on the average peak day temperatures from 1977-2006. The Reference Plan Forecast's summer peak day is assumed to occur in July, since this is the most common month of occurrence historically. It should be noted, however, that the summer peak has occurred in June, August and September in some years.

Table 2-1: CL&P 2009 Reference Plan Forecast

	Net Electrical Energy Output Requirements		Reference Plan (50/50 Case)			Extreme Hot Weather Scenario			Extreme Cool Weather Scenario		
Year	Output GWH	Annual Change (%)	Peak MW	Annual Change (%)	Load Factor (2)	Peak MW	Annual Change (%)	Load Factor (2)	Peak MW	Annual Change (%)	Load Factor (2)
HISTORY											
2004	25496		4818		0.602						
2005	26119	2.4%	5402	12.1%	0.552						
2006	24871	-4.8%	5512	2.0%	0.515						
2007	25185	1.3%	5209	-5.5%	0.552						
2008	24485	-2.8%	5289	1.5%	0.527						
Compound Rates of Growth (2004-2008)											
	-1.0%		2.4%								
HISTORY NORMALIZED FOR WEATHER											
2004	25578		5056		0.576						
2005	25498	-0.3%	5277	4.4%	0.552						
2006	24926	-2.2%	5084	-3.6%	0.560						
2007	24936	0.0%	5209	2.5%	0.546						
2008	24467	-1.9%	5184	-0.5%	0.537						
Compound Rates of Growth (2004-2008)											
	-1.1%		0.6%								
FORECAST											
2009	24150	-1.3%	5094	-1.7%	0.541	5580	7.6%	0.494	4617	-10.9%	0.597
2010	23910	-1.0%	5139	0.9%	0.531	5640	1.1%	0.484	4649	0.7%	0.587
2011	23883	-0.1%	5210	1.4%	0.523	5725	1.5%	0.476	4708	1.2%	0.579
2012	23917	0.1%	5278	1.3%	0.516	5806	1.4%	0.469	4762	1.2%	0.572
2013	23605	-1.3%	5337	1.1%	0.505	5879	1.3%	0.458	4808	1.0%	0.560
2014	23429	-0.7%	5397	1.1%	0.496	5954	1.3%	0.449	4856	1.0%	0.551
2015	23383	-0.2%	5514	2.2%	0.484	6085	2.2%	0.439	4959	2.1%	0.538
2016	23441	0.2%	5541	0.5%	0.482	6126	0.7%	0.436	4973	0.3%	0.537
2017	23350	-0.4%	5598	1.0%	0.476	6197	1.2%	0.430	5017	0.9%	0.531
2018	23338	-0.1%	5669	1.3%	0.470	6281	1.4%	0.424	5075	1.1%	0.525
Compound Rates of Growth (2008-2018)											
	-0.5%		0.7%			1.7%			-0.4%		
Normalized Compound Rates of Growth (2008-2018)											
	-0.5%		0.9%			1.9%			-0.2%		

1. Sales plus losses and company use.
2. Load Factor = Output (MWH) / (8760 Hours X Season Peak (MW)).

Forecasted Reference Plan Peaks are based on normal peak day weather (83° mean daily temperature). Forecasted Extreme Hot Weather Peaks are based on the weather that occurred on the 2001 peak day (88° mean daily temperature). Forecasted Extreme Cool Weather Peaks are based on the weather that occurred on the 2000 peak day (76° mean daily temperature).

2.1.1 Uncertainty in the Reference Plan Forecast

There is uncertainty in any long-run forecast, because assumptions that are used in the forecast are selected at a point in time. The particular point of time chosen is generally insignificant, unless the forecast drivers are at a turning point. This is the case this year. Outlined below are four major areas of uncertainty that are inherent to this forecast.

- The Economy - The Reference Plan Forecast is based on an economic forecast that was developed in November 2008. Business cycles represent normal economic fluctuations

which are typically not reflected in long-run trend forecasts because recovery eventually follows recession, although it is difficult to pinpoint when. So while the level of energy or peak demand that is forecasted for any given year of the forecast may be attained a little earlier or later than projected, the underlying trend is still likely to occur at some point and needs to be planned for. However, due to the severity of this recession, there is much uncertainty about economic conditions in the next year or two and the impact of the federal economic stimulus plan on energy usage, even in the long run.

- C&LM Funding – The Reference Plan Forecast assumes continued funding for new C&LM programs throughout the forecast period based on the 2009 C&LM Plan that is expected to be approved in early 2009. However, one of the measures being considered by Governor Rell to balance the state budget is a diversion of a portion of the ratepayer-funded conservation fund to the general fund. If this is adopted by the legislature, or if the 2009 C&LM Plan is not approved by the Connecticut Department of Public Utility Control ("DPUC"), the level of C&LM programs that can be implemented could be reduced and could raise both the energy and peak-demand forecasts.
- DG Monetary Grant Program – The forecast includes modest assumptions about sales reductions resulting from DG projects for which monetary grants have been requested on or before October 14, 2008 (the DPUC stopped accepting new grant applications as of this date pending a review of the DG monetary grant program that was established pursuant to PA 05-01). If this program is reinstated, or if customers who have already applied for monetary grants decide to change their plans, energy usage and peak demand would be different from the forecast.
- Weather - The Reference Plan Forecast assumes normal weather based on a thirty-year average (i.e., 1977-2006) of heating and cooling degree days. The historical peak day mean temperatures range from 76° F to 88° F, with deviations from the average peak day temperatures being random, recurring and unpredictable occurrences. For example, the lowest peak day mean temperature occurred in 2000, while the highest occurred in 2001. This variability of peak-producing weather means that over the forecast period, there will be years when the actual peaks will be significantly above or below the forecasted peaks.

2.1.2 Forecast Scenarios

Table 2-1 contains scenarios demonstrating the variability of peak load around the 50/50 peak forecast due to weather. The table shows that weather has a significant impact on the peak load forecast with variability of approximately 10%, or 600 MWs, above and below the 50/50 forecast, which is based on normal weather. To illustrate, the 2018 summer peak forecast reflecting average peak-producing weather is 5,669 MWs. However, either extremely mild or extremely hot weather for the entire forecast period could result in a range of potential peak loads from 5,075 MWs to 6,281 MWs. This 1,206 MWs of variation, which is a band of approximately plus or minus 10% around the average, demonstrates the potential impact of weather alone on forecasted summer-peak demand.

Extremely hot weather is equally unpredictable, yet the impact is immediate. A hot day in the first year of the forecast that matches the extreme peak day weather in 2001 could produce peak demand almost as high as the forecast for the ninth year under normal weather assumptions.

Even a moderately hot day, such as experienced on the 2005 peak day, could increase peak demand by approximately 125 MWs.

The Extreme Hot Weather scenario roughly corresponds conceptually to ISO-NE's 90/10 forecast, described in Section 2.1.3.

2.1.3 ISO-NE Demand Forecasts

The CSC's 2008 Review of the Ten-Year Forecast of Loads and Resources provides a concise description of the ISO-NE's "90/10" forecast used by CL&P for transmission planning purposes. A relevant excerpt is provided below.

Called the "90/10" forecast, it is separate from the normal weather (50/50) forecasts offered by the Connecticut Utilities. However, it is the one used by both ISO-NE and by the Connecticut utilities for utility infrastructure planning, including transmission and generation.

A 90/10 forecast is a plausible worst-case hot weather scenario. It means there is only a 10 percent chance that the projected peak load would be exceeded in a given year, while the odds are 90 percent that it would not be exceeded in a given year. Put another way, the forecast would be exceeded, on average, only once every ten years. While this projection is extremely conservative, it is reasonable for facility planning because of the potentially severe disruptive consequences of inadequate facilities: brownouts, blackouts, damage to equipment, and other failures. State utility planners must be conservative in estimating risk because they cannot afford the alternative. Just as bank planners should ensure the health of the financial system by maintaining sufficient collateral to meet worst-case liquidity risks, so load forecasters must ensure the reliability of the electric system by maintaining adequate facilities to meet peak loads in worst-case weather conditions. While over-forecasting can have economic penalties due to excessive and/or unnecessary expenditures on infrastructure, the consequences of under-forecasting can be much more serious. Accordingly, the Council will base its analysis in this review on the ISO-NE 90/10 forecast. Page 6.

As CL&P has reported in the past, there is one other major difference between the CL&P and ISO-NE forecasts, aside from the difference between the 50/50 forecast methodology used by CL&P and the 90/10 forecast methodology used by ISO-NE. The CL&P demand forecasts include reductions in demand from the Company's C&LM programs, DG resources and ISO-NE's Load Response program, while the ISO-NE demand forecasts do not include these reductions; instead, ISO-NE considers C&LM, Load Response and DG to be supply resources in their capacity forecast.

Table 2-2 shows CL&P's Reference Plan Forecast with CL&P's C&LM program, the DG resources and ISO-NE's Load Response program added back in to make it easier to compare CL&P's forecast with ISO-NE's forecast.

Table 2-2: Adjustments to Output and Summer Peak Forecasts

Net Electrical Energy Output Requirements

Year	Unadjusted Output GWH	Distributed Generation GWH	Company Sponsored C&LM GWH	ISO-NE Load Response GWH	Adjusted Output GWH	Annual Change (%)
HISTORY NORMALIZED FOR WEATHER						
2008					24,467	
FORECAST						
2009	24,449	(231)	(68)	-	24,150	-1.3%
2010	24,568	(341)	(316)	-	23,910	-1.0%
2011	24,913	(378)	(652)	-	23,883	-0.1%
2012	25,270	(379)	(974)	-	23,917	0.1%
2013	25,255	(378)	(1,272)	-	23,605	-1.3%
2014	25,363	(378)	(1,555)	-	23,429	-0.7%
2015	25,585	(378)	(1,824)	-	23,383	-0.2%
2016	25,901	(378)	(2,082)	-	23,441	0.2%
2017	26,056	(378)	(2,328)	-	23,350	-0.4%
2018	26,279	(378)	(2,563)	-	23,338	-0.1%
Normalized Compound Rates of Growth (2008-2018)						
	0.7%				-0.5%	

Reference Plan (50/50 Case)

Year	Unadjusted Peak MW	Distributed Generation MW	Company Sponsored C&LM MW	ISO-NE Load Response MW	Adjusted Peak MW	Annual Change (%)
HISTORY NORMALIZED FOR WEATHER						
2008					5,184	
FORECAST						
2009	5,306	(20)	(10)	(182)	5,094	-1.7%
2010	5,397	(29)	(46)	(182)	5,139	0.9%
2011	5,523	(32)	(98)	(182)	5,210	1.4%
2012	5,642	(32)	(150)	(182)	5,278	1.3%
2013	5,751	(32)	(199)	(182)	5,337	1.1%
2014	5,858	(32)	(246)	(182)	5,397	1.1%
2015	6,021	(32)	(292)	(182)	5,514	2.2%
2016	6,092	(32)	(336)	(182)	5,541	0.5%
2017	6,191	(32)	(378)	(182)	5,598	1.0%
2018	6,301	(32)	(418)	(182)	5,669	1.3%
Normalized Compound Rates of Growth (2008-2018)						
	2.0%				0.9%	

Extreme Hot Weather Scenario

Year	Unadjusted Peak MW	Distributed Generation MW	Company Sponsored C&LM MW	ISO-NE Load Response MW	Adjusted Peak MW	Annual Change (%)
HISTORY NORMALIZED FOR WEATHER						
2008					5,184	
FORECAST						
2009	5,792	(20)	(10)	(182)	5,580	7.6%
2010	5,897	(29)	(46)	(182)	5,640	1.1%
2011	6,037	(32)	(98)	(182)	5,725	1.5%
2012	6,170	(32)	(150)	(182)	5,806	1.4%
2013	6,293	(32)	(199)	(182)	5,879	1.3%
2014	6,414	(32)	(246)	(182)	5,954	1.3%
2015	6,591	(32)	(292)	(182)	6,085	2.2%
2016	6,676	(32)	(336)	(182)	6,126	0.7%
2017	6,789	(32)	(378)	(182)	6,197	1.2%
2018	6,913	(32)	(418)	(182)	6,281	1.4%
Normalized Compound Rates of Growth (2008-2018)						
	2.9%				1.9%	

1. Sales plus losses and company use.
2. Load Factor = Output (MWH) / (8760 Hours X Season Peak (MW)).

Table 2-3
Summer Seasonal Claimed Capabilities for Existing and Contracted Connecticut Capacity Sorted by Fuel Supply and Age

Fuel Supply (first type is primary, second type is alternate)

Age	Nuclear	Natural Gas	Natural Ggas / Light Oil	Residual Oil	Residual Oil / Natural Gas	Coal / Residual Oil	Coal / Light Oil	Light Oil	Municipal Solid Waste	Municipal Solid Waste / Light Oil	Other	Water	Landfill Gas	Total
Under contract to be built		1,238									97		36	1,371
Less than 10 years old		298	521					122						941
Less than 20 years old		445	156				181	12	13	22	26	10	2	867
Less than 30 years old	1,137		55					14	111	13		14		1,344
Less than 40 yeas old	877			807	448			251						2,383
Less than 50 years old				460	236	383		69						1,148
Greater than 50 years old					198							113		311
Total	2,014	1,981	732	1,267	882	383	181	468	124	35	123	137	38	8,365

Sources / Notes

(1) Existing unit ratings from January 2009 ISO-NE seasonal claimed capability report at: http://www.iso-ne.com/genrtion_resrcs/snl_clmd_cap/2009/scc_jan_2009.xls

(2) Under contract to be built unit ratings for Project 150 MWs from this section, rest from 2009 Electric Distribution Companies' (EDC) Integrated Resource Plan (IRP) filing with the Connecticut Energy Advisory Board (CEAB) at: http://www.ctenergy.org/pdf

(3) Existing unit in-service dates from 2008 ISO-NE CELT report at: http://www.iso-ne.com/trans/celt/report/2008/2008-celt_report_in_spreadsheet_form.xls or interpreted from monthly seasonal claimed capability posting.

(4) Under contract to be built in-service dates for Project 150 MWs from this section, rest frame 2009 EDC IRP filing with CEAB

(5) Other fuel includes wind, tires, biomass and manure

(5) Lake Road units 1 through 3, 752 summer MWs are physically but not electrically in Connecticut and so are not part of the table. The 2009 EC IRP filed with CEAB indicates that post-NEEWS these resources would likely be considered electrically in Connecticut. These units are less than ten years old, their primary fuel is natural gas and their alternative fuel is oil.

2.2 Resources: Existing and Planned Generation Supply

General Connecticut Capacity Picture

Table 2-3 provides a current snapshot of Connecticut's supply-side capacity picture based on ISO-NE documents, the Connecticut 2009 IRP, filed with the CEAB on January 2, 2009, and information provided below in this section. Table 2-3 shows existing and contracted to be built supply-side resources summarized by age and fuel type.

CL&P Specific Capacity Picture

CL&P does not presently own generation as a result of the restructuring of the electric industry in Connecticut that began in 1998.

Ongoing Generation Purchase Obligations

The Company does continue to purchase generation under a number of power-purchase agreements. CL&P also purchases generation under Rate 980 from a number of facilities when those facilities choose to sell. Rate 980 is a CL&P tariff that allows customer-owned generation to be sold to CL&P at prices derived from the ISO-NE wholesale energy market. CL&P does not use any of the foregoing purchases to serve load but rather uses them in the ISO-NE wholesale market to offset contract cost obligations.

New Class 1 Renewable Energy Project Purchases

Per Conn. Gen. Stat. §16-244c, as amended, the electric distribution companies are required to submit to the DPUC for its approval long-term purchase power agreements from Class I renewable energy source projects that receive funding from the Renewable Energy Investment Fund (administered by the Connecticut Clean Energy Fund ("CCEF")). By statute, on or after October 1, 2007 and until September 30, 2008, such agreements shall be comprised of not less than a total of one hundred twenty-five (125) megawatts (allocated between CL&P and The United Illuminating Company); and on and after October 1, 2008, such agreements shall be comprised of not less than a total of one hundred fifty (150) megawatts (allocated between the Companies) ("Project 150").

The Companies have executed a Cost Sharing Agreement in order to determine the sharing of costs incurred and benefits received in connection with each Electricity Purchase Agreement ("EPA") entered into under Project 150. Pursuant to the Cost Sharing Agreement, CL&P incurs approximately 80% of the costs and receives approximately 80% of the benefits derived from Project 150 EPAs.

As a result of the first solicitation for renewable projects in Project 150, on April 19, 2007, CL&P executed an agreement to procure 15 MWs (annualized) of power from Watertown Renewable Power, LLC's 30 MW biomass facility.

On January 30, 2008, the DPUC issued its final decision on the second solicitation for projects in Project 150. Seven of the eleven projects recommended by CCEF were selected for EPAs. The selected projects consist of three biomass, one landfill gas, and three fuel cell projects totaling 109.2 megawatts for a Project 150 total to date of 124.2 megawatts. Contracts between the utility (either CL&P or UI) and these resource owners were executed during 2008.

Table 2-4 lists the projects that are currently under long-term contracts under Project 150, including their planned capacity and the estimated date they plan to begin operation.

Table 2-4: Renewable Generation Projects Selected In Project 150

Round	Project (Location)	Project Amount (MW)	Contract Amount (MW)	Est. In-Service Year	Term
1	Watertown Renewable Power, LLC (Watertown, CT)	25.7 or 30.0 (1)	15.0	2011	15
2	DFC-ERG Milford Project (Milford, CT)	9.0	9.0	2010	18
2	South Norwalk Electric Works (South Norwalk, CT)	35.5 or 39 (1)	30.0	2010	15
2	Plainfield Renewable Energy (Plainfield, CT)	37.5	30.0	2011	15
2	Clearview Renewable Energy, LLC (Bozrah, CT)	30.0 or 33 (1)	30.0	2011	20
2	Stamford Hospital Fuel Cell CHP (Stamford, CT)	4.8	4.8	2009	15
2	Clearview East Canaan Energy, LLC (North Canaan, CT)	3.0	3.0	2010	20
2	Waterbury Hospital Fuel Cell CHP (Waterbury, CT)	2.4	2.4	2009	15

1. Project amount is subject to further discussion.

Although the Project 150 generating facilities are contracted to CL&P, and CL&P is responsible for 80% of the costs and benefits, they are not included in this report's supply tables, since CL&P does not anticipate acting as Lead Market Participant for them in the ISO-NE wholesale markets. CL&P believes each generator has an obligation under this proceeding's enabling statute to report on its project directly to the CSC. CL&P will revisit whether to include these resources in the supply tables in annual filings after they have been placed in-service and reporting responsibilities have been better defined.

New Owned Peaking Generation

PA 07-242 required the state's two publicly owned electric utilities to submit a proposal to the DPUC to build peaking generation facilities. While CL&P's two proposals were not chosen in the DPUC's solicitation of peaking generation, CL&P is the contractual counter party to the three selected projects (a total of 506 MW). CL&P will not receive any of the projects' electricity products nor represent the projects in the ISO-NE markets – it is the responsibility of the DPUC and the owners of the winning projects to provide their services to the market. CL&P will not include these projects in its annual filing.

2.2.1 Capacity Forecast

The capacity tables in this chapter provide estimates of CL&P's supply resources for which it has ownership or purchase entitlement interests at present and will maintain such interests during the 2009-2018 forecast period. All resources have winter and summer ratings in MWs reflecting the effects of varying seasonal conditions, such as ambient air and water temperatures, on unit ratings. It should be noted that starting with the ISO-NE Forward Capacity Market ("FCM") capacity commitment period of June 2010 through May 2011,

capacity obligations will be measured and met using principally only summer rated capacity. Generally, resources with winter ratings greater than their summer ratings may partner with resources having summer ratings greater than their winter ratings to meet capacity obligations; however, this is not expected to be a large part of the market. Winter ratings will continue to be reported in the interest of complete reporting.

2.2.2 Existing Resources and Planned Generation Resource Additions, Deactivations or Retirements

Table 2-5 lists existing supply resources in which CL&P has ownership or entitlement interests for winter 2008/2009 and summer 2009. This table lists CL&P's supply resources based on ownership or entitlement, arranged by: Base Load, Intermediate, Peaking, Pumped Storage, Hydroelectric, and Purchases categories.

Table 2-5: Generation Facilities in Which CL&P Has Ownership or Entitlement by Category

	WINTER RATING (MW)	SUMMER RATING (MW)	YEAR INSTALLED	LOCATION	% ENTITLEMENT CL&P
	2008/2009	2009			
Base					
Vermont Yankee	49.59	47.72	1972	Vernon, VT	7.897
Nuclear Subtotal	49.59	47.72			
Intermediate	0.00	0.00			
Peaking	0.00	0.00			
Pumped Storage	0.00	0.00			
Hydro	0.00	0.00			
Purchases					
System	0.00	0.00			
Non-Utility	345.91	335.56			
Purchase Total	345.91	335.56			
Total Generation	395.50	383.28			

Base-load units are typically operated around the clock, intermediate units are those used to supply additional load required over a substantial part of the day, and peaking units supply power usually during the hours of highest demand. On occasion, some of the more efficient intermediate units operate as base-load units, while others may be called upon to operate as

peaking capacity. Accordingly, these categories are intended to be generally descriptive rather than definitive, and reflect past operating patterns.

2.2.3 Ten-Year Capacity Forecast

Tables 2-6 and 2-7 summarize the ten-year capacity forecast for supply resources in which CL&P will have ownership or entitlement interest during the summer and winter peak periods from 2009 through 2018. The tables show CL&P's reserve margin expressed in MWs. Reserve margins decline over time, reflecting the ends of purchase power agreements. CL&P does not know with certainty that these resources will continue to operate as merchant generators once their contracts with CL&P end. However, with respect to these resources, the 2009 IRP assumes they continue to operate.

Resource Purchases

Table 2-7 provides a listing of existing cogeneration and small power production facilities 1 MW and greater located in Connecticut from which CL&P purchased power in 2008. The winter and summer claimed capacity of the generation at each production facility is shown in this table.

2.3 Generation Capacity Concerns

Although CL&P no longer owns or operates generation, it continues to have a responsibility to ensure the reliability of the electric system to deliver power to customers. Two important developments since the advent of the deregulated electric industry in Connecticut, the IRP and the ISO-NE FCM, play roles in planning for supply resources in the state.

Integrated Resource Plan for Connecticut

With respect to capacity need, the 2009 IRP, filed with the CEAB on January 2, 2009, concluded that Connecticut will not need to add new capacity to meet loss of load expectation capacity reliability needs under a wide range of possible futures for the next ten years. This conclusion is based on a set of assumptions, including: the retirement of 1,267 MWs; the continued funding of C&LM initiatives at current levels; new resources contracted by the DPUC in recent dockets come on-line as planned, including 506 MWs of peaking generation; and the completion of the NEEWS transmission project. The foregoing retirements are based on an emissions compliance analysis performed as part of the 2008 IRP and validated in the 2009 IRP.

ISO-NE Forward Capacity Market

ISO-NE conducted its second Forward Capacity Auction ("FCA") in December 2008 which resulted in 42,777 MW of new and existing demand-side and supply-side resources competing to provide 32,528 MWs needed for reliability between June 2011 and May 2012. The FCA consisted of eight rounds, starting at a price of $12.00/kW-mo. Bidding in the final round reached the minimum price established for this auction at $3.60/kW-mo, with 4,755 MW of excess internal New England resources remaining. This excess does not include 158 MW of real-time emergency generation that cleared surplus to the 600 MW allotment real-time emergency generation under the capacity market rules.

Table 2-6

2009 - 2018 Summer Forecast of Capacity (MW) at the Time of Summer Peak

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
SUPPLY BEFORE SALES OR EXCHANGES	383.28	338.93	338.93	286.22	238.50	238.50	44.30	41.30	23.09	23.09
CAPACITY SALES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NET GENERATION AVAILABLE	383.28	338.93	338.93	286.22	238.50	238.50	44.30	41.30	23.09	23.09
RESERVE	383.28	338.93	338.93	286.22	238.50	238.50	44.30	41.30	23.09	23.09

Table 2-7

2008/09 - 2017/18 Summer Forecast of Capacity (MW) at the Time of Winter Peak

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
SUPPLY BEFORE SALES OR EXCHANGES	395.50	388.60	349.60	349.60	242.68	242.68	229.95	47.80	44.80	25.22
CAPACITY SALES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NET GENERATION AVAILABLE	395.50	388.60	349.60	349.60	242.68	242.68	229.95	47.80	44.80	25.22
RESERVE	395.50	388.60	349.60	349.60	242.68	242.68	229.95	47.80	44.80	25.22

Supply before sales is made up of supply resources in which CL&P has ownership or entitlement interest as summarized in Tables 2-4 and 2-5, including purchases.

Capacity sales are unit or system power sales that result in a transfer of capacity from CL&P to the purchaser.

Net generation available is the sum of the foregoing categories.

Reserve is the difference between Net Generation Available and the Estimated Peak Load. Since CL&P no longer serves load with its own resources, reserve equals net generation available.

TABLE 2-7: EXISTING CUSTOMER OWNED FACILITIES 1 MW AND ABOVE PROVIDING GENERATION TO THE CONNECTICUT LIGHT & POWER COMPANY

EXISTING & PROVIDED GENERATION TO CL&P DURING 2008

Project Name	Location	Facility Type(1)	Fuel Source	By-Product of Fuel Consumption	Estimated Capacity kW	Claimed Capability Winter kW	Claimed Capability Summer kW
FACILITIES UNDER LONG TERM CONTRACT (2)							
AES	Montville, CT	COGEN	Coal	Steam	181,000	182,150	181,000
Algonquin(Dexter)	Windsor Locks, CT	COGEN	Gas	Steam	39,000	39,000	38,000
Derby Dam	Shelton, CT	SPP	Hydro	-	6,900	7,050	7,050
Goodwin Dam	Hartland, CT	SPP	Hydro	-	3,294	3,000	3,000
Colebrook	Colebrook, CT	SPP	Hydro	-	3,000	1,550	1,550
Quinebaug	Danielson, CT	SPP	Hydro	-	2,161	1,298	307
Kinneytown B	Seymour, CT	SPP	Hydro	-	1,500	1,510	654
Mid-CT CRRA(So. Meadow 5/6)	Hartford, CT	SPP	Refuse	-	67,000	57,326	52,709
Preston (SCRRRA)	Preston, CT	SPP	Refuse	-	13,850	16,514	16,011
Bristol RRF	Bristol, CT	SPP	Refuse	-	13,200	12,736	13,200
Lisbon	Lisbon, CT	SPP	Refuse	-	13,500	13,036	12,961
Wallingford RRF	Wallingford, CT	SPP	Refuse	-	7,100	6,900	6,350
Hartford Landfill	Hartford, CT	SPP	Methane	-	2,445	1,900	1,900
					353,950	**343,970**	**334,692**
FACILITIES NOT UNDER LONG TERM CONTRACT (3)							
Pratt & Whitney	E. Hartford, CT	COGEN	Gas	Steam	23,800	N/A	N/A
Rainbow (Farmington River Power)	Windsor, CT	SPP	Hydro	-	8,200	N/A	N/A
Ten Co./The Energy Network	Hartford,CT	COGEN	Gas	Steam	4,500	N/A	N/A
Wyre Wynd	Jewett City, CT	SPP	Hydro	-	2,780	N/A	N/A
WM Renewable	New Milford,CT	SPP	Methane	-	1,296	N/A	N/A
					40,576	-	-
				TOTAL EXISTING	**394,526**	**343,970**	**334,692**

(1) "SPP" Denotes a Small Power Producer, "COGEN" Denotes a Cogenerator.

(2) Estimated Capacity Represents Contracted Capacity.

(3) Estimated Capacity Represents Estimated Installed Capacity.

Chapter 3: CONSERVATION AND LOAD MANAGEMENT

Chapter Highlights

- CL&P collaborates with other organizations in the development of nationally-recognized energy efficiency and load management programs.
- Energy and demand savings resulting from Connecticut Energy Efficiency Fund programs are a cost-effective resource available to Connecticut customers and should continue to help moderate peak load growth in Connecticut.
- The Conservation and Load Management forecast is contingent upon having a stable source of funding. Any changes in funding will have an effect on savings.

3.1 Introduction

Over the years, CL&P's energy efficiency programs have led the energy-efficiency industry. Many of these programs have received national recognition. In August 2008, the American Council for an Energy Efficient Economy ("ACEEE") rated Connecticut number three in the United States behind California and Oregon on actions the state has taken to adopt and include energy efficiency in its policies[1]. In 2007, ACEEE also honored CL&P and the Connecticut Energy Efficiency Fund ("CEEF") with several program awards including Exemplary Program Recognition for the Energy Conscious Blueprint, Energy Opportunities, and Small Business Energy Advantage Programs. The United States Environmental Protection Agency ("EPA") honored the Northeast Energy Efficiency Partnership ("NEEP") and its sponsors, including CL&P, with an ENERGY STAR® Sustained Excellence 2007 Award for its continued leadership in protecting the environment through energy efficiency. Each dollar invested in energy efficiency through the CEEF generates an average of $4 in lifetime electric benefits making energy efficiency a cost effective resource for customers[2].

3.2 Conservation & Load Management Program Planning

On November 7, 2008, CL&P and UI filed with the DPUC its 2009 Conservation & Load Management Plan ("2009 C&LM Plan"). The 2009 C&LM Plan is a collaborative document developed jointly by the Companies, with assistance from the Energy Conservation Management Board ("ECMB"). The 2009 C&LM Plan was submitted to the DPUC in Docket No. 08-10-03, *DPUC Review of The Connecticut Light and Power Company's and The United Illuminating Company's Conservation and Load Management Plan for the Year 2009.* The 2009 C&LM Plan received input from members of the public, industry groups and private enterprise, and was given final approval by the ECMB in October 2008. CL&P's budget in the 2009 C&LM Plan is $58.0 million.

[1] http://www.aceee.org/pubs/e086.htm

[2] 2007 Legislative Report, Connecticut Energy Conservation Management Board, March 1, 2008

A variety of funding sources are leveraged in order to support this level of C&LM activity. Since the passage of the state's restructuring legislation in 1998 (PA 98-28), a $0.003/kWh electric charge has been the primary funding source for C&LM programs. The $0.003 charge will account for approximately $45 million of the state's C&LM budget in 2009[3]. In addition to the $0.003/kWh charge, CL&P expects approximately $3.3 million in revenues from peak demand savings entered into ISO-NE's Transition Period FCM that will be available for 2009 C&LM programs. Energy savings from C&LM activity also generates Class III Renewable Energy Credit ("REC") revenues that will support C&LM activity at a level of approximately $2.1 million in 2009.

PA 05-01 directed the DPUC to develop programs to reduce Federally Mandated Congestion Charges ("FMCC"). For 2009, the Companies and the ECMB proposed continuing those programs that were developed in the DPUC's Docket No. 05-07-14PH01, *DPUC Investigation to Reduce Federally Mandated Congestion Charges* and plan to spend an additional $7.6 million to implement load-response programs focused on reducing peak demand and FMCCs. The $7.6 million in funding is expected to supplement ISO-NE load response payments and continue through the beginning of 2010. These supplemental payments will be eliminated on May 31, 2010 and these demand resources will become fully integrated into the FCM.

In 2007, PA 07-242 instituted the annual creation of an Integrated Resource Plan (described in Section 2.3). PA 07-242 requires that "Resource needs shall first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible". This creates the potential for more energy efficiency spending in the future and positions energy efficiency as a key component of the state's comprehensive energy resource plan. The C&LM programs for 2010-2018 are based on the "reference case" used in the Companies' 2009 IRP and are built upon the savings in the 2009 C&LM Plan. The reference case includes funding from the $0.003/kWh charge, the ISO-NE FCM and Class III REC revenues as explained above. In addition to those sources of C&LM funding, CL&P estimates an additional $17 million annually of C&LM revenue from the RGGI auctions beginning in 2010[4]. Any changes in these assumed C&LM funding levels will impact the amount of energy and peak savings that C&LM programs may achieve.

3.3 Current Conservation & Load Management Programs

Table 3-1 summarizes the projected peak-load reductions from CL&P's C&LM program activity over the forecast period 2009-2018, which is based on the 2009 IRP's "reference case" C&LM funding level. These peak-load reductions reflect the direct impact of both historical and planned program activity over the ten-year period beginning in 2009 and include the impacts of PA 05-01-funded C&LM initiatives.

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[3] The $45 million reflects that some 2009 C&LM dollars were previously committed to 2008 program activity. In 2010, the 3 mil charge contribution to the C&LM budget is expected to increase funding back to its full level of approximately $70 million.

[4] Connecticut is holding a series of auctions in 2008 through 2009. Proceeds from the auction of carbon allowances are expected to supplement C&LM funding by the end of 2009. The $17 million estimate is based on an average price of $3.50 per allowance.

TABLE 3-1 CL&P-SPONSORED C&LM PEAK LOAD MW IMPACTS

	SUMMER IMPACT		
	Impact of Current Forecast	Impact of Prior Activity	Total Summer Impact
2009	191	490	682
2010	228	475	703
2011	280	445	726
2012	332	406	737
2013	381	373	754
2014	428	349	777
2015	474	300	774
2016	518	268	786
2017	560	245	805
2018	600	211	811

	WINTER IMPACT		
	Impact of Current Forecast	Impact of Prior Activity	Total Winter Impact
2009	196	548	744
2010	245	529	774
2011	313	506	819
2012	382	449	832
2013	447	372	819
2014	508	311	819
2015	566	251	816
2016	621	199	820
2017	674	178	851
2018	724	148	872

Notes:

MW totals are rounded, and therefore, totals may vary.

Prior activity savings diminish over time to account for measures that have reached the end of their estimated life.

The 'Impact of Current Forecast' columns included in the tables above reflect C&LM program activity for the period 2009 - 2018, based on the proposed level of funding described in Chapter 2.3.

Many factors could affect the level of savings that actually occur in the forecast period, including changes in available funding, changes in the energy consumption of CL&P customers, or changes in the economic climate.

3.4 Ten-Year C&LM Forecast

Table 3-2 presents the potential annual energy savings and summer and winter peak-load reductions forecasted for the C&LM programs implemented in the CL&P service territory for the 2009 IRP C&LM "reference case" program budgets. Table 3-2 also reflects ten years of projected program activity beginning in 2009. The projected savings of C&LM programs have been shown as separate line items since the average savings of energy efficiency programs is greater than ten years, while load-response activities have a more immediate, short-term impact. The energy and summer peak savings from this table are used to adjust the CL&P forecast in Table 2-2.

3.5 Forecast Sensitivity

The C&LM programs utilize a complementary mix of lost opportunity, retrofit, and market transformation implementation strategies to achieve savings. The energy savings and peak-load reductions projected in this forecast are sensitive to changes in a number of factors including changes in the electricity marketplace and to customer attitudes.

The most significant variable in determining energy savings is the stability of conservation and load management program funding, as noted earlier in this chapter. Projections are based on the continued implementation of a suite of programs similar in nature and focus to the 2009 IRP "reference case". Any legislative or regulatory changes in geographic and program focus will produce results which may vary from these projections. In addition, because the

C&LM savings are used as adjustments on the CL&P forecast, changes in C&LM funding levels will impact the energy and peak-load forecast found in Chapter 2.

Table 3-2: CL&P C&LM Programs Annual Energy Savings And Peak Load Reduction by Customer Class

Connecticut Light and Power 2009 – 2018 GWh Sales Saved

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Residential	33	140	267	396	498	581	651	718	782	844
Commercial	23	117	256	385	516	649	782	909	1,031	1,146
Industrial	11	58	128	193	258	325	391	455	516	574
Total GWh Sales Conserved	68	316	652	974	1,272	1,555	1,824	2,082	2,328	2,563
MW Reductions (Summer)										
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Residential	4	17	34	53	69	84	97	110	123	135
Commercial (non-Load Response)	4	19	43	64	86	107	129	149	168	187
Industrial (non-Load Response)	2	10	22	33	44	55	66	76	86	96
Total non-Load Mgt	10	46	98	150	199	246	292	336	378	418
Load Response	182	182	182	182	182	182	182	182	182	182
Total MW Reduction (Summer Impacts)	191	228	280	332	381	428	474	518	560	600
MW Reductions (Winter)										
	2009	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Residential	9	39	77	120	157	191	222	251	280	307
Commercial (non-Load Response)	3	16	35	53	71	89	106	123	139	154
Industrial (non-Load Response)	2	8	18	28	37	46	56	65	73	81
Total non-Load Mgt	14	63	131	200	265	326	384	439	492	542
Load Response	182	182	182	182	182	182	182	182	182	182
Total MW Reduction (Winter Impacts)	196	245	313	382	447	508	566	621	674	724

Note: Load Response Program Savings provides demand savings that is assumed to be supported by ISO-NE FCM payments and continue beyond June 1, 2010 even though C&LM supplemental payments are expected to end in May 2010.

Chapter 4: TRANSMISSION PLANNING AND SYSTEM NEEDS

Chapter Highlights

- CL&P's transmission facilities are part of the New England regional grid and must be designed, operated and maintained to ensure compliance with mandatory NERC reliability standards.
- CL&P's transmission facilities are an integral part of the New England regional transmission grid with numerous tie lines to neighboring electric systems.
- Many factors (with a fair amount of uncertainty) currently influence transmission planning and system needs.
- CL&P is proposing new transmission projects to strengthen its 345-kV ties with Massachusetts and Rhode Island to enhance system reliability and serve its electric load.
- The transmission system is an important enabler of competitive markets and the region's efforts to meet environmental goals.

4.1 Transmission is built for the Long Term and Reflects Uncertainty about the Future

Transmission enables varied amounts and sources of generation to serve varying load over a long term. Consequently, Transmission Planning must consider many factors about the future, most of which have a fair amount of uncertainty about them. Currently, there is an economic recession underway which leads to many questions. For example, how long will the current economic recession last? How deep will it go? What will be the effect when the business cycle improves? Which existing generating units will be subject to retirement? How do we diversify the fuel mix and lower the cost? Where and what kind of new generators will be built in the next two decades? Which renewables generating facilities will be built? How will the changing environmental laws in the federal arena such as RPS and others affect generators? Will electric vehicles become a bigger piece of the electric energy supply and delivery requirements? All the above and other items have an effect on how we study the future transmission system. Transmission is proposed and built to accommodate the future, considering as many scenarios as possible.

4.2 National Reliability Standards are Mandatory

The Federal Energy Policy Act of 2005 required FERC to designate an entity to provide for a system of mandatory, enforceable reliability standards under FERC's oversight. This action is part of a transition from a voluntary to a mandatory system of reliability standards for the bulk-power system. In July 2006, FERC designated NERC as the nation's Electric Reliability

Organization ("ERO"). The expectation of the ERO is to improve the reliability of the bulk-power system by proactively preventing situations that can lead to blackouts, such as that which occurred in August 2003.

The Connecticut transmission system is part of the larger NERC Eastern Interconnection and thus subject to the interdependencies of generation, load and transmission in neighboring electric systems. NERC recognizes that the actual planning and construction of new transmission facilities have become more complex. In 1997, NERC stated the following:

The new competitive electricity environment is fostering an increased demand for transmission service. With this focus on transmission and its ability to support competitive electric power transfers, all users of the interconnected transmission systems must understand the electrical limitations of the transmission systems and the capability of these systems to reliably support a wide variety of transfers.

The future challenge will be to plan and operate transmission systems that provide the requested electric power transfers while maintaining overall system reliability. All electric utilities, transmission providers, electricity suppliers, purchasers, marketers, brokers, and society at large benefit from having reliable interconnected bulk electric systems. To ensure that these benefits continue, all industry participants must recognize the importance of planning these systems in a manner that promotes reliability.[5]

On March 15, 2007, FERC approved mandatory reliability standards developed by NERC. FERC believes these standards will form the basis to develop and maintain the reliability of the North American bulk power system. These mandatory reliability standards apply to users, owners and operators of the bulk power system, as designated by NERC through its compliance registry procedures. Both monetary and non-monetary penalties may be imposed for violations of the standards. The final rule, "Mandatory Reliability Standards for the Bulk Power System," became effective on June 18, 2007.

4.3 Environmental Requirements May Change over the Next Ten to Twenty Years

New England's electricity sector faces many energy and capacity challenges in the next two decades as it simultaneously attempts to meet reliability needs and environmental requirements, while minimizing economic impacts. Regional environmental requirements such as RPS and RGGI may necessitate looking beyond New England for low-emissions and renewable resources. Today, renewable resources provide only a small portion of New England's energy requirements. However, New England, along with other regions throughout the nation, is looking to further diversify energy resources and is likely to push to substantially increase renewable resource requirements. Also, there is a Federal initiative to diminish the United States' reliance on imported oil, which is likely to change the generation mix in Connecticut.

Energy efficiency and demand-side options will remain important components of New England's resource mix. Importing power from Canada would provide significant amounts of

[5] Planning Standards, North American Electric Reliability Council, September 1997

low-emission and potential renewable power. A portfolio approach with a mix of New England and Canadian resources could meet the region's need for a comprehensive energy solution. CL&P believes that further development of the portfolio approach could provide significant opportunities for Connecticut and the region.

4.4 Background on CL&P's Transmission System

Transmission lines collectively form the infrastructure that is the interstate electric "highway system," capable of moving electric energy from where it is produced to where it is used. In New England, moving large amounts of electric energy over long distances is achieved primarily by the interconnected 345-kV regional bulk power system. The expansion of the 345-kV transmission network and ties to neighboring utilities and control areas enables CL&P to continue to meet customer peak demands for electricity.

CL&P's transmission grid is used to support reliable, economical and continuous service to intra-state customers. The 345-kV system allows for the efficient transfer of bulk power within and outside of the New England control area. This integrated grid enables CL&P to efficiently transmit power throughout its franchise service territory and share in the reliability benefits of parallel transmission paths.

Connecticut's most pressing transmission system need was to increase the capability of the system to transport power in southwest Connecticut ("SWCT"), where nearly half of the state's load is located. CL&P has completed the construction of the Bethel – Norwalk Project, Glenbrook Cables Project, the Long Island Cable Replacement Project and, most recently, the Middletown – Norwalk Project.

4.5 Transmission System

CL&P's transmission system is part of the interconnected New England transmission network. Transmission lines across New England and outside of the region are interconnected to form a transmission network, sometimes called a "grid" or "system". The transmission grid serves multiple purposes, all of which work together to enhance reliability. CL&P and other electric utilities design the transmission grid to withstand national, regional and company-specified contingencies, so that electric power is transmitted reliably and safely throughout the interconnected grid.

CL&P's 345-kV transmission system enables the movement of power from large central generating stations, such as Lake Road, Middletown 4 and the Millstone Nuclear Power Station, throughout Connecticut and over three interstate transmission tie lines to and from neighboring utilities. These tie lines provide connections with National Grid in Rhode Island, with the Western Massachusetts Electric Company ("WMECO") in Massachusetts and with Consolidated Edison in New York.

CL&P's transmission network also includes lower capacity transmission ties to neighboring utilities, all operating at voltages between 69-kV and 138-kV. These tie lines terminate with WMECO in Massachusetts, National Grid in Rhode Island, Central Hudson in New York, Long Island Power Authority in New York, Connecticut Municipal Electric Energy Cooperative, Inc. ("CMEEC"), and The United Illuminating Company ("UI").

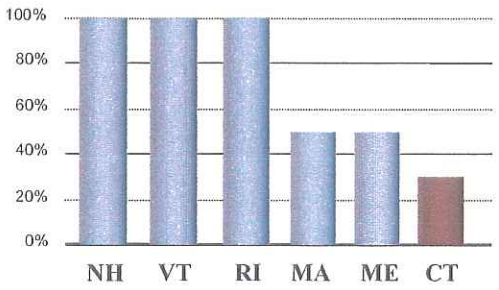
The CL&P transmission system, with its tie lines to neighboring utilities, provides multiple paths for electric energy to move freely over the southern New England transmission grid, increases system reliability during low and high load periods, and enhances the ability of the grid to continue to support the delivery of electric energy following transmission and generation emergencies. CL&P relies on the bulk power 345-kV transmission grid to reliably transmit electric energy to high load density areas in Connecticut. CL&P will continue to assess the peak demands for electricity in Connecticut and continue its vision to maintain a robust 345-kV transmission network. CL&P will continue to propose additions to this network with a long-term mission to ultimately operate multiple 345-kV tie lines to its neighboring electric systems in New England and New York to ensure customer reliability in the best interest of CL&P's electric customers.

The State of Connecticut's Transmission System and Serving Load

CL&P plans, builds and operates transmission infrastructure with a long-term vision to safely and reliably deliver power to its customers, under a wide variety of supply and demand conditions. The FERC mandates reliability requirements for CL&P to comply with while transmitting power from local generators and import points to local customer load.

- CL&P has the responsibility to meet the mandatory reliability standards managed by the NERC and overseen by the FERC and faces severe financial penalties of up to $1 million per day for *each* non-compliance occurrence.
- Among New England states, Connecticut is the least able to serve peak load using power imports.
- Connecticut imports are limited by its transmission system up to 2,500 MWs – about 30% of the state's peak load.
- Consequently, at least 70% of the electricity needed to serve customer peak demand must be generated in Connecticut.

Percentage of Peak Load that Could Be Served by Transmission Imports



Note: Chart uses approximate values based on known interface limits.

- The potential to develop large quantities of renewable resources, like wind and hydro power, are very low in Connecticut, but have greater probability in northern New England and Canada.
- The prospect of transporting renewable energy from northern New England and Canada to New England is particularly promising. Northeast Utilities is currently developing a solution with NStar and Hydro-Quebec that would import up to 1,500 MW of renewable generation from Canada.

Existing Substations and System Loops

CL&P currently has twelve major bulk power substations where the 345-kV and 115-kV transmission networks interconnect - Montville, Card, Manchester, Barbour Hill, Southington, Frost Bridge, North Bloomfield, East Devon, Norwalk, Killingly, Haddam, and Plumtree. These twelve substations enable bulk power from the large central generation stations and

power imported over the three 345-kV transmission tie lines to be delivered to CL&P's 115-kV system.

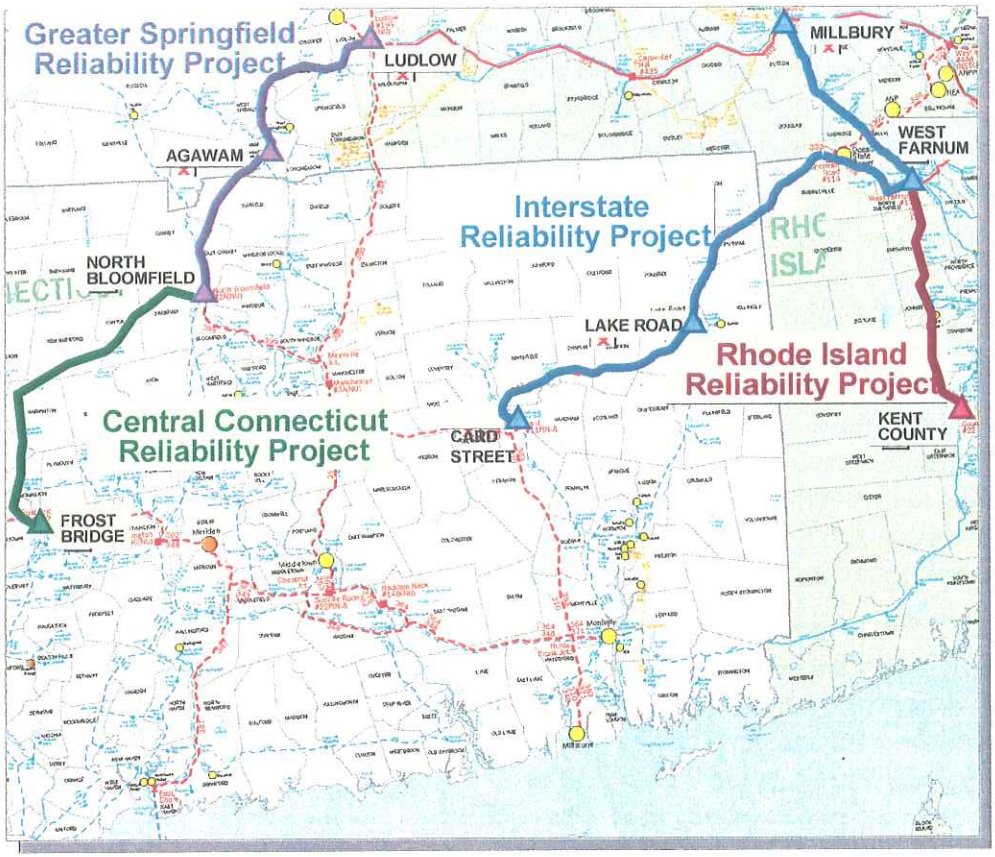
Overall, the 115-kV transmission system transmits power from central generating stations across transmission tie lines and bulk power substations to distribution step-down substations which supply distribution facilities and local area load. It also loops around high load density pockets, primarily in central and SWCT, and moves power to connect load centers in the eastern and northwestern area of the state.

4.6 The New England East – West Solution (NEEWS)

Connecticut's electric system reliability is explicitly tied to the state's ability to import electric power over the New England transmission grid. During the summer of 2006, Connecticut (including CL&P, UI and CMEEC) experienced an all time peak demand of approximately 7,400 MW. Under ideal system conditions Connecticut can reliably import only about 30% of the state's peak demand, as described above. Additionally, it is becoming increasingly likely that the potential retirement of aging and uneconomic generation will result in a condition where in-service generation and transmission import capabilities cannot reliably meet the growing summer peak customer demands for electricity.

ISO-NE, in their 2005 Regional System Plan, first identified the need for major southern New England transmission system reinforcements to address multiple reliability problems between Connecticut, Massachusetts and Rhode Island. ISO-NE, CL&P and National Grid have collaborated and developed a comprehensive set of interrelated transmission reinforcement projects known as the NEEWS. Figure 4-1 presents a graphical description of the new 345-kV circuit projects associated with NEEWS.

Figure 4-1: Map of NEEWS Projects



A brief description of the projects is listed below.

Greater Springfield Reliability Project

New and modified 115-kV and new 345-kV transmission facilities, including a new 345-kV transmission tie line connecting north-central Connecticut and western Massachusetts, would address reliability problems in the greater Springfield area. The new 345-kV facilities are expected to make a connection between WMECO's Ludlow Substation and Agawam Substation and a connection between Agawam Substation and CL&P's North Bloomfield Substation in Bloomfield.

Interstate Reliability Project

A new 345-kV transmission line connecting National Grid's service territory in Massachusetts and Rhode Island with CL&P's service territory would, when combined with the upgrades shown under the Central Connecticut Reliability Project described below, increase the east-west power transfer capability across southern New England. A preferred route was introduced in CL&P's August 2008 Municipal Consultation Filing that will tie National Grid's Millbury Switching Station in Massachusetts to CL&P's Card Substation in Lebanon, Connecticut via National Grid's West Farnum Substation in Rhode Island.

Rhode Island Reliability Project

New and modified 115-kV and new 345-kV transmission facilities will address reliability problems associated with Rhode Island's limited access to the 345-kV system and over-dependence on local generation. These facilities would be constructed by National Grid.

Central Connecticut Reliability Project

New and modified 115-kV and new 345-kV transmission facilities would address reliability problems associated with the increased transfer of power from eastern Connecticut to western and southwestern Connecticut. The currently planned connection points for a new 345-kV transmission line are North Bloomfield Substation in Bloomfield and Frost Bridge Substation in Watertown.

Transmission planning studies, performed in accordance with national and regional reliability standards, replicate the transmission system and forecast load demands. These studies reveal indications that transmission circuit overloads and system low-voltage problems can exist under the following contingent conditions:

- Loss of single and multiple 345-kV transmission circuits;
- Insufficient reactive reserve capability;
- Heavy power transfers within and through the New England region; and
- Generator dispatch scenarios that assume the unavailability of multiple generating units (*e.g.* the unavailability of multiple generating units at any time for any reason, such as economics, equipment failure, fuel supply, maintenance, or environmental concerns).

NEEWS is a comprehensive plan for Connecticut that addresses these contingent conditions by enhancing the transmission system in the following manner:

- Strengthens the bulk power delivery systems between Connecticut, Massachusetts and Rhode Island with the addition of new high capacity 345-kV transmission circuits;
- Increases the east-eest regional power transfer capability across southern New England;
- Provides an alternate 345-kV electric power source to the North Bloomfield Substation and establishes a new 345/115-kV "hub" west of the Connecticut River in Agawam where several existing 115-kV transmission circuits connect;
- Establishes additional 345-kV circuit connections at the Lake Road Switching Station in Killingly which will enhance the power delivery capability of the transmission network in the vicinity of the Lake Road Generating Station;
- Establishes a new 345-kV transmission path between the North Bloomfield and Frost Bridge Substations which will increase Connecticut's transmission system capability to deliver electric power from east to west across the state; and
- Increases reactive reserve capability with the installation of new 345-kV capacitor banks.

Following the completion of the NEEWS projects, Connecticut's import capability will increase to approximately 3,600 MW – or approximately 45% of the state's peak load. Increasing the state's ability to import power will benefit customers in three ways. First, it will strengthen system reliability by broadening the base of power supply available to meet

customer demand. Second, it will have a favorable impact on electric energy costs, because the same broadened base of supply should reduce the instances of Reliability Must Run ("RMR") contracts and other congestion charges that are related to transmission system limitations Third, it will help provide access to remote renewable and/or lower emission generation and meeting state and federal environmental goals.

The Connecticut siting of the first set of NEEWS projects began with the Connecticut Valley Electric Reliability Transmission Project (the Connecticut portion of the Greater Springfield Reliability Project and the Manchester to Meekville Junction Circuit Separation) application submittal to the CSC in October 2008.

4.7 Assessment of Transmission Needs in Connecticut's Sub-areas

CL&P's service territory is sub-divided into six areas for the purpose of assessing the reliability of the CL&P transmission system. A description of the regions and a summary of the future transmission needs in each area are discussed below. Planned projects (solid red) that are identified on the geographic maps indicate ISO-NE approval. Proposed projects (dotted red, as identified on the geographic maps) are alternative projects under assessment and do not have ISO-NE approval. Station reinforcements are identified by single line entries under the "from" station title in the supporting tables. Transmission line reinforcements are identified by entries under the "from" and "to" station titles in the supporting tables. The term "station" is interchangeable with substation or switching station. Tables 4-1 through 4-5 in the following sections include information on the project's proposed in-service date ("ISD"); these dates may change subject to system needs.

4.7.1 Southwest Connecticut Area

The Southwest Connecticut Area (SWCT), shown in Figure 4-2, is the largest load area within Connecticut and comprises fifty-four towns including all of UI's service territory. This area includes the towns essentially west of Interstate 91 and south of Interstate 84, and accounts for approximately half of the state's peak electric load demand.

Figure 4-2: Geographic Map of SWCT

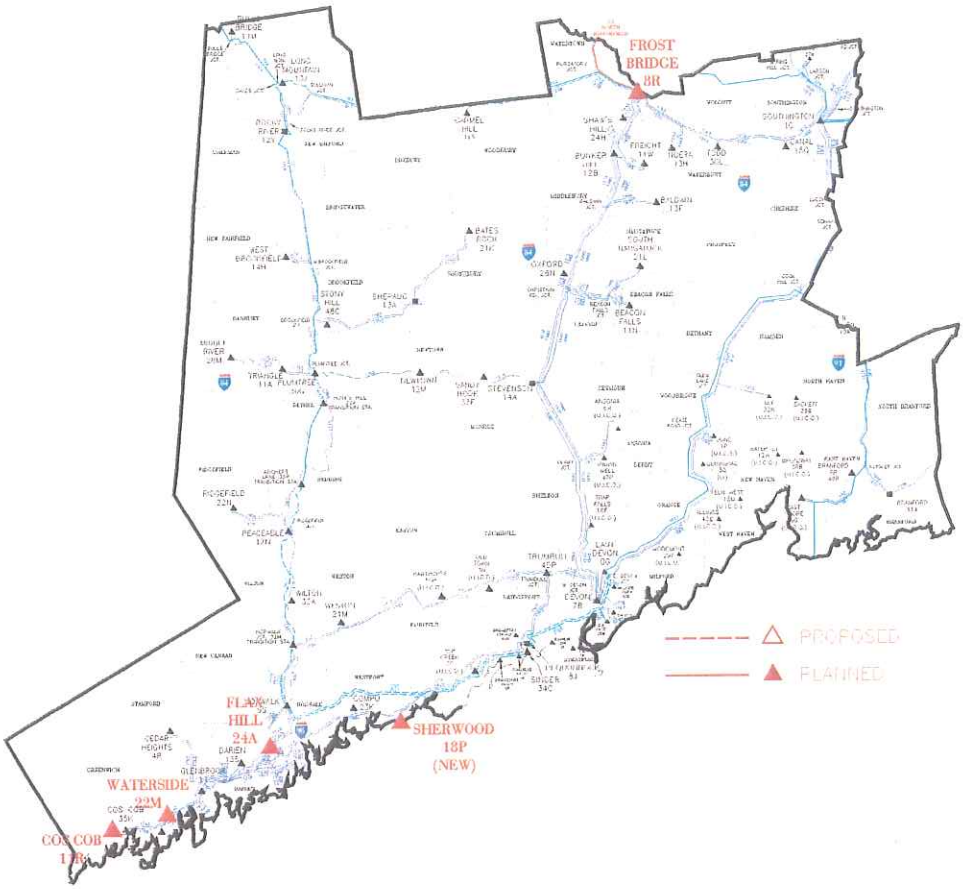


Table 4-1: Substation Projects in SWCT

Substation	City or Town	Voltage kV	Project Type	ISD
Cos Cob	Greenwich	115	Modify	2009
Flax Hill	Norwalk	115	Modify	2009
Waterside	Stamford	115	Modify	2010
Sherwood	Westport	115	New	2011
Frost Bridge (1)	Watertown	345	Modify	2013

(1) Represents a portion of Central Connecticut Reliability NEEWS related project.

Note: Presently there is no transmission line projects proposed in SWCT

CL&P is assessing the power flow capability of each 115-kV circuit in the transmission corridors between Frost Bridge and Devon Substation and between Frost Bridge and Plumtree Substation. In addition, improvements to the Stamford-Greenwich 115-kV transmission system are also being evaluated. The geographic map does not include any representation of these potential future projects at this time.

Table 4-1 contains a listing of future distribution projects that will require transmission reinforcements to integrate these facilities into SWCT's regional grid... At the Cos Cob, Flax Hill and Waterside Substations the projected reinforcement's plans include the installation of additional distribution transformation capability. The proposed Sherwood Substation is a planned new distribution facility that is required to reliably serve local area load. Also, 345-kV substation modifications are planned at Frost Bridge substation in regard to the Central Connecticut Reliability NEEWS project.

4.7.2 Manchester - Barbour Hill Area

The Manchester - Barbour Hill Area, shown in Figure 4-3, includes towns north and south of Manchester. These include Glastonbury to the south and the Massachusetts border towns of Enfield, Suffield and Somers to the north. The growth along the Interstate 91 and 84 corridors, especially in Manchester and South Windsor adjacent to the Buckland Hills Mall, has resulted in the need to upgrade the transmission network.

Table 4-2 contains a listing of transmission reinforcement projects in the Manchester – Barbour Hill area. The projects listed in the table include transmission circuit separations from a common structure to individual structures along existing rights-of-way.

Figure 4-3: Geographic Map of the Manchester – Barbour Hill Area

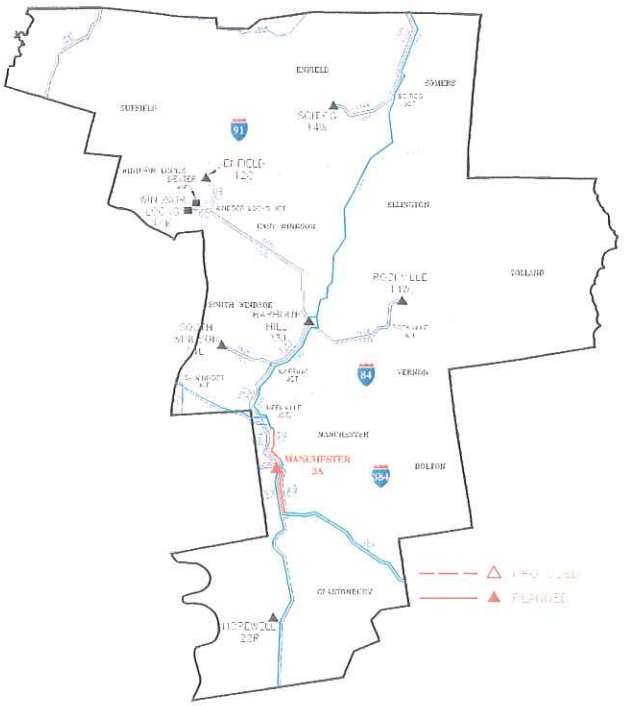


Table 4-2: Transmission Line Projects

From Station	City or Town	To Station	City or Town	Voltage kV	Miles	Project Type	ISD
Manchester (310)	Manchester	Millstone	Waterford	345	Portion of line	Modify	2010
Manchester (368)	Manchester	Card	Lebanon	345	Portion of line	Modify	2010
Manchester (1767)	Manchester	Hopewell	Glastonbury	115	Portion of line	Modify	2010
Manchester (395)	Manchester	Meekville Jct.	Manchester	345	Portion of line	Modify	2011
Manchester (1751)	Manchester	Meekville Jct.	Manchester	115	Portion of line	Modify	2011

Note: Presently, there are no substation projects proposed in the Manchester – Barbour Hill Area.

4.7.3 Eastern Connecticut Area

The Eastern Connecticut Area, shown in Figure 4-4, extends from the Rhode Island border in a westerly direction for about twenty miles and north from Long Island Sound to the Massachusetts border. The area is served by both CL&P and CMEEC.

Figure 4-4: Geographic Map of the Eastern Connecticut Area

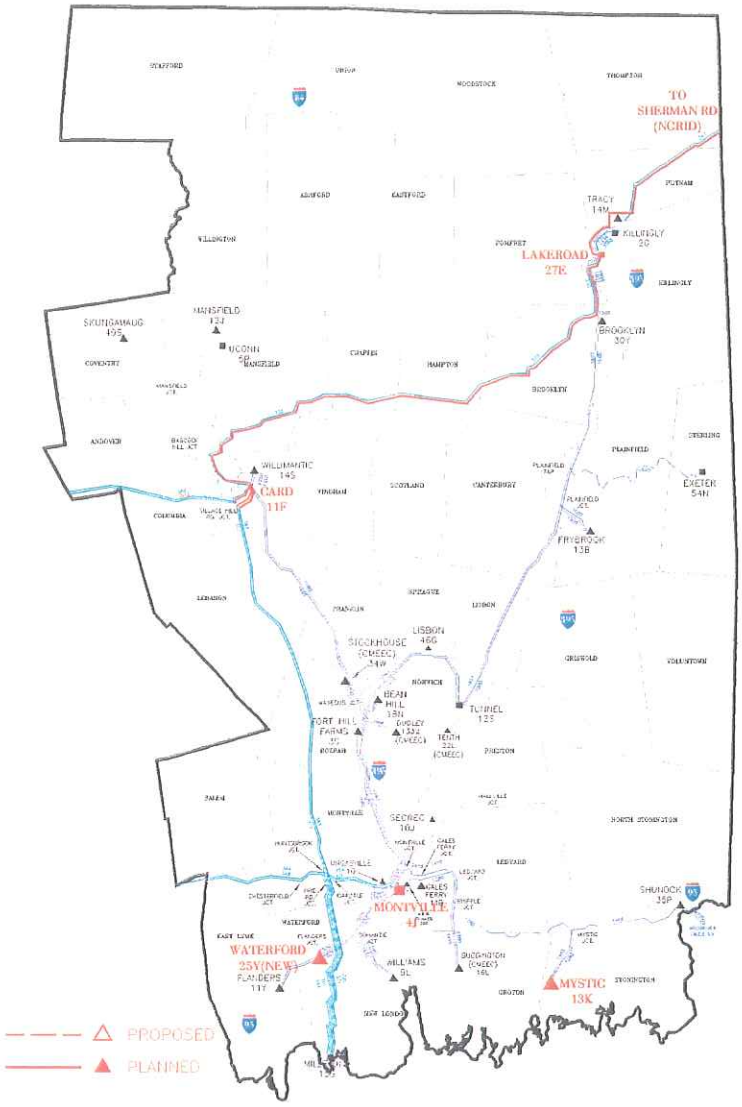


Table 4-3A: Transmission Line Projects

From Station	City or Town	To Station	City or Town	Voltage kV	Miles	Project Type	ISD
Card (1)	Lebanon	Lake Road	Killingly	345	29.3	New	2013
Lake Road (1)	Killingly	CT/RI Border	Thompson	345	7.6	New	2013

Table 4-3B: Substation Projects

Substation	City or Town	Voltage kV	Project Type	ISD
Waterford	Waterford	115	New	2009
Mystic	Stonington	115	Add	2009
Montville (1)	Montville	345	Modify	2013
Card (1)	Lebanon	345	Modify	2013
Lake Road (1)	Killingly	345	Modify	2013

(1) Represents a portion of Interstate Reliability NEEWS related project

Table 4-3A lists the transmission circuit reinforcements associated with the Interstate Reliability Project, one of the NEEWS Projects. Table 4-3B contains substation projects where Montville Substation will require the addition of 345-kV capacitor banks for reactive reserve. This is also part of the Interstate Reliability project. Other substation projects include distribution projects that will require transmission reinforcements to integrate these facilities into the eastern Connecticut regional grid. At the Mystic Substation the projected reinforcement plans include the installation of additional distribution transformation capability. The Waterford Substation is a planned new distribution facility that is required to reliably serve local area load. Also, 345-kV substation modifications are planned at Card and Lake Road substations related to the Interstate Reliability NEEWS project.

4.7.4 Middletown Area

The Middletown Area, shown in Figure 4-5, consists of a five- to ten-mile wide band east and west of the Connecticut River from Hebron to Old Lyme. The westerly section consists of the area included in a triangle that runs from Middletown to Old Saybrook and back to the eastern part of Meriden.

Figure 4-5: Geographic Map of the Middletown Area

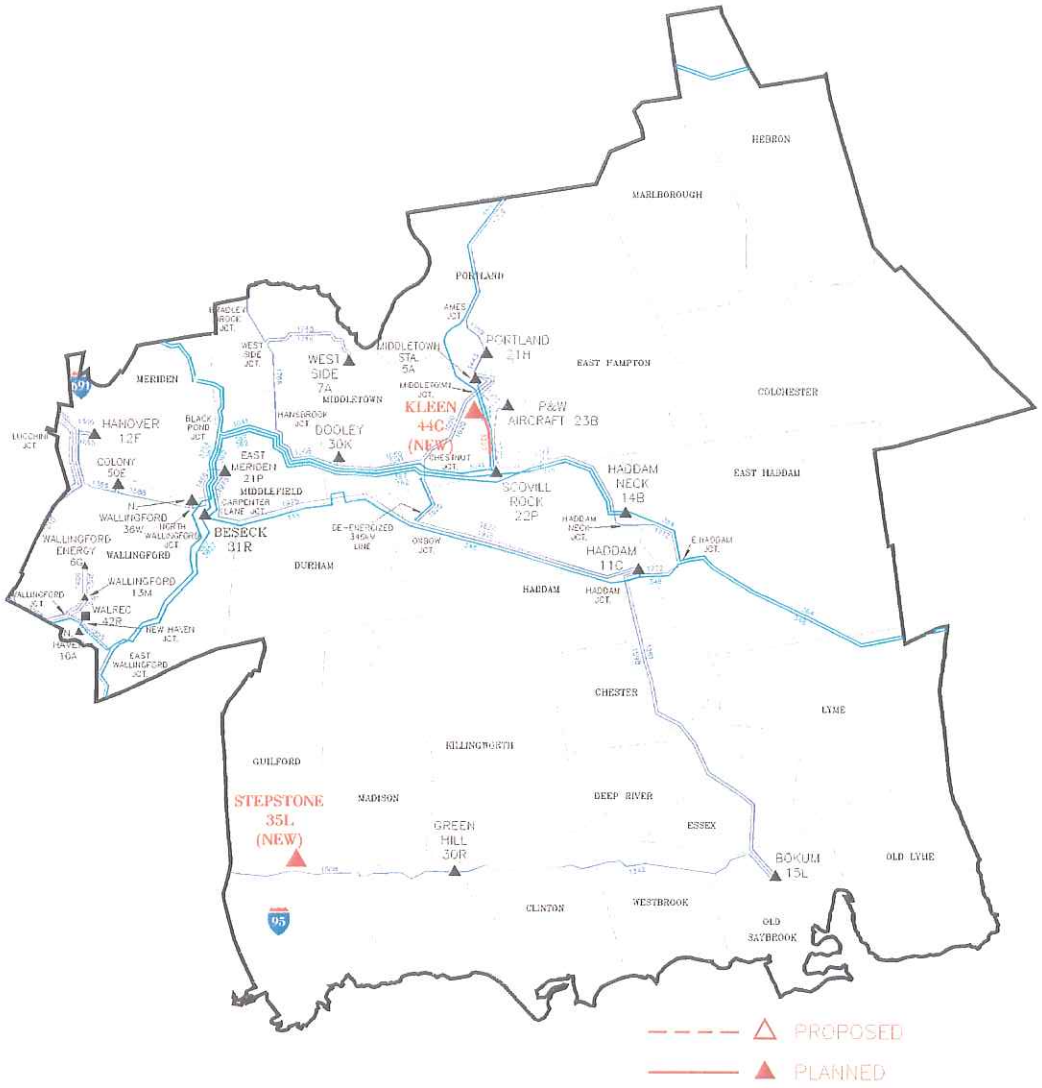


Table 4-4A: Transmission Line Project

From Station	City or Town	To Station	City or Town	Voltage kV	Miles	Project Type	ISD
Manchester	Manchester	Scovill Rock	Middletown	345	0.9	Modify	2012

Table 4-4B: Substation Projects

Substation	City or Town	Voltage kV	Project Type	ISD
Stepstone	Guilford	115	New	2009
KLEEN	Middletown	345	New	2010

Table 4-4A contains a 345-kV Manchester – Scovill Rock 353 circuit upgrade associated with the NEEWS Projects. In addition, the Kleen Generating Station will require a new interconnection that loops into the 345-kV Manchester – Scovill Rock 353 circuit. Table 4-4B includes a future distribution substation project that will require transmission reinforcements to integrate these facilities into the regional grid for eastern Connecticut. The Stepstone Substation is a planned new distribution facility that is required to reliably serve local area load demands.

4.7.5 Greater Hartford Area

The Greater Hartford Area, shown in Figure 4-6, is the towns in the vicinity of the Capitol city and stretches north to the Massachusetts border, west to the Farmington River, and south to the Route 691 interchange with the Berlin Turnpike and straddles the Connecticut River in the heart of central Connecticut.

Figure 4-6: Geographic Map of the Greater Hartford Area

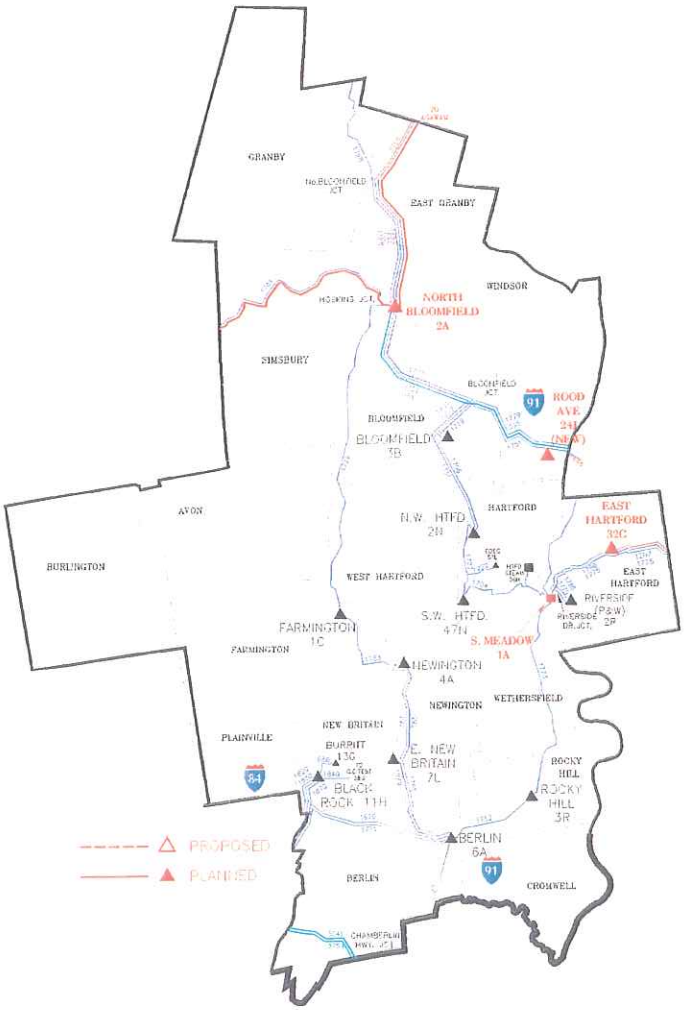


Table 4-5A: Transmission Line Projects

From Station	City or Town	To Station	City or Town	Voltage kV	Miles	Project Type	ISD
North Bloomfield (1)	Bloomfield	CT/Ma Border	East Granby	345	11.5	New	2013
North Bloomfield (1)	Bloomfield	CT/MA Border	East Granby	115		Remove	2013
North Bloomfield (1)	Bloomfield	CT/MA Border	East Granby	115		Remove	2013
North Bloomfield (1)	Bloomfield	CT/MA Border	Granby	115		Modify	2013
Manchester	Manchester	East Hartford	East Hartford	115	3.2	New	TBD

Table 4-5B: Transmission Substation Projects

Substation	City or Town	Voltage kV	Project Type	ISD
North Bloomfield	Bloomfield	115	Modify	2009
Rood Ave	Windsor	115	New	2009
North Bloomfield (1) & (2)	Bloomfield	345	Modify	2013

(1) Represents a portion of the Interstate Reliability NEEWS related project

(2) Represents a portion of the Central Connecticut Reliability NEEWS related project

Table 4-5A contains a listing of future transmission reinforcement projects for the Greater Hartford area. The table identifies transmission line projects associated with NEEWS. One new 345-kV transmission circuit is planned to tie the North Bloomfield Substation with the new 345/115-kV substation additions in Agawam, Massachusetts. In addition, the three existing 115-kV transmission circuits from North Bloomfield Substation to Massachusetts substations will be removed or modified. Table 4-5B includes a future distribution substation project that will require transmission reinforcements to integrate these facilities into the regional grid for the Greater Hartford area. The Rood Avenue Substation is a planned new distribution facility that is required to reliably serve local area load demands. Also, 345-kV substation modifications are planned at the North Bloomfield substation in regard to both the Interstate and Central Connecticut Reliability NEEWS projects.

4.7.6 Northwestern Connecticut Area

The Northwestern Connecticut Area, shown in Figure 4-7, is the portion of the state bounded by the Massachusetts and New York state borders and easterly toward Route 8 and south to the SWCT region.

Figure 4-7: Geographic Map of the Northwestern Connecticut Area

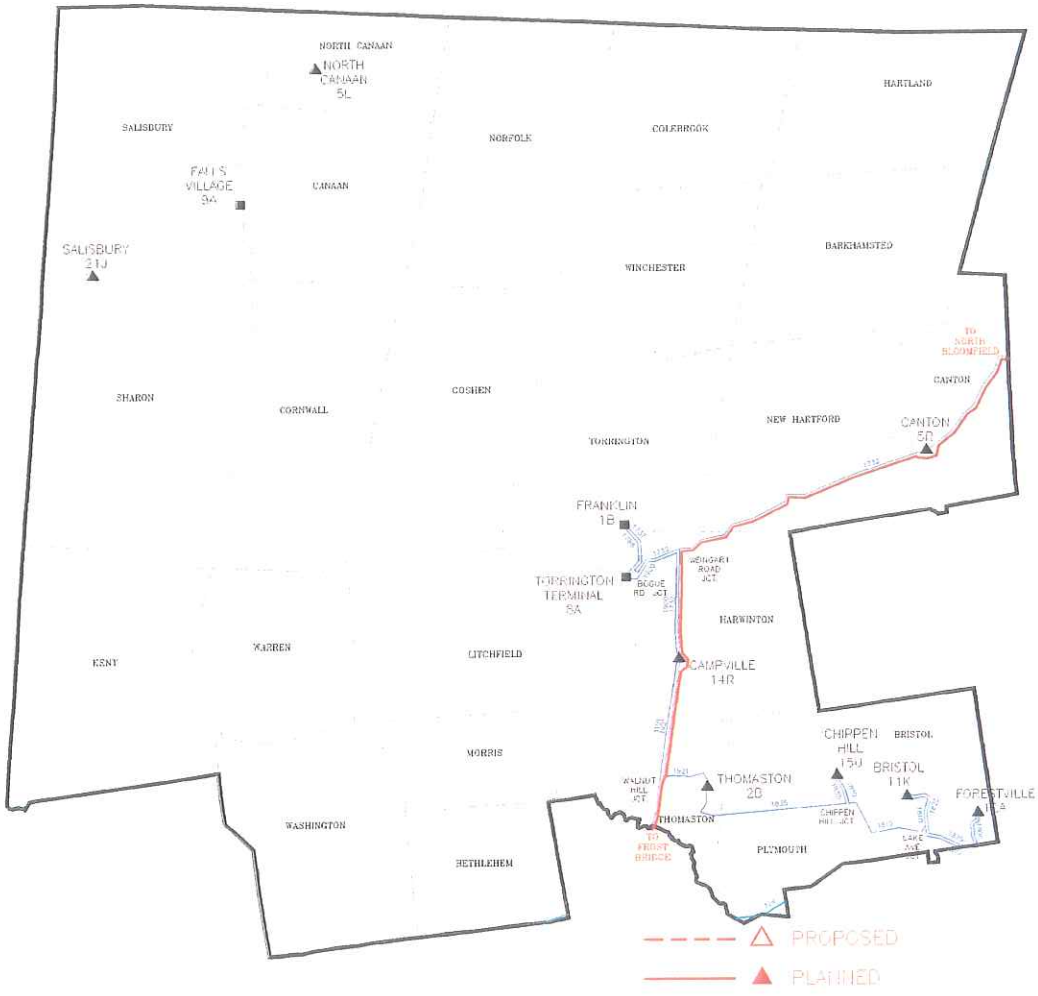


Table 4-6: Transmission Line Projects

From Station	City or Town	To Station	City or Town	Voltage kV	Miles	Project Type	ISD
Frost Bridge (1)	Watertown	North Bloomfield	Bloomfield	345	35.4	New	2013

(1) Represents a portion of the Central Connecticut Reliability NEEWS related project

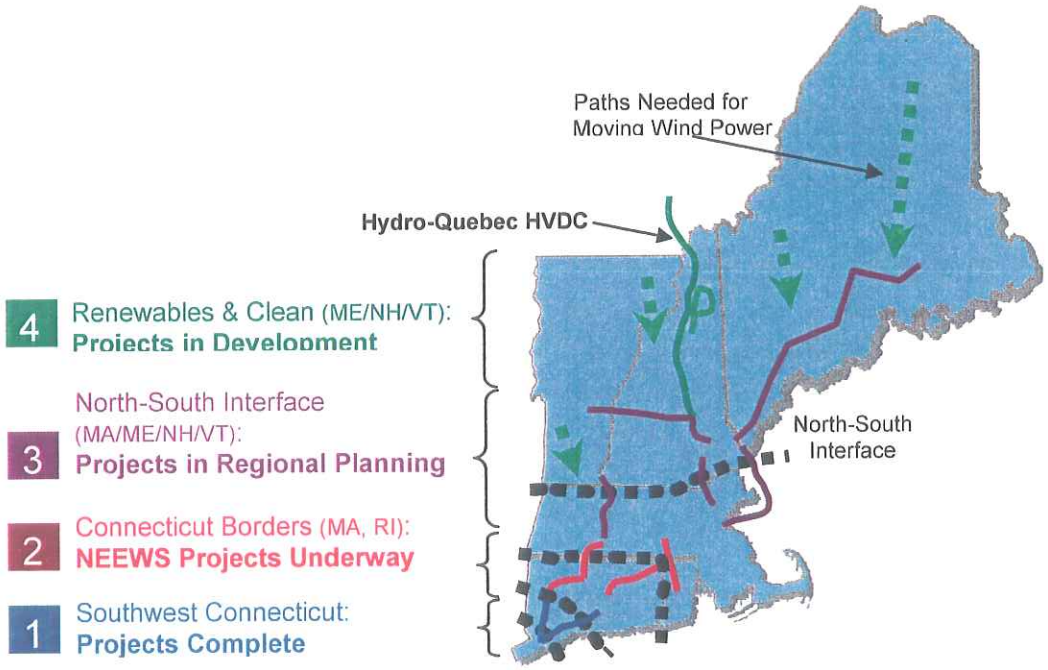
The table identifies a transmission line project associated with NEEWS. This project includes a new 345-kV circuit which is planned to tie the North Bloomfield Substation in Bloomfield

with the Frost Bridge Substation, in Watertown, Connecticut. In the Torrington, Salisbury, and North Canaan area, CL&P is evaluating the existing 69-kV transmission system. However, at this time, CL&P has no definitive plans to upgrade the existing transmission facilities in this area.

4.8 Incorporation of Renewables through Transmission

Transmission has an essential role to play in providing access to renewable electric energy resources. Renewable resources like wind and hydro power will likely not be sited close to load centers, so transmission will be needed to move this energy to the load. The prospect of transporting renewable energy from northern New England and Canada is particularly promising. Long-term forecasts show surplus summer generation in the eastern provinces of Canada and insufficient generation in Ontario, New York, and New England.

Strengthening Connecticut's transmission interconnection with the rest of New England will give the state the opportunity to share in the region's access to Canada's projected surplus summer power. CL&P has studied various options and has proposed a high-voltage direct current transmission tie line with Hydro Quebec which would be combined with a long-term power purchase agreement.



4.9 Underground Transmission and Cost

Transmission line dockets in recent years have established that the electrical characteristics and other attributes of underground transmission lines make such lines difficult to incorporate within the existing Connecticut transmission system, especially at the 345-kV voltage level. System reliability issues are created by underground line construction and are not always feasible or inexpensive to manage. Public concern over the magnetic fields that surround power transmission lines has been a driver for public pressures to construct new transmission lines underground; however, underground transmission lines also produce magnetic fields in publicly accessible locations.

Some of CL&P's more recent transmission line projects have required applications of underground transmission cables, including cables operating at 345-kV. As CL&P builds new transmission, more of the system is going underground. As part of CL&P's Bethel-Norwalk Project, 6.4 miles of existing 115-kV overhead transmission line was replaced by approximately ten miles of underground 115-kV transmission cables. Under this project, approximately twelve miles of parallel 345-kV underground cables entered service as part of a new 20.4-mile long 345-kV circuit. As part of the Middletown-Norwalk Project, CL&P's new transmission facilities include approximately thirty-four new circuit miles of underground 345-kV cables, and approximately one mile of overhead 115-kV lines was replaced by underground 115-kV cables. Finally, two new 115-kV underground cable circuits, each almost nine miles long, were completed as part of the Glenbrook Cables Project.

Cost

The 2007 Investigation into the Life-Cycle Costs of Electric Transmission Lines (Final CSC Report dated February 13, 2007) identified that the first and life-cycle costs of underground 115-kV and 345-kV transmission line are several times higher than the cost of an equal length of overhead transmission line when sufficient right-of-way already exists to accommodate the overhead line. In a regional cost allocation decision dated September 22, 2006, ISO-NE determined that $117.4 million of the estimated $357.2 million Bethel-Norwalk Project cost would not be eligible for regional cost recovery after finding that an all-overhead 345-kV line costing $117.4 million less was feasible and practical to build, even though some new right-of-way was needed. Therefore, Connecticut customers are now paying 100% of the ineligible $117.4 million cost extra. The next transmission projects may also face localization of any extra costs incurred from underground lines where a less costly overhead line alternative is deemed practical and feasible by ISO-NE.

Northeast
Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company
P.O. Box 270
Hartford, CT 06141-0270
(860) 665-5000
www.nu.com

ORIGINAL

March 2, 2009

Mr. Daniel F. Caruso, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Dear Mr. Caruso:

Submitted herewith, on behalf of The Connecticut Light and Power Company, is an original and twenty copies of the annual report on loads and resources, as required by Section 16-50r of the Connecticut General Statutes.

This load and resource report is available for review by the public during normal business hours at the principal office of Northeast Utilities Service Company, Regulatory Planning Department, Selden Street, Berlin, Connecticut. Arrangements for viewing the Report can be made by calling Mr. Kevin R. Prestage at (860) 665-5931.

Please contact me if you have any questions with respect to this filing.

Very truly yours,

Christopher R. Bernard
Manager, Regulatory Policy
NUSCO
As Agent for CL&P

Enclosure
cc: Kimberley J. Santopietro, DPUC