

2006 Forecast of Loads and Resources for the Period 2006-2015



The Connecticut Light & Power Company
March 1, 2006

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EXECUTIVE SUMMARY

A Continuing Responsibility to Ensure Electric System Reliability

The Connecticut Light and Power Company (“CL&P” or “the Company”) serves more than 1.1 million customers in Connecticut. CL&P’s primary responsibility is to provide safe, secure and reliable electric delivery service. In order to ensure reliable electric service, CL&P monitors system loads and plans delivery system modifications and upgrades needed to deliver power to meet its loads.

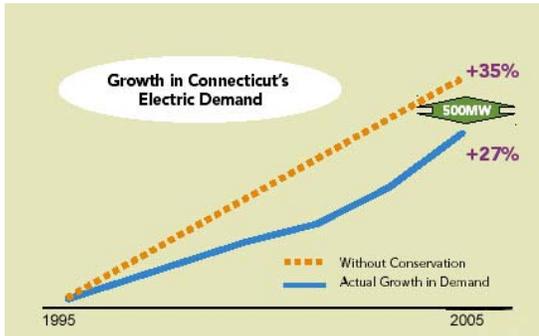
Most of the content of this report focuses on the electric transmission system. Transmission has always served as a vital link to transport power from generation sites to the “neighborhood” systems that distribute power to people, businesses, and communities. Historically, CL&P managed all three of the elements that impact system reliability – generation, transmission, and distribution. With the advent of the restructuring of Connecticut’s electric industry, CL&P no longer manages where and when generation is built. Consequently, transmission now plays a crucial role in ensuring electric reliability, and the transmission system must be robust enough to accommodate a wholesale generation market.

CL&P’s transmission system plays a critical supporting role in the economic growth of Connecticut by providing access to diverse and economic electrical energy resources. It is the crucial link between merchant power generation and consumers. CL&P’s customers must have adequate supplies of electricity and the necessary infrastructure to reliably move it where and when needed. As the economy grows and lifestyles improve, the demand for electric power continues to grow. Thus, CL&P is investing in Connecticut’s future by strengthening the regional transmission infrastructure, promoting competitive wholesale markets and enhancing system reliability and distribution networks.

CL&P’s forecast of load and resources over the next ten years reveals that system reliability is facing many challenges:

- Although customers are reacting to higher energy prices by reducing their overall consumption, peak demand for electricity continues to grow.
- Transmission infrastructure, historically built to serve customer load from utility-owned generation within a limited geographic area, must be upgraded to serve the same customer load reliably from remote merchant generation.
- The state’s generation resources are increasingly inadequate, with limited expansion on the horizon.
- High cost and high emission plants cannot be removed from the grid until adequate replacements are constructed.
- Power delivery capability into the state is well below peak demand needs.

1. Connecticut's Peak Electric Load Continues To Grow

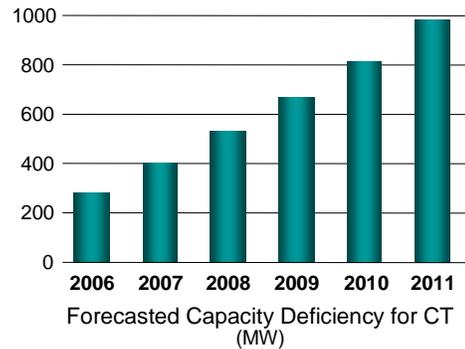


Despite investing over \$600 million in conservation measures over the last 10 years, Connecticut's peak load, normalized for weather, has grown over 25 percent.

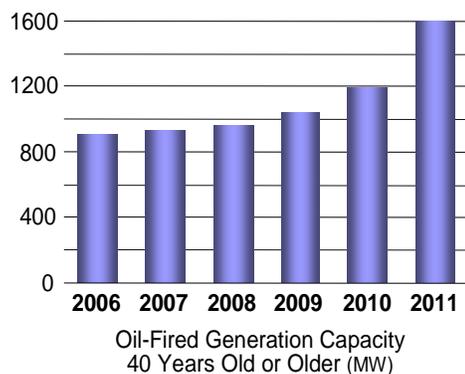
2. Connecticut's Generation Is Increasingly Inadequate

The Independent System Operator of New England ("ISO-NE") forecasts that Connecticut will have a generation capacity deficiency of 979 megawatts ("MWs") in 2011 – assuming no new plants and no retirements of existing generation.

Resource limitations could lead to emergency system operation under times of high customer demands for electricity.



3. Connecticut's Generation Is Growing Older



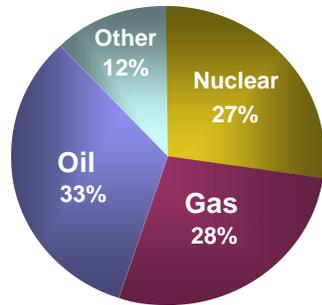
Connecticut faces the potential retirements of some older generating plants.

Several plants are environmentally and economically challenged, as evidenced by Reliability-Must-Run ("RMR") contracts.

Connecticut currently has 912 MWs of 40-year-old oil-fired capacity -- projected to reach 1,602 MWs in 2011.

Factoring in these 1,602 MWs of potential retirements, by 2011 the 979 MWs of Connecticut capacity deficiency could grow to 2,581 MWs – or 36 percent of Connecticut's peak load.

4. Connecticut Is Vulnerable to Generation Disruptions



Connecticut 2005 Generation by Fuel

As Connecticut’s generation resources tighten, the state becomes more vulnerable to events that can disrupt generation.

Long-term nuclear outages may be initiated by industry events and technical issues beyond the owner’s control.

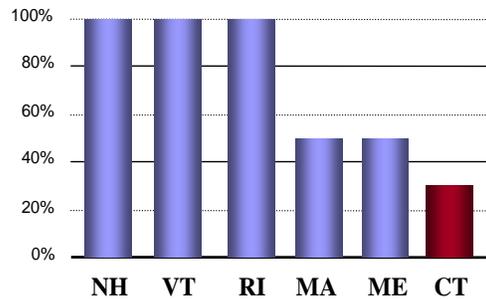
Many things could affect our distant natural gas supply (e.g., Hurricane Katrina and Ontario’s switch from coal to gas-fired generation.)

5. Connecticut Has Limited Power Import Capability

Among New England states, Connecticut is the least able to serve peak load using imports.

Connecticut imports are limited to 2,300 MWs – about 30 percent of the state’s peak load.

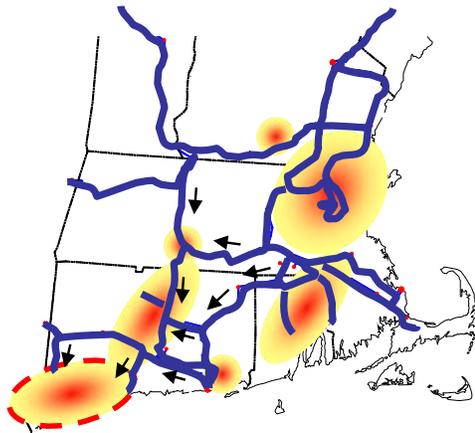
Consequently, at least 70 percent of the electricity needed to serve customer peak demand must be generated in Connecticut.



Percentage of Peak Load that Could Be Served by Transmission Imports

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

6. Connecticut’s Reliability is Inextricably Tied to Reliability in New England



New England 345-kV Grid and Load Area Concentration

Power flows instantaneously across state lines in New England, with New York and with Canada.

This broader base for the New England power grid gives each state an added measure of reliability and shared vulnerabilities.

ISO-NE has responsibility for planning and operating the New England grid, and CL&P’s planning must meet the reliability requirements of the ISO-NE and federal reliability standards.

What Must Be Done

Connecticut is facing a number of important energy challenges. Utilities, generators, regulators, legislators, and customers must work together on three fronts:

1. Continue, expand, and focus energy efficiency and demand response programs - with a strong focus toward conservation efforts in southwest Connecticut.
2. Develop fuel efficient, fast-start, and diverse generation resources, both customer-side and grid-side.
3. Continue to site and build needed electric transmission infrastructure, particularly that which expands the capability to import lower-cost power and move it within the state.

CL&P is committed to continuing to work with the Connecticut Department of Public Utility Control (“DPUC”), the Connecticut Siting Council (“CSC” or “the Siting Council”), ISO-NE, and other stakeholders to ensure that reliable and safe electric service is adequate and is provided in an environmentally responsible manner to meet growing customer demands for electricity.

Chapter 1: FORECAST OF LOADS AND RESOURCES

Chapter Highlights

- The CL&P system load continues to set new peaks despite rising energy costs and nationally-recognized conservation programs.
- While CL&P uses its own Reference Plan Forecast for financial forecasting, the Company uses ISO-NE's load forecast for transmission planning purposes.
- CL&P's analysis shows that weather variations in any one year could increase peak loads equal to the reduction achieved in peak load from installed conservation measures over the last ten years.
- Connecticut's reserve capacity is dwindling.

1.1 Report Overview

In this report, CL&P presents its plans to enhance the capability of the Connecticut transmission system, including a discussion of the complexities associated with transmission planning in a restructured electric utility industry centered on a competitive generation marketplace.

We also describe:

- The hierarchy of national and regional transmission reliability standards
- The regional transmission planning process under the ISO-NE
- The areas of Connecticut currently under transmission system reliability evaluation

CL&P also presents tables listing planned and proposed additions and upgrades to its transmission system through the forecast period.

1.2 Electric Energy and Peak-Demand Forecast

The forecast contained in this chapter was prepared in April 2005, before the actual 2005 summer peak occurred, and is substantially identical to the forecast filed on September 15, 2005 in data request Q-LF-003 in CSC's 2005 forecast of loads and resources proceeding, with the exception that the 2005 forecast values have been replaced with actual data and 2015 forecast data have been included.

The Reference Plan is based on the total franchise area that CL&P serves. As a delivery company, changes in market share due to industry restructuring are irrelevant and are therefore not factored into this forecast. The forecast excludes wholesale sales for resale and bulk power sales. Furthermore, this forecast includes the conservation and load management ("C&LM") program savings projections from CL&P's forecast from last year, and does not include the updated C&LM savings projections that are shown in Chapter 2 of this report.

CL&P's 2006 Economic and Load Forecast will be developed later this year and will be made available at that time to the CSC. The Company expects to use a new peak forecasting model to better reflect a paradox it has observed in recent years - that although customers are conserving electricity most of the year in reaction to higher energy prices, resulting in lower

energy growth, they appear to be less concerned about high prices during the summer heat waves when they increase their use of air conditioning, resulting in higher growth in peak demand. Although this forecast is used for CL&P's financial planning, it is important to note that it is not used for transmission planning. ISO-NE has responsibility for regional transmission planning and independently develops its own forecast which is used by CL&P for its transmission planning.

1.2.1 Reference Plan Forecast

CL&P's Reference Plan Forecast contains the results of the end-use models by customer class, adjusted for CL&P's forecasted C&LM and economic development programs. It does not include reductions due to ISO-NE's load management program.

The Reference Plan assumes:

- Normal weather based on a thirty-year average (1972-2001) of heating and cooling degree days and a reference case economic forecast
- Continued funding for new C&LM and economic development programs throughout the forecast period

The 2005 Reference Plan Forecast projects a weather-normalized compound annual growth rate in total electrical energy output requirements of 1.4 percent for CL&P between 2005 and 2015.

Without the Company's C&LM programs, the forecasted growth rate would be 1.8 percent. The Reference Plan normalized growth rate in summer peak demand in the Reference Plan Forecast is forecasted to be 1.0 percent. Similarly, if the C&LM programs were excluded, the forecasted growth rate would be 1.6 percent.

Since the 2005 actual summer peak was higher than the forecasted peak, the 2005-2015 forecasted peak growth rate is only 1.0 percent. This is somewhat lower than the 2004-2015 growth rate, which is 1.4 percent on a weather normalized basis, because the forecast is the same, but the 2005-2015 growth rate starts from a higher base year peak load.

Table 1-1 (at the end of this chapter) provides historic output and summer peaks, normalized for weather, for the 2001-2005 period, and forecast output and peaks for the 2006-2015 period. The peak load forecast is the maximum sum of the hourly forecasts of load for each customer class, company use and associated losses. The sum of the class hourly loads for each year, 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, as a 50/50 forecast, 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 1972-2001.

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 forecasted peaks.

1.2.2 Forecast Scenarios

Table 1-1 also contains scenarios demonstrating peak load data which demonstrates the variability around the 50/50 peak forecast due to weather. The high load scenario roughly corresponds conceptually to ISO-NE's 90/10 forecast, described below. The table shows that weather has a significant impact on the peak load forecast with variability of up to 9 percent, or approximately 500 MWs, above and below the 50/50 forecast, which is based on normal weather.

This means that weather in any one year could increase the peak load by as many MWs as the reduction achieved from investing in C&LM measures over the last ten years.

To illustrate, the 2015 summer peak forecast reflecting average peak-producing weather is 5,849 MWs. However, either extremely mild or extremely hot weather could result in a range of potential peak loads from 5,393 MWs to 6,379 MWs. This 986 MWs of variation, which is a band of about plus or minus 9 percent around the average, demonstrates the potential impact of weather alone on forecasted summer peak demand.

Extremely hot weather is 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 load demand greater than that forecasted for the sixth year under normal weather assumptions. Even a moderately hot day such as experienced on the 2005 peak load day could increase peak demand by approximately 200 MWs.

1.2.3 ISO-NE Demand Forecasts

ISO-NE independently develops annual forecasts of peak loads for each New England state. The forecast used for transmission planning studies is a 90/10 forecast which means that the actual peak load has a 10 percent chance of exceeding the forecasted load level and a 90 percent chance of falling below the forecasted load level.

ISO-NE uses this 90/10 demand forecast philosophy to develop its transmission plans because this planning approach results in greater certainty of providing reliable service under the most severe weather conditions.

1.3 Resources: Transmission System

Connecticut's most pressing transmission system need has been to increase the capability of the system to transport power into the southwest Connecticut area, where nearly half of the state's load is located. The system constraints for this area have affected both the CL&P and the United Illuminating Company ("UI") service territories.

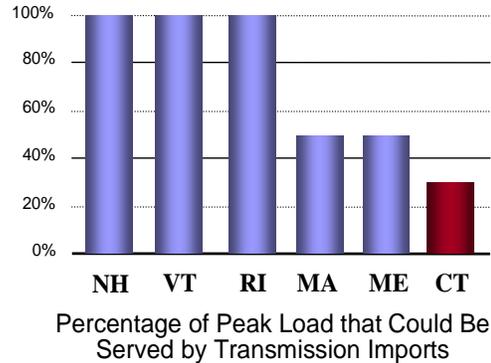
The recent siting approvals of several major projects in southwest Connecticut (described more fully in Section 5.3) will substantially address this need.

Anticipating that these projects will be in service by 2009, CL&P's next crucial transmission concern for electric system reliability is to increase the state's ability to import power from the New England grid.

Connecticut Has Limited Power Import Capability

Connecticut imports are limited to 2,300 MWs - about 30 percent of the state's peak load of 7,100 MWs.

Consequently, at least 70 percent of the electricity needed to serve customer peak demand must be generated in Connecticut.



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

Increasing the state's ability to import power will benefit customers in two 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 cost, because the same broadened base of supply should reduce the instances of RMR contracts and other charges that are related to system limitations.

1.3.1 CL&P Transmission System Data

The total mileage of CL&P's existing transmission circuits in service in Connecticut at the end of 2005 is comprised of:

- 392.3 circuit miles of 345-kilovolt ("kV") lines
- 5.8 circuit miles of 138-kV lines (all as underwater cable)
- 1,178.0 circuit miles of 115-kV lines (includes 46.6 miles of underground cable)
- 96.7 circuit miles of 69-kV lines (includes 2.8 miles of underground cable)

These transmission circuits supply power to 102 bulk power substations in the CL&P service territory.

1.4 Resources: Existing and Planned Generation Supply

CL&P no longer owns any in-state generation resources; however, the Company continues to purchase generation under a number of power-purchase agreements. CL&P has an entitlement in Vermont Yankee.

CL&P also purchases generation under Rate 980 from a number of qualifying facilities whenever they choose to sell. In both cases, CL&P sells the energy into the wholesale market.

The tables in this section have been simplified to reflect that CL&P no longer owns generation and is not serving load with its own resources as a result of electric industry restructuring in Connecticut.

Per Connecticut General Statute section 16-244c, by July 1, 2008, CL&P and UI are required to submit power contracts for at least 100 MWs of Class I renewable energy source projects to the DPUC for approval. Further, pursuant to Public Act 05-01, An Act Concerning Energy Independence ("EIA" or "the Act") CL&P will consider including grid-side generation in its

response to the DPUC’s solicitation in Docket 05-07-14PH02, *DPUC Investigation of Measures to Reduce Federally Mandated Congestion Charges (Long-term Measures)*.

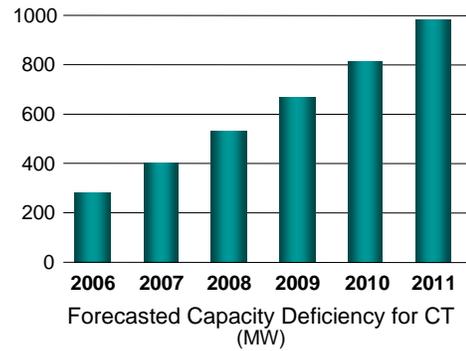
1.4.1 Generation Capacity Concerns

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. CL&P has three fundamental concerns about Connecticut’s generation capacity.

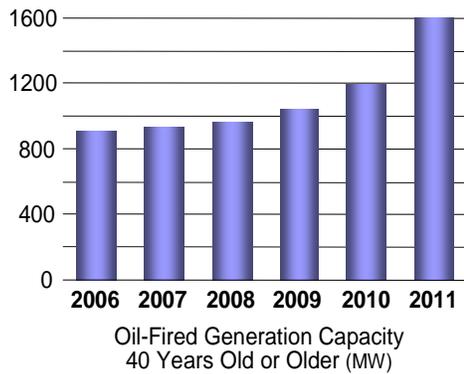
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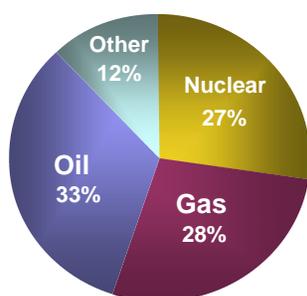
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Factoring in this 1,602 MWs of potential retirements, by 2011 the 979 MWs Connecticut capacity deficiency could grow to 2,581 MWs.

Connecticut Is Vulnerable to Generation Disruptions



Connecticut 2005 Generation by Fuel

As Connecticut's generation resources tighten, the state becomes more vulnerable to events that can disrupt generation.

Long-term nuclear outages may be initiated by industry events, technical issues beyond the owner's control.

Many things could affect our distant natural gas supply (e.g., Hurricane Katrina and Ontario's switch from coal to gas-fired generation.)

These three factors, when combined with the state's limited ability to import power by means of transmission, constitute a growing threat to system reliability.

1.4.2 Capacity Forecast

The capacity tables in this chapter provide estimates of CL&P's supply resources during the 2006-2015 forecast period. All resources have winter and summer ratings in MWs to reflect the effects of varying ambient air and water temperatures on thermal unit ratings and river flow conditions on hydroelectric unit ratings. Throughout this section, winter ratings are used in assessing CL&P's capacity situation relative to winter-peak demand, and summer ratings are used in assessing its capacity situation relative to summer-peak demand.

1.4.3 Existing Supply Resources

Table 1-2, below, lists existing supply resources in which CL&P has ownership or entitlement interests for Winter 2005/2006 and Summer 2006.

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 1-2
Generating Facilities In Which CL&P Has Ownership or Entitlement
By Category as of January 1, 2006

| GENERATION | WINTER RATING (MW) 2005/06 | SUMMER RATING (MW) 2006 | YEAR INSTALLED | LOCATION | CL&P ENTITLEMENT % |
|-------------------------|-------------------------------------|----------------------------------|-------------------|------------|--------------------------|
| Base Unit | | | | | |
| Vermont Yankee | <u>48.71</u> | <u>48.07</u> | 1972 | Vernon, VT | 9.50 |
| Base Subtotal | 48.71 | 48.07 | | | |
| Intermediate Unit | 0.00 | 0.00 | | | |
| Pumped Storage Unit | 0.00 | 0.00 | | | |
| Hydro Unit | 0.00 | 0.00 | | | |
| Purchases | | | | | |
| System | 45.00 | 45.00 | | | |
| Non-Utility | <u>348.15</u> | <u>336.09</u> | | | |
| Purchases Total | 393.15 | 381.09 | | | |
| TOTAL GENERATION | 441.86 | 429.16 | | | |

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.

Pumped-storage units use low-cost generation during off-peak periods to store water for the production of electricity during high-cost peak periods. Hydroelectric units may operate as base load, intermediate, or peaking capacity depending on the availability of water, which tends to vary seasonally.

1.4.4 Planned Generation Resource Additions, Deactivations or Retirements

CL&P has nothing to report on planned additions, deactivations or retirements of CL&P owned generating resources.

1.4.5 Ten Year Capacity Forecast

Tables 1-3 and 1-4, at the end of this chapter, summarize the ten-year capacity situation for CL&P during the summer and winter peak periods of 2006 through 2015. The tables show CL&P's reserve margin expressed in MWs.

1.4.6 Resource Purchases

Table 1-5, also at the end of this chapter, provides a listing of CL&P's contracted entitlements in existing cogeneration and small power production facilities of 1 MW and greater located in Connecticut from which CL&P purchased power in 2005. The winter and summer claimed capacity of the generation at each production facility is provided.

TABLE 1-1: CL&P 2005 Reference Plan Forecast Summer Peak - History 2001–2005; Forecast 2006-2015

| NET ELECTRICAL ENERGY OUTPUT REQUIREMENTS (1) | | SUMMER PEAK BASED ON NORMAL WEATHER | | | | SUMMER PEAKS BASED ON EXTREME WEATHER | | | | | |
|--|---------------|-------------------------------------|------------|-------------------------|-----------------------|---------------------------------------|-------------------------|-----------------------|------------|-------------------------|-----------------------|
| YEAR | OUTPUT GWH | ANNUAL CHANGE (%) | PEAK MW | ANNUAL CHANGE (%) | LOAD FACTOR (2) | HIGH | | | LOW | | |
| | | | | | | PEAK MW | ANNUAL CHANGE (%) | LOAD FACTOR (2) | PEAK MW | ANNUAL CHANGE (%) | LOAD FACTOR (2) |
| <u>HISTORY NORMALIZED FOR WEATHER</u> | | | | | | | | | | | |
| 2001 | 24428 | | 4729 | | 0.590 | | | | | | |
| 2002 | 24806 | 1.5% | 4988 | 5.5% | 0.568 | | | | | | |
| 2003 | 25077 | 1.1% | 5092 | 2.1% | 0.562 | | | | | | |
| 2004 | 25578 | 2.0% | 5020 | -1.4% | 0.580 | | | | | | |
| 2005 | 25498 | -0.3% | 5277 | 5.1% | 0.552 | | | | | | |
| COMPOUND RATES OF GROWTH (%) 2001-2005 | | | | | | | | | | | |
| | 1.1% | | 2.8% | | | | | | | | |
| <u>FORECAST</u> | | | | | | | | | | | |
| 2006 | 25818 | 1.3% | 5181 | -1.8% | 0.569 | 5626 | 6.6% | 0.524 | 4798 | -9.1% | 0.614 |
| 2007 | 26113 | 1.1% | 5274 | 1.8% | 0.565 | 5728 | 1.8% | 0.520 | 4883 | 1.8% | 0.610 |
| 2008 | 26489 | 1.4% | 5338 | 1.2% | 0.565 | 5802 | 1.3% | 0.520 | 4939 | 1.1% | 0.611 |
| 2009 | 26761 | 1.0% | 5412 | 1.4% | 0.564 | 5885 | 1.4% | 0.519 | 5005 | 1.3% | 0.610 |
| 2010 | 27108 | 1.3% | 5483 | 1.3% | 0.564 | 5966 | 1.4% | 0.519 | 5068 | 1.3% | 0.611 |
| 2011 | 27463 | 1.3% | 5546 | 1.2% | 0.565 | 6038 | 1.2% | 0.519 | 5123 | 1.1% | 0.612 |
| 2012 | 27979 | 1.9% | 5632 | 1.5% | 0.566 | 6133 | 1.6% | 0.519 | 5200 | 1.5% | 0.613 |
| 2013 | 28310 | 1.2% | 5711 | 1.4% | 0.566 | 6222 | 1.4% | 0.519 | 5271 | 1.4% | 0.613 |
| 2014 | 28746 | 1.5% | 5789 | 1.4% | 0.567 | 6309 | 1.4% | 0.520 | 5341 | 1.3% | 0.614 |
| 2015 | 29187 | 1.5% | 5849 | 1.0% | 0.570 | 6379 | 1.1% | 0.522 | 5393 | 1.0% | 0.618 |
| NORMALIZED COMPOUND RATE OF GROWTH (%) 2005-2015 | | | | | | | | | | | |
| | 1.4% | | 1.0% | | | 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°F mean daily temperature). Forecasted High Peaks are based on the weather that occurred on the 2001 peak day (88°F mean daily temperature). Forecasted Low Peaks are based on the weather that occurred on the 2000 peak day (76°F mean daily temperature).

Table 1-3
2006-2015 Summer Forecast of Capacity (MW) at the Time of Summer Peak
(as of January 1, 2006)

| | <u>2006</u> | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2011</u> | <u>2012</u> | <u>2013</u> | <u>2014</u> | <u>2015</u> |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Supply before sales or exchanges | 429.16 | 429.16 | 429.15 | 384.15 | 339.80 | 339.80 | 287.09 | 239.02 | 239.02 | 44.82 |
| Net effect of capacity exchanges | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Capacity sales | <u>0.00</u> |
| Net generation available | 429.16 | 429.16 | 429.15 | 384.15 | 339.80 | 339.80 | 287.09 | 239.02 | 239.02 | 44.82 |

Table 1-4
2005/06 - 2014/15 Winter Forecast of Capacity (MW) at the Time of Winter Peak
(as of January 1, 2006)

| | <u>2005/0</u> | <u>2006/0</u> | <u>2007/0</u> | <u>2008/0</u> | <u>2009/1</u> | <u>2010/1</u> | <u>2011/1</u> | <u>2012/1</u> | <u>2013/1</u> | <u>2014/1</u> |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | <u>6</u> | <u>7</u> | <u>8</u> | <u>9</u> | <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> |
| Supply before sales or exchanges | 441.86 | 441.86 | 441.85 | 396.85 | 389.95 | 350.95 | 350.95 | 242.56 | 242.56 | 229.83 |
| Net effect of capacity exchanges | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Capacity sales | <u>0.00</u> |
| Net generation available | 441.86 | 441.86 | 441.85 | 396.85 | 389.95 | 350.95 | 350.95 | 242.56 | 242.56 | 229.83 |
| Reserve | 441.86 | 441.86 | 441.85 | 396.85 | 389.95 | 350.95 | 350.95 | 242.56 | 242.56 | 229.83 |

Supply before sales or exchanges is made up of supply resources in which CL&P has ownership or entitlement interest as summarized in Tables 1-3 and 1-4, including purchases.

Net effect of capacity exchanges is the cumulative purchase or sale resulting from capacity exchange transactions.

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 1-5

**EXISTING CUSTOMER OWNED FACILITIES 1 MW AND ABOVE
PROVIDING GENERATION TO THE NORTHEAST UTILITIES SYSTEM**

EXISTING & PROVIDED GENERATION TO CL&P DURING 2005

| Project Name | Location | (1) Facility Type | Fuel Source | By-Product of Fuel Consumption | Estimated Capacity kW | Max Claimed Capability | |
|--|-------------------|-------------------------|----------------|--------------------------------------|-----------------------------|------------------------------|----------------|
| | | | | | | Winter | Summer |
| FACILITIES UNDER LONG TERM CONTRACT (2) | | | | | | | |
| AES | Montville, CT | COGEN | Coal | Steam | 181,000 | 182,150 | 181,000 |
| C.H. 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 | 2,064 | 2,064 |
| Colebrook | Colebrook, CT | SPP | Hydro | - | 3,000 | 1,373 | 1,373 |
| Quinebaug | Danielson, CT | SPP | Hydro | - | 2,161 | 2,810 | 960 |
| Kinneytown B | Seymour, CT | SPP | Hydro | - | 1,500 | 654 | 654 |
| Mid-CT CRRRA(So. Meadow 5/6) | Hartford, CT | SPP | Refuse | - | 64,100 | 59,675 | 52,709 |
| Preston (SCRRA) | Preston, CT | SPP | Refuse | - | 13,850 | 16,946 | 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 | 2,527 | 2,527 |
| | | | | | 351,050 | 346,921 | 334,859 |
| 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 | - | 4,500 | N/A | N/A |
| Wyre Wynd | Jewett City, CT | SPP | Hydro | - | 1,800 | N/A | N/A |
| | | | | | 36,500 | 0 | 0 |
| | | | | TOTAL EXISTING | 387,550 | 346,921 | 334,859 |

(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 2: CONSERVATION AND LOAD MANAGEMENT

Chapter Highlights

- CL&P is collaborating with others in the development of nationally-recognized C&LM programs.
- C&LM programs have been specifically targeted in southwest Connecticut (“SWCT”) to help reduce customer demand for electricity.
- C&LM programs are most effective in reducing energy usage when they receive stable and consistent funding.

The C&LM Plan for 2006 (the “Plan”) was filed with the DPUC on October 17, 2005. It was the product of close collaboration among CL&P, the Energy Conservation Management Board (“ECMB”), and UI and was submitted jointly by CL&P and UI to the DPUC in Docket 05-10-02, *DPUC Review of the CL&P and UI C&LM Plan for 2006*. The Plan received input from members of the public, industry groups and private enterprise, and was given final approval by the ECMB in October 2005. CL&P’s budget in the 2006 Plan is \$49.2 million.

In 2005, the Connecticut State legislature passed EIA, as noted, from which the DPUC opened Docket 05-07-14PH01, *DPUC Investigation to Reduce Federally Mandated Congestion Charges*. As a result of the DPUC’s December 28, 2005 Decision in this docket, CL&P will be spending an additional \$7.9 million to implement programs focused on reducing federally mandated congestion charges. The additional \$7.9 million will come from 2005 carryover and additional funding from a true-up of securitization bonds for C&LM programs. With the inclusion of EIA derived C&LM funding, CL&P will spend approximately \$57 million on C&LM programs in 2006.

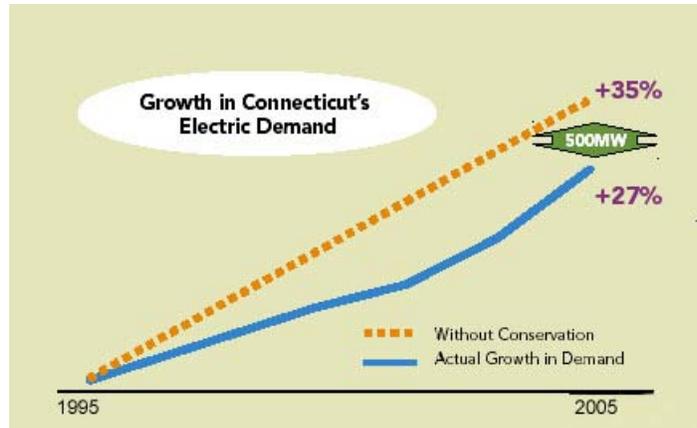
CL&P has made projections of the statewide savings that will result from C&LM program activity for the period 2006 through 2015 based on current funding levels.

Beginning in the summer of 2002, CL&P has taken specific actions in response to potential electricity shortages in SWCT. Conservation activities in 2006 continue to focus on and support that critical area. However, these activities, and any additional programs, are dependent upon continued stable funding. These activities target all 54 towns of SWCT, especially the 14 priority towns in the Norwalk-Stamford sub-area. Included in CL&P’s projections are the savings from its filed Plan plus the additional programs resulting from EIA.

Over the years, CL&P’s C&LM programs have led the energy efficiency industry. Many of these programs have received national recognition. In October 2005, the American Council for an Energy Efficient Economy rated Connecticut number one in the United States for energy saved as a percentage of electric sales.

However, even with the success of its C&LM programs, Connecticut is facing energy challenges which continue to threaten the state's economy and quality of life.

While C&LM will be a key part of resolving Connecticut's energy issues, new generation and additional transmission resources will be required.



2.1 Current Conservation & Load Management Programs

Table 2-1 below summarizes the projected impacts from CL&P's C&LM program activity over the forecast period 2006-2015 based on current funding levels outlined in the beginning of this chapter. These peak-load reductions reflect the direct impact of both historical and planned program activity over the ten-year period beginning in 2006.

**TABLE 2-1
CL&P-SPONSORED C&LM PEAK LOAD MW IMPACTS**

| | SUMMER IMPACT | | | | WINTER IMPACT | | |
|-------------|----------------------------|--------------------------|---------------------|-------------|----------------------------|--------------------------|---------------------|
| | Impact of Current Forecast | Impact of Prior Activity | Total Summer Impact | | Impact of Current Forecast | Impact of Prior Activity | Total Winter Impact |
| 2006 | 65 | 469 | 534 | 2006 | 66 | 480 | 546 |
| 2007 | 103 | 406 | 508 | 2007 | 109 | 417 | 526 |
| 2008 | 141 | 377 | 517 | 2008 | 152 | 399 | 551 |
| 2009 | 178 | 353 | 532 | 2009 | 195 | 377 | 573 |
| 2010 | 214 | 338 | 552 | 2010 | 232 | 358 | 590 |
| 2011 | 249 | 309 | 558 | 2011 | 268 | 335 | 603 |
| 2012 | 283 | 270 | 553 | 2012 | 297 | 279 | 576 |
| 2013 | 316 | 242 | 558 | 2013 | 319 | 225 | 544 |
| 2014 | 348 | 224 | 573 | 2014 | 342 | 196 | 538 |
| 2015 | 372 | 177 | 548 | 2015 | 357 | 140 | 497 |

Note: Totals may vary due to rounding

The 'Impact of the Current Forecast' columns included in the tables above reflect C&LM program activity for the period 2006 - 2015, based on the proposed level of funding described in the beginning of this Chapter.

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.

Table 2-2, on the next page, presents energy and peak savings based on \$57 million annual budget. The C&LM programs utilize a complementary mix of lost opportunity, retrofit, and market transformation implementation strategies to achieve savings. The projected impacts of C&LM programs have been shown as separate line items since the average impact of conservation programs is greater than ten years, while load management activities have a more immediate, short-term impact.

2.2 Ten-Year C&LM Forecast

Table 2-2 also 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 program budgets described in the beginning of Chapter 2. Table 2-2 also reflects ten years of projected program activity beginning in 2006. Past activity is included in the impact of prior activity shown in Table 2-1.

2.3 Forecast Sensitivity

The potential energy savings and peak load reductions projected in this forecast are sensitive to changes in a number of factors.

The most significant variable in determining energy savings is the stability of funding, as noted earlier in this chapter. Projections are also based on the continued implementation of a suite of programs similar in nature and focus to the Plan filed for 2006.

Any legislative or regulatory changes in geographic and program focus will produce results which may vary from these projections.

Additionally, the achieved savings and load reductions are sensitive to changes in the electricity marketplace and to customer attitudes.

Table 2-2

CL&P C&LM Programs Annual Energy Savings and Peak Load Reduction by Customer Class 2006 - 2015

GWh Sales Conserved

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|----------------------------------|-----------|------------|------------|------------|------------|--------------|--------------|--------------|--------------|--------------|
| Residential | 21 | 85 | 147 | 210 | 270 | 329 | 341 | 353 | 359 | 365 |
| Commercial | 29 | 116 | 203 | 290 | 378 | 465 | 552 | 639 | 726 | 807 |
| Industrial | 16 | 66 | 115 | 164 | 213 | 263 | 312 | 361 | 410 | 456 |
| Total GWh Sales Conserved | 67 | 266 | 466 | 665 | 861 | 1,056 | 1,205 | 1,353 | 1,496 | 1,628 |

MW Reductions (Summer Impacts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Residential | 3 | 11 | 19 | 28 | 33 | 39 | 44 | 47 | 50 | 53 |
| Commercial (non-Load Mgt) | 6 | 25 | 44 | 63 | 82 | 101 | 120 | 139 | 158 | 171 |
| Industrial (non-Load Mgt) | 4 | 14 | 25 | 36 | 46 | 57 | 68 | 78 | 89 | 96 |
| Total non-Load Mgt | 13 | 51 | 89 | 126 | 162 | 197 | 231 | 264 | 296 | 320 |
| Load Management | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| Total MW Reductions (Summer Impacts) | 65 | 103 | 141 | 178 | 214 | 249 | 283 | 316 | 348 | 372 |

MW Reductions (Winter Impacts)

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Residential | 8 | 31 | 54 | 76 | 93 | 109 | 118 | 120 | 122 | 125 |
| Commercial (non-Load Mgt) | 4 | 17 | 30 | 43 | 56 | 68 | 81 | 94 | 107 | 115 |
| Industrial (non-Load Mgt) | 2 | 10 | 17 | 24 | 31 | 39 | 46 | 53 | 60 | 65 |
| Total non-Load Mgt | 14 | 57 | 100 | 143 | 180 | 216 | 245 | 267 | 290 | 305 |
| Load Management | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |
| Total MW Reductions (Winter Impacts) | 66 | 109 | 152 | 195 | 232 | 268 | 297 | 319 | 342 | 357 |

Chapter 3: TRANSMISSION PLANNING AND RELIABILITY

Chapter Highlights

- ISO-NE is responsible for developing and maintaining a process that creates a regional system plan that includes transmission
- CL&P transmission facilities must be engineered and operated in accordance with the reliability standards set by the North American Electric Reliability Council (“NERC”), the Northeast Power Coordinating Council (“NPCC”) and ISO-NE.
- Transmission plays a key role in facilitating a competitive wholesale marketplace.

3.1 The New World

Restructuring resulted in transmission systems regulated by the Federal Energy Regulatory Commission (“FERC”), distribution systems regulated by state agencies and generators operating in a competitive marketplace. In New England, restructuring brought a change in generation ownership from the local utility to regional or national energy providers. New England utilities are required to procure transmission service on behalf of their distribution customers under the same terms and conditions as all other customers.

Centralized decision-making by electric utility companies no longer determines electricity production. Instead, competitive market forces and new participants control when and where electricity is produced and how it is produced with respect to fuel type and production unit capability (i.e., base load, intermediate, fast-start).

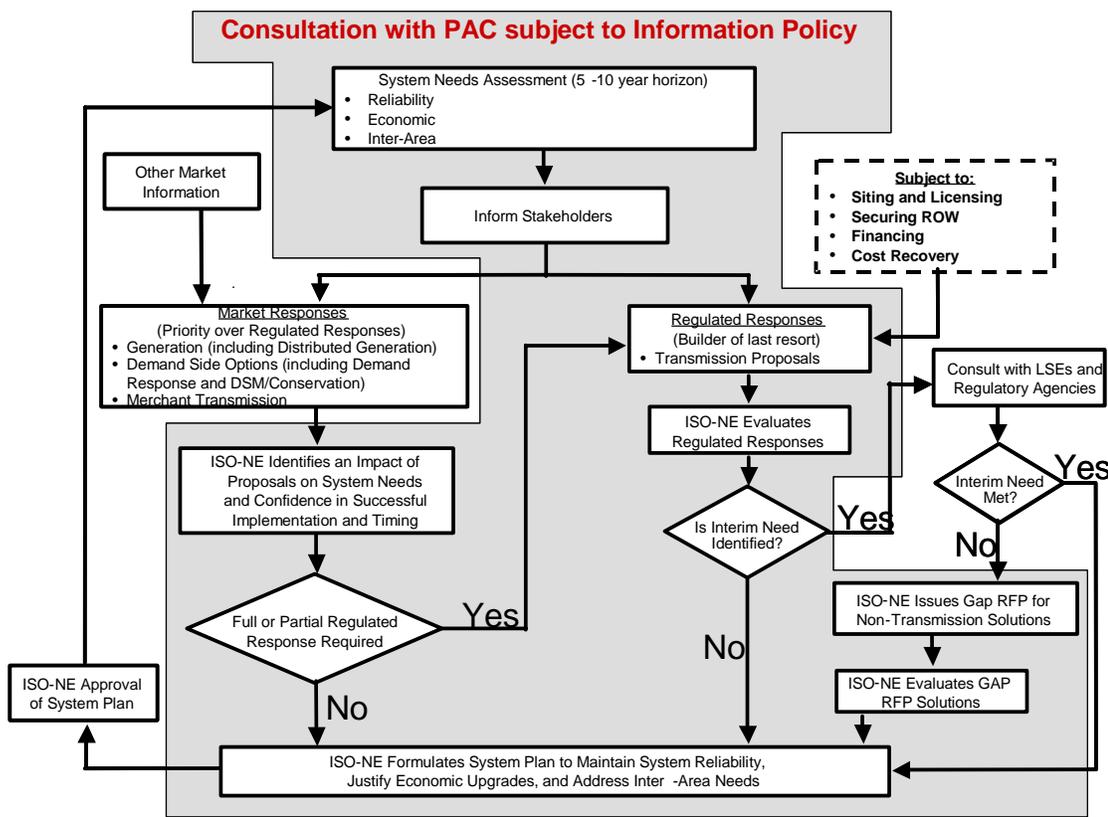
The introduction of competition into one segment of a previously regulated industry altered the focus of transmission system planning. Local transmission systems built in the past to serve customer load from utility-owned generation within a limited geographic area are now expected to serve the same customer load from remote merchant generation. Transmission systems must now be able to operate reliably with less reliance on local generation.

In 2001, FERC required the New England Power Pool (“NEPOOL”) to cede exclusive responsibility for the system planning process to ISO-NE. As the regional transmission operator (“RTO”), ISO-NE now determines transmission needs and approves solutions.

3.2 Transmission Planning in The New World

Diagram 3-1, on the next page, depicts the ISO-NE regional system planning process flow that has been developed under the new RTO structure. The diagram depicts a process in which ISO-NE solicits alternative solutions to reliability problems in New England which have been identified by a system needs assessment process. ISO-NE then identifies and proposes transmission projects that will address system reliability and economic efficiency needs that are not resolved by market responses. Market responses which materialize subsequent to ISO-NE’s project proposals may then alter the scope of any plans ISO-NE develops.

Diagram 3-1



PAC = Planning Advisory Committee
LSE = Load Serving Entity

Transmission system planning is now more complex than before restructuring and continues to evolve. Several factors which have added to the complexity of transmission planning include:

- Large numbers of new merchant generators in New England
- Stalled merchant generator projects
- Bankruptcies of large generating companies
- Deactivations or retirements of aging generators
- Potential for early retirements of generators for environmental or economic reasons
- Generators which, due to constraints on the transmission system, have petitioned ISO-NE for RMR agreements to help ensure continued reliable operation of the power system during peak-load periods

The transmission planning process must be dynamic and sufficiently flexible in the face of these factors to meet increasing demands to transfer power from remote resources to load centers. In 1995, NERC described the planning process as follows:

Planning is the process by which changes and additions to the bulk electric system are determined. The interconnected electric systems must be able to accommodate a wide range of system conditions and contingencies - continuously varying customer demands, differing amounts and patterns of electrical generation as determined by availability and costs, and various planned and unplanned outages of the transmission facilities. This

process strives to develop systems that will provide desired capability and performance in a cost-effective manner, while reliably supplying the electrical demands of customers and satisfying the business needs of electric system owners.¹

3.3 National Reliability Standards Will Soon Be Mandatory

Maintaining the reliability of the power supply and delivery system is necessary to ensure a robust competitive marketplace for electricity, to satisfy customer demands and expectations with regard to service reliability, and to protect the health, welfare and safety of the public.

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. Although NERC recognizes the importance of transmission infrastructure, the actual planning and construction of new transmission facilities has become more complex and time consuming.

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.²

NERC's mission is to ensure that the bulk electric system in North America is reliable, adequate, and secure. Since its formation in 1968, NERC has operated successfully as a self-regulatory organization, relying on reciprocity, peer pressure, and the mutual self-interest of all those involved in the electric system. Through this voluntary approach, NERC has helped to make the North American bulk electric system the most reliable system in the world. NERC membership comprises ten regional reliability councils that account for virtually all the electricity supplied in the United States, Canada and Mexico.

On April 1, 2005, NERC adopted a comprehensive set of reliability standards for the bulk power system. The new reliability standards incorporate the existing NERC standards and compliance requirements into an integrated and comprehensive set of measurable reliability standards. The new standards apply to all entities that play a role in maintaining the reliability of the bulk electric system in the United States and Canada.

These nationally recognized reliability standards were developed by NERC to meet the regulatory requirement to provide an electric power supply system with an acceptable level of service reliability in a cost-effective manner. CL&P facilities which are part of the interconnected bulk power system are designed and operated in accordance with the NERC Planning Standards, NPCC Basic Criteria for Design and Operation of Interconnected

¹ Planning Of The Bulk Electric Systems, North American Electric Reliability Council, Coordinated Planning Task Force of the Engineering Committee, May 1995

² Planning Standards, North American Electric Reliability Council, September 1997

Power Systems, and the ISO-NE Reliability Standards for the New England Area Bulk Power Supply System.

These transmission reliability standards apply to CL&P's facilities supplying local area supply systems, including 345-kV, 115-kV and 69-kV transmission lines and substations. The goal of transmission planning in all of New England is to ensure that a reliable and economic bulk power supply system exists within the framework of the criteria established by NERC, NPCC and ISO-NE.

NERC defines reliability as the degree of performance of the elements of the bulk power electric system that results in electricity being delivered from generation resources to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electricity supply. The two major components that define reliability are as follows:

Adequacy – The ability of the electric systems to supply the aggregate electrical demand and energy requirements of their customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

Security – The ability of the electric systems to withstand sudden disturbances such as electric short circuits or unanticipated loss of system elements.

Chapter 4: NEW ENGLAND TRANSMISSION COST ALLOCATION

Chapter Highlights

- Transmission system reliability upgrades that produce a regional benefit are borne by all New England states based on their loads.
- ISO-NE has the authority to determine which costs are regionalized and which costs should be localized.
- Economic upgrades may also qualify for regional cost-allocation, under certain conditions.

Events that have defined transmission cost allocation in New England include:

- On December 20, 2002, FERC issued an order in the New England standard market design (“SMD”) proceeding that provided guidance for a New England transmission cost allocation methodology.
- On July 31, 2003, after an extensive stakeholder process, NEPOOL and ISO-NE filed comprehensive Transmission Cost Allocation (“TCA”) Amendments to the NEPOOL Open Access Transmission Service Tariff (“NEPOOL Tariff”) with FERC.
- On December 18, 2003 FERC accepted the New England TCA Amendments and modified the NEPOOL Tariff.

The cornerstone of the TCA Amendments is the establishment of regional cost support and participant funding depending on the type of upgrade to the transmission system. The TCA Amendments also changed the decision-making authority on the classification of facilities in each category and the determination of localized costs from NEPOOL to ISO-NE.

Regional cost support means that qualifying transmission costs are rolled into the regional network service rates. These costs are then paid by all New England transmission customers, under the ISO-NE Transmission, Markets and Services Tariff (“ISO-NE Tariff”). The expectation is that network transmission facilities in the regional rates will provide benefits throughout New England.

The two types of facilities that qualify for regional cost support are Reliability Upgrades and Economic Upgrades. Together, these facilities are classified by ISO-NE as Regional Benefit Upgrades.

4.1 Treatment of Reliability Upgrades

Reliability Upgrade projects are eligible for regional cost support if the ISO-NE determines that the upgrade is needed for regional reliability. These upgrades may also produce net economic benefits for the region.

Reliability Upgrade projects are added to the ISO-NE regional system plan after markets are given the first opportunity to provide participant-funded solutions to system needs.

ISO-NE identifies Reliability Upgrades through transmission system assessments conducted in accordance with the NERC, NPCC and regional planning standards. Through this assessment, ISO-NE identifies the transmission upgrades needed to ensure acceptable ranges

of system stability, equipment short-circuit duty limits, voltage and thermal performance for New England.

4.2 Treatment of Economic Upgrades

Economic Upgrades that are eligible for regional cost recovery are those transmission upgrades that ISO-NE determines will provide net economic benefits to the region.

4.3 Transmission Costs Not Regionalized

Transmission costs that are not regionalized and included in regional network service rates require participant funding. This distinction is intended to assure that the entities that caused the costs to be incurred, and will likely be the only entity to receive the benefits from the facility, are assigned the full costs of those facilities.

Transmission facilities in this category include the following:

- Generator Interconnection-Related Upgrades – These facilities, paid by the generator, are necessary to interconnect the generator into the New England transmission system in accordance with regional reliability standards. They may include both generator leads and system upgrades to the regional and/or local transmission systems.
- Elective Transmission Upgrade – The cost of these facilities is allocated to those entities which have elected to construct a transmission facility for their own benefit.
- Local Benefit Upgrade – The cost of these facilities is paid by customers under local network service tariffs for facilities that have been determined to provide no regional benefits by ISO-NE, and is thus excluded from regional rates under the ISO-NE tariff.
- Merchant Transmission Facility – The costs of these facilities constructed for specific purposes outside of the PAC process are paid for by the developer.

Localized Costs are those costs determined by ISO-NE to be associated with regional benefit upgrades that are not allowed to be included in regional network rates. Localized Costs are not charged to all New England transmission customers under the ISO-NE Tariff. ISO-NE's localized cost determinations are not constrained by state and local siting decisions.

Chapter 5: TRANSMISSION SYSTEM NEEDS

Chapter Highlights

- CL&P's transmission facilities are an integral part of the transmission system it shares with the rest of New England.
- CL&P is currently engaged in many projects that will reinforce Connecticut's transmission system.
- To reliably and economically serve its electric load, CL&P needs to increase its capacity to import power from neighboring states over the 345-kV system.

5.1 Background on CL&P's Transmission System

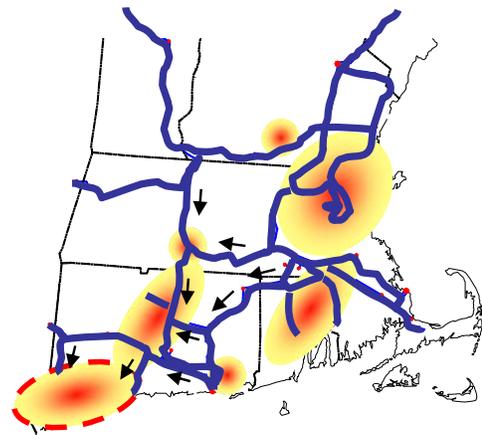
Transmission lines collectively form the infrastructure that is an interstate electric "highway system," moving electric energy from where it is produced to where it is used. In New England, moving electric energy is achieved primarily by the interconnected 345-kV regional bulk power system. The 345-kV transmission ties to neighboring utilities and control areas and expansion of the high voltage networks enables CL&P to meet its customers' peak demands. In addition, CL&P's transmission grid is used to support reliable, economical and continuous service to intra-state customers. Operating this system at 345 kV 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.

Part of an Interstate 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, safely and economically throughout the interconnected grid.

CL&P's 345-kV system enables the movement of power from large central stations, such as Lake Road, Middletown 4 and the Millstone Nuclear Power Station, throughout Connecticut and over three interstate transmission tie-lines to neighboring utilities. Tie lines include: one with National Grid, one with the Western Massachusetts Electric Company, and one with Consolidated Edison in New York.

CL&P's transmission network also includes 41 transmission ties to neighboring utilities, all operating at voltages between 69 kV and 138 kV. These tie lines include: one with



New England 345-kV Grid and Load Area Concentration

National Grid, one with Long Island Power Authority, one with Central Hudson, 13 with Connecticut Municipal Electric Energy Cooperative, Inc. (“CMEEC”), twenty with UI, and five with the Western Massachusetts Electric Company.

The CL&P transmission system, with its many tie lines to neighboring utilities, provides paths for power to move freely over the New England transmission grid. Power can flow in any direction, depending on generation dispatch, load patterns, and the configuration of the transmission system.

The transmission grid enables Connecticut to rely on out-of-state generation to help serve customer load. The transmission tie lines enable CL&P and neighboring electric systems access to economic generation, increased reliability during low and high load periods, and the ability to follow transmission and generation emergencies.

Substations and System Loops

CL&P currently has seven major bulk-power substations where the 345- and 115-kV transmission networks interconnect. The Montville, Card, Manchester, Southington, Frost Bridge, North Bloomfield and Plumtree substations transform voltage from 345 kV to 115 kV. These seven substations enable bulk power from the large central generation stations and power imported over the four 345-kV transmission tie lines to be delivered to CL&P’s 115-kV system.

The 115-kV transmission system loops around high load density areas in central and SWCT, and also connects the load centers in the eastern and northwestern parts of the state. The major 115-kV loop through western and SWCT ties the 345-kV interconnections at Southington and Plumtree to the 115-kV loop in the south. Overall this system transmits power from central stations, transmission tie lines and bulk power substations to distribution step-down substations supplying local area systems.

5.2 Overall Connecticut Assessment

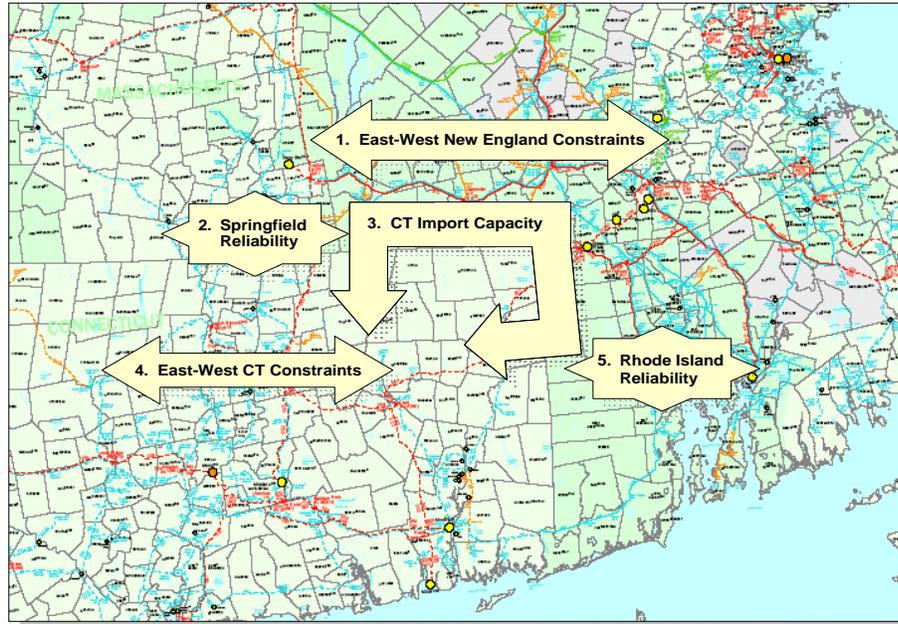
During the summer of 2005, Connecticut (including CL&P, UI and CMEEC) experienced a peak demand of approximately 7,100 MWs. In-state generation capacity is about 7,200 MWs, and Connecticut can reliably import about 2,300 MWs of power.

It is becoming increasingly likely that forced outages and the potential retirement of aging and uneconomic generation will produce the situation in which in-state generation and transmission imports cannot meet the growing summer peak power demands.

ISO-NE’s October 2005 Regional System Plan (“RSP05”) identified transmission constraints in the southern New England transmission systems that are influenced by simultaneous regional power flows. These include transfers across interfaces such as New York-New England, New England East-West, Connecticut import, Southeast Massachusetts/ Rhode Island and Connecticut East-West including dependencies on generation dispatches within the Springfield/Western Massachusetts area.

Southern New England Reinforcement Analysis

Of particular note to Connecticut is ISO-NE's Southern New England Reinforcement Analysis which lists several interdependent system reliability problems that Connecticut shares with Massachusetts and Rhode Island.



The Southern New England problems can be bundled into five interrelated reliability concerns as follows:

- | | |
|----------------------|--|
| New England | 1. East-West power flows are limited across southern New England. |
| Massachusetts | 2. The Springfield, Massachusetts, area experiences thermal overloads and voltage problems under numerous contingencies as the system tries to move power into Springfield and into Connecticut. |
| Connecticut | 3. Connecticut imports are limited to about 2,300 MWs. 4. East-to-West power flows in Connecticut stress the existing system. |
| Rhode Island | 5. Rhode Island's reliability is overly dependent upon single transmission lines or autotransformers to serve its needs. |

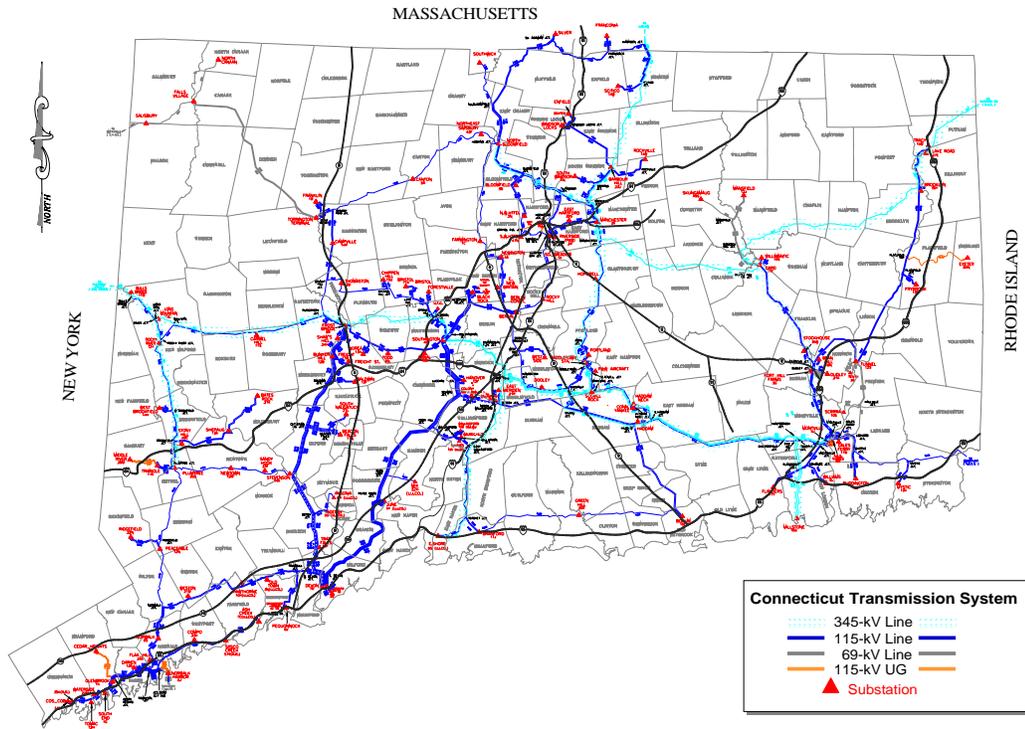
Presently, ISO-NE is leading a planning study with transmission planners from Northeast Utilities ("NU") and National Grid to determine the electrical solutions that best address these five concerns. All of these possible electrical solutions involve the addition of new 345-kV lines in Connecticut.

After the possible electrical solutions are identified and evaluated, ISO-NE, NU and National Grid will weigh in other factors (e.g., right-of-way analyses, constructability, and cost) to the evaluations of the alternative solutions. At this time, NU and National Grid expect to begin siting the project or projects that develop from this planning effort in 2007.

To the extent that reliability concerns involve inter-state transmission, the solutions will likely require some level of siting collaboration among the three states.

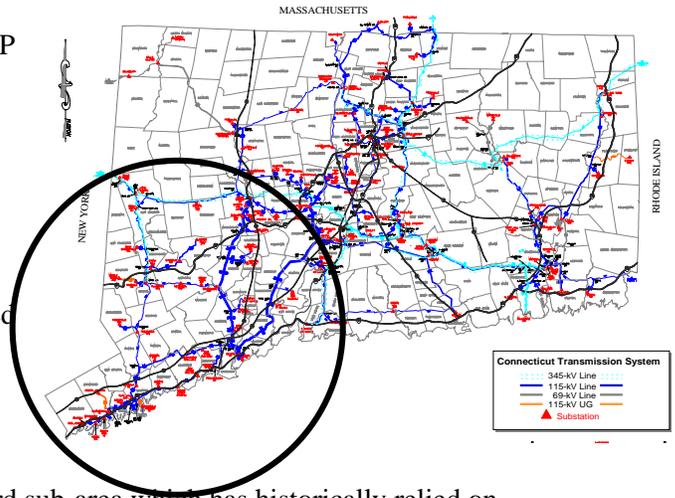
5.2.1 CL&P's Six Load Areas

CL&P's service territory has been sub-divided into several 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.



5.3 Southwest Connecticut Area

The largest and most critical area on the CL&P transmission system is the 54-town SWCT area including all of UI's service territory. This area, which is essentially west of Interstate 91 and south of Interstate 84, accounts for approximately half of the peak load in the state of Connecticut and is one of the fastest growing and economically vital areas of the state. This area is primarily served by 115-kV transmission lines which have essentially reached the limit of their ability to reliably and economically support the projected load in this area.



Contained in this area is the Norwalk-Stamford sub-area which has historically relied on generation to serve its load. With the change to a market-based system, and the aging of local generating plants, it is no longer prudent to rely on them to meet the longer term reliability needs of the area.

The Southwest Connecticut Reliability Projects

A study of the SWCT area including Norwalk-Stamford completed by ISO-NE, CL&P, and UI proposed a comprehensive long-range solution to the multitude of problems identified in this area. The plan identified the need to construct a 345-kV loop to integrate the SWCT area into the New England 345-kV bulk power electric transmission grid.

The Bethel-Norwalk Project

The first phase of the reinforcement plan is to construct a 345-kV line from Plumtree Substation, in Bethel, to the Norwalk Substation, located in Norwalk. The plan includes associated reconstruction of an existing 115-kV line on the right-of-way.



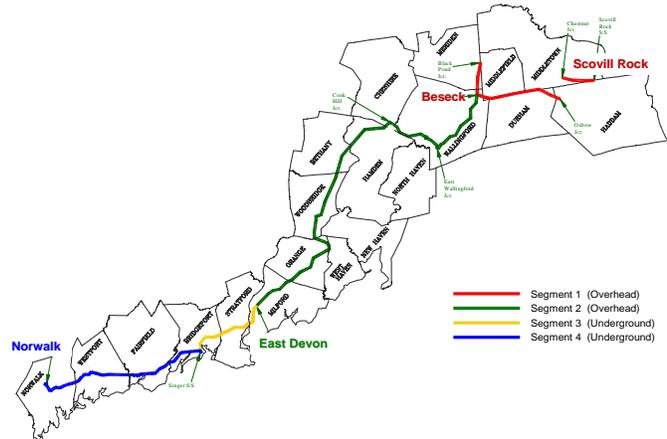
In CSC Docket No. 217, the Siting Council approved a rebuild of the existing 115-kV line with a combination of overhead and underground transmission facilities and the construction of a new 345-kV line

between Bethel and Norwalk. These designs include use of approximately 10 miles of 115-kV extruded insulation cables made from cross-linked polyethylene ("XLPE"), 2.1 miles of parallel 345-kV XLPE cables (a major advancement for United States' installations), 9.7-mile length of parallel high-pressure fluid-filled ("HPFF") 345-kV cables, and approximately 8.6 miles of overhead 345-kV line to complete the 20.4-mile 345-kV circuit.

As of December 31, 2005, this first phase of the planned transmission upgrades for SWCT is about 60 percent complete, and is expected to be completed by December 2006.

The Middletown-Norwalk Project

The second phase of the planned upgrades is the construction of a 345-kV line from the Middletown area to Norwalk. In CSC Docket No. 272, the Siting Council approved a combination of overhead and underground design types for the 345-kV line between Middletown and Norwalk. A new 345-kV switching station will be constructed at Beseck Junction, in Wallingford. The existing 345-kV Millstone-Southington line will be reconfigured so that the line section



from Millstone is extended west from Oxbow Junction to Beseck Switching Station. The Southington leg of this line will be extended east from Chestnut Junction to the 345-kV Scovill Rock Switching Station, and the Oxbow Junction-to-Chestnut Junction segment will be deenergized. In addition, the existing 345-kV Southington-Haddam Neck line will be looped south from Black Pond Junction to Beseck, establishing a Southington-to-Beseck circuit and a Beseck-to-Haddam Neck circuit.

Southwest from the new Beseck Switching Station the project includes the construction of approximately 33.4 miles of new overhead 345-kV transmission line which terminates at the new East Devon Substation, in Milford. Between East Devon and the new Singer Substation in Bridgeport, two 8.0 mile circuits of 345-kV XLPE cables will be built. The final leg of the 345-kV line from Singer Substation to Norwalk Substation will be built of two 15.4 mile circuits of 345-kV XLPE cables. The proposed project also includes upgrades to a number of 115-kV lines, and modifications of the interconnecting facilities for Milford Power and Bridgeport Energy.

This project has received ISO-NE technical approval and construction is scheduled to begin in 2006 and conclude in 2009.

Other Significant Southwest Connecticut Projects Entering Construction

The CSC in Docket No. 292 approved the construction of two new 115-kV underground transmission lines between the Norwalk Substation, in Norwalk, and the Glenbrook Substation, in Stamford. This project will effectively tie the reliability benefits of the new 345-kV transmission loop into the large load center in Stamford.

In Petition No. 702, the CSC approved a complete rebuild of the 115-kV transmission lines between Triangle Substation, in Danbury, and the Plumtree Substation, in Bethel, consolidating three existing circuits into two. The transmission configuration in this area is primarily radial in nature and does not provide integrated service to other regions. The load in this area has grown to the point where transmission outages may cause thermal overloads and voltage collapse.

C&LM Programs Targeted for SWCT

Along with implementing system upgrade solutions to help solve the transmission constraints in SWCT, CL&P has been aggressively implementing C&LM solutions for its customers. Since 2002, CL&P has offered uniquely tailored C&LM programs for residential, commercial, industrial, and municipal customers in SWCT. These innovative programs promote energy efficiency measures that not only save energy, but also reduce customer peak load demands. While these efforts cannot of themselves solve congestion in SWCT, CL&P believes its C&LM programs are part of a total solution and has asked the DPUC for approval to continue offering them in 2006.

The Long Island Cable Replacement

The replacement of the existing 138-kV submarine cable from Norwalk Harbor to Northport, Long Island was approved in CSC Docket No. 224. On June 24, 2004, NU entered into a Settlement Agreement with the Long Island Power Authority (“LIPA”), the DPUC, the Connecticut Department of Environmental Protection (“CT DEP”), and the Cross-Sound Cable Company to resolve pending FERC filings. The terms of the Settlement Agreement required that NU and LIPA negotiate in good faith to enter into agreements necessary to complete replacement of the 1385 Cable and that NU and LIPA prepare and file an “Implementation Plan” with the CT DEP to achieve such replacement.

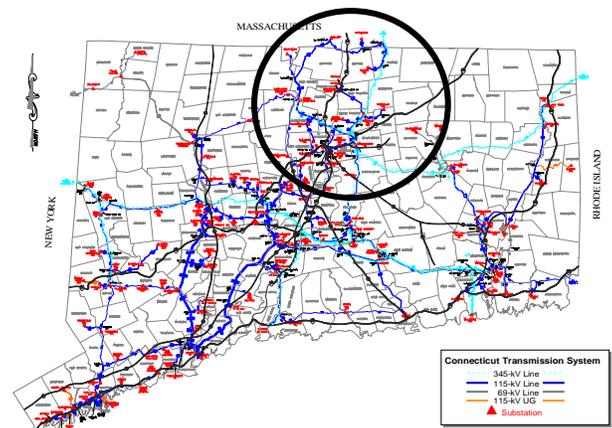
On September 30, 2004, NU and LIPA completed negotiations on “Construction and Use Agreements” for the project, and finalized an Implementation Plan. All documents were signed and filed with CT DEP on October 1, 2004. CT DEP approved the Implementation Plan and associated schedule in a letter dated January 24, 2005. In October 2004, NU commenced the Request for Proposals (“RFP”) process for cable design, fabrication and installation. This RFP solicitation did not result in a signed contract with an interested party.

On November 24, 2004, LIPA reactivated its pending Article VII application with the New York Public Service Commission for a Certificate of Environmental Compatibility and Public Need, which is part of that state’s siting approval process. On November 17, 2005, NU and LIPA initiated a re-bid process and issued a new RFP to solicit interested parties to design, fabricate, and install the new replacement cable system in Long Island Sound. At this time, NU and LIPA are currently internally evaluating the bids received from all interested parties and expect to begin contract negotiations shortly.

5.4 Manchester-Barbour Hill Area

The Manchester-Barbour Hill area includes part of Manchester, the towns located north and east of Manchester, and the towns of Suffield and Windsor Locks. It is primarily supplied by two radial 115-kV transmission lines from Manchester substation.

The rapid load growth along the Interstate 91 and Interstate 84 corridors and especially in Manchester and South Windsor adjacent to the Buckland Hills Mall area is causing an urgent need to upgrade the bulk substation and transmission system at the Barbour Hill Substation in South Windsor. In the near term, CL&P is proposing to address the reliability needs of the area with the installation of a 345/115-kV autotransformer.

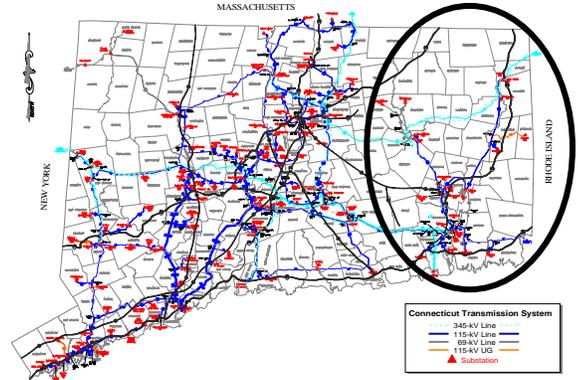


In the longer term, CL&P is also considering upgrades to the existing 115-kV transmission lines between the Manchester and the Barbour Hill substations.

5.5 Eastern Connecticut Area

The Eastern Connecticut area extends from the Rhode Island border in a westerly direction for about 20 miles and northerly from Long Island Sound to Massachusetts. The area is served by both CL&P and CMEEC, and is planned to the same reliability standards regardless of which entity is serving the load.

In 2005, the CL&P transmission system was modified to accommodate a 24.9-MW University of Connecticut cogeneration facility that was connected to the 69-kV transmission system in Mansfield.



Eastern Connecticut has experienced load growth along the Interstate 95 corridor and from the Foxwoods and Mohegan Sun casinos.

It is also important to ensure that reliable electric service is maintained at the local military installations including the United States Naval Submarine Base located in New London.

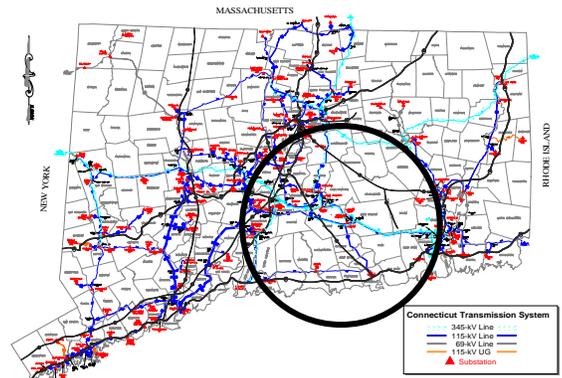
The area is supplied by 115-kV and 69-kV transmission lines. The 115-kV sources are two 345/115-kV autotransformers at Montville Substation, in Montville, and one 345/115-kV autotransformer at Card Substation, in Lebanon. Local generation is also available to serve customer load demands. The installation of a 345/115-kV autotransformer at the Killingly Substation, in Killingly, will reinforce the area's transmission system. This project was approved by the Siting Council in Docket No. 302 and is presently under construction.

CL&P is also studying the added reliability benefits of rebuilding and converting the existing 69-kV lines in the area to 115 kV. This could include new transmission facilities to improve service reliability to the greater Mystic area.

5.6 Middletown Area

The Middletown area consists of a 5- to 10-mile wide band, east and west of the Connecticut River from Glastonbury 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 easterly part of Meriden.

This area relies on the availability of 115-kV-connected generation at Middletown Station during high demand periods. However, uncertainty surrounds the economic and environmental viability of the continued operation of Middletown Units #2 and #3. Consequently, transmission reinforcements are needed in the near term.



In 2005, the area's reliability was enhanced by the addition of a 345/115-kV autotransformer at the Haddam Substation. In the longer term, CL&P is studying the added reliability benefits of installing a second autotransformer at Haddam Substation.

This installation would require the modification of the recently completed 345-kV Haddam facilities. In addition, it will be necessary to reconductor the 115-kV transmission line

between the Manchester Substation and the Hopewell Substation in Glastonbury, a project proposed in 2005 to the Siting Council under CSC Petition No. 737.

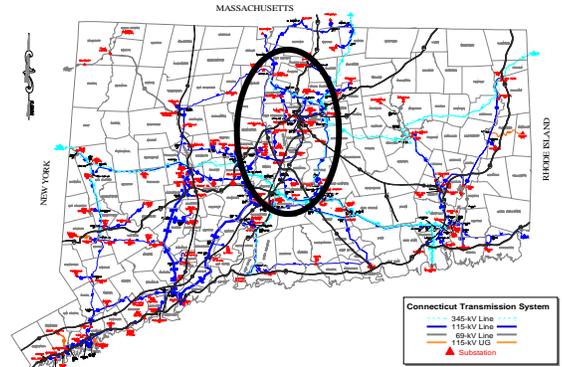
5.7 Greater Hartford Area

The Greater Hartford Area stretches north to the Massachusetts border, and is nestled in the middle of the Northwestern, Eastern and Southwestern Connecticut areas.

The transmission system supplying the Greater Hartford Area is robust and provides the area with an adequate supply in the near term.

Due to the thriving growth and business opportunities in the Southington, Berlin, Newington, and Farmington areas, CL&P has concerns about the ability of the area's transmission to meet future customer load demands. CL&P is studying several transmission reinforcement projects including the construction of a 345-kV line from the greater Middletown area to the Berlin Substation, in Berlin.

In addition, to improve reliability in the New Britain area, studies indicate a need to convert the existing 69-kV facilities at Black Rock Substation to 115 kV.

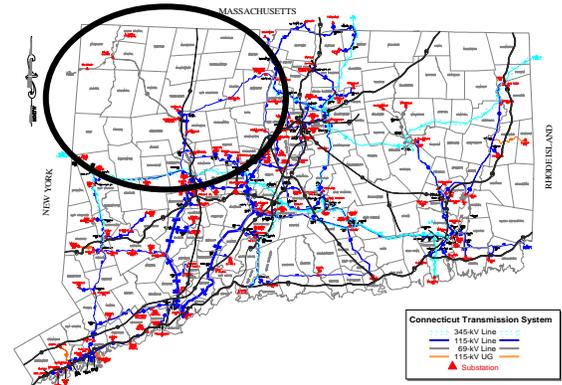


5.8 Northwestern Connecticut Area

The northwestern portion of the state is presently supplied by four 115-kV transmission lines.

In the Torrington, Salisbury, and North Canaan area, it may be necessary to convert the existing 69-kV transmission system to 115-kV operation (two of the lines were pre-built for future 115-kV operation under CSC Petition No. 26). An alternative considered would be to install a second 115/69-kV autotransformer at Torrington Terminal Substation, thus extending the life of the existing 69-kV facilities.

In addition, CL&P is evaluating a new 115-kV transmission line into the area that may be proposed from the Frost Bridge Substation in Watertown.



5.9 What Needs to Be Done in Connecticut

Connecticut is facing a number of significant energy challenges. Utilities, generators, regulators, legislators, and customers must work together on three fronts:

1. Continue, expand, and focus C&LM programs - with a strong focus on SWCT.
2. Develop fuel efficient, fast-start, and diverse generation resources both customer-side and grid-side.
3. Continue to site and build needed electric transmission infrastructure, particularly that which expands the capability to import lower-cost power and move it within the state.

Connecticut stakeholders must work together on all three of these fronts. Transmission alone cannot meet the challenges, nor can generation, or C&LM. Each is an essential piece of the solution.

CL&P is committed to continuing to work with the DPUC, the Siting Council, ISO-NE and other Connecticut state officials and stakeholders to ensure that reliable and safe electric service is adequate and is provided in an environmentally responsible manner to meet growing customer demands of Connecticut's residents and businesses for electricity.

Chapter 6: CL&P's TRANSMISSION PROJECTS

6.1 Summary Listing of CL&P Transmission Projects

CL&P's transmission projects are summarized in tables 6-1 through 6-4, below. During the forecast period, additional transmission projects beyond those listed may be justifiable to enhance reliability or provide efficient means to transmit electricity.

The estimated in-service dates ("ISD") for new facilities listed in the tables may vary through time as the dynamics of the system change.

Table 6-1 Transmission Circuit/Circuit-Segments Approved by the Connecticut Siting Council

Note: Build-types include overhead ("OH"), underground ("UG"), and underwater ("UW").

Table 6-2 Proposed Transmission Circuits on file with the Connecticut Siting Council

Table 6-3 Other Proposed Transmission Circuits

Table 6-4 Substation ("S/S") Projects

TABLE 6-1
Transmission Circuit/Circuit-Segments Approved by the
Connecticut Siting Council
(as of January 1, 2006)

| Transmission Project | Build-Type | Area | Voltage (kV) | Length (miles) | ISD |
|---|------------|------------------|--------------|----------------|------|
| Plumtree S/S, Bethel-Norwalk S/S, Norwalk (new) | OH | Southwest | 345 | 8.6 | 2006 |
| Plumtree S/S, Bethel-Norwalk S/S, Norwalk (new) | UG | Southwest | 345 | 11.8 | 2006 |
| Killingly S/S, Killingly (new Substation) – Tracy S/S, Putnam (new) | OH | Eastern | 115 | 0.1 | 2006 |
| Killingly S/S, Killingly (new Substation) – Tracy S/S, Putnam (new) | OH | Eastern | 115 | 0.1 | 2006 |
| Plumtree S/S, Bethel – Triangle S/S, Danbury (rebuild) | OH | Southwest | 115 | 1.8 | 2007 |
| Plumtree S/S, Bethel – Triangle S/S Danbury (rebuild) | OH | Southwest | 115 | 1.8 | 2007 |
| Norwalk Harbor Station, Norwalk - Northport Station, Northport (N.Y.) (replace) | UW | Norwalk-Stamford | 138 | 5.8 | 2008 |
| Norwalk S/S, Norwalk - Glenbrook S/S circuit 1, | UG | Norwalk-Stamford | 115 | 8.8 | 2008 |

| Transmission Project | Build-Type | Area | Voltage (kV) | Length (miles) | ISD |
|--|-------------------|------------------|---------------------|-----------------------|------------|
| Stamford (new) | | | | | |
| Norwalk S/S, Norwalk - Glenbrook S/S circuit 2, Stamford (new) | UG | Norwalk-Stamford | 115 | 8.8 | 2008 |
| East Devon S/S, Milford (new substation) - Singer S/S, Bridgeport (new substation) (UI), (new) | UG | Southwest | 345 | 2.4 | 2009 |
| East Devon S/S, Milford (new substation) - Singer S/S, Bridgeport (new substation) (UI), (new) | UG | Southwest | 345 | 2.4 | 2009 |
| Singer S/S, Bridgeport (new substation) - (UI), Norwalk S/S (new) | UG | Southwest | 345 | 15.4 | 2009 |
| Singer S/S, Bridgeport (new substation) - (UI), Norwalk S/S (new) | UG | Southwest | 345 | 15.4 | 2009 |
| Devon S/S, Milford – Wallingford Station Wallingford, (rebuild a portion of #1640) | OH | Southwest | 115 | 23.6 | 2009 |
| Devon S/S, Milford – Wallingford Station Wallingford, (new underground portion of #1640) | UG | Southwest | 115 | 0.5 | 2009 |
| Devon S/S, Milford – June St. S/S, Woodbridge (UI) (rebuild a portion of #1685) | OH | Southwest | 115 | 13.4 | 2009 |
| North Haven S/S, North Haven (UI) – Branford S/S, Branford (rebuild a portion of #1655 line) | OH | Southwest | 115 | 1.2 | 2009 |
| East Devon S/S, Milford – Devon S/S, Milford (new) | UG | Southwest | 115 | 1.3 | 2009 |
| East Devon S/S, Milford – Devon S/S, Milford (new) | UG | Southwest | 115 | 1.3 | 2009 |
| E. Meriden S/S, Meriden-N. Wallingford S/S, (CMEEC) (rebuild a portion of #1466) | OH | Southwest | 115 | 2.0 | 2009 |
| June St.,S/S, Woodbridge, (UI) – Southington S/S, | OH | Southwest | 115 | 10.5 | 2009 |

| Transmission Project | Build-Type | Area | Voltage (kV) | Length (miles) | ISD |
|---|-------------------|-------------|---------------------|-----------------------|------------|
| Southington (rebuild a portion of #1610) | | | | | |
| Devon S/S, Milford – Devon Switching Station, Milford, (UI) (rebuild) | OH | Southwest | 115 | 0.1 | 2009 |
| Devon S/S, Milford – Devon Switching Station, Milford, (UI) (rebuild) | OH | Southwest | 115 | 0.1 | 2009 |
| Devon S/S, Milford – Derby Jct., Shelton- Beacon Falls S/S, Beacon Falls (reconductor portion of #1570) | OH | Southwest | 115 | 3.8 | 2009 |
| Bunker Hill S/S, Waterbury – Baldwin Jct., Waterbury- Beacon Falls S/S, Beacon Falls (reconductor a portion of the #1575) | OH | Southwest | 115 | 3.8 | 2009 |
| Devon S/S, Milford – Lucchini Jct., Meriden- Southington S/S, Southington | OH | Southwest | 115 | 22.5 | 2009 |
| Scovill Rock S/S, Middletown – Chestnut Jct., Middletown (new) | OH | Middletown | 345 | 2.6 | 2009 |
| Oxbow Jct., Haddam – Beseck S/S, Wallingford (new switchyard) (new) | OH | Middletown | 345 | 8.0 | 2009 |
| Black Pond Jct., Middlefield – Beseck S/S, Wallingford (new switchyard) (new) | OH | Middletown | 345 | 2.8 | 2009 |
| Black Pond Jct., Middlefield – Beseck S/S, Wallingford (new switchyard) (new) | OH | Middletown | 345 | 2.8 | 2009 |
| Beseck S/S., Wallingford (new switchyard) - East Devon S/S (new substation), Milford (new) | OH | Middletown | 345 | 33.4 | 2009 |
| Haddam S/S – East Meriden S/S, Meriden (rebuild a portion of #1975) | OH | Middletown | 115 | 8.4 | 2009 |

TABLE 6-2
Proposed Transmission Circuits on file with the
Connecticut Siting Council
(as of January 1, 2006)

| Transmission Project | Build-Type | Area | Voltage (kV) | Length (miles) | ISD |
|---|-------------------|-------------|---------------------|-----------------------|------------|
| Manchester S/S, Manchester – Hopewell S/S Glastonbury (reconductor) | OH | Middletown | 115 | 7.0 | 2006 |

TABLE 6-3
Other Proposed Transmission Circuits
(as of January 1, 2006)

| Transmission Project | Area | Voltage (kV) | Length (miles) | ISD |
|--|------------------|---------------------|-----------------------|------------|
| Lake Road S/S, Killingly – Killingly S/S, Killingly (new) | Eastern | 115 | 1.0 | TBD |
| Lake Road S/S, Killingly – Killingly S/S, Killingly (new) | Eastern | 115 | 1.0 | TBD |
| Tunnel S/S, Preston – Ledyard Jct., Ledyard (rebuild & upgrade to 115-kV) | Eastern | 69 | 8.5 | TBD |
| Ledyard Jct., Ledyard – Gales Ferry S/S, Ledyard (upgrade to 115-kV) | Eastern | 69 | 1.6 | TBD |
| Gales Ferry S/S, Ledyard – Montville Station Montville (upgrade to 115-kV) | Eastern | 69 | 2.4 | TBD |
| Ledyard Jct., Ledyard – Buddington S/S, Groton (CMEEC), Groton (upgrade to 115-kV) | Eastern | 69 | 4.7 | TBD |
| Card S/S, Lebanon – Wawecus Jct., Bozrah (rebuild) | Eastern | 115 | 12.7 | TBD |
| Norwalk Harbor Station, Norwalk - Glenbrook S/S , Stamford (new) | Norwalk-Stamford | 115 | 9.2 | TBD |
| South End S/S, Stamford – Tomac S/S, Greenwich (reconductor a portion of the #1750) | Norwalk-Stamford | 115 | 0.4 | TBD |
| East Meriden S/S, Meriden – North Wallingford S/S, Wallingford (reconductor the westerly portion of the #1466) | Middletown | 115 | 0.5 | TBD |
| Schwab Jct., Wallingford – Colony S/S (CMEEC), Wallingford | Middletown | 115 | 1.5 | TBD |

| Transmission Project | Area | Voltage (kV) | Length (miles) | ISD |
|--|-------------------------|---------------------|-----------------------|------------|
| Manchester S/S, Manchester – Barbour Hill S/S, South Windsor (rebuild) | Manchester/Barbour Hill | 115 | 7.5 | TBD |
| Oxbow Jct., Haddam – Beseck Jct., Wallingford (unbundle/rebuild) | Southwest | 115 | 14.7 | TBD |
| Colony S/S (CMEEC), Wallingford North Wallingford S/S (CMEEC) (unbundle) | Southwest | 115 | 2.4 | TBD |
| Frost Bridge S/S, Watertown - Bunker Hill S/S, Waterbury | Southwest | 115 | 3.9 | TBD |
| Frost Bridge S/S, Watertown – Walnut Jct., Thomaston (new) | Northwest | 115 | 6.4 | TBD |
| Frost Bridge S/S, Watertown - Campville S/S, Harwinton (rebuild) | Northwest | 115 | 10.3 | TBD |

**TABLE 6-4
Substation Projects
(as of January 1, 2006)**

| Substation Projects | Area | Town | Voltage (kV) | ISD |
|---|-------------------------|---------------|---------------------|------------|
| Install a new Kleen Switching Station | Eastern | Middletown | 345 | TBD |
| Install the new Norwalk Substation | Eastern | Norwalk | 345/115 | 2006 |
| Install the new Killingly Substation | Eastern | Killingly | 345/115 | 2006 |
| Modify the existing Tracy Substation | Eastern | Putnam | 115 | 2006 |
| Expand the existing Card Substation | Eastern | Lebanon | 345 | 2006 |
| Expand the existing Triangle Substation | Southwest | Danbury | 115 | 2007 |
| Expand the existing Middle River Substation | Southwest | Danbury | 115 | 2007 |
| Install the new Wilton Substation | Southwest | Wilton | 115 | 2007 |
| Modify the existing Norwalk Substation | Southwest | Norwalk | 115 | 2008 |
| Expand the existing Glenbrook Substation | Southwest | Stamford | 115 | 2008 |
| Expand the existing Norwalk Harbor Substation | Southwest | Norwalk | 138/115 | 2008 |
| Install the new Barbour Hill Substation | Manchester/Barbour Hill | South Windsor | 345/115 | 2008 |
| Expand the existing Bunker Hill Substation | Southwest | Waterbury | 115 | 2008 |

| Substation Projects | Area | Town | Voltage (kV) | ISD |
|--|-----------------------------|-------------|---------------------|------------|
| Expand the existing Devon Substation | Southwest | Milford | 115 | 2009 |
| Install the new 345-kV Beseck Switching Station in Wallingford | Southwest | Wallingford | 345 | 2009 |
| Install the new East Devon Substation | Southwest | Milford | 345/115 | 2009 |
| Expand the existing Scovill Rock Switching Substation | Eastern | Middletown | 345 | 2009 |
| Expand the existing Norwalk Substation | Southwest | Norwalk | 345 | 2009 |
| Expand the existing Card Substation | Eastern | Lebanon | 345 | 2009 |
| Expand the existing Haddam Substation | Eastern | Haddam | 345/115 | TBD |
| Expand the existing Glenbrook Substation | Southwest | Stamford | 115 | TBD |
| Expand the existing Norwalk Harbor Station | Southwest | Norwalk | 115 | TBD |
| Install the new Stepstone Substation | Middletown | Guilford | 115 | TBD |
| Install the new Cohanzie Substation | Eastern | Waterford | 115 | TBD |
| Install the new Oxford Substation (formally Jack's Hill) | Southwest | Oxford | 115 | TBD |
| Install a new Windsor Substation | Manchester/ Barbour Hill | Windsor | 115 | TBD |
| Install a new Goshen Substation | Northwest | Goshen | 115 | TBD |

Temporary Over Voltage Mitigation Projects

| <u>Substation</u> | <u>C-type Filter & Reactor</u> | <u>ISD</u> |
|-------------------|------------------------------------|------------|
| Rocky River | TBD | TBD |
| Stony Hill | TBD | TBD |

CL&P substation record

From 1982 to 2005 CL&P's total number of substations was reduced from 331 to 234 primarily due to conversion of distribution feeders to a higher voltage thereby eliminating the need for many lower voltage substations. The Shunock Substation, in North Stonington, was placed in service in 2005.