The United Illuminating Company
157 Church Street
P.O. Box 1564
New Haven, CT 06506-0901
203 499 2000

March 15, 2006

Mr. S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: The United Illuminating Company's Load Forecast and Transmission Plan

Dear Mr. Phelps:

The United Illuminating Company (UI) hereby submits an original and twenty (20) copies of an Update of its Load Forecast and Transmission Planning in order to assist the Connecticut Siting Council in its Hearings pursuant to Section 16-50r of the General Statutes of Connecticut.

Respectfully submitted,

THE UNITED ILLUMINATING COMPANY

by Michael A. Coretto (dc)
Michael A. Coretto.
Director – Regulatory Strategy &
Retail Access

MAC

Report to the
Connecticut Siting Council

March 15, 2006

The United Illuminating Company

157 Church Street

New Haven, CT 06506

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Section I. Load Forecast Update

This year, as in previous years, The United Illuminating Company ("UI" or "Company") includes its load forecast and one sensitivity forecast which, when taken together, represent a range of possible futures. The ultimate sales and peak load experienced by UI are heavily impacted by weather. In 2005, UI experienced an all-time high summer peak load and an all-time high for annual sales. The past several years have contained above average temperatures during the critical summer period (2001, 2002 and 2005), an average weather year (2004), and years of average overall weather but with short, severe weather periods (2003). These weather variations demonstrate that the potential for extremely high peak loads exists within the Company's service territory. Proper planning dictates that a range of possible future load scenarios be developed in order to capture the range of potential peak loads and provide sufficient input into the infrastructure planning process. It is for this reason that the Company has developed a load forecast that assumes average/normal weather and a load forecast that assumes extreme weather.

The forecast shown on Exhibit 1 is based on "average" or "normal" weather. The base for this forecast is historical weather-corrected sales. The predominant factors driving this forecast are background (base) economic growth projections along with the currently estimated impacts of the Company's conservation and load management (CLM) activities, known consumption changes in the future for our large actively-managed commercial and industrial customers and incremental sales efforts. Additionally, the Company reviewed its

historical load growth over the past ten years, on a weather-adjusted basis, to derive its future load forecast.

The peak load in this forecast is calculated based on the Company's system requirements (i.e. sales plus Company use plus losses, in GWh) and the average system load factor experienced over the past ten years.

As the past four summers have shown, however, the potential for a peak load far above a "normal" or "average" weather forecast is a realistic possibility. In an effort to bound this potential future, the Company has developed a sensitivity load forecast. This forecast uses actual 2002 results (both system sales and load factor) as a base for the impact that extreme weather may have. The background economic assumptions, as well as CLM impacts, large account changes and incremental sales activities are assumed to be the same as in the "average" or "normal" weather forecast. The load forecast assuming extreme weather is shown on Exhibit 2.

No one is able to predict when extreme weather will occur. Prudent infrastructure planning requires that the possibility of abnormally hot weather within the forecast time period be recognized and plans be formulated to meet this possible demand. The bounds of the Company's forecasts are intended to provide a plausible range of futures. No single forecast will be applicable throughout the forecast period. Rather, extreme weather will occur one year, maybe not the next and then perhaps occur the third or fourth year. In fact, on a sales basis, the years 2001 through 2003 were above "average" i.e. actual sales were above

the weather corrected sales, while 2004 was near "average" with the actual sales being almost identical to the weather corrected sales level. In 2005, the Company experienced a high summer peak load and annual sales that were above those of an "average" weather year. When extreme weather occurs, regardless of the timing, the system infrastructure must be in place to serve the high load safely and reliably. Graphs of the system forecast and the sensitivity to extreme weather are shown in Exhibit 3 (system sales in GWh) and Exhibit 4 (peak load).

Conservation & Load Management

UI has continued delivering the portfolio of award winning Conservation and Load Management that customers have come to expect. Since the implementation of Connecticut's electric industry restructuring, the Company has worked with the members of the Energy Conservation Management Board (ECMB) to utilize the funds collected through the conservation charge on customers' bills, required by Public Act 98-28, to develop and implement programs to reduce customers' electricity usage. As a result of the efforts of UI, the ECMB and the Department of Public Utility Control (DPUC), the cumulative savings from 2000-- 2005 is 1.2 billion kWh or 1.2 Million MWh. This is about 4% of our total sales for the 2000-2005 period

The CLM programs at UI continue to deliver value to our customers. However, as UI noted in last year's forcast report, the actions of the General Assembly to balance the State's budget deficit have resulted in a nearly one-third reduction in available funding for CLM

programs. Despite the best efforts of all of those involved, the reduction of program funds has resulted in a corresponding loss of energy savings. Because of the timing of these financial arrangements, these reductions in energy savings will only now become apparent.

The overall impact of the CLM programs is dependent on the available program funds. The CLM program savings estimates included in the Company's forecast assume that the current level of funding remains in place through the forecast period. The savings assumptions become invalid in the event of additional losses of funding. The program savings can be resumed in the future with resumed funding, but the cumulative benefits that accrue over time are lost. Conversely, the program savings can be incrementally increased if additional funding becomes available.

During the June 2005 special session, Public Act 05-1, An Act Concerning Energy Independence, was passed. This legislation has the potential to provide incremental funding that would result in the incremental savings previously discussed. Due to the complicated nature of this large undertaking, many of the provisions of the Act are in the process of being refined by the DPUC and the full impact of those savings is not yet known.

Section II. Transmission Planning

The combination of increased energy consumption and the development of the competitive wholesale generation marketplace has impacted transmission system utilization. The UI projects included in this filing are a result of the impact of these factors on the existing infrastructure. These projects will enable the Company to fulfill its obligation to provide reliable service to its customers and to meet the design standards mandated by independent national and regional authorities responsible for the reliability of the transmission system: the North American Electric Reliability Council (NERC), the Northeast Power Coordinating Council (NPCC), the Independent System Operator – New England (ISO-NE), and the New England Power Pool (NEPOOL).

The on-going restructuring efforts in the electric industry at the state and federal levels have brought about numerous significant changes. The move towards open access to competing generation resources has resulted in changes in generating patterns due to competitive pricing and the siting and operation of merchant generating facilities. This has now become an additional impetus for transmission infrastructure upgrades. Previously, changes to the transmission system had been undertaken to (1) accommodate area load growth, and (2) maintain system reliability and voltage, and/or upgrade aging facilities. Generation-related transmission upgrades had been limited to the addition or retirement of planned, specific generating units. Now, transmission upgrades assist in the development of the competitive wholesale generation marketplace and also help reduce the economic penalties paid by Connecticut's electricity ratepayers as a result of limitations on the ability to import lower cost generation.

UI's planned transmission system modifications are listed in Exhibit 5 and are outlined below

The Southwest Connecticut (SWCT) Electric Reliability Project involves (1) expanding the 345kV transmission system into SWCT, and (2) upgrading the existing 115 kV system. The proposed 345kV expansion is being addressed by two related projects.

The Connecticut Light & Power Company (CL&P) has designed an expansion of the 345kV transmission system from Bethel to Norwalk. The Siting Council granted a certificate of environmental compatibility and public need for this project, which is now under construction.

UI and CL&P have developed the Middletown to Norwalk Project, which will complete the 345kV transmission loop in Southwest Connecticut. The Middletown to Norwalk Project, which received a certificate of environmental compatibility and public need from the CSC, on April 7, 2005, involves expanding the 345kV transmission system from Middletown to Norwalk and rebuilding and modifying portions of the 115kV system. This expands the 345kV backbone from Beseck Junction (Wallingford) to East Devon (Milford); East Devon to Singer (a new substation to be built in Bridgeport); and Singer to Norwalk. The proposal also includes a new 345 kV switching station at Beseck Junction and new 345/115 kV substations in Milford (East Devon Substation) and Bridgeport (Singer Substation). Modifications to CL&P's Scovill Rock Switching Station and Norwalk

Substation, and to UI's Pequonnock Substation will be required, and modifications to UI's Elmwest Substation or another UI substation may also be necessary. The proposed new Singer Substation will be located in the vicinity of UI's existing Pequonnock 115kV Substation (Bridgeport). It is expected that a sixteen-breaker gas insulated substation (GIS) will be constructed in a breaker-and-one-half configuration. This transmission arrangement will allow for 345kV line terminations from the East Devon and Norwalk 345kV substations.

Additionally, two 600 MVA 345/115 kV autotransformer banks will be installed at Singer Substation. These autotransformers are intended to interconnect the Pequonnock 115kV Substation and the Bridgeport Energy facility to the 345kV system. The design will ensure that a single malfunctioning 345kV circuit breaker will not interrupt both transmission paths from East Devon and Norwalk, or both 345/115 kV autotransformers simultaneously.

Once completed, the Bethel to Norwalk Project and the Middletown to Norwalk Project will establish a 345kV transmission loop into SWCT, thereby improving customer reliability and reducing transmission congestion costs. They will also provide an infrastructure capable of allowing greater access to more of New England's competitively priced generation. When compared to the scenario where the transmission system is not expanded, these expansion projects should result in lower energy costs to all of Connecticut's consumers as well as the continued reliable operation of the electric system.

UI has other transmission infrastructure upgrades planned or under internal review.

The Trumbull and Shelton areas are experiencing significant load growth. The Trumbull Substation Project, a new 115/13.8 kV substation, is needed to address reliability and capacity issues. UI anticipates making a filing with the CSC for this project during March 2006, with operation projected for 2007..

A new supply substation for the MTA Metro-North Railroad is planned for construction at Union Avenue in New Haven. UI will own and operate the 115kV transmission portion of this substation, while Metro-North will own and operate the 27.6kV distribution portion. The in-service date for the 115kV supply is solely dependent on Metro North's construction schedule. UI anticipates that a filing for its portion of the project will be submitted to the CSC no earlier than 2007.

The Naugatuck Valley area (Ansonia, Derby and Shelton) of UI's service territory is supplied by three 115/13.8 kV distribution substations - Ansonia, Indian Well and Trap Falls. These substations are connected to the 115kV transmission system via CL&P's 1545, 1560, and 1570 overhead lines. Due to the continued load growth in the area, it is forecasted that as early as the summer peak of 2010, these circuits (1545, 1560 and 1570) would no longer provide an adequate 115kV voltage supply to the area. At that time, a voltage collapse condition for UI customers supplied by either Ansonia, Indian Well or Trap Falls substations could result due to a single contingency loss of both the 1545 and 1570 lines.

UI has developed the following initial solutions to address the Naugatuck Valley area 115kV contingency voltage supply problem.

- Install a 115kV underground line between Ansonia Substation and Allings Crossing Substation, West Haven (approximately 10 miles).
- Install a 115kV underground line between Ansonia Substation and Broadway Substation, New Haven (approximately 11 miles).
- Install a 115kV underground line between Ansonia Substation and Glen Lake Switching Station, Woodbridge (approximately 8 miles).
- Install a 115kV 40 MVAr capacitor bank at Ansonia Substation and reconductor the 115kV lines (1545, 1560 and 1570) from Ansonia Substation to Derby Junction, Shelton (3.7 miles). The existing 4/0 copper conductors in these lines would be replaced with 795 ACSR conductors.
- Install a 115kV dynamic reactive device (synchronous condenser, Static VAr Compensator (SVC), STATCOM, Dynamic VAr Compensator (DVAR) or other FACTS device) at Ansonia Substation.

By 2007, UI is expected to complete the necessary studies to document the needs of the Naugatuck Valley 115kV Voltage Improvement Project and select a solution. UI anticipates making a filing with the CSC for this project by 2008.

Load growth has also warranted further study of new 115/13.8 kV substations in western Fairfield and North Branford. Anticipated completion for either substation would be 2014 or later.

Regarding the August 14, 2003 blackout, no UI system upgrades have been identified at this time. However, on September 1, 2005 the Federal Energy Regulatory Commission (FERC) issued a notice of proposed rulemaking for the establishment of an Electric Reliability Organization (ERO). The ERO will propose and enforce reliability standards. This is in response to the newly enacted Energy Policy Act of 2005, which in part directs FERC to establish an ERO, and develop mandatory electric reliability standards and enforcement procedures for reliability violations. The new rules are expected to be finalized soon. As a result of this, there may be requirements for additional system modifications in order to comply with the new FERC ruling.

UI is unaware of any instances where a UI transmission line exceeded its long-time or short-time emergency rating during abnormal system conditions. UI and CL&P in conjunction with CONVEX (the Connecticut Valley Electric Exchange), ISO-NE (the Independent System Operator for New England), and NEPOOL (New England Power Pool), periodically review the performance of the transmission system as part of a coordinated effort to provide adequate and reliable transmission capacity at a reasonable cost.

Please note that Exhibit 5 to this Report includes only those planned transmission projects that UI is responsible to undertake. It does not include any third-party plans to undertake transmission system modifications in UI's service territory. UI believes that it is the responsibility of such third parties to provide the Siting Council with a report of their plans as appropriate. Any such proposed modifications would also require notification and

coordination with UI so that UI can assess the impacts on the entire UI transmission system and ensure the system's continued reliability.

EXHIBIT 1

The United Illuminating Company

System Energy Requirements, Annual Sales, and Peak Load

Normal Weather , Peak forecast based on 10-yr historical average load factor

	Year Actual	Total Sys. Req'ts (GWH)	Annual Change (Pct.)	System Peak (MW)	Annual Change	Actual Sales (GWH)	Annual Change (Pct.)	Weather Adjusted Sales (GWH)	Annual Change (Pct.)	Load Factor (Pct.)
History	1995	5,648	3.1%	1,157	10.7%	5,339	3.6%	5,290	1.3%	56%
	1996	5,641	-0.1%	1,045	-9.7%	5,340	0.0%	5,359	1.3%	62%
	1997	5,631	-0.2%	1,173	12.3%	5,376	0.7%	5,421	1.2%	55%
	1998	5,728	1.7%	1,143	-2.6%	5,452	1.4%	5,485	1.2%	57%
	1999	5,943	3.8%	1,273	11.4%	5,652	3.7%	5,625	2.6%	53%
	2000	5,977	0.6%	1,153	-9.4%	5,654	0.0%	5,708	1.5%	59%
	2001	6,010	0.6%	1,318	14.3%	5,724	1.2%	5,689	-0.3%	52%
	2002	6,051	0.7%	1,300	-1.4%	5,781	1.0%	5,684	-0.1%	53%
	2003	6,071	0.3%	1,274	-2.0%	5,772	-0.2%	5,734	0.9%	54%
	2004	6,205	2.2%	1,201	-5.8%	5,952	3.1%	5,952	3.8%	59%
	2005	6,360	2.5%	1,346	12.1%	6,106	2.6%	5,995	0.7%	54%
		1995 - 2005 growth	12.6%		16.3%		14.4%		13.3%	
Forecast	2006	6,364	0.1%	1,302	-3.3%			6,055	1.0%	55.82%
	2007	6,428	1.0%	1,315	1.0%			6,116	1.0%	56%
	2008	6,509	1.3%	1,328	1.0%			6,193	1.3%	56%
	2009	6,557	0.7%	1,341	1.0%			6,239	0.7%	56%
	2010	6,622	1.0%	1,354	1.0%			6,301	1.0%	56%
	2011	6,689	1.0%	1,368	1.0%			6,364	1.0%	56%
	2012	6,772	1.3%	1,382	1.0%			6,444	1.3%	56%
	2013	6,823	0.7%	1,395	1.0%			6,492	0.7%	56%
	2014	6,891	1.0%	1,409	1.0%			6,556	1.0%	56%
	2015	6,961	1.0%	1,424	1.0%			6,623	1.0%	56%
		2005 - 2015 growth	9.4%		5.8%				10.5%	
	2016	7,048	1.3%	1,438	1.0%			6,706	1.3%	56%
	2017	7,103	0.8%	1,453	1.0%			6,758	0.8%	56%
	2018	7,175	1.0%	1,467	1.0%			6,827	1.0%	56%
	2019	7,248	1.0%	1,482	1.0%			6,897	1.0%	56%
	2020	7,339	1.2%	1,498	1.0%			6,983	1.2%	56%
	2021	7,396	0.8%	1,513	1.0%			7,038	0.8%	56%
	2022	7,472	1.0%	1,528	1.0%			7,109	1.0%	56%
	2023	7,548	1.0%	1,544	1.0%			7,181	1.0%	56%
	2024	7,641	1.2%	1,559	1.0%			7,270	1.2%	56%
	2025	7,702	0.8%	1,575	1.0%			7,328	0.8%	56%
		2015 - 2025 growth	10.6%		10.6%				10.6%	

EXHIBIT 2

The United Illuminating Company

System Energy Requirements, Annual Sales, and Peak Load

"Extreme Weather" , Peak forecast based on 2002 as proxy for extreme weather

	Year Actual	Total System Requirement GWHs	Annual Change (Pct.)	System Peak MWs	Annual Change	Actual Sales GWHs (	Annual Change Pct.)	Weather Adjusted Sales GWHs	Annual Change (Pct.)	Load Factor (pct.)
History	1995	5,648	3.1%	1,157	10.7%	5,339	3.6%	5,290	1.3%	56%
	1996	5,641	-0.1%	1,045	-9.7%	5,340	0.0%	5,359	1.3%	62%
	1997	5,631	-0.2%	1,173	12.3%	5,376	0.7%	5,421	1.2%	55%
	1998	5,728	1.7%	1,143	-2.6%	5,452	1.4%	5,485	1.2%	57%
	1999	5,943	3.8%	1,273	11.4%	5,652	3.7%	5,625	2.6%	53%
	2000	5,977	0.6%	1,153	-9.4%	5,654	0.0%	5,708	1.5%	59%
	2001	6,010	0.6%	1,318	14.3%	5,724	1.2%	5,689	-0.3%	52%
	2002	6,051	0.7%	1,300	-1.4%	5,781	1.0%	5,684	-0.1%	53%
	2003	6,071	0.3%	1,274	-2.0%	5,772	-0.2%	5,734	0.9%	54%
	2004	6,205	2.2%	1,201	-5.8%	5,952	3.1%	5,952	3.8%	59%
	2005	6,360	2.5%	1,346	12.1%	6,106	2.6%	5,995	0.7%	54%
	1995 - 2005 growth		12.6%		16.3%		14.4%		13.3%	
Forecast	2006	6,462	1.6%	1,388	3.1%	6,148	0.7%			53%
	2007	6,526	1.0%	1,402	1.0%	6,209	1.0%			53%
	2008	6,605	1.2%	1,416	1.0%	6,285	1.2%			53%
	2009	6,653	0.7%	1,429	1.0%	6,331	0.7%			53%
	2010	6,719	1.0%	1,443	1.0%	6,393	1.0%			53%
	2011	6,784	1.0%	1,458	1.0%	6,455	1.0%			53%
	2012	6,867	1.2%	1,472	1.0%	6,534	1.2%			53%
	2013	6,917	0.7%	1,486	1.0%	6,582	0.7%			53%
	2014	6,985	1.0%	1,501	1.0%	6,646	1.0%			53%
	2015	7,054	1.0%	1,516	1.0%	6,712	1.0%			53%
	2005 - 2015 growth		10.9%		12.6%		9.9%			
	2016	7,141	1.2%	1,531	1.0%	6,794	1.2%			53%
	2017	7,194	0.8%	1,546	1.0%	6,845	0.8%			53%
	2018	7,265	1.0%	1,561	1.0%	6,913	1.0%			53%
	2019	7,337	1.0%	1,576	1.0%	6,981	1.0%			53%
	2020	7,427	1.2%	1,592	1.0%	7,066	1.2%			53%
	2021	7,483	0.8%	1,608	1.0%	7,120	0.8%			53%
	2022	7,557	1.0%	1,624	1.0%	7,190	1.0%			53%
	2023	7,632	1.0%	1,640	1.0%	7,261	1.0%			53%
	2024	7,724	1.2%	1,656	1.0%	7,349	1.2%			53%
	2025	7,783	0.8%	1,672	1.0%	7,405	0.8%			53%
	2015 - 2025 growth		10.3%		10.3%		10.3%			

EXHIBIT 3

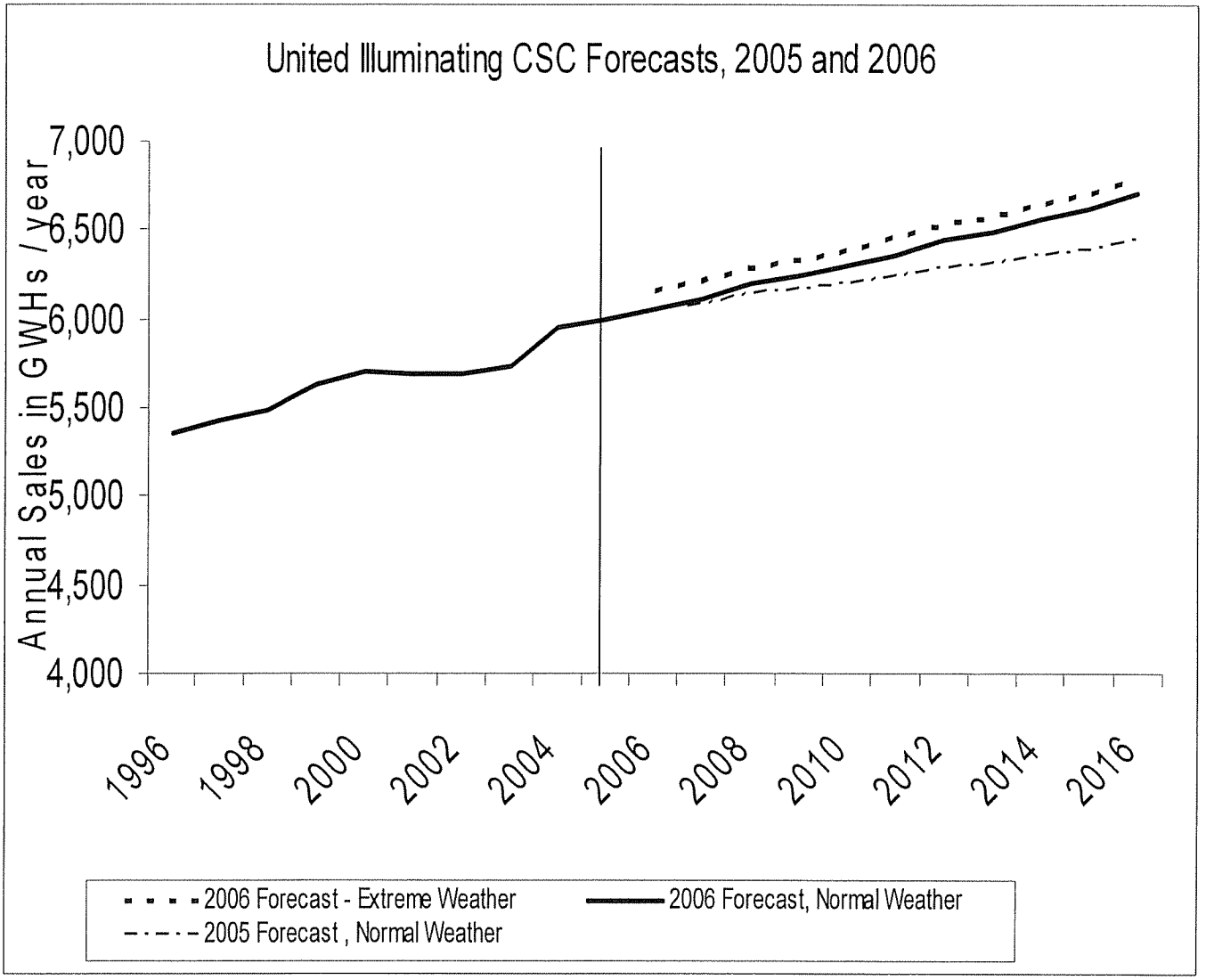
United Illuminating CSC Forecasts, 2005 and 2006
Annual Sales in GWHs / year
7,000
6,500
6,000
5,500
5,000
4,500
4,000
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2006 Forecast - Extreme Weather
2006 Forecast, Normal Weather
2005 Forecast , Normal Weather

EXHIBIT 4

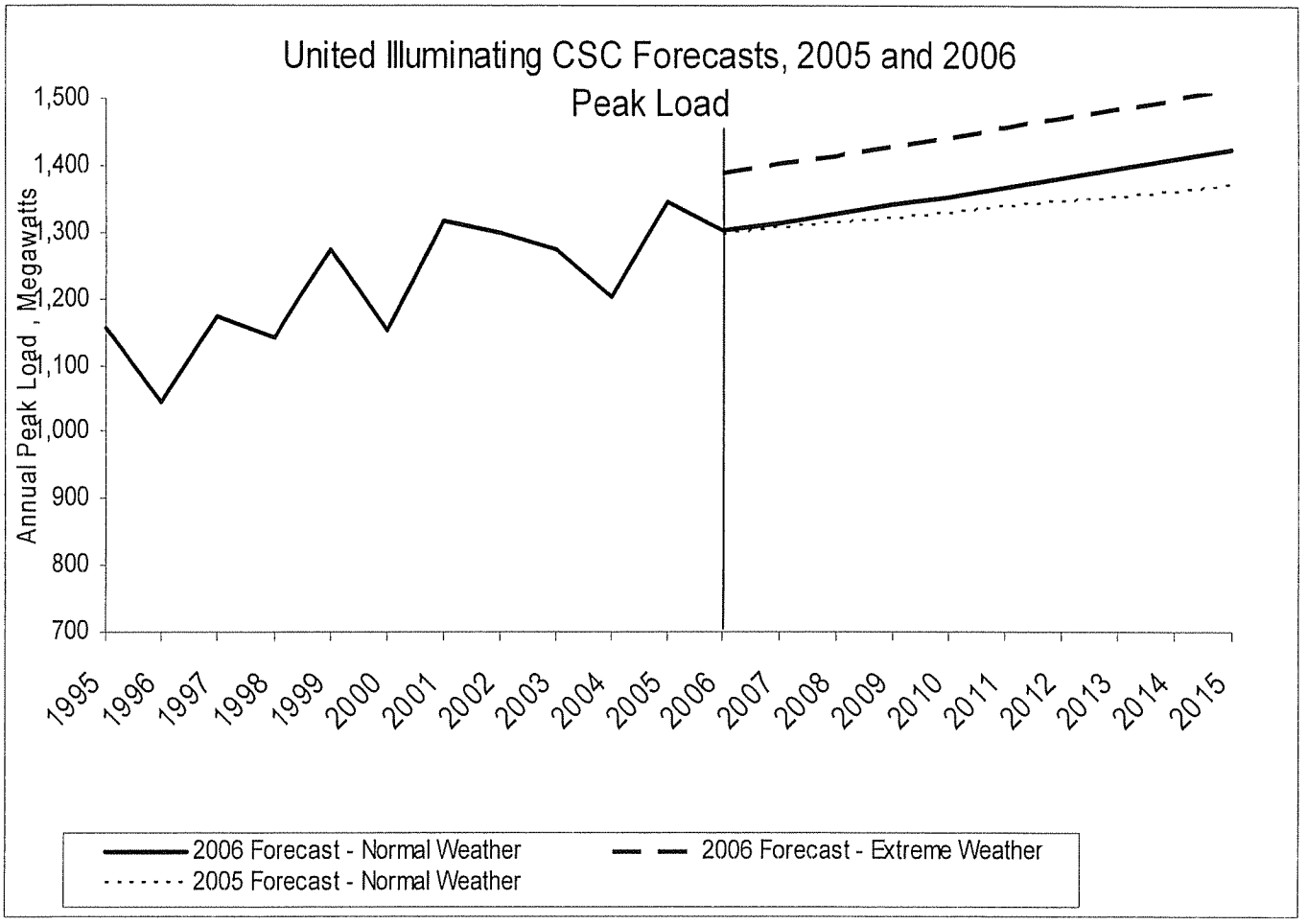
United Illuminating CSC Forecasts, 2005 and 2006
Peak Load
Annual Peak Load , Megawatts
1,500
1,400
1,300
1,200
1,100
1,000
900
800
700
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2006 Forecast - Normal Weather
2006 Forecast - Extreme Weather
2005 Forecast - Normal Weather

Exhibit 5

Report to the Connecticut Siting Council,

March 15, 2006

LIST OF PLANNED TRANSMISSION FACILITIES ON WHICH PROPOSED ROUTE REVIEWS ARE BEING UNDERTAKEN OR FOR WHICH CERTIFICATE APPLICATIONS HAVE ALREADY BEEN FILED

I. **Route Reviews Being Undertaken.**

	Project	kV	Date of Completion
1.	Naugatuck Valley 115 kV Voltage Improvement Project	115	2010 or later

II. **Certification Applications Contemplated.**

	Substation Projects	kV	Date of Completion
1.	Installation of new Trumbull Substation, Trumbull.	115	2007
2.	Metro North Union Avenue Substation – 115 kV transmission portion.	115	2007 or later
3.	Naugatuck Valley 115 kV Voltage Improvement Project	115	2010 or later
4.	Installation of new substation in western Fairfield.	115	2014 or later
5.	Installation of new substation in North Branford.	115	2014 or later

Exhibit 5

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	Transmission Line Project	Length (Miles)	kV	Date of Completion
1.	See Middletown / Norwalk Project, page 3 of 3	5.7	345	2009

III. Facilities which are or may be subjects of Requests for Declaratory Ruling by Council.

	Transmission Line Project	Length (Miles)	kV	Date of Completion
.	None Planned			

Exhibit 5

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IV. **Facilities which are associated with the Middletown / Norwalk Project.**

		Length (Miles)	kV	Date of Completion
	Substation Projects			
1.	Installation of new Singer 345 kV Substation, Bridgeport *(See Note 1)*		345	2009
2.	Pequonnock Substation, Bridgeport – Circuit Breaker and Bus Addition *(See Note 1)*		115	2009
	Transmission Line Projects			
1.	Installation of 345 kV underground lines from Singer 345 kV Substation, Bridgeport to splicing chamber just west of Housatonic River, Stratford *(See Note 1)*	5.7	345	2009

Notes:

1. This project is a part of the Middletown / Norwalk Project, which also includes other 345 kV additions as well as upgrades to existing 115 kV facilities.