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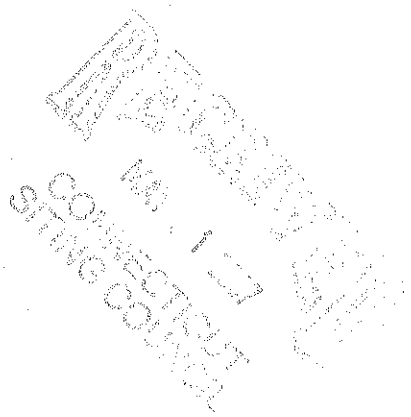

April 30, 2007

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

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Section I. Load Forecast Update

As in previous years, The United Illuminating Company ("UI" or "Company") sales forecast is developed for budgeting and financial planning purposes. This year, the Company has developed a new peak forecasting model. Unlike previous years in which the peak forecast was tied to the sales forecast through the load factor, this year's peak forecasting model incorporates econometric based data along with specific identified customer load growth. The econometric model is expected to be a better predictor of future system peak loads. Over the past ten years, UI has experienced relatively flat weather adjusted sales growth as compared to system peak growth. An accurate peak load forecast is required to properly plan for infrastructure modifications and additions to ensure the required capacity is in place to safely and reliably meet the demands our customers expect.

This year the Company includes its normal peak 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 2006, UI experienced an all-time high summer peak load, but a decrease in annual sales relative to 2005. The 2006 experienced peak exceeded the 2010 "extreme weather" forecast as stated in the 2006 Connecticut Siting Council Filing. Peak and sales data for 2006, illustrate that the system load factor is not a constant. The past several years have contained above average temperatures during the critical summer period (2001, 2002, 2005 and 2006), 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. Another variable that can impact the system peak is the level of economic development activity that actually occurs. Proper planning dictates that a range of possible future peak 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 peak load forecast that assumes average/normal weather and weighted economic development activity along with a load forecast that assumes extreme weather and aggressive economic development activity.

Normal Weather

The forecast shown on Exhibit 1 includes the system energy requirements, sales and system peak based on "average" or "normal" weather along with the forecast system peak of "extreme" weather. The base for the "normal" 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 (C&LM) 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 sales forecast.

In an effort to better plan the transmission and distribution infrastructure, the Company embarked on an effort in late 2006 to develop a econometric based ten-year system

peak load forecast. This peak forecast would be the basis for the UI ten-year transmission plan. The econometric based load forecast was derived by aggregating historic monthly energy sales by customer class. Energy sales by major customer class were first weather normalized using heating and cooling degree days (HDD and CDD). Economic and demographic variables developed from independent sources were incorporated in the Residential and Commercial-Industrial model as appropriate. The variables include publicly available data such as: number of households, household income, gross state product, New England electric and gas prices and Consumer Price Index-based deflators employed where appropriate. The resultant sales forecasts were then increased by a loss factor – which include Company usage and electric energy losses - to develop the system energy requirements.

The system "normal" peak load forecast was then calculated based on the Company's econometric based system energy requirements (i.e. sales plus Company use plus losses, in GWhr) and the weather normalized system load factor based on "50-50" or normal weather over the past ten years. The system "normal" peak load forecast can be found on Exhibit 1.

Extreme Weather Forecast

As the past five 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 peak load forecast. The extreme peak forecast was adjusted for aggressive economic development activity and extreme "90-10" weather. The economic development activity includes expansion of

existing UI customers, redevelopment of existing areas and new 'green field' construction. The extreme peak load forecast is shown on Exhibit 1 in conjunction with the "normal" weather forecast.

The ability to predict when extreme weather will occur or the exact amount of economic activity that will be realized is difficult. Therefore, prudent infrastructure planning requires that the possibility of abnormally hot weather within the forecast time period be recognized, as well as an appropriate assumption of future economic development activity, 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. However, in 2006, UI experienced a high summer peak load coupled with annual sales that were below 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.

Distributed Generation

Although the process for applying for monetary grants for Distributed Generation ("DG") installations in accordance with Public Act 05-01, June Special Session, *An Act Concerning Energy Independence* ("PA 05-01"), is underway, the amount of actual DG to be installed is not known. In conjunction with the unknown reliability levels of the DG units – individually and in aggregate - their contribution to system capacity are not accounted for in this forecast. The Company has noticed that many of the grant applications are based on Emergency Generation ("EG") units and not base load units. The applicants are also stating they will participate in the Independent System Operator for New England ("ISO-NE") load response program. Since the load response is not under the control of the Company, peak load and energy reductions due to this program are not specifically accounted for in the forecasts. The Company will continue to monitor both the number of DG installations and the type (EG or base load) in the future and make potential adjustments to future forecast filings.

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-- 2006 is 1.3 billion kWh or 1.3Million MWh.

The CLM programs at UI continue to deliver value to our customers. However, as UI noted in previous forecast reports, 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. Although there have been discussions at many levels regarding restored funding for the programs, the uncertainty around any restoration of funding has led us to forecast CLM activity based on the current authorized level of funding.

Since the savings assumptions are based on the current level of funding, 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.

There are several new sources of funding that may provide incremental funding to the energy efficiency programs in the future. The passage of Public Act 05-1, has lead to the creation of a Class III renewable resource which may provide some incremental funding in

the future. Additionally, the ISO-NE Forward Capacity Market may also provide some incremental funding for the programs in the future. These efforts are currently being developed and as such the exact level of program activity resulting from these dollars is still uncertain.

PA 05-01 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. The DPUC has also developed a process for providing incentives for a variety of demand side resources. Due to the lead time associated with developing and completing a project, the full impact of these programs can not yet be fully identified.

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), 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 2 and are outlined below.

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

The Connecticut Light & Power Company (CL&P) completed the Bethel to Norwalk 345 kV transmission system expansion project in 2006.

UI and CL&P have developed and are constructing the Middletown to Norwalk Project, which will complete the 345 kV transmission loop in Southwest Connecticut. The Middletown to Norwalk Project, which received a certificate of environmental compatibility and public need from the Connecticut Siting Council ("CSC"), on April 7, 2005, involves expanding the 345 kV transmission system from Middletown to Norwalk and rebuilding and modifying portions of the 115 kV system. This expands the 345 KV 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 project 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 345

kV Switching Station and Norwalk 345 kV Substation, and to UI's Pequonnock 115 kV Substation will be required. The proposed new Singer 345 kV Substation will be located in the vicinity of UI's existing Pequonnock 115 kV Substation (Bridgeport). Singer Substation is now under construction as a sixteen-breaker gas insulated substation (GIS) in a breaker-and-one-half configuration. This transmission arrangement will allow for 345 kV line terminations from the East Devon and Norwalk 345 kV substations.

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

The Middletown to Norwalk Project, which is expected to be completed in 2009, will serve to establish a 345 kV transmission loop into SWCT, thereby improving customer reliability and reducing transmission congestion costs. It 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, this expansion project 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 area has experienced significant load growth. The Trumbull Substation Project, a new 115/13.8 kV substation, is needed to address reliability and capacity issues. In 2007, UI received a certificate of environmental compatibility and public need for this project, which is projected to be in service by June 2008 .

The Shelton area also is experiencing significant load growth. The Shelton 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 2008, with operation projected for 2010.

Load growth has also warranted further study of new 115/13.8 kV substations in western Fairfield, Orange, Hamden and North Branford. Anticipated completion for these substations would be 2012 or later.

- Fairfield – Projected in service for 2012.
- Orange – Projected in service for 2013.
- Hamden – Projected in service for 2014.
- North Branford – Projected in service for 2016.

The Naugatuck Valley area (Ansonia, Derby and Shelton) of UI's service territory is presently supplied by three 115/13.8 kV distribution substations - Ansonia, Indian Well and Trap Falls. These substations are connected to the 115 kV 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 115 kV 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.

In addition to the 115 kV voltage supply issues in the Naugatuck Valley area, thermal capacity issues also exist during contingencies involving the 1545, 1560 and 1570 115 kV lines. To address both the Naugatuck Valley 115 kV voltage supply and thermal issues, UI is recommending a Naugatuck Valley 115 kV Reliability Improvement Project, expected to be in service by 2012.

UI, along with CL&P and ISO-NE, will be developing the initial solutions to address the Naugatuck Valley area 115 kV contingency voltage supply and thermal issues.

By early 2008 , UI, CL&P and ISO-NE are expected to complete the necessary studies to document the needs and provide a solution for the Naugatuck Valley 115 kV Reliability Improvement Project. UI anticipates making a filing with the CSC for this project by late 2008 or early 2009.

To address generation interconnection expansion issues in the greater Bridgeport-Norwalk-Stamford area, UI is recommending a Pequonnock 115 kV Fault Duty Mitigation Project, expected to be in service by 2011. By early 2008, UI, CL&P and ISO-NE are expected to complete the necessary studies to document the needs and provide a solution for the Pequonnock 115 kV Fault Duty Mitigation Project. UI anticipates making a filing with the CSC for this project by late 2008 or early 2009.

To address reliability compliance issues in the greater New Haven area, UI is recommending a Grand Avenue 115 kV Rebuild Project, expected to be in service by 2012. By mid-2008, UI and ISO-NE are expected to complete the necessary studies to document the needs and provide a solution for the Grand Avenue 115 kV Rebuild Project. UI anticipates making a filing with the CSC for this project by 2009.

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). This was in response to the newly enacted Energy Policy Act of 2005, which in part directed FERC to establish an ERO, and develop mandatory electric reliability standards and enforcement procedures for reliability violations. NERC has since been selected as the ERO and is in the process of setting mandatory standards and penalties for non-compliance. UI must now respond to NERC's expanding role and new requirements for maintaining system reliability.

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 2 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.

Section III - EXHIBITS

EXHIBIT 1 – System Energy Requirements, Annual Sales, and Peak Load Table

The United Illuminating Company

System Energy Requirements, Annual Sales, and Peak Load

	Year Actual	Total Sys. Req'ts (GWH)	Annual Change (Pct.)	System Peak (MW)	Annual Change	Load Factor (Pct.)	System Peak (MW)	Annual Change	Load Factor (Pct.)	Actual Sales (GWH)	Annual Change (Pct.)	Weather Adjusted Sales (GWH)	Annual Change (Pct.)
History	1996	5,641	-0.1%	1,045	-9.7%	62%				5,340	0.0%	5,359	1.3%
	1997	5,631	-0.2%	1,173	12.3%	55%				5,376	0.7%	5,421	1.2%
	1998	5,728	1.7%	1,143	-2.6%	57%				5,452	1.4%	5,485	1.2%
	1999	5,943	3.8%	1,273	11.4%	53%				5,652	3.7%	5,625	2.6%
	2000	5,977	0.6%	1,153	-9.4%	59%				5,654	0.0%	5,708	1.5%
	2001	6,010	0.6%	1,318	14.3%	52%				5,724	1.2%	5,689	-0.3%
	2002	6,051	0.7%	1,300	-1.4%	53%				5,781	1.0%	5,684	-0.1%
	2003	6,071	0.3%	1,274	-2.0%	54%				5,772	-0.2%	5,734	0.9%
	2004	6,205	2.2%	1,201	-5.8%	59%				5,952	3.1%	5,952	3.8%
	2005	6,360	2.5%	1,346	12.1%	54%				6,106	2.6%	5,995	0.7%
	2006	6,149	-3.3%	1,456	8.2%	48%				5,919	-3.1%	5,979	-0.3%
		1996 - 2006 growth	9.0%		39.4%						10.8%		11.6%
				Normal Weather Scenario			**Extreme Weather Scenario**						
				System Peak (MW)	Annual Change	Load Factor (Pct.)	System Peak (MW)	Annual Change	Load Factor (Pct.)				
Forecast	2007	6,344	3.2%	1,384	-4.9%	52%	1,534	5.4%	47%			6,036	1.0%
	2008	6,424	1.3%	1,421	2.7%	52%	1,594	3.9%	46%			6,112	1.3%
	2009	6,471	0.7%	1,443	1.5%	51%	1,633	2.5%	45%			6,157	0.7%
	2010	6,537	1.0%	1,463	1.4%	51%	1,671	2.3%	45%			6,219	1.0%
	2011	6,601	1.0%	1,475	0.8%	51%	1,691	1.2%	45%			6,281	1.0%
	2012	6,683	1.2%	1,480	0.3%	52%	1,697	0.4%	45%			6,359	1.2%
	2013	6,732	0.7%	1,485	0.3%	52%	1,704	0.4%	45%			6,406	0.7%
	2014	6,801	1.0%	1,490	0.3%	52%	1,710	0.4%	45%			6,471	1.0%
	2015	6,869	1.0%	1,495	0.3%	52%	1,717	0.4%	46%			6,536	1.0%
	2016	6,954	1.2%	1,501	0.4%	53%	1,724	0.4%	46%			6,617	1.2%
		2006 - 2016 growth	13.1%		3.1%								10.7%

1. System Requirements are sales plus losses and company use.
2. Load Factor = System Requirements (MWHr) / (8760 Hours X System Peak (MW)).

Normal Weather Scenario based on a 12-hour average Temperature-Humidity Index (THI) of 78.7. Extreme Weather Scenario (90/10) based on a 12-hour average THI of 80.5.

EXHIBIT 2 - Transmission System Planned Modifications

Report to the Connecticut Siting Council

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 Reliability Improvement Project	115	2012

II. **Certification Applications Contemplated.**

	Substation Projects	kV	Date of Completion
1.	Installation of new substation in Shelton	115	2010
2.	Pequonnock 115 kV Duty Mitigation Project	115	2011
3.	Installation of new substation in western Fairfield	115	2012
4.	Naugatuck Valley 115 kV Reliability Improvement Project	115	2012
5.	Grand Avenue 115 kV Rebuild Project	115	2012
6.	Installation of new substation in Orange	115	2013
7.	Installation of new substation in Hamden	115	2014
8.	Installation of new substation in North Branford	115	2016

EXHIBIT 2 - Transmission System Planned Modifications

Report to the Connecticut Siting Council

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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 2 - Transmission System Planned Modifications

Report to the Connecticut Siting Council

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.