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January 15, 2010

VIA HAND DELIVERY

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

Re: Docket No. 370A: CL&P Application for the Greater Springfield Reliability Project and the Manchester to Meekville Junction Circuit Separation Project; and

Docket No. 370B: NRG Energy, Inc. Application Pursuant to C.G.S. § 16-50/(a)(3) for Consideration of a 530 MW Combined Cycle Generating Plant in Meriden, Connecticut
Post-Hearing Brief and Proposed Findings of Fact

Dear Mr. Phelps:

I write on behalf of NRG Energy, Inc. ("NRG") to provide you with the requisite number of copies of NRG's Post-Hearing Brief and, as you will see below, a limited number of Proposed Findings of Fact.

As you may recall, the Connecticut Siting Council (the "Council") issued a Protective Order allowing parties to review certain proprietary information produced by London Economics International LLC ("LEI") relating to the economic costs and benefits of the Greater Springfield Reliability Project and NRG's Meriden Project (the "Protected Material"), subject to the execution of a Non-Disclosure Agreement ("NDA"). NRG executed NDAs, reviewed the Protected Material and briefly references such material in its Post-Hearing Brief.

Under the Protective Order, Paragraph 8 states, in part, that if the Protected Materials are used in any manner in any document, then the confidentiality of the Protected Material shall be preserved by prominently labeling the document "Confidential-Proprietary Information" and limiting the recipients of such documents to members and staff of the Council and any parties that have executed a NDA. We are

Murtha Cullina LLP | Attorneys at Law

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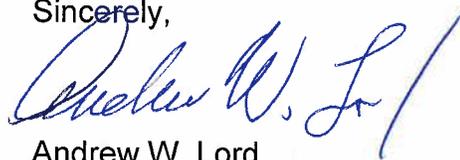
not aware of any parties besides NRG that have executed an NDA. Therefore, based on the foregoing and after consulting with Attorney Bachman and Attorney Fitzgerald, NRG will provide confidential unredacted versions of its Post-Hearing Brief to each Council member and staff and to The Connecticut Light and Power Company ("CL&P") representatives on the service list. All other parties will receive a version of the Post-Hearing Brief in which any reference to the LEI information is redacted.

In addition, NRG Energy, Inc. ("NRG") has reviewed the Proposed Findings of Fact filed by CL&P on January 4, 2010. NRG notes that many of CL&P's Proposed Findings do not represent facts at all, but rather are determinations that must be made by the Council or mere opinions of CL&P. NRG trusts that the Council will eliminate those entries and ensure that any Findings of Facts that accompany the Decision and Order in these proceedings are true facts grounded in the record evidence.

NRG proposes that the following be included in the Findings of Fact adopted by the Council:

- LEI has determined that the GSRP would yield net economic costs to Connecticut ratepayers of \$82 million during the ten-year period ending in Year 2023, as measured in 2014 dollars. *CL&P Exhibits 15 and 24, Figure 4.*
- LEI has determined that NRG's Meriden Project would yield net economic benefits to Connecticut ratepayers of \$13 million during the ten-year period ending in Year 2023. *CL&P Exhibits 15 and 24, Figure 4.*
- CL&P did not file with the Council any studies that would determine whether or not local generation in Connecticut combined with a smaller transmission project in the Greater Springfield area would adequately address the reliability need stated in CL&P's Application.

Sincerely,



Andrew W. Lord

Enclosures

cc: CT Siting Council Commission Members
Service List

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	<input checked="" type="checkbox"/> U.S. Mail	The Connecticut Light & Power Co. P.O. Box 270 Hartford, CT 06141-0270	Robert E. Carberry, Manager NEEWS Projects Siting and Permitting Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-6774 carbereg@nu.com
	<input checked="" type="checkbox"/> E-mail		Duncan MacKay, Esq. Legal Department Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-3495 mackadr@nu.com
	<input checked="" type="checkbox"/> U.S. Mail		Jeffrey Towle, Project Manager Transmission, NEEWS Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 665-3962 towlejm@nu.com
	<input checked="" type="checkbox"/> U.S. Mail		Anthony M. Fitzgerald, Esq. Brian T. Henebry, Esq. Carmody & Torrance LLP P.O. Box 1950 New Haven, CT 06509 (203) 777-5501 afitzgerald@carmodylaw.com bhenebry@carmodylaw.com
Intervenor (granted on February 19, 2009) Competing Applicant as of 03/19/2009	<input checked="" type="checkbox"/> U.S. Mail	NRG Energy, Inc.	NRG Energy, Inc. c/o Julie L. Friedberg, Senior Counsel – NE 211 Carnegie Center Princeton, NJ 08540
	<input checked="" type="checkbox"/> U.S. Mail		Andrew W. Lord, Esq. Murtha Cullina LLP CityPlace I, 185 Asylum Street Hartford, CT 06103-3469 (860) 240-6180 (860) 240-5723 – fax alord@murthalaw.com

**LIST OF PARTIES AND INTERVENORS
SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
<p align="center">Party (granted on April 7, 2009)</p>	<input checked="" type="checkbox"/> U.S. Mail	<p align="center">City of Meriden</p>	<p>Deborah L. Moore, City Attorney Meriden City Hall Department of Law 142 East Main St. Meriden, CT 06450 (203) 630-4045 (203) 630-7907 – fax dmoore@ci.meriden.ct.us</p>
	<input checked="" type="checkbox"/> U.S. Mail		<p>Lawrence J. Kendzior, City Manager Meriden City Hall 142 East Main St. Meriden, CT 06450 lkendzior@ci.meriden.ct.us</p>
<p align="center">Party (granted on April 7, 2009)</p>	<input checked="" type="checkbox"/> E-Mail	<p align="center">The United Illuminating Company (UI)</p>	<p>John J. Prete The United Illuminating Company 157 Church Street, P.O. Box 1564 New Haven, CT 06506-1904 (203) 499-3701 (203) 499-3728 neews-ui@uinet.com</p>
	<input checked="" type="checkbox"/> E-Mail		<p>Linda L. Randell Senior Vice President, General Counsel and Corporate Secretary UIL Holdings Corporation 157 Church St., P.O. Box 1564 New Haven, CT 06506-0901 (203) 499-2575 (203) 499-3664 Linda.randell@uinet.com</p>
	<input checked="" type="checkbox"/> E-Mail		<p>Bruce L. McDermott Wiggin and Dana LLP One Century Tower New Haven, CT 06508-1832 (203) 498-4340 (203) 782-2889 bmcdermott@wiggin.com</p>

Date: November 13, 2009

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**LIST OF PARTIES AND INTERVENORS
SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Party (granted on June 4, 2009)	<input checked="" type="checkbox"/> E- Mail	Citizens Against Overhead Power Line Construction continued...	Matthew C. McGrath Attorney at Law 4 Richmond Road West Hartford, CT 06117 (860) 878-0158 (860) 570-1203 – fax McGrath@McGrathLaw.Pro
Intervenor (granted on July 21, 2009)	<input checked="" type="checkbox"/> E- Mail <input checked="" type="checkbox"/> E- Mail	Massachusetts Municipal Wholesale Electric Company (MMWEC)	Nicholas J. Scobbo, Jr. Bruce F. Anderson Ferriter Scobbo & Rodophele, PC 125 High Street Boston, MA 02110 (617) 737-1800 ext. 234 (617) 737-1803 fax nscobbo@ferriterscobbo.com Edward Kaczenski Manager, Generation Services Massachusetts Municipal Wholesale Electric Company 327 Moody St., P.O. Box 426 Ludlow, MA 01056 ekaczenski@mmwec.org banderson@ferriterscobbo.com
	<input checked="" type="checkbox"/> E-Mail	Massachusetts Energy Facilities Siting Board (MA EFSB)	Stephen August Presiding Officer Energy Facilities Siting Board One South Station Boston, MA 02110 (617) 305-3525 (617) 443-1116 - fax Stephen.August@state.ma.us

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

THE CONNECTICUT LIGHT & POWER	:	DOCKET NOs. 370A/B
COMPANY APPLICATION FOR	:	
CERTIFICATES OF ENVIRONMENTAL	:	
COMPATIBILITY AND PUBLIC NEED	:	
FOR THE CONNECTICUT PORTION OF	:	
THE GREATER SPRINGFIELD	:	
RELIABILITY PROJECT AND FOR	:	
THE MANCHESTER TO MEEKVILLE	:	
JUNCTION CIRCUIT SEPARATION	:	
PROJECT	:	January 15, 2009

NRG ENERGY, INC. POST-HEARING BRIEF

I. INTRODUCTION

The Connecticut Light and Power Company (“CL&P” or the “Company”) has requested that the Connecticut Siting Council (“CSC” or “Council”) grant Certificates of Environmental Compatibility and Public Need (the “Certificates”) for the Connecticut portion of the Greater Springfield Reliability Project (“GSRP”) and the Manchester to Meekville Project (“MMP”) as described in the Company’s Application dated October 20, 2008 (the “CL&P Application”). In response to a Request for Proposals issued by the Connecticut Energy Advisory Board (“CEAB”) on November 4, 2008 (the “RFP”), NRG Energy, Inc. (“NRG”) proposed its 530-megawatt (“MW”) combined cycle gas turbine (“CCGT”) plant in Meriden, Connecticut (the “Meriden Project”) as an alternative to the increased import capability that would be provided by the GSRP and MMP. On March 19, 2009, NRG filed an Application Pursuant to Connecticut General Statutes § 16-50/(a)(3) (the “NRG Application”)

to enable the Council to simultaneously consider the CL&P Application and the NRG Application in this consolidated proceeding, which is the first of its kind.¹

Section 16-50p(a)(3)(F) of the Connecticut General Statutes prohibits the Council from approving an application that is heard under a consolidated hearing process with applications from one or more RFP projects unless the Council determines that the “facility proposed in the subject application represents the most appropriate alternative among such applications” based on the statutory criteria of public need, consumer costs and environmental impacts. The Council’s findings and determinations must accord with the overarching purpose of the Public Utility Environmental Standards Act (“PUESA”), which is “[t]o provide for the balancing of the need for adequate and reliable public utility services at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state”²

According to CL&P, the GSRP was designed to address the thermal overloads and voltage problems in Greater Springfield that cause the electric grid to violate federal reliability standards in that area.³ CL&P and ISO New England Inc. (“ISO-NE”) state that the reliability violations are exacerbated when power must travel through Springfield to reach Connecticut.⁴ The Meriden Project would alleviate these problems by providing in-state generation that would reduce the need to import power into Connecticut.⁵ In addition, the Meriden Project would provide substantial economic benefits to Connecticut’s electricity consumers, while the

¹ This is the first time that a CEAB-sponsored RFP has produced proposals that could meet all or part of the need set forth in a certificate application, requiring the Council to evaluate the competing applications in a consolidated proceeding pursuant to C.G.S. § 16-50m(a).

² C.G.S. § 16-50g.

³ See discussion *infra* Part IV.A.

⁴ *Id.*

⁵ See discussion *infra* Part IV.B.

GSRP would yield net costs.⁶ Finally, the Meriden Project would have considerably less adverse environmental impacts than the GSRP.

Despite these positive features of the Meriden Project, CL&P and ISO-NE have not studied whether the Meriden Project together with more limited transmission upgrades in the Greater Springfield area would adequately address the public need at the lowest reasonable cost to consumers and in a manner that best preserves Connecticut's environment and ecology.⁷ CL&P and ISO-NE posit that no such study is needed because the GSRP and MMP represent the best solutions to the stated public need, and urge the Council simply to defer to their collective judgment. The law requires and the citizens of Connecticut deserve far more than that. The Council should suspend this proceeding pending further study of alternatives by CL&P and ISO-NE or deny the CL&P Application if such studies are not produced before the March 19, 2010 statutory deadline for this proceeding.

II. PROCEDURAL BACKGROUND

The CL&P Application was filed with the Council on October 29, 2008 and states that the GSRP is needed to eliminate violations of reliability standards and equipment overloads on the existing transmission system over which power is imported into Connecticut.⁸ The CL&P Application explains that these improvements would increase Connecticut's import capability and provide the state's electricity consumers with better access to lower-cost, low-emission and renewable remote power resources.⁹ CL&P asserts that the MMP improvements would

⁶ See discussion *infra* Part V.A-D.

⁷ See discussion *infra* Part IV.B.

⁸ CL&P Application, p. ES-2.

⁹ *Id.*

accommodate the higher power flows on the north-central Connecticut transmission system that would result from the increased imports made possible by the GSRP.¹⁰

On November 4, 2008, as required by C.G.S. § 16a-7c(a), the CEAB issued the RFP for alternative solutions to the need that purportedly would be addressed by the GSRP and MMP.¹¹ The RFP stated that the CEAB was “seeking energy alternatives that could address *part or all* of the claimed needs identified in the CL&P filing,” including proposals that would “add local supply sources or reduce loads within the targeted geographical area of the CL&P or the Western Massachusetts Electric Company . . . service territories”¹²

NRG responded to the RFP on December 31, 2008 by proposing the Meriden Project as an alternative to the GSRP and MMP.¹³ NRG’s proposal did not claim that the Meriden Project would resolve the local reliability issues in the Greater Springfield area that are cited in the CL&P Application. Rather, NRG advanced its Meriden Plant on the basis that it is a local supply alternative to the increased import capability that would result from the GSRP as part of the broader New England East-West Solution (“NEEWS”). GE Financial Services (“GE”) and Ice Energy, Inc. (“Ice”) also submitted responsive proposals.

On February 17, 2009, the CEAB issued its Evaluation Report on the GSRP and MMP and on the three non-transmission projects proposed as alternatives (the “CEAB Report”).¹⁴

¹⁰ *Id.* at ES-1.

¹¹ CEAB Request for Proposals Seeking Alternatives to The Connecticut Light and Power Company’s Proposed Greater Springfield Reliability Project and Manchester to Meekville Project (Nov. 4, 2008) (hereinafter “RFP”).

¹² RFP, pp. 2-3 (Emphasis added).

¹³ Proposal Submitted by NRG to the CEAB (Dec. 31, 2008).

¹⁴ CEAB Evaluation Report to the Council, An Analysis of The Connecticut Light and Power Company’s Proposed Greater Springfield Reliability Project and Manchester to Meekville Project and the Non-Transmission Projects Proposed as Alternatives (Feb. 17, 2009) (hereinafter “CEAB Report”).

The CEAB Report concluded that generation additions in southwest Connecticut, like the NRG and GE projects, could mitigate the north to south power flows that cause reliability problems in the Springfield area, while the Ice project would reduce peak electric loads.¹⁵

Ultimately, the CEAB concluded that all three projects could provide net economic benefits to Connecticut ratepayers.¹⁶ The CEAB therefore recommended that the Council evaluate these projects further, but advised that “more detailed work will need to be done to assess the ability of the three RFP proposals to mitigate the reliability problems and to assess the cost effectiveness of the proposals.”¹⁷

Following the issuance of the CEAB Report, the Council informed NRG, GE and Ice that they would be required to file certificate applications for their respective projects even though NRG and GE previously had obtained certificates for their proposed generating plants.¹⁸ GE and Ice thereafter notified the Council that they would not participate in the Docket No. 370 proceeding, leaving NRG as the sole competing applicant. On March 19, 2009, NRG filed with the Council the NRG Application, which continues to propose the Meriden Plant as an alternative to the enhanced import capability that would be provided by the GSRP.¹⁹

¹⁵ CEAB Report, p. 3.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ CSC Letter to Parties and Intervenors in Docket No. 370 (Feb. 27, 2009), p. 1.

¹⁹ Application of NRG Energy, Inc. Pursuant to Connecticut General Statutes § 16-50l(a)(3) (March 19, 2009) (hereinafter “NRG Application”), pp. 9-12.

III. STANDARD OF REVIEW

Section 16-50g of the Connecticut General Statutes states that a key purpose of PUESA is “[t]o provide for the balancing of the need for adequate and reliable public utility services at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state” Consistent with that overarching purpose, Section 16-50p(a)(3) of the Connecticut General Statutes prohibits the CSC from granting a certificate, either as proposed or modified, unless the Council finds and determines:

- A public need for the facility and the basis of the need;
- The nature of the probable environmental impacts of the facility;
- Why the adverse environmental impacts are not a sufficient reason to deny the application;
- In the case of an electric transmission line, that the facility conforms to a long-range plan for expansion of the power grid and will serve the interests of electric system economy and reliability and that the overhead portions of the facility are cost-effective and the most appropriate alternative based on a life-cycle cost analysis; and
- In the case of an application that was heard under a consolidated hearing process following a CEAB-sponsored RFP, that the subject application represents the most appropriate alternative based on the findings and determinations made in accordance with the above.

In summary, there are three main statutory criteria that must form the basis of the Council’s comparative determination in this proceeding: (1) public need, (2) cost effectiveness and (3) environmental compatibility.

IV. PUBLIC NEED

A. The Need Stated in the CL&P Application.

CL&P states that “improvements are needed to provide safe, reliable and economic transmission service throughout the Greater Springfield, Massachusetts geographic area and in

north-central Connecticut, and to assure that these portions of the electric grid will comply with federal and regional reliability standards.”²⁰ This need is discussed further in the ISO-NE Southern New England Transmission Reliability Report 1- Needs Analysis, dated January 2008 (the “Needs Analysis”), which is included in Volume 5 of the CL&P Application. The Needs Analysis describes studies conducted jointly by ISO-NE, Northeast Utilities (“NU”) and National Grid (collectively, the “SNETR Working Group”) of the transmission systems in western Massachusetts, Connecticut and Rhode Island.²¹ From these studies, the SNETR Working Group concluded in part that:

- At 2009 peak loads for Connecticut there is a need for improvements to the area’s import capability, generating resources, or a combination of both,²²
- There are numerous local area reliability concerns in the Springfield area; and²³
- The Springfield 115 kV system is one of the paths for transporting power into Connecticut. These Connecticut imports exacerbate the thermal overloads and voltage violations in Springfield.²⁴

Mr. Kowalski expanded on the relationship between the reliability problems in the Springfield area and Connecticut’s import capability at the October 27 hearing in this proceeding. He stated that Connecticut can import 2,500 MW quite reliably when generation

²⁰ CL&P Application, p. ES-1.

²¹ ISO-NE Southern New England Transmission Reliability Report 1- Needs Analysis (Jan. 2008), CL&P Application, Volume 5, Exhibit 1 (hereinafter “Needs Analysis”).

²² Needs Analysis, p. 14.

²³ *Id.* at 23.

²⁴ *Id.*

in the Springfield area is on, but when it is off, the 115 kV Springfield line becomes heavily loaded, requiring a curtailment of power exports into Connecticut.²⁵

B. New Generation in Connecticut Could Address Part of the Need.

Generation constructed in Connecticut could reduce the need to import power from Massachusetts into Connecticut, thereby lessening the reliability criteria violations in the Greater Springfield area. However, CL&P and ISO-NE have not studied whether new generation in Connecticut together with a more targeted transmission solution in the Springfield area could address the reliability need more cost effectively with less environmental impacts than could the GSRP and the MMP. This is a fundamental evidentiary gap that must be closed before the Certificates requested by CL&P can be granted. The CEAB made similar observations in its critique of the studies conducted by ICF International (“ICF”), a consulting firm retained by CL&P to evaluate non-transmission alternatives to the GSRP.

The CEAB wrote in its response to Interrogatory OCC-68:

The original ICF study examined the GSRP as a whole. It did not consider or evaluate whether non-transmission alternatives could replace some of the components of the GSRP. For example, adding additional amounts of generation in Connecticut appeared to effectively mitigate the criteria violations in Connecticut, but may not have eliminated the reliability criteria violations on the lines between Breckwood and the East and West Springfield buses. It is certainly possible that upgrading only those two older, low capacity lines, combined with additional generation in Connecticut, might effectively eliminate the other components of the GSRP. Because this scenario has not been studied, it is not possible to make an informed decision about the CL&P application. The CEAB believes that having such analyses would create a complete record upon which to base a decision.²⁶

Although this CEAB response was filed on May 29, 2009, no such analyses of alternative solutions have been performed by CL&P or ISO-NE during the ensuing seven months.

²⁵ Tr. 10/27/09, pp. 129-130.

²⁶ CEAB Response to Interrogatory OCC-68 (May 29, 2009), p.1 (Emphasis in original).

The Council heard testimony from the ISO-NE witnesses on the issue of public need at the hearings conducted on October 27 and 28. Mr. Frank Mezzanotte testified that ISO-NE's Planning Procedure 5-3 ("PP 5-3") requires a reliability solution to be modeled at or near the established transfer capability limit, which is 2,500 MW for Connecticut prior to any contingencies.²⁷ PP 5-3 says no such thing. The purpose of PP 5-3 is to outline the measures and assumptions to be used in evaluating whether a new generation or transmission facility proposed by an applicant would have a "significant adverse effect" on the electric power system.²⁸ In making that determination, PP 5-3 requires that transfer conditions be modeled "at or near their established limits (in the direction to produce ('worst cases' results)"²⁹ PP 5-3 further states: "The rationale for maintaining these transfer levels before and after the addition of the proposed facility should be discussed."³⁰ In short, the aim of PP 5-3 is to ensure that the addition of a proposed facility does not make existing conditions worse. As the ISO-NE witnesses have testified in this proceeding, the existing system cannot support a Connecticut import limit of 2,500 MW today under all system conditions and dispatch scenarios.

The Council also heard testimony from the CL&P witnesses regarding ISO-NE Planning Procedure 3 ("PP 3"), which, unlike PP 5-3, actually does inform the planning for

²⁷ Tr. 10/27/09, pp. 228-29. Connecticut's import limit is presently 2,500 MW under normal conditions and 1,700 MW under emergency conditions, reflecting the aggregate capability of transmission connections into Connecticut. *See* Tr. 7/21/09, p. 128 (where Mr. Scarfone confirms that a 1,700 MW import limit is used in the event of a line failure). Under typical conditions, the 345 kV line from Ludlow to Manchester supplies approximately 30% of that total, with the remainder coming principally from Rhode Island via Lake Road and New York via Pleasant Valley. *See* Needs Analysis, p. 12.

²⁸ ISO New England Planning Procedure 5-3, Guidelines for Conducting and Evaluating Proposed Plan Application Analyses (Feb. 1, 2005), § 1.2, p.1 (CL&P Ex. 31).

²⁹ *Id.* at 3.3.1.1(g), p. 8.

³⁰ *Id.*

transmission projects that are required to meet reliability standards for the New England area bulk power supply system.³¹ With regard to transmission transfer capability, PP 3 merely states:

The New England bulk power system shall be designed with adequate inter-Area and intra-Area transmission transfer capability to minimize system reserve requirements, facilitate transfers, provide emergency backup of supply resources, permit economic interchange of power, and to assure that the conditions specified in Sections 3.1 and 3.2 can be sustained without adversely affecting the New England system or other Areas. Anticipated transfers of power from one area to another, as well as within areas, should be considered in the design of inter-Area and intra-Area transmission facilities. Therefore, design studies will assume applicable transfers and the most severe load and resource conditions that can be reasonably expected.³²

Thus, PP 3 also does not specify a particular interface capability target, nor does it require that transmission facilities be constructed to maintain the maximum interface limit at all times and under all conditions.

The ISO-NE witnesses do not dispute the premise that in-state generation could reduce Connecticut's reliance on imports from Massachusetts, but Mr. Mezzanotte opined that Connecticut would derive no gain from such generation if the state's import capability limit degrades as a result.³³ He reasoned that, since the ultimate objective is to supply load, Connecticut would be no better off with 500 MW of generation and 2,000 MW of transfer capability than it would be with no generation and 2,500 MW of transfer capability. "The resource is no gain," he says.³⁴ This reasoning is perplexing because adding 500 MW of local generation offsets the decrease in import capability when the Springfield area generation is out

³¹ ISO New England Planning Procedure No. 3, Reliability Standards for the New England Area Bulk Power Supply System (June 11, 2009), § 1, p. 1 (CL&P Ex. 30).

³² *Id.* at § 4, p. 6.

³³ Tr. 10/27/09, pp. 219-20.

³⁴ *Id.* at p. 220, l. 4.

of service, and when it is in service, the combination of the 500 MW of local generation combined with the 2,500 MW of import capability results in substantial additional supply for Connecticut compared to the existing system.

Mr. Mezzanotte's testimony exemplifies the difference between the role of federal reliability planners and state policymakers. ISO-NE understandably prefers a solution that allows maximum flexibility to wheel power around the electric grid, while state policymakers also must concern themselves with the cost and environmental impacts that proposed reliability solutions would visit upon the citizens of their state. Given this latter obligation, the Council should require CL&P and ISO-NE to demonstrate whether the Meriden Project and a smaller transmission project confined to the Springfield area could adequately address the reliability needs in a more cost-effective fashion. Based on the substantial ratepayer benefits of the Meriden Project and the lesser environmental impacts that likely would come from a smaller transmission project, the Council should not grant the requested Certificates for the GSRP and MMP in the absence of additional solution studies.

V. ECONOMIC COSTS AND BENEFITS

A. Ratepayer Costs and Benefits Are Central to this Proceeding.

Earlier this fall, the Council invited comments regarding the relevance of ratepayer costs and benefits of the GSRP and the Meriden Project to the Council's findings and determinations in this proceeding. In a memorandum to the Council dated October 8, 2009, Attorney Fitzgerald responded with a thoughtful argument that states in part as follows:

“[I]ssues regarding long-term costs to ratepayers and system economy – and the need to balance cost with other factors – are at the heart of a certification proceeding, and therefore are clearly relevant. As set forth in the “Legislative Findings and Purpose” of the [PUESA], one of the key purposes of PUESA is to “provide for the balancing of the need for adequate and reliable public utility services *at the lowest reasonable cost to consumers* with the need to protect the

environment and ecology of the state” Conn. Gen. Stat. § 16-50g.
(Emphasis in original)

NRG concurs and urges the Council to place significant weight on the relative ratepayer costs and benefits of the GSRP and the Meriden Project as entered in the record and summarized herein.

B. LEI Reports That the Meriden Project Will Provide Net Benefits to Consumers While the GSRP Will Provide Net Costs.

CL&P retained London Economics International LLC (“LEI”) to compute the economic costs and benefits of the GSRP and the Meriden Project to Connecticut ratepayers starting in Year 2014 and ending in Year 2023 (the “Study Period”). Ms. Julia Frayer of LEI presented the results of this analysis in testimony dated July 7, 2009, as corrected by Errata dated July 23, 2009 (as corrected, the “LEI Testimony”). The LEI Testimony reports that the Meriden Project would yield net economic *benefits* of \$13 million and the GSRP would yield net economic *costs* of \$82 million to Connecticut ratepayers.³⁵ These figures represent the present value of benefits and costs of the two projects over the Study Period and are summarized in Figure 4 of the LEI Testimony. NRG submits that the LEI Testimony understates both the net benefits of the Meriden Project and the net costs of the GSRP due to certain flawed assumptions. Even if the Council were to accept LEI’s analysis without adjustment, it is clear that there is at least a \$95 million gap between the net benefits of the Meriden Project and the net costs of the GSRP.

³⁵ Testimony of Julia Frayer on Behalf of The Connecticut Light and Power Company (July 7, 2009) (hereinafter “LEI Testimony”), Figure 4, p. 18.

C. The LEI Testimony Understates the Net Benefits of the Meriden Project.

1. The Costs Are Overstated.

LEI assumed that the Meriden Project would be developed under a long-term contract styled as a Contract for Differences (“CfD”).³⁶ Consistent with that contract structure, LEI first established the annual gross contract payment for the Meriden Project based on the capital costs included in the NRG Application, a ten-year contract term and estimated fixed operations and maintenance (“O&M”) costs.³⁷ LEI then computed the projected energy profits and the capacity revenues that the Meriden Project would earn in the Energy Market and the Forward Capacity Market (“FCM”), respectively, and deducted these two revenue streams from the gross contract payment to yield a net contract cost for each year of the Study Period.³⁸ LEI’s computation contains two flawed assumptions that result in an overstatement of the Meriden Project’s costs: (1) a ten-year recovery period for the equity of the Meriden Project, and (2) a 16% after-tax required return on equity (“ROE”).

Debt Recovery Period. The LEI Testimony states that the debt financing term and the equity recovery term for the Meriden Project are both assumed to be 10 years.³⁹ At the August 13 hearing, however, Ms. Frayer testified that LEI actually used a 10-year equity recovery period and a 15-year debt term in its economic model.⁴⁰ Even if that were the case, LEI’s assumption that NRG’s shareholders would be allowed to recover their equity investment before the bondholders are repaid is entirely at odds with project structure norms and the

³⁶ LEI Testimony, p. 16.

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.* at 56-57.

⁴⁰ Tr. 8/13/09, pp. 35-36.

realities of the financial marketplace. Further, LEI assumed a 20-year term for equity recovery and debt financing for a comparable generic CCGT plant that was assumed in LEI's model to enter the market in 2019.⁴¹ LEI should have used the same 20-year term for the equity recovery and debt financing periods of the Meriden Project or, at the very least, the 15-year minimum contract term that NRG stated was needed to develop the Meriden Project.⁴²

Ms. Frayer admits that the costs of the Meriden Project would have been lower during the Study Period if a longer equity recovery and debt financing term had been used.⁴³

ROE. LEI assumes a 16% after-tax ROE for the Meriden Project, compared to a 12.89% after-tax ROE approved by the Federal Energy Regulatory Commission ("FERC") for the GSRP and other NEEWS projects.⁴⁴ The LEI Testimony explains that a higher ROE was used for the Meriden Project "in order to preserve a reasonable differential in weighted average cost of capital of a regulated transmission versus contracted (but unregulated) generation project."⁴⁵ At the August 13 hearing, Ms. Frayer clarified that the differential aims to capture the higher risk inherent in an unregulated generation project as compared to a regulated transmission project.⁴⁶

During cross-examination by NRG, Ms. Frayer acknowledged that NU applied for, and FERC granted, an ROE adder and other special incentives for NEEWS (including the GSRP)

⁴¹ LEI Testimony, p. 105 (Figure 82).

⁴² NRG Proposal to CEAB (Dec. 31, 2008) (Optional Template).

⁴³ Tr. 8/13/09, p. 37.

⁴⁴ LEI Testimony, p. 56; Tr. 8/13/09, p. 24.

⁴⁵ LEI Testimony, p. 56, n. 37.

⁴⁶ Tr. 8/13/09, p. 28.

in recognition of the special financial and multi-state siting risks of these projects.⁴⁷ The Meriden Project, by contrast, has already received its permits, including a certificate from the Council, and has been partially constructed. Thus, the notion that the risk profile of the Meriden Project would be higher than the risk profile of the GSRP is baseless. NRG, moreover, is seeking a contract with CL&P or The United Illuminating Company (“UI”) for the Meriden Project. The Department of Public Utility Control (“DPUC”) recently ordered CL&P to enter into peaking generation contracts with GenConn Energy LLC, a joint venture of NRG and UI, with an ROE that is consistent with the allowed ROEs of CL&P and UI.⁴⁸ No other generation contract approved by the DPUC in recent years has included an after-tax ROE any where near 16% regardless of the contract form.

2. The Benefits Are Likely Understated.

LEI computes the benefits of the Meriden Project by measuring the extent to which it would lower prices in the regional Energy Market, the FCM and the Locational Forward Reserve Market (“LFRM”) administered by ISO-NE.⁴⁹ In order to isolate these market benefits, LEI developed a base case scenario that predicts future prices in the three markets without the Meriden Plant under normalized conditions (the “Base Case”).⁵⁰ LEI then overlaid the Meriden Project on the Base Case to determine how such prices would change once the Meriden Project enters the market. The price changes so determined were then used by LEI to compute the benefits of the Meriden Project.

⁴⁷ *Id.* at 25-26.

⁴⁸ *Id.* at 26-27.

⁴⁹ LEI Testimony, pp. 57-59.

⁵⁰ *Id.*

Figure 40 of the LEI Testimony shows that the Meriden Project would yield substantial energy benefits to Connecticut ratepayers because it would displace less-efficient, higher-cost units operating in the Energy Market.⁵¹ LEI assumes that these substantial energy benefits will continue until 2019, when they fall sharply due to the impact of the Meriden Plant on the hypothesized investment decisions of CCGT developers as explained below.⁵² With regard to FCM benefits, LEI assumes that the entry of the Meriden Project will actually cause FCM prices to rise in the early years, creating what LEI terms “disbenefits.”⁵³ NRG disagrees with these modeling results.

Generic CCGT Plant Entry in 2019. LEI’s Base Case assumes generic CCGT capacity will enter the market to replace retired capacity, but only if it is economically feasible (*i.e.*, the market revenues are sufficient to cover the plant’s fixed costs).⁵⁴ Applying this rule, the Base Case assumes that a generic 450-MW CCGT plant will enter the market in 2019 and begin to yield energy savings in that year.⁵⁵ When the Meriden Project is overlaid on the Base Case, LEI assumes that development of the generic CCGT plant will be delayed because it could not earn sufficient revenues in the Energy Market due to the Meriden Project’s downward impact on energy prices.⁵⁶ Thus, LEI reasons that the Meriden Project would forestall energy benefits that otherwise would occur from the generic CCGT plant in Year 2019 in the Base Case, which accounts for the \$60 million drop in the annual energy benefits

⁵¹ *Id.* at 60.

⁵² *Id.* at 57-59.

⁵³ *Id.* at 61.

⁵⁴ *Id.* at 70.

⁵⁵ *Id.* at 57-59.

⁵⁶ *Id.* at 58; Tr. 8/13/09, pp. 102-103.

attributed to the Meriden Project beginning in 2019 and continuing for each subsequent year of the Study Period. LEI's analysis only holds weight if the Base Case assumptions regarding the economics of the generic CCGT plant are reasonable. They are not.

LEI assumed that the capital cost of the generic CCGT unit would be \$1,039 per kilowatt ("kW") in Year 2019.⁵⁷ At NRG's request, LEI filed a late-filed exhibit that demonstrates that the generic CCGT cost estimate accords with the capital costs of CCGT plants constructed prior to 2006 and current cost assumptions used by other planning agencies.⁵⁸ Notwithstanding this additional support, the record contains evidence that suggests that the cost of constructing a new CCGT unit is greater than \$1,039/kW today.

The NRG Application estimates that the capital costs of the Meriden Project would be \$1,400/kW.⁵⁹ This estimate is favorable compared to the cost of constructing a whole new CCGT plant because of the advanced state of engineering, permitting and infrastructure development of the Meriden Project. Kleen Energy recently raised \$1.4 billion of capital funds to finance a 620-MW CCGT plant in Middletown, Connecticut (the "Kleen Plant"), indicating that the capital cost of that plant was over \$2,200/kW.⁶⁰ Ms. Frayer testified that she was familiar with the Kleen Plant and stated: "I had it at least over \$2,000 per megawatt."⁶¹ Ms. Frayer nonetheless defended the \$1,039/kW cost estimate of the generic CCGT unit in 2019, reasoning that efficiency improvements will likely drive down the cost of

⁵⁷ LEI Testimony, p. 105 (Figure 82).

⁵⁸ CL&P Ex. 29 (Aug. 27, 2009).

⁵⁹ NRG Application, p. 22.

⁶⁰ Tr. 8/13/09, pp. 89-90.

⁶¹ *Id.* at 90.

power plants over the next decade.⁶² This assumption is unsupported and not credible. If Ms. Frayer had assumed a more reasonable capital cost for the generic CCGT plant in 2019, it would not likely have entered the market economically in the Base Case, and the annual benefits of the Meriden Project would have continued unabated at the \$80 to \$90 million range throughout the Study Period.

The FCM “Disbenefits.” Figure 40 of the LEI Testimony reports that the Meriden Project’s entry into the FCM will cause FCM prices to rise under the revenue substitution theory devised by Ms. Frayer.⁶³ She testified that power plant developers need a certain amount of revenues to meet their minimum profit margins. Thus, if energy prices decline due to the Meriden Project, power plant owners will raise their FCM bids to compensate, thereby creating the “disbenefits” illustrated in Figure 40.⁶⁴ NRG disagrees with this logic for several reasons.

First, it is contrary to the fundamental economic principle that additional supply in a market causes prices to fall. Indeed, the present oversupply in the regional FCM has caused the Forward Capacity Auction to clear at the floor price, suggesting that the FCM is not immune to basic economic theory concerning supply and demand. Second, a review of LEI’s confidential price data filed on November 4, 2009 disclosed [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶² *Id.* at 90-91.

⁶³ LEI Testimony, p. 60.

⁶⁴ Tr. 8/13/09, pp. 125-27.

ratepayers would pay rates that are based on revenue requirements, which will differ from investment costs”⁷¹

NRG asked Ms. Frayer why the GSRP costs were not based on transmission revenue requirements if the objective of LEI’s modeling exercise was to determine the impact of the GSRP on Connecticut ratepayers. She responded:

I’m not aware that that calculation has been done for the GSRP. So in view of that, I had relied on a comparison where I had taken the investment costs in 2014 dollars and compared them for purposes of an illustration to the estimated market benefits.⁷²

Ms. Frayer candidly acknowledged that a rough estimate of the annual transmission revenue requirements would be twenty percent (20%) of the investment costs, which would equal \$36 million for 2014, declining slightly in each subsequent year.⁷³ She also agreed that these transmission revenue requirements would continue to be charged to ratepayers over the 40-year estimated useful life of the GSRP.⁷⁴ Thus, the \$180 million cost figure presented in the LEI Testimony does not come close to the actual cost of the GSRP to Connecticut ratepayers.

VI. ENVIRONMENTAL COMPATIBILITY

The CL&P Application has faced stiff opposition from the Citizens Against Overhead Power Line Construction (“CAOPLC”), an advocacy group of families and property owners in East Granby and Suffield, Connecticut who are concerned about the adverse health,

⁷¹ *Id.* at 43.

⁷² Tr. 8/13/09, pp. 42-43.

⁷³ *Id.* at 44.

⁷⁴ *Id.* at 47-48.

environmental and economic impacts of the GSRP.⁷⁵ The CAOPC cites the following among its key concerns:

- The health and safety of persons, particularly children, who reside in or visit the affected areas due to the electromagnetic fields that would radiate from the new 345 kilovolt lines.
- The visual impact of the new transmission towers that would be located in the Newgate area of West Suffield and East Granby.
- Erosion and water runoff problems in the vicinity of Phelps Road in West Suffield that would be worsened by the clearing of the transmission right of way.
- The impact on agricultural lands, particularly in Suffield.
- The decline in property values of homes located near the new transmission lines.⁷⁶

The First Selectman of East Granby filed testimony on July 7, 2009 to express concerns about the adverse impacts of the GSRP on the scenic and aesthetic vistas that can be enjoyed from the Metacomet Ridge and Trail, the wetlands and watercourses that would be disturbed during construction, the health and safety of families residing in the Newgate area, and the drop in value of the homes located there.⁷⁷ Similar concerns were voiced by the First Selectman of Suffield in testimony dated August 17, 2009.⁷⁸

By contrast, no resident, advocacy group or governmental official has opposed the Meriden Project on environmental grounds. On the contrary, the City of Meriden has expressed strong support for the Meriden Project and welcomes the economic stimuli it would

⁷⁵ Testimony of CAOPC (Oct. 30, 2009), p. 1.

⁷⁶ *Id.* at 8-9.

⁷⁷ Testimony of the Honorable James Hayden, First Selectman, Town of East Granby (July 7, 2009).

⁷⁸ Testimony of the Honorable Scott R. Lingenfelter, First Selectman, Town of Suffield (Aug. 17, 2009).

bring to the community. The Council itself determined that the Meriden Project is environmentally compatible when it granted a certificate to PDC-El Paso Meriden, LLC, the former sponsor of the Meriden Project, in CSC Docket No. 190. Finally, common sense suggests that a smaller transmission solution confined to the Springfield area would likely have less adverse environmental and ecological impacts than would the GSRP and the MMP.

VII. THE COUNCIL SHOULD SUSPEND THE PROCEEDINGS PENDING FURTHER STUDIES, AND IN THE ABSENCE OF SUCH STUDIES, SHOULD DENY THE CL&P APPLICATION.

Before the CSC may issue Certificates for the GSRP and MMP, the Council must find that these projects achieve the optimal balance of the need to provide adequate and reliable electric service at the lowest reasonable cost to consumers with the need to protect the environment and ecology of the state.⁷⁹ The record evidence does not support such a finding.

Instead, the evidence supports the following conclusions:

- The reliability problems in the Springfield area are caused in part by the need to import power into Connecticut, but CL&P and ISO-NE have not studied whether the Meriden Project (which would reduce the import need) and a smaller transmission solution in the Springfield area would meet the reliability need in a more cost-effective fashion.
- The Meriden Project provides substantial economic benefits to Connecticut ratepayers, while the GSRP would burden ratepayers with substantial net costs.
- The Meriden Project together with more targeted transmission upgrades in Springfield would likely produce less adverse impacts on the environment and ecology of the state than would the GSRP and the MMP as proposed.

These conclusions justify a Council order suspending this proceeding until CL&P and ISO-NE study whether the Meriden Project and a targeted transmission solution in the Springfield area could meet the reliability need at a lower cost to consumers.

⁷⁹ C.G.S. § 16-50g.

A. There is Precedent for Suspending a Certificate Proceeding Pending Completion of Additional Studies.

In Docket No. 272, CL&P and UI filed a certificate application for a new 69-mile 345 kV transmission line to run from Middletown to Norwalk (the “M-N Project”).⁸⁰ The route proposed by CL&P and UI included 24 miles of underground lines from Norwalk to East Devon.⁸¹ Some eight months into the proceeding, ISO-NE filed testimony stating that the proposed design would not operate reliably. As a result of this development, the utilities and ISO-NE formed the Reliability and Operating Committee (“ROC Group”) to consider potential project modifications that would enable maximum feasible use of underground cable for the M-N Project, consistent with ISO-NE’s reliability standards.⁸² The Council suspended evidentiary hearings in Docket No. 272 while the ROC Group considered potential project modifications.⁸³ In less than six weeks, the ROC Group completed several case studies that allowed CL&P and UI to modify the project design and obtain a certificate from the Council.⁸⁴

If the ROC Group could develop numerous case studies within a six-week period, then CL&P and ISO-NE should be able to study a limited set of alternative solutions consisting of the Meriden Project and targeted transmission upgrades in the Springfield area before

⁸⁰ See *Joint Application of The Connecticut Light and Power Company and The United Illuminating Company for a Certificate of Environmental Compatibility and Public Need for a 345-kV Electric Transmission Line Facility and Associated Facilities Between Scovill Rock Switching Station in Middletown and Norwalk Substation in Norwalk*, Docket No. 272 (Oct. 9, 2003) (hereinafter “272 Application”).

⁸¹ *Id.* at ES-2.

⁸² See Cover Letters to Report of the Reliability and Operability Committee, Docket No. 272 (Aug. 16, 2004).

⁸³ See CSC Press Release, Re 272 Application (Aug. 16, 2004).

⁸⁴ See Report of the Reliability and Operability Committee, Docket No. 272 (Aug. 16, 2004) (hereinafter “Preliminary ROC Report”). After the Preliminary ROC Report was issued, additional discovery was conducted, additional hearings were held and the ROC Group filed interim and final reports. See Docket No. 272. The Council approved the Certificate on April 7, 2005. Decision and Order, Docket No. 272 (Apr. 7, 2005).

March 19, 2010, the statutory deadline in this proceeding. Although NRG is not in a position to conduct this study on its own for the reasons described by Mr. Robert Stein at the October 27 hearing, NRG will participate in the study in any manner that would be helpful to CL&P, ISO-NE and the Council, including by providing any additional information that CL&P and ISO-NE may require with respect to the Meriden Project.

B. The Council Should Deny the CL&P Application if Additional Studies Are Not Performed.

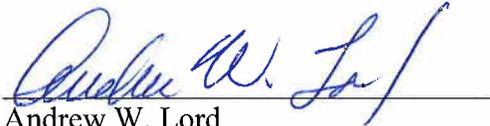
If CL&P declines to undertake additional studies, the Council should deny the CL&P Application for failure to demonstrate that the GSRP/MMP is the most appropriate solution to the stated reliability need. Although CL&P may claim that such action by the Council would expose electricity customers in Massachusetts and Connecticut to imminent electricity outages, the testimony of the ISO-NE witnesses at the October 28 hearing suggests that no blackouts are looming on the horizon. The ISO-NE witnesses confirmed that, in the event the Council denies the CL&P Application, ISO-NE and CL&P would work together to design an alternative solution to the reliability problems in the Springfield area and would take appropriate steps to ensure that the lights do not go out in Massachusetts or Connecticut.⁸⁵

⁸⁵ Tr. 10/28/09, pp. 48-50.

IV. CONCLUSION

CL&P has the burden of proving that its proposed GSRP and MMP represent the most appropriate alternative to the need identified in the Needs Analysis. CL&P has not met that burden and, consequently, the Council should order additional solution studies or decline to grant the requested Certificates if such studies are not forthcoming.

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