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December 4, 2008

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

Re: Docket No. 346 - Implementation of Section 8 of Public Act 07-242, An Act Concerning Electricity and Energy Efficiency

Dear Mr. Phelps:

This letter provides the response to requests for the information listed below.

Response to EES-01 Interrogatories dated 10/31/2008
EES-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026, 027, 028, 029

Very truly yours,

John Morissette /tc

John Morissette
Manager
Transmission Siting and Permitting
NUSCO
As Agent for CL&P

cc: Service List

Witness: Douglas S. McCracken, William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
How does your utility (or CMEEC) define "energy security"? What are the primary security threats that need to be addressed and how are they examined in your internal siting processes?

Response:
One definition of "Energy security" within the industry is a system free of disturbances or unusual occurrences caused by sabotage, "Energy security" is also the ability of the electric system to withstand disturbances such as electric short circuits or unanticipated loss of system elements without cascading wide-area outages. With regards to the second part of this question, it does not relate to siting of facilities and is beyond the scope of this proceeding. In addition because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure. Physical and cybersecurity threats are addressed by standard utility practice security designs (barb wire fence, access controls, security cameras), and by the NERC CIP standards. Electric system disturbances are addressed through adherence to NERC, NPCC and ISO-NE standards in system planning, design, operation and maintenance.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
For what specific security-related threats are there formal plans to protect grid resources?

Response:
Because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure. CL&P does meet all the requirements of the applicable North American Electric Reliability Corporation (NERC) standards, including the Critical Infrastructure Protection (CIP) standards.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
How many full-time personnel work on issues related to grid security?

Response:
Transmission "grid security" is a term with a broad scope, synonymous with grid reliability, involving many full-time staff.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
What dollar amount and percentage of total budget is allotted to security-related functions?

Response:
This question does not relate to the siting of facilities and is beyond the scope of this proceeding. However, CL&P allocates an adequate percentage of its budget to security-related functions to meet industry requirements. A specific dollar amount would be difficult to estimate.

Witness: Douglas S. McCracken, Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Are security-related personnel involved in design, upgrade and siting considerations of grid assets?

Response:
Yes, CL&P does design and site facilities with reliability and security in mind. Personnel abide by the applicable FERC, NERC, NPCC, ISO-NE standards, DPUC regulations and National Electrical Safety Code.

Witness: Douglas S. McCracken, Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Where do security-related functions rank compared with other priorities (e.g. cost, profit, safety) included in design and siting of resources ? Please list the top five in order.

Response:
When designing and siting resources there are many factors that must be considered, including security-related functions. All of these factors must be taken into account and be given due regard with respect to each specific project.

Witness: Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Does redundancy by siting new transmission resources add reliability? Security? Always? If not, where does it reach a diminishing return or negatively impact reliability? Security? Why might it reach such a point?

Response:
Yes. Yes. Yes. Adding transmission to a power system inherently makes the power system more robust and reliable.

Witness: Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Does redundancy in transmission in any way weaken reliability or security? If so, in what way(s)?

Response:
Redundancy in transmission increases reliability of the power system. CL&P designs transmission to meet all applicable FERC, NERC, NPCC and ISO-NE standards with regards to reliability and security.

Witness: Bradley P. Bentley, Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
What new technological enhancements have been made in the last five years that improve grid operation and that would also improve security? How have they accomplished this end result?

Response:
Because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure, however initial implementation of the NERC CIP standards has improved security. System security has also improved via NERC standards, NPCC criteria, and ISO-NE operating procedures which continue to evolve and stengthen the grid.

Witness: Bradley P. Bentley, Douglas S. McCracken, William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
What future enhancements are planned in the next two years that would further improve security? Next five years?

Response:
Because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure, however full implementation of the NERC CIP standards will further improve security in the next two years and beyond. System security will be improved via NERC standards, NPCC criteria, and ISO-NE operating procedures which continue to evolve and stengthen the grid.

Witness: Bradley P. Bentley, Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
Is there regulatory pressure to deny or delay the use of new technology that might enhance grid operations as well as add reliability and security due to potential electricity rate impacts?

Response:
No. Generally, utility investments are subject to prudency and/or socialization determination by regulatory agencies with rate making authority. These agencies review investments based on reasonableness of the investment at the time of the investment or the usefullness to those who will share in the benefit of the investment. Therefore, all reasonable investments in energy security would likely be viewed favorably by rate making authorities.

Witness: Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
What elements do you believe define decentralization of the grid?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Do you believe decentralization offers any additional security advantages compared to the currently configured grid design as sited? If not, why not? If so, why? If so, have you considered strategies to further decentralize the grid?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: Bradley P. Bentley
Request from: Environmental/Energy Solutions

Question:
Do you believe if utilities were offered a higher rate of return for decentralization efforts (including ratebasing of small generation up to 25 MW or other security-related grid upgrades) under decoupling/PBR, might this result in greater efforts in that direction? (Think in terms of utility incentives such as the program management fee of 1% to 5% (after taxes) first provided for under PA 88-57.)

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
Do you see autorecloser and sectionalizer technology as a step toward decentralization? How widely deployed are these technologies at this time?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
What major grid components are primarily foreign sourced? Towers, cables, circuit breakers, reclosers, SCADA, other? Does this present challenges in timely procurement of components in a "just in time" global distribution system? Does this have security implications? What might those implications be?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however grid components come from a variety of sources, including foreign. NU maintains adequate supplies of spare equipment, and also pools inventory with other utilities, to address needs including security issues.

Witness: Douglas S. McCracken, William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
If normal communication channels used by your SCADA system were disrupted, could your portion of the grid continue to operate? Is there any backup SCADA and/or communication system capable of maintaining normal or near normal operation? Has this been tested and are written after action reports available?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding. CL&P follows good utility practice regarding the design, maintenance, and monitoring of its SCADA Systems. CL&P has redundancy built into it SCADA system design and this functionality is tested.

Witness: Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
If the ISO-NE and its satellite facilities (e.g. Convex at 3333 Berlin Turnpike et al) became inoperative, what would the effect be on providing power to Connecticut ratepayers?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however there would be no effect, both ISO-NE and CONVEX are in full compliance with NERC Standards.

Witness: Bradley P. Bentley, Douglas S. McCracken
Request from: Environmental/Energy Solutions

Question:
Do you believe the security of the nation is linked to a strong economy which in this day and age is dependent upon reliable and secure sources of electricity?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however, the security of the nation is certainly linked to a strong economy. Reliable and secure sources of electricity are only one of the many factors that go into building a strong economy. A robust transmission system that meets all applicable FERC, NERC, NPCC and ISO-NE standards will provide reliable and secure delivery of electricity from a wider number of sources.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Does your utility believe that cyberthreats present a viable danger to grid operation? If not, why not? If so why and how?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however we use sound risk management principles and security best practices to implement physical and cyber measures that enhance our preparedness for security threats.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Does your security staff include a full time person or persons dedicated to cyberrelated threats?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however CL&P utilizes a corporate Information Technology security staff that is responsible for NU's electronic security.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
How do you rate cyber threats compared to other security considerations? What is your criteria for rating relative importance of threats?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Are you compliant with appropriate and most current NERC cybersecurity standards? Have you had any discrepancies in compliance in the past year? If so, what were the nature of those noncompliance items?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however CL&P meets all requirements of the applicable NERC CIP physical and cyber standards. No, we have not had any discrepancies in this area in the past year.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Does your utility employ a SCADA system that might be termed a "legacy" (older, but proprietary) system or is it a Microsoft Windows-based system? A hybrid?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however CL&P's SCADA technology is upgraded as the technology changes.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
What is (are) the country(s) of origin (not merely nameplate brand) of the SCADA system(s) and its components in use by your utility?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Do you know where SCADA coding has taken place? Is it an issue of concern? If yes, what steps have been taken to examine this? Any resultant abnormalities?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding, however we know where the SCADA coding has taken place. No, it is not an issue or concern.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Does your utility provide training to grid operators/control room personnel in learning if and when they become victims of a cyber attack? Does this include recognizing when a loss of "situational awareness"1 might occur? Does your utility have a simulator capable of duplicating such conditions as might be found during a cyber attack? If not, is there a cost-shared, regional facility that can be used?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding. In addition because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
What was the effect on your system during the Blaster Worm episode in early August 2003?Was your utility IT system infected? Which portions? Did this have any effect on grid operations? Other operations? Did it affect security in any manner?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding. In addition because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure.

Witness: William E. McEvoy
Request from: Environmental/Energy Solutions

Question:
Have you experienced additional cyber intrusions from direct hacking into your system? From viruses, worms, Trojan Horses, Distributed Denial of Service Attacks, other? How many "episodes" of suspected intrusions occur per month? per year?

Response:
This question does not relate to siting of facilities and is beyond the scope of this proceeding. In addition because of the highly sensitive nature of the information requested, CL&P cannot answer this question without suitable protections in place so that the information provided will remain secure.