Northeast
Utilities System

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April 17, 2009

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

Re: Docket No. 370 - CT Greater Springfield Reliability Project

Dear Mr. Phelps:

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

Response to CSC-02 Interrogatories dated 04/02/2009
CSC-027, 028, 029, 030, 031, 032, 033, 034, 035, 036, 037, 038, 039, 040, 041, 042, 043, 044, 045, 046, 047, 048, 049*, 050, 051

Response to OCC-01 Interrogatories dated 04/02/2009
OCC-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014

Very truly yours,

Robert Carberry DL

Robert Carberry
Project Manager
NEEWS Siting and Permitting
NUSCO
As Agent for CL&P

cc: Service List

* Bulk material provided.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide the per capita electric usage for 1990, 2000 and 2008 for the north-central Connecticut area, the entire State of Connecticut and the Springfield, MA area.

Response:

The attached table provides per capita electric usage for the entire State of Connecticut, the north-central Connecticut area, and the customers served by WMECO substations in the Springfield, Massachusetts area . The Springfield statistics do not include customers of National Grid or municipal electric companies.

The north-central Connecticut towns reflected in this response are Manchester, East Hartford, Hartford, West Hartford, Avon, South Windsor, Windsor, Bloomfield, Simsbury, East Windsor, Windsor Locks, East Granby, Enfield, Suffield, and Granby.

Note that this usage data reflects all customer classes combined and is not normalized for weather differences.

Further, please note that the 2008 population data for the State of Connecticut is not yet available, so this response provides 2007 per capita electric usage data in lieu of 2008 for the State of Connecticut. Similarly, population data by town is not yet available for either 2007 or 2008, thus this response provides 2006 per capita electric usage for north-central Connecticut and Springfield.

Per Capita Electric Usage (kWhr)

	Connecticut		North-Central CT		Springfield, MA	
	Usage	% chg	Usage	% chg	Usage	% chg
1990	8254		9630		6198	
2000	8773	6.3%	9391	-2.5%	6573	6.1%
2006/2007	9743	11.1%	9936	5.8%	6721	2.3%

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide peak demand and mean demand for each year from 1998 through 2008 for the north-central Connecticut area, the entire State of Connecticut and the Springfield, MA area.

Response:

The power-flow studies performed in connection with the needs assessments for the GSRP Project did not require the historic individual substation information requested in this data request. Rather, the ISO-NE CELT forecasted loads for the relevant years were allocated to the individual substations for modeling purposes. Accordingly, the requested information must be assembled in order to answer this question, and that effort will entail extensive and time consuming research. The necessary research effort is underway and the Company will provide the requested information when it is complete. It is estimated that the information should be ready to file by approximately May 15, 2009.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide projected peak demand and mean demand for 2010, 2015, 2020 and 2025.

Response:

Peak Demand: We extended the 90/10 peak demand projections for Connecticut and Greater Springfield provided in the Application, Appendix F-1, up to 2025. A copy of those extended projections is provided with this response.

Mean Demand: We understand "mean demand" as used in this question to be the average of the hourly loads over the course of a year. Accordingly,we determined the mean demand by dividing the ISO-NE 2008 Capacity, Energy, Load and Transmission (CELT) Report's total Gigawatthours for Connecticut and the portion of western Massachusetts that is representative of the Greater Springfield area by 8760 hours for each year between 2009 and 2025.

Year	Connecticut	Greater Springfield
2009	3,928 MW	496 MW
2010	3,968 MW	498 MW
2011	4,009 MW	501 MW
2012	4,047 MW	503 MW
2013	4,082 MW	507 MW
2014	4,113 MW	511 MW
2015	4,142 MW	516 MW
2016	4,170 MW	522 MW
2017	4,196 MW	529 MW
2018	4,222 MW	535 MW
2019	4,249 MW	542 MW
2020	4,276 MW	549 MW
2021	4,302 MW	556 MW
2022	4,330 MW	563 MW
2023	4,357 MW	570 MW
2024	4,384 MW	577 MW
2025	4,412 MW	585 MW

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Identify remote generating units that would export power to Connecticut via the GSRP transmission line. Would any of these generating units provide power at a lower cost than in-state generating units?

Response:

In New England with few exceptions, specific generators are not dispatched to serve specific customer demands. Generation resources are dispatched based on their bid price into the ISO market system from lowest to highest to meet the region's needs. In general, increasing transmission transfer capacity into a region will tend to lower the amount of time the system is constrained which will increase the amount of delivery from lower cost generation resources outside the local area. Conversely, congestion into an area due to transmission constraints will require the need to run higher cost generation more often in that local area.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Describe each overhead segment (structure number to structure number) and its potential underground line route variation, providing a comparison cost for each segment (as identified in Table H-3 of Volume I of the Application).

Response:
Planning level estimates for the cost of the four underground variations developed for GSRP, as compared with the cost of the overhead line segments they would replace, are shown in Table 1.

Table 1: Initial Capital Costs of Underground Variations and of Overhead Segments They Would Replace

1	2	3	4	5	6	7
UG Variation	Length of OH Line Replaced by UG Variation	Cost of UG Variation	Cost of OH Segment Replaced	Excess UG Cost (3) - (4)	UG Cost Multiple (3) ÷ (4)	OH Section To Be Replaced (Existing Structures)
3.6 Miles in-ROW	3.6	$166,000,000	$12,400,000	$153,600,000	13.4	Str 3187 to Str 3219
4.6 miles in-ROW	4.6	$200,300,000	$15,500,000	$184,800,000	12.9	Str 3177 to Str 3219
Newgate Road	4.6	$262,800,000	$15,500,000	$247,300,000	17.0	Str 3177 to Str 3219
RT 167/187	5.0	$337,500,000	$15,500,000	$322,000,000	21.8	Str 3177 to Str 3224

The difference in the cost to Connecticut consumers resulting from the choice of one of the underground variations would be much greater than the differences shown in Table 1, because of federal tariff provisions. This project is expected to qualify for inclusion in New England regional transmission rates, so that its cost would be shared throughout New England according to company load share. Connecticut accounts for approximately 27% of the New England load, so Connecticut customers would bear approximately 27% of the project cost included in regional rates. However, recovery of project costs through regional rates is not automatic. Only costs determined by ISO-NE to be eligible for regionalization according to specific tariff provisions will be included in regional rates. ISO-NE Planning Procedure 3 provides, and experience has shown, that where a line (or a line segment) that would normally be constructed overhead in conformity with good utility practice is instead constructed underground, the excess cost of underground line construction will not be included in regional rates, but will be "localized". The effect of localization of excess underground costs would be that Connecticut consumers would bear 27% of what the cost of an overhead line (or segment) would have been, plus 100% of the difference between that cost and the cost of an underground line(or segment) and any line transition stations. Accordingly, for example, if CL&P were to build an underground variation that cost 10 times more than a segment of overhead line constructed in accordance with standard good utility practice would have cost, it is likely that the cost to Connecticut consumers for the underground line would be 34 times more than that of the overhead line [(1 x 27%) + (9 x 100%) = 9.27 ÷ 0.27 = 34.3].

As applied to the estimated costs of the GSRP underground variations and the overhead line segments they would replace shown in Table1, the relative impact on Connecticut consumers of the localization of excess underground costs would be as follows:

Table 2: Comparison of Cost to CT Consumers of Underground Variations And Overhead Segments They Would Replace

1	2	3	4	5	6	7
UG Variation	Cost of UG Variation	Cost of OH Segment Replaced	Excess UG Cost (2) - (3)	Cost to CT of OH Section (3) x 27%	Total Cost to CT of UG After Localization (4) + (5)	Multiple UG Cost to CT After Localization (6) ÷ (5)
3.6 Miles in-ROW	$166,000,000	$12,400,000	$153,600,000	$3,348,000	$156,948,000	46.9
4.6 miles in-ROW	$200,300,000	$15,500,000	$184,800,000	$4,185,000	$188,985,000	45.2
Newgate Road	$262,800,000	$15,500,000	$247,300,000	$4,185,000	$251,485,000	60.1
RT 167/187	$337,500,000	$15,500,000	$322,000,000	$4,185,000	$326,185,000	77.9

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
How would the proposed project recover its costs? Have any costs ($/kWh) been calculated?

Response:
The costs of the proposed project are intended to be recovered through New England's regional transmission rates. Each New England utility bears its load ratio share of the cost of all regional transmission. The utilities, including CL&P, in turn, recover those costs through retail rates to their customers (e.g., CL&P would set rates through its retail tariffs based on the charges for transmission service billed to CL&P).

The incremental costs of the project (as it is currently proposed) for 2014, the estimated first full year of service, equate to an average, incremental retail rate of $0.00121/kWh (CL&P's revenue requirements responsibility of $28.62M divided by 23,626,734 MWH of projected billed sales).

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
When does CL&P expect to receive necessary local, state and federal permits?

Response:
CL&P is preparing to file an application with the U.S. Army Corps of Engineers (USACE) in June 2009 in relation to permits sought under the Clean Water Act Section 404 and Rivers and Harbors Act Section 10. CL&P is also preparing to file an Application with the CT DEP in June 2009 for a Water Quality Certification under Section 401 of the Clean Water Act, and an application with the CT DEP for a Stream Channel Encroachment Line Permit in April 2009.

CL&P anticipates one-year review periods by each agency following a completeness/sufficiency determination. CL&P anticipates that permit decisions would be issued during the 2nd quarter of 2010. A variety of state and local permits for the Massachusetts components of the Project are on similar tracks with permit decisions expected in the first or second quarter of 2010.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Does CL&P have the authority to install underground cables within the transmission line ROW in areas with non-fee easements? Would easements have to be modified?

Response:
With the exception of four properties in East Granby and four in Suffield, CL&P has the required easement rights to construct the in-ROW underground line variations. For those eight properties, CL&P would have to negotiate updated easements from the property owners before underground line construction within the transmission ROW could commence. Additional land and easement rights would be required for the construction of transition stations.

In addition to new easement rights, CL&P would need environmental permits from the Connecticut Department of Environmental Protection and the U.S. Army Corps of Engineers to install underground cables in the ROW. CL&P explained in its Application that such authorizations are unlikely because underground line construction within an existing tranmission line ROW is unlikely to be considered the "least environmentally damaging practical alternative" by these agencies. See, Application VII. 1, pp. H-12, H-23 - 26. A letter recently received from CTDEP, copy attached, supports that concern.

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
FRANKLIN WILDLIFE MANAGEMENT AREA
391 ROUTE 32
NORTH FRANKLIN, CT 06254
TELEPHONE: (860) 642-7239

April 3, 2009

Mr. Donald D. Biondi
Transmission Siting and Permitting
Northeast Utilities
107 Selden Street
Berlin, CT 06037

re: Greater Springfield Reliability Project

Dear Mr. Biondi

What a pleasure to meet you on March 26, 2009 regarding the Greater Springfield Reliability Project. The materials provided to me before the meeting were: the application to the Connecticut Siting Council Volume 11 of 11 dated October 2008, Section E, Section L; Description of Existing Environment along proposed line routes at the North Bloomfield substation, Section M; Existing Environment: Underground line route...and Section N.; Potential Environmental Effects and Mitigation Measures. At the meeting, I was handed a technical memo re: Greater Springfield Reliability Project CT Component Rare Species Mitigation Summary.

While we did not discuss mitigation measures for a possible underground alternative to this project, I want to reiterate that any underground alternative would be a serious concern to the Connecticut Department of Environmental Protection's Wildlife Division. The land altering work would be very disruptive to most listed wildlife species. Additionally, any underground trenching in the riverbed of the Farmington River where the federally listed freshwater mussel species, dwarf-wedge mussel, is located would trigger at consultation with the U. S. Fish and Wildlife Service per the Endnagered Species Act. In that case, you should forward a detailed project proposal to the U. S. Fish and Wildlife Service (USFWS) for their information and notification (Susi vonOettingen, U. S. Fish and Wildlife Service, 70 Commercial Street, Suite 300, Concord, NH 03301-5087, (603) 223-2541). The Wildlife Division will be happy to assist the USFWS and you in the consultation process.

Regarding the Memo:

1. The DEP Wildlife Division concurs with the seven measures to protect Jefferson salamanders that were presented (pages 2-3). Tree clearing should be done in September and October to minimize impacts and wood chip ramps located every 30'.

2. The DEP Wildlife Divison concurs with the six measures to protect Eastern Box Turtles that were present (pages 3-4).

3. The DEP Wildife Divison concurs that the two measures to protect Eastern Pearlshell Mussel that were presented (page 4).

4. The DEP Wildlife Divison concurs with the two measures to protect the Arrow Clubtail Dragonfly, Dwarf wedgemussel and the Easten Pond Mussel in the Farmington River (page 4).

5. The DEP Wildlife Divison concurs with the measure to protect Bush's sedge on the ROW (page 4).

6. The DEP Wildlife Divison concurs with the measure to protect Barn owls (page 6).

7. The DEP Wildlife Divison concurs with the four measures to protect Wood Turtles (page 6). Additionally, since wood turtles hibernate in riparian corridors, if the work is done between November and April (the dormant period for wood turtle) no on-site monitor will be needed.

8. The DEP Wildlife Divison concurs with the two measures to protect Eastern Hognose snake (page 7).

If you have any additional questions, please feel free to contact me at Julie.Victoria@ct.gov. Thank you for the opportunity to comment.

Sincerely,

Julie Victoria
Wildlife Biologist
Franklin Swamp Wildlife Management Area
391 Route 32
N. Franklin, CT 06254
phone: 860-642-7239

cc: NDDB – 15747, 16104
J. Dickson
K. Metzler
T. O'Sullivan – ENSR/AECOM

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
What would be the approximate distance between each construction site that would be required along the proposed GSRP and the MMP? Approximately how many construction sites would be needed in total?

Response:
In the CSC application the following types of construction sites were identified:

Work Area (Section J.1.1)
Conductor Pulling Site (Section J.1.9)
Storage Area (Section J.1.2.1)
Staging Area (Section J.1.2.2)
Laydown Area (Section J.1.2.3)

Work Areas will be constructed at every new and existing structure location. These Work Areas will generally also serve as the Laydown Area for the materials needed at each particular site.

Based on final design and terrain, the Conductor Pulling Sites, in general, will be located 1 to 2 miles apart. There will be approximately eight Conductor Pulling Sites for GSRP and three for MMP.

The Storage Areas and Staging Areas will be located based on the availability of parcels of land required to support them. Finding and securing these areas will be the responsibility of the contractor, thus these locations have not been identified at this time. Depending on the size parcels available in each area there would be approximately 2 to 4 Storage/Staging Areas for GSRP and 1 to 2 for MMP.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
What is the estimated distance between each proposed transmission structure?

Response:
The proposed cross-sectional spacing between the new H-Frame structures and the existing lattice towers is typically 75 feet, based on NUSCO standards developed for compliance with industry safety standards. Refer to Exhibit 1 in Volume 10 of the application for diagrams of all the cross-section configurations.

The distance between consecutive structures of the proposed H-Frame line averages about 570 feet, which approximates the existing span lengths of the adjacent line of lattice towers. The terrain in Connecticut causes the span lengths to vary greatly, with a maximum span length of 1166 feet under the proposed layout. For specific span lengths, please refer to the plan and profile drawings located in Exhibit 2, Volume 10 of the application.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Would the proposed spacing of transmission structures affect the amount of vegetative clearing that would be needed along the ROW?

Response:
Longer or shorter conductor-span distances between structures of a line do not significantly affect the amount of vegetative clearing required. While the conductor blow-out distance is more in longer spans than it is in shorter spans, the side clearing must also remove trees that could fall into the normal conductor zone. Vegetation clearing in the zone beneath the conductors is also unchanged by span length.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
The response to CSC-005 states that a minimum of 1.7 acres would be needed for the placement of equipment at a transition station site. However, the response to CSC-010 states that approximately two to four acres of clearing would be necessary within the Newgate Wildlife Management Area. Why would the entire two to four acres of vegetation be cleared if only 1.7 acres would be necessary for equipment?

Response:
The 2-4 acres of clearing is required to provide a level area for the transition station. The equipment within the station requires a minimum area of 1.7 acres within the overall cleared area of 2-4 acres. The cleared area in excess of the minimum 1.7 acres is required to facilitate construction activities, equipment and material laydown areas, site access and maintenance needs, and other requirements necessary to develop the site such as drainage improvements, grade transitions, etc. The detailed engineering and field investigations have not been completed to determine the site specific clearing area.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
For transition stations proposed on non-CL&P property, were the property owners consulted?

Response:
A list of the potential line transition station locations, along with underlying landowners is attached. No individual outreach to the few private landowners on the list was initiated. However, like all other abutters of the right-of-way, these owners were mailed a brochure about the project. They also were mailed a postcard inviting them to an open house during the municipal consultation process.

It should be noted that the size of the area shown for transition stations in the application was a conservative footprint, to allow for flexibility of location. Should any of the underground variations be selected by the Council, additional detailed engineering would be required specific to the site and layout of the transition station to determine final location.

Greater Springfield Reliability Project
Landowner Information for Potential Transition Station Sites Associated with Underground Line Route Variations

Potential Transition Station Site	Line List ID	Town	Landowner Name	Site Address
Granby Junction	1048	East Granby	Connecticut Light & Power Company (CL&P)	Lot 6 Turkey Hills Road
Granby Junction	1049	East Granby	Connecticut Light & Power Company (CL&P)	Lot 5A Turkey Hills Road
3.6-Mile In-ROW Underground Line Route Variation	1058	East Granby	State of Connecticut Aeronautics DOT	Newgate Road Row (Lots 31&32)
Newgate Road	1159	Suffield	Lodola, John P.	3010 Phelps Road
Newgate Road	1160	Suffield	Hartford Electric Light Co (CL&P)	Phelps Road, Lot 9-19
Newgate Road	1161	Suffield	Hartford Electric Light Co (CL&P)	Phelps Road, Lot 16
Newgate Road	1162	Suffield	Suffield Sportsman Association	2900 Phelps Road
State Route 168/187 Underground Variation	1163	Suffield	Sorrow, Shawn S.	2609 Mountain Road
State Route 168/187 Underground Variation	1164	Suffield	Town of Suffield	2715 Mountain Road
State Route 168/187 Underground Variation	1165	Suffield	Hartford Electric Light Co (CL&P)	Mountain Road, Lot 10
Enfield East (MA Noticed Alternative route only)	n/a	Enfield	McGillivray, Angelina J.	N. Maple Street, Map/Lot 79-11
Enfield West (MA Noticed Alternative route only)	n/a	Enfield	Connecticut Light & Power Company (CL&P)	Sword Avenue, Map/Lot 34-59

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
In response to CSC-015 CL&P stated that during the Middletown to Norwalk project construction had community outreach limitations regarding stakeholder choice of pole height and finish. How would CL&P change the procedure to limit this problem in future projects, including the GSRP and MMP?

Response:
CL&P suggests that the D&M Plan procedure that was followed prior to Docket 272 was preferable and yielded better results. Structure heights and finishes should be determined by the Council, upon the recommendation of the Council staff, made after staff consults with the Applicant. The staff should also entertain suggestions made by stakeholders, such as municipal CEOs, but all suggestions (including those of the Applicant) should be evaluated by staff, prior to making a recommendation to the Council. Providing a "local option" for structure heights and finishes can result in a motley appearance of the right-of-way, unintended consequences, and dissatisfaction among the very stakeholders whose choices have been adopted. By reason of their training and experience, and their vantage point of considering an entire project rather than just one segment of right-of-way, Council staff will probably produce a more balanced and thoughtful overall design. In doing so, they can consider, but not default to, expressions of preference by local stakeholders. Finally, these expressions of preference should be solicited and provided in writing, rather than in local hearings. Line design does not require, and does not benefit from, an adversary type proceeding.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
What is the maximum distance that a crane boom could be located from a pole structure during installation of the lines?

Response:
The maximum distance that a crane boom could be located from a structure depends upon factors such as the type and capacity of the crane, the pole height and weight, and terrain at the structure location. A typical distance from the center of the pole to the centerline of rotation of the boom is approximately 50 feet. As noted, a number of factors could cause this distance to vary. The final decision on the crane setup at each structure will be the responsibility of the construction contractor.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
What length of time would be needed for conductor installation for each pulling section?

Response:
The installation time for overhead transmission conductor varies with the pulling section. The range of conductor installation times anticipated for one pulling section of overhead transmission conductors for the Greater Springfield Reliability Project is one to three weeks per circuit, including conductor and shield wire pulling, sagging the wires and clipping in the hardware at each structure.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Would CL&P hire an independent environmental inspector to inspect construction conditions? How often?

Response:
CL&P would be willing to hire, if directed by the Council, an independent environmental inspector to conduct periodic inspections of erosion and sediment controls, listed species exclusion areas, and for overall compliance with D&M Plans, and conditions of permit approvals. In accordance with previous projects, these would typically be weekly, with supplemental inspections as required after significant rain events. CL&P plans to hire it's own subconsultants to monitor the construction conditions on a daily basis, and ensure overall compliance with D&M plans.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Has CL&P determined what crossing method would be used for each waterbody that may be crossed, if an underground route were chosen? What DEP restrictions are associated with such waterbodies?

Response:
CL&P has completed a preliminary investigation of all potential waterway crossings, if an underground line variation was chosen. The result of the preliminary investigation identified a number of potential methods to cross the various waterways such as an open cut method, casing method, jack & bore, horizontal directional drill, and microtunneling. As these potential methods are preliminary in nature, further investigation, including subsurface investigation, would be needed for a final decision and design for each potential crossing.

Should underground crossings of waterbodies be required, CL&P would be required to obtain various permits from the DEP that may include a Water Quality Certification under Section 401 of the Clean Water Act, a Stream Channel Encroachment Line Permit, consultations with the DEP Fisheries Department and Natural Diversity Database (to determine potential seasonal restrictions and protective measures for sensitive species), a Notice of Intent to comply with the General Permit for discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEP-PERD-GP-015). A determination of permit applicability would be performed based on the selected underground alternative, and pre-application meetings would be held between CL&P representatives, DEP Staff and the U.S. Army Corps of Engineers-New England District to review the required permits.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
How much downhill migration would be expected for underground cables? Would migration occur regardless of percent slope?

Response:
CL&P expects that underground cable systems would be designed to minimize downhill cable migration on slopes, or due to vibration. Vaults and cable racking systems will be designed to minimize cable migration. Special cable anchoring systems would be used on slopes, as required. Severe slopes may require more elaborate and expensive anchoring than mild slopes.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide information about each "open house" held in the affected communities (including date, location, description of materials presented).

Response:
As part of the municipal consultation process, there were eight open houses hosted in affected municipalities for the Greater Springfield Reliability Project - three in Connecticut and five in Massachusetts. Listed below are the dates and locations of the open houses conducted in Connecticut towns:

Suffield: Tuesday, June 24, 2008, 6:00 to 8:00 PM, Suffield High School (1060 Sheldon Street)

East Granby: Wednesday, June 25, 2008, 6:00 to 8:00 PM, East Granby High School (95 South Main Street)

Enfield: Thursday, June 26, 2008, 7:00 to 9:00 PM, The Enfield Street School (1318 Enfield Street)

The open houses were organized into four clusters of information stations. The first cluster included:

A Welcome station where visitors were welcomed and given a project information kit describing the project. The Welcome station and information kit included a graphic explaining how to participate in the siting process.

A Route Locator station, where two large monitors could be used to answer the question "Where?" by scanning and zooming in on Google-Earth (satellite) maps of the project.

The second cluster was the "Why?" cluster. The materials presented at the three information stations at this cluster included:

A large screen with a short video of business, environmental and community leaders describing why the NEEWS upgrade of the transmission system is needed,

Posters of how the electric industry has been restructured in Connecticut, how our uses of electricity have grown, how the electricity consumption by residents in that particular town has out-paced its population growth, high-level maps of the transmission grid and the problems that need to be solved, a chart showing how investments in conservation have helped delay the need for a transmission upgrade, and

Collateral material included handouts of how energy and congestion charges are large component costs on a CL&P customer's bill, how to become more energy efficient in your own home, and a free compact florescent light bulb.

The third cluster was the "How?" cluster. The materials presented at the three information stations at this cluster included:

Two screens with photo-simulations of how the proposed project would look in the visitors' town,

Posters with pictures of various structure designs, and pictures depicting the four stages of construction, and

Actual samples of conductors and insulators, along with picture books of other aspects of design and construction.

The fourth cluster was the "What About...?" cluster. The materials presented at the three information stations at this cluster included:

Environmental management aspects of a transmission line right-of-way,

Electric and Magnetic Fields - educational video, graphics, and third-party materials (e.g., from the World Health Organization), and

Specific property information about how the project could affect existing easements.

All the stations were staffed by knowledgeable representatives from CL&P, who were available to respond one-on-one to visitors' questions.

Please also see CL&P's Bulk Filing #2 sent to the Council on November 4, 2008 for copies of the handouts that were made available to open house attendees and other materials mailed in advance of the open houses to residents and businesses along the GSRP route in CT.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide the number of homes and/or properties that would have to be purchased along the entire GSRP northern route and Southern Route Alternative (for both CT and MA).

Response:

We understand this question to ask not just about homes and parcels of land that would have to be acquired in their entirely, but also properties where additional easement rights would be required - either to widen the right-of-way (ROW) or to enable planned construction within the boundaries of the existing ROW.

The answer to this question requires an understanding of the definition of the "northern route" and the "Southern Route Alternative;" and an understanding of the work that would be required for each of them.

First, bear in mind that these are alternate routes only for the new 345-kV line. Regardless of which route is chosen for the 345-kV line, extensive reconstruction of 115-kV lines on the "northern" ROW will be required. Therefore, the choice is between concentrating both the 345-kV and 115-kV construction on the "northern" ROW, or constructing the 345-kV line on the "southern" ROW while still reconstructing the 115-kV lines on the "northern" ROW.

Second, the northern and southern ROW's. are not completely different from one another. They share a common segment that starts at North Bloomfield Substation, extends approximately 12 miles to the Connecticut / Massachusetts state border, and a further 6 miles to the Agawam Substation. Accordingly, the acquisition required along this section of ROW for the "northern" route would also be required for the "southern" route.

However, if the southern route is chosen, there will be additional acquisition requirements along this common segment. That is because the 345-kV line will be constructed from the North Bloomfield to the Agawam Substation, and will then "double back" to South Agawam along the same ROW before proceeding toward the Ludlow Substation along the "southern" ROW. So, along a 3.2 mile segment of ROW between Agawam and South Agawam, there will be two 345-kV lines, and the ROW will have to be wider than it would be if the northern route were chosen.

Therefore, the ROW in this 3.2 mile segment of the southern route would need to be widened by 65 feet, whereas a 35 foot expansion would be required for the single 345-kV line that would be located here if the northern route were chosen.

Against this background, the answer to the question is as follows:

Regardless of which route is chosen, it will be necessary to widen the ROW across three properties in Connecticut, between North Bloomfield Substation and the state border. This widening will not require the acquisition or removal of any structures.

If the preferred northern route is accepted, 4 homes or commercial structures that would conflict with the existing or expanded ROW would have to be removed. All of these structures are in Massachusetts.

The northern route would also require widening of the ROW over 59 properties in Massachusetts.and the acquisition of additional rights within the existing ROW over 131 properties in Massachusetts

A detailed real estate requirements analysis for the southern route has not been completed. Nevertheless, it is clear that the acquisitions required for the southern route would be greater than those required for the northern route.

First, the required acquisition in Connecticut along the ROW between North Bloomfield Substation and the state border would be the same as for the norther route - the ROW would have to be widened over three properties.

Second, the southern route ROW would have to be widened over 54 properties in Massachusetts, and seven homes or commercial structures along this section of ROW would have to be removed.

Third, even when the 345-kV line is located on the southern route, the reconstruction of the 115-kV lines along the northern ROW will require the acquisition of additional rights within the width of the existing ROW over 105 properties.

Finally, additional rights will need to be acquired within the existing "southern route" ROW. However, since a detailed real estate analysis of the southern route has not yet been done, the number of properties where these rights would be needed has not been determined.

Route	Homes/Business Structures To Be Removed		Properties Where Widening of Easement Required		Properties on Northern ROW Where Additional Rights Within Existing Easements Required		Properties on Southern ROW Where Additional Rights Within Existing Easements Required	
	CT	MA	CT	MA	CT	MA	CT	MA
Northern	0	4	3 (3.5 ac)	59 (7.6 ac)	0	131	0	0
Southern	0	7	3 (3.5 ac)	54 (12.1 ac)	0	105	0	TBD

Thus, the choice of the southern route, as compared to the northern route, would require the removal of 3 additional homes or business structures; require 4.5 more acres of ROW widening; reduce the requirement of additional rights within the northern ROW by less than 25%; and would require the acquisition of additional rights over an as yet undetermined number of properties along the southern route.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
A cross-section listed in Table O-9 of the application is listed as XS-S06, however, the description and profile drawing do not appear in the preceding text of Section O. Please provide information for XS-S06.

Response:
Cross-section XS-S06 applies to a short segment of the Noticed-Alternative Southern Route in Longmeadow, Massachusetts. The two rows in Table O-9 (section O.4.2.2, page O-49) for cross-section XS-S06 should be deleted.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Provide the Plan as stated on page 2 of Appendix O-1 in Volume I of the Application, for the pre- and post-NEEWS magnetic field line design alternatives for the Southern Route Alternative.

Response:
Attached is a "Supplement to CL&P's Field Management Design Plan Specific to the Connecticut Portion of the Massachusetts Southern Route Alternative," dated March 20, 2009.

* Bulk material provided.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
In the vicinity of Wyncairne Road in East Granby, would the proposed GSRP result in any vegetative clearing to the west of the existing line? What would be the distance of the proposed 345-kV line to the residences on Wyncairne Road, immediately to the west?

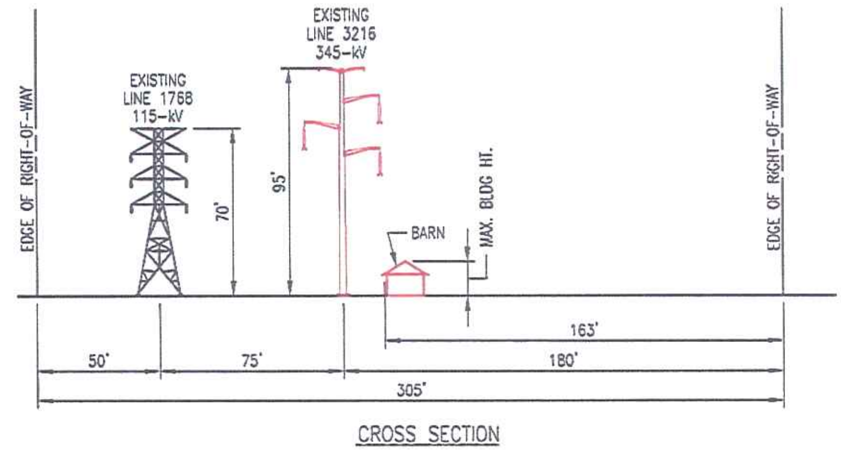
Response:
In general there are no plans for any vegetative clearing along the west side of the ROW, except for removal of any individual danger trees not removed by previous maintenance clearing.

The distances from the centerline of the proposed 345-kV line to the residences on Wyncairne Road range from 160 to 240 feet.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
In the application (Volume 11, the Connecticut Portion of the North Bloomfield to Agawam Route, Mapsheet 28 of 45), please identify the building structures in Suffield that are immediately east of the proposed transmission line. Are these structures within the CL&P easement? What is the distance of the proposed line to each of these buildings?

Response:
Two building structures are within the existing CL&P transmission line easement, as represented on Mapsheet 28 of 45. Both of these building structures are barns and are represented on the attached drawings (CSC-LL 1102 and CSC-LL -1104). The transmission line design represented on these drawings is the delta configuration, as presented in Volume 10, XS-2 BMP. As noted on drawing CSC-LL 1102, the estimated horizontal distance from the center of the proposed transmission line to the nearest edge of the barn is 17 feet, and 2.4 feet horizontal from the nearest conductor to the nearest edge of the barn (based on aerial survey information). As noted on drawing CSC-LL 1104, the estimated horizontal distance from the center of the proposed transmission line to the nearest edge of the barn is 35 feet, and 20 feet horizontal from the nearest conductor to the nearest edge of the barn (based on aerial survey information). Preliminary engineering indicates that these structures cannot remain in the ROW and must be removed prior to start of construction, due to electrical safety clearance requirements. CL&P will work with the property owner(s) to remove/relocate the structures from the ROW.



CROSS SECTION

N. BLOOMFIELD - AGAWAM

LL #	ADDRESS	MAX BLG HT. (FT)	WEATHER CASE	MODELED CLEARANCE (FT) HOR.	VERT.
1102	1334 NEWGATE RD. W. SUFFIELD, CT	14.0	NESC 100 MPH WIND	0.0	63.7
			NU 9 PSF WIND	0.0	53.4
			MAX OPERATING	2.4	36.6

PRELIMINARY - SUBJECT TO CHANGE

LEGEND:

- SHIELD WIRE
- 115-kV CONDUCTOR (NO WIND, MAX. OPERATING TEMP.)
- 345-kV CONDUCTOR (NO WIND, MAX. OPERATING TEMP.)
- DISTRIBUTION CIRCUIT (NO WIND, MAX. OPERATING TEMP.)
- EXISTING R/W BOUNDARY
- PROPOSED R/W BOUNDARY (IF REQUIRED)
- NU OWNED PARCEL

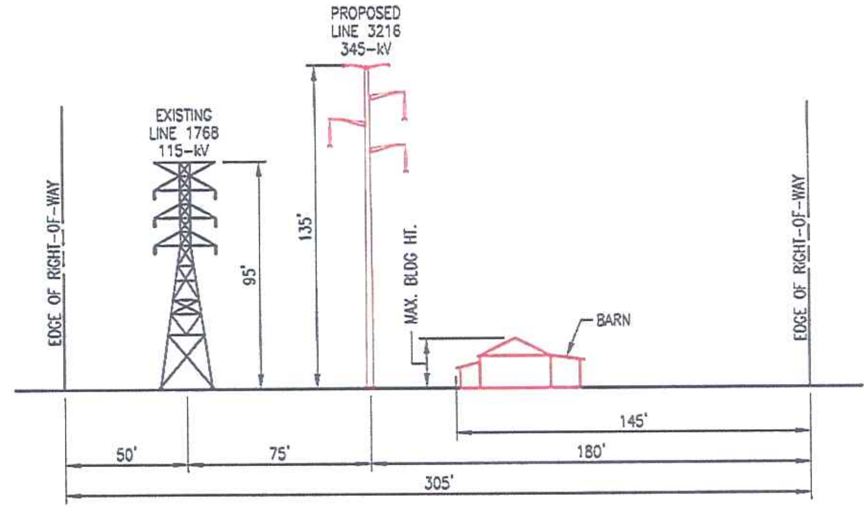
NOTES:

1. CLEARANCES AND DISTANCES SHOWN ARE BASED UPON PRELIMINARY STRUCTURE LAYOUTS AND LOCATIONS UTILIZING AERIAL LIDAR SURVEY. THEY ARE LIKELY TO CHANGE WITH FINAL DESIGN AND COMPLETION OF GROUND SURVEY.
2. HORIZONTAL CLEARANCES ARE BASED UPON THE PORTION OF THE OBJECT CLOSEST TO THE LINES. VERTICAL CLEARANCES ARE BASED UPON THE TALLEST PORTION OF THE OBJECT.
3. HORIZONTAL CLEARANCES UTILIZE POLE TIP DEFLECTION 5% OF THE POLE HEIGHT AT NU 9 PSF WIND AND 10% DEFLECTION AT NESC 100 MPH WIND.

Northeast Utilities System

TITLE GREATER SPRINGFIELD RELIABILITY PROJECT
NORTH BLOOMFIELD - AGAWAM
LL 1102, WEST SUFFIELD, CT

BY NHZ	CHKD PWW	APP	APP
DATE 4/7/09	DATE 4/7/09	DATE	DATE
SCALE NONE	MICROFILM DATE	DWG. NO. CSC-LL 1102	
P.A. #			



CROSS SECTION

N. BLOOMFIELD – AGAWAM

LL #	ADDRESS	MAX BLG HT. (FT)	WEATHER CASE	MODELED CLEARANCE (FT) HOR.	MODELED CLEARANCE (FT) VERT.
1104	1208 NEWGATE RD. W. SUFFIELD, CT	20.5	NESC 100 MPH WIND	0.0	65.4
			NU 9 PSF WIND	0.6	58.7
			MAX OPERATING	20.0	49.5

PRELIMINARY - SUBJECT TO CHANGE

LEGEND:

- SHIELD WIRE
- 115-kV CONDUCTOR (NO WIND, MAX. OPERATING TEMP.)
- 345-kV CONDUCTOR (NO WIND, MAX. OPERATING TEMP.)
- DISTRIBUTION CIRCUIT (NO WIND, MAX. OPERATING TEMP.)
- EXISTING R/W BOUNDARY
- PROPOSED R/W BOUNDARY (IF REQUIRED)
- NU OWNED PARCEL

NOTES:

1. CLEARANCES AND DISTANCES SHOWN ARE BASED UPON PRELIMINARY STRUCTURE LAYOUTS AND LOCATIONS UTILIZING AERIAL LIDAR SURVEY. THEY ARE LIKELY TO CHANGE WITH FINAL DESIGN AND COMPLETION OF GROUND SURVEY.
2. HORIZONTAL CLEARANCES ARE BASED UPON THE PORTION OF THE OBJECT CLOSEST TO THE LINES. VERTICAL CLEARANCES ARE BASED UPON THE TALLEST PORTION OF THE OBJECT.
3. HORIZONTAL CLEARANCES UTILIZE POLE TIP DEFLECTION 5% OF THE POLE HEIGHT AT NU 9 PSF WIND AND 10% DEFLECTION AT NESC 100 MPH WIND.

Northeast Utilities System

TITLE GREATER SPRINGFIELD RELIABILITY PROJECT
NORTH BLOOMFIELD – AGAWAM
LL 1104, WEST SUFFIELD, CT

BY NHZ	CHKD PMW	APP	APP
DATE 4/7/09	DATE 4/7/09	DATE	DATE
SCALE NONE	MICROFILM DATE	DWG. NO. CSC-LL 1104	
P.A. #			

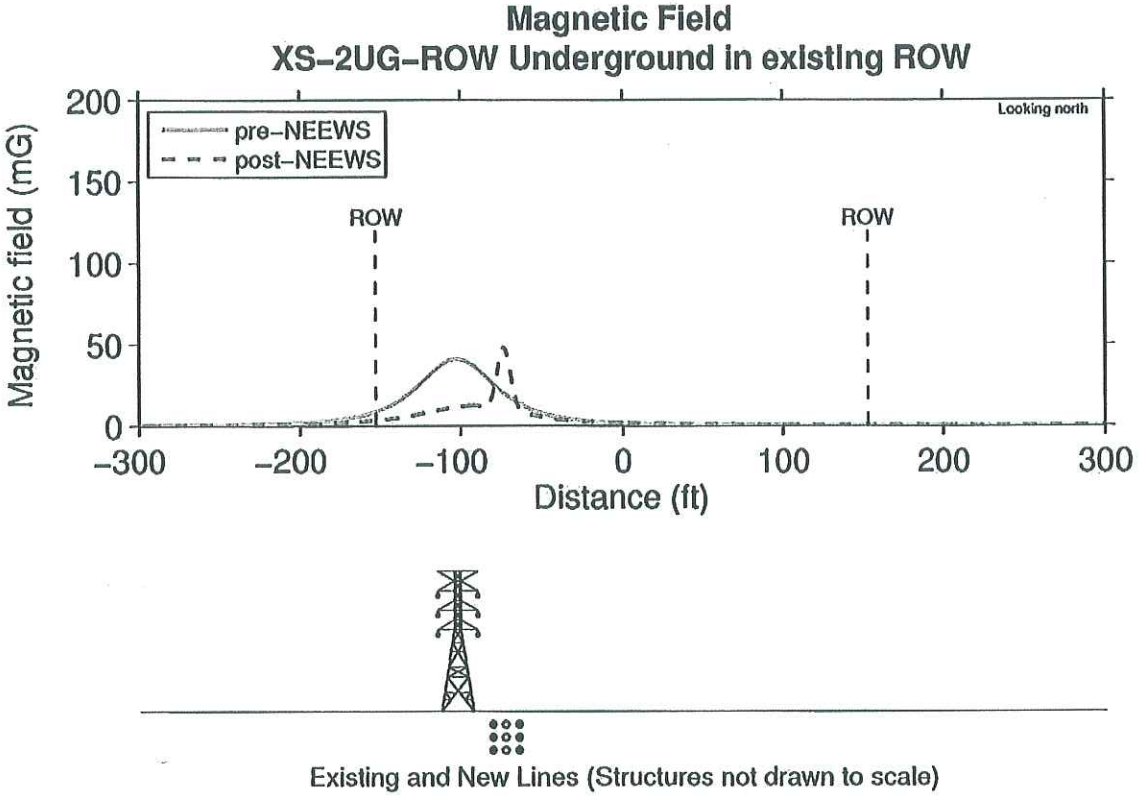
Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Since filing its Application, has CL&P become aware of any statements in that Application that require correction or clarification? If so, please provide such corrections/clarifications. Please treat this interrogatory as a continuing request, which CL&P should update periodically as appropriate.

Response:
CL&P is hereby providing the following corrections and/or clarifications to its Application:

1. On page O-15 in section O, the dispatch Table O-2 contains several errors. In the APL Pre-NEEWS column, the CT E-W transfer level should be 2,500 MW, in both of the AAL columns, pre and post NEEWS, the figure for West Springfield unit #3 should be 0 MW, and a row is missing for Cobble Mountain which was dispatched at 17 MW in all columns.
2. In section O, Figure O-10 and Table O-7 omitted pre-NEEWS information for ease of comparison. Replacements for Figure O-10 and Table O-7 are attached.
3. The overhead line's life-cycle cost figure of $84,900,000 in Table I-4 should be $85,070,105, matching the figure on page 1 of Appendix H-1.

Figure O-10: Profile XS-2 UG: 4.6-mile/3.6-mile UG line variations within ROW to Phelps Road transition station – Magnetic fields under pre-NEEWS (2012) and post-NEEWS (2017) conditions at AAL[1]



[1] Higher magnetic fields than shown in this profile would be produced over splicing vaults where the cables are more widely separated than shown here.

Table O-7: Summary of pre-NEEWS (2012) and post-NEEWS (2017) magnetic field levels at annual average loading (AAL) – underground variations for part of Granby Junction to CT/MA State Border (XS-2)

	Magnetic Field (mG)	
Cross Section	**West/North ROW***	**East/South ROW***
XS-2 – Pre	8.7	0.1
XS-2 – Post	23.5	12.6
XS-2 UG variation– Post (in ROW)	3.2	0.5
XS-2 UG variation– Post (under streets)	2.6	5.6

* 25 feet from centerline for in street underground construction

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
The Application (p. ES-18) states that, if the Southern Route Alternative (to GSRP), an alternative which CL&P apparently does not favor, is certificated by the Massachusetts Energy Facilities Siting Board, some 5.4 miles thereof would be located in Connecticut.

a) Does CL&P believe that this 5.4 mile section must be reviewed by the CSC in this docket, regardless of actions by the Mass EFSB, or that such Connecticut review would be needed only if the Mass EFSB rejects GSRP in favor of the Southern Route Alternative?
b) Please treat this interrogatory as a continuing request, which CL&P should update periodically as appropriate.

Response:
a) CL&P believes that the Connecticut sections of the Southern Route Alternative for the 345-kV line between the Agawam (MA) and Ludlow (MA) Substations should be reviewed by the CSC in this Docket, in conjunction with the Council's review of the proposed 345-kV line from North Bloomfield (CT) Substation to the MA/CT state border. Postponing a review of the Connecticut sections of the Southern Route Alternative until after final action by the Massachusetts EFSB would likely result in procedural complexity, project delay, and increased expense.

The timing of the respective decisions of the EFSB and the Siting Council will determine whether or not the Council needs to act on CL&P's request for approval of the Connecticut sections of the Southern Route Alternative. CL&P has asked the Council to grant contingent approval for this construction, should the Council render a final decision before the EFSB does. *See,* Application, Vol. 1, pp. 54, 55. On the other hand, if the EFSB acts first, the Siting Council will know whether or not the request for approval of the Connecticut portions of the Southern Route Alternative is moot.

As a practical matter, CL&P expects that the EFSB and the Siting Council will coordinate their proceedings to minimize inefficiency and the potential for inconsistent results.

b) CL&P will treat this interrogatory as a continuing request, and will update its response periodically as appropriate.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the Application, p. ES-31, which estimates the initial capital cost for GSRP and MMP as $728 Million (714 + 14), and that for the Connecticut portion as $147 Million (133 + 14).

a) Does CL&P still believe these dollar totals are accurate? If not, please provide updated figures as appropriate.

b) Please provide an estimate of the counterpart life cycle costs (both nominal and present-valued) for GSRP and MMP, and the Connecticut portion thereof, computed using CSC's guidelines for such calculations.

Response:
a) CL&P believes that the estimates submitted as part of CL&P's application are reasonable and meet ISO-NE's criteria for estimated costs of a Planned Project.

b) The estimate for the total GSRP project, including life-cycle costs in nominal and present value forms, are shown in the table below. Please note that these estimates do not consider substation costs in the calculation, as prescribed in the CSC guidelines.

GSRP - CT 345-kV LIFE CYCLE COSTS

ROUTE	INITIAL CAPITAL COST	PRESENT VALUE LIFE CYCLE COST	NOMINAL VALUE LIFE CYCLE COST*
All Overhead	$ 41,290,000	$ 85,070,000	$ 391,907,000
All Underground in ROW	$ 454,568,000	$ 648,112,000	$ 2,370,319,000
All Underground Along Adjacent Road	$ 478,546,000	$ 682,006,000	$ 2,493,520,000

GSRP TOTAL LIFE CYCLE COSTS

ROUTE	INITIAL CAPITAL COST	PRESENT VALUE LIFE CYCLE COST	NOMINAL VALUE LIFE CYCLE COST*
345-kV All OH	$ 250,449,000	$ 450,814,000	$ 1,921,580,000
115-kV All OH	$ 137,195,000	$ 218,924,000	$ 856,194,000
TOTAL	$ 387,644,000	$ 669,738,000	$ 2,777,774,000

MMP LIFE CYCLE COSTS

ROUTE	INITIAL CAPITAL COST	PRESENT VALUE LIFE CYCLE COST	NOMINAL VALUE LIFE CYCLE COST*
115-kV All OH	$ 13,728,000	$ 21,029,000	$ 79,534,000

*Nominal value is calculated by removing the present value (PV) factor from the spreadsheet calculations.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
According to a summary posted on the Edison Electric Institute website, the American Recovery and Reinvestment Act of 2009 ("ARRA") provides substantial funds to modernize the electric grid, including through matching grants, as well as funds for state energy programs.

a) Might the GSRP/MMP project qualify for funding under one or more ARRA programs?
b) Could CL&P apply for ARRA funds directly, or would any such application require the cooperation or intervention of others (e.g., a State of Connecticut agency)?
c) Has CL&P taken any steps to secure ARRA funds for GSRP/MMP, in order to mitigate the cost to ratepayers of this project? If yes, please specifically describe those steps. If no, why not?

Response:
a) The GSRP and MMP might qualify for funding support under the Temporary Technology Loan Guarantee Program established by the American Recovery and Reinvestment Act of 2009 (ARRA). This program extended the authority of the U.S. Department of Energy (DOE) to issue loan guarantees and appropriated $6 billion for this program (to underwrite up to $60 billion in loans). The act amended the Energy Policy Act of 2005 by adding a new section defining eligible technologies for new loan guarantees. Eligible projects include renewable energy projects that generate electricity or thermal energy and facilities that manufacture related components, electric power transmission systems, and innovative biofuels projects. Eligible projects need to begin construction on or before September 30, 2011.

We are still awaiting clarification from DOE on the exact guidelines for this program to determine whether the GSRP and MMP qualify or not. We are also evaluating whether these projects would qualify under other programs.

b) The company is awaiting DOE guidance on application requirements for the Temporary Technology Loan Guarantee Program.

c) We have begun investigating how this new program might work and the implications to our customers and our company. We expect the DOE to release additional guidelines for this program later this Spring. CL&P will determine its next actions after analyzing the applicability of the new guidelines to the GSRP and MMP, assessing a number of technical and financial issues and working with the State to assess our combined ARRA priorities and its impact to customers.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference Section H.5.1.1 of the Application (p. H-49). The title of this Section states that it provides comparative cost estimates [initial capital costs, apparently] for four potential underground line route variations versus the comparable overhead line sections that CL&P recommends. However, the discussion following this title does not appear to provide the indicated comparisons.

a) Please provide those cost comparisons, in specific detail for the four route variations there discussed.
b) Does CL&P believe that any incremental costs associated with such undergrounding would be treated by ISO-New England as eligible for regional (i.e., New England-wide) cost support, or would be treated as localized costs (i.e., to be borne by Connecticut ratepayers only)?
c) Assume that any extra costs for such underground construction would be treated as a localized cost. On that basis, please provide a comparative estimate of the cost to Connecticut ratepayers for each potential underground route variation versus the comparable overhead line sections that CL&P recommends.

Response:

a) A planning grade estimate of the capital cost of each of the underground route variations and the capital cost of the overhead section that each would replace are provided in the attached Excel files. The following table compares those costs:

Comparison of Initial Capital Cost of Underground Variations To Cost of Overhead Sections They Would Replace

1	2	3	4	5	6	7
UG Variation	Length of OH Line Replaced by UG Variation	Cost of UG Variation	Cost of OH Segment Replaced	Excess UG Cost (3) - (4)	UG Cost Multiple (3) ÷ (4)	OH Section To Be Replaced (Existing Structures)
3.6 Miles in-ROW	3.6	$166,000,000	$12,400,000	$153,600,000	13.4	Str 3187 to Str 3219
4.6 miles in-ROW	4.6	$200,300,000	$15,500,000	$184,800,000	12.9	Str 3177 to Str 3219
Newgate Road	4.6	$262,800,000	$15,500,000	$247,300,000	17.0	Str 3177 to Str 3219
RT 167/187	5.0	$337,500,000	$15,500,000	$322,000,000	21.8	Str 3177 to Str 3224

b) CL&P believes that the incremental costs associated with such undergrounding would not be treated by ISO-New England as eligible for regional cost support, but rather that they would be treated as localized costs. Experience has shown that where a line (or a line segment) that would normally be constructed overhead in conformity with good utility practice is instead constructed underground, the excess cost of underground construction will not be included in regional rates, but will be "localized."

c) Since costs of transmission improvements that qualify for regional rate support are allocated according to New England load share, approximately 27% of such costs are allocated to Connecticut load. The effect of localization of excess underground costs would be that Connecticut consumers would bear approximately 27% of what the cost of an overhead line (or segment) would have been, plus 100% of the difference between that cost and the cost of an underground line(or segment), including transition stations. Following is a comparative estimate of the cost to Connecticut ratepayers for each of the potential underground route variations versus the comparable overhead line sections that CL&P recommends.

Comparison of Initial Cost to Be Recovered Through Connecticut Rates: Underground Variations vs. Overhead Sections They Would Replace

1	2	3	4	5	6	7
UG Variation	Cost of UG Variation	Cost of OH Segment Replaced	Excess UG Cost (2) - (3)	Cost to CT of OH Section (3) x 27%	Total Cost to CT of UG After Localization (4) + (5)	Multiple UG Cost to CT After Localization (6) ÷ (5)
3.6 Miles in-ROW	$166,000,000	$12,400,000	$153,600,000	$3,348,000	$156,948,000	46.9
4.6 miles in-ROW	$200,300,000	$15,500,000	$184,800,000	$4,185,000	$188,985,000	45.2
Newgate Road	$262,800,000	$15,500,000	$247,300,000	$4,185,000	$251,485,000	60.1
RT 167/187	$337,500,000	$15,500,000	$322,000,000	$4,185,000	$326,185,000	77.9

NUSCO - Greater Springfield -East Granby 345kV (SR 187)
UG LENGTH (Miles) 8.00
Description: 1 circuit, 3 cables per phase, 3 splices per vault
Note: The individual unit rates below provide a preliminary estimate of the associated costs prior to design. The unit rates may vary in construction bids and during construction due to placement of the contractors profit and contingency. The unit rates have been increased in an effort to anticipate unforeseen conditions and unknown market fluctuations. Although the unit rates may vary, the overall cost per mile is within the industry standard level of accuracy.

UNDERGROUND CONSTRUCTION

Item No.	Item	Unit	Quantity	Unit Price	Cost	Comments
1	Admin/Mob/De-mob by Contractor	L.S.	1	L.S.	$1,716,020	1% of Constuction Cost
2	Material Testing	L.F.	42,240	$21	$881,211	Total Length
3	Construction Staking/Survey	L.F.	42,240	$3	$126,720	Total Length
4	Traffic Control, Flagger & Police	L.S.	1	L.S.	$6,135,000	
5	Existing Utility Locates (potholing)	L.S.	1	$464,000	$464,000	
6	Trench Excavation	L.F.	43,085	$81	$3,489,869	1.02 X Total Length
6a	Rock Excavation (Trench)	L.F.	43,085	$281	$12,106,829	1.02 X Total Length
7	Existing Utility Relocation	Mi.	8.00	$246,000	$1,968,000	Budget
8	HDD	L.S.	1	L.S.	$0	Budget
9	Jack & Bore	L.S.	1	L.S.	$960,000	Budget
10	Duct Bank (9)-8" PVC & (7)-2" PVC	L.F.	43,085	$446	$19,215,821	1.02 X Total Length
11	(9)-345kV XLPE Cables	L.F.	44,352	$1,170	$51,891,840	1.05 X Total Length
11a	Installation of (9)-345kV XLPE Cables	L.F.	44,352	$126	$5,588,352	1.05 X Total Length
12	(3) Fiber Optic Cables -Relaying	L.F.	43,085	$18	$775,526	1.02 X Total Length
13	Grounding System	L.S.	1	L.S.	$2,322,000	
14	Temperature Monitoring System	L.S.	1	L.S.	$926,000	
15	Fluidized Thermal Backfill (FTB)	L.F.	43,085	$208	$8,961,638	1.02 X Total Length
16	Pavement Restoration	L.F.	43,085	$188	$8,099,942	1.02 X Total Length
17	Plating	L.S.	1	L.S.	$94,000	
18	Traffic Signal Loop Detection Repair	L.S.	1	L.S.	$400,000	
19	Splice Vaults	Ea.	78	$93,000	$7,254,000	(Total Length/1,650)*3
19a	Rock Excavation (Vault)	Ea.	78	$33,000	$2,574,000	
20	Splices	Ea.	234	$53,650	$12,554,100	
21	Terminations	Ea.	18	$64,070	$1,153,260	
22	Termination Structure	Ea.	18	$13,130	$236,340	
23	Cathodic Protection	L.F.	21,120	$5	$105,600	Budget
24	Communication Handholes	Ea.	52	$3,981	$207,003	
25	Spare Parts	L.S.	1	L.S.	$684,100	2 reels of 2000' of cable, 4 splices, 2 term.
26	Contaminated Soils Testing and Disposal	L.S.	1	L.S.	$8,632,339	
27	Thermal Couple	L.F.	42,240	$5	$211,200	Budget
28	Land Acquisition	L.S.	1	L.S.	$755,963	
29	Transition Station	L.S.	2	$6,791,625	$13,583,250	
	Underground Subtotal				$174,073,923	
	Engineering & Construction Management				$18,208,132	10% of Underground Subtotal with 4.6% tax
	All-In Factor				$145,172,952	
	Ungerground Total				**$337,455,008**	
	Cost per Mile				**$42,181,876**	

*All-In factor includes escalation, AFUDC, contingency, directs, and indirects

NUSCO - Greater Springfield- 345kV UG in Existing ROW

UG LENGTH (Miles) 4.60

Description: 1 circuit, 3 cables per phase, 3 splices per vault

Note: The individual unit rates below provide a preliminary estimate of the associated costs prior to design. The unit rates may vary in construction bids and during construction due to placement of the contractors profit and contingency. The unit rates have been increased in an effort to anticipate unforeseen conditions and unknown market fluctuations. Although the unit rates may vary, the overall cost per mile is within the industry standard level of accuracy.

UNDERGROUND CONSTRUCTION

Item No.	Item	Unit	Quantity	Unit Price	Cost	Comments
1	Admin/Mob/De-mob by Contractor	L.S.	1	L.S.	$977,470	1% of Constuction Cost
2	Material Testing	L.F.	24,288	$21	$506,696	Total Length
3	Construction Staking/Survey	L.F.	24,288	$3	$72,864	Total Length
4	Traffic Control, Flagger & Police	L.S.	0	L.S.	$0	
5	Existing Utility Locates (potholing)	L.S.	0	$266,800	$0	
6	Trench Excavation	L.F.	24,774	$46	$1,139,593	1.02 X Total Length
6a	Rock Excavation (Trench)	L.F.	24,774	$231	$5,722,739	1.02 X Total Length
7	Existing Utility Relocation	Mi.	0.00	$246,000	$0	Budget
8	HDD	L.S.	0	L.S.	$0	Budget
9	Jack & Bore	L.S.	0	L.S.	$0	Budget
10	Duct Bank (9)-8" PVC & (7)-2" PVC	L.F.	24,774	$446	$11,049,097	1.02 X Total Length
11	(9)-345kV XLPE Cables	L.F.	25,502	$1,170	$29,837,808	1.05 X Total Length
11a	Installation of (9)-345kV XLPE Cables	L.F.	25,502	$126	$3,213,302	1.05 X Total Length
12	(3) Fiber Optic Cables -Relaying	L.F.	24,774	$18	$445,928	1.02 X Total Length
13	Grounding System	L.S.	1	L.S.	$1,338,000	
14	Temperature Monitoring System	L.S.	1	L.S.	$683,000	
15	Fluidized Thermal Backfill (FTB)	L.F.	24,774	$208	$5,152,942	1.02 X Total Length
16	Pavement Restoration	L.F.	0	$188	$0	1.02 X Total Length
17	Plating	L.S.	0	L.S.	$0	
18	Traffic Signal Loop Detection Repair	L.S.	0	L.S.	$0	
19	Splice Vaults	Ea.	45	$93,000	$4,185,000	(Total Length/1,650)*3
19a	Rock Excavation (Vault)	Ea.	45	$33,000	$1,485,000	
20	Splices	Ea.	135	$53,650	$7,242,750	
21	Terminations	Ea.	18	$64,070	$1,153,260	
22	Termination Structure	Ea.	0	$13,130	$0	
23	Cathodic Protection	L.F.	12,144	$5	$60,720	Budget
24	Communication Handholes	Ea.	30	$3,981	$119,425	
25	Spare Parts	L.S.	1	L.S.	$684,100	2 reels of 2000' of cable, 4 splices, 2 term.
26	Contaminated Soils Testing and Disposal	L.S.	1	L.S.	$4,690,833	
27	Thermal Couple	L.F.	24,288	$5	$121,440	Budget
28	Land Acquisition	L.S.	0	L.S.	$0	
29	Transition Station	L.S.	2	$9,421,225	$18,842,450	
30	Clearing and Grubbing / Access Road	L.S.	1	L.S.	$4,586,061	
	Underground Subtotal				$103,310,478	
	Engineering & Construction Management				$10,806,276	10% of Underground Subtotal with 4.6% tax
	All-In Factor				$86,158,149	
	Ungerground Total				**$200,274,903**	
	Cost per Mile				**$43,538,022**	

*All-In factor includes escalation, AFUDC, contingency, directs, and indirects

UG Assumptions:

Estimate assumes 2007 dollars.

Engineering and Program Management is estimated at 10% of total cost

Real estate is estimated a $6 psf

Includes CT sales tax and assumes all materials will be contractor-provided (i.e. not on an NU PO)

Includes 5 acre of land acquisition for transition station

NUSCO - Greater Springfield -East Granby 345kV (Newgate Route)
UG LENGTH (Miles) 6.00
Description: 1 circuit, 3 cables per phase, 3 splices per vault
Note: The individual unit rates below provide a preliminary estimate of the associated costs prior to design. The unit rates may vary in construction bids and during construction due to placement of the contractors profit and contingency. The unit rates have been increased in an effort to anticipate unforeseen conditions and unknown market fluctuations. Although the unit rates may vary, the overall cost per mile is within the industry standard level of accuracy.

UNDERGROUND CONSTRUCTION

Item No.	Item	Unit	Quantity	Unit Price	Cost	Comments
1	Admin/Mob/De-mob by Contractor	L.S.	1	L.S.	$1,335,890	1% of Constuction Cost
2	Material Testing	L.F.	31,680	$21	$660,908	Total Length
3	Construction Staking/Survey	L.F.	31,680	$3	$95,040	Total Length
4	Traffic Control, Flagger & Police	L.S.	1	L.S.	$4,657,000	
5	Existing Utility Locates (potholing)	L.S.	1	$348,000	$348,000	
6	Trench Excavation	L.F.	32,314	$81	$2,617,402	1.02 X Total Length
6a	Rock Excavation (Trench)	L.F.	32,314	$281	$9,080,122	1.02 X Total Length
7	Existing Utility Relocation	Mi.	6.00	$246,000	$1,476,000	Budget
8	HDD	L.S.	1	L.S.	$0	Budget
9	Jack & Bore	L.S.	1	L.S.	$960,000	Budget
10	Duct Bank (9)-8" PVC & (7)-2" PVC	L.F.	32,314	$446	$14,411,866	1.02 X Total Length
11	(9)-345kV XLPE Cables	L.F.	33,264	$1,170	$38,918,880	1.05 X Total Length
11a	Installation of (9)-345kV XLPE Cables	L.F.	33,264	$126	$4,191,264	1.05 X Total Length
12	(3) Fiber Optic Cables -Relaying	L.F.	32,314	$18	$581,645	1.02 X Total Length
13	Grounding System	L.S.	1	L.S.	$1,770,000	
14	Temperature Monitoring System	L.S.	1	L.S.	$787,000	
15	Fluidized Thermal Backfill (FTB)	L.F.	32,314	$208	$6,721,229	1.02 X Total Length
16	Pavement Restoration	L.F.	32,314	$188	$6,074,957	1.02 X Total Length
17	Plating	L.S.	1	L.S.	$99,000	
18	Traffic Signal Loop Detection Repair	L.S.	1	L.S.	$300,000	
19	Splice Vaults	Ea.	60	$93,000	$5,580,000	(Total Length/1,650)*3
19a	Rock Excavation (Vault)	Ea.	60	$33,000	$1,980,000	
20	Splices	Ea.	180	$53,650	$9,657,000	
21	Terminations	Ea.	18	$64,070	$1,153,260	
22	Termination Structure	Ea.	18	$13,130	$236,340	
23	Cathodic Protection	L.F.	15,840	$5	$79,200	Budget
24	Communication Handholes	Ea.	40	$3,981	$159,233	
25	Spare Parts	L.S.	1	L.S.	$684,100	2 reels of 2000' of cable, 4 splices, 2 term.
26	Contaminated Soils Testing and Disposal	L.S.	1	L.S.	$6,567,151	
27	Thermal Couple	L.F.	31,680	$5	$158,400	Budget
28	Land Acquisition	L.S.	1	L.S.	$629,025	
29	Transition Station	L.S.	2	$6,791,625	$13,583,250	
	Underground Subtotal				$135,553,161	
	Engineering & Construction Management				$14,178,861	10% of Underground Subtotal with 4.6% tax
	All-In Factor				$113,047,676	
	Ungerground Total				**$262,779,698**	
	Cost per Mile				**$43,796,616**	

*All-In factor includes escalation, AFUDC, contingency, directs, and indirects

UG Assumptions:

Estimate assumes 2007 dollars.
Engineering and Program Management is estimated at 10% of total cost
Real estate is estimated a $6 psf
Estimates assume 50% of splice vaults will be located off-roadways on private property
Permanent easement size is estimated at 12,000 SF
Temporary easement size is estimated at 4,300 SF
Includes CT sales tax and assumes all materials will be contractor-provided (i.e. not on an NU PO)

NUSCO - Greater Springfield -East Granby 345kV (SR 187)
UG LENGTH (Miles) 8.00
Description: 1 circuit, 3 cables per phase, 3 splices per vault
Note: The individual unit rates below provide a preliminary estimate of the associated costs prior to design. The unit rates may vary in construction bids and during construction due to placement of the contractors profit and contingency. The unit rates have been increased in an effort to anticipate unforeseen conditions and unknown market fluctuations. Although the unit rates may vary, the overall cost per mile is within the industry standard level of accuracy.

UNDERGROUND CONSTRUCTION

Item No.	Item	Unit	Quantity	Unit Price	Cost	Comments
1	Admin/Mob/De-mob by Contractor	L.S.	1	L.S.	$1,716,020	1% of Constuction Cost
2	Material Testing	L.F.	42,240	$21	$881,211	Total Length
3	Construction Staking/Survey	L.F.	42,240	$3	$126,720	Total Length
4	Traffic Control, Flagger & Police	L.S.	1	L.S.	$6,135,000	
5	Existing Utility Locates (potholing)	L.S.	1	$464,000	$464,000	
6	Trench Excavation	L.F.	43,085	$81	$3,489,869	1.02 X Total Length
6a	Rock Excavation (Trench)	L.F.	43,085	$281	$12,106,829	1.02 X Total Length
7	Existing Utility Relocation	Mi.	8.00	$246,000	$1,968,000	Budget
8	HDD	L.S.	1	L.S.	$0	Budget
9	Jack & Bore	L.S.	1	L.S.	$960,000	Budget
10	Duct Bank (9)-8" PVC & (7)-2" PVC	L.F.	43,085	$446	$19,215,821	1.02 X Total Length
11	(9)-345kV XLPE Cables	L.F.	44,352	$1,170	$51,891,840	1.05 X Total Length
11a	Installation of (9)-345kV XLPE Cables	L.F.	44,352	$126	$5,588,352	1.05 X Total Length
12	(3) Fiber Optic Cables -Relaying	L.F.	43,085	$18	$775,526	1.02 X Total Length
13	Grounding System	L.S.	1	L.S.	$2,322,000	
14	Temperature Monitoring System	L.S.	1	L.S.	$926,000	
15	Fluidized Thermal Backfill (FTB)	L.F.	43,085	$208	$8,961,638	1.02 X Total Length
16	Pavement Restoration	L.F.	43,085	$188	$8,099,942	1.02 X Total Length
17	Plating	L.S.	1	L.S.	$94,000	
18	Traffic Signal Loop Detection Repair	L.S.	1	L.S.	$400,000	
19	Splice Vaults	Ea.	78	$93,000	$7,254,000	(Total Length/1,650)*3
19a	Rock Excavation (Vault)	Ea.	78	$33,000	$2,574,000	
20	Splices	Ea.	234	$53,650	$12,554,100	
21	Terminations	Ea.	18	$64,070	$1,153,260	
22	Termination Structure	Ea.	18	$13,130	$236,340	
23	Cathodic Protection	L.F.	21,120	$5	$105,600	Budget
24	Communication Handholes	Ea.	52	$3,981	$207,003	
25	Spare Parts	L.S.	1	L.S.	$684,100	2 reels of 2000' of cable, 4 splices, 2 term.
26	Contaminated Soils Testing and Disposal	L.S.	1	L.S.	$8,632,339	
27	Thermal Couple	L.F.	42,240	$5	$211,200	Budget
28	Land Acquisition	L.S.	1	L.S.	$755,963	
29	Transition Station	L.S.	2	$6,791,625	$13,583,250	
	Underground Subtotal				$174,073,923	
	Engineering & Construction Management				$18,208,132	10% of Underground Subtotal with 4.6% tax
	All-In Factor				$145,172,952	
	Ungerground Total				**$337,455,008**	
	Cost per Mile				**$42,181,876**	

*All-In factor includes escalation, AFUDC, contingency, directs, and indirects

Project **Greater Springfield Reliability Project**
Overhead Construction in Connecticut

Task	Activity	Estimate
1	Clearing, Real Estate and Access Roads	$ 4,890,000
2	Structures and Foundation	$ 13,496,697
3	Conductor and Shield Wire/OPGW	$ 4,987,570
4	Engineering, Prog Mgmt and Const Mgmt	$ 2,337,427
5	CT Taxes	$ 504,470
6	NU Labor and overheads	$ 2,650,293
7	Contingency	$ 4,459,000
8	Escalation	$ 4,576,000
9	AFUDC	$ 3,389,000
10	**Total Project Cost**	**$ 41,290,457**

Notes: Costs are for construction of Overhead lines (base design) in CT only.
EMF BMP designs, and substation costs are not included.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the two all-underground route variations evaluated for the Connecticut portion of GSRP (discussed on p. H-20 and otherwise).
(a) CL&P states (p. H-12 & H-26) that it has assumed that both such line variations are technically feasible. What is the basis for this assumption?
(b) Has CL&P performed any studies of whether either or both of these all-underground route variations would have an adverse effect on electric system reliability? If so, please provide copies of any such studies.

Response:
(a) When the application was prepared, CL&P assumed that the variations would pass screening tests for temporary overvoltages (TOV), however these tests had not yet been completed.
(b) The attached report prepared by EnerNex in January 2009 indicated that with 12.2 miles of underground 345-kV cables between North Bloomfield Substation and the Massachusetts border in a new North Bloomfield to Agawam 345-kV circuit, the temporary overvoltages passed screening criteria. Based on this finding, the underground cable-route variations, each of which is approximately 12 miles in length, would be technically feasible. The same report indicates that TOVs do become a problem if this undergrounding of the proposed new 345-kV circuit were to be extended from the North Bloomfield Substation to the Agawam Substation, a distance of 21. 5 miles. The report indicates that 21.5 miles of underground cables in the new 345-kV circuit from North Bloomfield to Agawam would have an adverse effect on electric system reliability. A technical approval by ISO-NE would also be required to confirm the technical feasibility of underground variations to the proposed overhead line.

Please note that the term "tehnically feasible" used in the interrogatory and in this response is not the opposite of the term "technologically infeasible" in Conn. Gen. Stats. sec. 16-50p(i) (the "underground presumption" provision) since the latter term incorporates concepts of comparative reliability of overhead and underground lines and unreasonable burdens on ratepayers from the excess cost of underground construction.

GSRP1 and GSRP2 TOV Results, Without CCRP & ISRP

The TOV simulations have been performed with GSRP1 (12.2 miles underground from North Bloomfield to Agawam) and GSRP2 (21.5 miles underground, no overhead). The 345-kV lines of CCRP (Frost Bridge-North Bloomfield) and ISRP (Card-Lake Road and Lake Road-West Farnum) are not in the system model.

Tables 1 and 2 summarize the TOV results for three fault locations and four contingency conditions. The T2 and T6 screening violations are plotted in Figures 1-5.

With GSRP2, there are 2-cycle and 6-cycle TOV results above the screening criteria, with either Agawam-Ludlow (new line) or North Bloomfield-Barbour Hill-Manchester (Line 395S) out of service. Either of those two contingencies creates a radial underground transmission line feeding 345/115-kV autotransformers, which represents a severe configuration for TOV. A similar condition exists with GSRP1, but with significantly less cable capacitance the T2 and T6 levels are significantly lower compared to GSRP2.

It is recommended that the total amount of cable capacitance in GSRP2 be reduced, since the T6 levels pose a risk to nearby surge arresters.

Table 1 -Summary of GSRP1 Results for TOV

		T2			T6		
Contingency	Fault	Max [pu]	Max Bus	Counts	Max [pu]	Max Bus	Counts
Base Case	N Bloom	1.199	N.BLOOMFLD2A	0	1.207	N.BLOOMFLD2A	0
	Agawam	1.193	N.BLOOMFLD2A	0	1.190	N.BLOOMFLD2A	0
	Ludlow	1.249	N.BLOOMFLD2A	0	1.193	N.BLOOMFLD2A	0
Agawam-Ludlow Out	N Bloom	1.393	N.BLOOMFLD2A	0	1.462	N.BLOOMFLD2A	0
	Agawam	1.409	N.BLOOMFLD2A	0	1.408	N.BLOOMFLD2A	0
	Ludlow	1.142	N.BLOOMFLD2A	0	1.105	N.BLOOMFLD2A	0
2 NBloom Autos Out	N Bloom	1.372	N.BLOOMFLD2A	0	1.352	N.BLOOMFLD2A	0
	Agawam	1.298	N.BLOOMFLD2A	0	1.319	N.BLOOMFLD2A	0
	Ludlow	1.320	N.BLOOMFLD2A	0	1.317	N.BLOOMFLD2A	0
Line 395S Out	N Bloom	1.494	N.BLOOMFLD2A	0	1.491	N.BLOOMFLD2A	0
	Agawam	1.511	N.BLOOMFLD2A	0	1.509	N.BLOOMFLD2A	0
	Ludlow	1.456	N.BLOOMFLD2A	0	1.381	N.BLOOMFLD2A	0
Line 301-2 Out	N Bloom	1.186	N.BLOOMFLD2A	0	1.220	N.BLOOMFLD2A	0
	Agawam	1.184	N.BLOOMFLD2A	0	1.219	N.BLOOMFLD2A	0
	Ludlow	1.281	N.BLOOMFLD2A	0	1.194	N.BLOOMFLD2A	0
Totals		1.511		0	1.509		0

Table 2 - Summary of GSRP2 Results for TOV

		T2			T6		
Contingency	Fault	Max [pu]	Max Bus	Counts	Max [pu]	Max Bus	Counts
Base Case	N Bloom	1.421	N.BLOOMFLD2A	0	1.324	N.BLOOMFLD2A	0
	Agawam	1.424	N.BLOOMFLD2A	0	1.322	N.BLOOMFLD2A	0
	Ludlow	1.345	N.BLOOMFLD2A	0	1.234	N.BLOOMFLD2A	0
Agawam-Ludlow Out	N Bloom	1.852	N.BLOOMFLD2A	1	1.750	N.BLOOMFLD2A	1
	Agawam	1.808	N.BLOOMFLD2A	1	1.681	N.BLOOMFLD2A	1
	Ludlow	1.084	NORWALK 9S	0	1.071	Singer n	0
2 NBloom Autos Out	N Bloom	1.427	N.BLOOMFLD2A	0	1.329	N.BLOOMFLD2A	0
	Agawam	1.468	N.BLOOMFLD2A	0	1.361	N.BLOOMFLD2A	0
	Ludlow	1.384	N.BLOOMFLD2A	0	1.246	N.BLOOMFLD2A	0
Line 395S Out	N Bloom	1.760	N.BLOOMFLD2A	1	1.624	N.BLOOMFLD2A	1
	Agawam	1.752	N.BLOOMFLD2A	1	1.597	N.BLOOMFLD2A	1
	Ludlow	1.658	N.BLOOMFLD2A	1	1.429	N.BLOOMFLD2A	0
Line 301-2 Out	N Bloom	1.394	N.BLOOMFLD2A	0	1.372	N.BLOOMFLD2A	0
	Agawam	1.394	N.BLOOMFLD2A	0	1.357	N.BLOOMFLD2A	0
	Ludlow	1.277	N.BLOOMFLD2A	0	1.214	N.BLOOMFLD2A	0
Totals		1.852		5	1.750		4

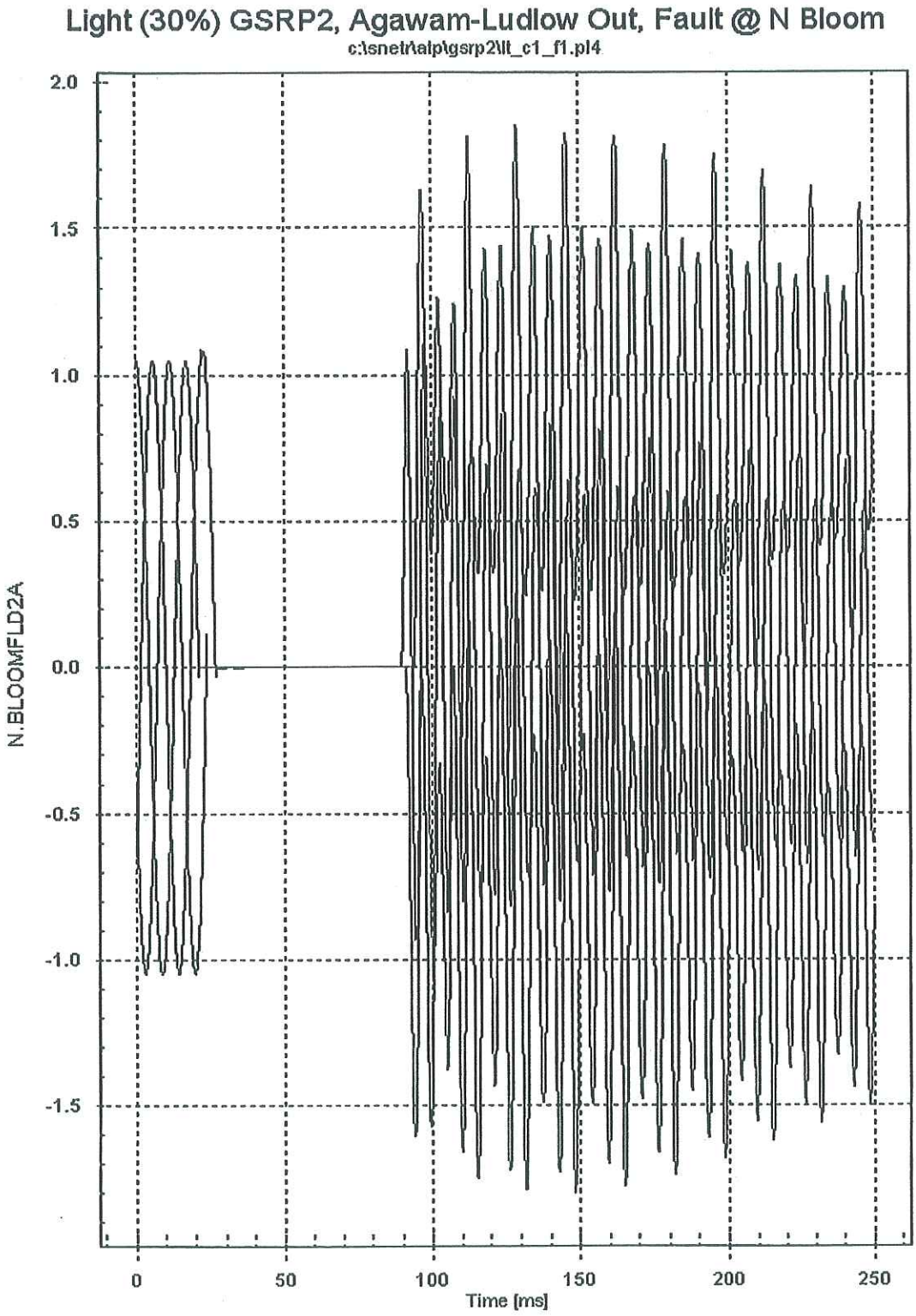


Figure 1: Light (30%) GSRP2, Agawam-Ludlow Out, Fault @ N Bloom

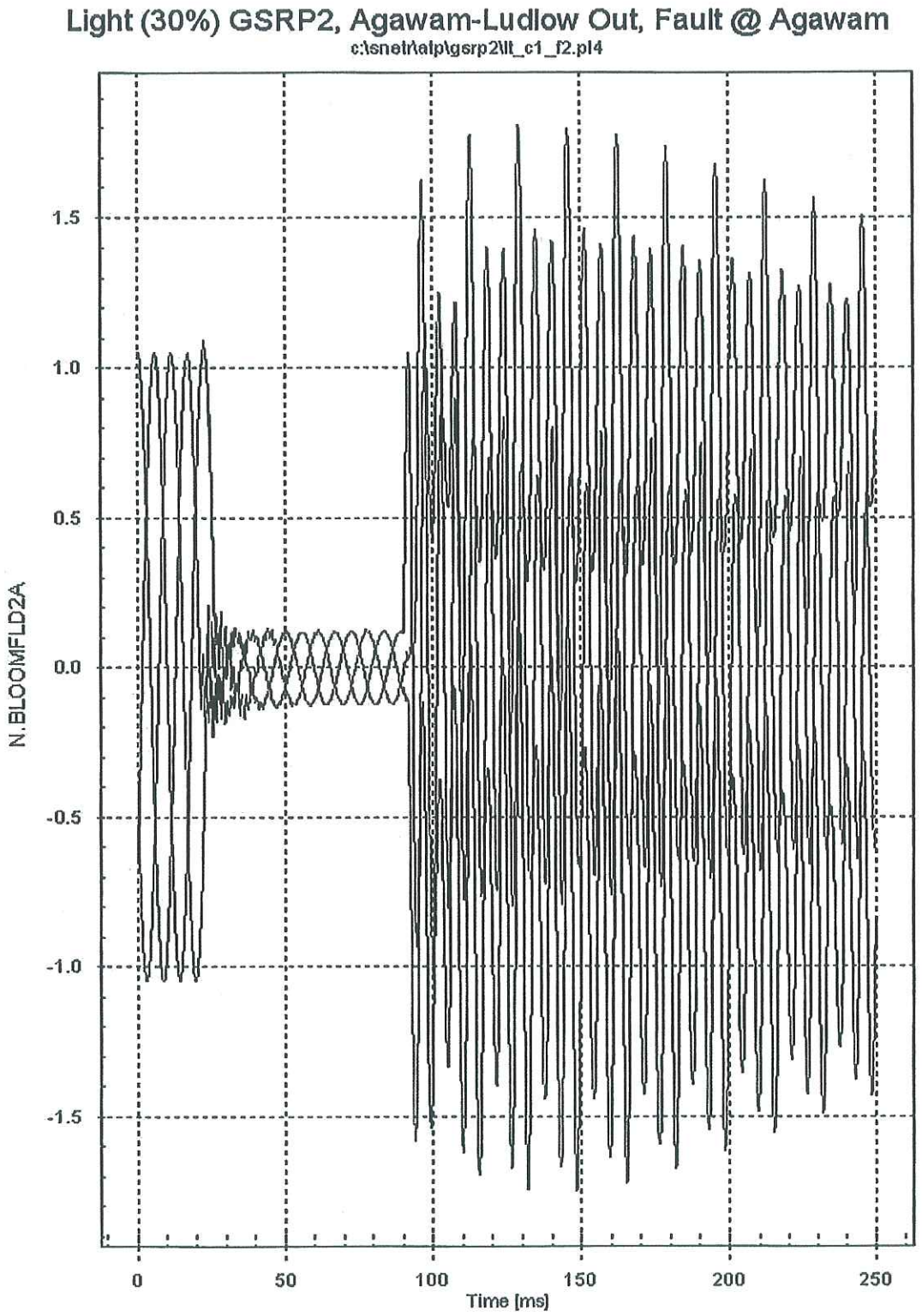


Figure 2: Light (30%) GSRP2, Agawam-Ludlow Out, Fault @ Agawam

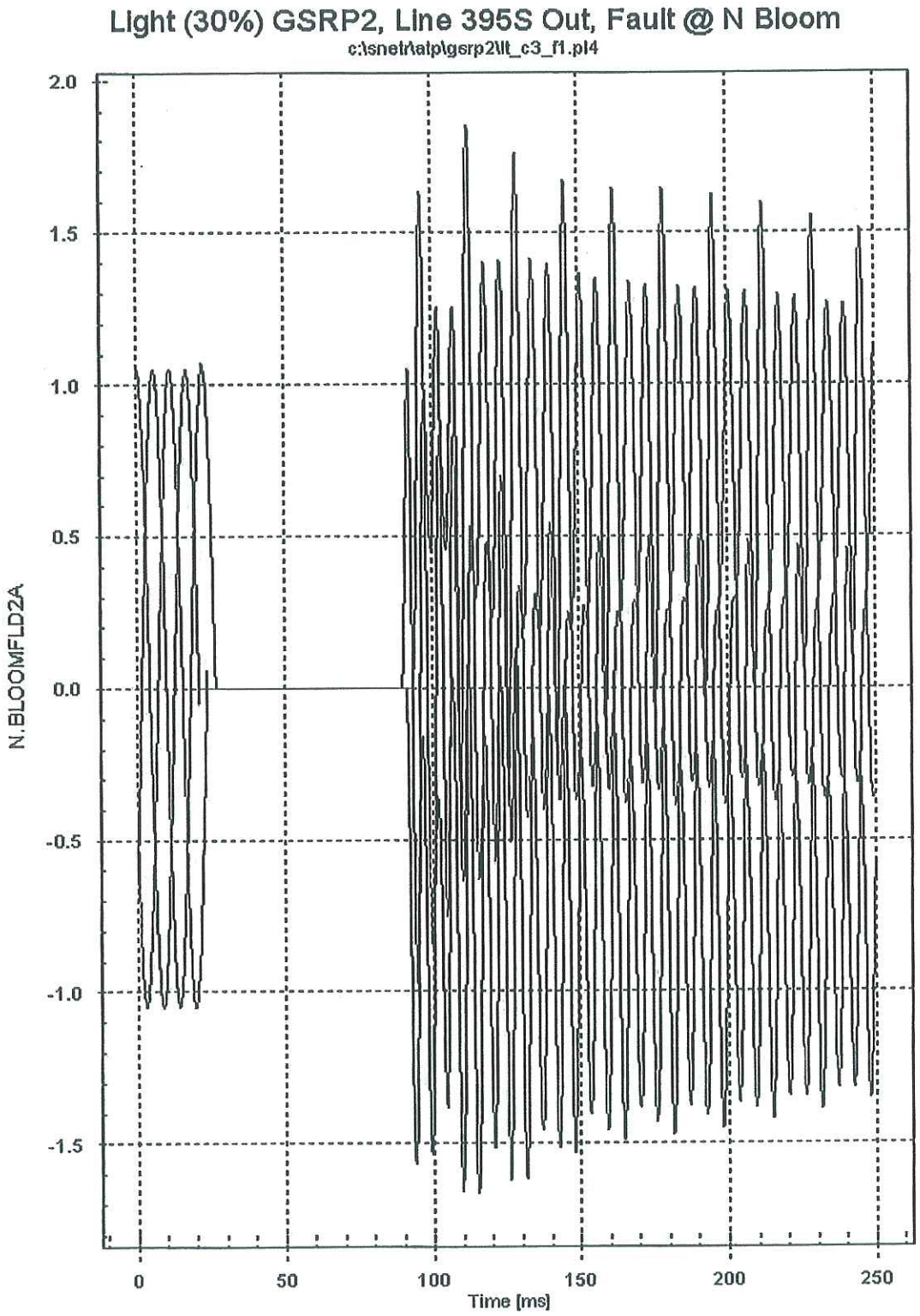


Figure 3: Light (30%) GSRP2, Line 395S Out, Fault @ N Bloom

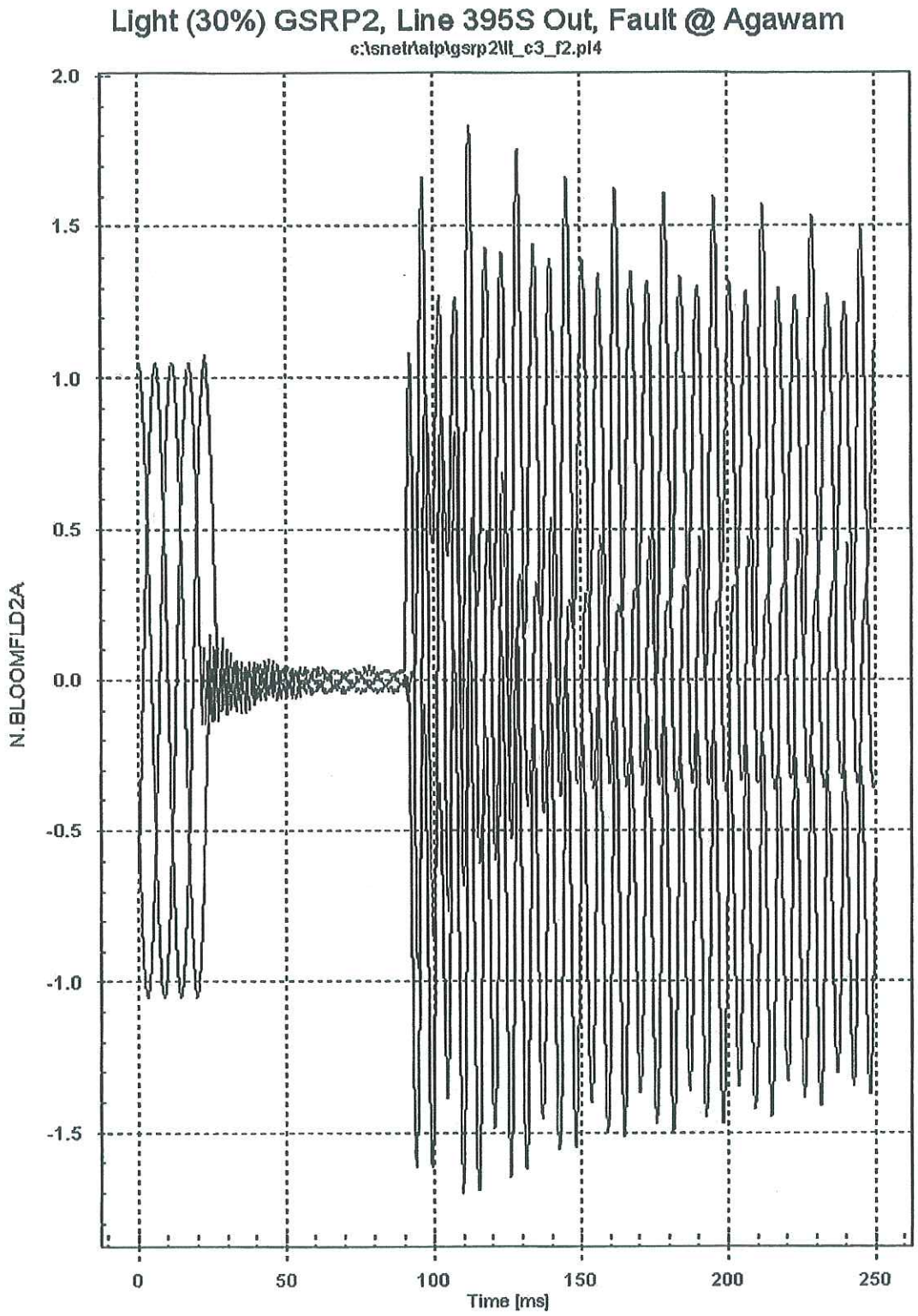


Figure 4: Light (30%) GSRP2, Line 395S Out, Fault @ Agawam

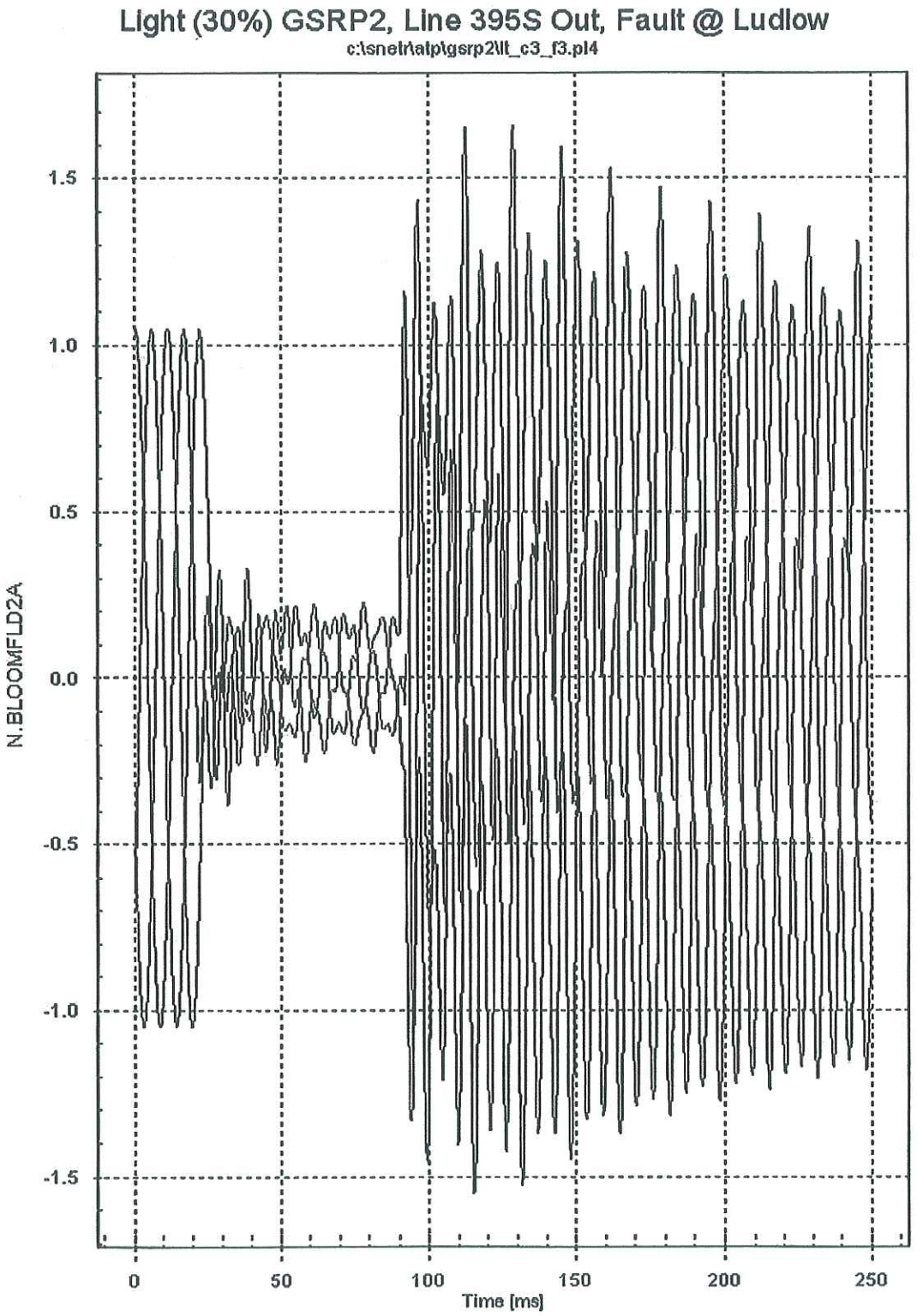


Figure 5: Light (30%) GSRP2, Line 395S Out, Fault @ Ludlow

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the two all-underground route variations evaluated for the Connecticut portion of GSRP (discussed on p. H-20 and otherwise).
a) Please provide comparative estimates for the initial capital costs, for both such line variations, versus the comparable overhead line configuration that CL&P recommends.
b) Please provide an estimate of the counterpart life cycle costs (both nominal and present-valued) for these three items, computed using CSC's guidelines for such calculations.
c) Does CL&P believe that any incremental costs associated with such undergrounding would be treated by ISO-New England as eligible for regional (i.e., New England-wide) cost support, or would be treated as localized costs (i.e., to be borne by Connecticut ratepayers only)?
d) Assume that any extra costs for such underground construction would be treated as a localized cost. On that basis, please provide a comparative estimate of the cost to Connecticut ratepayers for both all-underground route variations versus the comparable overhead line that CL&P recommends.

Response:
a) See response (b) below

b) Below are the Initial capital costs, presesnt value life cycle cost and nominal value life-cycle costs for the Connecticut portion of GSRP 345-kV line. In accordance with CSC guidelines, these numbers do not include costs for North Bloomfield S/S.

CT GSRP 345-kV LIFE CYCLE COSTS

ROUTE	INITIAL CAPITAL COST	PRESENT VALUE LIFE CYCLE COST	NOMINAL VALUE LIFE CYCLE COST
All Overhead	$ 41,290,000	$ 85,070,000	$ 391,907,000
All Underground in ROW	$ 454,568,000	$ 648,112,000	$ 2,370,319,000
All Underground Along Adjacent Road	$ 478,546,000	$ 682,006,000	$ 2,493,520,000

c) CL&P believes that the incremental costs associated with such undergrounding would not be treated by ISO-New England as eligible for regional cost allocation, but rather that they would be treated as localized costs. Experience has shown that where a line (or a line segment) that would normally be constructed overhead in conformity with good utility practice is instead constructed underground, the excess cost of underground construction will not be included in regional rates, but will be "localized".

d) Since costs of transmission improvements that qualify for regional rate support are allocated according to New England load share, approximately 27% of such costs are allocated to Connecticut load. The effect of localization of excess underground costs would be that Connecticut consumers would bear approximately 27% of what the cost of an overhead line (or line segment) would have been, plus 100% of the difference between that cost and the cost of an underground line (or line segment), including line transition stations. Following is a comparative estimate of the cost to Connecticut ratepayers for each of the potential all-underground route variations versus the comparable overhead line that CL&P recommends (neglecting North Bloomfield S/S costs).

Comparison of Initial Cost to Be Recovered Through Connecticut Rates:

All-Underground Variations vs. Overhead Proposal They Would Replace

1	2	3	4	5	6	7
UG Variation	Cost of UG Variation	Cost of OH Segment Replaced	Excess UG Cost (2) - (3)	Cost to CT of OH Section (3) x 27%	Total Cost to CT of UG After Localization (4) + (5)	Multiple UG Cost to CT After Localization (6) ÷ (5)
All UG in ROW	$454,568,000	$41,290,000	$413,278,000	$11,148,300	$424,426,300	38.1
All UG in Roads	$478,546,000	$41,290,000	$437,256,000	$11,148,300	$448,404,300	40.2

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the CEAB Evaluation Report to CSC, 2/17/09, p. 2, Item 2, stating that the CL&P Application does not include certain Connecticut power supply commitments in the needs assessment.
a) Why did the power flow assessments in the Application omit the indicated items?
b) Please supply a revised need analysis which reflects inclusion of the indicated items.
c) With that analysis, please provide all electronic spreadsheets, including all linked spreadsheets, relied upon. In those spreadsheets, please leave all cell formulas intact.

Response:

The ICF Non-transmission alternatives assessment did not include the peaker units because it was already under way when the initial award was made and the ultimate peaker portfolio was not set until after the ICF Analysis was provided to the CEAB. As the following answers show, the omission of the specific peaker units does not affect the validity of the results of either the ICF Analysis or the Updated GSRP power-flow Analysis performed by NUSCO.

(a) The Executive Summary of the CEAB Evaluation Report, at p. 2, Item 2 first notes that proposed new Connecticut generation was not included in the ISO-NE Needs Assessment (because the commitments were made after the Needs Assessment was substantially completed in 2006). It then goes on say that "some" of these new projects are also not reflected in the "supplemental studies included in the "Application materials." These "Application materials" include an updated needs analysis specific to GSRP, based on power-flow studies using current assumptions, prepared by NUSCO, in consultation with ISO-NE (the "Updated GSRP Power-flow Analysis) and a non-transmission alternatives study specific to GSRP, prepared by ICF International (the "ICF Analysis"). The Updated GSRP Power-flow Analysis is described in Section F-5 of Volume 1 of the Application, and its detailed results are provided in the CEII Appendix. The ICF Analysis is described in Section G.1.5 of the Application; a redacted copy of it is provided as part of Volume 4 of the Application; and its detailed results are provided in the CEII Appendix.

The projects that CEAB identifies in the Executive Summary of its Evaluation Report as omitted from the updated analyses in the Application materials are specifically identified at pages 28 and 29 of the body of the Evaluation Report. CEAB is referring to "the peaking generation projects selected by the [DPUC] in its June 25, 2008 order in Docket No. 08-01-01," which it notes were not included in the ICF Analysis.

As CL&P advised CEAB after CEAB's consultants had reviewed the ICF Analysis and before CL&P filed its Application in this Docket:

> ICF did not include the peaking units recently approved by the CTDPUC in docket 08-01-01. At the time ICF began the analysis, the peakers noted had yet to be approved and it was only after modeling began that the approvals were received. ICF did, however, in case 1, reduce Connecticut zonal demand by 1000 MW. This demand reduction is in addition to the aggressive DSM in the base case. See the response to CEAB-04, Q-CEAB-001 for additional information. This zonal demand reduction did not eliminate the overloads, so there is no reason to believe the 700 MW from the peakers at specific locations would eliminate the overloads.

See, CL&P response to Data Request CEAB-04, Q-CEAB-003, 9/29/08, posted on the CEAB website

at http://www.ctenergy.org/pdf/9-28-08-CEAB.pdf

Moreover, at the time CEAB performed its analysis, it was unclear what the peaker RFP capacity would turn out to be. Indeed, as CEAB notes, the ultimate committed capacity was just over 500 MW. Evaluation Report at 28, 29, fn. 20. This represented a decline of nearly 200 MW from the initial aggregate capacity of just under 700 MW, because the Bridgeport Energy II Plant was withdrawn and the GenConn Middletown Plant was substituted for it. This substitution occurred in October, 2008, after CL&P submitted the above response to CEAB, and just before it filed its Application. *See,* DPUC Docket 08-01-01, Department Notice of Intent to Approve GenConn Middletown, d. Sept. 30, 2008.

The Updated GSRP Power-flow Analysis was not a non-transmission alternatives study. The Dispatch Scenarios that were run for the updated GSRP Needs Analysis modeled specific generators in the Greater Springfield Area. *See,* Application §F.5.3, pp. F-31 - F-32. The relevant generation assumption for CT was that generation would be running such that transfers into CT would be at approximately 2500 MW under normal conditions and 1700 MW under contingencies. *See,* Application Vol. 1, § F.5.4, p. F-33.

(b)-(c) CL&P has not asked ICF to perform an additional study that includes the peaker plants. As explained in CL&P's response to CEAB, quoted above, there is no reason to believe that the addition of the peaker plants to ICF's model would make any difference to its results. However, NUSCO does plan to perform yet another updated need analysis for GSRP (again in consultation with ISO-NE), which will incorporate new load forecast data based on the ISO 2009 Capacity, Energy, Loads and Transmission (CELT) Report and new power supply commitments in the region following the ISO Forward Capacity Auction #2 that was completed in the fall of 2008. These commitments include the peaker units. NUSCO expects to complete that further updated analysis before it files its pre-filed testimony in this docket. Copies of that analysis and its supporting data will be provided when the analysis is finished.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the CEAB Evaluation Report to CSC, 2/17/09, pp. 21 & 23, stating that the ISO-NE needs assessment for NEEWS is now dated.
(a) Does CL&P agree with this CEAB statement? Why or why not? Please answer in specific detail.

(b) If ISO-NE updates its needs assessment for NEEWS, does CL&P intend to update all relevant portions of its Application? Why or why not? Please answer in specific detail.

Response:

(a) The statement in the CEAB Evaluation Report to which this question refers is:

> An assessment of the individual or collective ability of the proposed [RFP] projects to address the needs was not feasible in this evaluation due to the fact that the Needs Assessment is now dated ....
>
> (Evaluation Report, p. 21)

CL&P disagrees with this statement. It is true that the ISO-NE Needs and Options Analyses were based on 2005 data. That is why NUSCO, in consultation with ISO-NE performed the Updated GSRP Power-flow Analysis based on 2008 data, as explained in Application Vol. 1, Section F.5. However, the power flow analyses described in the earlier ISO-NE reports remain relevant. They were well designed and based on an accurate system topology; and their results, as they relate to GSRP, are consistent with the results of the Updated GSRP Power-flow Analysis. This consistency is not surprising, given the severity of the need. As the Application states:

> These reliability problems exist now, with today's system configuration and loads that have already occurred; and they will continue to grow as the load increases.
>
> (Application, Vol. 1, § F.4.2, p. F-28)

Further, even if the ISO-NE and CL&P assessments were "dated", that would not have disabled CEAB from making its own technical assessment of the RFP Projects. Instead, CEAB apparently performed no power flow analyses or other technical assessment of if its own and declined to consider that submitted by CL&P (because they considered that it came too late in the process).

(b) If ISO-NE releases any documentation of a further updated analysis of the GSRP need, ISO-NE or CL&P will provide it to the Council. In addition, as noted in response to Q-OCC-003, NUSCO does plan to perform yet another updated need analysis for GSRP (again in consultation with ISO-NE), which will incorporate new load forecast data based on the ISO 2009 Capacity, Energy, Loads and Transmission (CELT) Report and new power supply commitments in the region following the ISO Forward Capacity Auction #2 that was completed in the fall of 2008. Copies of that analysis and its supporting data will be provided when the analysis is finished.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the CEAB Evaluation Report to CSC, 2/17/09, pp. 24-25, stating that two transmission solution studies included with the Application rely on a now-dated ISO-NE needs analysis.

a) Does CL&P agree with this CEAB statement? Why or why not? Please answer in specific detail.
b) If ISO-NE updates its needs assessment for NEEWS, does CL&P intend to update all relevant portions of its Application? Why or why not? Please answer in specific detail.

Response:

(a) The June 2008 "New England East-West Solutions Report, Options Analysis" and the April 23, 2008 "Springfield Solution Report" are in no way "dated." These reports summarize a multi-year planning, engineering, routing, environmental evaluation, and cost estimating process undertaken to identify and then design the most efficient, cost effective, and environmentally benign transmission solution to address the GSRP need. Neither of these reports is itself an analysis of need. Rather, they each describe the evolution of the transmission solution to a need identified by other analyses. So long as there is no significant change in the need for which the transmission solution is designed, there is no reason to re-design the solution. As described in response to preceding questions, updated needs analyses have demonstrated that the same basic need identified in the initial ISO-NE Needs Analysis remains today. CL&P expects that the next (and final) updated needs analysis, taking the FCA #2 results and the 2009 CELT into account, will also show that the basic GSRP need persists.

(b) If ISO-NE releases any documentation of a further updated analysis of the GSRP need, ISO-NE or CL&P will provide it to the Council. In addition, CL&P will provide the updated analysis described in the preceding paragraph to the Council when it is finished, together with its supporting data.

CL&P will "update its Application" by submission of the materials described above. It does not plan to make text changes to materials that have already been filed, which would be a burdensome, wasteful, and unhelpful task.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the CEAB Evaluation Report to CSC, 2117/09, pp. 26-28, summarizing an ICF study of non-transmission alternatives included in the Application.
a)Does CEAB accurately summarize that ICF study?
b) Why did that ICF study fail to include the peaking generation projects approved by DPUC in June 2008?
c) Why did that ICF study assume that 350 MW of exports to New York would be maintained on the Cross Sound Cable?
d) Please supply a revised analysis of non-transmission alternatives, one which assumes inclusion of the DPUC-approved peaking projects, and of the NRG Meriden project, and which assumes curtailment of Cross Sound Cable flows.
e) In connection with Part (d) just above, please also include analysis of variant cases that CL&P considers reasonable.
f) With the analyses responsive to Parts (d) and (e) just above, please provide all electronic spreadsheets, including all linked spreadsheets,relied upon. In those spreadsheets, please leave all cell formulas intact.

Response:

a) No, the CEAB Evaluation Report does not accurately summarize the ICF study. The CEAB only provides a partial summary of portions of the ICF study. As stated on page 27 of the CEAB Evaluation Report to CSC, 2/17/09, the summary describes some of the assumptions included in the Reference Case. In other words, not all information is provided. For example, ICF included Combined Heat and Power (CHP) resources in Western Massachusetts and Connecticut, which are not included in the CEAB summary. Further, the CEAB summary does not include other ICF assumptions for the rest of New England. For example, ICF included renewable energy resources in all of ISO-NE to meet the Renewable Portfolio standard (RPS) requirements by year 2013, and not just the 642 MW of renewable capacity that was added in Western Massachusetts. The CEAB summary does not describe all the cases included in the study and the methodology used for the study. Similar information about the input assumptions used in the study, as well as the methodology used for the study, is not included in the CEAB summary. Given the absence of important information that will help a reader fully understand the ICF study and correctly interpret the results, we believe the CEAB does not accurately summarize ICF's study.

b) Please see the response to OCC-8.

c) Outbound flows to New York of about 300 - 350 MW occur virtually every day on the Cross Sound Cable. Moreover, there is a firm contract between Cross Sound Cable and a New England generator for the delivery of at least 100 MW over this cable. Hence, it is reasonable to simulate such system conditions to test the robustness of any planned reliability solution.

d) The study is currently being performed and will be provided to the OCC as a supplement to CL & P's response to Q-CSC-018 of CSC's Pre-Hearing Questions on GSRP: Docket No. 370.

e) The study that will be provided as a supplement to Q-CSC-018 is being performed for three different dispatches. However, it should be noted that there are several more reasonable system conditions ("variations") that are possible.

f) Complex power flow simulation programs are used for such studies, not spreadsheets. ICF's power flow study inputs, outputs and cases were all provided to the CEAB along with the study report. They are listed in the schedule of data provided to CEAB that is attached to the response to Q-OCC-13. Please see that response for CL&P's suggestion concerning the production of this scheduled data.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Reference the CEAB Evaluation Report to CSC, 2/17109, pp. 28-31, summarizing an additional power flow case CEAB requested of CL&P.
a) Does CEAB accurately summarize that further ICF case?
b) Please supply a copy of that further ICF study.
c) Does CL&P agree with CEAB that further reliability assessments of this type would "have significant merit"?

Response:

a) No, the CEAB does not summarize the "additional power flow case" that CEAB requested accurately. We refer to this case as an "additional power flow case" rather than as "further ICF study" since, as the CEAB states, this power flow case was performed at the request of CEAB, and therefore it is not an ICF study. In describing the additional power flow case, the CEAB does not describe the reference case assumptions, which are significant. It is important to recognize that the basis for this additional power flow case is ICF's Case 5,which is a variant of the ICF reference case. The ICF reference case includes the following assumptions all of which are represented in the ICF case 5 and the additional power flow case as well.

1184 MW of new generation in Connecticut
508 MW of "focus" DSM in Connecticut
225 MW of passive DR in Western Massachusetts
642 MW of new hypothetical renewable generation in Western Massachusetts.

The ICF case 5, further adds 600 MW of new hypothetical generation in the Springfield area and, re-activates 304 MW of Springfield generation that was previously assumed to be retired in the reference case.

Finally, the additional power flow case assumes 1500 MW of additional new generation in Connecticut curtails 350 MW of export to Long Island and, degrades the Connecticut import capability by 1800 MW to 700 MW. All of this is above and beyond what has been assumed in ICF reference case and ICF case 5. Thus, the input assumptions for the additional power flow case therefore include:

1. 2684 MW of new generation in Connecticut
2. 508 MW of "focus" DSM in Connecticut
3. 225 MW of passive DR in Western Massachusetts
4. 642 MW of new hypothetical renewable generation in Western Massachusetts.
5. Curtailment of 350 MW of exports on the Cross Sound cable
6. 600 MW of new hypothetical generation in the Springfield area and,
7. Re-activation of 304 MW of Springfield generation that was previously assumed to be retired.

ICF's CHP assumptions as well as other assumptions for the rest of New England are also not described in the CEAB summary.

The CEAB also understates the importance of the criteria violations that remain after the assumptions in the additional power flow case are implemented. In fact, the criteria violations that remain are some of the key violations that GSRP is intended to address in the first place. These overloaded facilities include the East Springfield to Breckwood and Breckwood to West Springfield transmission cables.

Given the absence of important information that will help a reader fully understand the additional power flow case and correctly interpret the results, we believe the CEAB does not accurately summarize the additional power flow case that CEAB requested.

b) The additional power flow case that CEAB requested contains CEII. Copies will be filed with the Council and served in accordance with the CEII Protective Order.

c) We disagree with CEAB's opinion, expressed at p.31 of the Evaluation Report, that "this test case indicates that further evaluating Connecticut generation scenarios of this type could have significant merit." This was not a "Connecticut generation scenario;" it was a Massachusetts/Connecticut new generation/RMR/DR/import constraining/export curtailing scenario, in which extreme counter-factual assumptions failed to resolve some of the key reliability issues addressed by GSRP. The appropriate conclusion to draw from these results is that investigating additional scenarios of this type would not be useful.

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Please supply, for the record in this docket, a copy of each reliability assessment that CL&P provided to CEAB in connection with the CEAB RFP process.

a) If any such assessments already are on the record in this docket e.g., per OCC-12(b)], specify where they are to be found rather than supplying a duplicate copy.
b) In this connection, please also supply copies of any related letters or memoranda that CL&P provided to CEAB.

Response:
CL&P has provided CEAB and their consultant, LaCapra, with very extensive power flow data and analyses and other materials that could qualify as "reliability assessments." Much of this material is CEII. Attached to this response is an inventory of the extensive information provided to the CEAB, either directly or through LaCapra Associates. The inventory indicates those materials that are available from other sources, such as websites. We suggest that the OCC review this inventory and advise us which listed materials it would like to receive. We will then segregate CEII and non-CEII material and make the appropriate filing and service.

Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included	Date Sent
1	GSRP Municipal Consultation Filing (MCF)	In addition, the following reports were included in the filing: (1) ISO-NE, "2008-2017 Forecast Report of Capacity, Energy, Loads & Transmission (CELT)," April 2008; (2) ISO-NE, "2007 Regional System Plan," October 18, 2007; (3) ISO-NE, "2006 Regional System Plan," October 26, 2006; (4) ISO-NE, "Regional System Plan (RSP05)," approved 10/20/2005; (5) ISO-NE Southern New England Transmission Reliability, "Report 1 – Needs Analysis," January 2008; (6) ISO-NE, "Planning Procedure No. 3 (PP-3) Reliability Standards for the New England Area Bulk Power Supply System," October 13, 2006; (7) ISO-NE, "Planning FERC Electric Tariff No. 3 Open Access Transmission Tariff – Attachment K Regional," December 7, 2007; (8) Northeast Power Coordinating Council, "Document A-02 – Basic Criteria for Design and Operation of Interconnected Power Systems," Revised May 6, 2004; (9) Northeast Power Coordinating Council, "Document A-05 – Bulk Power System Protection Criteria," Revised November 14, 2002; (10) CSC, "Review of Ten Year Forecast of Connecticut Electric Loads and Resources 2007-2016;" (11) CSC, "Review of the Ten Year Forecast of Connecticut Electric Loads and Resources 2006-2015;" (12) CT Energy Advisory Board, "2007 Energy Plan for Connecticut," approved February 6, 2007; (13) CL&P, "2008 Forecasts of Loads and Resources for the Period 2008-2017; and (14) NUSCO, "Transmission Planning Guideline," May 2008.	6/16/08
2	MCF Supplemental Submittal – NEEWS Draft Report 2 - Options Analysis (Redacted)		6/24/08
3	MCF Supplemental Submittal – GSRP Solution Report	**(provided directly to LaCapra Associates pursuant to the Confidential Energy Infrastructure Information non-disclosure agreement)**	7/21/08
4	Face-to-face meeting with CEAB to Open Lines of Communication	Attendees: (NU) Kathy Shea, Tony Fitzgerald, Pat Kinney; (CEAB) Dan Peaco, Heather Hunt; Jeff Gaudiosi	7/21/08

<table>
<tr><th>Tab</th><th>NEEWS-Related Communications/Data Provided to CEAB/LaCapra</th><th>Additional Reports Included</th><th>Date Sent</th></tr>
<tr><td>5</td><td>Response to CEAB Information Requests (sent on 7/2/08): Questions 1-10 and 16. The text of these responses is posted on the CEAB website: www.ctenergy.org/NEEWSRFP.html In addition to providing written responses to questions, CL&P provided (or directed LaCapra/CEAB to) the documents listed in the opposite column.</td><td>
<table>
<tr><th>Report, Presentation or Letter</th><th>Date</th><th>Pages</th><th>How Made Available</th></tr>
<tr><td>ISO-NE RTEP-03 Technical Report</td><td>November 13, 2003</td><td>114</td><td>ISO-NE Website</td></tr>
<tr><td>ISO-NE RTEP-04 Technical Report</td><td>October 21, 2004</td><td>282-283</td><td>ISO-NE Website</td></tr>
<tr><td>ISO-NE Regional System Plan (RSP05)</td><td>October 10, 2005</td><td>90-91</td><td>ISO-NE Website</td></tr>
<tr><td>ISO-NE 2006 Regional System Plan *</td><td>October 26, 2006</td><td>89-93</td><td>ISO-NE Website</td></tr>
<tr><td>ISO-NE 2007 Regional System Plan *</td><td>October 18, 2007</td><td>87-90</td><td>ISO-NE Website</td></tr>
<tr><td>CL&P 2006 Forecast of Loads and Resources</td><td>March 1, 2006</td><td>27-29</td><td>SO-NE Website</td></tr>
<tr><td>CL&P 2007 Forecast of Loads and Resources</td><td>March 1, 2007</td><td>27-28</td><td>ISO-NE Website</td></tr>
<tr><td>CL&P 2008 Forecast of Loads and Resources</td><td>March 3, 2008</td><td>26-27</td><td>ISO-NE Website</td></tr>
<tr><td>WMECO 2004 Transmission Forecast</td><td>April 1, 2004</td><td>III-3</td><td>Copy Provided With This Response</td></tr>
<tr><td>WMECO 2005 Transmission Forecast</td><td>December, 2004</td><td>11 and 15</td><td>Copy Provided With This Response</td></tr>
<tr><td>WMECO 2006 Transmission Forecast</td><td>December, 2005</td><td>16-17</td><td>Copy Provided With This Response</td></tr>
<tr><td>2007 WMECO</td><td>December</td><td>18-20</td><td>Copy</td></tr>
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</td><td>7/22/08</td></tr>
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Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included				Date Sent
		Transmission Forecast	29, 2006		Provided With This Response	
		2008 WMECO Transmission Forecast	December 31, 2007	22-25	Copy Provided With This Response	
		CSC Review of the Ten-Year Forecast of Loads and Resources, 2007-2016*	November 14, 2007	18 and 24	On CSC Website	
		ABB Draft Report, Volume 1: Springfield Area Transmission System Reinforcement Study	February 27, 2007	all	Copy Provided With This Response	
		ABB Draft Report, Volume 1: Springfield Area Transmission System Reinforcement Study**	February 15, 2005	all	Copy Provided With This Response	
		ISO-NE Planning Advisory Committee Meeting	May 4, 2005		Presentation Slides on ISO-NE Website	
		ISO-NE Planning Advisory Committee Meeting	March 15, 2006		Presentation Slides on ISO-NE Website	
		ISO-NE Reliability Committee	July 27, 2006		Presentation Slides on ISO-NE Website	
			December 15, 2006		Presentation Slides on	

Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included				Date Sent
		Advisory Committee Meeting			ISO-NE Website	
		ISO-NE Planning Advisory Committee Meeting	December 3, 2007		Presentation Slides on ISO-NE Website	
		ISO-NE Planning Advisory Committee Meeting	May 19, 2008		Presentation Slides on ISO-NE Website	
		Memorandum, ISO-NE's Stephen Rourke to CEAB, Response to Comments on SNETR	March 22,2007	all	Previously Provided	
		Response of Raymond Necci to Honorable Terry Backer re: NEEWS Projects	March 19, 2008	all	Copy Provided With This Response	
		CL&P Response to CEAB Comments on Options Analysis	July, 2008		In Process	
		GSRP Solution Report	May, 2008		Copy Provided With The Response to CEAB-01, Q-CEAB-003	
		Also provided: (1) New England East-West Solutions Report 2, "Options Analysis," dated June 2008; (2) The Connecticut Light and Power Company and the Western				

Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included	Date Sent
		Massachusetts Electric Company entitled "Solution Report for the Springfield Area, the Greater Springfield Reliability Project Including the Springfield 115-kV Upgrades," (Springfield Solution Report), redacted public version dated July 2008, (3) a list of generation dispatches used in the Options Report; (4) the system contingencies modeled in the referenced reports, (5) three files containing the three I.3.9 reports were **(provided directly to LaCapra Associates pursuant to Confidential Energy Infrastructure Information non-disclosure agreement)**	
6	Second Response to CEAB's First Set of Information Requests: Q's 11 - 15 In addition to providing written responses to the above questions, CL&P provided the documents listed in the opposite column.	(1) a diagram containing details on the power flows and voltages in the area, (2) diagram is a one-line diagram showing lines and stations, and (3) the most recent actual and forecast loads for the buses located in the Connecticut and Springfield, Massachusetts areas, based on the 2008 ISO-NE Capacity, Energy, Loads and Transmission (CELT) report. **(provided directly to LaCapra Associates pursuant to the Confidential Energy Infrastructure Information non-disclosure agreement)**	8/1/08
7	Letter from Kathy Shea in response to CEAB's Comments (sent 5/29/08) to ISO-NE on the NEEWS Draft Report 2 – Options Analysis	(1) Brattle Group Report on "Rising Utility Construction Costs: Sources and Impacts" – September 2007; (2) ISO-NE's response to CEAB's comments on the SNETR analysis; (3) A copy of the NU presentation to ISO-NE Planning Advisory Committee "Managing Capital Projects" – December 3, 2007; and 4 slides on the NEEWS Decision Sequence	8/13/08
	Conference call to discuss the NEEWS Needs Analysis ***Nothing new provided, just a discussion of the first set of responses that then led to the second set on questions**	Attendees: Bob Carberry, Al Scarfone and Dick Hahn	8/28/08
8	Response to CEAB's Second Set of Information Requests, Q's 17 -20 (sent on 8/22/08). In addition to written responses to questions, CL&P provided the	An unredacted version of the Greater Springfield Solution Report **(provided directly to LaCapra Associates pursuant to the Confidential Energy Infrastructure Information non-disclosure agreement)**	8/29/08

Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included	Date Sent
	report identified in the column opposite.		
9	Third Response to LaCapra's First Set of Information Requests **(2 CDs provided amounting to ~12,000 pages of data)**	(1) The power-flow base case for the existing system in PSS/E "rawd" format; (2) power-flow base cases for the existing system in PSS/E "sav" format; (3) power-flow base case plots for the existing system showing the requested data for the 345-kV system between the Ludlow and Manchester substations; (4) a listing of over 50 contingencies; (6) power-flow base case with GSRP modeled in PSS/E "rawd" and "sav" formats; and (7) the contingency listing and plots.	
10	Response to CEAB's Third Set of Information Requests sent on 9/5/08	Letter responding to questions about Non Transmission Alternatives (NTA) study for GSRP in progress, enclosing copy of NTA study for National Grid's Rhode Island Reliability Project	9/19/08
11	ICF NTA Report Delivered to LaCapra Associates	ICF International NTA Study Report: "Assessment of Non-Transmission Alternatives to the NEEWS Transmission Projects: Greater Springfield Reliability Project (Sept. 2008). **Contains CEII**	9/25/09
12	Response to Data Request CEAB-04, Q's 1 – 24 (sent 9/29/08)	Responses provide further information on ICF NTA Report. Responses are posted by CEAB at: http://www.ctenergy.org/NEEWSRFP.html	10/10/08
13	Freedom of Information Act Request to CEAB	Seeks copies of RFP Responses filed January 2, 2009.	1/06/09
14	Evaluation of RFP Proposals	• Transmittal message • Cover letter • Memorandum • "Preliminary Analysis of the Technical Effectiveness of Proposed Generation Alternatives to GSRP," including power-flow study inputs and results. (**CEII**) • Dissenting Opinion in CSC Docket No. 190 • "Evaluating the Economic Benefits of Transmission Investments", Brattle Group, May 3, 2007 The CEAB has posted non-CEII portions of this evaluation at	1/29/09

Tab	NEEWS-Related Communications/Data Provided to CEAB/LaCapra	Additional Reports Included	Date Sent
		http://www.ctenergy.org/NEEWSRFP.html	
15	Miscellaneous Communications between Al Scarfone and Dick Hahn	• An email from Dick Hahn to Al Scarfone and Al's response, both on 9/22/08, regarding clarification on the issue of how to calculate total New England load flows; • A phone call from Al Scarfone to Dick Hahn on 9/17/08 to clarify the pre- and post-case data plots sent and, to answer a question about whether this was the same information used in the CSC filing; • Two emails from Al Scarfone to Dick Hahn on 9/17/08 containing additional pre- and post-GSRP .dat files; • Email from Dick Hahn on 9/16/08 asking about the 1700 MW base case – response from Al Scarfone by phone; • A further question in an email on 9/2/08 from Dick Hahn to Al Scarfone asking about the difference in load forecasts – clarified in CDs sent on 9/12/08.	Various
16	Emails between Bob Carberry and Dick Hahn regarding CEII Requests	Includes the cover letters sent to: • CPower • GE • Ener NOC, Inc.	Various
17	Letter from Lisa Thibdaue. to John Mengacci regarding how CEAB will respond to RFPs	Various questions and readiness on the part of NU to support CEAB's efforts.	12/9/08

Witness: CL&P Panel
Request from: Office of Consumer Counsel

Question:
Please supply, for the record in this docket, a copy of any economic comparisons that CL&P has prepared concerning the relative costs to Connecticut ratepayers of GSRP/MMP or NEEWS (on the one hand) versus a generation project such as the NRG Meriden Project (on the other).

Response:
CL&P has not prepared or commissioned any economic comparisons concerning the relative costs to Connecticut ratepayers of GSRP / MMP and the NRG Meriden Project or a generic generation project because GSRP is a reliability project for which new generation, especially new generation in Connecticut, is not a practical substitute. In addition, if CL&P were to nevertheless attempt such a comparison, it would not know what to compare. At this time, CL&P is still trying to determine whether the NRG Meriden Project is being offered as an alternative to GSRP / MMP or just to some portion of GSRP, such as the proposed segment of 345-kV line between North Bloomfield Substation and the state border and the improvements to North Bloomfield Substation.

If CL&P does prepare or obtain any such economic comparisons, once it knows what to compare, it will provide copies in response to this request.