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July 14, 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 FRWA-01 Interrogatories dated 07/06/2009
FRWA-001, 002, 003, 004, 005, 006, 007, 008, 009

Response to SUFFIELD-01 Interrogatories dated 06/29/2009
SUFFIELD-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016

Very truly yours,

Robert Carberry /dd

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

cc: Service List

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
What measures, if any, will be taken to prevent the accidental transport and introduction of invasive plant and animal species (terrestrial or aquatic) to construction sites?

Response:

CL&P is cognizant of concerns with respect to the spread of terrestrial and/or aquatic invasive plant species along the transmission line right-of-way (ROW) as a result of construction equipment movements. On other recent transmission line construction projects (e.g., the Middletown-Norwalk Project), CL&P developed an invasive species control plan, which was accepted by the CT DEP and the Army Corps of Engineers (ACOE). The plan identified the wetlands in which invasive plant species were identified prior to construction and defined measures to be taken to minimize the potential for the spread of invasive species into wetlands along the ROW. CL&P developed a similar control plan for the Greater Springfield Reliability Project; this plan is included as part of Appendix D to the Projects' Section 404/10 permit application that was submitted to the ACOE on June 19, 2009.

The invasive plant species targeted for control are those identified by federal and state regulatory authorities. The DEP, under PA 03-136 and in cooperation with the Connecticut Invasive Plants Council (through the Invasive Plant Atlas of New England), compiled a State list of invasive plants. The U.S. Department of Agriculture, Natural Resources Conservation Service also maintains list of noxious plants, by state. Based on a review of these lists and the characteristics of the Project area, the most common invasive species likely to be associated with or in wetlands along the ROW are listed below.

Typical Invasive Species

Common Name	*Latin Name*
Purple loosestrife	*Lythrum salicaria L.*
Common reed	*Phragmites australis*
Multiflora rose	*Rosa multiflora*
Asiatic bittersweet	*Celastrus orbiculatus*
Japanese barberry	*Berberis thunbergii*
Buckthorn	*Rhamnus spp.*
Tartarian honeysuckle	*Lonicera tartarica*
Autumn olive	*Elaeagnus umbellata*
Reed canary grass	*Phalaris arundinacea L.*
Japanese knotweed	*Polygonum cuspidatum*
Privet	*Ligustrum vulgare*
Spurge (leafy)	*Euphorbia esula L.*

During wetland delineations of the ROW for GSRP and MMP, which were conducted as part of the project planning activities, CL&P's environmental consultants completed data forms that included lists of the predominant species in each wetland (refer to Volume 2 of the CSC Application).

In locations where invasive species exist prior to construction, the objective will be to minimize the spread of such species along the ROW, to locations that presently do not contain invasives. However, it should be recognized that due to the prevalence of invasive species adjacent to the ROW (as well as throughout Connecticut and the Northeast in general), such species may nonetheless be spread by various methods outside of CL&P's control.

One potential measure for minimizing the spread of invasive species during construction, as described in the Invasive Species Control Plan included as part of the ACOE application,is cleaning equipment before it moves from a segment of ROW containing wetlands with stands of invasive species, to a segment of ROW that does not contain wetland invasive species. This cleaning would consist of removing visible dirt from the equipment using shovels and compressed air to minimize the potential of introducing invasive species to other portions of the ROW. The Contractor(s) would also be required to maintain logs documenting the cleaning history of each piece of equipment and make the logs available to the Environmental Inspectors upon request.

Additionally, soils excavated from wetlands or riparian areas containing invasive plants will be stockpiled separately and contained within staked bales to minimize the potential of spreading these soils elsewhere onto the ROW. Additionally, if bales are used on-site as a sediment-control device, then the bales must be certified by the supplier to be free of noxious or invasive plant matter. This is especially important when bales are deployed adjacent to wetland areas. Efforts will be made during construction to minimize equipment mobility in areas containing invasive species to avoid dragging invasive plant material back and forth from established stands. Lastly, if bales are used on-site as a sediment-control device, then the bales must be certified by the supplier to be free of noxious or invasive plant matter. This is especially important when bales are deployed adjacent to wetland areas.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
What herbicides are typically used in managing vegetation in the transmission line rights of way, and what is known about their effects on aquatic organisms?

Response:

CL&P maintains vegetation along its ROWs in accordance with its integrated vegetation management program, the objective of which is to comply with mandatory regulatory standards for maintaining clearances from conductors. This program employs various techniques for vegetation management, of which the use of herbicides is one.

The herbicides currently used by CL&P for controlling undesirable vegetation on transmission rights-of-way are as follows:

Product Name	Manufacturer	EPA Registration Number
Accord Concentrate	Dow AgroSciences	62719-324
Powerline	BASF	241-431
Habitat	BASF	241-426
Escort	DuPont Agricultural Products	352-622
Garlon 4 Ultra	Dow AgroSciences	62719-527
Krenite S	DuPont Agricultural Products	352-395
Milestone VM	Dow AgroSciences	62719-537
Pathfinder II	Dow AgroSciences	62719-176

Herbicides will be used in accordance with current federal regulations, State of Connecticut pesticide statutes, and product labels. State regulations allow for the use of herbicides up to the edges of waterbodies, and in wetlands for herbicides specifically labeled for wetland applications. Most, but not all, of the herbicides listed in Northeast Utilities Specification for Rights-of-Way Vegetation Management are labeled for wetland applications. Applications of herbicides on CL&P rights-of-way will be made by certified/licensed applicators in accordance with label directions and all state laws and regulations governing herbicide applications.

Studies on many of these products show that some have potential adverse effects on non-plant aquatic organisms (specifically the ester formulations of Garlon 4 Ultra and Pathfinder II). All other products have no impact on non-plant aquatic organisms and some are either approved for use in controlling aquatic vegetation in Connecticut or contain active ingredients that are approved for aquatic applications. Applications are made such that the potential for herbicides to enter water bodies and water courses are minimized. Current state requirements for these applications allow for applications to made up to the edge of standing or flowing water. However, CL&P specifications require a minimum setback distance of 10 feet from standing or flowing water where herbicides may not be applied.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
Have alternatives to herbicide been considered for areas immediately upstream of watercourses and in the vicinity of vernal pools and wetlands in the rights of way?

Response:

As noted in the response to Data Request FWRA-01, Q-FWRA-002, CL&P uses integrated vegetation management to control growth on its ROWs. The primary vegetation control technique is the use of state-registered herbicides to control targeted vegetation species. In sensitive areas such as areas near watercourses and wetlands (including near identified vernal pools), the primary method of control is the cutting of brush and woody trees with a follow-up herbicide application to the cut stumps.

By eliminating undesirable tree and invasive shrub species, the areas are left open for the native low-growing vegetation to develop, thereby reducing the ability of the undesirable plant species to sprout and become established requiring future maintenance. This is one aspect of the cultural control objective - using native plant communities to compete for sun, soil, water and nutrients with the undesirable species resulting in the development of a natural, low-growing and low-maintenance vegetated community.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
In the event that the Clean Water Restoration Act (S.787) passes the U.S. Senate, will there be a review of planned compliance with federal wetlands regulations to determine whether any aspect of compliance needs to be altered?

Response:

Yes, a review and evaluation of the final bill approved by the U.S. Senate would be completed by CL&P to determine whether any aspect of compliance with federal wetlands regulations on the project needs to be altered. We have completed a review of the proposed bill entitled Clean Water Restoration Act S.787, dated April 2, 2009, and it appears that the proposed amendments to the Federal Water Pollution Control Act do not alter the CL&P's current plans for compliance with federal wetlands regulations.

The wetlands along the Project rights-of-way (ROWs) were delineated by CL&P's environmental consultant (ENSR/AECOM) using both standard 1987 federal wetland delineation methods and Connecticut water resource criteria as defined in the state's Inland Wetland and Watercourses Act. Connecticut regulations for defining wetlands, which rely solely on soil characteristics, are more conservative than federal criteria, under which wetlands are defined based on a three-parameter approach (i.e., soils, hydrology, and vegetation). By thus applying both the state and federal criteria to delineate water resources along the Project ROWs, CL&P has taken a very conservative approach.

Further, CL&P has been coordinating with and expects to continue to work closely with both the CT DEP and the U.S. Army Corps of Engineers (USACE), New England District, regarding the Project. CL&P has applied for a Section 401 Water Quality Certificate from the CT DEP[1] and a Section 10 of the Rivers and Harbors Act / Section 404 Clean Water Act Permit from the USACE. Should the passage of the Clean Water Restoration Act require the implementation of any special procedures or mitigation for the Project, CL&P anticipates that such measures could be addressed as conditions of the Section 10 / Section 404 permit that the USACE would issue for the Project or as conditions of the 401 Water Quality Certificate that would be issued by the CT DEP.

[1] The federal government has delegated to CT DEP the authority to administer the regulatory requirements of Section 401 of the federal Clean Water Act.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
The application states that any new culverts needed will be designed and installed in accordance with CT DEP Inland Water Resources Division guidelines. Will this also be true for the replacement of any existing culverts?

Response:

In addition to the new culverts that will be installed and maintained along permanent access roads as required (and for which CL&P is submitting permit applications to the ACOE and DEP), CL&P anticipates that temporary culverts, associated with temporary construction access roads, will be needed. It is also possible that some existing culverts will have to be replaced.

During construction at some watercourse crossing locations, CL&P anticipates that existing culverts may be temporarily extended to accommodate the temporary widening of access roads, which will be required to support large construction equipment. Following the need for such temporary roads, as part of the restoration phase of construction, the culvert extensions and expanded portions of the access roads will be removed and the sites will be returned to grade.

CL&P will evaluate existing culverts based on pre-construction conditions. If it is determined that an existing culvert needs to be replaced, CL&P anticipates that the new culvert will be an "in kind" replacement, matching the existing culvert diameter and length and thereby maintaining the present flow through the structure. For such replacement culverts, CL&P would consult with the DEP and would file for coverage under the Connecticut General Permit for Placement of Utilities and Drainage Within Inland Wetlands And Stream Channel Encroachment Lines
(DEP-IWRD-GP-005), if applicable.

On the federal level, replacement of existing culverts is considered an exempt activity under Section 404(f)(1)(B) (33 U.S.C. 1344(f)(1)(B)), relating to discharges of dredged or fill materials for the purpose of maintenance of currently serviceable structures.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
Will culvert installation be done in consultation with CT DEP to ensure adequate fish passage?

Response:

Culverted crossings of streams are only proposed where constructibility studies indicate that temporary crossings or alternative access is not available or where permanent access must be maintained to provide for the safe operation of the transmission line.

Of the nine new proposed culvert crossings of regulated watercourses along the GSRP route in Connecticut, two of the culverts would be installed within perennial watercourses, both in East Granby. These two watercourses are designated as Class A waters pursuant to the Connecticut Water Quality Standards Classification.

Project representatives consulted with Don Mysling at the CT DEP Inland Fisheries Division, Habitat Conservation and Enhancement Program, regarding how the proposed culverts that would affect waterbodies with cold water fisheries. Measures recommended by Mr. Mysling as well as measures in the Stream Crossing Guidelines, the roadway/culvert crossing requirements of the CT Programmatic General Permit (PGP), and the CT Addendum to the PGP, were incorporated into the design of these culverts.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
Where disturbance or destruction of vernal pools or wetlands is unavoidable, will this effect be mitigated by establishment of equivalent vernal pool or wetland habitat in the same area?

Response:

CL&P has coordinated and will continue to coordinate with the CT DEP and the USACE regarding appropriate mitigation for any unavoidable adverse effects to wetlands, including vernal pools. However, the primary objectives of CL&P's routing and construction plans are to first avoid and, if avoidance is not possible, then to minimize permanent adverse effects to water resources. Unavoidable adverse effects, such as would result from the need to place new structures or a permanent access road in a wetland (requiring fill and resulting in the loss of wetland acreage), will be mitigated by providing compensation, either on or off the Project construction area, as determined based on mitigation plans approved by the CT DEP and the USACE.

Specifically, for GSRP, portions of 17 wetlands along the Preferred Northern route were determined to function as vernal pool habitat. Of the 17 wetlands with vernal pools, one (located in Suffield) will be affected by construction, including the installation of a new pole structure, temporary construction envelope, and temporary access road to reach the proposed structure location. Two wetlands along the MMP were determined to function as vernal pool habitat. Neither vernal pool, however, will be affected by construction of the MMP.

Vernal pools providing amphibian breeding habitat to a state-listed species were determined to occur within three wetlands located in East Granby. CL&P developed site-specific measures to mitigate effects on the Jefferson salamander population in the subject area of the ROW. The mitigation measures have been presented to the CT NDDB ,and CL&P has received concurrence from the CT NDDB. (Site-specific mitigation measures are found on pages 6-22 and 6-23 of the Section 401 WQC for CT.) No new structures, construction areas, or access roads are proposed within these three vernal pools. Effects on the vernal pools may result from removal of vegetation and tree clearing.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
The application acknowledges that the lower Farmington River is under study for possible designation as a National Wild and Scenic River. While that study is underway, the lower Farmington enjoys all the protections of a river that is already designated. This includes National Park Service review of any project in the proposed Wild & Scenic corridor that requires federal permits. Has there been any contact with the National Park Service (suggested contact: Jamie_Fosburgh@nps.gov) to determine the requirement and the process for review of this project, either before or after Wild and Scenic designation?

Response:

CL&P is aware of the importance of the Farmington River as a recreational and natural resource. CL&P also understands that a feasibility study is being conducted to assess whether the Lower Farmington River, (consisting of the reach of the river between Canton and Windsor, including the location of the proposed 345-kV transmission line crossing) and the East and West Branches of Salmon Brook might be federally designated as wild and scenic.

CL&P contacted Jamie Fosburgh at the National Park Service (NPS) (via email) with an offer to discuss the status of the feasibility study of the Lower Farmington River and to inform the NPS of the proposed Project plans for avoiding adverse effects to the river. The NPS will provide formal input to the Project as part of the USACE Section 10 / Section 404 permitting process.

Witness: CL&P Panel
Request from: Farmington River Watershed Association

Question:
Has the National Park Service been consulted with respect to reducing the project's visual impact associated with the New England National Scenic Trail?

Response:

The proposed 345-kV transmission line would traverse the Metacomet Trail in two locations (at Hatchett Hill Road in East Granby and east of Mountain Road in Suffield). In addition, from certain vantage points along the trail, portions of the existing and proposed transmission line structures are visible. The proposed 345-kV transmission line would be located within CL&P's existing ROW, adjacent to existing overhead transmission line structures, at both trail crossings. South of the Hatchett Hill Road crossing and on both sides of the Mountain Road crossing, the ROW is located within CL&P's fee-owned property (refer to mapsheets 2 of 10 and 8 of 10, respectively, in Volume 9 of the Siting Council Application).

The Metacomet Trail was only recently (March 2009) officially designated as the New England National Scenic Trail. As a result, CL&P has not yet formally consulted with the National Park Service regarding the proposed Project. However, CL&P did recently contact Jamie Fosburgh at the National Park Service (NPS) (via email) with an offer to discuss the status of the feasibility study of the Lower Farmington River and to inform the NPS of the proposed Project plans for avoiding adverse effects to the river.

Additionally, CL&P has commissioned visual simulations, including a recently prepared animated computerized visual assessment, to evaluate the potential effects of different types of transmission line structures, as viewed from the trail and at trail crossings. This visual resource information is described in CL&P's Application to the Siting Council and is further discussed in the direct testimony of R. Carberry and S. Newland (July 7, 2009).

The NPS will provide formal input to the Project through the review of CL&P's Section 10 / Section 404 permit application to the USACE. However, prior to the agency consultations that will be involved in that process, CL&P will coordinate with the NPS regarding the two trail crossing locations and the potential views of the transmission line structures from vantage points along the trail, as well as regarding measures for maintaining access to the trail during Project construction.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
How are the costs to construct the proposed facilities calculated for the portion that passes through the Town of Suffield?

Response:

Cost estimates for the total project are established using an initial project scope and design (based on preliminary structure locations), and using recently completed project actuals and experience, knowledge of market conditions, and vendor contacts as necessary to update the labor, material and equipment costs. After completion of the total project estimate, the portion of those facilities in Suffield would be estimated using a prorated amount of the total transmission line estimate (e.g. 4.8 /12 miles). See the table below for the resulting estimate for the portion of the proposed line in Suffield only. The "Overhead Base" refers to a configuration in which the 345-kV line would be supported by wood- or steel-pole H-frames for the full distance through Suffield of 4.8 miles. The Overhead EMF BMP entry in the table refers to a configuration in which steel monopoles with a delta line design would be substituted for the H-frames for a distance of 2 miles in Suffield, per CL&P's Field Management Design Plan.

Please note that the Suffield cost estimates in the table do not include any substation costs, and include only the costs to construct the proposed 345-kV line for 4.8 miles in Suffield.

Suffield 345-kV Transmission Costs

Transmission	Distance (mi)	Estimate of Line Costs in Suffield
Overhead Base	4.8	$ 16,516,000
Overhead EMF BMP	4.8	$ 19,850,000

Witness: CL&P Panel
Request from: Town of Suffield

Question:
What is the unit of measure used to determine the cost of these facilities?

Response:

The estimated cost of the facilities uses figures from the date of the original base estimate (2008), plus escalation based on the year of spend in US$.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
What would be the cost for the development of the proposed power line if the entire portion within the Town of Suffield were above ground?

Response:

The estimated cost of the proposed power line with the entire portion of the line within Suffield (and also within East Granby and Bloomfield) above ground is that shown in CL&P's Application. The estimated base cost of the transmission line only is $41,290,000 (i.e., no costs for North Bloomfield Substation included). Including the Field Management Design Plan (FMDP) proposal for an alternate overhead line design (i.e., BMP design) that CL&P set forth in Section O of the Application for 3.2 miles of the line, and recognizing that 2.0 miles of this 3.2-mile line section is within Suffield, the estimated cost for the entire overhead line would be $44,677,000.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
What would be the cost for the development of the proposed power line if the entire portion within the Town of Suffield were below ground?

Response:

Assuming that the proposed 345-kV line was constructed overhead on the CL&P right-of-way in Bloomfield and East Granby and underground within the right-of-way for the 4.8 miles in Suffield, with a line transition station at each end of the underground line section (i.e., where the line route crosses the Suffield borders with East Granby, CT and Agawam, MA) the estimated costs for the transmission line and transition stations only (therefore, not including North Bloomfield Substation costs) would be $217,103,000. This estimate assumes that suitable transition station locations exist at the two Suffield border crossings. This estimated cost may be compared to the current base cost estimate of $41,290,000 to construct an all-overhead 345-kV line on the CL&P right-of-way.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
What is the cost of installation of below-ground facilities per unit of measure? What is the cost of installation of above-ground facilities per unit of measure?

Response:

The estimated cost per mile to construct the 345-kV line underground as proposed in the Application is approximately $37,260,000/mile to $46,104,000/mile, depending on the route chosen. The estimated cost per mile to construct the 345-kV line overhead (base H-frame estimate) as proposed in the Application is approximately $3,440,800/mile. These estimates consider costs for the line construction only, and do not include any substation or transition station costs. These estimates are route specific and would fluctuate from one route to another.

The estimated cost per mile to construct the 345-kV line underground is $37,742,500/mile for in-road construction. The estimated cost per mile to construct the 345-kV line overhead (base H-frame estimate) on the CL&P ROW is approximately $3,440,800/mile. These estimates include costs for the line construction only, and do not include any substation or transition station costs.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
How are units of electromagnetic force calculated?

Response:

Power-frequency electric and magnetic fields are each calculated using computer programs which apply well-known laws of physics and long-available modeling methods. For this project, CL&P's consultants employed computer algorithms developed by the Bonneville Power Administration, an agency of the United States Department of Energy, to calculate the fields. Electric fields are computed and measured in units of kilovolts/meter (kV/m), and magnetic fields are computed and measured in units of milliGauss (mG). Because the electric and magnetic fields at the power frequency of 60 cycles per second are independent of one another, are not coupled and do not propagate away from a line, they should not be referred to as electromagnetic waves or electromagnetic radiation.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Concerning the proposed facility, are there any studies of other facilities that would provide accurate data for the strength of the emf radiation per foot distance from the power lines for the above-ground portion of the installation?

Response:

"Studies" or data concerning other facilities would not provide accurate data with respect to electric and magnetic fields that would be associated with the proposed line. The fields associated with different lines vary, according to multiple variables that are different in virtually every case. The most accurate prediction of the fields that will be associated with the proposed lines is provided by the modeling results described in the Application. Calculation results for both electric and magnetic field levels at ground level near to overhead transmission lines, existing and proposed, were provided in the Application, in Section O and several of its appendices. Several graphs within Section O display calculated magnetic field levels that would be found at ground level while traversing CL&P's right-of-way. Assumptions made for these magnetic field calculations were described in section O.3.2. For magnetic fields especially, please note that the field level at any one spot is not constant and changes as the power demands over the line change.

Please note that on any graph in Section O, the magnetic field levels drop off with increasing distance from a point directly beneath a line, but not in a linear fashion; i.e., there is no simple equation to use to determine how much the level drops with each additional foot of distance. Generally, however, for each doubling of distance away from the center of the line conductors, the field levels would decrease by a factor of 4; e.g., four times lower at 200 feet from the center of the conductors than at 100 feet.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Concerning the proposed facility, are there any studies of other facilities that would provide accurate data for the strength of the emf radiation per foot distance from the underground lines?

Response:

As is the case with overhead lines, data concerning other facilities would not provide accurate data from which levels of electric and magnetic fields at "per foot" distances from the GSRP line, were it built underground, could be estimated. The best information concerning these values is that provided in the Application. Calculation results for both electric and magnetic field levels at ground level near to underground 345-kV transmission lines were provided in the Application, in Section O and several of its appendices. Some graphs within Section O display calculated magnetic field levels that would be found at ground level while walking over and near to an underground 345-kV cable system. Assumptions made for these magnetic field calculations were described in Section O.3.2. For magnetic fields especially, please note that the field level at any one spot is not constant and changes as the power demands over the line change.

Please note that on any graph in Section O, the magnetic field levels drop off with increasing distance from a point directly beneath a line, but not in a linear fashion; i.e., there is no simple equation to use to determine how much the level drops with each additional foot of distance. The magnetic field levels fall off rapidly from the underground cables because the individual cables are closer to one another.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
If the answer to either question 7 or 8 is yes, what is the projected emf
a. per foot from the underground lines or
b. per foot from the above-ground lines?

Response:

Projected levels of both electric and magnetic fields were provided in Section O of CL&P's Application, based on assumptions explained in Section O.3.2.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
If there are no studies dealing with the above questions how would CL&P calculate the emf per distance for lines which are:
a. above ground?

b. below ground?

Response:

CL&P employs computer programs to calculate the electric and magnetic field levels near to overhead and underground transmission lines.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
What is the amortization period which CL&P uses to calculate the recovery of costs for this project from rate-payers?

Response:

This project will be installing various transmission-related equipment. Each type of equipment has a depreciable life. Below is a list of equipment types and their regulatory-approved average lives.

Account	Description	Life (years)
350	Land and Land Rights	Not Depreciable
352	Structures and Improvements	45
353	Station Equipment	41.2
354	Towers & Fixtures	51.3
355	Poles & Fixtures	38
356	Overhead Conductors & Devices	42
357	Underground Conduit	45.8
358	Underground Conductors & Devices	39.2
359	Roads & Trails	65

Witness: CL&P Panel
Request from: Town of Suffield

Question:
How does CL&P recoup its cost of constructing this proposed facility?

Response:

For the New England East-West Solution (NEEWS) Projects, which the Greater Springfield Reliability Project (Project) is part of, Northeast Utilities Service Company (NU) and National Grid USA (NGrid) submitted a rate application on September 17, 2008 to the Federal Energy Regulatory Commission (FERC) (Docket No. ER08-1548), This application sought recovery of financing costs of Construction Work In Progress (CWIP) during the siting and construction phases of the Project in each of their respective Local Network Service (LNS) transmission schedules in the ISO-NE Tariff. On November 17, 2008, FERC approved NU's and NGrid's rate application, which allows NU to charge its retail customers in Connecticut, New Hampshire and Western Massachusetts for costs incurred during the siting and construction phase of the Project.

NU will submit a Transmission Cost Allocation (TCA) Application to ISO-NE requesting that the Project's costs be recovered under Regional Network Service (RNS) in the ISO-NE Tariff. Following ISO-NE approval of the TCA Application, the Project's costs that have been determined by ISO-NE to provide regional benefits will be recovered under RNS. RNS costs are allocated to all load in New England based on a load-ratio share. For the costs that ISO-NE determines not to provide regional benefits, such as state or local undergrounding requirements or other accommodations, it is likely that these costs will not be accepted by ISO-NE for inclusion in regional rates, and, instead, will be paid by local customers.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Please provide the project cost to rate-payers per kilowatt-hour if the entire portion of the project located in Suffield is built below-ground.

Response:
In preparation for its siting application, CL&P did not perform the survey and engineering analysis to calculate a planning grade estimate for the Suffield portion of the project being built entirely underground. CL&P did, however, complete the analysis and planning grade estimate for an underground alternative referred to as the Newgate Road variation, which was filed as part of the application. While the length of the sections are not exactly the same -- about 6 miles for the Newgate Road variation vs. about 5 miles for undergrounding all of Suffield -- the Newgate Road variation can be used as a proxy to provide a rough estimate of the potential cost of an all-underground route through Suffield.

Overhead transmission lines deemed to be of regional benefit qualify for regional rate support with the project cost being allocated throughout New England based on load share. For Connecticut, that share is about 27%. Experience has shown that incremental costs associated with undergrounding, where a lower cost overhead line is feasible and practical, would not be treated by ISO-NE as eligible for regional cost support but, rather, would be treated as localized costs, to be paid entirely by Connecticut ratepayers. (Please refer to Data Request OCC-01, Q-OCC-005 for a more detailed explanation.)

The following table provides a comparative estimate of the cost to Connecticut ratepayers for the Newgate Road variation, as a proxy to estimate the cost of undergrounding the entire Suffield portion of the project. Looking strictly at the differences in length, CL&P expects the actual cost to be somewhat less than the Newgate Road variation, but actual cost may vary.

Comparison of Initial Capital Cost to be Recovered Through Connecticut Rates
(Underground (UG) Variation vs. Overhead (OH) Section It 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 Regional Allocation of 27%	Total Cost to CT of UG After 100% Localization (4) + (5)	Multiple UG Cost to CT After Localization (6) ÷ (5)
Newgate Road Option from Application	$262,800,000	$15,500,000	$247,300,000	$4,185,000	$251,485,000	60.1

Assuming CL&P's proposed all-overhead line and route were approved, in the first full year of service, 2014, a typical CL&P residential customer could expect to see an increase to the transmission charge of 0.126 cents per kWh. For a residential customer utilizing 700 kWh per month, this would mean an approximate increase of $0.88 per month.

With underground cables and associated transition stations replacing the proposed overhead line section in Suffield, the transmission charge would increase to about 0.325 cents per kWh, or $2.27 per month for this typical residential customer. Therefore, this Suffield change would cause a cost increase for this residential customer of $1.39 per month more than that for the overhead line.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Please provide the project cost to rate-payers per kilowatt-hour if the entire portion of the project located in Suffield is built below-ground.

Response:

Please see the response to Data Request SUFFIELD-01, Q-SUFFIELD-013.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Under each of the above scenarios, when would the additional cost of the project to rate-payers commence?

Response:

The cost estimates provided in response to the preceding question are based upon the first year of operation of the Greater Springfield Reliability Project, now estimated to be 2014. However, financing costs associated with the siting and construction of the Greater Springfield Reliability Project and other related projects associated with the New England East-West Solution (NEEWS), are currently being being charged to its retail customers of rhe Northeast Utilities electric operating companies located in Connecticut, New Hampshire and Massachusetts.

Please see the response to Data Request SUFFIELD-01, Q-SUFFIELD-012 for additional information.

Witness: CL&P Panel
Request from: Town of Suffield

Question:
Under each of the above scenarios, when would the additional cost of the project to rate-payers end?

Response:

The capital costs of the project facilities will be reflected in customer rates until the assets are fully depreciated. Please see the response to Data Request SUFFIELD-01, Q-SUFFIELD-011 for a list of the accounting book lives of these transmission facilities and related assets. Over this time and thereafter, the operating and maintenance costs of the project facilities will continue to be reflected in customer rates.