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

Question:
Page 13 of the "EMF" section states that the MMP-V would increase the magnetic field levels along the Greater Springfield Reliability Project line by approximately 2.3%. Is that along the edges of the ROW or directly beneath the line?

Response:

Over the XS-1 segment of the right-of-way from North Bloomfield Substation to Granby Junction, the approximate 2.3% increase in magnetic fields applies at every point, including the right-of-way edges and directly beneath the line. In this segment of the Greater Springfield Reliability Project, there will be no parallel transmission lines producing magnetic fields to interact with those of the new 345-kV line.

In the XS-2 segment of the right-of-way from Granby Junction to the CT/MA state line, a parallel 115-kV line to the west of the new 345-kV line will produce magnetic fields that will interact with those of the new 345-kV line. This interaction causes the approximate increase in magnetic fields at the west edge of the right-of-way to be 2.1% with the H-frame line and 2.2% with the split-phase line. Beneath the new 345-kV line and at the east right-of-way edge, the increase in magnetic fields is approximately 2.3%.

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

Question:
Do the "post NEEWS MMP" and "post NEEWS MMP-V" calculations in the appendices of the EMF section, reflect the MMP projects only? Is the GSRP assumed in-service? Are any other NEEWS projects assumed in-service?

Response:

The magnetic field calculation results in Appendix O-5.1 and Appendix O-5.2 to Mr. Carberry's testimony, dated April 7, 2010, were obtained by computer models relying upon the same assumptions that were stated in the Company's Application in section O.3.2. For the 2017 "post-NEEWS" modeling, the system configuration included either the Manchester to Meekville Junction Circuit Separation Project (MMP) or the variation (MMP-V) together with all four of the NEEWS projects in their proposed line configurations and with their ancillary projects. In addition to the GSRP, the other NEEWS projects are the Rhode Island Reliability Project, the Interstate Reliability Project, and The Central Connecticut Reliability Project.

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

Question:
Approximately how many pole structures would be needed for the MMP? Approximately how many would be needed for the MMP-V?

Response:

MMP would require 25 new pole structures at 23 locations, while MMP-V would require 34 new pole structures at 31 locations. At two locations for MMP and three locations for MMP-V, a lattice-steel tower supporting the double-circuit 115-kV line will be replaced by two monopoles, one for each circuit.

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

Question:
What is the Applicant's preferred project: MMP or MMP-V? Please explain reasoning.

Response:

The MMP was born from a need to resolve a potential N-1 overload problem which results from the GSRP change to the transmission system. Separating segments of the 395 and 1448 circuits where they share common line structures was a simple and obvious solution to this problem. The MMP-V would also resolve the problem in a more robust way, and at a comparable cost if it would eliminate the need for 345-kV capacitor additions at Ludlow Substation. The principal disadvantage of the MMP-V is that it creates a risk of permitting delay, since CTDEP will not consider the MMP and the MMP-V at the same time. As explained in CL&P's pre-filed testimony and Interrogatory responses, such a delay would have implications for the construction of all of GSRP as well as MMP/MMP-V. However, the tentative schedule that the Council has adopted for reconsideration of the MMP / MMP-V calls for a "Poll of Council Members" on June 17, 2010, with the final written decision package being issued on 7/29/10. If the Council were to adhere to this schedule and thus provide a solid indication of which project it was going to approve in mid June, such delay could be avoided, and the MMP-V would be the Company's preferred project.

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

Question:
Why does MMP or MMP-V have to be tied in with the GSRP as "one project" for U.S. Army Corps of Engineers purposes? Why can't they be separated?

Response:

The U.S. Army Corps of Engineers (USACE) requires that an applicant file an application for a single and complete Project. Based on USACE guidance, a single and complete project means the total project proposed or accomplished by one owner/developer or partnership. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility.

While the GSRP and MMP are physically and electrically separate, in order to energize the GSRP, the MMP or MMP-V will have to be ready to be energized as well. Because of the USACE's requirement that a single permit application be made for a single and complete project, the Section 10/404 Permit application was necessarily filed jointly by CL&P and by Western Massachusetts Electric Company, and seeks a single permit for both the Massachusetts and Connecticut portions of GSRP and the MMP.

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

Question:
On page 2 of the "Process" tab, the Applicant states that the MMP reopening may delay the entire GSRP, in part because of a delay in receiving approvals from the Massachusetts Department of Environmental Protection (MA DEP). Was MMP submitted to the MA DEP? If so, why? What is MA DEP's jurisdiction over the MMP or MMP-V?

Response:

The referenced testimony does not say that selection of the MMP-V would create a risk of delay in receiving an approval from MADEP. MMP was not submitted to MADEP, and MADEP has no jurisdiction over the MMP or MMP-V, or over the Connecticut portion of the GSRP. Each of MADEP and CTDEP have jurisdiction only with respect to the construction proposed in their respective states.

However, the United States Army Corps of Engineers (USACE) has jurisdiction over all GSRP and MMP (or MMP-V) facilities that will affect the waters of the United States, and it will issue a single Section 10/404 permit for both projects. In order to obtain that permit, WMECO and CL&P must first obtain Section 401 water quality certificates from both MADEP and CTDEP. The concern described at page 2 of the Process tab is that a delay in obtaining the Connecticut WQC could cause a delay in obtaining the (USACE) Section 404 permit, which would then delay the start of construction.

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

Question:
On page 4 of the Process tab, the Allowance for Funds Used During Construction (AFUDC) was calculated as approximately $750,000 per month. How is this figure determined?

Response:

AFUDC charges to a capital project represent the financing cost of the debt and equity funds used to pay for the project while under construction. These AFUDC charges during construction are capitalized as part of the cost of the project. The monthly AFUDC charge is determined by the cost of debt and equity funds for that month times the accumulated project expenditures, referred to as Construction Work in Progress (CWIP). This AFUDC methodology is as approved by FERC. The $750,000 per month was the estimated AFUDC expense for the GSRP (in CT and MA) and the MMP, for a month late in the fourth quarter of 2010, based on the projected cost of debt and equity at the time of the filing of CL&P's Petition for Reconsideration of the Council's MMP decision. The actual AFUDC expense may be different depending on the cost of debt and equity at the time of the actual construction.

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

Question:
Page 5 of the "Process" tab states that the "projects (i.e. GSRP and MMP/MMP-V) are physically and electrically separate and that they could be constructed on independent schedules consistent with their siting approvals." It also repeats the claim that the two will "require the same environmental permit." Further a claim is made that both "will have to be ready to be energized as well." Explain the latter claim. If the MMP/MMP-V project is denied, why cannot GSRP go forward?

Response:

As explained in Section F.4.4 of the Application (Vol. 1, p. F28, 29), and as summarized by the Council in its Opinion in this Docket, "The specific need for the MMP is a consequence of reliability improvements from the proposed GSRP itself. The MMP would make certain adjustments to help the system accommodate these higher power flows more reliably." (Opinion, p. 2). Without the MMP or MMP-V, the redistribution of these higher power flows in the event of certain contingencies would overload the Hartford 115-kV cable circuits. Accordingly, GSRP can not be energized before the MMP (or MMP-V) is implemented without causing an adverse impact on the transmission system.

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

Question:
Is it reasonable to ascribe all MMP-V cost against MMP when there is a likelihood that MMP-V will be required as part of a future 345-kV expansion? Given the advantages of MMP-V, is there any credible reason why MMP-V costs would not be regionalized?

Response:

Yes, it is reasonable to include the MMP-V costs in the current project costs, even though the additional MMP-V work would likely be required at some indefinite time in the future. This treatment is required when there is no other planned project to which a portion of the cost can be assigned.

The fact that the MMP-V was not found to be required in power-flow simulations to eliminate a criteria violation provides a credible reason why its incremental costs would not be regionalized. However, as described in the Scarfone/Laskowski testimony, in the event that the MMP-V were selected, NUSCO hopes to make a convincing case to ISO-NE that the costs of the MMP-V should qualify for regional cost recovery. Moreover, NUSCO expects to make a convincing case that because the MMP-V can make the proposed Ludlow 345-kV capacitors unnecessary, any incremental costs will be non-existent or minimal.

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

Question:
Have formal steps been taken to confirm that MMP-V cost would qualify for regionalization? If not, why not?

Response:

No. The only "formal step" by which to obtain such a determination is a Transmission Cost Allocation Application (TCA). NUSCO will not file a TCA Application for any part of GSRP or MMP / MMP-V until the final configuration of these projects has been determined by the completion of the siting and permitting processes. This timing avoids having to revise applications or determinations in light of changes made during the regulatory processes and allows the determination to be made on the basis of the most current cost estimates. This timing is also consistent with NUSCO's past practice on large projects (e.g., with respect to the Bethel-Norwalk and Middletown-Norwalk projects.)

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

Question:
Referring to page 5 of the "System Benefits" tab, lines 13 through 22, is there always time for operations to adjust imports after a first contingency and before a second contingency? Do multiple contingencies occur simultaneously, or nearly so?

Response:

No, there is not always time for operations to adjust imports after a first contingency and before a second contingency; and yes, multiple contingencies do sometimes occur simultaneously, or nearly so.

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

Question:
Did the transfer capability studies, referred to on page 7 of the "System Benefits" tab, include the Ludlow 345-kV capacitor? If yes, please explain why.

Response:

No, the transfer capability studies referred to on page 7 of the "System Benefits" tab did not include the Ludlow 345-kV capacitors.

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

Question:
Has performance of the system with and without MMP-V been modeled for responses to very large power swings such as might occur for a major disruption like the Mid-West outage of 2003? If so, briefly describe results. If not, why not?

Response:

No, the Company has not performed such an analysis. The applicable reliability standards and criteria by which system needs are determined do not require such a test, and these events would be very difficult to define and model. The Company did test both the MMP and MMP-V for extreme contingencies in stability studies. However, as stated in the April, 2010 report of the comparative power-flow modeling of the MMP and MMP-V, these contingences did not result in blackout conditions. The Applicant is filing four copies of that report with the Council pursuant to the Council's bulk filing provisions and the CEII protective order entered in this Docket (see CSC-04, Q-CSC-020-BULK). Copies will be provided on request to parties or intervenors who have qualified to receive CEII information.
** This response is proprietary and confidential and is available only to signatories of the nondisclosure agreement.

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

Question:
Compare the extent of environmental impact associated with the MMP-V with past CL&P projects, such as Beseck to East Devon. Could design and construction parameters minimize impacts to the floodplain?

Response:

In Connecticut, the linear nature of transmission lines (which must necessarily get from Point A to Point B) will unavoidably involve some construction activities / crossings of floodplains, wetlands, and watercourses. This was certainly the case with the 33.4-mile Beseck to East Devon section of the Middletown-Norwalk (MN) Project, which extended across various watercourses, including the floodplains of the Wepawaug River in the City of Milford and the Quinnipiac River in the Town of Wallingford. For the MN Project, as well as for the MMP-V and any other CL&P project, environmental impacts are minimized to the extent practical by the careful siting of transmission line structures, temporary and permanent access roads, and other work areas. In fact, avoidance, minimization, and -- if avoidance / minimization is not possible - mitigation of environmental impacts, are pre-requisites for the acquisition of key regulatory approvals from the United States Army Corps of Engineers and the CT Department of Environmental Protection.

For MMP-V, the placement of additional structures in the floodway of Hop Brook cannot be avoided entirely due to the location of the existing Manchester Substation and the site within the substation where the new 345-kV facilities must interconnect. Siting in this area is further constrained by the brook and other land-use development. In comparison, for the MN Project, no above-ground structures were placed within any designated floodways, and no new SCEL areas were affected.

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

Question:
Would environmental impacts similar to those associated with MMP-V occur if a similar project were constructed in the future, as part of a 345-kV upgrade?

Response:

Yes. If the MMP were built, and later on additional construction was undertaken to create a 345-kV line from Manchester Substation to Meekville Junction, the impacts of that additional construction would be similar to the incremental impacts of the MMP-V, as compared to the MMP.

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

Question:
Has the area around Meekville Junction been previously environmentally disturbed due to nearby construction?

Response:

Yes. Within the existing transmission line ROW at Meekville Junction, there are nine transmission line structures and two access roads that have been placed within and through wetlands in this area. Outside of the ROW to the north there is a residential development and paved streets that are in proximity to the wetlands at Meekville Junction. To the east and west there is commercial development. It is likely that construction of these developments caused environmental disturbances to the Meekville Junction area. The presence of invasive plant species, including common reed (*Phragmites australis*) and Japanese knotweed (*Polygonum cuspidatum*) is consistent with typical disturbed soil conditions.