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CONNECTICUT SITING COUNCIL

RE:	JOINT APPLICATION OF THE CONNECTICUT LIGHT AND POWER COMPANY AND THE UNITED ILLUMINATING COMPANY FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR A 345-KV ELECTRIC TRANSMISSION LINE FACILITY AND ASSOCIATED FACILITIES BETWEEN SCOVILL ROCK SWITCHING STATION IN MIDDLETOWN AND NORWALK SUBSTATION IN NORWALK	:	DOCKET NO. 272 MARCH 11, 2005

PROPOSED FINDINGS OF FACT
OF THE
OFFICE OF CONSUMER COUNSEL

The Office of Consumer Counsel ("OCC") is a party to the above-captioned Connecticut Siting Council ("Siting Council" or "Council") proceeding. OCC is the statutory advocate for consumer interests in all matters that may affect Connecticut utility ratepayers with respect to public service companies, per §16-2a of the Connecticut General Statutes ("CGS").

OCC herewith files its Proposed Findings of Fact, as requested by the Siting Council on February 22, 2005.

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Summary of Key Points

1. Connecticut law, even as modified by Public Act 04-246, does not allow the Siting Council to certificate a transmission facility that fails to meet accepted electrical reliability standards.

2. Docket evidence shows that the 24-Mile Case is inferior to the 13-Mile Case on all relevant electrical reliability measures.

3. The Siting Council should decline to certificate the 24-Mile Case, and instead should certificate the 13-Mile Case.

I. BACKGROUND

In this proceeding, the Siting Council is reviewing the various facilities for which The Connecticut Light and Power Company ("CL&P") and The United Illuminating Company ("UI") [CL&P and UI together, the "Applicants"] seek a certificate of environmental compatibility and public need. In their Application of October 9, 2003, the Applicants presented the Siting Council with the following principal options:

(a) the Proposed Route (with supported changes), containing approximately 45 miles of overhead construction and 24 miles of underground construction;
(b) Alternative A, containing approximately 60 miles of overhead construction and 13 miles of underground construction;
(c) Alternative B, containing approximately 72 miles of overhead construction and 2 miles of underground construction.

The particulars of the Proposed Route, and of Alternative A and Alternative B, considered as Applicant proposals, each have been somewhat changed over the course of this proceeding, principally on account of the Applicants' response to the Final Report of the Reliability and Operability Committee, December 20, 2004 ("Final ROC Report").

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For convenience and clarity, these three alternative proposals, as currently recommended by the Applicants, are referred to below, not as the Proposed Route, Alternative A and Alternative B, but rather as (respectively) the 24-Mile Case, the 13-Mile Case and the 4-Mile Case.[1]

Public Act 04-246, An Act Concerning Electric Transmission Siting Criteria ("PA 04-246" or the "Special Transmission Statute"), took effect on June 3, 2004, and applies to this proceeding. OCC, in its Comments on Public Act 04-246, filed with the Siting Council on July 19, 2004, argues that the presumption for undergrounding found in the Special Transmission Statute makes only limited, modest changes to the Siting Council's fundamental mandate as an administrative agency. By contrast, many participants in this proceeding have stated that the Special Transmission Statute makes profound changes in the Siting Council's mandate (usually without demonstrating this contention in any detail).

While there is room for debate on the extent to which the Special Transmission Statute has changed the law applicable to this proceeding, there can be no disagreement that this statute requires the Siting Council to consider the effect of burying the proposed

[1] In a Power Point presentation to the FERC Technical Session held in Hartford on January 6, 2005, John Prete (an Applicant representative) referred to these three currently recommended alternatives as the 4 Mile Case, the 13 Mile Case and the Maximum Underground Case. The latter phrase refers to a line configuration featuring 24 miles of underground cable.

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transmission line on the reliability of the state's electric system. PA 04-246, § 7 [last two sentences of new subsection (h) of CGS § 16-50p][2].

The evidentiary record in this proceeding demonstrates that the 24-Mile Case is unacceptable, based solely on electrical system reliability considerations. In these Proposed Findings of Fact, OCC summarizes pertinent elements of the docket record relating to the conclusion just stated. Based on that evidentiary record, OCC urges the Siting Council to issue a Certificate of Environmental Compatibility and Public Need for the 13-Mile Case (i.e., Alternative A, as proposed by the Applicants in their initial application, and as modified by the Final ROC Report).

II. PROPOSED FINDINGS OF FACT

OCC's proposed findings of fact, on the limited issue described above, are as follows:

1. Both Connecticut law and good engineering practice require the Siting Council to take a conservative approach to technological issues. CGS § 16-50t(a)(3) (Elimination of overhead transmission lines is to proceed "over appropriate periods of time in accordance with existing applicable technology."); Tr., 2/17/05, pp. 16-18 (Technological feasibility, for this docket, should include actual industry experience. If mitigation measures not based on established industry practice are contemplated, that adds significant risk. The initial testing for new technologies, or new uses for existing technologies, should be on a small scale, so that the system impacts of possible failures would be minimal.)

2. Connecticut law applicable to this docket creates a presumption favoring underground placement of the proposed transmission project, for sections adjacent to certain land uses. PA 04-246, § 7.

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[2] This statutory text now has been codified as CGS § 16-50p(i).

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3. This presumption favoring underground cable may be rebutted by (among other reasons) evidence that it would be technologically infeasible to bury the facility. In determining such infeasibility, the Council must consider the effect of such burial on the reliability of the state's electric system. PA 04-246, § 7.

4. The Applicants have made three discrete proposals to the Council, containing (respectively) approximately four, thirteen and twenty-four miles of underground cable. These are referred to here as the 4-Mile Case, the 13-Mile Case and the 24-Mile Case.

5. Docket evidence establishes that 24 miles of underground cable is the greatest length of cable that possibly could be certificated, consistent with maintaining reliability of Connecticut's electrical system. Final ROC Report, 12/20/04; Report of Applicants and ISO-New England Regarding the February 14, 2005 Technical Meeting (2/15/05); KEMA's Findings Based on Results Presented at the Connecticut Siting Council's Technical Meeting on February 14, 2005 (2/16/05); Tr., 2/17/05, pp. 53-56 (KEMA corrects news reports suggesting that it believes that 4 to 8 additional miles of undergrounding beyond 24 miles are technically feasible); Tr., 2/17/05, pp. 56-62 (KEMA states that the Applicants and ISO-New England accurately summarized the areas of expert agreement following the 2/14/05 technical conference).

6. As a practical matter, it is not feasible for the Council to certificate lengths of cable other than 4 miles, 13 miles, and 24 miles, as specifically proposed by the Applicants, notwithstanding that the technical studies underlying the ROC Report treat possible lengths for underground cable as a continuum. See, e.g., Tr., 2/17/05, p. 110 (18 miles not possible, given the geography in the Bridgeport area).

7. As a technical matter, it generally is not feasible for the Council to divide given lengths (e.g., 24 miles) of underground cable into discrete sub-sections (e.g., 13 + 11 miles), because this would make an already weak electrical system more complex and variable. Tr., 1/11/05, pp. 61-64, 66-69.

8. The ROC studies focused on five specific measures of electrical system reliability: harmonic performance, transient performance, thermal and voltage performance, stability performance, and short circuit performance. Interim ROC Report, 8/16/04; Interim ROC Report, 10/8/04; Final ROC Report, 12/20/04; Tr., 1/11/05, pp. 44-46.

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9. KEMA, the Council's independent expert, agreed that all five of these measures should be considered when evaluating electrical system reliability. See OCC-33(b), OCC-34(b), OCC-35(a), OCC-36(a), OCC-37(a), OCC-38(a) (KEMA answers).

10. The 24-Mile Case is inferior to the 13-Mile Case on each one of these five reliability measures. Final ROC Report, 12/20/04, pp. 2-8 (executive summary).

11. The Applicants and ROC also considered the difficulty of system operation and risks to system operability as measures of electrical system reliability. Interim ROC Report, 8/16/04, p. 4.

12. KEMA, the Council's independent expert, agreed that the difficulty of system operation and risks to system operability should be considered when evaluating electrical system reliability. See OCC-44, OCC-48 (KEMA answers).

13. The 24-Mile Case is inferior to the 13-Mile Case on all relevant reliability measures related to system operability. Final ROC Report, 12/20/04, p. 5 (executive summary) (the 24-Mile Case is more difficult to construct and operate, and carries more risk, than the 13-Mile Case); Tr., 1/13/05, pp. 196-197 (The 13-Mile Case is better than the 24-Mile Case on questions of the difficulty of system operation and risks to system operability.).

14. The Applicants and ROC also considered the difficulty of taking existing generation units in SW CT off line for re-powering, and the difficulty of adding new generation units in SW CT, as measures of electrical system reliability. Application, 10/19/03, Vol. 1, p. F-31.

15. KEMA, the Council's independent expert, agreed that the difficulty of taking existing generation units in SW CT off line for re-powering, and the difficulty of adding new generation units in SW CT, should be considered when evaluating electrical system reliability. See OCC-46, OCC-47 (KEMA answers).

16. The 24-Mile Case is inferior to the 13-Mile Case on all relevant reliability measures related to re-powering generation units or adding generation units in SW CT. Tr., 1/11/05, p. 31 (By getting this far to the edge, with the 24-Mile Case, you limit your options in the future for system expansion. Any additions we make in the future are going to have to be studied exhaustively to make sure we can handle them satisfactorily); Tr., 1/11/05, pp. 52-58 (Installation of the 24-Mile Case would make all future additions of generation, even smaller units, a risky proposition, one that would have to be carefully and thoroughly studied. The 24-

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Mile Case is not the total solution, but rather is one that creates fresh problems when new generation in SW CT is under consideration. Connecting new generation to underground cable also is a concern, due to capacitance issues.); Tr., 1/13/05, pp. 198-200 (The 13-Mile Case is better than the 24-Mile Case with regard to the future needs of the system, expansion of the system, and the ability to add new generation in SW CT).

17. Overall, the 24-Mile Case is far more risky from a reliability perspective than is the 13-Mile Case. Final ROC Report, 12/20/04, p. 5 (executive summary) (The 24-Mile Case carries more risk than the 13-Mile Case); Tr., 1/11/05, p. 30 (As you add more cable in SW CT, you take on more risk. The modeling results become volatile and unpredictable.); Tr., 1/11/05, p. 31 (By going from the 13-Mile Case to the 24-Mile Case, we are taking on more risks.); Tr., 1/13/05, pp. 31-34 (The 24-Mile Case is at the edge of the minefield. We took a lot of risks to get to that point. The 24-Mile Case risks our ability for future system expansion. We used up every trick in the bag to get to 24 miles.); Tr., 1/13/05, pp. 42-43 (24 miles is adding a lot more risk than if it was an overhead installation.); Tr., 1/13/05, pp. 194-196 (As you move from 13 miles to 24 miles, the risks increase.).

18. Installation of the 24-Mile Case would carry system planning well beyond its customary limits. Tr., 1/13/05, p. 184 (We have to address some additional issues to make the 24-Mile Case work.); Tr., 1/13/05, pp. 200-201 (While all three cases meet the good utility practice standard, the 24-Mile Case rates lower on this criterion than do the 13-Mile Case or the 4-Mile Case.); Tr., 1/13/05, p. 202 (The 24-Mile Case stretches power system planning, design and construction beyond customary practices.).

19. Installation of the 24-Mile Case would create specific problems in the future regarding surge arresters. Tr., 1/11/05, pp. 135-141 (Failure of surge arresters creates significant, possibly catastrophic, problems for the system. With the changeouts we are talking about for the 24-Mile Case, the safety margin is decreased and the risks increased.); Tr., 1/13/05, pp. 182-183 (Installation of the 13-Mile Case would require changeouts of fewer surge arresters.).

20. From a reliability perspective, the Applicants, ISO-New England and the ROC consultants all would prefer the 13-Mile Case to the 24-Mile Case. Final ROC Report, 12/21/04, pp. 4, 7 (executive summary); Tr., 1/11/05, pp. 32-33, 39; Tr., 1/13/05, pp. 90-91, 190; Tr., 1/13/05, p. 197 (The 13-Mile Case is better than the 24-Mile Case from the standpoint of strengthening the weak electrical system in SW CT.)

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21. The system modeling results led the Applicants and the ROC consultants to be uncomfortable with the 24-Mile Case. Tr., 2/17/05, pp. 79-80, 95-96, 108-110 (18 miles of undergrounding is more comfortable, because that amount presents fewer incursions into the safety zone than are found in the 24-Mile Case. From a reliability standpoint, 18-20 miles of undergrounding would be ideal[3]; the 24-Mile Case stretches this. At 24 miles, we believe that we can operate, but we're certainly at the edge.)

22. Installation of the 24-Mile Case would require extensive mitigation measures to be made technologically feasible, measures that the 13-Mile Case would not require. Final ROC Report, 12/20/04, p. 6 (executive summary) (the 24-Mile Case will require extensive equipment changes on the existing system, to be made technologically feasible); ISO-New England Power Point presentation to FERC, 1/6/05 (ISO Exhibit No. 13), p. 9 (The 24-Mile Case works only if extensive mitigating measures are employed, measures that would not be required for the 13-Mile Case); Tr., 1/11/05, p. 32 (We're going to have to do a wholesale replacement of substation equipment to make this work.); Tr., 1/11/05, pp. 92-93, 117 (Installation of the 24-Mile Case would require wholesale unprecedented changes in the substations); Tr., 1/13/05, p. 178 (The ROC Report's approval of the 24-Mile Case is conditional on a wide variety of system upgrades of various kinds.).

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[3] The Council should keep in mind that this (18-20) mileage figure is drawn from system modeling studies, not from consideration of actual construction opportunities. See Proposed Finding of Fact #6, above.

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III. CONCLUSION

For all of the above-stated reasons, OCC urges the Siting Council to make its determinations in this proceeding in accordance with the Proposed Findings of Fact presented above. Specifically, OCC urges the Siting Council to reject the 24-Mile Case and to issue a Certificate of Environmental Compatibility and Public Need for the 13-Mile Case (i.e., Alternative A, as proposed by the Applicants in their initial application, and as modified by the ROC Report).

Respectfully submitted,

MARY J. HEALEY
CONSUMER COUNSEL

By _____
Bruce C. Johnson
Litigation Attorney

CERTIFICATION

I hereby certify that a copy of the foregoing has been mailed and/or hand-delivered to all known parties and intervenors of record this 11th day of March 2005.

_____
Bruce C. Johnson
Commissioner of the Superior Court