

Petition No. 1073
The United Illuminating Company
Statewide
Staff Report
August 22, 2013

On July 22, 2013, the Connecticut Siting Council (Council) received a Petition (Petition) from The United Illuminating Company (UI) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed transmission remediation activities to comply with the North American Electric Reliability Corporation (NERC) facility ratings recommendation to industry. On October 7, 2010, NERC issued a nationwide alert to the bulk power industry of possible discrepancies between the design of transmission facilities and actual field conditions that require immediate attention. NERC recommended that the utilities assess transmission lines to confirm that the facility ratings were being determined based on actual field conditions and that any difference between design and actual field conditions is within the tolerances defined by the facility rating methodology.

To comply with the NERC recommendation, UI has or plans to:

- Review as-built transmission line clearances on 345-kV, and 115-kV systems. Light detection and ranging technology (LiDAR) was used to measure the distances to the existing ground profile and other objects within the right-of-way (ROW);
- Utilize computer modeling to graphically translate the LiDAR data;
- Identify and evaluate any clearance “points of interest” for potential impact on the transmission line thermal rating;
- Work with customers to address encroachments or other ROW modifications that have occurred within its easements or property;
- Correct all clearance issues that adversely affect a line’s ability to achieve its designed thermal rating; and
- File status reports twice per year with NERC on its findings and progress.

UI’s total overhead circuit miles for transmission lines in Connecticut are 7.16 circuit miles of 345-kV and 94.85 circuit miles of 115-kV. UI followed the timetable set by NERC, which include completion of field assessments of 345-kV overhead transmission lines by December 31, 2011 and 115-kV overhead transmission lines by December 31, 2012.

After reviewing its 345-kV system, UI did not find any locations with clearance issues. However, after reviewing its 115-kV system, UI identified a number of locations with unauthorized encroachment clearance, structure heights not in accordance with construction tolerances, and inadequate clearance due to underbuilt utility facilities.

UI has completed an analysis to determine if the line rating is impacted by any field conditions that are not consistent with design. If necessary, UI will temporarily modify the line rating by reducing power flow capacity to maintain compliance with National Electrical Safety Code clearance requirements.

Actions for remediation include:

- Increasing line tension to reduce sag;
- Relocating conductors to new tubular steel monopole structure(s) at locations where tensioning or replacement is not feasible;
- Replacing an existing structure to increase conductor height;
- Installing an intermediate structure to reduce conductor span sag; and
- Raising conductor attachments points.

Remediation would occur within established utility/railroad corridors; have temporary effects to wetlands and watercourses, if any; have a limited number of structures requiring a height increase; not create new noise impacts; not create new permanent effects on wildlife; and would not increase electric and magnetic fields directly under the transmission line wherever its conductor heights are increased.

Environmental effects would be mitigated through the use of best management practices for construction, erosion and sedimentation control measures, use of existing access roads, construction mats would be used in areas where wetlands and sensitive areas cannot be avoided, vegetation clearing will be minimized. Following construction activities, UI would stabilize and revegetate disturbed/exposed areas.

Construction is expected to begin in the first quarter of 2014 and be completed by the fourth quarter of 2015.

UI proposes to file supplemental notice to the Council for proposed activities on a site-specific basis.

Staff recommends that the approval of this petition is subject to the following conditions:

1. UI shall file with the Council a sub-petition for each site-specific remediation activity for Council staff review that includes the following information:
 - a. The exact location of the remediation activity;
 - b. Description of the remediation activity, including, but not limited to site drawings and plans depicting current field conditions, corrected field conditions and access routes to areas of remediation activities;
 - c. An impact statement relating to the potential environmental effects of construction as follows, where applicable:
 - i. Wetlands and watercourses
 - ii. Flood zones
 - iii. Connecticut Department of Energy and Environmental Protection Natural Diversity Database areas
 - iv. Clearing of trees and/or vegetation
 - d. A mitigation plan for any identified environmental impact, including, but not limited to best management practices, erosion and sediment controls, re-vegetation and site stabilization.

2. UI shall provide notice to the town(s) and abutting property owners of the proposed remediation activity with a copy of the site-specific sub-petition indicating that comments or concerns should be submitted to the Council within 30 days of the date that the sub-petition is sent to the town(s) and abutting property owners. Proof of such notice shall be provided to the Council at the time the site-specific sub-petition is filed with the Council. If UI identifies field conditions that require immediate attention to restore the rating of a transmission line that is out of compliance and UI submits to the Council site-specific sub-petition proof of notice to the town and abutting property owners, and submits written permission to proceed with the remediation activity from the town, the 30-day comment period may be waived.