



July 10, 2014

Northeast Utilities Service Company P.O. Box 270 Hartford, CT 06141-0270 (860) 728-4532

Mr. Robert Stein, Chairman Connecticut Siting Council Ten Franklin Square New Britain, CT 06051

RE: Docket No. 424: Interstate Reliability Project

Development & Management Plan Change Notice Request:

Structure Modifications Pursuant to Federal Aviation Administration Conditions of Determination

for Aviation Warning and Markings - Towns of Mansfield, Brooklyn, and Pomfret

## Dear Chairman Stein:

Pursuant to Section 16-50j-62(a)(1) of the Regulations of Connecticut State Agencies (RCSA) and Section 7.2 of the *Development and Management (D&M) Plan for the Construction of the Interstate Reliability Project (Project, Interstate) New 345-kV Transmission Lines and Related Minor Modifications to Adjacent Lines*, The Connecticut Light and Power Company (CL&P) submits the above-referenced proposed D&M Plan change to the Connecticut Siting Council (Council) for review and approval.

In the D&M Plan approved by the Council (Volumes 1 and 2 dated August 2013; Volume 3 dated August 2013, updated February 2014), CL&P noted that consultations with the Federal Aviation Administration (FAA) were ongoing regarding CL&P's proposed aviation warning mitigation for certain 345-kV transmission line structures in the vicinity of the Windham Airport in Willimantic and the Danielson Airport in Killingly. Subsequent to the Council's approval of the D&M Plan, CL&P continued to consult with the FAA and has now designed aviation markings in accordance with the FAA's conditions of a determination of no hazard to aviation.

The new transmission line structures affected by the FAA's conditions are located in the vicinity of the airports, in the Towns of Mansfield, Brooklyn, and Pomfret. The purpose of this proposed D&M Plan change is to incorporate the aviation warning mitigation for these structures into the Project design.

Specifically, CL&P proposes to install steady-state red obstruction lights on eight new transmission line structures near Windham Airport and 10 new transmission line structures near Danielson Airport. Marker balls will be placed on shield wires along spans near some of these structures. Further, to conform to FAA recommendations, CL&P slightly reduced the height of two new structures.

Table 1 identifies the transmission line structures on which lighting or marking will be installed, consistent with the FAA determination, and highlights the structure designs that differ from those presented on the February 2014 D&M Plan Volume 3 maps. All aviation warning lights on the new structures will be solar-powered except for those on Structures 215 and 216. The lights on these two structures, located on either side of Church Street in the Town of Brooklyn, will be supplied by distribution service lines that will extend to the structures from an existing distribution line along Church Street. Structure 215 is located on CL&P-owned property.



Chairman Stein July 9, 2014 Page 2

For reference, Figure 1 includes photographs of aviation warning lights recently installed on new transmission line structures on the Massachusetts portion of the Greater Springfield Reliability Project. The warning lights planned for the Interstate transmission line structures will be the same, or similar to, these lights. Exhibit FAA-1 illustrates the design of the aviation warnings and solar panels. Figure 2 provides representative photographs of marker balls on transmission lines.

To incorporate the FAA's conditions of marking and/or lighting into the Project design, CL&P proposes to modify eight D&M Plan Volume 3 mapsheets that depict structures affected by the FAA determinations. These proposed D&M Plan Volume 3 modifications are included in Attachment A, and are summarized as follows:

- Volume 3, Mapsheet Nos. 11, 12, 13, 14, 42, 43, 44, and 45. These February 2014 D&M Plan
  mapsheets include structure-specific notations indicating "Potential FAA Lighting Recommended"
  or "FAA Lighting Recommended". CL&P proposes to modify the notations on these mapsheets
  as follows to reflect the FAA-recommended mitigation and CL&P's design:
  - "Aviation Warning Lights to be Installed per FAA Recommendations (Solar Powered; refer Exhibit FAA-1)".
  - "Aviation Warning Lights to be Installed per FAA Recommendations (Distribution Line Power Supply)" (Structures 215 and 216 only).
  - "Marker Balls to be Placed on Span".

On each of the seven mapsheets, the structure description information table also has been updated, as appropriate, to reflect structure height changes associated with the FAA mitigation (as summarized in Table 1).

CL&P is providing notice of the proposed D&M Plan changes to the affected property owners and chief elected officials of the towns of Mansfield, Brooklyn, and Pomfret.

Enclosed please find an original and 15 copies of this submission.

Should you or other Council members have any questions regarding this submission, please do not hesitate to contact me via e-mail at john.morissette@nu.com or telephone at (860) 728-4532.

Sincerely,

John R. Morissette

Project Manager - Transmission Siting

**Enclosures** 

CC:

Service List

Table 1
Specifications Regarding FAA-Recommended Lighting and Associated Minor Decreases in Structure Height (Changes from Approved D&M Plan, Volume 3 Maps, dated February 2014, are shown in RED)

D&M Plan Volume 3 Map No. / Town	SUMMARY OF STRUCTURE INFORMATION CONTAINED ON D&M PLAN VOLUME 3 MAPS (February 2014)						TYPE OF LIGHTING OR MARKING PER FAA	
	STR #	NU STR #	DESCRIPTION <sup>1</sup>	HEIGHT <sup>2</sup> (FT)	FINISH	FOUNDATION	L-810 Light Power Source	Marker Balls (Location) <sup>3</sup>
MANSFIELD								
11	58	10757	345-kV Single Circuit Guyed Steel Frame 3-Pole Horizontal Running Angle (2-15 deg)	70	Weathering	Direct Embed	Solar	N/A
11	59	10758	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	N/A
11	60	10759	345-kV Single Circuit Steel H-Frame Horizontal Tangent	110	Weathering	Direct Embed	Solar	N/A
<b>12/</b> 13	67	10766	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	Ahead and Back Span
13	68	10767	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	Ahead Span
13	69	10768	345-kV Single Circuit Guyed Steel Frame 3-Pole Horizontal Running Angle (2-15 deg)	85	Weathering	Direct Embed	Solar	Ahead Span
13	70	10769	345-kV Single Circuit Steel H-Frame Horizontal Tangent	85	Weathering	Direct Embed	Solar	Ahead Span
13	71	10770	345-kV Single Circuit Steel H-Frame Horizontal Tangent	85	Weathering	Direct Embed	Solar	Ahead Span
14	73	10772	345-kV Single Circuit Steel H-Frame Horizontal Tangent	85	Weathering	Direct Embed	N/A	N/A
BROOKLYN								
42	215	10913	345-kV Single Circuit Steel H-Frame Horizontal Tangent	90	Weathering	Direct Embed	Distribution Line	Ahead and Back Span
42	216	10914	345-kV Single Circuit Steel H-Frame Horizontal Tangent	90	Weathering	Direct Embed	Distribution Line	Ahead Span
43/44	222	10920	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	Ahead and Back Span
44	223	10921	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	Ahead Span
POMFRET					8	Direct Emileu		Ancad Span
44	224	10922	345-kV Single Circuit Steel H-Frame Horizontal Tangent	80	Weathering	Direct Embed	Solar	Ahead Span
44/45	225	10923	345-kV Single Circuit Steel H-Frame Horizontal Tangent	75 70	Weathering	Direct Embed	Solar	Ahead Span
45	226	10924	345-kV Single Circuit Steel H-Frame Horizontal Tangent	<del>70</del> <b>62</b>	Weathering	Direct Embed	Solar	Ahead Span
45	227	10925	345-kV Single Circuit Guyed Steel 3-Pole Horizontal Running Angle (10-20 deg)	75	Weathering	Direct Embed	Solar	Ahead Span
45	228	10926	345-kV Single Circuit Steel H-Frame Horizontal Tangent	85	Weathering	Direct Embed	Solar	Ahead Span
45	229	10927	345-kV Single Circuit Steel H-Frame Horizontal Tangent	90	Weathering	Direct Embed	Solar	Ahead Span

## Notes:

- 1. Structure description is as specified in the February 2014 D&M Plan, Volume 3 maps (shown in black), with planned changes to accommodate FAA recommendations shown in red.
- 2. Structure height (feet) identifies height per the February 2014 D&M Plan, Volume 3 maps (shown in black), with height change planned to reflect conformance to FAA recommendations shown in red.
- 3. Marker ball location "ahead or back span" refers to the planned location of the FAA-recommended marker balls along conductor wires either in front of or in back of the specified transmission line structure. Refer to Figure 2 for representative photographs of marker balls on transmission line conductors.
- 4. Per the final FAA recommendations, Structure 73 does not require lighting.

Exhibit FAA-1: FAA Light and Solar Panel Arrangement on Transmission Structure

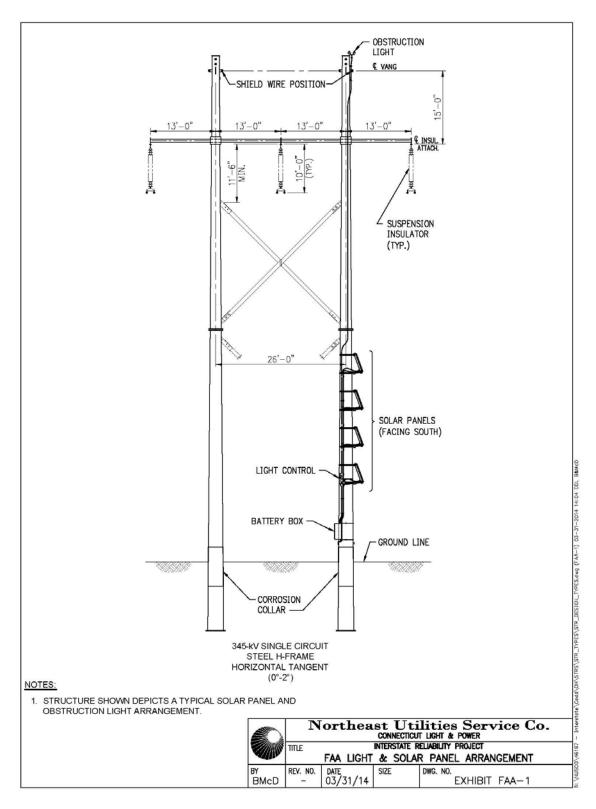




Figure 1a



Figure 1b

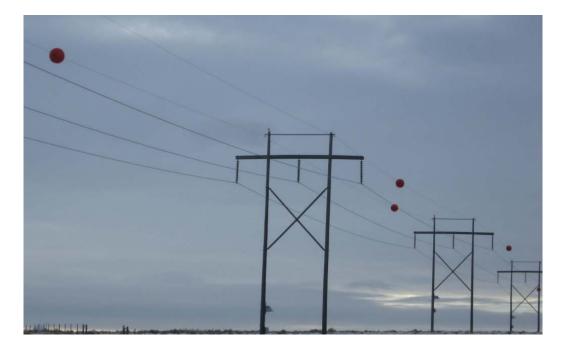


Figure 1c

Figure 1 (a-c)
Aviation warning lights recently installed on new transmission line structures on the Massachusetts portion of the Greater Springfield Reliability Project

Figure 2
Representative Examples of Marker Balls on Transmission Lines





## **ATTACHMENT A**

## REVISED D&M PLAN VOLUME 3 MAPSHEETS INCORPORATING LIGHTING, MARKING, AND STRUCTURE HEIGHT MODIFICATIONS TO REFLECT FAA CONDITIONS OF DETERMINATION AVIATION WARNINGS AND MARKINGS

(Revised Mapsheet Nos. 11, 12, 13, 14, 42, 43, 44, and 45)

