

4.0 ROUTE AND ANCILLARY FACILITY SITE SELECTION FOR 345-kV TRANSMISSION LINES

4.1 STANDARD OF REVIEW: “OTHER SITE LOCATIONS”

The Siting Board has a statutory mandate to implement the policies of G.L. c. 164, §§ 69H-69Q to provide a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost. Further, G.L. c. 164, § 69J requires the Siting Board to review alternatives to planned projects, including “other site locations.” In implementing this statutory mandate and requirement, the Siting Board requires a petitioner to show that its proposed facility siting plans are superior to alternatives and that its proposed facilities are sited at locations that minimize costs and environmental impacts while ensuring supply reliability. NEPCO 1998 at 372; Berkshire Power 1996 at 347; Silver City 1994 at 256; Cabot Power 1994 at 371.

In order to determine whether a facility proponent has shown that its proposed facility siting plans are superior to alternatives, the Siting Board requires the proponent to demonstrate that it examined a reasonable range of practical facility siting alternatives and that its proposed facilities are sited at locations that minimize costs and environmental impacts while ensuring reliable supply. CELCO 2001 at 326; NEPCO 1998 at 372; BECO 1997, at 272; Massachusetts Municipal Wholesale Electric Company, 12 DOMSB 18, 116 (2001) (MMWEC 2001); ANP Blackstone Company, 8 DOMSB 1, 212-213 (1999) (ANP 1999). In order to determine that a facility proponent has considered a reasonable range of practical alternatives, the Siting Board requires the proponent to meet a two-pronged test:

- First, the facility proponent must establish that it developed and applied a reasonable set of criteria for identifying and evaluating alternatives in a manner which ensures that it has not overlooked or eliminated any alternatives which are clearly superior to the proposal.
- Second, the facility proponent must establish that it identified at least two noticed sites with some measure of geographic diversity.¹

¹ When a facility proposal is submitted to the Siting Board, the petitioner is required to present (1) its preferred route, and (2) at least one alternative route. These routes often are described as the noticed-alternatives because these are the only routes described in the notice of adjudication published at the commencement of the Siting Board’s review. In reaching a decision in a facility case, the Siting Board can approve a petitioner’s preferred route, approve an alternative route, or reject all routes. The Siting Board, however, may not approve any route which was not included in the notice of adjudication published at the commencement of the proceeding.

CELC 2001 at 327; MMWEC 2001 at 119; ANP 1999 at 213; Berkshire Power at 347, 348; Silver City 1994 at 258; Cabot Power 1994 at 373.

In the following sections, WMECO presents a detailed description of its route selection process, including an overview of the route selection methods; the alternative alignments that were subsequently identified and evaluated; and the process whereby preferred and noticed-alternative routes were selected. Section 5 presents detailed analyses of the environmental impacts and costs of the development of the 345-kV transmission lines along the preferred and the noticed-alternative routes, respectively. Both routes are shown to have comparable reliability. Similarly, Section 6 presents a description of the route selection process for the 115-kV transmission lines, including an overview of the route selection methods; the alternative alignments that were subsequently identified and evaluated; and the process whereby preferred and alternative routes were selected. Section 7 then contains a detailed analysis of the environmental impacts and costs of the 115-kV transmission lines along the preferred overhead line route shared with the 345-kV lines and the underground alternative line routes. Differences in reliability of the 115-kV alternative routes are also assessed. Underground line alternatives were not considered for the “spur” route between the proposed Cadwell Switching Station and Exit 6 Junction and the Shawinigan Switching Station. On this “spur”, no 345-kV line construction occurs and no right-of-way expansion is required to accommodate the replacement of the existing 115-kV overhead lines. Underground line alternatives were not considered for the Orchard Substation to Orchard Junction “spur” section of 115-kV lines either, because the proposed scope is re-conductoring only. In this regard, most, if not all, of the existing line structures between Orchard Substation and Orchard Junction will not be replaced.

4.2 OVERVIEW OF SITING METHODOLOGY

4.2.1 The Project

The GSRP will consist of new 345-kV lines, connecting three substations (Ludlow, Agawam and North Bloomfield) to complete a loop between WMECO’s Ludlow Substation and CL&P’s North Bloomfield Substation, for the purpose of reinforcing the Springfield area transmission system (see Figure 4-1). A 345-kV supply point to the Springfield 115-kV system is provided at the Agawam Substation and upgrades to existing 115-kV lines will be made to handle anticipated flows through the system. Figure 4-1 is a map which shows both sets of improvements and their location in the Greater Springfield area. Modifications affecting the Ludlow, Agawam, Orchard, Chicopee and Piper Substations and the South Agawam, Shawinigan and Fairmont Switching Stations are also required in connection with the transmission line construction. These substations and switching stations are shown in Figure 4-2. A new