

Final Report

Hancock County Reliability Project For I.3.9 Approval

May, 2005

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1 Introduction

Bangor Hydro Electric’s (BHE) customers in the Ellsworth and Trenton areas are currently served radial from the Ellsworth Falls 115/34.5-kV Substation. BHE proposes transmission upgrades and additions to improve system reliability and support to customers in these areas.

A 115-kV transmission line will be constructed between Boggy Brook and Trenton Substations to serve new 115/34-kV transformation at Trenton. This new line will be referred to as Line 61 and will be built with 14.5 miles of 795ACSR conductor. The existing ring bus at Boggy Brook switching station will be upgraded to include an additional 115-kV breaker for termination of Line 61. A 115-kV breaker will also be added on Line 61 at Trenton Substation.

Ellsworth and Trenton area 2007 summer peak load is approximately 60MW, see Table 1.1 below. With the addition of Line 61, approximately 10MW of the total load in these areas will be fed by this line. Trenton and Ellsworth falls are interconnected on BHE’s sub-transmission system.

	Pre-Project	Post-Project
Ellsworth	60MW	47MW
Trenton	0MW	13MW

Table 1.1 - 2007 Summer Peak Load for Ellsworth and Trenton

The proposal described above is referred to as the Hancock County Reliability Project. The in-service date for the project is December, 2007.

Figures 1.1 and 1.2 below show the BHE Downeast area transmission system geographically and schematically.

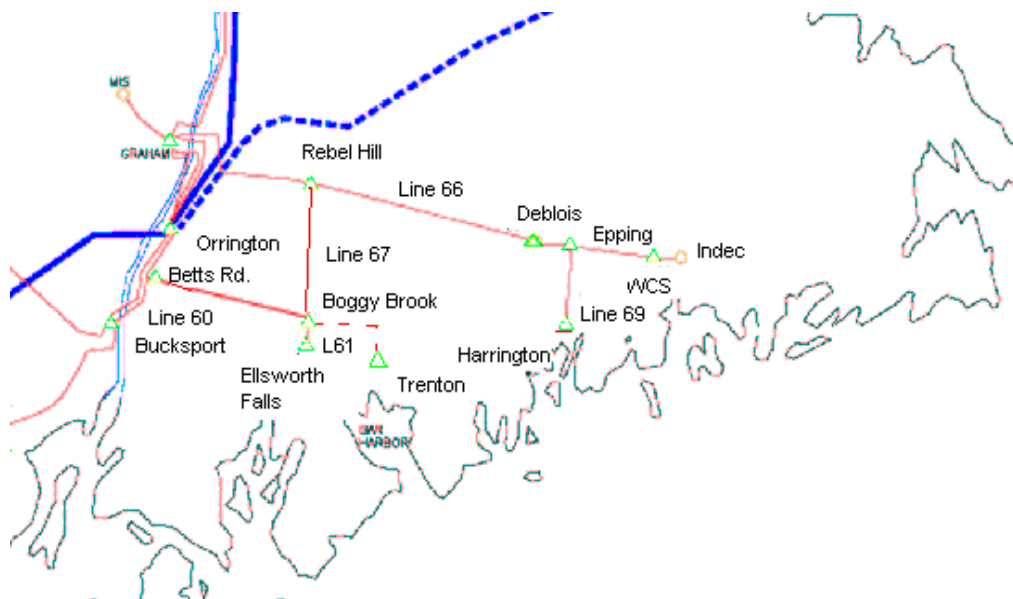


Figure 1.1 - Geographical Map of Study Area

Figure 1.2 below depicts the existing transmission system and the proposed Hancock County Reliability Project.

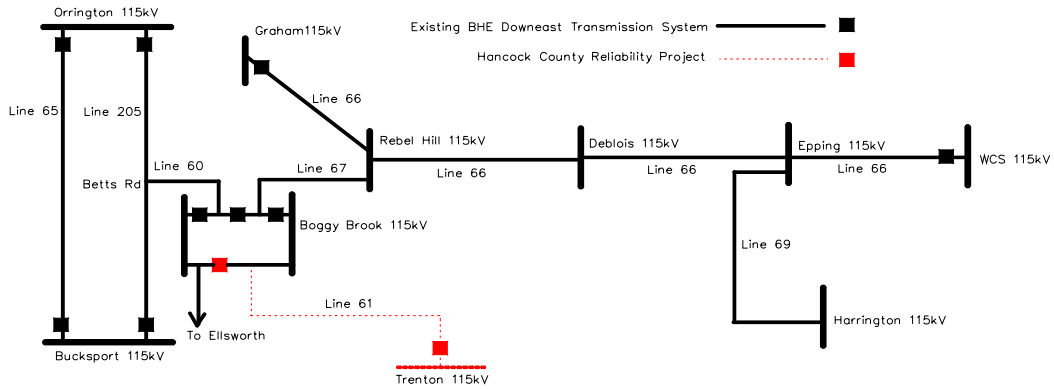


Figure 1.2 - Schematic Representation of the Study Area

2 Recommendation

Analysis of the Hancock County Reliability Project was not necessary. The addition of a 115-kV radial transmission line between Boggy Brook and Trenton Substations poses no adverse impacts to the transmission system. The Project provides additional 115/34-kV transformation to serve Ellsworth and Trenton area load.

The Hancock County Reliability Project is a long term upgrade that will improve reliability to customers in the Ellsworth and Trenton areas of the BHE transmission system.