



Environmental Assessment
Transmission Line 24L Rebuild Project
Bay Bulls, NL

Submitted By: Newfoundland Power Inc.

Submitted: January 26, 2010

Environmental Assessment

24L Rebuild Project 2010

Name of the Undertaking:

Rebuild 66,000-volt Wood Pole Transmission Line (24L), Bay Bulls, NL

Proponent:

- (i) Name of Corporate Body: Newfoundland Power Inc.
- (ii) Address: P.O. Box 8910, 55 Kenmount Road, St. John's, NL A1B 3P6
- (iii) Chief Executive Officer:
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The Undertaking:

- (i) Nature of the Undertaking: Newfoundland Power owns and operates a 66,000-volt wood pole electrical transmission line (TML 24L) located between Bay Bulls Big Pond Substation and Mobile Substation. A 7.0 kilometre section to be rebuilt in 2010 is located between Bay Bulls Big Pond Substation and Dump Road in Bay Bulls, following mainly along the limits of Route 10 (Southern Shore Highway).
- (ii) Purpose/Rationale/Need for the Undertaking: TML 24L was constructed in 1964 and has to be rebuilt because of identified deficiencies on a number of deteriorated structures. This TML is a critical transmission line as it is the only connection to the main electrical grid for 7 Newfoundland Power hydroelectric plants and 9 privately-owned wind generation units. As a result, any outage to this transmission circuit results

in a power interruption to customers on the Southern Shore and a loss of the ability for the power generation units to supply power to the main electrical grid.

To maintain electrical connection to the area during the construction period, an alternate route is required to allow the existing transmission line to remain energized. Property issues and existing structures prohibit the new line from being constructed adjacent to the existing line. Therefore a new corridor was selected to re-route around existing obstacles, including residences, private lands and ponds. In the area of the farm (see attached picture), the proposed transmission line will be located to the west of the property. This will cause a portion of the new corridor to be in excess of 500 metres from the road reservation for Route 10.

Description of the Undertaking:

Geographical Location: TML 24L is located on the Avalon Peninsula and is a part of the transmission system that connects substations in the Goulds and Mobile. A 7.0 kilometre section to be rebuilt in 2010 is located along Route 10 between the southern limits of Bay Bulls Big Pond and Bay Bulls Dump Road. Within this section and just south of the boundary limit for the City of St. John's, a portion of the new corridor is located in excess of 500 metres from Route 10. There is an existing farm (Irish Loop Farms) located on the west side of Route 10 where the transmission line is being re-routed to the rear of the property. The proposed transmission line corridor will be 15 metres wide with a single wood pole configuration located along the corridor center line. The total length of line located outside the 500 metre corridor is 1650 metres. The outer limit of the proposed line is located 860 metres from the center line of Route 10 (see attached map). Access to the new corridor will be gained by travelling the corridor.

- (i) Physical Features: Preparation of the 15 metre wide corridor will consist of clearing of the corridor to ensure there is no vegetation present to prevent risks to the transmission line and the public. The terrain located within the corridor is a mixture of trees and marsh. Brush will be cut and piled along the edge of the corridor. The pole configuration will consist of single wood pole configuration with approximately 70 metre pole spacing. Pole heights will be in the range of 12 metres to 16 metres (see attached).
- (ii) Construction: Construction of the transmission line will commence once all approvals are received, but no earlier than May 2010. The first phase of the project will be the clearing of the brush along the 15 metre wide corridor, and obtaining the necessary survey information required for the design. Construction of the line will require the installation of poles, framing of the structures and stringing new conductor. Pole

installation will be carried out through the use of excavators. Framing of the structures and stringing of conductor will utilize muskegs and nodwells to carry material and personnel to the work area. All equipment will access the work area by travelling along the new corridor. All equipment is equipped with spill response kits and all workers have attended job specific environmental training. Stream crossings will be avoided where possible, and silt screening installed in any stream or wet area to minimize disruption to fish habitat. Once the new line has been constructed, the existing line will be dismantled and all associated hardware removed from site.

- (iii) Operation: The transmission line will be a permanent installation with predicted lifespan of 40 years before it will require rebuilding. CCA-treated wood poles will be used while maintaining appropriate distances from waterways. Annual inspections of the line will be carried out by Newfoundland Power personnel and utilize ATV's or snowmobiles for transportation during the inspection.

- (iv) Occupations: The number of personnel on site will vary during the project, depending on the type of work being carried out. The quantities and time lines specified refer to the work to be completed outside the 500 metre corridor. The initial phase is clearing of the brush along the new corridor and will involve approximately 10 vegetation management contract personnel for 2 weeks. Surveying of this section will be completed in a couple of days by 2 surveyors utilizing GPS technology. The construction phase will involve a pole and line contractor to install poles and new conductor and will include labourers, equipment operators and power line technicians. It is expected this section will take 2 weeks to construct and will involve approximately 15 personnel.

- (v) Project Related documents: N/A

Approval of the Undertaking:

The following approvals are required for the project:

Town of Bay Bulls – received

City of St. John's – within City limits; PPWSA

Department of Environment and Conservation, Environmental Assessment Division – in excess of 500 metres from existing corridor (Route 10)

Crown Lands – Application for new corridor

Department of Fisheries and Oceans - fording

Department of Environment and Conservation, Water Resources Management Division - fording

Department of Government Services, Government Service Centre - Protected Roads

Schedule:

The proposed schedule for the project is as follows:

Approvals: Fall 2009/Winter 2010

Brush clearing: May 2010

Surveying: May 2010

Pole installation: June/July 2010

Funding:

The work will be carried out as part of the Company's 2010 capital budget at an estimated total project cost of \$1.161K.

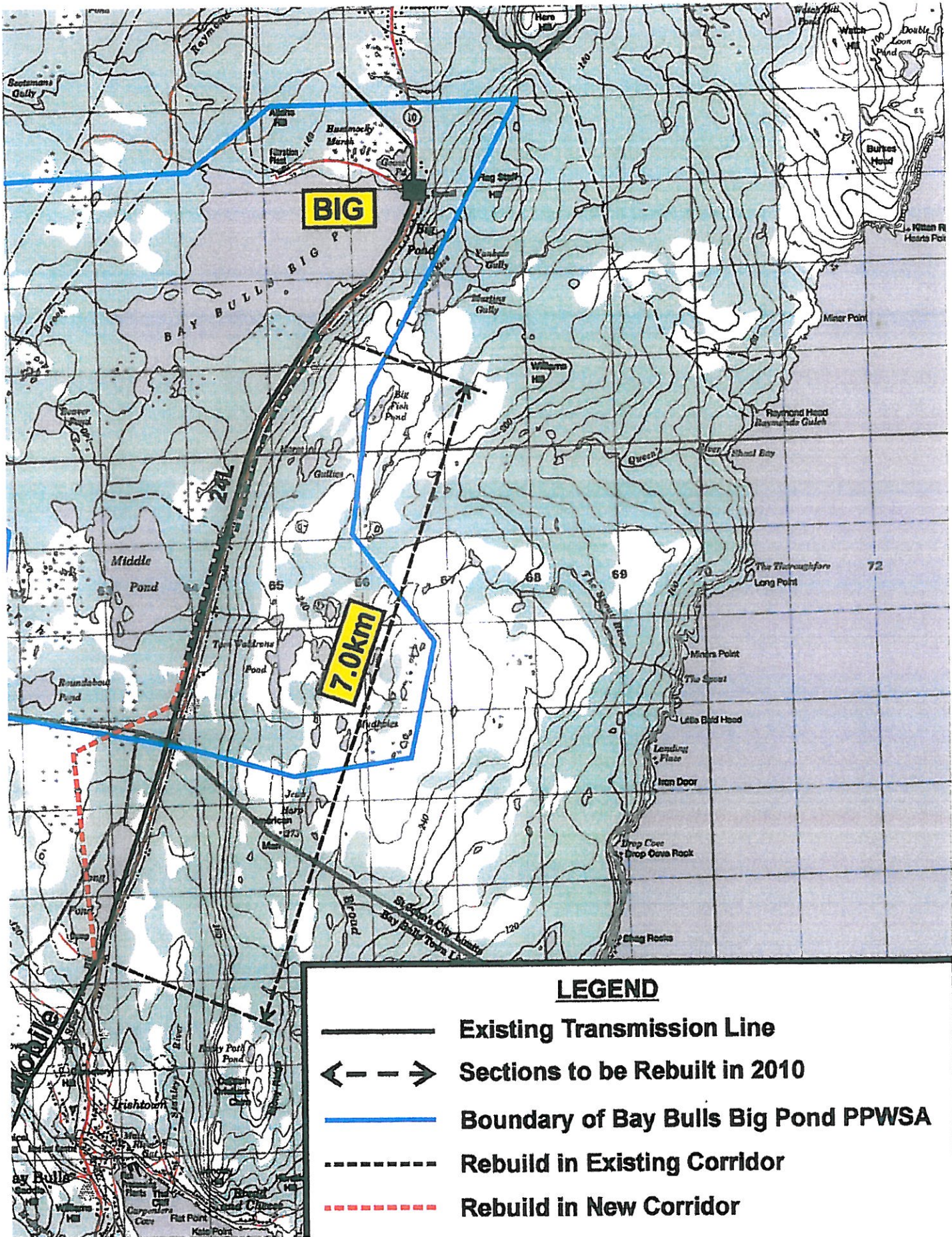
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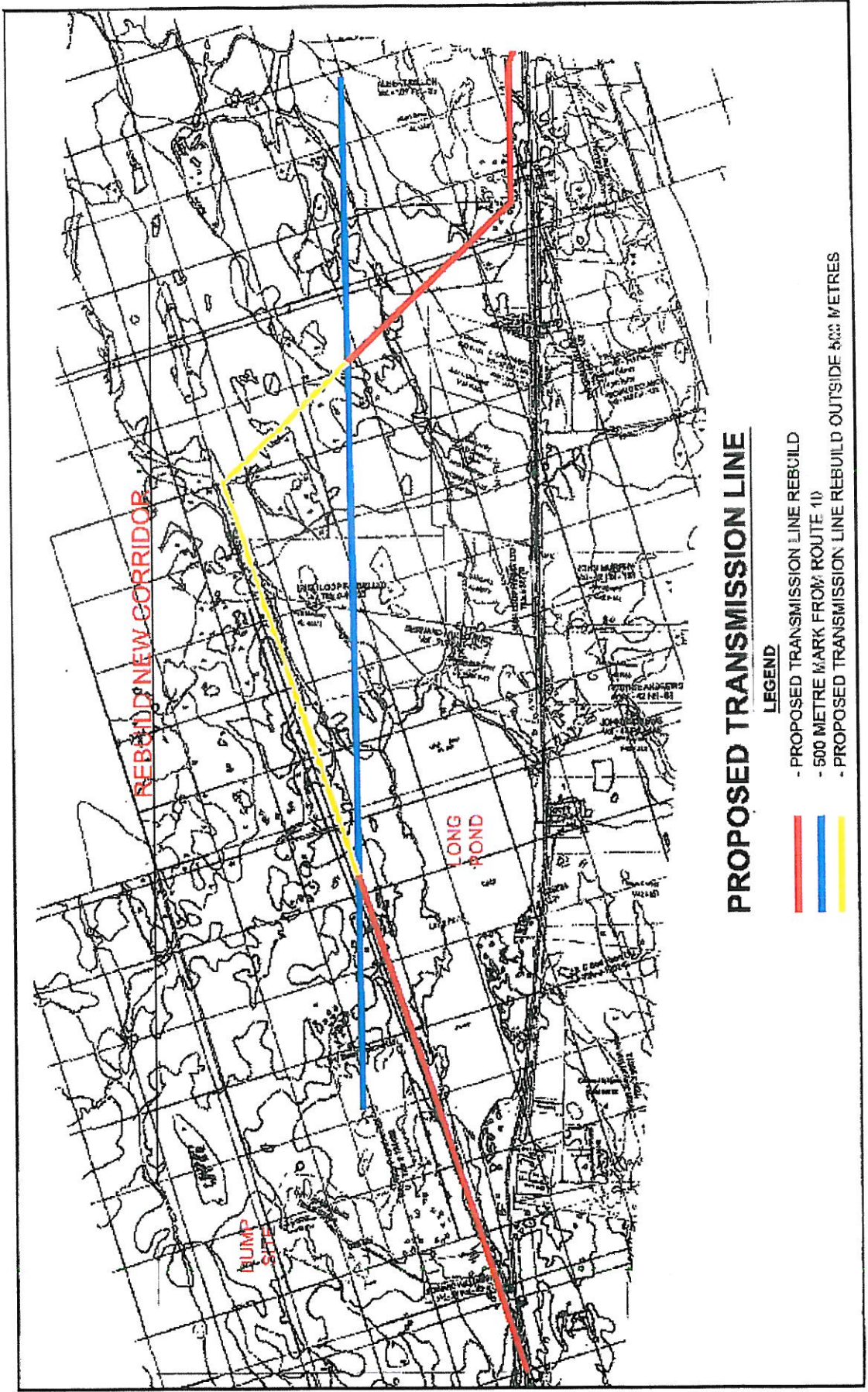
Signature:


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Appendix A
Maps & Pictures



Map of TML Route Outlining Corridor



PROPOSED TRANSMISSION LINE

LEGEND

- PROPOSED TRANSMISSION LINE REBUILD
- 500 METRE MARK FROM ROUTE 41
- PROPOSED TRANSMISSION LINE REBUILD OUTSIDE 500 METRES

Irish Loop Farm TML Alignment



Appendix B
Structure Configurations

Typical Structure Configuration

