

October 7, 2011

Mr. Mark Lanigan Island Regulatory and Appeals Commission PO Box 577 134 Kent Street Suite 501

Charlottetown PE C1A 7L1



Dear Mr. Lanigan:

## Maritime Electric Response to Interrogatory 2012 Capital Budget - UE20719

Please find attached the Company's response to the Interrogatory filed by the Island Regulatory and Appeals Commission with respect to the 2012 Capital Budget.

Yours truly,

MARITIME-ELECTRIC

J. W.)Geldert

Vice President, Finance, Administration

and Chief Financial Officer

**JWG61** 

Enclosure

S-1 The application and responses to PEI Energy Corporation interrogatories make reference to the transformer installation at Church Road substation. The Commission understands this new transformer is required or the proposed Y104 transmission line which is required for further wind farm production in East Pont. Also, this transformer installation will reduce current system line losses and improve system reliability in that area. Please provide the estimated payback to the Company for this transformer investment associated with the reduced system losses. Please describe the nature of the improved system reliability this transformer investment will achieve with examples.

## Response:

S-1 The estimated annual reduction in transmission losses attributable to the proposed transformer installation, under the current loading scenario, is approximately \$96,000. This translates into a simple payback of 28 years. If an additional 30 MW of wind generation is located in eastern PEI, the loss savings would increase to approximately \$440,000/year with a simple payback of 6 years.

Maritime Electric's main objective is to replace the aged T4 transmission line before there are significant reliability issues as the line is of 1965 vintage.

Planning studies have consistently called for the extension of the 138 kV transmission system into eastern PEI to improve voltage levels, replace aged infrastructure and maintain and improve the reliability.

The proposed transformer will result in immediate line loss savings, however, the primary objective is to provide an interconnection point between the new 138 kV facilities and the remaining 69 kV system of transmission lines T2, T8 and T10. In this context, the loss reduction is a residual benefit of the overall plan.

## **Maritime Electric**

2012 Capital Budget Application – UE20719
Responses to Interrogatory Filed by Island Regulatory and Appeals Commission

In terms of reliability improvements, the transformer installation will provide only modest gains initially. However, the replacement of T4 with a new transmission line and the ability to connect the 69 kV and 138 kV transmission systems is expected to maintain and improve the reliability of supply to eastern PEI.

The existing eastern transmission system has certain limitations due to the increase in load in the area. On-Island generation is required at times to support voltage levels in eastern PEI and the ability to backup the Crossroads/Stratford area is limited as the existing T4 transmission line becomes overloaded in the event of an outage on T2. A new 138 kV transmission line interconnected through the proposed transformer to the existing 69 kV transmission system in eastern PEI will address these voltage and back up limitations.