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October 29, 2012

To Huron County Federation of Agriculture

For Submission to the Ontario Energy Board

**Related to Files: EB-2011-0076 / EB-2011-0077 / EB-2011-0078  
Tribute Resources Inc.**

Dear Sirs:

The Argument-in-Chief submitted to the Ontario Energy Board related to:

**EB-2011-0076 / EB-2011-0077 / EB-2011-0078**  
signed by Jane E. Lowry, President, of Tribute Resources Inc. and Bayfield Resources Inc. on behalf of Huron Bayfield Limited Partnership and Bayfield Pipeline Corp dated 2012-09-10 states:

“Tribute has carefully reviewed the report filed in evidence by William K.G. Palmer on behalf of the HCFA (HCFA Questions in Response to Interrogatories dated July 18, 2012, after Schedule D) and respectfully disagrees with some of the positions taken or theories advanced by Mr. Palmer, on the basis that they have admittedly not been verified or proven scientifically. The Applicant respectfully views these positions and theories as preferably excluded from the Board’s consideration in this case unless they are substantiated, and it is therefore submitted that they should accordingly be given the weight they attract.”

Subsequently, the Ontario Energy Board Staff Submission dated October 22, 2012 for the same Energy Board files makes no reference to the wind turbines proposed to be sited adjacent to the natural gas compressor station for the proposed natural gas storage project, nor makes any mention of any risk posed to the natural gas compressor station by the wind turbine project.

It is remarkable that the Ontario Energy Board Staff were able to conclude that no risk to the natural gas compressor station or pipelines would be posed by the wind turbines in the same vicinity, given that the Tribute argument in chief responded to the question of the Municipality of Bluewater and Huron County Federation of agriculture in a non specific manner, stating only:

*“4.5 Will there be any issues with the proposed Industrial Wind Turbine Projects and the associated infrastructure in this area on Tribute’s Gas*

*Storage Project (i.e. storage lands and facilities, including equipment, pipelines, wellheads, compressor station etc.)?”*

“Tribute submits that there will be few, if any, issues with the proposed Industrial Wind Turbine (“IWT”) projects which are nearby, none of which are not easily capable of resolution. The only project in the immediate vicinity of the Bayfield and Stanley pools is the Bluewater project, one owned by Next Era Energy (“NEE”) which has no proposed turbines within the pool boundary in either of the Bayfield or Stanley proposed Designated Storage Areas (“DSA”s).”

“To gather the above understanding, and in response to the concerns raised by the Huron County Federation of Agriculture (“HCFA”) as well as the Municipality of Bluewater, Tribute representatives and consultants met with NEE specifically about locations and facilities for each of the IWT and storage projects. Tribute provided NEE with detailed drawings of the proposed well locations for each of the Bayfield and Stanley pools as well as the proposed pipeline route files. NEE provided Tribute with detailed layout and gathering facility maps of both the Bluewater project, which as stated above is in the vicinity of the Bayfield and Stanley pools and the Goshen project, which is to the South where the proposed pipeline route will cross through.”

None of the information is specific as to the actual setbacks between the wind turbines and the natural gas compressor stations or pipelines associated with the Tribute Natural Gas storage project. In a previous response, Tribute Resources identified only that setbacks between the natural gas compressor station and nearby building or structures is identified in the Oil Gas and Salt Resources Act 10.2 (1) specifying:

“No person shall erect, locate, or construct, a building or structure of the type prescribed by the regulations within 75 metres of a well or facility unless the well or facility has been decommissioned ... “

and notes a reference to setbacks in a MNR Renewable Energy Projects document which notes the word “setback” only in section 7.8 “Petroleum resources operation setback”:

“Development is not permitted within 75 metres of a petroleum resources operation, unless the applicant submits an engineers report demonstrating that there are no effects to the development. Well location information can be obtained from the Ontario Oil, Gas and Salt Resources Library.”

One would thus conclude (obliquely, as the document is not specific) that Tribute Resources are committing only that their natural gas well and compressor station will be separated by 75 metres from the Next Era Energy wind turbines.

It is “curious” that Tribute would discount known concerns (from actual operational evidence) that wind turbines can and have failed through blade failures, tower collapse, and fires, that are known to have impacted locations up to 500 metres from the base of the turbine. For Tribute to formally respond that “some of the positions taken or theories advanced by Mr. Palmer ... have admittedly not been verified or proven scientifically” and as a result to provide neither specifics nor response is indeed “curious.” Proving that a proposed (for which no specifics are given) natural gas well head will be damaged by a falling wind turbine blade, or that a natural gas vent from a compressor station will be impacted by burning debris is of course impossible *in advance* without specifics of the separation distance, or the construction details of the natural gas well and compressor station vents. In fact, it is only possible to predict with a reasonable degree of assurance that damage will occur. It is for this reason that Hydro One Systems Inc. “assessed the risks from wind turbine generator operation to our transmission lines ... To avoid these risks we developed technical directives for a required wind turbine setback from our transmission assets ... of ... 500 metres from 500 kV assets.” (reference letter of Enza Cancilla, Manager of Hydro One Networks Inc, to W. Palmer dated November 3, 2008.) To dismiss the concerns without specifying other than a setback of 75 metres is not a sufficient response to provide any assurance that the damage to the natural gas well heads, compressor stations, vents, or pipelines, will not occur when it is known that wind turbine blades, tower collapse, and fires have impacted objects well beyond 75 metres.

A principle of deterministic safety assessment is to put in place barriers to prevent sensitive subjects by being harmed from known accidents. The Tribute response has provided no specific assurance. That the Board Staff of the Ontario Energy Board would seem to have accepted the Tribute request to discount the concerns without even comment, given that no assurance is given as to what the setbacks will actually be is remarkable.

As part of personal training conducted at the Massachusetts Institute of Technology (MIT) in Risk Informed Operational Decision Management I had the opportunity to spend a number of hours in the MIT Engineering Library reviewing case histories of a number of notable accidents, many involving fatalities including the Bhopal Union Carbide disaster, the Challenger Space Shuttle explosion, a number of commercial aviation accidents, and a Toronto Transit Commission subway accident on the Spadina Line. The chilling realization is that ALL of these disasters shared a common root cause, in that in every case there had been a denial of concerns identified by qualified professionals by the responsible authorities in advance of the accident.

As a Professional Engineer, with formal training (at MIT) and experience (at Ontario Hydro Nuclear / Ontario Power Generation / Bruce Power) in public safety risk evaluation, I identified concerns to the responsible authorities that required answers about the adequacy of setbacks between the wind turbines

to be located at unspecified locations adjacent to the Tribute natural gas storage facility, compressor stations, and pipelines. To have these concerns ignored by the responsible regulator, the Ontario Energy Board, without provision of any satisfactory answer other than an oblique reference to a 75 metre setback (which is not adequate) bears a chilling similarity to the precursors of notable accidents studied in that MIT library. I wish to formally record my concern on the public record, and ask the Ontario Energy Board to acknowledge receipt of this.

Respectfully Submitted,

A handwritten signature in black ink that reads "William K.G. Palmer". The signature is written in a cursive, slightly slanted style.

William K.G. Palmer P. Eng.