



TRIBUTE ENERGY STORAGE INC.
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Vaughan, Ontario, Canada
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March 6, 2020

Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

ATTENTION: Board Secretary;

**Re: Tribute Energy Storage Inc. ("TESI")
Application for De-Designation of the Bayfield & Stanley Reservoirs
Response to Ontario Energy Board ("OEB") Staff Interrogatories
OEB File Number: EB-2019-0297**

In accordance with Procedural Order No. 1 ("PO1"), please accept this document as TESI's responses to OEB Staff Interrogatories in the above noted proceeding, which were served to TESI and all intervenors on February 27, 2020. This document has been served on OEB staff and all intervenors by TESI on March 6, 2020, as directed by PO1.

Sincerely,

[Originally signed by]

Stephen J. Sangiuliano
Director, Project Management
March 6, 2020

OEB STAFF QUESTIONS #1:

Ref: Application, pp.2

Tribute Energy Storage Inc. (TESI) states that in 2017 it purchased the rights and intellectual information pertaining to the Bayfield and Stanley reservoirs (Pools) from Tribute Resources Inc. (Tribute).

- a) Please provide evidence confirming the execution of the transaction described above to demonstrate that all of the rights pertaining to the Pools now belong to TESI.
- b) Please describe the relationship between TESI and Tribute. Do they have the same officers/directors?
- c) Please provide evidence to demonstrate that Tribute is aware of TESI’s application to the OEB.
- d) Please explain how the designation was transferred from Tribute to TESI.

TESI RESPONSES #1:

(1)(a) Please find appended hereto as Schedule A the Share Purchase Agreement (“SPA”) of the Bayfield and Stanley porous rock reservoirs Petroleum and Natural Gas (“PNG”) and other such leases and permits from Tribute Resources Inc. (“TRB”) to TESI, dated August 31st, 2017.

(1)(b) TRB and TESI are completely separate corporate entities with different operational focuses, with the former concerned initially with oil and natural gas (“O&G”) extraction and storage in the early 2010s, now focused solely on renewable energy development, and the latter company focusing solely on Compressed Air Energy Storage (“CAES”). The only person remaining partially active in both corporate entities is Jane E. Lowrie acting as an officer in both.

(1)(c) Please find appended hereto as Schedule B the scanned mail containing the Notice of OEB Procedure which was mailed by TESI to TRB on January 27, 2020 (page 11), accompanied by TESI’s of Application for De-Designation and evidence therefor, as directed by the OEB via the Letter of Direction issued to TESI on January 10, 2020.

(1)(d) TESI understands that the natural gas Designated Storage Area (“DSA”) is registered and attached permanently to the lands (not the leasee developers), where the reservoirs are located, according to the boundaries set by the Ontario Ministry of Natural Resources & Forestry (“MNRF”), after its pre-consultations with the geologists and engineers. The OEB then sets the DSA (Cabinet does not undertake this task anymore). The DSA and its enforcement is essentially supervised by the MNRF through the well licensing process, as no party can drill a well into these registered, designated areas without MNRF consent.

OEB STAFF QUESTIONS #2:

Ref: Application, pp.2

The application states:

The core reason for the seven (7) year development hiatus, which now appears to be permanent, was simply due to ongoing unprofitable project economics and poor financial model outcomes, which are directly attributable to the sustained gas price decrease across all North American natural gas markets...

...New gas storage has since remained uneconomic to develop and deliver gas into and the Dawn Hub regional market. The evidence is clear that no new natural gas storage projects are being proposed and no applications have been filed with the OEB since the Bayfield and Stanley applications were prepared in 2008.

From these statements, OEB staff understands that the envisaged development of the Pools did not occur primarily because it was not economical to do so given persistent depressed gas market prices. OEB staff also understands that it is TESI's position that development of the Pools as natural gas reservoirs is still not economical.

The application cites various links, but it would be helpful if more specific references (excerpts, graphs, tables, specific pages etc.) within those documents can be provided to clarify the statements made in the application:

- a) Please provide excerpts or specific references from the referenced website links to demonstrate that persistent depressed gas prices made it uneconomic to develop the Pools and that it is still uneconomic to develop the Pools as natural gas reservoirs.
- b) Please explain why the Pools were sold by Tribute to TESI at a significant discount. Does TESI know whether Tribute attempted to sell the Pools to any other party?
- c) Has TESI attempted to sell the Pools to a third party? If so, were there any expressions of interest received?

TESI RESPONSES #2:

(2)(a) Footnote 1 on the original TESI application (page 2)¹ referencing the NGIData website provides graphs representing Canadian natural gas prices on a daily, weekly, and bidweek basis, the prices for which are comparably low when viewed from the lens of historic pricing.

From a forecast perspective, the Government of Ontario's Fuel Systems 20-Year Outlook, referenced as footnote 6 on the original TESI application (page 4)², the graphs and analyses contained within demonstrate a range of possible fuels sector characterizations and outlooks for demand, ranging from 1,800 PJ to 2,400 PJ in 2035 compared to 2,300 PJ in 2015 (see Figure 27). This range is reflected in five outlooks which all reflect actions identified in the government's recently announced Climate Change Action Plan. The outlooks are all consistent with the outlooks presented by the Ontario Independent Electricity System Operator ("IESO") in its Ontario Planning Outlook ("OPO"), and were developed based on a common set of assumptions and data regarding economic activity, demographics, fuel shares, electrification, pricing, weather, etc. (see Section 2.1 of Fuels System Outlook).

As may be seen, in the final year of the outlook horizon, Outlook F yields a total Ontario energy-related fuels demand that is 23% lower than that projected by Outlook B. (see section 2.1 of Fuels System Outlook, Figure 29). Outlooks E and F reflect all of the assumptions adopted by IESO for the OPO Outlooks C and D, but also explore different levels of additional natural gas Demand Side Management ("DSM"), and the displacement of some conventional fuels with less carbon-intense alternatives, thus providing a more wholesome projection of fuels demand.

Future demand for fuels will not only depend on local provincial economic, demographic and policy trends, but also depends on global macroeconomic and fuels market trends and technology development. In the Rocky Mountain Institute's ("RMI") 2019 study 3 of the state of natural gas economics, it was found that persistent low gas prices are driving gas plants to lose their edge in power markets and the economics of pipelines will suffer significantly as well. The likely cost

¹ NGIData: *Canada Natural Gas Prices*;

https://www.naturalgasintel.com/data/data_products/bidweek?region_id=canada

² Government of Ontario: *Fuels system 20-year outlook*; <https://www.ontario.ca/document/fuels-technical-report/fuels-system-20-year-outlook>

³ RMI: *The growing market for clean energy portfolios & Prospects for gas pipelines in the era of clean energy*; <https://rmi.org/insight/clean-energy-portfolios-pipelines-and-plants>

increases for gas pipelines due to competition from Clean Energy Portfolios (“CEPs”) is further illustrated in the graph contained in Figure 3 therein. The risky economics of natural gas infrastructure is an increasingly global phenomenon in an era of clean energy and energy conservation.

Furthermore, ‘Exhibit 1’ - as found on page 2 of the RMI’s 2-page summary of their above-mentioned study- demonstrates the tipping point for CEP economics versus new gas-fired power plants. The study illustrates how combinations of renewables, storage, and DSM strategies (as mentioned above) can cost-effectively provide the same reliability services as natural gas would traditionally.⁴ On page 2 of the same study referenced herein, ‘Exhibit 2’ demonstrates the percentage of proposed combined-cycle gas plants that, if built, will face stranded cost risk. The grim forecast for the economics of natural gas is further emphasized and summarized on page 2 of this study’s summary which outlines the billions of dollars that US electricity customers could save by investing in CEPs instead of their uneconomic gas alternatives, thereby drawing stark parallels between the US and Canadian gas market realities.

(2)(b) At the time of the sale of the Pools in 2016-2017, TRB was making an attempt to transition the company to a renewable energy-only company, thereby becoming a non-O&G company. As part of that transition process, TRB retained KPMG to undertake a corporate valuation of all of TRB’s assets, including the Bayfield and Stanley (“the Pools”) leaseholds, residual gas-in-place, and intellectual Property (“IP”). KPMG independently conducted a valuation of the assets and valued the Bayfield and Stanley assets at \$996,000. This price became the acknowledged purchase price for TESI, and there was no negotiation on this price. TESI is unaware if TRB attempted to sell the Pools to any other party.

(2)(c) TESI has not attempted to sell the Pools to a third party, and thus, no expressions of interest have been received in regards to the sale of the Pools.

OEB STAFF QUESTIONS #3:

Ref: Application, pp.3-4

The application makes the following statements:

Ontario has approximately 248 billion cubic feet (BCF) of developed natural gas storage...

... Demand for natural gas in Ontario is forecast to grow only about 60% between 2019 and 2035, from 45 to 120 Petajoules, or 3.75% per year according to one forecast. Aiken and Associates suggests that the growth forecast would be about 1% per year, with the exception of new greenhouse demand.

The application cites various links, but it would be helpful if more specific references (excerpts, graphs, tables, specific pages etc.) within those documents can be provided to clarify the statements made in the application:

- a) Please file excerpts or specific pages from the referenced website link to support the statement made above regarding the existence of approximately 248 BCF of developed natural gas storage.
- b) TESI stated that 193 BCF is used to supply the annual needs of in-franchise Ontario gas customers. Please provide the exact references (excerpts, specific pages) to support this statement.

⁴ RMI: *bridge backwards? The financial risks of the “rush to gas” in the US power sector*; <https://rmi.org/wp-content/uploads/2019/09/clean-energy-portfolio-two-pager.pdf>

- c) TESI stated that natural gas demand in Ontario is forecast to grow 3.75% per year. OEB staff has viewed the link provided but is not able to see this number. Please explain. Please provide specific references (an excerpt, specific pages) from the referenced website link to support this statement.
- d) TESI stated that according to one forecast, demand for natural gas is expected to grow by 1% per year. Please provide the specific reference (excerpt, specific pages) for this information.
- e) Is there any other information that TESI can provide to explain why the de-designation of the Pools does not result in harm to Ontario customers in terms of reducing the future availability of natural gas storage to meet the needs of Ontario customers.

TESI RESPONSES #3:

(3)(a) Footnote 4 on TESI's original application (<http://www.cer-rec.gc.ca/nrg/ntgrtd/mrkt/snpsht/2018/05-03whrdscncstrnqrlgs-eng.html>), paragraph 2:

*“Underground natural gas storage facilities in Canada are located in five provinces: Alberta, British Columbia (B.C.), Ontario, Quebec, and Saskatchewan. The combined capacity of all underground storage facilities in Canada is 949 Bcf. The majority of this capacity (548 Bcf) is located in Alberta, **followed by Ontario with 248 Bcf**. While Alberta’s storage facilities are spread out across the province, Ontario’s storage capacity is located near Dawn, Ontario. B.C. has the largest facility, the FortisBC Aitken Creek facility in Fort St. John, with 95 Bcf. A natural gas storage facility is currently in the early phase of construction near Alton, Nova Scotia”*

(3)(b) As indicated in the Enbridge Gas Inc. (“EGI”) 5 Year Gas Supply Plan (EB-2019-0137)⁵, Union’s regulated storage capacity is 92.7 BCF (Table 25, page 81) and EGI’s regulated storage capacity (cost of service in Sarnia (99.4 BCF) and Welland (0.3 BCF)) is 99.7 BCF, totaling 192.4 BCF.

(3)(c) TESI has went back to review the source of the information and the information is no longer appearing on the website provided in the application.

(3)(d) As indicated in their 5 Year Gas Supply Plan (EB-2019-0137), EGI is forecasting flat growth in the annual demand for both the EGD rate zone (Table 2, page 33) and the Union rate zones (Table 21, page 72) for the period 2020 through 2024. Increased consumption from customer growth is expected to be offset by declining normalized average consumption, primarily in the residential sector. There is limited growth potential for annual gas volumes in other Ontario gas distributors such as Kitchener Utilities, Kingston Utilities, EPCOR Natural Gas Limited Partnership, Six Nations Natural Gas Limited and the other smaller distributors in the province. There is increased gas consumption that is expected from the expansion of gas service to previously unserved communities, including the new EPCOR South Bruce service area. However, the volumes from these community expansions is likely to be small in comparison to that of existing consumers. Beyond the 2024 period, it is expected that the move to a lower carbon economy will continue to result in DSM conservation programs that will lower the consumption of consumers and continue to offset the growth in volumes from the growth in customers, similar to the flat projection in the 2020 to 2024 period forecast by EGI.

(3)(e) TESI believes that there is no harm to Ontario customers in the DSA becoming a CAES DSA for several reasons:

⁵ Enbridge Gas Inc.: EB-2019-0137; 5 Year Gas Supply Plan

(i) the Southwestern Ontario and Mid-west US regions in lower Michigan have multiple (100s of Billion Cubic Feet – “BCF”) of other Silurian and sandstone reservoirs, which are currently undeveloped, and some of which are much closer to existing delivery pipeline infrastructure;

(ii) two small depleted Ontario Pools, located 60 kms from the Dawn-Trafalgar pipeline, representing in total less 3.334 BCF (original gas-in-place) are not sufficiently material to make a difference in how Ontario is likely to store gas a few decades into the future;

(iii) there is a distinct recognition that increasingly, less (not more) gas will be burned in the future, as electricity will play a relatively larger role in overall societal energy usage – mainly due to reducing carbon contributions. Already, certain US jurisdictions are banning natural gas stoves as a means to eliminate carbon output, and if this trend were to continue to home and water heating, eventually gas throughput and the need for gas storage may flatline, or be on the decline;

(iv) industrial throughput in Ontario has steadily decreased resulting in decreased need for gas storage in Ontario. From a preliminary web-search, it is apparent that there is little-to-no information readily available that suggesting that there will be a resurgence in heavy industries returning to Ontario in the foreseeable-future, thereby tightening Ontario’s gas supplies and increasing the need for additional gas storage; and

(v) the oversupply of natural gas in the continent due to successful exploration and fracking shows no signs of abating, and with that trend, the Ontario region is likely to continue to experience importing gas – on demand – from the upper states south of Lake Erie and connecting US pipelines. There is no evidence of supply shortages at depressed market prices.

OEB STAFF QUESTIONS #4:

Ref: Application, pp.3

TESI’s application states that in 2010, Union Gas joined Tribute as a development partner with the hopes and expectations that the Pools would be developed together. It is stated that Union withdrew from the joint venture partnership and requested its deposit back when Union concluded that it was not possible to develop the Pools on a positive economic basis.

a) Please provide evidence to support the statement that Union Gas withdrew from the joint venture partnership for the reasons stated in the application.

TESI RESPONSES #4:

(4)(a) Please find appended hereto as Schedule C-1 the letter detailing the settlement between TRB (who at the time held the Bayfield and Stanley reservoirs) and Market Hub Partners Canada L.P. (“MHP Canada”; Union’s Limited Partnership for the deal). Further, please find appended hereto as Schedule C-2 the TRB news release of the corporations the repayment of the term loan to MHP Canada.

Current members of TESI staff were involved with developing the Tipperary north and south gas storage pools, which were approved by the OEB in the late 2000s. At that time, the OEB may recall from its approvals that ownership of the Tipperary Pools was transferred from the Tipperary LP to Union Gas Limited in two tranches (75%, then the residual 25% a few years later). At the time, Union expressed an interest in partnering with TRB in respect of the development of the Bayfield and Stanley Pools. Union paid TRB a conditional \$1.5 MM deposit to have the right to participate in

the development on certain conditions. When the gas price continued to drop over the months the development was in contemplation, and Union concluded that the margins for gas storage were not recovering and would likely continue to deteriorate, Union gave notice to TRB that it wished to recover its deposit and exit the Bayfield and Stanley Pool development. Union's deposit was returned and the litigation started by Union against TRB was thereby avoided.

OEB STAFF QUESTIONS #5:

Ref: Application, pp.4

TESI asserts that it is in the public interest for the Pools to become useable and useful with another purpose. TESI has applied to revoke the designation of the Pools as natural gas storage reservoirs in order to be able to develop the Pools as compressed air energy storage (CAES) facilities.

TESI indicates that the proposed use of the Pools will require a new regulation to be passed permitting the use of the Pools for CAES.

- a) Has TESI initiated any discussions with the relevant authorities regarding a new regulation?
- b) Assuming that the OEB grants TESI's application for de-designation, what does TESI plan to do with the Pools if the required regulation is not eventually passed?

TESI RESPONSES #5:

(5)(a) Yes, TESI has made a formal request to the MNRF to obtain a CAES regulation pursuant to the *Oil, Gas and Salt Resources Act* ("OGSRA"). TESI understands that the MNRF is actively considering this request.

(5)(b) If the OEB grants the requested de-designation, and if for whatever reason, a regulation is not forthcoming, then TESI would request that the Pools maintain their natural gas DSA, which is why TESI is asking for the OEB to make its positive approval of the de-designation conditional upon the Ontario Cabinet proclamation of the OGSRA regulation, so that the designation delineation for either gas or CAES is preserved for whichever use remains when this process is completed. It is in the public interest that a designation for these Pools be preserved as these are valuable formations and geological Pools; it is TESI's contention that it is in the public interest that a CAES regulation be promulgated to allow for a useful economic energy storage facility development to support the competitive renewable electricity industry in Ontario.

OEB STAFF QUESTIONS #6:

Ref: Application, pp.5

The application states the following:

TESI would like to ensure that its application to request removal of the natural gas DSA be coordinated with and be effective conditional on the TESI request for and approval of a MNRF regulation for the injection and withdrawal of air in the Bayfield and Stanley porous rock reservoirs, the application process for which is currently underway

- a) Does this mean that TESI does not want the OEB to make a decision on the application until a new regulation is passed? Please explain.

TESI RESPONSES #6:

(6)(a) As mentioned in TESI Response (5)(b), TESI is asking both the MNR and the OEB to coordinate their regulatory efforts closely so that the Proclamation of the new CAES regulation pursuant to the OGSRA, along with the anticipated OEB approval to de-designate the natural gas DSA granted in December 2012, are aligned. TESI is not asking the OEB to defer making a decision in this application, rather, TESI is asking the OEB to make its decision to de-designate the Pools, but to make the gas storage de-designation take effect on the date that the Ontario Cabinet proclaims the OGSRA CAES regulation, so there will be a seamless transition from a gas storage designation to a CAES Pool designation.

OEB STAFF QUESTIONS #7

Ref: Application, pp.5 and Landowner letter

The application contains a letter dated December 12, 2017 from the landowners on whose land the reservoirs are located to the Ministry of Natural Resources and Forestry. This letter supports the development of the reservoirs as CAES facilities.

- a) Has there been further consultation with the landowners since 2017?
- b) Please provide any further information on feedback received from landowners since 2017 with respect to TESI's proposed plans for the reservoirs.

TESI RESPONSES #7:

(7)(a) Yes, TESI staff and Paul Steckle, the lead Landowner Committee Member (and 4-term MP), have been coordinating the CAES development closely for many years, dating back to 2015 when it started to become apparent that TRB would not have an economic window to develop gas storage. It was around that time that the idea of exploring a transition to CAES was tabled for the landowners to consider, instead of leaving the designated gas storage Pools to be abandoned. Communication between TESI and the Bayfield and Stanley landowners is consistent, with the larger and more formal meetings regarding the development of the reservoirs as CAES systems taking place on the following dates (list not exhaustive):

- December 2017
- April 2018
- December 2018
- March 14, 2019
- December 5, 2019
- February 10, 2020

(7)(b) Since 2017, TESI has met with the landowners and their appointed Committee on a few occasions to consider the transition of the Gas Storage Comprehensive Settlement Agreement and Gas Storage Lease to CAES-equivalent documents, along with an Access and Option Agreement for CAES development, all of which are in the negotiation stages and expected to be completed in 2020.

There have been four meetings outside of the landowner group meetings, two with Gordon Porter at his home in Goderich, and one each with the McKinley family at their St. Mary's hatchery and one with Bev Hill at his farm. TESI staff have met Paul Steckle on a couple of occasions at his farm.

Following the annual 2019 Landowner Christmas dinner and update slide presentation, as recently as February 10th and February 13th, landowner meetings were convened first with the Committee, then with the larger invited landowner group. The feedback (mainly on the agreements) has been positive throughout, and any concerns or specific landowner issues have been and/or are being addressed. Landowners have agreed to engage a local Seaforth lawyer to advise the landowners independently and review the draft agreements on their behalf, for which TESI has offered to pay their costs. TESI would observe that the relationships with the landowners and TESI are in good condition and communications are open and transparent. Paul Steckle will be meeting the local MPP to update her and communicate the landowner support for the project ensure her support at Cabinet for the needed OGSRA CAES regulation.

**SCHEDULE A:
BAYFIELD & STANLEY SHARE PURCHASE AGREEMENT BETWEEN TRB & TESI**

**SCHEDULE B:
PROOF OF NOTICE OF SERVICE BY TESI TO TRB**

**SCHEDULE C-1:
LETTER OF SETTLEMENT BETWEEN TRB & HMP CANADA**

**SCHEDULE C-2:
TRB NEWS RELEASE OF THE REPAYMENT OF A TERM LOAN TO MHP CANADA**