



## memo

Date: August 7, 2020

To: Mr. Thomas Cushing, MassDEP Southeast Regional Office

From: Mr. Barry Goodrich, Enbridge

Cc: Ms. Kate Brown, Enbridge

**Re: Response to MassDEP Request for Clarifying Information on BACT Analysis for EMD Alternative Weymouth Compressor Station (Transmittal No. X266786)**

Below and attached please find Algonquin Gas Transmission, LLC's (Algonquin) response to your August 5, 2020 email requesting clarifying information on certain aspects of the BACT Analysis for EMD Alternative, which was submitted on July 24, 2020 as an Addendum to the Non-Major Comprehensive Plan Approval Application for the Weymouth Compressor Station (Addendum).

**MassDEP Request 1:** *A copy of the June 2020 communication from National Grid, which is referenced in the prefiled direct testimony of Mr. John Heintz. During conversations on or about July 29 and again on August 5, you indicated this document, which supports the necessity to upgrade the Edgar substation is considered confidential by National Grid and consequently, Algonquin may not be able to provide the requested document. Should you be unable to provide either the requested document or sufficient alternative documentation regarding the necessity for upgrades to the Edgar substation, MassDEP may consider excluding the costs associated the Edgar substation from the BACT analysis.*

**Algonquin Response:** Please find attached as Exhibit 1 hereto, a copy of the June 2020 communication from National Grid referenced in the prefiled direct testimony of Mr. John Heintz.

Enbridge provided Eversource and National Grid with specifications to supply power to a 30 MVA substation. Although the specifications that were provided were those that are necessary to support a single EMD unit, as noted in the communication, a 30 MVA substation would also be sufficient for an additional unit.

While Enbridge would normally use a soft start (or reduced voltage start) for the EMD, it would require the ability to conduct an across the line start (at motor rated terminal voltage) in the event that the soft start is unavailable. The across the line start requires a facility with capacity of approximately 27 Megavolt Amperes (MVA). Accordingly, Enbridge



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specified a 30 MVA facility as the capacity required to prevent any adverse impact to the incoming utility service due to the starting conditions of the electric motor.

**MassDEP Request 2:** Please provide a discussion of using 115 kV transmission line power as opposed to 13.8 kV distribution line power for the electric motor drive under consideration.

Algonquin would require 115kV transmission line power to support an EMD alternative consistent with Enbridge's standard practice. Enbridge has exclusively provided transmission line power (69-250kV) to support its EMD installations in the U.S. since 2008. The following list identifies the service voltage provided for those projects.

| Year | FERC Project Name  | Station/Location | Service Voltage |
|------|--------------------|------------------|-----------------|
| 2008 | TIEMS II           | Heidlersburg/PA  | 138kV           |
|      |                    | Uniontown/PA     | 138kV           |
| 2010 | TEMAX              | Chambersburg/PA  | 115kV           |
|      | TIEMS III          | Heidlersburg/PA  | 138kV           |
|      | TIEMS III          | Uniontown/PA     | 138kV           |
| 2012 | TEAM               | Bedford/PA       | 138kV           |
| 2014 | TEAM 2014          | Delmont/PA       | 138kV           |
| 2016 | GME                | Opelousas/LA     | 138kV           |
|      | Access Adair South | Tompkinsville/KY | 167kV           |
|      | Stratton Ridge     | Angleton/TX      | 138kV           |

It is Enbridge's standard practice to utilize federally regulated transmission service for EMDs because it considers that more reliable than distribution service (<69kV) with respect to adequacy and operating reliability and thus closer to the fuel reliability that a gas turbine can provide for compression.



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**MassDEP Request 3:** *Please provide a map, which identifies the proposed route of the underground cable that was used for costing purposes.*

**Algonquin Response:** Attached as Exhibit 2 hereto, please find a copy of the Atlantic Bridge Project Figure RR10 – Response 2C, created February 9, 2016, which identifies the approximate route of the underground cable that was used for costing purposes.

**MassDEP Request 4:** *Please identify to what extent National Grid would be responsible for costs referenced in the EMD BACT.*

**Algonquin Response:** Algonquin would be responsible for the costs referenced in the EMD BACT, not National Grid. *See, e.g.,* June 11, 2020 email from Joseph Murphy (National Grid) to Laurence Smith (Enbridge), attached hereto as Exhibit 1 (“Eversource would be responsible for designing and constructing any Substation modifications. Enbridge would be responsible for all the costs associated[ed] with the service.”)



## **Exhibit 1 – Email Correspondence**

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**Subject:** FW: Enbridge Weymouth Compressor Station 138kV Transmission Service from Edgar Substation

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**From:** Murphy, Joseph <[Joseph.Murphy3@nationalgrid.com](mailto:Joseph.Murphy3@nationalgrid.com)>

**Sent:** Thursday, June 11, 2020 12:45 PM

**To:** Laurence Smith <[Laurence.Smith@enbridge.com](mailto:Laurence.Smith@enbridge.com)>

**Cc:** Andy Nakanishi <[Andy.Nakanishi@enbridge.com](mailto:Andy.Nakanishi@enbridge.com)>; Paul Krawczyk <[paul.krawczyk@eversource.com](mailto:paul.krawczyk@eversource.com)>; Thompson, Michael A. (Tx Commercial Svcs.) <[Michael.Thompson@nationalgrid.com](mailto:Michael.Thompson@nationalgrid.com)>; Reardon, Kevin C. <[Kevin.Reardon@nationalgrid.com](mailto:Kevin.Reardon@nationalgrid.com)>

**Subject:** [External] RE: EXT || FW: Enbridge Weymouth Compressor Station 138kV Transmission Service from Edgar Substation

**EXTERNAL: PLEASE PROCEED WITH CAUTION.**

This e-mail has originated from outside of the organization. Do not respond, click on links or open attachments unless you recognize the sender or know the content is safe.

Hi Larry/ Andy,

I agree with Paul, that NGrid would provide the service, but it would be subject to an Agreement between Eversource and National Grid. Eversource would be responsible for designing and constructing any Substation modifications. Enbridge would be responsible for all the costs associate with the service. As mentioned, a formal review would require a System Impact Study and a PPA submittal at the ISO. We can't confirm Paul's number below, but concur that it is a recent/ reasonable example, assuming there is a open bay for a new Breaker. If not, the price would be more expensive to provide the service.

Given your need for an immediate answer and not knowing what would be involved with the requirements of a circuit, (particularly underground unknowns) unfortunately, it is not possible to develop an estimate specific to your project by Friday. I can confirm that the circuit between Edgar and the Point of service would be constructed, owned and operated by National Grid. All substation modifications would be constructed, owned and operated by Eversource.

If you wish to proceed with a formal request, let us know and we can start that process.

Thanks  
Joe

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**From:** Laurence Smith <[Laurence.Smith@enbridge.com](mailto:Laurence.Smith@enbridge.com)>

**Sent:** Thursday, June 11, 2020 10:29 AM

**To:** Murphy, Joseph <[Joseph.Murphy3@nationalgrid.com](mailto:Joseph.Murphy3@nationalgrid.com)>

Cc: Andy Nakanishi <[Andy.Nakanishi@enbridge.com](mailto:Andy.Nakanishi@enbridge.com)>

Subject: EXT || FW: Enbridge Weymouth Compressor Station 138kV Transmission Service from Edgar Substation

Joe,

Based on the below clarification from Eversource and the attached information previously provided by Enbridge, would it be possible for NG to provide a high level, nonbinding estimate for the cost to perform the work highlighted in yellow?

Please advise,  
Larry

**Laurence S. Smith**

Sr. Electrical Engineer, Facilities Project Engineering  
Engineering & Construction  
Assigned to: Enbridge  
Employee of: Aerotek  
—

ENBRIDGE

TEL-713-989-8437 [laurence.smith@enbridge.com](mailto:laurence.smith@enbridge.com)  
Office 5D43, 5400 Westheimer Court, Houston, TX 77056

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From: Krawczyk, Paul H <[paul.krawczyk@eversource.com](mailto:paul.krawczyk@eversource.com)>

Sent: Thursday, June 11, 2020 9:00 AM

To: Laurence Smith <[Laurence.Smith@enbridge.com](mailto:Laurence.Smith@enbridge.com)>

Cc: Andy Nakanishi <[Andy.Nakanishi@enbridge.com](mailto:Andy.Nakanishi@enbridge.com)>; Lucas, Jacob E <[jacob.lucas@eversource.com](mailto:jacob.lucas@eversource.com)>

Subject: [External] RE: Enbridge Weymouth Compressor Station 138kV Transmission Service from Edgar Substation

**EXTERNAL: PLEASE PROCEED WITH CAUTION.**

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Larry,

This is a follow-up to my conversation with Andy regarding the below. As I noted to Andy, Enbridge's Weymouth station is in National Grids territory. So, National Grid would provide the retail service and be responsible for the underground line from Edgar Station to the Weymouth pump plant and would have to develop that cost. National Grid would also need to contract with Eversource for the 115 kV connection at Eversource's Edgar station. Engineering has not performed any review of the potential connection, but it appears that the connection would at least require the addition of one breaker. Unfortunately, it is not possible to develop an estimate specific to your project by Friday. A contract would be required, most likely with National Grid, outlining the scope and cost to perform the study and it would require following our internal cost estimating process. However, to give Enbridge an idea of the potential costs, a high level non-binding cost estimate of \$3.4 million was provided to a customer in early 2015 for the addition of one breaker. While that estimate is not specific to Enbridge's project, it can give you an indication of the cost of adding a breaker.

Hope this is helpful.

Thanks,  
Paul

*Paul Krawczyk  
Lead Transmission Analyst  
Eversource Energy*

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**From:** Laurence Smith <[Laurence.Smith@enbridge.com](mailto:Laurence.Smith@enbridge.com)>

**Sent:** Wednesday, June 10, 2020 1:57 PM

**To:** Krawczyk, Paul H <[paul.krawczyk@eversource.com](mailto:paul.krawczyk@eversource.com)>

**Cc:** Andy Nakanishi <[Andy.Nakanishi@enbridge.com](mailto:Andy.Nakanishi@enbridge.com)>

**Subject:** Enbridge Weymouth Compressor Station 138kV Transmission Service from Edgar Substation

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Paul,

This is a follow up email to the VM Andy left you earlier today concerning the above subject. The following information should be sufficient for you to understand our needs and start a conversation with your transmission planning group:

- 9000HP Synchronist Motor Operating at Unity PF
- Normally Soft Started with 3X inrush Limit
- Occasional Across the Line Start in the event the soft starter is not available with Pre-start Notification to Eversource
- Enbridge Provided 30MVA, 138kV/13.8kV Substation with Capacity ALS and potential future HP expansion (2<sup>nd</sup> unit) included
- See attached for Arial View of proposed Line route to the Weymouth Station

As I'm sure Andy indicated in his VM, Enbridge is looking for rapid turnaround response for a high level (-50 to +200%) estimate for a scope and associated cost required for infrastructure upgrades and transmission line underground routing as noted on the attached that would be needed to support the above load addition to your Edgar substation. This request to Eversource is being driven by an urgent request from Enbridge's Air Permitting Team for engineering support in responding to certain regulatory time sensitive requests for information.

As such, it would be greatly appreciated if a call could be set up with Andy to discuss Eversource's ability to support this request.

With best regards,  
Larry

**Laurence S. Smith**

Sr. Electrical Engineer, Facilities Project Engineering

Engineering & Construction

Assigned to: Enbridge

Employee of: Aerotek

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ENBRIDGE

TEL-713-989-8437 [laurence.smith@enbridge.com](mailto:laurence.smith@enbridge.com)

Office 5D43, 5400 Westheimer Court, Houston, TX 77056

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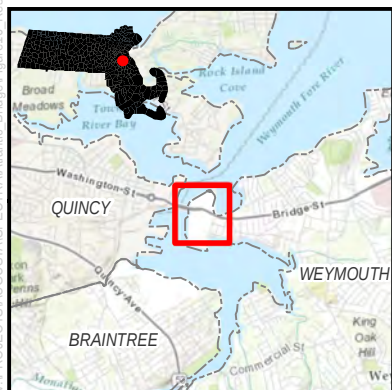
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For the registered information on the UK operating companies within the National Grid group please use the attached link: <https://www.nationalgrid.com/group/about-us/corporate-registrations>



## **Exhibit 2 – Atlantic Bridge Project Figure RR10 – Response 2C**



### Legend

- New Electrical Substation
- 0.5 Mile Route for Electrical Supply

Sources: ESRI, SPECTRA

**Spectra Energy**  
Partners

Algonquin Gas Transmission, LLC  
Maritimes & Northeast Pipeline, L.L.C.

### Atlantic Bridge Project

Figure RR10 - Response 2C

Weymouth Compressor Station

Routes to Existing  
Electrical Substation

Created:  
2/9/2016



14 Gabriel Drive  
Augusta, ME 04330