

## Cushing, Thomas (DEP)

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**From:** Kate Brown <Kate.Brown@enbridge.com>  
**Sent:** Monday, August 03, 2020 6:14 PM  
**To:** Cushing, Thomas (DEP)  
**Cc:** Barry Goodrich  
**Subject:** RE: Algonquin Addendum questions  
**Attachments:** Appendix E BWP AQ BACT\_Table 1.pdf

Tom,  
Please find attached the BWP AQ BACT Form, Table 1, which has been updated as you requested such that it identifies the proposed BACT limit for all pollutants.

Additionally, Algonquin provides the following response to your request. Please let me or Barry know if you need any additional information.

**MassDEP Request:** *In document "ADDENDUM TO NON-MAJOR COMPREHENSIVE PLAN APPROVAL APPLICATION" page 4-17 states "Indirect annual costs of property taxes, insurance and the administration costs associated with the operation of each option do not vary significantly between the options, so these costs were not included in the economic evaluation." Please substantiate the assumption that there is not significant variability in costs.*

**Algonquin Response:** Indirect annual costs of property taxes, insurance, and the administration costs are defined in EPA's OAQPS Cost Control Manual in Section 1 Chapter 2.6.5.8. as follows:

*[Property taxes, insurance, and administrative costs] are factored from the system **total capital investment**, at 1, 1, and 2%, respectively. Property taxes and insurance are self-explanatory. Administrative charges cover sales, research and development, accounting, and other home office expenses. [...] For simplicity, the three items are usually combined into a single, 4% factor. These estimates can serve for cost estimates if sources do not have any reliable and accurate information on these indirect operating costs.*

Total Capital Investment is defined in Section 1 Chapter 2.4.1 of EPA's OAQPS Cost Control Manual as:

*Total capital investment (TCI) includes all costs required to purchase equipment needed for the control system (purchased equipment costs), the costs of labor and materials for installing that equipment (direct installation costs), costs for site preparation and buildings, and certain other costs (indirect installation costs). TCI also includes costs for land, working capital, and off-site facilities.<sup>4</sup> Taxes, permitting costs, and other administrative costs are covered in Section 2.6.5.8.*

The 4% factor for property taxes, insurance and administration costs, identified in the Cost Control Manual assumes that these costs are variable only as a factor of the total TCI of the option being evaluated. In its Addendum, Algonquin determined that the TCI associated with an EMD alternative would exceed the TCI associated with the SoLoNOx turbine by \$12,242,077, while conservatively assuming that the property taxes, insurance, and administrative costs would be the same (i.e., zero differential) for both options. See Addendum § 4.4.3.1. and Table 4-6. Applying the 4% rate from the Cost Control Manual would have increased the difference in TCI between the EMD and the SoLoNOx turbine by \$489,683 (\$12,242,077\*.04=\$489,683). See Addendum, Table 4.6. Therefore, including the property taxes, insurance, and administrative costs at the OAQPS rate of 4% would have resulted in a higher cost per ton of emissions removed for the EMD alternative than calculated by Algonquin. Because Algonquin did not have a basis to conclude that property taxes, insurance and administration costs for the EMD alternative in this case would actually exceed those costs for the SoLoNOx turbine, it made the more conservative assumption that they would not vary significantly and that these costs for an EMD alternative would not be greater than those associated with a SoLoNOx turbine.



**Kate Brown**  
Consulting Scientist  
**Air Permitting**

**ENBRIDGE**

TEL: 207-274-2607 | CELL: 207-232-0095 | Kate.Brown@enbridge.com  
6 Ashley Drive, Scarborough, ME 04074

enbridge.com

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**From:** Cushing, Thomas (DEP) <thomas.cushing@state.ma.us>

**Sent:** Wednesday, July 29, 2020 2:59 PM

**To:** Barry Goodrich <Barry.Goodrich@enbridge.com>

**Cc:** Kate Brown <Kate.Brown@enbridge.com>

**Subject:** [External] Algonquin Addendum questions

**EXTERNAL: PLEASE PROCEED WITH CAUTION.**

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Barry,

Based on my review to date, I am requesting the following clarifications:

1. In document "ADDENDUM TO NON-MAJOR COMPREHENSIVE PLAN APPROVAL APPLICATION" page 4-17 states "Indirect annual costs of property taxes, insurance and the administration costs associated with the operation of each option do not vary significantly between the options, so these costs were not included in the economic evaluation." Please substantiate the assumption that there is not significant variability in costs.
2. Department form "BWP AQ BACT," which was included as Appendix E in the Addendum only identifies the proposed emission limit (i.e. BACT) for NOx. Please update Table 1 such that it identifies the proposed BACT limit for all pollutants.

I may request additional documentation or clarifications as necessary as my review of your submittal progresses.

Thomas Cushing  
Permit Section Chief  
MassDEP, Southeast Region  
(508) 946-2824

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