Vermont Non-Transmission Alternatives Screening Form

For use in screening to determine whether or not a reliability issue requires non-transmission alternatives (NTA) analysis in accordance with the Memorandum of Understanding in Docket 7081.

Identify the proposed upgrade: _____
Date of analysis: _____

1 Does the project meet the following definition of "impracticable":

❑ Yes
❑ No

a. The need for a redundant supply to a radial load; or
b. An economic transmission project[1], transmission built to achieve a public policy objective other than reliability, or other non-reliability-driven transmission or
c. Maintenance-related, addressing asset condition, operations, or safety; or
d. Addressing transmission performance, e.g., addition of high-speed protection or a switch to sectionalize a line; or
e. Needed to address stability or short circuit problems.[2].

*If so, check "yes" and **discontinue** screening; otherwise, continue to #2.*

2 What is the proposed transmission project's need date? _____

If the need for the project is based on existing or imminent reliability criteria violations (i.e., arising within one year based on the controlling load forecast), discontinue NTA screening; otherwise continue to #3.

[1] "Economic transmission" used in this context refers to projects so classified under ISO-New England's planning process as defined in the ISO-NE Open Access Transmission Tariff (OATT).

[2] "Stability" refers to the ability of a power system to recover from any disturbance or interruption. Instability can occur when there is a loss of synchronism at one or more generators (rotor angle stability), a significant loss of load or generation within the system (frequency stability), or a reactive power deficiency (voltage stability). Stability problems are influenced by system parameters such as transmission line lengths and configuration, protection component type and speed, reactive power sources and loads, and generator type and configuration. Due to the nature of instability, non-transmission alternatives involving addition of generation or reduction of load will not solve these problems.

3 Could elimination or deferral of all or part of the upgrade be accomplished by a 25% load reduction or off-setting generation of the same magnitude? *(See note.)*

❑ Yes
❑ No

If so, check "yes" and continue to question 5; otherwise, check "no" and discontinue the NTA screening.

4 Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than $2.5 million. *(See note.)*

❑ Yes
❑ No

If so, check "yes" proceed to define the scope and timing of non-transmission alternative analysis.

Sign and date this form.

This analysis performed by: _____

Print name & title

_____

Company

_____

Date

_____

Signature

NTA Screening Form
Notes, examples and descriptions

Line 3 Non-transmission alternatives should be considered if the project can be altered or deferred with load reductions or off-setting generation, according to the schedule below, of existing peak load of the affected area at the time of the need for the preferred transmission alternatives. This schedule recognizes that deployment of a load reduction program in a specific area takes time to organize and implement. Therefore, the following assumptions including time and accrued load reduction should be considered when examining the load reduction:

Period	**Magnitude of load reduction and/or off-setting generation**
1-3 years	15% of peak load
5 years	20% of peak load
10 years	25% of peak load

Line 4 The $2.5 million is in year 2012 dollars and is adjusted for escalation in future years using the Handy Whitman transmission cost index. This threshold does not account for the expected costs of the NTAs, but rather only includes the expected savings to the cost of the transmission project.

Definition of "uneconomic" in the context of the revised NTA Screening Form:

In the context of the revised NTA Screening Form, "uneconomic" is defined by step 4. Specifically, and for screening purposes only, alternatives to a transmission upgrade are considered to be uneconomic when:

> The likely reduction in costs from the potential elimination or deferral of all or part of the upgrade is greater than $2.5 million.

This definition of uneconomic is informed by the following considerations:

- The NTA Screening Form is being revised as part of the Public Service Board approved VSPC process reform. Among the primary goals of process reform is to shift Vermont System Planning Committee (VSPC) efforts away from excess process and towards the successful implementation of non-transmission alternatives. The change of the relevant thresholds from the present NTA Screening Form ($2 million cost / $1 million reduction) to the proposed threshold of $2.5 million savings is intended to help focus VSPC efforts and NTA analyses on those projects that have the potential to provide the greatest benefit to Vermont. The VSPC notes that a comprehensive NTA analysis is very resource intensive and can cost in the hundreds of thousands of dollars.
- Not all NTA analyses result in the identification of viable alternatives to transmission upgrades. Given this risk, it is appropriate to focus resources and dollars on those projects that have the potential to provide the greatest benefits.
- The $2.5 million threshold for the reduction in upgrade costs in step 4 of the NTA Screening Form does not account for the costs of the NTAs themselves, captures only the expected savings to the cost of the transmission project, and as such is a conservative screen.