

NTA SCREENING OF PROPOSED SOLUTIONS

NTA screening was conducted for the proposed solutions using the current screening form located on the VPSC web site at

<http://www.vermontspc.com/VPSC%20Subcommittees/Preliminary%20NTA%20Screening%20Tool%20rev3%20p1.pdf> .

St Albans solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes. The load level at which the project is approximately 25% below the projected 90/10 2009 summer peak load level. The screening tool allows a 15% reduction assumption in the 1 to 3 year period. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: No. The scale and scope of the transmission solution will not likely change by \$1,000,000 or more.

Georgia-St Albans voltage instability solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes. Based upon current system design criteria, the load level at which the project is needed is beyond the projected 2009 summer peak load level but before the 2018 summer peak load level.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially, if the non-transmission alternative is an effective replacement.

Middlebury solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes.**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes.** The load level at which the project is 40% below the projected 90/10 2009 summer peak load level. The screening tool presumes a 15% reduction in load in the 1 to 3 year period. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes, potentially.**

Blissville solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes.**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes.** The load level at which the project is needed is approximately 30% of the projected 90/10 2009 summer peak load level. The screening tool presumes a 15% reduction in load in the 1 to 3 year period. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes, potentially.**

Hartford solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes.**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes.** The reliability concerns occur at approximately 40% below of the projected 90/10 2009 summer peak load level. The screening tool presumes a 15% reduction in load in the 1 to 3 year period. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes, potentially.**

Chelsea solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes.**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes.**

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes, potentially.**

North Rutland solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes.** The load level at which the project is needed is approximately 15% of the projected 90/10 2009 summer peak load level. The screening tool presumes a 15% reduction in load in the 1 to 3 year period. A non-transmission alternative would likely have to include generation to potentially address the reliability concern.

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes, potentially.**

Ascutney solution

Question 1: *Is the proposed project's cost expected to exceed \$2,000,000?*

Answer 1: **Yes**

Question 2: *Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?*

Answer 2: **Yes and No.** The solution addresses two concerns. One concern is inadequate transformation capacity, which occurs before 2009. However, if the 46 kV deficiencies were addressed, the transformer solution would be needed in 2013, when the transformer itself would overload. The other concern is the substation configuration, which also occurs before 2009. This concern cannot be deferred by non-transmission alternatives.

Question 3: *Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000*

Answer 3: **Yes** with respect to the 46 kV transformation. **No** with respect to the substation configuration.

Bennington solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: No. The substation configuration concern occurs before 2009. The load level at which the project is needed is approximately 40% of the projected 90/10 2009 summer peak load level. This concern cannot be deferred by non-transmission alternatives.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Not applicable. See response to question 2.

Voltage support solutions

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Individually, no.

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: No. The low voltage concerns occur before the projected 2009 summer peak load level. The high voltage concerns occur before the projected 2009 light load level.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Not applicable. See response to question 2.

St Johnsbury solution

See the NTA screening for the Lyndonville project presented to the VPSC at <http://www.vermontspc.com>

K-186 overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: No. This overload is not effectively influenced by load reductions in Vermont load. This overload is affected by load in New Hampshire and regional power transfers.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Not applicable. See response to question 2.

K-31 overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: No. This overload occurs with present-day peak loads and system conditions. This overload is not effectively influenced by reductions in Vermont load. This overload is also affected by load in New Hampshire and regional power transfers.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Not applicable. See response to question 2.

K-149 overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes. However, this overload is affected predominantly by load in New Hampshire and regional power transfers. The amount of load reduction in Vermont will need to increase over time in order to maintain the deferral benefits. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially.

T-198 overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: No. This overload is not effectively influenced by reductions in Vermont load. This overload is also affected by load in New Hampshire and regional power transfers.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Not applicable. See response to question 2.

K-32 overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes. However, this overload is also affected by load in New York and regional power transfers. The amount of load reduction in Vermont will need to increase over time in order to maintain the deferral benefits. A non-transmission alternative would have to include generation to potentially address the reliability concern.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially.

Coolidge autotransformer overload solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes. However, this overload is also affected by load in New York and New Hampshire and regional power transfers. The amount of load reduction in Vermont will need to increase over time in order to maintain the deferral benefits.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially.

Barre solution

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially.

Solution to overall system voltage and thermal concerns

Question 1: Is the proposed project's cost expected to exceed \$2,000,000?

Answer 1: Yes

Question 2: Could elimination or deferral of all or part of the upgrade be accomplished through the use of non-transmission alternatives?

Answer 2: Yes.

Question 3: Is the likely reduction in costs from the potential elimination or deferral of all or part of the upgrade greater than \$1,000,000

Answer 3: Yes, potentially.