

The Narragansett Electric Company
d/b/a National Grid (Interstate Reliability Project)
RIPUC Dkt. No. 4360

Joint Rebuttal Testimony of
Gabriel Gabremicael, P.E. and
Mark Stevens, P.E.

February 7, 2013

Witnesses: Gabriel Gabremicael, P.E. and Mark Stevens, P.E.

1 Q. Mr. Gabremicael, please state your full name and business address.

2 A. My name is Gabriel Gabremicael. My business address is 40 Sylvan Road, Waltham,
3 Massachusetts 02451.

4 Q. Have you previously filed testimony in this matter?

5 A. Yes, Mark Stevens and I filed joint prefiled testimony in this docket on November 21,
6 2012.

7 Q. Mr. Gabremicael and Mr. Stevens, have you reviewed Mr. Booth's testimony on behalf
8 of the DPUC?

9 A. Yes. We have reviewed Mr. Booth's testimony and would like to respond to several
10 points which he raised about the Project.

11 Q. Mr. Booth suggests on page 8 of his prefiled testimony that National Grid should
12 evaluate the age of its existing 345 kV infrastructure for the assets currently in place.
13 Does National Grid agree with this suggestion?

14 A. Yes. National Grid's Asset Management Transmission Group reviews its assets to
15 determine the need for improvements and/or replacement due to asset condition.
16 However, the evaluation of the need for improvement or replacement is not based on age
17 alone. If a need for improvement or replacement is confirmed, then a solution is
18 developed that could range from a targeted refurbishment, a short-term life extension (10-
19 20 years), or to a complete rebuild (+30 years). The preferred alternative is selected
20 based on a review of a number of factors including expected costs, ability to provide
21 adequate capacity, comparison to standards, and minimization of environmental and
22 abutter impacts. The evaluation will also compare potential permitting, outage

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1 requirements and construction duration impacts of the various condition-based projects.

2 The preferred alternative will be the lowest cost solution that addresses the needs of the
3 project with acceptable project impacts. On October 17, 2012, National Grid presented
4 its New England Transmission Line Asset Condition and Refurbishment Program and
5 Projects to the ISO-NE Planning Advisory Committee in which it outlined the needs for
6 the next one to five years. Some of the projects outlined were noted as being important
7 for providing reliable supply to Rhode Island because they involved lines that were
8 studied within the NEEWS project.

9 Q. On pages 12-13 of his prefiled testimony, Mr. Booth questions the configuration and
10 costs of several alternatives. Why was the reconductoring/rebuilding of the existing 328
11 Line included as part of Option A-1 but not included as part of Option A-3?

12 A. For Option A-1, the 328 Line overloads for the N-1-1 contingency loss of the 336 Line
13 and the 341 Line. For Option A-3 (which includes the Uxbridge Switching Station) the
14 328 Line does not overload for the N-1-1 contingency loss of the 336 Line and the 341
15 Line. However, Option A-3 requires mitigating the sag limitation on the 3361 line by
16 increasing conductor clearance to allow a higher thermal capability on the line thereby
17 eliminating overloads during an N-1-1 contingency.

18 Q. On pages 8-9 of his prefiled testimony, Mr. Booth suggests that the 10 year study horizon
19 should be 20 or 30 years. Why does National Grid use a 10 year study horizon when
20 performing long term studies, and is it consistent with national and regional planning
21 standards and criteria?

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- 1 A. The lead time required to plan, permit, license, and construct transmission system
2 upgrades is typically between five and ten years depending on the complexity of the
3 project. The ISO-NE Capacity, Energy, Loads and Transmission (CELT) forecast used
4 to model the transmission network for reliability analysis uses a ten year horizon.
5 National Grid's 10 year study horizon is in-line with NERC Planning Standards, NPCC
6 criteria, and Attachment K (Regional System Planning Process) of the ISO-NE Open
7 Access Transmission tariff.
- 8 Q. Does this conclude your testimony?
- 9 A. Yes, it does.