New England States
Committee on Electricity

To: **ISO-NE, PAC**
From: **NESCOE**
Date: **May 15, 2015**
Subject: **Transmission Planning Assumptions**

The New England states appreciate that ISO-NE has started reviewing its transmission planning assumptions with the Planning Advisory Committee (PAC), including addressing the use of probability in transmission planning.

For historical context given the passage of time, we provide this memo to refresh recollections about what NESCOE had requested of ISO-NE in connection with this matter in 2013. We would be pleased to provide a quick summary or answer any questions at an upcoming PAC meeting.

On April 19, 2013, NESCOE sent a memo to ISO-NE and PAC entitled "*Enhancing Consistency in Regional System Planning*".[1] Subsequently, on September 17, 2013, NESCOE, together with representatives of the Maine Public Utilities Commission, made a presentation to the PAC.[2] NESCOE has also noted this matter in connection with comments on ISO-NE's draft work plans.

The states' interest in enhancing consistency and transparency in planning assumptions grew from PAC discussions regarding the development of the transmission planning technical guide. In that discussion, the states raised a concern about a lack of a transparent standard in ISO-NE's formation of base cases. Increasing transparency and consistency in planning assumptions could, in our view, increase state and stakeholder confidence in ISO-NE's planning assumptions and the output of the planning process, and result in more efficient planning and siting processes.

In the presentations noted above, NESCOE observed that rather than debating each of the elements of base case formation independently (for example, whether it is reasonable for ISO-NE to assume two generators are out of service, or what transfer stresses ISO-NE should assume) it would enhance consistency and transparency to use probabilities of load level and generator outages (including those which drive

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[1] http://www.nescoe.com/uploads/Transmission_Planning_Memo.pdf
[2] http://www.iso-ne.com/static-assets/documents/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2013/sep172013/a2_enhancing_consistency_in_regional_system_planning.pdf

the distribution of interface flows) to determine the relative likelihood of the various base cases.

NESCOE also suggested that ISO-NE could determine a threshold base case probability value or range to define the term "reasonable stress" as it is used in Planning Procedure 3. This would bring consistency to base cases 1) within a single needs assessment and 2) between individual needs assessments and thus increase consistency and predictability across projects and state siting proceedings. Specifically, it is not the probability of any one item alone that is of concern, but rather the combination of the probability of different items that merit examination. For example, the probability of load level, transfer levels, and unit outages, taken together can give a relative probability to a base case. The material presented in 2013 demonstrated that historically some of the base cases were much more likely to occur than others.

Accordingly, NESCOE suggested that ISO-NE, in collaboration with the PAC, develop a standard value against which to measure base cases. To achieve the objective of increasing consistency, and decreasing debate in the stakeholder process and in siting proceedings, the method for determining the value should be as easy to understand as possible and use as widely available data set as possible.

We understand that the specific method provided on our example may not be precisely right, nor may it cover all circumstances. It is, however, illustrative of the kind of improvements that ISO-NE and PAC together can make to the planning process after further examination and dialogue. We believe ISO-NE, states and stakeholders have a common interest in enhanced consistency and transparency and look forward to participating in a more focused discussion with ISO-NE and PAC.