

Compiled Market Participant RNA Comments

Tim Foxen, NRG:

My comment specifically is that the RNA, in the needs identification section or elsewhere, should explicitly identify transmission criteria violations that NYISO studies identify on elements in the subtransmission system that TOs, not NYISO, is responsible for securing and that the NYISO will advise the TOs of the violation. Thus, there is a commitment for NYISO to notify the TO of the violation.

I note that this provision addresses concerns noted by the PSC at ESPWG that it is looking for assurance that subtransmission system criteria violations are not overlooked and that there is appropriate communication on this between NYISO and the TOs.

Deidre Facendola, Con Edison:

1. The Base Case RNA should model the existing transmission system interface limits quantifying known annual changes.
2. Base Case and Scenario assumptions should be detailed for each distinct year of the study and the resulting Base Case RNA needs (MWs and MVARs) should be quantified by year in terms of known resources and existing transfer limits.
3. Unless it can be demonstrated that the transmission into Zones G – K are fully utilized, the conclusion that the new generation in base case findings #1 and #2 must be located in the respective zones cannot be supported.
4. Base case finding #4 should clearly state that the constant transfer limits are reduced transfer limits and should include support for the assumed lower transfer limits. Additionally, the finding should note that Con Edison contests any effect the series reactors may have on lowering the transfer limits.
5. Outline the external emergency assistance assumptions in the base case and scenarios.
6. Clarify if the Neptune line has been modeled as a 660mw UDR (assuming a firm contract from PJM). Check Table 7.1. If so, has the external emergency assistance assumption been adjusted to reflect a reduced amount of available capacity resources from PJM?
7. Table 7.1 should note under “Total NYCA Capability” that it excludes UDR and non UDR.
8. Describe more clearly and in more detail the new transmission topology used in the RNA report. Are the NY/NE flows the only flows that are limited with the new topology? Describe how the other external flows have been modeled.
9. Add a section that states the assumptions made to model the neighboring regions.
10. Add a section with the assumptions used to model the load in MARS.
11. Clarify if the NYPA RFP is modeled in the base case? In a scenario?

12. M29 increases transfers between I & J by 350mw (of the identified 500mw need) yet the NYISO claims this project reduces the need by a small amount. Quantify how much of the 500mw need is reduced.
13. The RNA should clearly state that based on its screening criteria the study does not include new facilities beyond year 5, but does model load growth over the 10 year horizon.
14. In section 8.1 under methodology, the report notes that if the system failed to meet LOLE = 0.1, combined cycle units of 250mw were added. The NYISO should substantiate using a 250mw combined cycle unit. Why didn't the NYISO consider smaller simple cycle GTs? Five 50mw GTs would provide greater LOLE benefit than a single 250 mw combined cycle unit.
15. Section 9.2 under environmental compliance, there is no quantification of the impact of these initiatives on the RNA study.
16. Section 9.2 discussion of neighboring system plans, it should be noted that the additional power may not be available during peak hours as neighboring systems will also need new capacity within the next five years.
17. Section 11, for both the first five year base case and the second five year base case, state the objective as to why the NYISO performed a free flow transmission model analysis.
18. Section 11.1.1.2 states that the most effective area to add capacity is zone J. The NYISO should run in MARS the alternative of adding capacity elsewhere to quantify the difference. Unless existing transmission into Zone J is fully utilized, adding capacity elsewhere is a viable option.
19. Justify why a re-dispatch of available generating units in the voltage limiting transmission-constrained case is not employed to solve or reduce the voltage

RNA Issues/Questions from DPS Staff

Conclusions on Page 7:

#1 & 2: Rather than stating the need as generation is required, should orient it to say how much load in each zone cannot be served with the current system for x number of hours in each year. Should also note that need year is based on 1-in-10 and state what the need would be if used traditional 18% reserve margin.

#3: On the benefits of the Neptune Project, no details/support for the conclusion is presented.

#4 & 6: No quantification. Talk is in terms of economic problems, not reliability problems. (Reduction of xfer capability speaks to economic issues; it doesn't speak to the reliability of the system.) Need to state at what minimum xfer level does a reliability problem occur, what the reliability problem is and when this problem starts.

#4: Talk about holding xfer capability across the years. What levels were held and why?

#4: What were the import/export levels in the base cases? What assumptions did you base these schedules on? Are only firm contracts modeled?

#4: The report states that reactive was added to accomplish convergence. How much, and how was that accounted for in the statement of need.

#5: a) States Poletti provides voltage support for UPNY/SENY xfers. b) States that Poletti retirement in 2008 doesn't put you below resource adequacy criteria. Given a), how can b) follow? Even if b) is true, what happens in 2009 and 2010? Need to include language from the agreement so people understand under what conditions Poletti can remain in service.

#6: No quantification. Last sentence talking about xfer cap between two interfaces doesn't make sense.

Scenarios/Sensitivity, P. 8:

#2: Needs more explanation. What specifically is the model being used and how is that more representative of reality? How is it to be implemented across the base cases (static modeling or does something float with system conditions)?

#3: What are the years in which this happens? Write up makes it sound like the loss of IP 2 & 3 is manageable. But Table 12.2 indicates this is a serious issue. Are there problems if we are missing one or both units on peak? If yes, in what year? Can the problems be managed? What do the results mean for today if we lose one or both units? Quantification of xfer impacts needed. If generation needs identified in conclusion 1 are met, is this still a problem?

Conclusion, P.8:

#3: What adverse impacts are referred to: economic or reliability?

#4: How would "initiatives" be studied and the information used? What qualifies as an "initiative"?

Other:

General: Are SCRs included in the MARS modeling? If yes, how?

P. 20, Table 3: Load growth upstate is higher in upstate than historical data and growth downstate is projected at lower rates than historical data. Anping Liu has a clarifying request in to John Pade.

P. 31, Table 7.1: Needs to be revised. Such items as include SCRs as part of reserves, calculate required capacity at 18% instead of 17%, etc.

P. 36, under Task 1: What is an “interface transfer violation”?

P. 41, IP discussion in para 2: drop the phrase “for safety reasons”.

P. 41, Existing Transmission Infrastructure Ageing: Are you saying that maintenance is not taking place? Need more explanation as to the point being made.

P.45, 11.1.1.3 discussion: Which alternative reflects reality and why?

P.44, Table 11.2: How can we be within 1-in-10 in 2009 with only a 10% reserve margin?

P.45, Table 11.3:

* Between 2006 and 2007 capacity goes down but reliability goes up? Needs to be explained.

* Do the Reserve Margin numbers reflect SCRs?

* In 2008, the table claims that reliability is .122 (or about 1-in-8) and that corresponds to an 11% reserve margin. That is not consistent with what we have seen in IRM studies.

P.57, Table 12.2: Is the 2008 column supposed to apply to both IP 2 & 3 or is it correctly labeled? (We thought it was stated at the ESPWG meeting that it applies to both.) I both, how can the LOLE only be .171? Needs explanation.

NYSEG/RG&E Comments on the RNA

NYSEG & RG&E has 3 major comments on the draft RNA.

1. We agree with many others that there needs to be more specificity in the results section, as well as in the summary of findings. For example, can the needs be met with a combination of voltage support in the lower Hudson Valley, plus a reduced amount of generation in NYC? It would also be enlightening to describe what the results would be if the planned unit additions that did not make it into the base case did indeed occur.
2. Voltages and Transfer Limits – References to “adverse impacts” should be quantified, illustrating what assumptions were used in the findings. This applies to both voltage levels and transfer limits, as applicable. Also, it is not completely clear what transfer levels are used in the base case, whether they are the same as used today, or if

they are reduced. There could be a better description of the trade-offs between voltage performance and transfer limits.

3. A more detailed explanation is necessary for the alternative transmission network topology (page 8 and page 45). The RNA also should identify the discrepancy between this network and the network used in the IRM studies. The alternative network model, as we understand it, seems to make sense and we don't believe that using 2 different representations (in the RNA and the IRM respectively) is necessarily a fatal flaw. If indeed the alternative model is more accurate and uncovers a need date earlier than the standard topology model, then we would be remiss if it was ignored.

Also, several minor comments:

1. Coal Retirement scenarios (pages 42 and 57) - 2 scenarios for the retirement of coal units were identified on page 42. Yet the results on page 57 seem to include only one, and it's not clear which one. If the results are the same for both scenarios, then it should be so stated.
2. Identification of Resource Needs – An example (pages 58 and 59) – Tables 13.1, 13.2 and 13.3 are somewhat confusing in that it is not stated that the ISO is not going to be declaring needs for other than the base case (table 13.1). There ought to be an explanation just after 13.1 that says that the following tables are illustrative only and needs will only be identified as a result of base case findings.
3. Polletti Station (page 7) – It is stated that the retirement of Polletti in 2008 does not result in the system being out of compliance. Yet how much of the 2010 need is based on the retirement? If the 2010 need can be met with a 500 MW unit is it true that it can be met with Polletti operating as well?
4. Transfer limits (page 7, bullet 4) – It is stated that voltage limitations show a sharp degradation through time with load increases and generator retirements. It is not clear how much effect each cause has. For example, all the retirements in the table on page 33 occur before 2009. Therefore it would appear that the system degradation beyond 2010 is solely due to load growth.

NYSEG/RG&E Deliverability Comments

Regarding future detail work on the alternate methods to look at deliverability, we believe that method alternatives 1 and 4a should be the primary methods used going forward to achieve more definitive results for deliverability.

In addition, while examining all these variations of the deliverability testing scenarios has been useful, we may be starting to miss the major point regarding deliverability. The genesis of deliverability testing was to identify if it were necessary to create a form of second product for resource interconnections, and, if so, what form that product might take. In other words, it was intended to help create a more efficient marketplace, and not intended to address concerns such as reliability or congestion. We have the CRPP and congestion calculations for these.

The definition of deliverability that we have been using, i.e. “the aggregate of generation to supply the aggregate of load without overloading network elements”, may be too broad, because the preliminary results are uncovering things like load pockets. Under the assumptions for the test method, we have to simulate the growth of load to absorb the full generation output. Growing the load in a load pocket will put pressure on the system elements connecting the load pocket to the bulk system, and overload them at a certain point. This is not deliverability. Rather, it is a reliability concern if the actual load is forecast to get too high, and we have the CRPP to address such cases.

Similarly, the preliminary results are uncovering things like overloads of Leeds – Pleasant Valley. Again, it is questionable whether we are uncovering deliverability problems when these types of lines pop up. It seems like we are uncovering facilities that are subject to congestion under certain conditions. We know this already.

However when the results uncover generator pockets, for example the Astoria results, we are potentially seeing deliverability concerns. These types of results go directly to the point of the interconnection second product debate that began this exercise.

Bob Reed NYSEG

Comments on NYISO Version 3 (9/7/05)
Draft Reliability Needs Assessment (RNA)
National Grid

General Comments

The NYISO draft Reliability Needs Assessment (RNA) was discussed extensively at the September 13, 2005, Electric System Planning Working Group (ESPWG) meeting. This note summarizes National Grid’s comments at that meeting and includes additional detail related to the concerns we expressed, as well as specific editing suggestions.

Clear Statement of Underlying Assumptions Based on Existing Conditions and Known Changes:

To provide useful and understandable information to the market and a meaningful basis for NYISO determinations of reliability need, the conditions and assumptions used to derive the NYISO’s RNA Base Case and the assumptions used to define scenarios around that Base Case must be clearly stated and explained in the RNA report.

Specifically,

1. The RNA Base Case should reflect the existing system including expected changes (i.e., those that are anticipated to occur based upon a certain agreed criteria). The Base Case should not include presumed “fixes” that have not been formally proposed.

2. The RNA should specifically state all relevant base starting point assumptions and all expected changes by year that are included in the Base Case analysis.
3. Base Case needs that are identified should result from the combination of all the conditions or identified problems of the Base Case (i.e., not pertain separately to individual conditions/problems).

Need for Additional Detail

The NYISO should provide quantitative assessments rather than qualitative statements of reliability needs in the RNA. Such quantification is needed for the RNA to achieve its purpose of providing information to the market necessary to elicit market responses to reliability needs. In addition, quantification of need is required for the NYISO to identify whether and where a regulated backstop solution may be required.

Specifically,

4. Each Base Case Need should be specifically quantified in terms of at least one, but preferably all three of the following:
 - a. Need for increased locational capacity resources (MW and MVar)
 - b. Need for increased locational transfer limit (From -To MW)
 - c. Need for increased locational reactive resources (MVar)
5. To the extent possible, needs associated with Scenarios should be quantified in the same terms as the Base Case needs.
6. On page 7, Base Case findings #1 and 2 quantify reliability needs in terms of MW, location and timing and appear to be based on the analyses described in the report. However, finding #3 does not quantify the reliability benefit of the Neptune project in a similar manner (i.e., MW/MVar, location and timing). In addition, points 4, 5 and 6 discuss increasing voltage limitations and need for additional reactive capability only in general terms. They have little or no analytical back-up (which perhaps is included in Appendices that have not yet been published). For the RNA to provide sufficient information on these needs for either the market to respond or the NYISO to identify any need for a regulated backstop solution, the derivation of the identification of needs must be substantiated in the RNA report.

Presentation of RNA Results

The purpose of the RNA is to identify any reliability problems and to provide the foundation for the NYISO's determination of any need for a regulated reliability backstop solution to those needs. In the current draft, the need for additional resources is stated (where explicit) in terms of MW of additional capacity in a particular zone (E.g., findings #1 and 2, page 7). Findings of reliability needs or problems should be stated in a manner that does not presume a particular solution to the need. For example, needs can be stated:

“The results of the RNA indicate a need for additional resources of XX MW in Zone YY which could be met in a variety of ways, including additional capacity in the zone, increased ability to deliver capacity into the zone, demand side resources, etc. In addition, a statement should be made up front to the effect that each problem/need can have a variety of potential solutions, and if a specific need is characterized in terms of one type of solution, that does not imply that it is the preferred solution, but merely a proxy for more specifically quantifying the attributes of the need.

Specific Comments

7. Pg. 7; Base Case Findings #1 and #2: These needs are understated because they ignore the impact of reduced transfer limits on resource adequacy needs. In other words, the last three Findings should be fully incorporated into Base Case assumptions (as opposed to previously derived higher limits and/or previous higher limits averaged with newer derived lower limits), and the needs identified in Findings #1 and #2 should then be based upon that Base Case. These findings are even further understated if the more robust topology discussed in Key Scenario Finding #2 is adopted for the Base Case.
8. Pg. 7; Base Case Finding #3: Discussion of the Neptune Project does not really present a need or give quantified information. This item should be moved to Key Scenarios on pg. 8 and stated in terms of the additional need that would arise if the Neptune Project were not to come to fruition.
9. Pg. 7; Base Case Finding #4: Using the phrase “adversely affected” is too vague to provide useful information. It does not even indicate that there is a low voltage problem, only a “voltage limitation” problem. These limitations need to be quantified and described by location and by year. Constant transfer limits should not be employed for the entire ten year period. Rather, transfer limits should be indicated by size, year and location. Similarly, the “identified reactive deficiencies” should be explicitly identified and their impact described without assuming “any corrective actions.”
10. Pg. 7; Base Case Finding #5: This finding raises a concern that a need may arise depending upon “whatever corrective actions are employed” before the retirement of the Polletti unit. The purpose of the RNA is to determine if corrective actions are needed, rather than to suggest that no corrective actions may be needed if not yet identified or proposed corrective actions are taken? This appears to be circular reasoning.
11. Pg. 7; Base Case Finding #5: The statement that “retirement of the generating unit in February 2008 does not result in the NYCA being out of compliance with resource adequacy criteria” is misleading and inaccurate because the resource adequacy test ignored the decrease in transfer limit capabilities that the retirement of Polletti caused (i.e., the resource adequacy test was flawed because it only considered the loss of Polletti real power capability, while it ignored the loss of Polletti reactive power capability).
12. Pg. 7; Base Case Finding #6: Again this finding is too vague to be useful. See comments regarding Finding #4.

13. Pg. 8; Key Scenario #1: The resource adequacy impact of the Dunwoodie-Sherman Creek reinforcement should be quantified as opposed to being stated in terms of “a small amount.” Presumably this value is not the same as the 350 MW increase in transfer capability.
14. Pg. 8; Key Scenario Finding #2: The NYISO has indicated that it recommends that the more robust topology model should be the one used for the Base Case. If this is the case, then all Base Case findings should be presented using the more robust model. In addition this model, should be explained in detail, including how its assumptions, analytic method, and results compare with other studies such as the IRM studies.
15. Pg. 8; Key Scenario #3: As previously, the findings are too vague to be useful. The consequences of the retirement of the Indian Point units should be presented in quantitative terms fully taking into account the loss of real and reactive power capability (by location) afforded by those units, including the associated impact on resource adequacy needs due to reduced transfer limits.
16. Pg. 8; Conclusion #2: It is not clear why increasing dependence on external resources (in this conclusion due to the addition of a new HVDC tie) “will place more emphasis on the importance and criticality of regional planning.” Robust regional planning is critical for ensuring reliability whatever the resources deployed. To the extent that different resources have different impacts on reliability these should be taken into account in the analysis of reliability needs, not broadly characterized in a concluding statement. .
17. Pg. 8; Conclusion #3: Although the relevance of Conclusion #3 is not immediately clear, upon further investigation it appears that the intent of this Conclusion is to state that: “The results of Base Case Findings #2 and 3 are not valid unless it is presumed that low voltage problems resulting in reduced transfer levels as identified in Findings #4, #5 and #6 are corrected first.” Again, this appears to be circular reasoning on the part of the draft RNA. The RNA’s purpose is to identify all problems as needs; not to identify some needs with the presumption that other needs will have been met.
18. Pg. 8, Conclusion #4: Environmental initiatives are important scenarios, and (as stated in General Comments above) to the extent possible, the impact of these initiatives should be quantified in terms of specific needs that they will generate.
19. Pg. 9, Paragraph 2 (version 2): Why are the following statements italicized? – “The key point is that the total nominal transfer capability between the control areas in the Northeast is less than 5% of the total peak load of the region. The transfer capability as a percent of the regional load has been steadily declining.” Is the key point that this trend indicates a need for additional transfer capability to improve reliability, or that such transfer capability would be desirable even if not needed?
20. Pg. 16; Paragraph 2: The following statement appears in the “Historical Trends” section: “The real challenge on a going forward basis will be to maintain the benefits that fuel diversity, in particular dual fuel capability, provides today”. This is couched as a recommendation, and therefore should not be included in Historical Trends” as such. Furthermore, it is not clear that New York has formal fuel diversity criteria. Therefore, if necessary, this issue should be discussed in Section 9.0: System Planning Issues rather than mentioned in the Historical Trends section.

21. Pg. 33; Table: The title states it is a list of what's included in the base case "load flow". Does this literally mean that these projects are not necessarily included in the full RNA Base Case study (e.g., MARS analyses), but only the load flow portions of it?
22. Pg. 34; Paragraph 2: The following statement is made: "Voltage and thermal emergency transfer limits analysis was performed to determined (sic) transfer limits used in the MARS transmission constraints model." This apparently was based upon previous studies and/or higher limits from previous studies averaged with lower limits derived from RNA studies. This inconsistency needs to be corrected. MARS analyses for the RNA need to be based on transfer limits identified in or derived from the RNA.
23. Pg. 36; Paragraph 2: This paragraph appears to be describing a process to compare the relative merits of solutions rather than identifying needs. Please explain.
24. Pg. 36; Paragraph 3: A reference is made to "limited transfer analysis of selected NY power system interfaces." Please describe more fully what this analysis is compared particularly to an analysis of the "voltage and thermal performance of the bulk power transmission system."
25. Pg. 41; Paragraph 4: A reference is made to transmission line flow capability decreasing as it ages. This is an unsubstantiated generalized statement which either needs to be retracted or specifically qualified by what it may be referring to (e.g.; a certain underground cable may have been derated because a portion of its cooling capability may have become inoperable).

Typographical/Editorial Comments/Questions

26. Pg. 1, last paragraph: Add "through 2015" after "over a 10 year planning horizon".
27. Pg. 5; paragraph 3: Shouldn't "meet expected demand is *below* the system's requirement" read "*above*" instead?
28. Pg. 7-8: Given the importance of this section, headings should be numbered and titled as follows:
 - 3.1. Base Case Needs Identified
 - 3.2 Key Scenario and Sensitivity Findings
 - 3.3 Conclusions
29. Pg. 9, et al: Generally speaking, all maps and diagrams should be a full page. Except for the simplest ones, they are largely illegible and of little value in their present size/resolution.
30. Pg. 14; paragraph 5: This states that transmission at 115 kV and above decreased by 164 circuit miles, but then alludes to the fact that some was transferred to the PJM Control Area. Did all 164 miles go to PJM, or did some transmission actually get retired?
31. Pg. 29; Paragraph 4: Shouldn't "section 1.1 below" read "section 7.1 below"?
32. Pg. 33; Table: Please identify projects by the zone(s) in which they are located.
33. Pg. 36: Task #1 and #2: An incomplete sentence shows up in both tasks starting as: "For the cases ..."
34. Pg. 41; Paragraph 6: Shouldn't this read: "operate with higher temperatures" rather than "operate with higher voltages"? If not, please explain.

35. Pg. 43, 44; Tables 11.1 and 11.2: Please include annual locational reserve margin information (e.g., NYC and LI) in these tables.
36. Pg. 45; Paragraph 3: This paragraph presumably applies to the more robust topology changes discussed on pg. 8, but it is difficult to recognize these are the same. Please indicate in both places that they indeed are the same.

Ralph Rufrano, NYPA:

On first blush I don't believe the suggestion was to replace LOLE with LOEE but to additionally provide LOEE. There was also a request to better quantify what voltage issues under what conditions caused the perceived need.

Ken Lotterhos, LIPA:

On September 1st, 2005 the NYISO distributed its Draft Reliability Needs Assessment (“RNA”). The draft report was amended on September 2nd and then again on September 7th. Preliminary findings were discussed at the Electric System Planning Working Group (“ESPWG”) and Transmission Planning Advisory Subcommittee (“TPAS”) meetings on September 13th and 14th, respectively (“September Meetings”). Subsequently, the NYISO distributed a list of comments provided by market participants at these meetings (“Comment List”) and requested additional comments by September 23rd.

As a preliminary matter, LIPA requests that the NYISO confirm there will be a continuing dialog between the NYISO and Market Participants concerning the RNA report, its assumptions and findings.

LIPA’s initial comments on the Comment List are as follow:

1. Verification of Base Case Models with the New York Transmission Owners – At the September Meetings the NYISO stated that comments on the RNA would be solicited through a three part process: from the Transmission Owners a topology review; from the ESPWG a scenario review; and from TPAS reliability criteria review. LIPA submitted initial comments on the RNA base case representations on August 11th and provided oral comments at the September Meetings. The NYISO has indicated that new cases reflecting these comments are to be made available for review on September 26th, with additional comments due September 30th. It is essential that the base case representations used in the RNA are accurate and reflect corrections of errors or oversights identified in the Transmission Owner review; this goes to the heart of the validity of the study’s findings.
2. Confirm Modeling Assumptions with Neighboring Systems – The ability to maintain simultaneous transfers to Con Edison and LIPA from PJM should be confirmed. Further, the Neptune line has a capability of 660 MW; the table on page 33 indicates a 600 MW capability while 660 MW of UDRs are indicated in table 7.1.

3. The MARS Model Used in the RNA should be Consistent with the NYSRC Model - The NYISO wishes to use an alternative MARS network model in the CRPP RNA which it believes more accurately reflects the upstate voltage model than does the NYSRC model used in IRM studies.¹ A very significant outcome of this is that it doubles the 2010 resource need and advances the year of the need to 2008. *Id.* at 8. There should be consistency between present IRM study and the CRPP studies being conducted. The CRPP RNA (5-10 year look ahead) should be a fair indicator of future IRM study (yearly) identified requirements.
4. The NYISO Should Provide the RNA Appendices – The draft RNA report does not contain appendices that are referenced in the report. These appendices include information, such as transfer limits and short circuit results, which is essential in reviewing the study conclusions. The NYISO should provide the appendices to the Market Participants before the next ESPWG and TPAS meetings in October.
5. Loss of Load Expectation (“LOLE”) Information should not be Replaced – The list of preliminary RNA issues distributed by the NYISO suggests replacing LOLE information in the RNA with LOEE (“Loss of Expected Energy”). The NYISO should reject this request, reporting LOEE information is not consistent with information reported in NYSRC studies and other NYISO studies. As an alternative, the NYISO may report both LOEE and LOLE.

¹ See RNA at p8, item 2 and p45.