Proposed mechanism to implement a TSL in the IRM Tan45 process

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Background

- NYSRC EC requested an "Examination of Transmission Security Limits in the IRM Study"

- Specifically:
  - Investigate the methodology that the NYISO uses in setting the operational locational floors including the assumptions used*. Compare it to the preliminary minimum locational requirements found in the IRM study
  - Examine if a minimum operational limit is appropriate for the IRM analysis, and if so, how it could be incorporated into the setting of the IRM
  - Analyze the impacts to the IRM of incorporating the existing TSL into the IRM calculation
  - The analysis will also consider whether the Lower Hudson Valley should be included in the IRM setting process if time is available

- http://nysrc.org/PDF/MeetingMaterial/ECMeetingMaterial/EC%20Agenda%20262/4.1.1%20Examination%20of%20TSLs%20in%20the%20IRM%20Study-v3%20-%20Attachment%204.1.1.pdf

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"How" to incorporate a TSL into the IRM Tan45 process

- At the February 3, 2021 ICS meeting, the NYISO requested input on how to incorporate a TSL into the IRM Tan45 process

- NYISO received feedback and prepared an initial proposal in order to solicit further feedback and discussion

- This presentation outlines that proposal. It does not intend to answer, or recommend an answer to, the question of whether a TSL should be adopted into the IRM Study process nor the appropriate method for calculating such a TSL

General proposal

- Perform existing Tan45 process
  - Starts with all locations at as-found
- Compare result with TSL for each Zone J and Zone K
- If a location's TSL is higher than the Tan45 locational requirement, set the locational requirement (Tan45 LCR) to the TSL. The TSL is the locational requirement (Tan45 LCR) for the remainder of the study
- Create a Tan45 curve between NYCA and the Locality (Zone J or Zone K) that was not bound by the TSL, holding the TSL-constrained Locality at its TSL
  - This maintains TSL-constrained locality (per above step) at its TSL
  - The resultant IRM and Tan45 LCR for the other Locality complete the analysis
- An example is shown on the next slide

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Illustrative Examples

- Assume an 80% NYC TSL and 100% LI TSL

- Assume the current Tan45 process produces a 20% IRM, 82% NYC locational requirement, and 98% LI locational requirement

- Set the LI locational requirement to 100%

- Perform a Tan45 analysis with only NYCA and NYC, holding LI at 100%

- Assume the results of the analysis show an IRM of 19% and NYC locational requirement of 81%

- The final results of the Tan45 process would be an IRM of 19%, NYC locational requirement of 81% and LI locational requirement of 100%

- Assume an 80% NYC TSL and 100% LI TSL

- Assume the current Tan45 process produces a 20% IRM, 82% NYC locational requirement, and 98% LI locational requirement

- Set the LI locational requirement to 100%

- Perform a Tan45 analysis with only NYCA and NYC, holding LI at 100%

- Assume the results of the analysis show an IRM of 21% and NYC locational requirement of 80%

- The final results of the Tan45 process would be an IRM of 21%, NYC locational requirement of 80% and LI locational requirement of 100%

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Next Steps

- Return to the next ICS meeting to further discuss the results of the proposed analysis

- Consider additional feedback received at today's meeting

- The NYISO to address remaining action items in the NYSRC whitepaper scope

  - Investigate the methodology that the NYISO uses in setting the operational locational floors including the assumptions used. Compare it to the preliminary minimum locational requirements found in the IRM study

  - Examine and recommend to the NYSRC to decide whether and how a minimum operational limit is appropriate for setting

  - The analysis will also consider whether the Lower Hudson Valley should be included in the IRM setting process if time is available

- NYSRC to address whether and how integrate TSLs into to its IRM Study

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Questions?

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