

Project 2012-05 Mapping Document

Transition of MOD-001-1a, MOD-004-1, MOD-008-1, MOD-028-1, MOD-029-1a, and MOD-030-2 to Proposed MOD-001-2

The below mapping document provides information on how the approved requirements within MOD-001-a, MOD-004-1, MOD-008-1, MOD-028-1, MOD-029-1a, and MOD-030-2 transition into the proposed MOD-001-1. As a general statement, the reliability-based components of those Reliability Standards are captured in MOD-001-2 while non-reliability-based components will be transition out of the NERC Reliability Standards. Where a prescriptive existing requirement does not easily map into the proposed MOD-001-2, a description and change justification is provided.

| Standard: MOD-001-1a – Available Transmission System Capability | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-001-1a R1 | Requirement R2 | The proposed Reliability Standard requires disclosure of the method used to calculate Available Transfer Capability (ATC) but no longer requires a registered entity to select a method explicitly described in the NERC Reliability Standards. |
| MOD-001-1a R2 | Requirement R2 | The proposed Reliability Standard will require disclosure of calculation frequency but does not specify the range of required calculations. |
| MOD-001-1a R2.1 | Requirement R2 | See comments on Requirement R2. |
| MOD-001-1a R2.2 | Requirement R2 | See comments on Requirement R2. |
| MOD-001-1a R2.3 | Requirement R2 | See comments on Requirement R2. |

| Standard: MOD-001-1a – Available Transmission System Capability | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-001-1a R3 | Requirement R2 | Requirement R2 of the proposed Reliability Standard retains the obligation to have an Available Transfer Capability Implementation Document (ATCID) that reflects its method for calculating Available Flowgate Capability (AFC) or ATC. |
| MOD-001-1a R3.1 | Requirement R2 | This information would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.2 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.2.1 | Requirements R2 & R5 | This description would be included within the ATCID created under Requirement R2 and may be addressed under Requirement R5 in response to a request for clarification. |
| MOD-001-1a R3.2.2 | Requirement R2 | This rationale would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.3 | Requirement R2 | This information would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.4 | Requirements R5 & R6. | The identity of the TSPs and Transmission Operators (TOPs) for which it provides data is captured when a registered entity formally requests that information under Requirements R5 or R6 of the proposed Reliability Standard. |
| MOD-001-1a R3.5 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.6 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |

| Standard: MOD-001-1a – Available Transmission System Capability | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-001-1a R3.6.1 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.6.2 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R3.6.3 | Requirement R2 | This description would be included within the ATCID created under Requirement R2. |
| MOD-001-1a R4 | Requirement R5 | The requirement for a Transmission Service Provider (TSP) to notify registered entities when a change is made to its ATCID is an administrative burden and provides little to no reliability benefit. Posting on its company website or Open Access Same-Time Information System (OASIS) provides notice that a change has been made. Although not specifically required under the proposed Reliability Standards, a registered entity may continue to provide such notice. |
| MOD-001-1a R4.1 | | |
| MOD-001-1a R4.2 | | |
| MOD-001-1a R4.3 | | |
| MOD-001-1a R4.4 | | |
| MOD-001-1a R4.5 | | |
| MOD-001-1a R4.6 | | |
| MOD-001-1a R5 | Requirement R5 for an ATCID provided upon formal request. | Requirement R5 of the proposed Reliability Standard obligates the TSP to provide its ATCID to any registered entity that needs it for reliability upon request. |
| MOD-001-1a R6 | The Requirement has been retired. | Ensuring that ATC, Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Total Flowgate Capability (TFC) calculations use assumptions no more limiting than those used in the planning of operations does not serve a clear reliability goal. The ATCID will have a description of how ATC, TTC, AFC, or TFC is calculated, with sufficient detail to allow for a comparison. |

| Standard: MOD-001-1a – Available Transmission System Capability | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-001-1a R7 | The Requirement has been retired. | Ensuring that ATC, TTC, AFC, and TFC calculations use assumptions no more limiting than those used in the planning of operations does not serve a clear reliability goal. The ATCID will have a description of how ATC, TTC, AFC, or TFC is calculated, with sufficient detail to allow for a comparison. |
| MOD-001-1a R8 | The Requirement has been retired. | The reliability component of ATC is disclosure of a registered entity’s practice which is still captured, but not the performance aspect of the ATC calculations. Mandating the frequency with which ATC is calculated does not serve a reliability benefit. |
| MOD-001-1a R8.1 | The Requirement has been retired. | See comments on Requirement R8. |
| MOD-001-1a R8.2 | The Requirement has been retired. | See comments on Requirement R8. |
| MOD-001-1a R8.3 | The Requirement has been retired. | See comments on Requirement R8. |
| MOD-001-1a R9 | Requirement R5 | Requirement R6 of the proposed Reliability Standard requires a TOP or TSP, within 45 calendar days of receiving a written request, to make available the data or explain why it is not doing so due to confidentiality, regulatory, or security concerns. |
| MOD-001-1a R9.1 | | See comments for Requirement R9. |
| MOD-001-1a R9.1.1 | | See comments for Requirement R9. |
| MOD-001-1a R9.1.2 | | See comments for Requirement R9. |
| MOD-001-1a R9.1.3 | | See comments for Requirement R9. |
| MOD-001-1a R9.2 | | See comments for Requirement R9. |

Standard: MOD-004-1 – Capacity Benefit Margin

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-004-1 R1 | Requirement R3 | The proposed standard will require registered entities that use Capacity Benefit Margin (CBM) to have a Capacity Benefit Margin (CBMID) that reflects its current practices for determining CBM. The proposed Reliability Standard does not dictate how CBM must be calculated. |
| MOD-004-1 R1.1 | Requirement R3 | See comments above. |
| MOD-004-1 R1.2 | Requirement R3 | See comments above. |
| MOD-004-1 R1.3 | Requirement R3 | See comments above. |
| MOD-004-1 R2 | Requirement part R5.2.2 | Requirement R5 of the proposed Reliability Standard requires TSPs to share its CBMID with entities that request it and have a reliability need for that data. |
| MOD-004-1 R3 | Requirement R3 | The applicability of the proposed Reliability Standard has been changed so that the LSE is not an applicable registered entity within the Reliability Standard. The method by which a TSP determines CBM will be included in its CBMID. |
| MOD-004-1 R3.1 | Requirement R3 | See comment above. |
| MOD-004-1 R3.2 | Requirement R3 | See comment above. |
| MOD-004-1 R4 | The Requirement has been retired. | The applicability of the proposed Reliability Standard has been changed so that the Resource Planner (RP) is not an applicable registered entity within the Reliability Standard. The method by which a TSP determines CBM will be included in its CBMID. |
| MOD-004-1 R4.1 | The Requirement has been retired. | See comment above. |
| MOD-004-1 R4.2 | The Requirement has been retired. | See comment above. |

Standard: MOD-004-1 – Capacity Benefit Margin

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-004-1 R5 | Requirement R3 | The proposed Reliability Standard will require TSPs that use CBM to have a CBMID but does not specify what must be included or how it is calculated. |
| MOD-004-1 R5.1 | Requirement R3 | The proposed standard will require TSPs that use CBM to have a CBMID but does not specify what must be included or how it is calculated. |
| MOD-004-1 R5.2 | Requirement R3 | The proposed standard will require TSPs that use CBM to have a CBMID but does not specify what must be included or how it is calculated. |
| MOD-004-1 R6 | The Requirement has been retired. | The applicability of the proposed standard has been changed so that the Transmission Planner (TP) is not an applicable registered entity within the standard. The method by which a TSP determines CBM will be included in its CBMID. |
| MOD-004-1 R6.1 | The Requirement has been retired. | See comment above. |
| MOD-004-1 R6.2 | The Requirement has been retired. | See comment above. |
| MOD-004-1 R7 | The Requirement has been retired. | The proposed standard does not explicitly require that the TSP to notify Load-Serving Entities (LSEs) and RPs of the amount of CBM set aside. The SDT determined this requirement provided little to no reliability benefit. The proposed Reliability Standard only requires the TSP to have a CBMID and make that available to other registered entities, including LSEs and RPs. |
| MOD-004-1 R8 | The Requirement has been retired. | The applicability of the proposed Reliability Standard has been changed so that the TP is not an applicable registered entity within the Reliability Standard. |

Standard: MOD-004-1 – Capacity Benefit Margin

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-004-1 R9 | Requirement R6 | The new Requirement R6 requires TSPs to share the data used in CBM calculations with registered entities that have a reliability need for that data. TPs are not longer subject to the Reliability Standard. |
| MOD-004-1 R9.1 | Requirement R6 | See comment above. |
| MOD-004-1 R9.2 | Requirement R6 | See comment above. |
| MOD-004-1 R10 | The Requirement has been retired. | The applicability of the proposed Reliability Standard has been changed so that the LSE or Balancing Authority (BA) are not applicable registered entities within the Reliability Standard. |
| MOD-004-1 R11 | Requirement R3 | The proposed Reliability Standard will require entities that use CBM to have a CBMID but does not dictate what must be included or how it is calculated. |
| MOD-004-1 R12 | Requirement R3 | The proposed Reliability Standard will require entities that use CBM to have a CBMID but does not dictate what must be included or how it is calculated. |
| MOD-004-1 R12.1 | Requirement R3 | The proposed Reliability Standard will require entities that use CBM to have a CBMID but does not dictate what must be included or how it is calculated. |
| MOD-004-1 R12.2 | Requirement R3 | The proposed Reliability Standard will require entities that use CBM to have a CBMID but does not dictate what must be included or how it is calculated. |
| MOD-004-1 R12.3 | Requirement R3 | The proposed Reliability Standard will require entities that use CBM to have a CBMID but does not dictate what must be included or how it is calculated. |

| Standard: MOD-008-1 – Transmission Reliability Margin Calculation Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-008-1 R1 | Requirement R4 | Requirement R4 requires a TRMID that reflects the TOPs current practices for determining TRM. The proposed Reliability Standard does not dictate how TRM must be calculated as such detail provides little to no reliability benefit. |
| MOD-008-1 R1.1 | Requirement R4 | See comment above. |
| MOD-008-1 R1.2 | Requirement R4 | See comment above. |
| MOD-008-1 R1.3 | Requirement R4 | See comment above. |
| MOD-008-1 R1.3.1 | Requirement R4 | See comment above. |
| MOD-008-1 R1.3.2 | Requirement R4 | See comment above. |
| MOD-008-1 R1.3.3 | Requirement R4 | See comment above. |
| MOD-008-1 R2 | Requirement R4 | Requirement R4 requires a TRMID that describes how TRM values are determined. Prescribing that the value must come from a predefined list of uncertainties or that the value does not double count with CBM does not provide any reliability benefit. |
| MOD-008-1 R3 | Requirement R5 | Requirements R5 and R6 require disclosure of TRMID and underlying data upon request if not already posted on OASIS or similar site. |
| MOD-008-1 R4 | Requirement R4 | Requirement R4 requires a TRMID that includes the frequency of updating; setting an arbitrary date to recalculate TRM does not contribute to reliability. |

| Standard: MOD-008-1 – Transmission Reliability Margin Calculation Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-008-1 R5 | Requirements R2 & R4 | Requirements R2 and R4, the ATCID and TRMID respectively, would contain information on how the value is shared and on what frequency. Setting an arbitrary frequency is unnecessary to meet the reliability goal of disclosure. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R1 | Requirements R1 & R2 | Requirement R1 requires a TOP to have a written methodology for determining TTC or TFC. Requirement R2 requires a TSP to have an ATCID that describes how ATC or AFC is determined, which would include any parts of the TTC/TFC development not covered by a TOP under Requirement R1. |
| MOD-028-1 R1.1 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.3 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.4 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.5 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.5.1 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.5.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R1.5.3 | Requirements R1 & R2 | See comment above. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R1.5.4 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R2 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-028-1 R2.1 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure by the TOP and TSP respectively of their practice that meets the reliability need of this requirement; further specification or instructions on how to perform this task do not address the reliability goal of disclosure. |
| MOD-028-1 R2.2 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure by the TOP and TSP respectively of their practice that meets the reliability need of this requirement; further specification or instructions on how to perform this task do not address the reliability goal of disclosure. |
| MOD-028-1 R2.3 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure by the TOP and TSP respectively of their practice. In addition, R1 requires the TOP to use the defined facility ratings and SOL's, as appropriate, to determine the TTC value. |
| MOD-028-1 R3 | Requirement R1, Part 1.2 | Requirement R1, Part 1.2 requires the use of these elements to the extent that they impact the determination of TFC or TTC. These requirements were modified to the list in Requirement R1, Part 1.2 and Requirement R2, Part 2.1 with the requirement that each methodology shall describe the method used to account for the elements that impact the determination of TFC, TTC, AFC or ATC. |
| MOD-028-1 R3.1 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.1.1 | Requirements R1 & R2 | See comment above. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R3.1.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.1.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.2.1 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.2.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R3.2.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R4 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-028-1 R4.1 | Requirements R1 & R2 | Requirements R1 and R2 set this obligation upon the TOP and TSP, respectively. |
| MOD-028-1 R4.2 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure of practice, which is the reliability need for this requirement. Verification that a contract is being followed is primarily a commercial issue and not a NERC Reliability issue. |
| MOD-028-1 R4.3 | Requirement R1, Part 1.2 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, and Requirement R1 specifically addresses documentation of their process and reliability points. The remainder of the material in the requirement provides instructions on determining TTC, which is not necessary within a NERC requirement to protect reliability. The TTC methodology will describe how these services are used and any necessary clarifications can be sought under Requirement R5. Having a long list of methods of incorporating these service did not contribute to reliability. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
|---|---|---|
| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R5 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-028-1 R5.1 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure of practice which is the reliability need for this requirement; the frequency or freshness of a calculation will be discussed within the ATCID and driven by either reliability or market needs, whichever provides for a tighter time frame. The required periodicity of a TFC or TTC calculation is a method and region specific issue, and it is not necessary to reliability to specify such a value. |
| MOD-028-1 R5.2 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R5.3 | Requirements R1 & R2 | See comment above. |
| MOD-028-1 R6 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-028-1 R6.1 | Requirement R1 and Parts 1.1 and 1.2.1 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP respectively, and R1 specifically addresses documentation of their process and the reliability points. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R6.2 | Requirements R1, Part 1.2.1 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, and R1 specifically addresses documentation of their process and the reliability points. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. |
| MOD-028-1 R6.3 | Requirements R1 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, and R1 specifically addresses documentation of their process and the reliability points. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. The new Reliability Standard does not prevent "Sum of Facility Ratings" as a limit on the path, however it does not prescribe it either. "Sum of Facility Ratings" is a commercial concept; the reliability aspect was addressed in determining the Incremental Transfer Capability (ITC). |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R6.4 | Requirements R1 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, and R1 specifically addresses documentation of their process and the reliability points. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. Contractual rights imply there is already a contract and obligation in place, there is no reliability benefit in NERC monitoring this contract. The Reliability Standard does not prevent this from being a limit, but does not prescribe it either |
| MOD-028-1 R7 | Requirement R1 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-028-1 R7.1 | Requirement R1 & R6 | Requirement R1 of the proposed Reliability Standard requires disclosure of the frequency of update, which is the reliability need this requirement addresses. The frequency of disclosure is set by agreement with the TSP or other factors, and there is no reliability benefit in setting an arbitrary frequency of providing the value. |
| MOD-028-1 R7.2 | Requirement R1 & R6 | Requirement R1 of the proposed Reliability Standard requires disclosure of the frequency of update, which is the reliability need this requirement addresses. The frequency of disclosure is set by agreement with the TSP or other factors, and there is no reliability benefit in setting an arbitrary frequency of providing the value. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R8 | This Requirement has been retired. | This requirement is primarily a definition of what Existing Transfer Commitments (ETC) is and does not provide for system reliability. Breaking ETC into its component parts is a guide for determining ETC but does not establish a reliability requirement. Under their agreements with which the transmission commitments are made the registered entity is obligated to respect those commitments and there is no need for NERC to monitor this commercial arrangement. |
| MOD-028-1 R9 | This Requirement has been retired. | This requirement is primarily a definition of what ETC is and does not provide for system reliability. Breaking ETC into its component parts is a guide for determining ETC but does not establish a reliability requirement. Under their agreements with which the transmission commitments are made the registered entity is obligated to respect those commitments and there is no need for NERC to monitor this commercial arrangement. |
| MOD-028-1 R10 | This Requirement has been retired. | Requirements R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that Requirements R10 and R11 just provided additional educational reference to ATC, but did not establish a reliability requirement. |

| Standard: MOD-028-1 – Area Interchange Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-028-1 R11 | This Requirement has been retired. | Requirements R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that Requirements R10 and R11 just provided additional educational reference on what ATC was but did not establish a reliability requirement. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R1 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-029-1a R1.1 | Requirements R1 & R2 | Requirement R1, Part 1.2 requires the use of these elements to the extent that they impact the determination of TFC or TTC. These requirements were modified to the list in Requirement R1, Part 1.2 and Requirement R2, Part 2.1 with the requirement that each methodology shall describe the method used to account for the elements that impact the determination of TFC, TTC, AFC or ATC. |
| MOD-029-1a R1.1.1 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.1.1 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.1.2 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.1.3 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.2 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.3 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.4 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.5 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.6 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.7 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.8 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.9 | Requirements R1 & R2 | See comment above. |
| MOD-029-1a R1.1.10 | Requirements R1 & R2 | See comment above. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R1.2 | Requirement R1, Part 1.1 | Requirement R1, Part 1.1 describes the method used to account for Facility Ratings as well as system voltage, transient stability, voltage stability, and other SOLs. |
| MOD-029-1a R2 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-029-1a R2.1 | Requirement R1, Part 1.2, Requirement R2 | Requirement R1, Part 1.2 requires the use of these elements to the extent that they impact the determination of TFC or TTC. These requirements were modified to the list in Requirement R1, Part 1.2 and Requirement R2, Part 2.1 with the requirement that each methodology shall describe the method used to account for the elements that impact the determination of TFC, TTC, AFC or ATC. |
| MOD-029-1a R2.1.1 | Requirement R1, Parts 1.1 & 1.2, Requirement R2 | Requirement R1 specifically requires the TOP to respect transmission element ratings, Requirements R1 and R2 requires disclosure of the TOP and TSP's practices in this regard. The revised Reliability Standard does not go into detail to require that the starting case for an analysis meet these criteria. Requirement R1, Part 1.1 requires that TTC accounts for these elements, but does not require that the starting case meet the criteria described under MOD-029 Requirement R2, Part 2.1. Trying to list this detail would require a textbook level description of the process and would not set a reliability goal. |
| MOD-029-1a R2.1.2 | Requirement R1, Parts 1.1 & 1.2, Requirement R2 | See comment above. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R2.1.3 | Requirement R1, Parts 1.1 & 1.2, Requirement R2 | See comment above. |
| MOD-029-1a R2.2 | This requirement part has been retired. | This is not a reliability requirement but a business practice to provide for some sort of result when a reliability constraint can't be reached. This level of information is appropriate in an instructional context but is not a reliability requirement. The current Requirement R1 requires the TOP to describe how it does this, but does not prescribe a method. |
| MOD-029-1a R2.3 | Requirements R1 & R2 | As the name implies, there is already an obligation between the parties to respect a value and Requirement R1 just requires that TTC not exceed reliability limits, it does not rule out a lower limit due to contractual obligations. There is no reliability benefit to NERC monitoring to ensure that contractual obligations are met. |
| MOD-029-1a R2.4 | This requirement part has been retired | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, including documentation of their process and the reliability points addressed in R1. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R2.5 | This requirement part has been retired. | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, including documentation of their process and the reliability points addressed in R1. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. |
| MOD-029-1a R2.6 | Requirements R1 & R2 | As the name implies, there is already an obligation between the parties to respect a value and Requirement R1 just requires that TTC not exceed reliability limits, it does not rule out a lower limit due to contractual obligations. There is no reliability benefit to NERC monitoring to ensure that contractual obligations are met. |
| MOD-029-1a R2.7 | Requirements R1 & R2 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, including documentation of their process and the reliability points addressed in R1. The remainder of the material in the requirement provides instructions on determining TTC; using a requirement to explain a method of calculating TTC does not support a reliability need. |
| MOD-029-1a R2.8 | Requirements R1 & R2 | Requirements R1 and R2 address this need by requiring a methodology, and in the effort to demonstrate that the methodology was followed the necessary reports will be developed. |
| MOD-029-1a R3 | Requirements R1 & R2 | Requirement R1, Part 1.1 requires that SOLs be accounted for in the method used in determining TTC. Requirement R2 requires disclosure of practices for determining ATC. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R4 | Requirements R1, R5, & R6 | Requirement R1 of the proposed Reliability Standard requires disclosure of the frequency of update, which is the reliability need this requirement addresses. The frequency of disclosure is set by agreement with the TSP considering individual facts and circumstances, and there is no reliability benefit in setting an arbitrary frequency of providing the value. Requirement R6 requires disclosure of data and Requirement R5 requires disclosure of methods and responding to requests for clarification. |
| MOD-029-1a R5 | This requirement has been retired. | This requirement is primarily a definition of what ETC is and does not provide for system reliability. Breaking ETC into its component parts is a guide for determining ETC but does not establish a reliability requirement. Under their agreements with which the transmission commitments are made the registered entity is obligated to respect those commitments and there is no need for NERC to monitor this commercial arrangement. |
| MOD-029-1a R6 | This requirement has been retired. | This requirement is primarily a definition of what ETC is and does not provide for system reliability. Breaking ETC into its component parts is a guide for determining ETC but does not establish a reliability requirement. Under their agreements with which the transmission commitments are made the registered entity is obligated to respect those commitments and there is no need for NERC to monitor this commercial arrangement. |

| Standard: MOD-029-1a – Rated System Path Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-029-1a R7 | This requirement has been retired. | Requirements R7 and R8 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that Requirements R7 and R8 just provided additional educational reference on what ATC was but did not establish a reliability requirement. |
| MOD-029-1a R8 | This requirement has been retired. | Requirements R7 & R8 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that Requirements R7 and R8 just provided additional educational reference on what ATC was but did not establish a reliability requirement. |

| Standard: MOD-030-2 – Flowgate Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-030-2 R1 | Requirements R1 & R2 | This is a summary of the requirement parts and does not in itself establish and obligation. |
| MOD-030-2 R1.1 | Requirement R1 & R2 | Requirement R1, Part 1.2 requires the use of these elements to the extent that they impact the determination of TFC or TTC. These requirements were modified to the list in Requirement R1, Part 1.2 and Requirement R2, Part 2.1 with the requirement that each methodology shall describe the method used to account for the elements that impact the determination of TFC, TTC, AFC or ATC. |

| Standard: MOD-030-2 – Flowgate Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-030-2 R1.2 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R1.2.1 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R1.2.2 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R1.2.3 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R1.2.4 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R2 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-030-2 R2.1 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |
| MOD-030-2 R2.1.1 | Requirement R1, Parts 1.3 & 1.3.1 | Requirement R1, Part 1.3 requires each methodology to describe the process for including any reliability-related constraints requested to be included by another TOP based on if the requesting TOP includes those constraints in its TFC or TTC determination. Furthermore, Requirement R1, Part 1.3.1 states that each TOP that uses the Flowgate methodology shall include in its methodology an impact test process for including requested constraints. If a generator to Load transfer in a registered entity's area or a transfer to a neighboring registered entity impact the requested constraint by five percent or greater, the requested constraint shall be included in the TFC determination, otherwise the requested constraint is not required to be included. |
| MOD-030-2 R2.1.1.1 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.1.2 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.1.3 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |

| Standard: MOD-030-2 – Flowgate Methodology | | |
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| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
| MOD-030-2 R2.1.2 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.2.1 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.2.2 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.2.3 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.3 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.4 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.4.1 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.1.4.2 | Requirement R1, Parts 1.3 & 1.3.1 | See comment above. |
| MOD-030-2 R2.2 | This requirement part has been retired. | The required periodicity of updating a list is not of a reliability benefit. |
| MOD-030-2 R2.3 | This requirement part has been retired. | The required periodicity of updating a list is not of a reliability benefit. |
| MOD-030-2 R2.4 | Requirement R1, Part 1.1 & Requirement R2 | Requirement R1, Part 1.1 requires that SOLs be accounted for in the method used in determining TTC. Requirement R2 requires disclosure of practices for determining ATC. |
| MOD-030-2 R2.5 | Requirements R1 & R2 | Requirements R1 and R2 require disclosure of practice which is the reliability need for this requirement; the frequency or freshness of a calculation will be discussed within the ATCID and driven by either reliability or market needs whichever provides for a tighter time frame. |
| MOD-030-2 R2.5.1 | This requirement part has been retired. | The frequency of disclosure is set by agreement with the TSP considering the individual facts and circumstances, and there is no reliability benefit in setting an arbitrary frequency of providing the value. |

Standard: MOD-030-2 – Flowgate Methodology

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-030-2 R2.6 | This requirement part has been retired. | The frequency of disclosure is set by agreement with the TSP considering the individual facts and circumstances, and there is no reliability benefit in setting an arbitrary frequency of providing the value. |
| MOD-030-2 R3 | Requirement R6 | Requirement R6 requires data sharing. |
| MOD-030-2 R3.1 | Requirement R6 | See comment above. |
| MOD-030-2 R3.2 | Requirement R6 | See comment above. |
| MOD-030-2 R3.3 | Requirement R6 | See comment above. |
| MOD-030-2 R3.4 | Requirement R6 | See comment above. |
| MOD-030-2 R3.5 | Requirement R6 | See comment above. |
| MOD-030-2 R4 | Requirements R1, part 1.1 & R2 | Requirement R1, Part 1.2 requires the use of these elements to the extent that they impact the determination of TFC or TTC. These requirements were modified to the list in Requirement R1, Part 1.2 and Requirement R2, Part 2.1 with the requirement that each methodology shall describe the method used to account for the elements that impact the determination of TFC, TTC, AFC or ATC. |
| MOD-030-2 R5 | Requirements R1 & R2 | This requirement serves no direct purpose other than serving as a bridge to the requirement parts below. |

Standard: MOD-030-2 – Flowgate Methodology

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-030-2 R5.1 | Requirements R1 & R2 | Requirements R1 and R2 maintain the reliability portion of these requirements upon the TOP or TSP, respectively, including documentation of their process and the reliability points addressed in R1. Specifically, Requirement R2, Part 2.2 requires each TSP that uses the Flowgate Methodology to use the AFC determined by the TSP for reliability constraints identified in Requirement R1, Part 1.3. |
| MOD-030-2 R5.2 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R5.3 | Requirements R1 & R2 | See comment above. |
| MOD-030-2 R6 | This requirement has been retired. | This requirement is primarily a definition of what ETC is and does not provide for system reliability. Breaking ETC into its component parts is a guide for determining ETC but does not establish a reliability requirement. Under their agreements with which the transmission commitments are made the registered entity is obligated to respect those commitments and there is no need for NERC to monitor this commercial arrangement. |
| MOD-030-2 R6.1 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.1.1 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.1.2 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.2 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.2.1 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.2.2 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.3 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.4 | This requirement part has been retired. | See comment above. |

Standard: MOD-030-2 – Flowgate Methodology

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-030-2 R6.5 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.6 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R6.7 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.1 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.2 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.3 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.4 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.5 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.6 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R7.7 | This requirement part has been retired. | See comment above. |
| MOD-030-2 R8 | This requirement has been retired. | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |
| MOD-030-2 R9 | This requirement has been retired. | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |

Standard: MOD-030-2 – Flowgate Methodology

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-030-2 R10 | This requirement has been retired. | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |
| MOD-030-2 R10.1 | This requirement has been retired. | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |
| MOD-030-2 R10.2 | This requirement has been retired. | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |
| MOD-030-2 R10.3 | Requirement R2 | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |

Standard: MOD-030-2 – Flowgate Methodology

| Requirement in Approved Standard | Reliability Components Transition to the Below Requirement in New Standard or Other Action | Description and Change Justification |
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| MOD-030-2 R11 | Requirement R2 | Requirements R8, R9, R10 and R11 do not appear verbatim in the new Reliability Standard; however, Requirement R2 will require disclosure and the NERC Glossary of Terms defines ATC. Beyond that these requirements just provided additional educational reference on what ATC was but did not establish a reliability requirement. |

New Requirements not found in existing MOD standards

| Requirement in Approved Standard | Transitions to the below Requirement in New Standard or Other Action | Description and Change Justification |
|----------------------------------|--|--------------------------------------|
| N/A | N/A | N/A |