Summary Consideration of Comments:

The Drafting Team has reviewed the comments and made some changes to the standard to address these comments.

1. As requested by BPA and others, the standard was modified to be clear that MOD-030 does not require conversion of AFC to ATC. While the OASIS Requirements require that ATC be posted, the Drafting Team could not find any reason that AFC must be converted to ATC for reliability. MOD-030 continues to provide the equation to convert AFC to ATC, that shall be used 'when' the conversion occurs, but the NERC standards do not define 'when' that conversion must occur.
2. All VRFs were set to "Lower" in response to industry comments. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling.
3. A more graded approach was applied to the VSLs where appropriate.
4. During the review of the VSLs and Measures, it was determined that the measures for R6, R7, R8, and R9 did not adequately measure compliance with the requirements. The drafting team updated the measures and VSLs to ensure that they captured the need to have accurate and valid numbers used in the requirements.
5. The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations.
6. The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
7. The Drafting Team has changed the requirements to use a consistent 5%.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/standards/newstandardsprocess.html.

Entity	Comment
Associated Electric Cooperative, Inc.	Again same as MOD-001. If the calculation typically calculates every hour and for some reason an hour is missed the VSL is too high. It should be low.
Response: Where possible, the VSLs have been broken into graduated levels rather than only one level.	
Bonneville Power Administration	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. BPA suggests the following modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TTC with TFC. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates, which would complicate operation with no benefit in reliability: 1. R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. 2. BPA has examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. Response: The Drafting Team has inserted language to address this issue in 2.1.1.2 and 2.1.2.2 3. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away

Entity	Comment
	from the existing monitored flowgate then a new flowgate should be defined. 4. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. BPA has a Flowgate that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: R2.4 is intended to allow the specification of voltage or stability limited flowgates. 5. In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. BPA suggests these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been

Entity	Comment
	requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
CenterPoint Energy	ERCOT filed comments to the SDT that ATC, TTC, CBM, and TRM are not applicable within ERCOT operations and that these Standards should have provisions that make it clear that these requirements apply only within market structures in which they are pertinent were ignored by the SDT. These standards should not apply to ERCOT, thus our negative vote.
Response: MOD-001 has R1 that requires Transmission Operators to select a methodology based on ATC Paths, which have now been defined to be any path for which ATC is already calculated or any path that is a Posted Path, as defined by FERC. Assuming ERCOT does not calculate ATC and has no directive to do so, MOD-001 R1 (and therefore also R2, R6, R7, R8) would not be applicable to ERCOT, and would not require implementation of any methodology, including this standard.	
FirstEnergy Energy Delivery	FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. We offer the following general comments in addition to our specific standard comments presented below. CBM & TRM - MARKET AREAS: FE supports the drafting team approach of three ATC methodologies presented in MOD-028, MOD-029 and MOD-030 to account for differences in calculating ATC in various geographic areas of the bulk electric system. However, the use of a single standard methodology for CBM and TRM as currently written does not meet the needs for entities operating within a market area such as MISO, PJM etc. FE suggests that various requirements in the proposed standards that are currently applicable to the TP and TOP are actually handled by the RTO and within a market area would more appropriately be assigned to the Planning Coordinator (PC) and Reliability Coordinator (RC), respectively. This change would allow the proposed standards for CBM and TRM to be used largely as within both market and non-market areas as the PC and RC would be appropriate in both. Our comments below on specific MOD standards elaborate on this point and provide examples where we feel the applicability is inappropriately assigned to TP or TOP responsible entities within a transmission market construct. Response: Please see responses contained in the CBM and TRM comment reports. DECISION TO BALLOT: While the MOD standards presented are improving in content FE believes the standards should have

Entity	Comment
	been issued for one more comment period prior to ballot per the NERC Standard Development Procedures (SDP). In many cases this is only the 2nd draft version being reviewed by industry. The objective during the Solicit Public Comments on Draft Standard (Step 6) of the NERC SDP is to Receive stakeholder inputs on the draft standard for the purpose of assessing consensus on the draft standard, and modifying the draft standard as needed to improve consensus. Based on the 200+ pages of comments of the prior draft version it is hard to conclude that the industry was near consensus. Additionally, per the SDP, now that the standards have gone to First Ballot (Step 9), the standard drafting team is not permitted to make any changes to the standards based on comments received during this First Ballot. The drafting team will now be required to rely on their responses to industry feedback to try and improve consensus during a re-circulation ballot. FE has concerns with the consequences of this decision with regard to the integrity of the standard development process and substantive registered entity perspectives. Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes. FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. However, at this time, FE is voting Negative to this standard with the following comments and suggestions: o Either the Planning Coordinator (PC) or Reliability Coordinator (RC) should replace the Transmission Operator (TOP) as having ultimate responsibility for the requirements in R2 and R3. The PC or RC will work with their associated Transmission Planners and/or TOPs to obtain the necessary information to properly identify flowgates and develop the proper transmission models. Response: R2 & R3 will remain the responsibility of the Transmission Operator. The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The Drafting Team believes that the function of ensuring operating reliability includes identifying and maintaining flowgates per requirements R2 and developing the transmission models per requirement R3, and therefore is the Transmission Operator's responsibility. o Also with regard to R2 and R3, we believe that there is too much detail in the subrequirements and that there may be other methods to identify flowgates and develop transmission models. These requirements should focus on the what and not the how. Response: The Drafting Team believes that in order to maintain the reliability of the flowgate methodology, a minimum amount of flowgates need to be determined based on standard criteria. Please note that this is only used to determine the minimum amount of flowgates to be added, other processes can be used to add additional flowgates. o The definitions for AFC and Flowgate Methodology should include mention of Postbacks and Counterflows which are significant factors in calculating AFC and ATC (see the algorithm of Requirement R8). Response: The SDT has modified the definitions accordingly.

Entity	Comment
Response: Please see in-line responses.	
Great River Energy	GRE supports BPA's position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period based on the significance of the comments submitted during the previous commenting periods.
Response: Please see responses to BPA, PJM, and MISO.	
Hydro One Networks, Inc.	Hydro One Networks Inc. is casting a negative vote on the 6 MOD standards (MOD-001, MOD-004, MOD-008, MOD-28, MOD-029 and MOSD-030) We believe there is a fundamental issue related with effective dates, that is, the dates in which Reliability Standards become effective and enforceable. In principle, the effective date of standards must be the same for all jurisdictions in North America. It does not make sense that there is a period of time when a standard is effective only in some jurisdictions while not in others. This is particularly important in the MOD Standards in ballot as they have implications on neighbouring areas. The words inserted in the Effective Date of the Standards as well as in the Implementation Plan document permit that these Standards are effective in some jurisdictions and not others. These Standards should be modified to ensure that they become effective in all jurisdiction at the same time, including those where such regulatory approval in not required that is, only when all regulatory approvals have been obtained. Response: Based on the need to support data exchange dependencies, the drafting team has modified the language to read as follows: First day of the first calendar quarter that is twelve months beyond the date that all four standards (MOD-001-1, MOD-028-1, MOD-029-1, and MOD-030-1) are approved by all applicable regulatory authorities. In addition we offer the following comments to the specific Standard MOD-030: o Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable. Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for TOs to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.
Response: Please see in-line responses.	
Hydro-Quebec TransEnergie	Requirement 2.1.1 asks for an "OTDF greater than 3% and within the Transmission Operator system are included as Flowgates." Requirement 2.1.4.1 asks for "has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF)". The same requirement states that "The Transmission Operator may utilize distribution factors less than 5% if desired." Only one factor shall be used in all the standard and no allowance for not following it should be made. Moreover other standards ask for 5%!
Response: The Drafting Team has changed the requirements to use a consistent 5%.	

Entity	Comment
Kansas City Power & Light Co.	Requirement R2 requires the Transmission Operator to perform functions that are currently performed by the SPP Transmission Service Provider for KCPL. This requirement should be revised to "or Transmission Service Provider" after "Transmission Operator" so that the entity could perform these tasks.
Response: R2 will remain the responsibility of the Transmission Operator. The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The SDT believes that the function of ensuring operating reliability includes identifying and maintaining flowgates per requirement R2 and this is a Transmission Operator responsibility. While KCPL may have delegated tasks of the Transmission Operator function to SPP, they can not delegate the responsibility. The Transmission Operator's responsibility to other entities that it appears KCPL has delegated to SPP is the coordination of available transfer capability with the Transmission Service Provider (Transmission Service Provider). The Transmission Service responsibility definition in the Functional Model is "administers the transmission tariff and provides transmission services under applicable transmission service agreements," (for example, the pro forma tariff). The requirement R2 is not a responsibility of the Transmission Service Provider.	
National Grid	Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable.
Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5%. The Drafting Team intends for Transmission Operators to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
New Brunswick Power Transmission Corporation	The conflicting requirements combined with the provisions to apply lower thresholds render this standard not measurable and enforceable.
Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5%. The Drafting Team intends for Transmission Operators to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
Northeast Utilities	Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable.
Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5%. The Drafting Team intends for Transmission Operators to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent	

Entity	Comment
reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
Portland General Electric Co.	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. BPA suggests the following modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TT with TF. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates which would complicate operation with no benefit in reliability: 1. R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. 2. BPA has examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. Response: The Drafting Team has inserted language to address this issue in 2.1.1.2 and 2.1.2.2 3. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. 4. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. BPA has a Flowgate that can be limited by a generation loss and the limitation is reactive margin or voltage

Entity	Comment
	dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: R2.4 is intended to allow the specification of voltage or stability limited flowgates. 5. In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. BPA suggests these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or SOLs and IROLs on a Transmission Operator system are included as Flowgates.. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a “credible” limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
Potomac Electric Power Co.	Potomac Electric agrees with the comments of PJM distributed to the ballot body. I will not repeat them here, but do include the headings: I. The ATC MOD standards should have been sent out for comment not pre-ballot posting. II. Depth of the ATC MOD standards is excessive. III. Determining Violation Risk Factors is incorrect. IV. Determining Violation Severity Levels is incomplete.
Response: Please see PJM response.	
PP&L, Inc.	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. It is suggested that the

Entity	Comment
	following modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TTC with TFc. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates which would complicate operation with no benefit in reliability: o R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. o As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. There are examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. A Flowgate exists that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. R2.4 is intended to allow the specification of voltage or stability limited flowgates. o In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three

Entity	Comment
	most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. It is suggested that these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or SOLs and IROLs on a Transmission Operator system are included as Flowgates.. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology or SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a “credible” limiting Element/Contingency combinations that may be requested for inclusion.

Entity	Comment
Response: Please see in-line responses.	
Public Service Electric and Gas Co.	PSE&G votes NO for the reasons expressed in PJM comments.
Response: Please see PJM response.	
Sierra Pacific Power Co.	Not used as a methodology.
Response: No response needed.	
Southern Company Services, Inc.	We applaud the great work of the standard drafting team. While the current version is "workable" by Industry, making minor changes to the current draft could undermine the integrity of the good work of the drafting team.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
Westar Energy	R1.1 Should be criteria used by the Transmission Provider not Operator. R2.1.1 and R2.1.2 should read ... OTDF greater than or equal to 3%... R2.1.4.1 Why now use terminology of ... at least 5%...?
Response: The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The SDT believes that the function of ensuring operating reliability includes identifying and maintaining flowgates is the Transmission Operator's responsibility. The Drafting Team has changed the requirements to use a consistent 5%.	
Western Area Power Administration	No comment.
Response: No response needed.	
Independent Electricity System Operator	The requirements are not clearly drafted because there are multiple thresholds provided throughout the document pertaining to treatment of flowgates - 3% in some cases and 5% in other cases - inconsistent with the 5% threshold that is normally used in the industry and TLR practices. Requirement R2.1.1 is new/significantly revised from previous requirement under a different number. It says: Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates. The question is why 3%? Even if we assume that it tries to draw consistency with the curtailment threshold for flowgate response, it should be 5%, not 3%. There is no basis for provided this, and now the industry is asked to vote on this new requirement. In the SDT response to previous comments, the STD

Entity	Comment
	indicated that it would provide explanation on the 3% but there isn't any provided in the current draft standards. Same comment for R2.1.2. Additionally, this standard has also been substantively revised since the last posting. It really should have been posted for another round of comment before being sent to balloting, even allowing for the assumption that the majority of the industry does not have any major issues with the changes.
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
ISO New England, Inc.	Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable.
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for Transmission Operators to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
New York Independent System Operator	The NYISO does not employ a flowgate-based methodology but is voting against the proposed standard for the reasons set forth in its general comments in response to MOD-001, i.e., the proposed standard is unnecessarily detailed and prescriptive (especially with respect to its mandates regarding the frequency of recalculations), includes unduly harsh violation risk factors that are inconsistent with NERC own policies, and needs to include more graduated violation severity levels. The NYISO also supports the NPCC comment that this proposed standard appears to include internal inconsistencies that render it not measurable and enforceable.
Response: Please see MOD-001 and NPCC responses.	
PJM Interconnection, L.L.C.	PJM believes no requirement from the set of ATC standards should have an assigned Risk Factor exceeding "Lower". A Lower Risk Factor requirement is administrative in nature and (a) is a requirement that, if violated, would not be expected to affect the electrical state or capability of the bulk power system, or the ability to effectively monitor and control the bulk power system; or (b) is a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to affect the electrical state or capability of the bulk power system, or the ability to effectively monitor, control, or restore the bulk power system. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in

Entity	Comment
	the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. NERC states that a VSL defines the degree to which compliance with a requirement was not achieved. The violation severity levels for these draft standards need to be developed with a more graded implementation for several requirements. The VSLs for several requirements do not consistently include the graded degree of achieving compliance. To the extent that reliability and transparency can be maintained in the event that the entity does not meet the measures the VSL is often excessive. Some VSLs do not recognize the potential varying level of non-compliance with the requirement. With these requirements there are several instances where the VSLs should have incorporated the following distinctions: • Recognizing gross violation of the requirement – for example the entity's program ignores the requirement. • Recognizing programmatic issues exist with the implementation of the requirement leading failure to meet some of the requirement. For example if only 167 hours of hourly ATC values instead of 168 hours are calculated it would be a violation with a severe sanction indicating that reliability was severely affected. The actual impact being minimal since customers can only reserve hourly ATC for 24 to 48 hours in the future out of the 168 hours. It is clear that the SDT recognized differences in severity levels in some of the requirements such as MOD001 requirement 7. This was accomplished by specifying timeframes and numbers of instances of not meeting the requirements. However the VSLs in several instances throughout the standard(s) do not reflect this approach. The SDT should continue with a more graded implementation of VSLs for: MOD030-1: R6, R7, R8, R9, & R11 Response: The Drafting Team has modified the VSLs to be more graded for R6, R7, R8, and R9. Since R11 is simple math and is either implemented correctly or it is not, the Drafting Team does not beleive grading is needed. • Definitions: AFC and Flowgate Methodology definitions should include the components postbacks, counterflows, and generator to load impacts separately. Response: The SDT has modified the definitions to include Postbacks and Counterflows. The generation to load impacts are included as a part of ETC and therefore will not be added to the definitions separately. The ATC MOD standards should have been sent out for comment not pre-ballot posting. Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes. <u>Requirement 1</u> • The Measure M1 and associated VSL for R1 need to have a more graded approach. The current VSL considers that missing a couple of mappings to the model in R1.2 is a high VSL. This sanction is too severe because there is no associated affect on reliability

Entity	Comment
	Response: The drafting team has graded the VSL. • R1.2 and R4. PJM is in agreement with the clarification that source and sink for purposes of transmission service can be POR and POD. However, the requirement is an awkward acknowledgement of the practice of using POR/POD rather than source/sink. PJM believes the language does not clarify the requirements enough. R1.2.1. This causes problems with R4 looking for a point source/sink. Zone to zone transmission service has been in place for years and this standard conflicts with this practice. It is understood through SDT discussion that the POR can substitute for the source and the POD can substitute for the sink, but R4 does not say this and can easily miss this interpretation during audits. Instead this issue is met with the phrase" as specified in the ATCID". If not one would assume that the source or sink must be modeled discretely if a source is specified in the request and that source is not explicitly specified in the ATCID. Response: In R1.2 the standard allows for each Transmission Service Provider to define, in their ATCID, how it handles the source/sink of transmission reservations it receives. For example, the source/sink field can be used or the POR/POD field. In R4, the standard states that the Transmission Service Provider needs to use the source and sink as they define in their ATCID which as we said can be the POR or POD of the reservation. <u>Requirement 2</u> • The "Medium" risk factor is inconsistent with NERC's definition of risk factors and should be changed to "Lower" if the requirement is to be retained. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. • R2.1.1 and R2.1.2 -Should allow ODTF of at least 3% (similar to language in 2.1.4.1) Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5% and has modified the language to use "at least", rather than "greater than". • R2.1.1.1 and R2.1.2.1 – is ambiguous because the flowgates used in AFC and ATC calculations are a subset of those used in operations and planning studies. Modify or remove R2.1.2.1 because the external flowgates considered in ATC calculations may be much more robust then those used in operations or planning studies. PJM believes that the transfer analyses can use contingencies consistent with operations and planning studies, but believes the analysis should be able

Entity	Comment
	to include other flowgates that may not be included in the operations and planning studies. The current standard could be interpreted to require that the only flowgates that can be considered for the transfer analysis must have been used in operations and planning studies. Response: Requirements 2.1.1.1 and 2.1.2.1 have been modified to permit more robust assumptions to be used in Operations and Planning studies by limiting the scope to first-contingency analysis, however, it is the intent of the Drafting Team to not permit flowgates to be identified for use in AFC calculations if they would not be identified in Operations and Planning studies. • The word "update" used in R2.2, R2.3, and R2.5 should be replaced with "review and update if necessary". Response: The SDT has modified the standard to replace "update" with "establish" in each of these locations, intending to allow a simple setting of the value without recalculation if appropriate. • R2.5.1 and R3.1 should be modified to recognize that these requirements apply only to facility ratings used in the definition of a flowgate used in the AFC and ATC calculations and does not apply to all facility ratings contained in the model. In addition, these requirements should only apply to permanent rating changes not temporary rating changes. Response: The SDT has updated R2.5.1 and R3.1 to reflect these suggestions. However, the drafting team believes that temporary rating changes should be honored, and no change has been made. <u>Requirement 3</u> • The "Medium" risk factor is inconsistent with NERC's definition of risk factors and should be changed to "Lower" if the requirement is to be retained. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. • R3.2 and R3.3 -The update frequency for AFC calculations should be addressed by NAESB. Response: The SDT disagrees, and believe there can be impacts on reliability if these calculations are not performed regularly.

Entity	Comment
	• R3.4 This standard should not set limits on how models are equivalized. Transmission Operators and regularly use equivalized models that may differ from this requirement. The restriction to 161 kV and below should be removed from the requirement. Response: The SDT disagrees, and believes it is important to establish minimum requirements for how the system should be modeled. <u>Requirements 4, 5, and 6</u> • R4, R5, & R6 have the qualifier "as specified in the ATCID". These step by step elements should be eliminated and the reliability requirement clarified. Response: The SDT disagrees and believes that these steps are required to ensure consistency in implementations. <u>Requirement 5</u> • The "Medium" risk factor is inconsistent with NERC's definition of risk factors and should be changed to "Lower" if the requirement is to be retained. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. • R5.2 MOD001 R3.7.1 addresses daily and R3.7.2 addresses monthly , therefore a description of how outages are used in hourly calculations is not required. However, MOD-030 R5.2 requires including all expected outages within scope of model as specified. This requirement should be modified for consistency. Response: MOD-001 requires that an explanation of outage processing be provided; while special rules for handling outage when determining hourly ATC/AFC are not required (it is assumed that an hourly calculation will simply use the outages in effect that hour), they are also not prohibited. • R5.2 requires including all expected outages within the scope of model as specified in the ATCID. The intent was to allow outages from a portion of the day to be used to calculate daily AFC and a portion of a daily snapshot to be used for calculating monthly. <u>The description of how outages are applied and including all of those outages has a high chance of noncompliance</u>. A suggestion is to add a time duration for how long an outage can be temporarily excluded (i.e. 7 days for the Lower VSL). PJM believes that the current VSLs for R5.2 are too severe because a TSP that wants to include

Entity	Comment
	nearly all outages from the NERC SDX outages (this can be over 500 outages for a large TSP) would be in violation for excluding even one outage because of a naming problem that be corrected in 1 to 7 days in most cases. R5.1 requires the use of the Transmission Operator model, but NERC SDX outage data is based on a coordinated IDC model that is only updated for summer and winter. Some modeling can be different and therefore the names or bus numbers would not match creating a violation. Is there a consistent method that can be developed and incorporated into the requirements that helps guide TSPs to do the right thing without being severely penalized for temporary errors outside their control? Does NERC expect to interpret the effectiveness of this method? PJM suggests eliminating the requirement or modifying it to state "as specified in the ATCID". Response: In R1.2 the standard allows for each Transmission Service Provider to define, in their ATCID, how it handles outgaes. The Drafting Team expects that this would include the handling of unrecognized outages. <u>Requirement 6</u> • The "Medium" risk factor is inconsistent with NERC's definition of risk factors and should be changed to "Lower" if the requirement is to be retained. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. • R6.1 PJM believes that including the impacts of base generation to load is a required component of the determination of ATC, but it should be separate from the ETC. The impacts of base generation to load is ambiguous, but the intent was to recognize that transmission and generation outages are applied to the base case model and solved. This changes the flows and AFC on the flowgates used for ATC calculation. These impacts are not really existing transmission commitments because they are not reservation or transmission service based. PJM believes that the language of the requirements and formula for calculating ATC should modified to clarify separate the base generation to load impacts from the ETC (transmission service) component and revise the formula as follows: Response: The Drafting Team feels that for MOD-30 the base case generation to load impacts should be included in the ETC component. This allows for consistency in components that makeup the ATC/AFC formulas within all the methodologies. The Drafting Team did change "impact of base generation to load" to "impacts of generation to load in the model defined in 5.2" in order to clarify the language.

Entity	Comment
	• R6.3 -PJM believes reservations in "Accepted", as well as, "Confirmed" status should be included. Once service is "Accepted" by a TSP it cannot be retracted. Not including "Accepted" reservation could result in overselling the transmission system and could lead to curtailments. Using reservations in Accepted and Confirmed status should also be included in MOD-001 R3.2.1 Response: The Drafting Team believes that the calculation of ETC should only include CONFIMRED reservations and rollover rights. Accepted reservations may be included in "Internal ATC," as described in FERC Order 638. • R6.5, R6.6 and R7.3, R7.4 - PJM believes that requirements should specifically include that Grandfathered obligations can be included in the model. The phrase Grandfathered obligations that are not included in the model implies that some grandfathered obligations can be included in the model. Response: The Drafting Team removed the language, "not included in the model". The intent of the standard is for the impacts to be accounted for and not double counted. Therefore the impact can be identified by either including the transactions in the model or by using the calculated distribution factor. In either case the impacts get summed up to make up the ETC component. <u>Requirement 8</u> • The medium risk factor is inconsistent with NERC's definition of risk factors and should be changed to lower if the requirement is to be retained. Response: The Drafting Team has modified the standard to set all VRFs to Lower. A medium risk factor is appropriate for "a requirement that, if violated, could ***directly*** affect the electrical state or the capability of the bulk power system, or the ability to effectively monitor and control the bulk power system, but is unlikely to lead to bulk power system instability, separation, or cascading failures." A violation of these standards can produce values that indirectly affect the system (i.e., the value may be used in other processes that result in the sale of transmission service), which results in a Lower VRF. The Drafting Team believes that subsequent recalculations of ATC or AFC will help address any incorrect values. Additionally, such a value would be identified and prevented in advance of actual reliability problems by other standards (e.g., SOL or IROL in the FAC standards) as well as the Transmission Operator's existing guidelines and procedures that prevent the Transmission Operator from over-scheduling. • R8 The formula should have a GTL variable representing the generation to load impacts that are currently lumped into ETC. to specifically Response: The Drafting Team feels that for MOD-30 the base case generation to load impacts should be included in the ETC component. This allows for consistency in components that makeup the ATC/AFC formulas within all the methodologies. The Drafting Team did change "impact of base generation to load" to "impacts of generation to load in the model defined in 5.2" in order to clarify the language.

Entity	Comment
	Requirement 9 • R9 Non-firm should be removed from this reliability standard and be considered NAESB scope. Response: The SDT disagrees. Non-Firm is used in several other standards, and Non-Firm has the potential to have reliability impacts. Requirement 10 PJM believes that the MOD standards go too far in areas that should be covered and addressed by Business Practices (as defined in MOD-001 Definitions). The frequency of postings and frequency of AFC/ATC calculations should be NAESB Business Practices not in NERC standards as reliability based requirements (see specific details for MOD-001 R2 and R7 and MOD-030 R10 in Specific Comments sections below). Not recognizing the clear distinction between the reliability scope to be addressed by these standards and the NAESB business practices could cause inconsistencies in interpretation. • The periodic requirements of R10 are NAESB scope. This requirement should be eliminated. Response: The SDT disagrees, and believe there can be impacts on reliability if these calculations are not performed regularly.
Response: Please see in-line responses.	
Alabama Power Company	We applaud the great work of the standard drafting team. While the current version is "workable" by Industry, making minor changes to the current draft could undermine the integrity of the good work of the drafting team.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
Bonneville Power Administration	BPA suggests a vote of No with the following comments: The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. BPA suggests the following modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TT with TF. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates which would complicate operation with no benefit in reliability: 1. R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting

Entity	Comment
	contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. 2. BPA has examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. Response: The Drafting Team has inserted language to address this issue in 2.1.1.2 and 2.1.2.2 3. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. 4. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. BPA has a Flowgate that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: R2.4 is intended to allow the specification of voltage or stability limited flowgates. 5. In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. BPA suggests these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria:

Entity	Comment
	R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
Consolidated Edison Co. of New York	Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable.

Entity	Comment
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for TOs to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
Dominion Resources, Inc.	In support of PJM and NPCC comments
Response: Please see PJM and NPCC responses.	
FirstEnergy Solutions	FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. We offer the following general comments in addition to our specific standard comments presented below. CBM & TRM - MARKET AREAS: FE supports the drafting team approach of three ATC methodologies presented in MOD-028, MOD-029 and MOD-030 to account for differences in calculating ATC in various geographic areas of the bulk electric system. However, the use of a single standard methodology for CBM and TRM as currently written does not meet the needs for entities operating within a market area such as MISO, PJM etc. FE suggests that various requirements in the proposed standards that are currently applicable to the TP and TOP are actually handled by the RTO and within a market area would more appropriately be assigned to the Planning Coordinator (PC) and Reliability Coordinator (RC), respectively. This change would allow the proposed standards for CBM and TRM to be used largely as within both market and non-market areas as the PC and RC would be appropriate in both. Our comments below on specific MOD standards elaborate on this point and provide examples where we feel the applicability is inappropriately assigned to TP or TOP responsible entities within a transmission market construct. Response: Please see responses contained in the CBM and TRM comment reports. DECISION TO BALLOT: While the MOD standards presented are improving in content FE believes the standards should have been issued for one more comment period prior to ballot per the NERC Standard Development Procedures (SDP). In many cases this is only the 2nd draft version being reviewed by industry. The objective during the Solicit Public Comments on Draft Standard (Step 6) of the NERC SDP is to Receive stakeholder inputs on the draft standard for the purpose of assessing consensus on the draft standard, and modifying the draft standard as needed to improve consensus. Based on the 200+ pages of comments of the prior draft version it is hard to conclude that the industry was near consensus. Additionally, per the SDP, now that the standards have gone to First Ballot (Step 9), the standard drafting team is not permitted to make any changes to the standards based on comments received during this First Ballot. The drafting team will now be required to rely on their responses to industry feedback to try and improve consensus during a re-circulation ballot. FE has concerns with the consequences of this decision with regard to the integrity of the standard development process and substantive registered entity perspectives. Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes. FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. However, at this time, FE is voting Negative to this standard with the following comments and suggestions:

Entity	Comment
	o Either the Planning Coordinator (PC) or Reliability Coordinator (RC) should replace the Transmission Operator (TOP) as having ultimate responsibility for the requirements in R2 and R3. The PC or RC will work with their associated Transmission Planners and/or TOPs to obtain the necessary information to properly identify flowgates and develop the proper transmission models. Response: R2 & R3 will remain the responsibility of the Transmission Operator. The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The Drafting Team believes that the function of ensuring operating reliability includes identifying and maintaining flowgates per requirements R2 and developing the transmission models per requirement R3, and therefore is the Transmission Operator's responsibility. o Also with regard to R2 and R3, we believe that there is too much detail in the subrequirements and that there may be other methods to identify flowgates and develop transmission models. These requirements should focus on the what and not the how. Response: The Drafting Team believes that in order to maintain the reliability of the flowgate methodology, a minimum amount of flowgates need to be determined based on standard criteria. Please note that this is only used to determine the minimum amount of flowgates to be added, other processes can be used to add additional flowgates. o The definitions for AFC and Flowgate Methodology should include mention of Postbacks and Counterflows which are significant factors in calculating AFC and ATC (see the algorithm of Requirement R8). Response: The SDT has modified the definitions accordingly.
Response: Please see in-line responses.	
Georgia Power Company	We applaud the great work of the standard drafting team. While the current version is "workable" by Industry, making minor changes to the current draft could undermine the integrity of the good work of the drafting team.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
Gulf Power Company	We applaud the great work of the standard drafting team. While the current version is "workable" by Industry, making minor changes to the current draft could undermine the integrity of the good work of the drafting team.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
Hydro One Networks, Inc.	Hydro One Networks Inc. is casting a negative vote on the 6 MOD standards (MOD-001, MOD-004, MOD-008, MOD-28, MOD-029 and MOSD-030) We believe there is a fundamental issue related with effective dates, that is, the dates in which Reliability Standards become effective and enforceable. In principle, the effective date of standards must be the same for all jurisdictions in North America. It does not make sense that there is a period of time when a standard is effective only in some jurisdictions while not in others. This is particularly important in the MOD Standards in ballot as they have implications on neighbouring areas. The words inserted in the Effective Date of the Standards as well as in the Implementation Plan document permit that these Standards are effective in some jurisdictions and not others. These Standards should be

Entity	Comment
	modified to ensure that they become effective in all jurisdiction at the same time, including those where such regulatory approval in not required that is, only when all regulatory approvals have been obtained. Response: Based on the need to support data exchange dependencies, the drafting team has modified the language to read as follows: First day of the first calendar quarter that is twelve months beyond the date that all four standards (MOD-001-1, MOD-028-1, MOD-029-1, and MOD-030-1) are approved by all applicable regulatory authorities. In addition we offer the following comments to the specific Standard MOD-030: o Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable. Response: The Drafting Team has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for TOs to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.
Response: Please see in-line responses.	
Lincoln Electric System	LES supports BPA's position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period.
Response: Please see responses to BPA, PJM, and MISO.	
MidAmerican Energy Co.	I support the BPA position that further changes should be made to eliminate the TFC to TTC and AFC to ATC conversions. I also support the PJM recommendation that this standard needs another commenting period.
Response: Please see BPA response.	
Mississippi Power	We applaud the great work of the standard drafting team. While the current version is "workable" by Industry, making minor changes to the current draft could undermine the integrity of the good work of the drafting team.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
New York Power Authority	MOD-030-1--recommendation to vote NO not accept. Some requirements (e.g. R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements (e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4 and R6.1), the standard makes provisions (e.g. 2.1.4.1, footnotes to R6.2, R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measurable and enforceable.

Entity	Comment
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for TOs to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
Public Service Electric and Gas Co.	PSE&G votes NO for the reasons expressed in PJM comments.
Response: Please see PJM response.	
Wisconsin Public Service Corp.	WPSC supports BPA position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period.
Response: Please see responses to BPA, PJM, and MISO.	
Madison Gas and Electric Co.	We support BPA's position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period .
Response: Please see responses to BPA, PJM, and MISO.	
Bonneville Power Administration	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC , but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. BPA suggests the following modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TTC with TFC. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates which would complicate operation with no benefit in reliability: 1. R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS.

Entity	Comment
	2. BPA has examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. Response: The Drafting Team has inserted language to address this issue in 2.1.1.2 and 2.1.2.2 3. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. 4. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. BPA has a Flowgate that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: R2.4 is intended to allow the specification of voltage or stability limited flowgates. 5. In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. BPA suggests these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods.

Entity	Comment
	R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a “credible” limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
Calpine Corporation	The former NERC standard for ATC required that TSPs have and publish their methodology for calculation of ATC. Such a standard has clearly been rejected by FERC, instead opting for much greater transparency. However, we note that amongst the redlined changes in the version of MOD-001 that is being balloted, the word transparency has been deleted from the purpose. We also note that Requirement R3.1 requires that sufficient data will be exchanged to allow for validation of the ATC calculation but in response to EPSA and many others it is clear that NERC will not mandate what if any of this data will be shared with market participants. By deferring that question to NAESB, it makes it very difficult for market participants to evaluate whether this standard provides sufficient transparency. The notion of an ATCID document is a positive step. To have a single document with a comprehensive list of assumptions represents a substantial improvement over the status quo. However, the utility of this document is difficult to evaluate if it is not yet determined which parties will have access to the document. Furthermore, while flexibility is necessary in order to create a standard with applicability across many jurisdictions, allowing undue flexibility as long as assumptions are captured in the ATCID cannot assure market participants of a sufficient degree of standardization.

Entity	Comment
Response: NAESB is responsible for determining which information will be shared with market participants. While the standard does promote enhanced transparency, the purpose has been reworded to focus more on the reliability aspects of the standard. The Drafting Team believes that the standard provides an appropriate balance between flexibility and standardization. Where possible, the next posting will provide the links to available draft NAESB documentation.	
Electric Power Supply Association	The former NERC standard for ATC required that TSPs have and publish their methodology for calculation of ATC. Such a standard has clearly been rejected by FERC, instead opting for much greater transparency. However, we note that amongst the redlined changes in the version of MOD-001 that is being balloted, the word transparency has been deleted from the purpose. We also note that Requirement R3.1 requires that sufficient data will be exchanged to allow for validation of the ATC calculation but in response to EPSA and many others it is clear that NERC will not mandate what if any of this data will be shared with market participants. By deferring that question to NAESB, it makes it very difficult for market participants to evaluate whether this standard provides sufficient transparency. The notion of an ATCID document is a positive step. To have a single document with a comprehensive list of assumptions represents a substantial improvement over the status quo. However, the utility of this document is difficult to evaluate if it is not yet determined which parties will have access to the document. Furthermore, while flexibility is necessary in order to create a standard with applicability across many jurisdictions, allowing undue flexibility as long as assumptions are captured in the ATCID cannot assure market participants of a sufficient degree of standardization. In calculating the ATC or AFC as applicable, a significant factor in the calculations will be the assumed counterflows and postbacks. The standards provide no guidance on these terms, but rather leave them entirely to the discretion of the TSP, subject only to documentation of their assumptions in the ATCID, which might not be visible to market participants.
Response: NAESB is responsible for determining which information will be shared with market participants. While the standard does promote enhanced transparency, the purpose has been reworded to focus more on the reliability aspects of the standard. The Drafting Team believes that the standard provides an appropriate balance between flexibility and standardization. Where possible, the next posting will provide the links to available draft NAESB documentation.	
FirstEnergy Solutions	FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. We offer the following general comments in addition to our specific standard comments presented below. CBM & TRM - MARKET AREAS: FE supports the drafting team approach of three ATC methodologies presented in MOD-028, MOD-029 and MOD-030 to account for differences in calculating ATC in various geographic areas of the bulk electric system. However, the use of a single standard methodology for CBM and TRM as currently written does not meet the needs for entities operating within a market area such as MISO, PJM etc. FE suggests that various requirements in the proposed standards that are currently applicable to the TP and TOP are actually handled by the RTO and within a market area would more appropriately be assigned to the Planning Coordinator (PC) and Reliability Coordinator (RC), respectively. This change would allow the proposed standards for CBM and TRM to be used largely as within both market and non-market areas as the PC and RC would be appropriate in both. Our comments below on specific MOD standards elaborate on this point and provide examples where we feel the applicability is inappropriately assigned to TP or TOP responsible entities within a transmission market construct. Response: Please see responses contained in the CBM and TRM comment reports.

Entity	Comment
	DECISION TO BALLOT: While the MOD standards presented are improving in content FE believes the standards should have been issued for one more comment period prior to ballot per the NERC Standard Development Procedures (SDP). In many cases this is only the 2nd draft version being reviewed by industry. The objective during the Solicit Public Comments on Draft Standard (Step 6) of the NERC SDP is to Receive stakeholder inputs on the draft standard for the purpose of assessing consensus on the draft standard, and modifying the draft standard as needed to improve consensus. Based on the 200+ pages of comments of the prior draft version it is hard to conclude that the industry was near consensus. Additionally, per the SDP, now that the standards have gone to First Ballot (Step 9), the standard drafting team is not permitted to make any changes to the standards based on comments received during this First Ballot. The drafting team will now be required to rely on their responses to industry feedback to try and improve consensus during a re-circulation ballot. FE has concerns with the consequences of this decision with regard to the integrity of the standard development process and substantive registered entity perspectives. Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes. FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. However, at this time, FE is voting Negative to this standard with the following comments and suggestions: – Either the Planning Coordinator (PC) or Reliability Coordinator (RC) should replace the Transmission Operator (TOP) as having ultimate responsibility for the requirements in R2 and R3. The PC or RC will work with their associated Transmission Planners and/or TOPs to obtain the necessary information to properly identify flowgates and develop the proper transmission models. Response: R2 & R3 will remain the responsibility of the Transmission Operator. The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The Drafting Team believes that the function of ensuring operating reliability includes identifying and maintaining flowgates per requirements R2 and developing the transmission models per requirement R3, and therefore is the Transmission Operator's responsibility. – Also with regard to R2 and R3, we believe that there is too much detail in the subrequirements and that there may be other methods to identify flowgates and develop transmission models. These requirements should focus on the what and not the how. Response: The Drafting Team believes that in order to maintain the reliability of the flowgate methodology, a minimum amount of flowgates need to be determined based on standard criteria. Please note that this is only used to determine the minimum amount of flowgates to be added, other processes can be used to add additional flowgates. – The definitions for AFC and Flowgate Methodology should include mention of Postbacks and Counterflows which are significant factors in calculating AFC and ATC (see the algorithm of Requirement R8).

Entity	Comment
	Response: The SDT has modified the definitions accordingly.
Response: Please see in-line responses.	
Lincoln Electric System	LES supports BPA's position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period.
Response: Please see BPA response.	
PPL Generation LLC	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. It is suggested that the following modifications be made to MOD-030-1: – Change the following Requirements and Measures to replace each ATC with AFC: – R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. – Change the Data Retention requirements in the second and fifth dashes to replace each TTC with TFC. – Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates which would complicate operation with no benefit in reliability: – R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. – As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. There are examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. A Flowgate exists that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate.

Entity	Comment
	Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. R2.4 is intended to allow the specification of voltage or stability limited flowgates. – In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. It is suggested that these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or SOLs and IROLs on a Transmission Operator system are included as Flowgates.. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology or SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where:

Entity	Comment
	2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
PSEG Power LLC	PSEG Power LLC votes no for the reasons expressed in PJM comments.
Response: Please see PJM response.	
Barry Green Consulting Inc.	Transparency: The former NERC standard for ATC required that TSPs have and publish their methodology for calculation of ATC. Such a standard has clearly been rejected by FERC, instead opting for much greater transparency. However, we note that amongst the redlined changes in the standard that is being balloted, the word transparency has been deleted from the purpose. We also note that a requirement that sufficient data be exchanged to allow for validation of the ATC calculation is included but in response to EPSA and many others it is clear that NERC will not mandate what if any of this data will be shared with market participants. By deferring that question to NAESB, it makes it very difficult for market participants to evaluate whether this standard provides sufficient transparency. The notion of an ATCID document is a positive step. To have a single document with a comprehensive list of assumptions represents a substantial improvement over the status quo. However, the utility of this document is difficult to evaluate if it is not yet determined which parties will have access to the document. Furthermore, while flexibility is necessary in order to create a standard with applicability across many jurisdictions, allowing undue flexibility as long as assumptions are captured in the ATCID cannot assure market participants of a sufficient degree of standardization. In calculating the ATC or AFC as applicable, a significant factor in the calculations will be the assumed counterflows and postbacks. The standards provide no guidance on these terms, but rather leave them entirely to the discretion of the TSP, subject only to documentation of their assumptions in the ATCID. We would be concerned if these values are unduly conservative.
Response: NAESB is responsible for determining which information will be shared with market participants. While the standard does promote enhanced transparency, the purpose has been reworded to focus more on the reliability aspects of the standard. The Drafting Team believes that the standard provides an appropriate balance between flexibility and standardization. Where possible, the next posting will provide the links to available draft NAESB documentation.	
Bonneville Power	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. BPA suggests the following

Entity	Comment
Administration	modifications be made to MOD-030-1: o Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TTC with TFC. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates, which would complicate operation with no benefit in reliability: 1. R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. 2. BPA has examples of transmission lines operated in series that would require separate Flowgates be defined for each transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. Response: The Drafting Team has inserted language to address this issue in 2.1.1.2 and 2.1.2.2 3. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. 4. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. BPA has a Flowgate that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: R2.4 is intended to allow the specification of voltage or stability limited flowgates.

Entity	Comment
	5. In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. BPA suggests these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology, or alternately SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or

Entity	Comment
	- A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
Consolidated Edison Co. of New York	Some requirements(eg.R2.1.1) stipulate that flowgates having a 3% OTDF are to be included for AFC calculation; whereas other requirements(e.g. R2.1.4.1) stipulate that flowgates with a 5% PTDF or OTDF are to be included. Despite this apparent inconsistency, after having these two sets of threshold stipulated and with requirements that link to the curtailment threshold (e.g. R6.2, R6.4, and R6.1), the standard makes provisions(eg.2.1.4.1, footnotes to R6.2,R6.4 and R6.6) that allow inclusion of flowgates at responses lower than these thresholds. The apparently conflicting requirements combined with the provisions to apply lower thresholds render the standard not measureable and enforceable.
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for TOs to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	
Dominion Resources, Inc.	Support comments provided by NPCC and PJM
Response: Please see NPCC and PJM responses.	
FirstEnergy Solutions	FirstEnergy Corp. (FE) appreciates the hard work put forth by NERC ATC Standard Drafting Team. However, at this time, FE is voting Negative to this standard with the following comments and suggestions: o Either the Planning Coordinator (PC) or Reliability Coordinator (RC) should replace the Transmission Operator (TOP) as having ultimate responsibility for the requirements in R2 and R3. The PC or RC will work with their associated Transmission Planners and/or TOPs to obtain the necessary information to properly identify flowgates and develop the proper transmission models. Response: R2 & R3 will remain the responsibility of the Transmission Operator. The functions, responsibilities, and tasks of the Transmission Operator and Transmission Service Provider are defined in the NERC Reliability Functional Model. The Transmission Operator function ensures the real-time operating reliability of the transmission assets within a reliability area. The Drafting Team believes that the function of ensuring operating reliability includes identifying and maintaining flowgates per requirements R2 and developing the transmission models per requirement R3, and therefore is the Transmission Operator's responsibility. o Also with regard to R2 and R3, we believe that there is too much detail in the subrequirements and that there may be other methods to identify flowgates and develop transmission models. These requirements should focus on the what and not the how. Response: The Drafting Team believes that in order to maintain the reliability of the flowgate methodology, a minimum

Entity	Comment
	amount of flowgates need to be determined based on standard criteria. Please note that this is only used to determine the minimum amount of flowgates to be added, other processes can be used to add additional flowgates. o The definitions for AFC and Flowgate Methodology should include mention of Postbacks and Counterflows which are significant factors in calculating AFC and ATC (see the algorithm of Requirement R8). Response: The SDT has modified the definitions accordingly.
Response: Please see in-line responses.	
Lincoln Electric System	LES supports BPA's position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period.
Response: Please see responses to BPA, PJM, and MISO.	
MidAmerican Energy Co.	Although this standard leaves much to be desired, it is better than the current standard. I hope NERC continues to work towards consistency in the arena of transfer capability.
Response: Thank you.	
PP&L, Inc.	The SDT made modifications to MOD-030-1 to no longer require conversion of AFC to ATC and TFC to TTC, but failed to make all of the necessary modifications to reflect the removal of the conversion requirement. It is suggested that the following modifications be made to MOD-030-1: – Change the following Requirements and Measures to replace each ATC with AFC: o R1.2 - R1.2.2, R1.2.4, description of the first variable in R9, R10.3, and M17. o Change the Data Retention requirements in the second and fifth dashes to replace each TT with TF. o Change the Violation Severity Levels to replace Transfer Capabilities with AFC at R9 Severe VSL. Response: These corrections have been made. Additional barriers to an affirmative vote on MOD-030-1 are concerns about adding additional flowgates, which would complicate operation with no benefit in reliability: o R2.1.1 and R2.1.2 do not take into consideration Special Protection Schemes (SPS) that are utilized within the Western Interconnection, which prevent some contingencies, which initiate use of a SPS, from being the limiting contingency. This can move the limiting contingencies outside the defined Flowgate, but does not require those contingencies to be in a Flowgate to reliably operate the transmission system. Response: R2.1.1.1 and R2.1.2.1 have been modified to include the use of SPS. o As written, additional contingency/limiting elements would need to be defined as Flowgates and unnecessary complexity will be added to operating the transmission system with no increased reliability benefit. There are examples of transmission lines operated in series that would require separate Flowgates be defined for each

Entity	Comment
	transmission line as R2.1.1 and R2.1.2 are written because, at minimum, the first three limiting Element/contingency combinations are included as Flowgates. In our example, limiting for the most limiting Flowgate protects the others that are in series and should not require additional Flowgates be defined. If Flowgates are defined based on protecting for multiple contingencies and outage conditions, the limiting element/contingency combinations can move away from the existing monitored Flowgates. Limiting the existing Flowgates can protect the transmission system without adding additional Flowgates. This methodology seems to be more applicable to thermally limited Flowgates than voltage stability or transient stability. A Flowgate exists that can be limited by a generation loss and the limitation is reactive margin or voltage dip, rather than a specific element. The existing Flowgate is limited to protect for the generation loss. In this example the limiting contingency is not a Flowgate and the limiting element is not a Flowgate. Response: If a flowgate is defined to protect multiple contingencies and outage conditions, then the flowgate that needs to be defined is the most limiting monitored element/contingency pair. Therefore if the most limiting flowgate moves away from the existing monitored flowgate then a new flowgate should be defined. R2.4 is intended to allow the specification of voltage or stability limited flowgates o In R2.1.1 and R2.1.2 it is not clear what is meant by the first three limiting element/contingency combinations with an OTDF greater than 3% are included as Flowgates. Here are some possibilities: The limiting elements for the three most limiting contingencies need to be included as Flowgates. The three most limiting elements for the worst contingency need to be included as Flowgates. The three most limiting contingencies need to be included as Flowgates. The three most limiting contingencies and the most limiting elements for each contingency need to be included as Flowgates. An example would be helpful. Response: The standard drafting team has added language to 2.1.1 and 2.1.2 to clarify what is meant by first three limiting element/contingency combinations. It is suggested that these Requirements be rewritten in the following manner: R2.1. Identify Flowgates used in the AFC process based, at a minimum, on the following criteria: R2.1.1. Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator system up to the path capability such that at a minimum the first three limiting Element/Contingency combinations with an OTDF greater than 3% and within the Transmission Operator system are included as Flowgates, or SOLs and IROLs on a Transmission Operator system are included as Flowgates.. 2.1.1.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.2. Results of a first Contingency transfer analyses from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements/Contingency combinations with an Outage Transfer Distribution Factor (OTDF) greater than 3% and within the Transmission Operator system are included as Flowgates unless the interface

Entity	Comment
	between such adjacent Balancing Authorities is accounted for using another ATC methodology or SOLs and IROLs on a Transmission Operator system are included as Flowgates. 2.1.2.1. Use Contingency assumptions consistent with those used in operations studies and planning studies for the applicable time periods. R2.1.3. Any limiting Element/Contingency combination within the Transmission model that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months. R2.1.4. Any credible limiting element/contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where: 2.1.4.1. If the coordination of the limiting element/contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. Response: The SDT has modified R2.1.1.1 and R2.1.2.1 to respond to the suggestions to acknowledge the use of SPS and has added a new R2.1.4.2 to further define a "credible" limiting Element/Contingency combinations that may be requested for inclusion.
Response: Please see in-line responses.	
PSEG Energy Resources & Trade LLC	PSEG Energy Resources & Trade LLC votes NO for the reasons expressed in PJM's ballot.
Response: Please see PJM response.	
Commonwealth of Massachusetts Department of Public Utilities	Due to the extensive revisions in the final draft, industry input should have been solicited before setting this revised standard for a vote.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	
National Association of Regulatory Utility Commissioners	Due to the extensive revisions in the final draft, industry input should have been solicited before setting this revised standard for a vote.
Response: The Drafting Team has made changes in response to this ballot and will be soliciting comments from the industry on these changes.	

Entity	Comment
Midwest Reliability Organization	The MRO supports BPA position, and agrees with the PJM and MISO recommendation that the standard needs an additional commenting period.
Response: Please see responses to BPA, PJM, and MISO.	
Northeast Power Coordinating Council, Inc.	The variability of distribution factor thresholds will make enforceability of some requirements problematic.
Response: The SDT has changed the sub-requirements under R2 to use a consistent 5%. The SDT intends for Transmission Operators to be able to use more conservative lower thresholds in both defining flowgates and including the impacts of adjacent reservations, if they so choose. The minimum thresholds were established to ensure the standards are measurable.	