

Attachment 1 — Guide to Compliance with the Orders

Topic	Order	Cite	Brief Description	Addressed By	Detailed Citation
ATC	890	211	Definition of Flowgates	MOD-030 R2.1, R2.2, R2.3	As TDU Systems note, there is neither a definition of AFC in NERC's Glossary nor an existing reliability standard that discusses the AFC method. In order to achieve consistency in each component of the ATC calculation (discussed below), we direct public utilities, working through NERC, to develop an AFC definition and requirements used to identify a particular set of transmission facilities as a flowgate. However, we remind transmission providers that our regulations require the posting of ATC values associated with a particular path, not AFC values associated with a flowgate. Transmission providers using an AFC methodology must therefore convert flowgate (AFC) values into path (ATC) values for OASIS posting. In order to have consistent posting of the ATC, TTC, CBM, and TRM values on OASIS, we direct public utilities, working through NERC, to develop in the MOD-001 standard a rule to convert AFC into ATC values to be used by transmission providers that currently use the flowgate methodology.
ATC	890	211	Standard AFC->ATC Calculation	MOD-030 R11	As TDU Systems note, there is neither a definition of AFC in NERC's Glossary nor an existing reliability standard that discusses the AFC method. In order to achieve consistency in each component of the ATC calculation (discussed below), we direct public utilities, working through NERC, to develop an AFC definition and requirements used to identify a particular set of transmission facilities as a flowgate. However, we remind transmission providers that our regulations require the posting of ATC values associated with a particular path, not AFC values associated with a flowgate. Transmission providers using an AFC methodology must therefore convert flowgate (AFC) values into path (ATC) values for OASIS posting. In order to have consistent posting of the ATC, TTC, CBM, and TRM values on OASIS, we direct public utilities, working through NERC, to develop in the MOD-001 standard a rule to convert AFC into ATC values to be used by transmission providers that currently use the flowgate methodology.
ATC	890	212	Firm ATC uses only Firm Commitments	MOD-028 R3, R4.3, R8, R10 MOD-029 R5, R7 MOD-030 R6, R8	The Commission also believes that further clarification is necessary regarding the calculation algorithms for firm and non-firm ATC. Currently, NERC has no standards for calculating non-firm ATC. We find that the same potential for discrimination exists for non-firm transmission service as for firm service and that greater uniformity in both firm and non-firm ATC calculations will substantially reduce the remaining potential for undue discrimination. Therefore, we direct public utilities, working through NERC, to modify related ATC standards by implementing the following principles for firm and non-firm ATC calculations: (1) for firm ATC calculations, the transmission provider shall account only for firm commitments; and (2) for non-firm ATC calculations, the transmission provider shall

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				postbacks in Firm ATC.	
ATC	890	212	Non-Firm ATC uses firm and non-firm commitments, postbacks or redirected services, unscheduled service, and counterflows	<p>MOD-028 R3, R4.3, R8, R9, R10, R11 MOD-029 R5, R6, R7, R8 MOD-030 R6, R7, R8, R9</p> <p>Unscheduled service will be handled as a postback as defined by NAESB Business Practices.</p>	account for both firm and non-firm commitments, postbacks of redirected services, unscheduled service, and counterflows. We understand that these principles are currently followed by most transmission providers and believe they should be clearly set forth in the ATC-related reliability standards. As described below, each transmission provider's Attachment C must include a detailed formula for both firm and non-firm ATC, consistent with the modified ATC-related reliability standards.
ATC	890	237	Develop consistent practices for calculating TTC/TFC	<p>MOD-028 R1, R2, R3, R4, R5, R6, R7 MOD-029 R1, R2, R3, R4 MOD-030 R2</p>	The Commission adopts the NOPR proposal and directs public utilities, working through NERC, to develop consistent practices for calculating TTC/TFC. We direct public utilities, working through NERC, to address, through the reliability standards process, any differences in developing TTC/TFC for transmission provided under the pro forma OATT and for transfer capability for native load and reliability assessment studies.
ATC	890	237	Address differences between Pro-Forma TTC and Native Load/Reliability Assessment TTC	MOD-001 R6, R7	
ATC	890	243	Standard calc of native load use - include in MOD-001	<p>MOD-028 R3 MOD-029 R5 MOD-030 R6</p> <p>Note this is not contained in MOD-001, as the methodologies each utilize load at different points in the process.</p> <p>Note that MOD-029 does not perform simulations to</p>	To achieve greater consistency in ETC calculations and further reduce the potential for undue discrimination, the Commission adopts the NOPR proposal and directs public utilities, working through NERC and NAESB, to develop a consistent approach for determining the amount of transfer capability a transmission provider may set aside for its native load and other committed uses. We expect that NERC will address ETC through the MOD-001 reliability standard rather than through a separate reliability standard. By using MOD-001, the ETC calculation can be adjusted to be applicable to each of the three ATC methodologies under development by NERC.

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				determine native load use, so native load use is treated as equivalent to the nominal value of the load forecast.	
ATC	890	244	In the short-term ATC calculation, all reserved but unused transfer capability (non-scheduled) shall be released as non-firm ATC.	MOD-028 R11 MOD-029 R8 MOD-030 R9 Unscheduled service will be handled as a postback under the NAESB Business Practices.	In order to provide specific direction to public utilities and NERC, we determine that ETC should be defined to include committed uses of the transmission system, including (1) native load commitments (including network service), (2) grandfathered transmission rights, (3) appropriate point-to-point reservations, (4) rollover rights associated with long-term firm service, and (5) other uses identified through the NERC process. ETC should not be used to set aside transfer capability for any type of planning or contingency reserve, which are to be addressed through CBM and TRM. In addition, in the short-term ATC calculation, all reserved but unused transfer capability (non-scheduled) shall be released as non-firm ATC.
ATC	890	244	ETC = Native load (including Network)	MOD-028 R8, R9 MOD-029 R5, R6 MOD-030 R6, R7	
ATC	890	244	ETC = Grandfathered	MOD-028 R8, R9 MOD-029 R5, R6 MOD-030 R6, R7	
ATC	890	244	ETC = Appropriate PTP	MOD-028 R8, R9 MOD-029 R5, R6 MOD-030 R6, R7	
ATC	890	244	ETC = Long-term Rollover rights	MOD-028 R8 MOD-029 R5 MOD-030 R6	
ATC	890	244	Define any additional ETC components	MOD-028 R8, R9 MOD-029 R5, R6 MOD-030 R6, R7	

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ATC	890	245	Reservations with Same POR whose SUM would exceed gen nameplate must be addressed	The SDT does not believe this can be addressed any differently than how it is currently handled without compromising reliability. The customer has the right to schedule as they desire, and that right must be planned for.	We agree with TDU Systems that inclusion of all requests for transmission service in ETC would likely overstate usage of the system and understate ATC. We therefore find that reservations that have the same point of receipt (POR) (generator) but different point of delivery (POD) (load), for the same time frame, should not be modeled in the ETC calculation simultaneously if their combined reserved transmission capacity exceeds the generator's nameplate capacity at POR. This will prevent overly unrealistic utilization of transmission capacity associated with power output from a generator identified as a POR. We direct public utilities, working through NERC, to develop requirements in MOD-001 that lay out clear instructions on how these reservations should be accounted. One approach that could be used is examining historical patterns of actual reservation use during a particular season, month, or time of day.
ATC	890	262	CBM =0 in Non-Firm Calc	MOD-028 R11 MOD-029 R8 MOD-030 R9 Note that if CBM has been scheduled, it is considered firm use.	Concerning TAPS' proposal to remove the reservation decision from the sole discretion of transmission providers, we determine that LSEs should be permitted to call for use of CBM, if they do so pursuant to conditions established in the reliability standards development process. We direct public utilities working through NERC to modify the CBM-related standards to specify the generation deficiency conditions during which an LSE will be allowed to use the transfer capability reserved as CBM. In addition, we direct that transmission set aside as CBM shall be zero in non-firm ATC calculations. Finally, we order public utilities to work with NAESB to develop an OASIS mechanism that will allow for auditing of CBM usage.
ATC	890	273	TRM <=> 0 in Non-Firm Calc	MOD-028 R11 MOD-029 R8 MOD-030 R9	The Commission also adopts the NOPR proposal to establish standards specifying the appropriate uses of TRM to guide NERC and NAESB in the drafting process. Transmission providers may set aside TRM for (1) load forecast and load distribution error, (2) variations in facility loadings, (3) uncertainty in transmission system topology, (4) loop flow impact, (5) variations in generation dispatch, (6) automatic sharing of reserves, and (7) other uncertainties as identified through the NERC reliability standards development process. Because load, facility loading and other uncertainties constantly deviate, we will not require that TRM set aside capacity be set at zero in the non-firm ATC calculation. In other words, we will not require transfer capability that is set aside as TRM to be sold on a non-firm basis. We find that clear specification in this Final Rule of the permitted purposes for which entities may reserve CBM and TRM will virtually eliminate double-counting of TRM and CBM.
ATC	890	292	ATC Assumptions should be the same as those used in Planning of Operations	MOD-001 R6, R7	The Commission also adopts the NOPR proposal to require transmission providers to use data and modeling assumptions for the short- and long-term ATC calculations that are consistent with that used for the planning of operations and system expansion, respectively, to the maximum extent practicable. This includes, for example: (1) load

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ATC	890	292	Load levels the same plan/ops vs. ATC	MOD-001 R6, R7	levels, (2) generation dispatch, (3) transmission and generation facilities maintenance schedules, (4) contingency outages, (5) topology, (6) transmission reservations, (7) assumptions regarding transmission and generation facilities additions and retirements, and (8) counterflows. We find that requiring consistency in the data and modeling assumptions used for ATC calculations will remedy the potential for undue discrimination by eliminating discretion and ensuring comparability in the manner in which a transmission provider operates and plans its system to serve native load and the manner in which it calculates ATC for service to third parties. The Commission directs public utilities, working through NERC, to modify ATC standards to achieve this consistency.
ATC	890	292	Gen Dispatch the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	TX and Gen Facilities maintenance the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	Contingency outages the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	Topology the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	TX Reservations the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	Assumptions re: additions and retirements the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	292	Counterflows the same plan/ops vs. ATC	MOD-001 R6, R7	
ATC	890	293	Develop an approach for accounting for counterflows, in the relevant ATC standards and business practices.	MOD-001 R3.2 The standards currently only require disclosure of the TSP's approach to counterflows.	With regard to EPSA's request for the standardization of additional data inputs, we believe they are already captured in the Commission's proposal as adopted in this Final Rule. Xcel asks the Commission to require consistency in the determination of counterflows in the calculation of ATC. Counterflows are included in the list of assumptions that public utilities, working through NERC, are required to make consistent. We believe that counterflows, if treated inconsistently, can adversely affect reliability and competition, depending on how they are accounted for. Accordingly, we reiterate that public utilities, working through NERC and NAESB, are directed to develop an approach for accounting for counterflows, in the relevant ATC standards and business practices. We find unnecessary Xcel's request that we require a date certain for specific issues in the Western Interconnection to be addressed. Above we require public utilities, working through NERC, to modify the ATC standards within 270 days after the publication of the Final Rule in the Federal Register.
ATC	890	295	Load level modeling methodology the same to support data exchange	MOD-001 R9 MOD-028 R3.1.2, R3.2.2, R8, R9 MOD-029 R5, R6	We offer the following clarifications. In response to Southern, we clarify that we require consistent use of assumptions underlying operational planning for short-term ATC and expansion planning for long-term ATC calculation. We also clarify that there must be a consistent basis or approach to determining load levels. For example, one approach may be for transmission providers to calculate load levels using an on- and offpeak model for

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				MOD-030 R6.1.1, R6.2.1, R7.5, R7.6 Stakeholders have indicated that the use of specific forecasts may not be reliable, as the most challenging periods of time may not be easily classifiable into “peak” or “off peak.” Instead, the standards require the use of Load Forecasts, but do not require specific forecasts.	each month when evaluating yearly service requests and calculating yearly ATC. The same (peak- and off-peak) or alternative approaches may be used for monthly, weekly, daily and hourly ATC calculations. Regardless of the ultimate choice of approach, it is imperative that all transmission providers use the same approach to modeling load levels to enable the meaningful exchange of data among transmission providers. Accordingly, we direct public utilities, working through NERC, to develop consistent requirements for modeling load levels in MOD-001 for the services offered under the pro forma OATT.
ATC	890	296	Dispatch should include all DNRs and committed resources as expected to run, and uncommitted resources deliverable within CA, economically dispatched to meet balancing needs	MOD-001 R9 MOD-028 R3.1.3, R3.2.3 MOD-029 Not applicable. MOD-030 R6.1.2, R6.2.2 Note that MOD-029 does not perform simulations of generator dispatch to determine native load use.	With respect to modeling of generation dispatch, we direct public utilities, working through NERC, to develop requirements in NERC’s MOD-001 reliability standard specifying how transmission providers shall determine which generators should be modeled in service, including guidance on how independent generation should be considered. We agree with Ameren that any modeling of base generation dispatch must model generators, including merchant generators, as they are expected to run. Accordingly, we direct public utilities, working through NERC, to revise reliability standard MOD-001 by specifying that base generation dispatch will model (1) all designated network resources and other resources that are committed or have the legal obligation to run, as they are expected to run and (2) uncommitted resources that are deliverable within the control area, economically dispatched as necessary to meet balancing requirements.
ATC	890	297	How to model POR to POD without source/sink	MOD-028 R4.3 MOD-029 Not applicable. MOD-030 R1, R4 Note that MOD-029 uses named paths, not Source-to-Sink analysis.	Regarding transmission reservations modeling, we direct public utilities, working through NERC, to develop requirements in reliability standard MOD-001 that specify (1) a consistent approach on how to simulate reservations from points of receipt to points of delivery when sources and sinks are unknown and (2) how to model existing reservations.
ATC	890	297	How to model existing reservations	MOD-028 R4.3 MOD-029 Not applicable.	

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				MOD-030 R1.2, R4 Note that MOD-029 uses named paths, not Source-to-Sink analysis.	
ATC	890	301	ATC to be recalculated by all transmission providers on a consistent time interval and in a manner that closely reflects the actual topology of the system,	MOD-001 R8 MOD-030 R10	The Commission adopts the NOPR proposal and requires the development of reliability standards that ensure ATC is calculated at consistent intervals among transmission providers. The Commission thus directs public utilities, working through NERC and NAESB, to revise reliability standard MOD-001 to require ATC to be recalculated by all transmission providers on a consistent time interval and in a manner that closely reflects the actual topology of the system, e.g., generation and transmission outages, load forecast, interchange schedules, transmission reservations, facility ratings, and other necessary data. This process must also consider whether ATC should be calculated more frequently for constrained facilities. ATC-related requirements for OASIS posting are discussed below.
ATC	890	310	Mandatory Data Exchange for ATC	MOD-001 R9	The Commission adopts the NOPR proposal and directs public utilities, working through NERC, to revise the related MOD reliability standards to require the exchange of data and coordination among transmission providers and, working through NAESB, to develop complementary business practices. The following data shall, at a minimum, be exchanged among transmission providers for the purposes of ATC modeling: (1) load levels; (2) transmission planned and contingency outages; (3) generation planned and contingency outages; (4) base generation dispatch; (5) existing transmission reservations, including counterflows; (6) ATC recalculation frequency and times; and (7) source/sink modeling identification. The Commission concludes that the exchange of such data is necessary to support the reforms requiring consistency in the determination of ATC adopted in this Final Rule. As explained above, transmission providers are required to coordinate the calculation of TTC/TFC and ATC/AFC with others and this requires a standard means of exchanging data.
ATC	890	310	DEX Load	MOD-001 R9	
ATC	890	310	DEX TX Plan and Contingency outages	MOD-001 R9	
ATC	890	310	DEX Gen Plan and Contingency outages	MOD-001 R9	
ATC	890	310	DEX Base dispatch	MOD-001 R9	
ATC	890	310	DEX existing reservations incl counterflows	MOD-001 R9	
ATC	890	310	DEX ATC recal frequencies and times	MOD-001 R9	
ATC	890	310	DEX Source sink modeling identification	MOD-001 R9	
ATC	890	354	Release unused CBM as non-firm ATC	MOD-028 R11 MOD-029 R8 MOD-030 R9	The Commission adopts the CBM posting requirements proposed in the NOPR. In doing so, we amend our OASIS regulations to incorporate the directives established in the CBM Order. Accordingly, we require transmission providers to post (and update) the CBM amount for each path. In addition, the Commission requires transmission providers to make any transfer capability set aside for CBM but unused for such purpose available on a non-firm basis and to post this availability on OASIS. Furthermore, the Commission requires transmission providers to post (and update) the TRM values for the paths on which the transmission provider already posts ATC, TTC, and CBM.

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ATC	890	389	Unscheduled Reservation released on non-firm and posted on OASIS	Unscheduled service will be handled as a postback under the NAESB Business Practices.	We affirm our statement in the NOPR proposal acknowledging that transfer capability associated with transmission reservations that are not scheduled in real time is required to be made available as non-firm, and posted on OASIS.
ATC	693	782	Criteria used to calculate transfer capabilities for use in determining ATC must be identical to those used in planning operation of the system.	MOD-001 R6, R7	Although we are not proposing to approve or remand this proposed Reliability Standard, the Commission believes that it can be improved. The Commission believes that the process used to determine transfer capabilities should be transparent to the stakeholders, and agrees with International Transmission and MidAmerican that the results of those calculations should not be available for public disclosure but only for qualified entities on a confidential basis. In addition, the process and criteria used to determine transfer capabilities must be consistent with the process and criteria used for other users of the Bulk-Power System. Simply stated, the criteria used to calculate transfer capabilities for use in determining ATC must be identical to those used in planning and operating the system. The Commission directs the ERO to take this into account in its Reliability Standards development process, and to modify the Reliability Standard consistent with Order No. 890 in Docket No. RM05-25-000.
ATC	693	1046	Contingencies to be disclosed	MOD-001 R3.1, R9 Note that NAESB is addressing all public information disclosure requirements.	(W)e adopt the NOPR's proposal that this Reliability Standard should include a requirement that applicable entities make available a comprehensive list of assumptions and contingencies underlying ATC/AFC and TTC/TFC calculations. While we require the submission of contingency files under MOD-010-0, here we only direct the ERO to consider development of a requirement that the transmission service provider declare what type of contingencies it uses for specific calculations of ATC/AFC and TTC/TFC, and release the contingency files upon request if not submitted with the data filed with the ERO in compliance with MOD-010-0.

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ATC	693	1047	Post attachment C on OASIS	NAESB is addressing all OASIS posting requirements.	In order to increase the transparency of ATC calculations, we adopt the NOPR's proposal and direct the ERO to develop in MOD-001-0 a requirement that each transmission service provider provide on OASIS its OATT Attachment C, in which Order No. 890 requires transmission providers to include a detailed description of the specific mathematical algorithm the transmission provider uses to calculate both firm and nonfirm ATC for various time frames such as: (1) the scheduling horizon (same day and realtime), (2) operating horizon (day ahead and pre-schedule) and (3) planning horizon (beyond the operating horizon). In addition, a transmission provider must include a process flow diagram that describes the various steps that it takes in performing the ATC calculation.
ATC	693	1050	TTC be addressed under the Reliability Standard that deals with transfer capability such as FAC-012-1, rather than MOD-001-0.	The SDT believes that structuring TTC to be within each of the three methodologies is more appropriate, based on the complexities and differences in determining TTC.	We adopt the NOPR proposal and require that TTC be addressed under the Reliability Standard that deals with transfer capability such as FAC-012-1, rather than MOD-001-0. The FAC series of standards contain the Reliability Standards that form the technical and procedural basis for calculating transfer capabilities. FAC-008-1 provides the basis for determining the thermal ratings of facilities while FAC-009-1 provides the basis for communicating those ratings. FAC-010-1 and FAC-011-1 provide the system operating limits methodologies for the planning and operational horizon respectively and FAC-014 provides for the communication of those ratings.
ATC	693	1051	Modify FAC-012-1 and any other appropriate Reliability Standards to assure consistency in the determination of TTC/TFC for services provided under the pro forma OATT	The SDT believes that structuring TTC to be within each of the three methodologies is more appropriate, based on the complexities and differences in determining TTC.	The Commission directs the ERO, through the Reliability Standards development process, to modify FAC-012-1 and any other appropriate Reliability Standards to assure consistency in the determination of TTC/TFC for services provided under the pro forma OATT, and requires that those processes be the same as those used in operation and planning for native load and reliability assessment studies. Changes to the process of calculating TTC are appropriate if implementation is coordinated with revisions to the other applicable operating or planning standards. We acknowledge that reliability regions have historically calculated transfer capability using different approaches, and we agree that regional differences should be respected. However, as already discussed above regarding ATC, TTC requirements will be determined in the ERO Reliability Standards development process, and any request for a regional difference from the Reliability Standards must take place through the ERO process.

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ATC	693	1052	Include TTC in the FAC body of standards	The SDT believes that structuring TTC to be within each of the three methodologies is more appropriate, based on the complexities and differences in determining TTC.	We disagree with MidAmerican's opinion that transfer capabilities that are addressed by FAC-012-1 are necessarily different from TTC used for ATC calculation. The NERC glossary defines transfer capability (TC) as essentially identical to TTC. We believe that modeling principles for simulating power transfers and determination of transfer capabilities should be the subject of a single standard. Those principles should be the same regardless of whether transfer capability is used for the purpose of operations, planning or offering for sale. By modeling principles we refer to the way transfers are simulated and the type of analysis that should be performed, such as steadystate, dynamic stability or voltage stability. We are certain that consistent calculation of transfer capabilities will prevent over- and under-estimation of the total transfer capability available for sale. We agree with APPA that this distinction should either be clarified or eliminated through the ongoing Reliability Standards development process, and therefore direct the ERO to modify MOD-001-0 to address TTC under transfer capability-related standards such as the FAC group of Reliability Standards.
ATC	693	1056	Specify the users, owners and operators to which the Reliability Standard will apply	The SDT has done so in the applicability of the standards, as well as in the requirements.	The Commission agrees with APPA that the collaborative efforts and knowledge developed over decades of interconnected operation should not be wasted. We do not believe that will happen through the Reliability Standards development process and that all of the applicable entities will have significant roles to play in achieving the goal the Commission has set out in Order No. 890. Therefore, we adopt the proposal in the NOPR and direct the ERO to modify MOD-001-0 to reflect the users, owners and operators to which the Reliability Standard will apply.
ATC	693	1057	Disclose algorithms for firm and non-firm ATC processes.	MOD-028 R10, R11 MOD-029 R7, R8 MOD-030 R8, R99	Accordingly, the Commission neither accepts nor remands MOD-001-0 until the ERO submits additional information. Although the Commission does not propose any action with regard to MOD-001-0, we address above a number of concerns regarding the Reliability Standard, consistent with those set forth in Order No. 890. We direct the ERO to develop modifications to the Reliability Standard through the Reliability Standards development process that: (1) provide a framework for ATC, TTC and ETC calculation, developing industry-wide consistency of all ATC components; (2) require disclosure of algorithms, for both firm and non-firm ATC and processes used in the ATC calculation; (3) identify a detailed list of information to be exchanged among transmission providers for the purposes of ATC modeling; (4) include a requirement that the assumptions used in ATC and AFC calculations should be consistent with those used for planning the expansion or operation of the Bulk-Power System to the maximum extent practicable; (5) include a requirement that ATC be updated by all transmission providers on a consistent time interval; (6) include a requirement that applicable entities make available assumptions and contingencies underlying ATC and TTC calculations; (7) address only
ATC	693	1057	Define information to be shared between TSPs for ATC calculations	MOD-001 R9.1	
ATC	693	1057	Assumptions use in Planning of Operations and ATC Assumptions should be the same	MOD-001 R6, R7	
ATC	693	1057	ATC should be updated on a consistent schedule	MOD-001 R8 MOD-030 R10	
ATC	693	1057			

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ATC	693	1057	ATC/TTC Assumptions and Contingencies must be made available	MOD-001 R3.1, R9 Note that NAESB is addressing all public information disclosure requirements.	ATC/AFC while TTC/TFC should be addressed under transfer capability standards such as FAC-012-1 and (8) identify the applicable entities in terms of users, owners and operators of the Bulk-Power System.
ATC	693	1057	Put TTC in FAC section	The SDT believes that structuring TTC to be within each of the three methodologies is more appropriate, based on the complexities and differences in determining TTC.	
ATC	693	1057	Identify applicable entities	The SDT has done so in the applicability of the standards, as well as in the requirements.	
ATC	693	1101	CBM must be 0 in non-firm ATC	MOD-028 R11 MOD-029 R8 MOD-030 R9 Note that if CBM has been scheduled, it is considered firm use.	We also reiterate the direction in Order No. 890 that CBM should have a zero value in the calculation of non-firm ATC because non-firm service may be curtailed so that CBM can be used. CBM is reserved as part of the firm transfer capability so that it is available when needed for energy emergencies. We determine that each LSE should be permitted to call for use of CBM, provided all of the other Requirements of R1.1 are met. We direct that CBM may be implemented up to the reserved value when a LSE is facing firm load curtailments.
ATC	693	1105	CBM must be 0 in non-firm ATC	MOD-028 R11 MOD-029 R8 MOD-030 R9 Note that if CBM has been scheduled, it is considered firm use.	The Commission approves MOD-006-0 as mandatory and enforceable. In addition, the Commission directs the ERO to develop a modification to Reliability Standard MOD-006-0 through the Reliability Standards development process that: (1) includes a provision that will ensure that CBM and TRM are not used for the same purpose; (2) provides that CBM should be used for emergency generation deficiencies; (3) modifies Requirement R1.2 to define "generation deficiency" based on a specific energy emergency alert level; (4) includes a provision that CBM should have a zero value in the calculation of non-firm ATC and (5) expands the applicability section to include the entities that actually use CBM, such as LSEs.

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TRM	890	273	Explicit definition of what goes into TRM	MOD-008 R1	<p>The Commission also adopts the NOPR proposal to establish standards specifying the appropriate uses of TRM to guide NERC and NAESB in the drafting process. Transmission providers may set aside TRM for (1) load forecast and load distribution error, (2) variations in facility loadings, (3) uncertainty in transmission system topology, (4) loop flow impact, (5) variations in generation dispatch, (6) automatic sharing of reserves, and (7) other uncertainties as identified through the NERC reliability standards development process. Because load, facility loading and other uncertainties constantly deviate, we will not require that TRM set aside capacity be set at zero in the non-firm ATC calculation. In other words, we will not require transfer capability that is set aside as TRM to be sold on a non-firm basis. We find that clear specification in this Final Rule of the permitted purposes for which entities may reserve CBM and TRM will virtually eliminate double-counting of TRM and CBM.</p>
TRM	890	273	TRM = Load Forecast and Load Distribution Error	MOD-008 R1	
TRM	890	273	TRM = Variation in facility loading	MOD-008 R1	
TRM	890	273	TRM = uncertainty in tx topology	MOD-008 R1	
TRM	890	273	TRM = loop flow	MOD-008 R1	
TRM	890	273	TRM = variations in dispatch	MOD-008 R1	
TRM	890	273	TRM = ARS	MOD-008 R1	
TRM	890	273	Define any additional uses	MOD-008 R1	
TRM	890	273	No double counting	MOD-008 R2	
TRM	890	275	Max TRM Calc	<p>The SDT has not been able to identify any maximum calculation that stands out as a leading example to be made into a standard. TRM is a risk management tool, and its calculation may be legitimately different for various systems, regions, and companies.</p>	<p>In addition, we direct public utilities, working through NERC, to establish an appropriate maximum TRM. One acceptable method may be to use a percentage of ratings reduction, i.e., model the system assuming all facility ratings are reduced by a specific percentage. This is a relatively simple method and, if adopted as the reliability standard's method, should not restrict a transmission provider from using a more sophisticated method that may allow for greater ATC without reducing overall reliability.</p>

Topic	Order	Cite	Brief Description	Addressed By	Detailed Citation
TRM	693	1082	No double counting	MOD-008 R2	Accordingly, the Commission neither accepts nor remands MOD-004-0 until the ERO submits additional information. In the interim, compliance with MOD-004-0 should continue on a voluntary basis, and the Commission considers compliance with the Reliability Standard to be a matter of good utility practice. Although the Commission did not propose any action with regard to MOD-004-0, it addressed above a number of concerns regarding the Reliability Standard, consistent with those set forth in Order No. 890. Therefore, we direct the ERO to develop modifications to the Reliability Standard through the Reliability Standards development process to: (1) clarify that CBM shall be set aside upon request of any LSE within a balancing area to meet its verifiable historical, state, RTO or regional generation reliability criteria; (2) develop requirements regarding transparency of the generation planning studies used to determine CBM value; (3) modify the current Requirements to make clear the process for how CBM is allocated across transmission paths or flowgates; (3) modify its standard in order to prevent setting aside CBM and TRM for the same purposes; (4) modify the standard by adding LSE as an applicable entity and (5) coordinate with NAESB business practice standards.
TRM	693	1122	Define flowgate/path allocation process for TRM	MOD-008 R1.2 Note that NERC plans to develop a more detailed set of guidelines for TRM in the future.	Consistent with the NOPR proposal and Order No. 890, the Commission directs the ERO to modify standard MOD-008-0 to clarify how TRM should be calculated and allocated across paths or flowgates. We understand that the standards drafting process is underway as a joint project with NAESB. We agree with International Transmission, MidAmerican and MISO about the need for more uniformity and transparency in TRM calculation methodology and use, in order to eliminate potential reliability and discrimination concerns. Consistent with Order No. 890, the Commission directs the ERO to specify the parameters for entities to use in determining uncertainties for which TRM can be set aside and used, such as: (1) load forecast and load distribution error; (2) variations in facility loadings; (3) uncertainty in transmission system topology; (4) loop flow impact; (5) variations in generation dispatch; (6) automatic reserve sharing and (7) other uncertainties as identified through the NERC Reliability Standards development process. We find that clear specification in this Final Rule of the permitted purposes for which entities may reserve CBM and TRM will also virtually eliminate double-counting of TRM and CBM. Therefore, we direct the ERO to determine clear requirements regarding permitted uses for TRM through its Reliability Standards development process.
TRM	693	1122	TRM = Load Forecast and Load Distribution Error	MOD-008 R1	
TRM	693	1122	TRM = Variation in facility loading	MOD-008 R1	
TRM	693	1122	TRM = uncertainty in transmission topology	MOD-008 R1	
TRM	693	1122	TRM = loop flow	MOD-008 R1	
TRM	693	1122	TRM = variations in dispatch	MOD-008 R1	
TRM	693	1122	TRM = ARS	MOD-008 R1	
TRM	693	1122	Define any additional uses	MOD-008 R1	
TRM	693	1124	Add PC, RC to applicable entities	The SDT does not find that these entities need to be added to the TRM standard, as it can not identify any explicit	

Topic	Order	Cite	Brief Description	Addressed By	Detailed Citation
				responsibilities of these entities which can be measured that relate to TRM.	
TRM	693	1126	Explicit definition of what goes into TRM	MOD-008 R1	The Commission neither accepts nor remands MOD-008-0 until the ERO submits additional information. In the interim, compliance with MOD-008-0 should continue on a voluntary basis, and the Commission considers compliance with the Reliability Standard to be a matter of good utility practice. Although the Commission did not propose any action with regard to MOD-008-0, it addressed above a number of concerns regarding the Reliability Standard, consistent with those proposed in Order No. 890. Accordingly, we direct the ERO to develop modifications to the Reliability Standard through the Reliability Standards development process including: (1) clear requirements on how TRM should be calculated, including a methodology for determining the maximum TRM value, and allocated across paths; (2) clear requirements for permitted purposes for which TRM can be set aside and used; (3) clear requirements for availability of documentation that supports TRM determination and (4) expanding the applicability to add planning authorities and reliability coordinators and any other appropriate entity identified in the Reliability Standards development process.
TRM	693	1126	Documentation of TRM	MOD-008 R1, R3	
TRM	693	1126	Allocation of TRM across paths	MOD-008 R1.2 Note that NERC plans to develop a more detailed set of guidelines for TRM in the future.	
TRM	693	1126	Max TRM Calc	The SDT has not been able to identify any maximum calculation that stands out as a leading example to be made into a standard. TRM is a risk management tool, and its calculation may be legitimately different for various systems, regions, and companies.	

TRM	693	1126	Standard on How TRM to be calculated	The SDT has not been able to identify any single methodology that stands out as a leading example to be made into a standard. TRM is a risk management tool, and its calculation may be legitimately different for
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Topic	Order	Cite	Brief Description	Addressed By	Detailed Citation
				and companies.	
TRM	693	1126	Add PC, RC to applicable entities	The SDT does not find that these entities need to be added to the TRM standard, as it can not identify any explicit responsibilities of these entities which can be measured that relate to TRM.	890-290. The Commission directs public utilities, working through NERC, to modify the reliability standards MOD-010 through MOD-025 to incorporate a requirement for the periodic review and modification of models for (1) load flow base cases with contingency, subsystem, and monitoring files, (2) short circuit data, and (3) transient and dynamic stability simulation data, in order to ensure that they are up to date. This means that the models should be updated and benchmarked to actual events. We find that this requirement is essential in order to have an accurate simulation of the performance of the grid and from which to comparably calculate ATC, therefore increasing transparency and decreasing the potential for undue discrimination by transmission providers.
OTHER	890	290	Develop MOD-010 through MOD025 to include review of models used	NERC has this development effort in its planning cycle.	