



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Kenneth A. Sugden
Organization:	Flathead Electric Cooperative
Telephone:	406 751 4401
E-mail:	gmgr@fec.cc
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
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<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

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The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

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**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

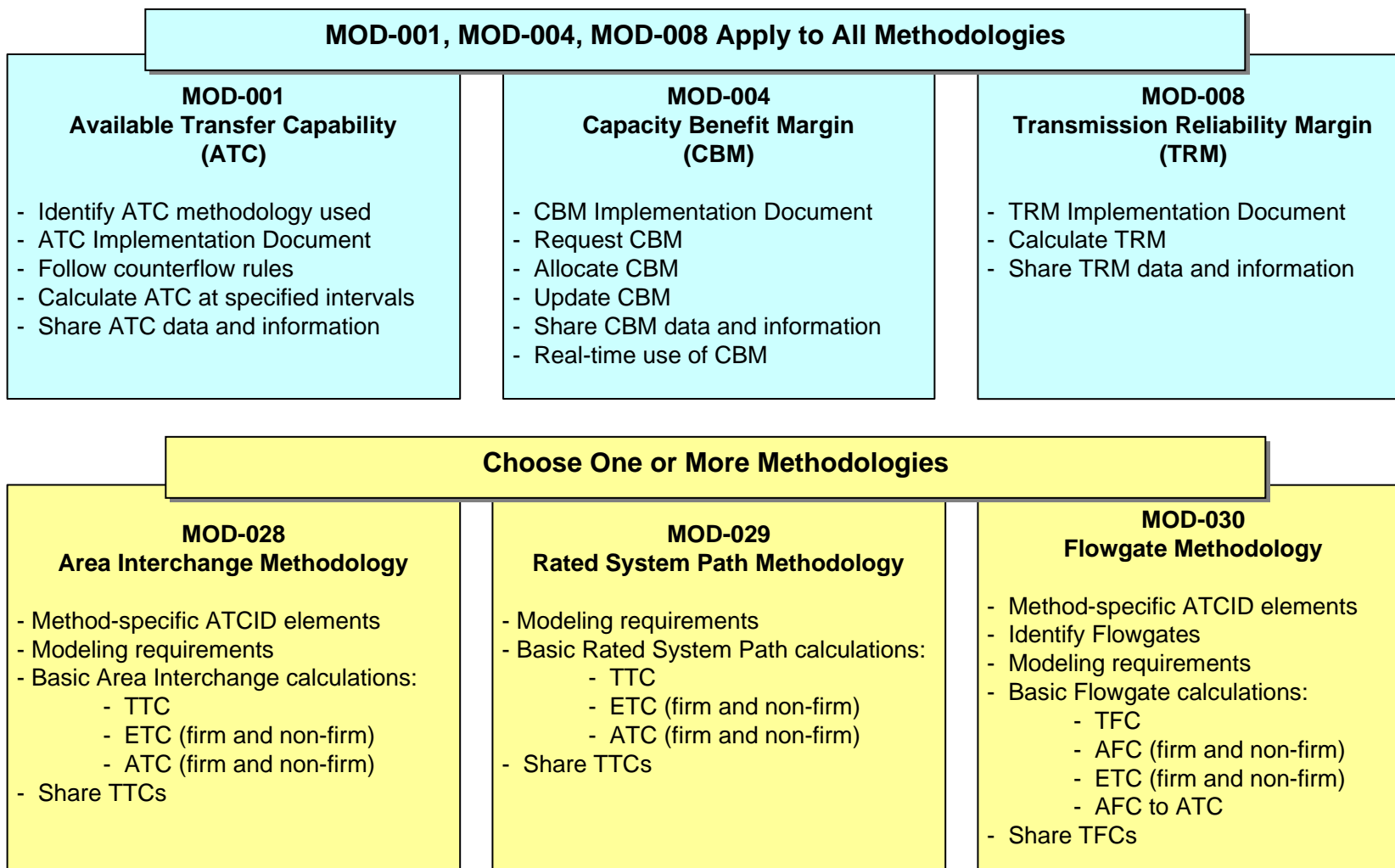
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

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5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.  
Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

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2) In reference to MOD-030-1/R10, the requirement should be altered as follows: "The Transmission Service Provider shall [insert] provide a tool to [end insert] convert Flowgate AFCs to ATCs (and TFCs to TTCs) for Posted Paths. . . ." BPA calculates flowgate AFC's for its network and provides a tool for AFC-to-ATC conversion (in BPA's case, Power Utilization Factor Calculators). We believe at this time that this is sufficient for transmission customer needs and that the posting of ATCs, as opposed to AFCs, would result in less transparency due to the sheer number of combinations that could be required to be posted.





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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Bert Bressers
Organization:	Southwest Power Pool
Telephone:	501-614-3300
E-mail:	bbressers@spp.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
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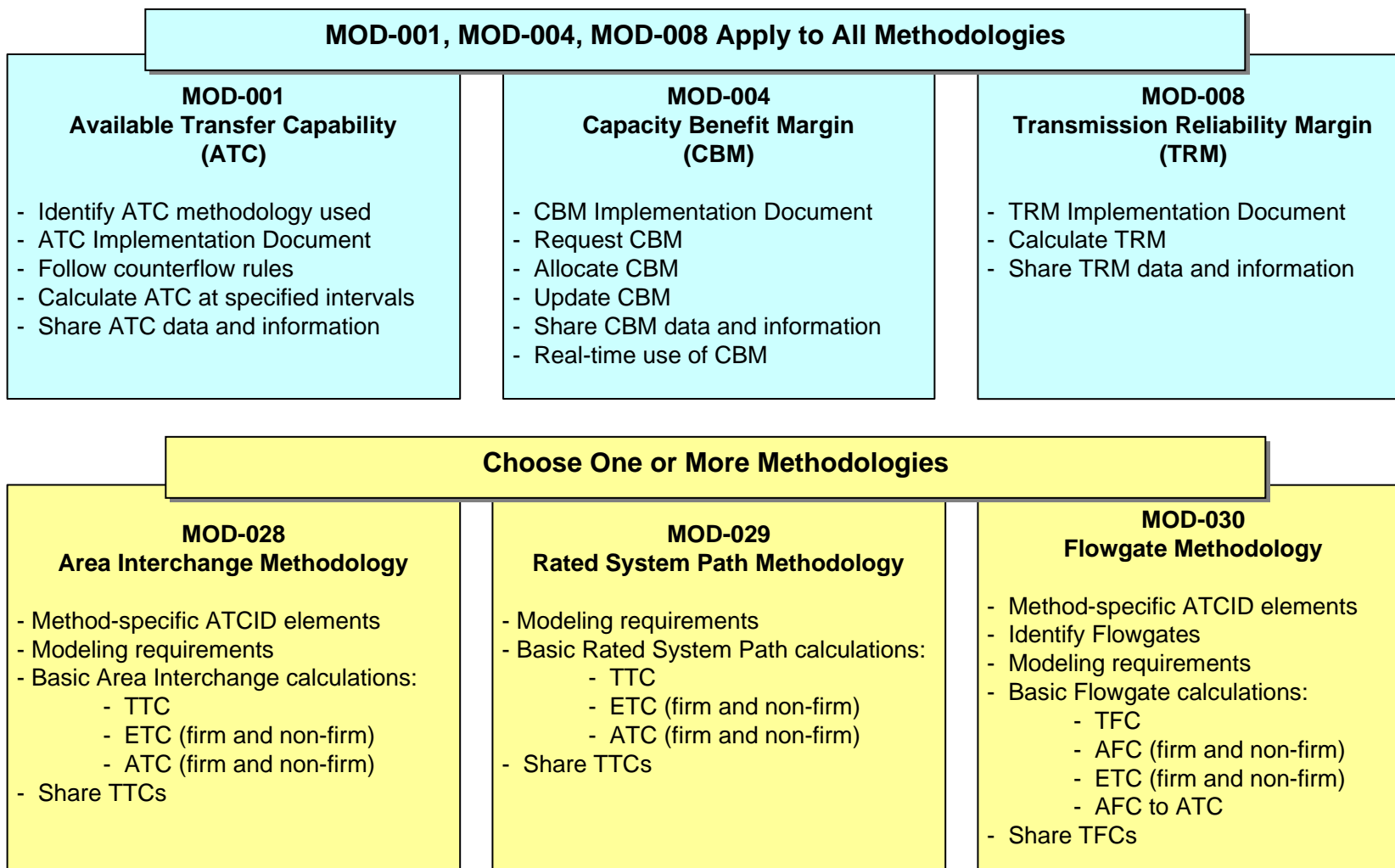
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Comments:

MOD-001-1

R1

1. Is it correct that R1 assumes that all the Transmission Operators within the Tariff footprint of a Transmission Providers shall agree upon the applicable ATC Methodology for the Tariff footprint and the TSP shall base the ATC Calculations and the ATCID document on the selected ATC methodology or methodologies. Meaning R1 and R2 are related.

2. Is it correct R1 assumes that a TSP can only have one methodology for the time frame specified in R2.1. Same for R2.2 and R2.3. They can be different for R2.1 and R2.2 or R2.3.

3. The MOD-001-1 responsibilities of Transmission Operator are not fully clear. Is MOD-001-1 assuming that a Transmission Operator can calculate ATC based on his selected ATC Methodology for his Operator Area independent from TSP for purpose of evaluating some of his internal Service Requests and that TSP can have a different Methodology for the Tariff footprint that includes Operator Area of TOP. Meaning no relation between R1 and R2, TOP and TSP can have different methodologies for ATC Calculations.

R8

1. Is MOD -001-1 assuming that somehow the Transmission Operator is calculating TTC, AFC or ATC or any other data that will be used for purpose of evaluating Service Requests.

2. What is the list of assumptions that are referred to in R8.

R10.13

1. If a TSP uses flow gate Methodology (MOD-030-1) what ETC need to be posted, the ETC on flow gate basis as specified in R7 MOD-030-1 or a ETC on path basis converted from ETC flow gate basis to ETC path basis using conversion specified in R9 MOD-030-1.

2. Is it a correct assumption that ATC, ETC and TTC posted for a path can be values from 3 different constraints, so the numbers itself don't add up. Is this in line with what FERC had in mind when requesting posting of TTC, ATC and ETC.

3. There are "rumors" that Scenario Analyzer is not considered being compliant by FERC with R10.3 standards. Are you aware of any additional NERC or NAESB requirements that describe what is considered being compliant with R10.13, posting ATC, ETC, TTC. Not the "what" requirement but the "how" requirement.

M2

1. Do we need to be compliant with the requirements of MOD-030 (selected ATC Methodology) or are we audit against the description of ATCID Document

M7

1. Same question as listed under R8.

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MOD-004-1



R5

1. We think this should be a TSP responsibility and not a TP responsibility. What is reason this was assigned to Transmission Planner.

MOD-008-1

R1 and R2

1. What is the reasoning behind making TSP responsible for the ATCID Document and CBMID document and making TOP responsible for TRMID Document. We think TRMID should be a TSP responsibility also.

MOD-030-1

R2

1. What is the reasoning behind making TOP solely responsible to identify flow gates. We think both TSP and TOP are responsible, TOP for his Operating Area and TSP for the Tariff footprint and neighboring footprints.

R3

1. What is the reasoning behind making TOP responsible to maintain a transmission model to determine AFC. We think TSP should be responsible, to model the Tariff footprint and neighboring footprints as complete as possible.

R4.2

1. What is the reasoning behind requirement of higher granularity for AFC Calculations. (using Source and not POR). We think it should be allowed to calculate impacts on POR / POD basis (grouping of commonly dispatched resources within BA Area) and not with higher granularity. (Source) It is not required to schedule the Confirmed Reservation with same granularity.

2. What is meant with "interface points with adjacent TSP". The 1tier BA Area of TSP?

R5.2

1. What is definition of external (third party) flow gate. Is it something like: third party flow gate is flow gate for which the limiting equipment of the monitored element is not in one of the TOP Areas of the Tariff footprint of the TSP.

2. What if RC footprint doesn't match the Tariff footprint. Are we required to use AFC overwrite from some one else if it is our RC flow gate however not our Tariff flow gate.

R6.2

1. What is the definition of "expected to be scheduled". Does this mean TSP can use judgement ?

2. What is the definition of "Included in de model ", probably refers to included in calculations referred to in R6.1.1 – R6.1.4

R9

1. MOD-001-1 requires posting of ETC. If a TSP uses Flowgate Methodology does he need to convert ETC (flow gate based) to ETC (path based) using same formula as R9. Or does he need to post ETC flow gate based, result of R7 and R8 requirements of MOD-030-1.

M2

1. See R2 question..

M7

1. See R3 question.

M10

1. What about using outages for Monthly time frame? We only use outages if they last more than 15 days in that Month.



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(Complete this page for comments from one organization or individual.)	
Name:	Anita Lee
Organization:	Alberta Electric System Operator
Telephone:	403 539-1497
E-mail:	anita.lee@aeso.ca
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
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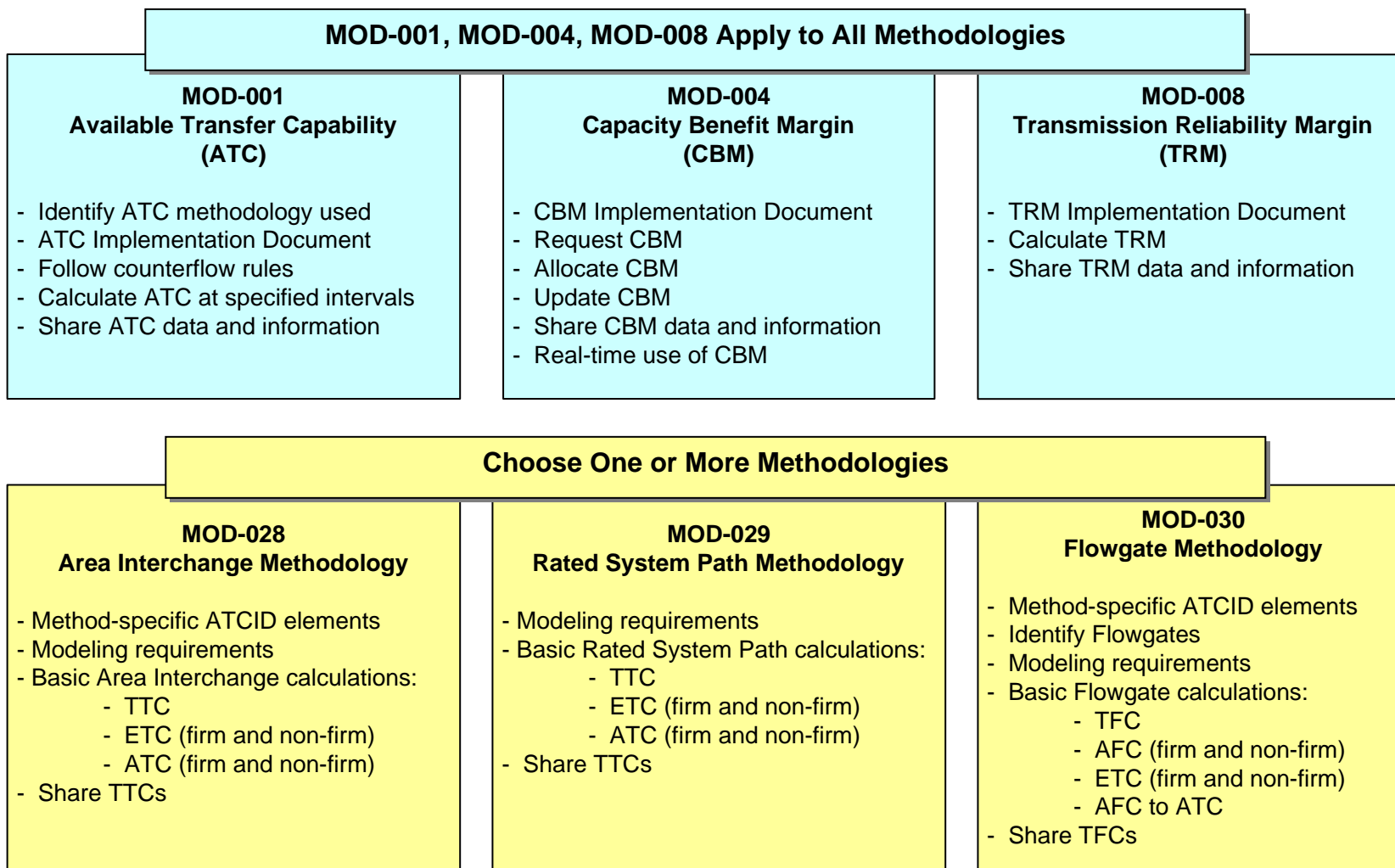
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Comments: The AESO currently does not use OASIS for transmission services but is sharing information with the British Columbia Transmission Corporation for posting transmission services on the only one shared tie line. To meet some of the requirements

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in these standards that require the entity to post transmission information (such as ATCID) on OASIS, would it be acceptable for such entity to post the information on its website instead? Could this provision be added to the requirements?



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Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Warren Clark
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
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<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
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## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

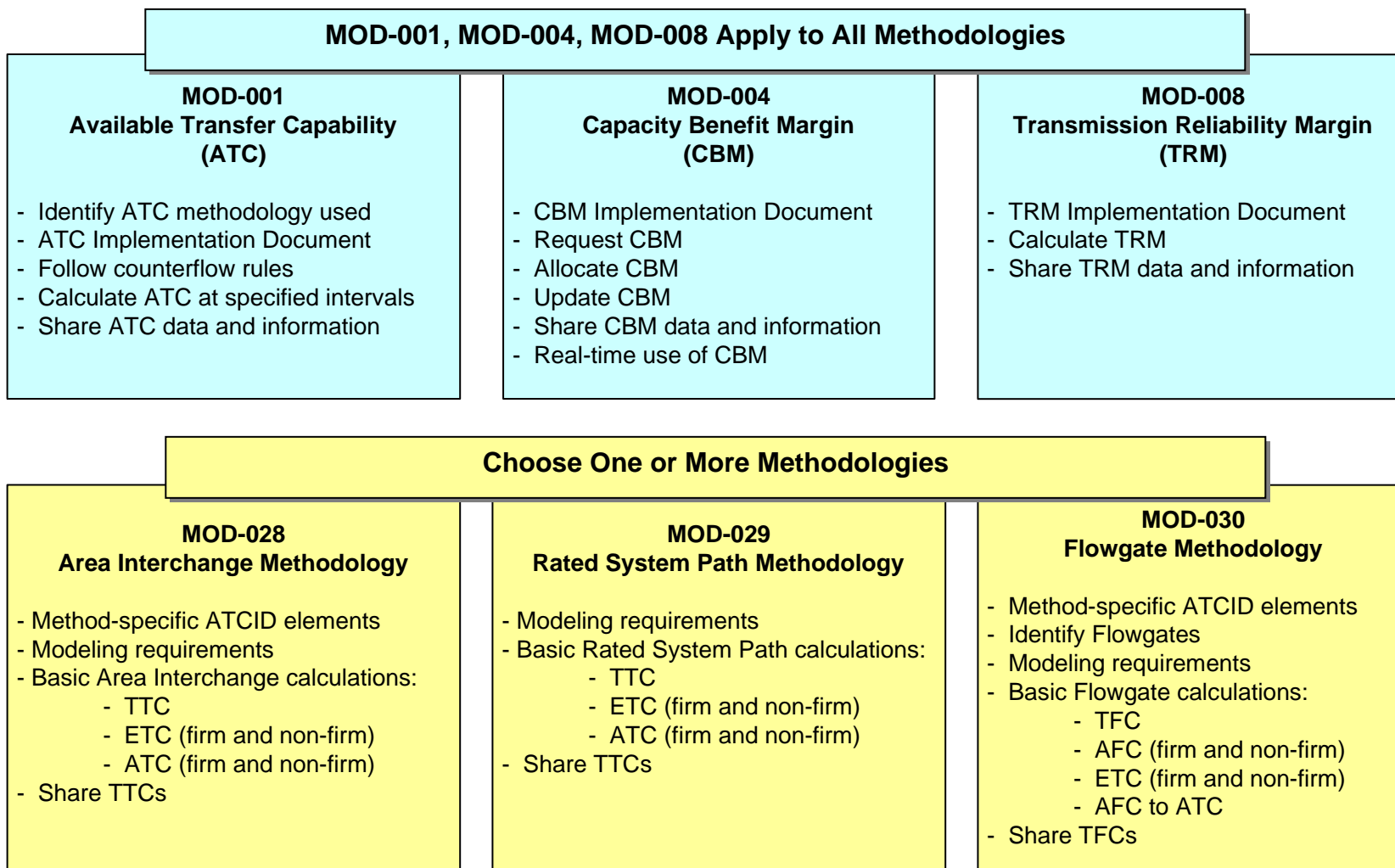
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: Avista strongly supports the inclusion of a 12-month implementation period for these standards. A 12-month implementation period is particularly important for MOD-29. MOD-29, as drafted, will require that numerous paths not previously exposed to the high rigors of the MOD-29 TTC determination process will have to be examined. Avista anticipates that it will elect the Rated System Path Methodology for certain Posted Paths on Avista's system. Avista will, at a minimum, require a 12-month implementation period to assure proper review of the Posted Paths under the methodology. It will be difficult, if not impossible, to fully implement MOD-29 in the absence of the recommended 12-month implementation period.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: In MOD-001, "Posted Path" is included as a defined term. "Posted path" is also defined in 18 CFR § 37.6 (b)(1)(i). Using a term that is already defined in the CFR may create confusion. Accordingly, Avista suggests that throughout the MOD standards, NERC replace the term "Posted Path" with a different defined term, such as "paths required to be posted", "paths requiring posting" or "paths for which ATC is calculated."

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-001-1, A., 3. the stated purpose contains goals that are not required for reliable system operation, but rather are for viable commercial activity. Reliable system operations are impacted by incorrect TTC values and uncoordinated transaction scheduling activities.

MOD-001-1, A., 4. Applicability, Transmission Service Providers calculate ATC. Transmission Operators (in the near term) and Transmission Planners (in the longer term) calculate TTC.

MOD-001-1, B., R1, Transmission Operators calculate transfer capability (TTC) of facilities within their TO areas. Transmission Planners calculate transfer capability (TTC) of facilities within their TP areas. Transmission Service Providers calculate ATC for those paths that they are required to, choose to, or are asked to post.

MOD-001-1, B., R3 Transmission Service Providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability. This requirement to create a separate document creates an undue burden on the industry - transmission customers will have two different documents to review, and transmission service providers will have two different documents to maintain.

MOD-001-1, B., R3.3 the term "Facility" should say "Posted Path" (but see the comment above regarding definition of "Posted Path"). The term facility in the NERC glossary says facility is "A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)."

MOD-001-1, B., R3.6 "Allocation methodologies" – it is not clear to what this means? Perhaps the following: "For paths where multiple Transmission Service Providers share capacity or have rights, describe how the capacity is allocated among providers," or words to that effect.

MOD-001-1, B., R4 is not needed, it is already covered in R3.2.

MOD-001-1, B., R5 is not needed, it is already covered in R3.2.

MOD-001-1, B., R6 is not necessary. Revisions to Attachment C are to be filed and posted.

MOD-001-1, B., R7 Attachment C is already required to be posted (available) for any entity to review, subject to CEII concerns.

MOD-001-1, B., R9 is not a reliability concern. In addition, it is unduly burdensome. Current and accurate ATCs are a commercial concern. In addition, performing 168 hourly calculations every hour when neither TTC nor ETC has changed, benefits no one and is costly. The commercial requirement should be to require the recalculation of hourly ATC once a day and whenever either TTC or ETC changes for any period of time between this hour and the next 168 hours.

MOD-001-1, B., R10, this requirement for data sharing between reliability entities is a good concept. However, as currently worded, all the burden to supply data is incorrectly placed totally upon the TSP and not on the Transmission Operator or Transmission Planner. Much of the data listed is critical for proper TTC calculation which the TSP may not have access to. The TSP calculates ATC based on upon TTC supplied by the Transmission Operator and/or Transmission Planner. This requirement does not specify how the request is made or how the response or provision of data is dated. The corresponding measurement, M9, implies that all data items requested will be supplied within 14 days, but requirement states that the TSP will begin to make available at the 14 day mark. In addition, change first sentence words "...days of a request of any Transmission..." to "...days of a request made by any Transmission..." to read more in-line with the intent.

MOD-004-1, A., Capacity Benefit Margin is a use of the transmission system that is requested by a load serving entity. This standard contains requirements for the interactions between the LSE and the transmission provider. These requirements are largely commercial in nature and should be under NAESB development. Reliability standards concerning CBM should only require LSEs to acquire minimum CBM to ensure service to load.

MOD-004-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's CBM methodology. This requirement to create a separate document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and providers would have to maintain two different documents.

MOD-004-1, B., R2 is not necessary. Revisions to Attachment C are to be filed and posted (available) for any entity to review, subject to CEII concerns.

MOD-004-1, B., combine R3.3 language into R3.1.

MOD-004-1, B., R3.2 it seems more reasonable for the requirement to read "LSE shall review any active CBM requests at least every six months and submit updates as required."

MOD-004-1, B., R8, R9, R10, M11, M12, M13 use of the terms "tag" or "Interchange Transaction Tag" which is inconsistent with NERC INT and NAESB CI BP standards where specific reference to "tag" or "e-Tag" has purposefully been avoided in those standards. The term Request For Interchange (RFI) refers to a collection of data as defined in the NAESB RFI Datasheet, to be submitted to the Interchange Authority for the purpose of implementing bilateral Interchange between a Source and Sink BA. Or the term Arranged Interchange refers to The state where the Interchange Authority has received the Interchange information (initial or revised) and has distributed that information for reliability assessment. I believe that in these requirements, Arranged Interchange is the more appropriate language.

MOD-008-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's TRM methodology. This requirement to create a separate document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and TSPs two different documents to maintain.

MOD-008-1, B., R1.1 suggest modifying to read: "For each path or flowgate that ATC or AFC is calculated, describe how each of the following components of uncertainty are used in calculating TRM for each of the ATC time horizons (if not applicable, indicate as such):" The words "ATC time horizons" could be used to eliminate the need for R1.4.

MOD-008-1, B., R1.1 suggest adding another item to the list. Variability and uncertainty in determining Transmission losses across Posted Paths.

MOD-029-1, B., R1 (modeling requirements) should include the statement that the data listed below should reflect the expected conditions for the applicable time period.

MOD-029-1, B., 1.6 Suggests this bullet be deleted. This is already addressed in R2 wherein the modeling process is dictated. In the RSP methodology, "peak load forecasts" are not used to stress the system; rather, load and generation are simulated to stress the system to its greatest capacity. There are cases when the highest forecasted load may not stress the system to its greatest utilization – which is the goal of the R2 under the RSP.

MOD-029-1 B., R5 definition of GF - The language describing Grandfathered capacity includes the defined terms "Firm" and "Transmission Service." Use of these words as defined terms is inconsistent throughout the proposed standards. They should either be changed here to a lower case or all applicable areas in each proposed standard should be changed to the defined term.

MOD-029-1 in R6, is the "non-firm capacity reserved for NITS" the same as Secondary Network Service (i.e., NN-6)?

MOD-029-1 in R7 & R8, what are "Postbacks"? This term is not used in the west. The term Postback should not be used in the RSP methodology.

MOD-029-1 in R5, R6, R7, & R8, calculation of ETC and ATC are commercial concerns and should be addressed in business practice standards NAESB and enforced through FERC's adoption of those business practice standards into the CFR.

MOD-029-1 in R8 ETC (Firm) definition, it uses the word "non-firm" and it should state "firm". We are assuming this is a typo.

MOD-029-1 in R8 the requirement says we are to use the same formula for all horizons – this is incorrect. For the real-time, same-day time frame, we release all unscheduled capacity as non-firm ATC. As such, the formula would read:

$$\text{ATCNF} = \text{TTC} - \text{Scheduled ETCF} - \text{Scheduled ETCNF} - \text{CBMS} - \text{TRMU} + \text{Counter-schedulesF} + \text{Counter-schedulesNF}$$



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Jerry Smith
Organization:	Arizona Public Service Co.
Telephone:	602-250-1135
E-mail:	jerry.smith@aps.com
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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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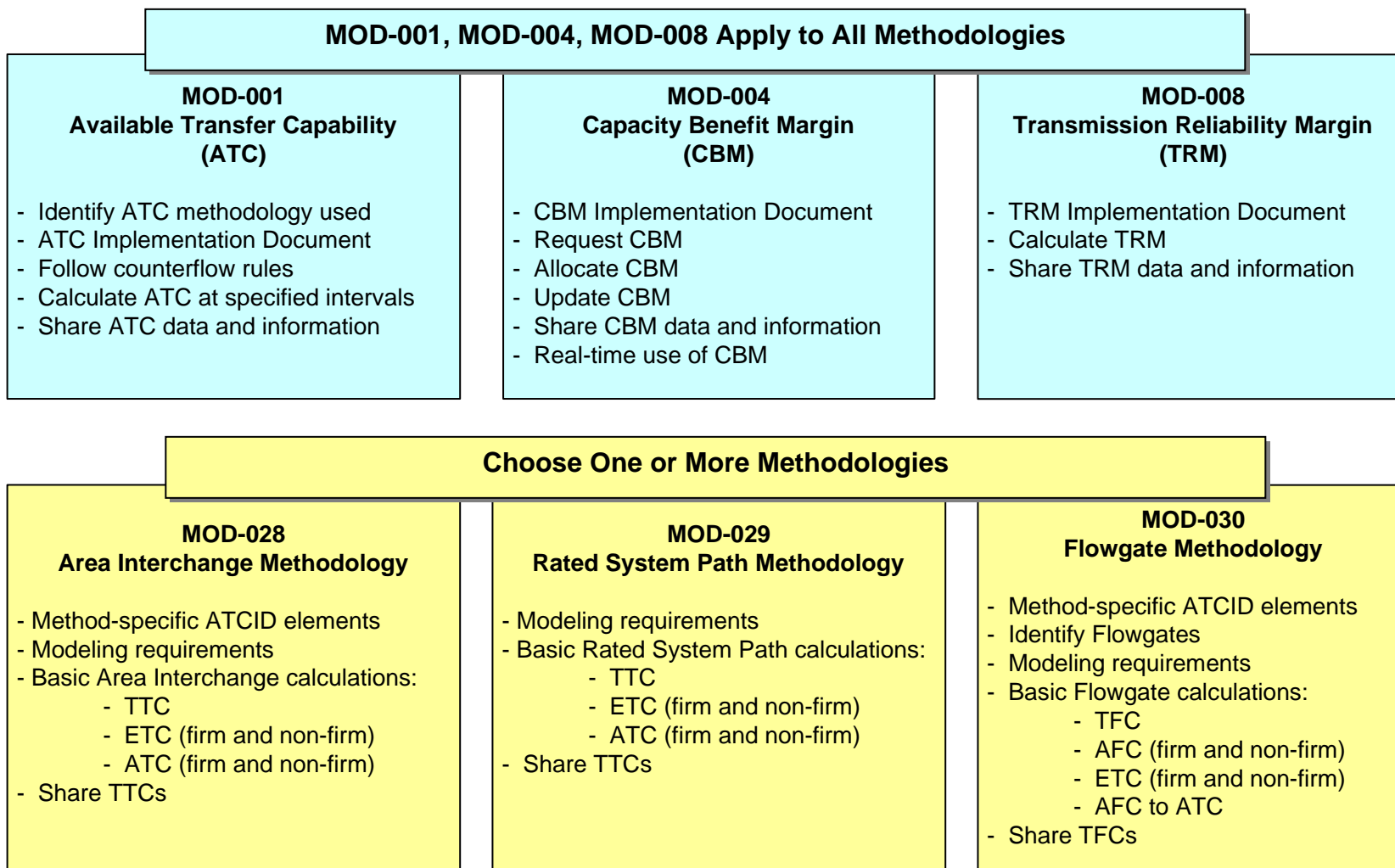


**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

Arizona Public Service Co. strongly supports the inclusion of a 12 month implementation period for these standards.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: Arizona Public Service Co. agrees with the WECC's Comment that the NERC ATC Drafting team should clarify the meaning of the term counterflows.

In addition the NERC ATC Drafting team should clarify what is meant by the term post back.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: • Arizona Public Service Co. is in agreement with the WestConnect Comments and in general agreement with the WECC Comments.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

Arizona Public Service Co. is in agreement with the WestConnect Comments and in general agreement with the WECC Comments.

In addition the Arizona Public Service Co. adds the following comment.

MOD-001

The use of Counter Schedules to create firm ATC is of concern to APS. This practice could result in unreliable conditions to the interconnection if the counter flows do not occur. Due to the reliability concerns there should be a requirement for the Transmission Provider to provide documentation of actions that it will take if the Counter Flows do not occur.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: Arizona Public Service Co. is in agreement with the WestConnect Comments and in general agreement with the WECC Comments.



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<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	Eugene Warnecke
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<b>NERC Region (check all Regions in which your company operates)</b>	<b>Registered Ballot Body Segment (check all industry segments in which your company is registered)</b>
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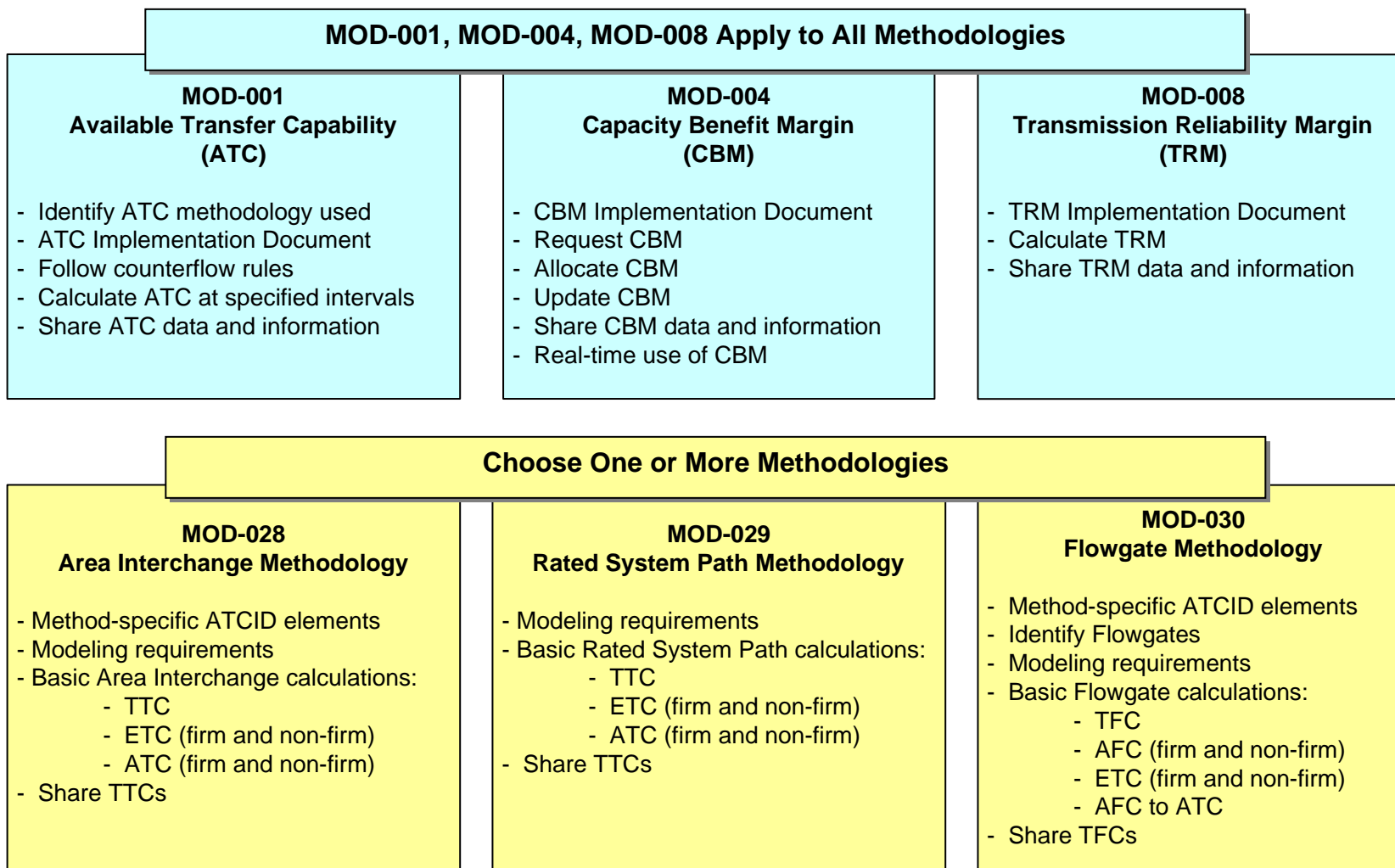


**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
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- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: MOD-004-1

- R4.2. This is a fundamental mathematical analytical dichotomy. The CBM component is based on probabilistic LOLE/LOLP style analyses that look at aggregate probability loss. The reserve sharing component of TRM is deterministic. It is imprudent to combine these as they are not derived from the same methodology except in the rare case where the generation is sufficiently constrained that the only resulting generation left after CBM event is the reserve sharing generation.
- R4.2.2. Since AFC is determined from CBM, CBM for each Flowgate should not be dependent on AFC. CBM can be big enough to drive AFC to zero or negative. This simply means that resource adequacy criteria can't be met, and no capacity will be available on that Flowgate (which is what the original wording of this requirement was trying to do anyway). Therefore CBM should not be set to AFC, it should be left at whatever value was calculated. This concept applies to R4.2.1 and R5.2 as well.

R4.3 and R5.3 Not necessary. Refer to R4.2.2 for explanation.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: MOD-004-1

M8. "CBM has been used to determine a margin" should be reworded. CBM is a margin. Suggest eliminating "to determine a margin".

D.1.1.3. R1 refers to CBMID not ATCID.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-004-1

6. Effective Date: "all six standards are approved" MOD-001-1 lists the six standards, should list here as well.

R4.1.2.2. "each impacts" => "each impact"



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Jason Shaver
Organization:	American Transmission Company
Telephone:	262 506 6885
E-mail:	jshaver@atcllc.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
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On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
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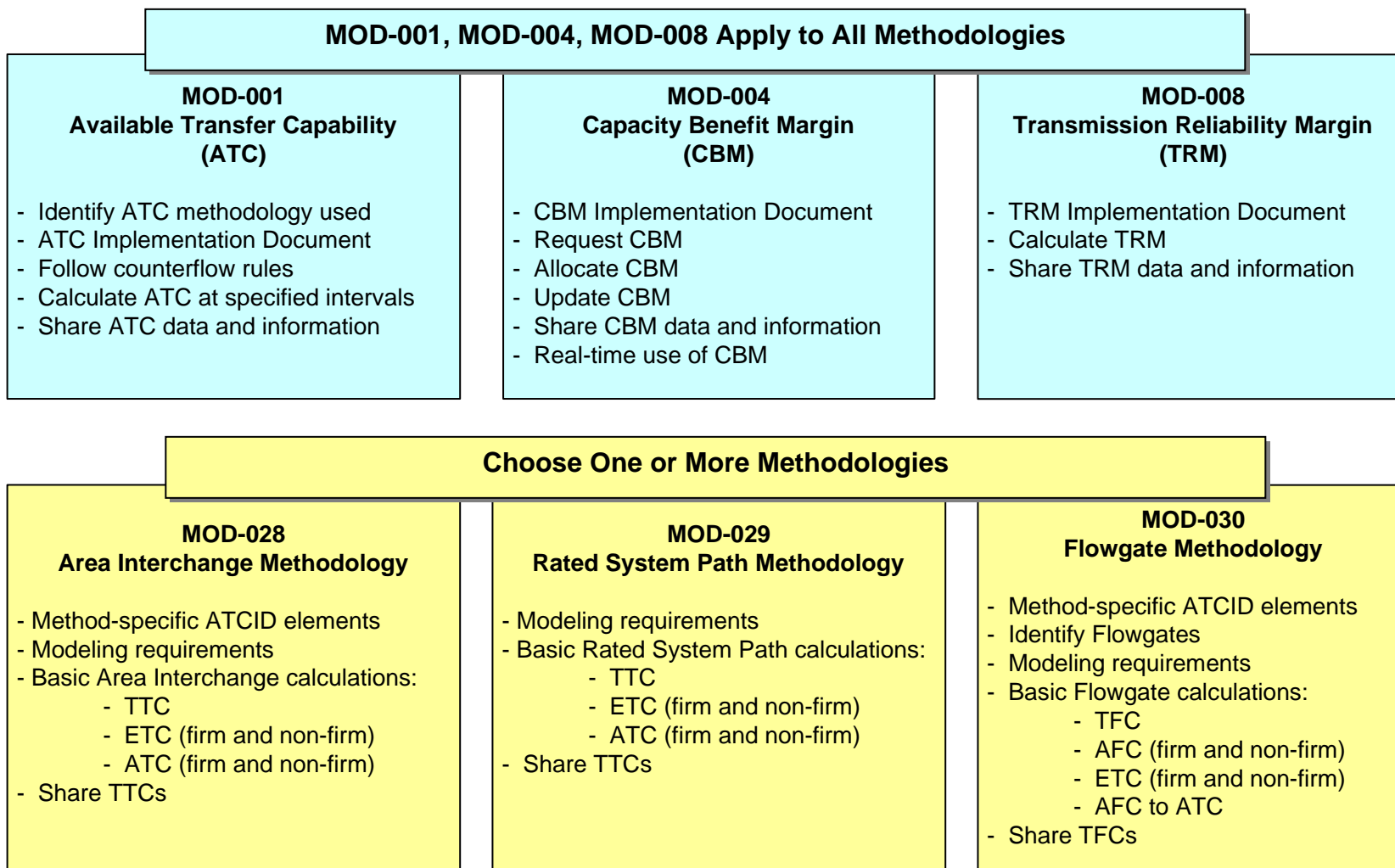


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Incorrect Measure or Compliance Element:

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Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-001-1 – Available Transfer Capability

R1: Potential source of problems – the Transmission Operator (American Transmission Co.) selects an ATC methodology that the Transmission Service Provider (Midwest Independent System Operator) must use for calculations even if it is not equipped to use the methodology chosen. May want to add language that urges agreement between TO and TSP.

MOD-004-1 – Capacity Benefit Margin

R2: Typo in line two, “CBID” should be “CBMID”

R4.1.2.2: Should be rewritten. Suggestion: “Impacts with a Distribution Factor of 3% or greater relative to OTDF Flowgates and 5% or greater relative to PTDF Flowgates will be classified as significant.”

R4.2: CBM should not be based on the sum of all requests – we don’t need to plan for a simultaneous capacity emergency in every area impacted by a Flowgate. Rather, CBM should be based on the maximum of all requests. By reserving the maximum CBM of all requests, a single capacity emergency in any one area impacted by the Flowgate will be covered.

R4.2.2: Setting CBM to the lesser of the GCIR impacts or the firm AFC for a Flowgate is not correct, because setting CBM based on AFC or ATC is an invalid circular argument. Consider the following simple example:

The definition of  $AFC: TFC - EFC - CBM - TRM + \text{Postbacks} + \text{Counterflows} = AFC$

So, if the rating on a Flowgate is 100 MW (TTC = 100),  
there are no existing transmission commitments (ETC = 0),  
the calculated GCIR impacts is 25 MW (CBM = 25),  
and for the sake of this example there is no Transmission Reliability Margin (TRM = 0),  
and no Postbacks or Counterflows.

Our AFC:

$$100 - 0 - 25 - 0 + 0 + 0 = 75$$

Now assume that firm sales account for 75 MW of flow across the Flowgate, so ETC = 75.

New AFC:

$$100 - 75 - 25 - 0 + 0 + 0 = 0$$

So in this case, we’ve got an AFC of zero, which is less than the calculated GCIR, so we would set CBM to zero even though we previously set aside 25MW for CBM that is being unused!

CBM should be set to the calculated maximum GCIR value for the impacted LSE's. As CBM fluctuates up and down year-by-year the AFC will be affected and may sometimes go negative, but this is a necessary by-product of selling transmission service (ETC) far into the future.

R4.3: CBM should not be reduced based on insufficient capacity. If AFC/ATC happens to be negative when a request to use CBM is issued, the CBM transactions should be granted and then all transactions across the constrained element, including the CBM transactions, should be curtailed on a pro-rata basis, which will result in load shedding procedures for the capacity deficient entity. This is the next step in an Energy Emergency Alert. CBM is the last attempt in EEA2 to prevent EEA3 and firm load curtailment.

R5.2: Change sum to maximum, see note for R4.2.

MOD-008-1 – Transmission Reliability Margin

R1.5: Typo in line one, change "all" to "any."

R4: Shouldn't the Transmission Operator also have the right to request this information? This requirement only allows other TSP's to receive the TRM calculation info.

MOD-030-1 – Flowgate Methodology

R2.1: Typo in line one, change "used" to "use."

R3: Change "Transmission Operator" to "Transmission Service Provider" because MOD-001 requires the TSP to calculate ATC/AFC values.\

R8: Typo in counterflows section, change "ATC" to "AFC"

R9: Typo, "ATCNF" should be "AFCNF"



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Abbey Nulph
Organization:	Bonneville Power Administration
Telephone:	(360) 619-6421
E-mail:	ajnulph@bpa.gov
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
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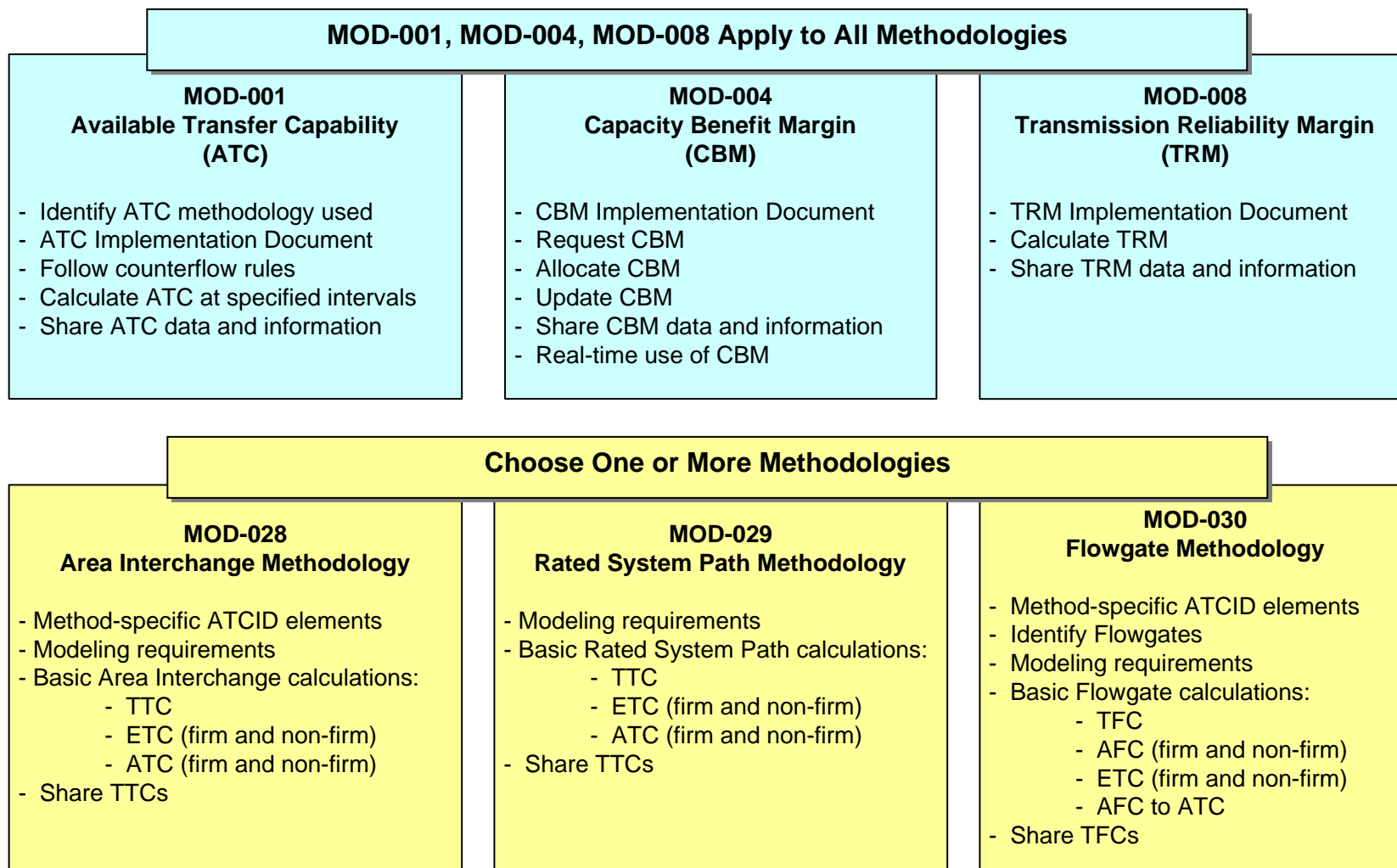
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: This allotted time is sufficient and if shortened, would be a burden, especially for those entities electing to use the Rated System Path methodology that will require a much more rigorous TTC determination process than has historically been used.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

- Incorrect Definition:

- a. A definition for counterflow should be provided and used consistently in MOD-028, -029, and -030. A suggested definition follows: "Counterflow: the impact of schedules, reservations, or actual flows of energy in the direction opposite to the constraint."

- b. MOD-004 – In Order 890, FERC limited the use of CBM to meet generation reliability criteria – please clarify what is meant by "reserve adequacy requirements"

- c. MOD-029 – The definition of Rated System Path Methodology incorrectly refers to ATC as "Available Transmission Capability" – this should be corrected to "Available Transfer Capability"

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

- Incorrect Requirement:

- a.

MOD-001

- i. R1 and R2 – "time periods" should be replaced with "time horizons"
- ii. R3.2 – "counter-schedules" should be deleted and "counterflows" should be capitalized with the definition supplied above [Counterflow: the impact of schedules, reservations, or actual energy flows in the direction opposite to the constraint
- iii. R3.3 – BPA suggests removal of this requirement, as it would require extensive modification to existing databases without serving a great need.
- iv. R4 and R5 – should be cut from MOD-001 and placed in MOD-028, -029, and -030

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- v. R10 – The wording is confusing and should be modified to the following: “...current versions of the following data, limited to that data requested, in electronic format...”
- vi. R10.2 – “Peak” should be deleted, as non-peak load forecasts may be used in ATC calculations
- vii. R10.3 – BPA requests that the term “Block dispatch” be defined
- viii. R10.4 – Should be modified to the following, to be less vague and more consistent with the pro-forma OATT: “Aggregated capacity encumbered for Network Integration Transmission Service and Secondary Service”
- ix. R10.6 – Should be modified to the following, to allow for the inclusion of Grandfathered service or other statutory obligations that have not been contracted for: “Aggregated capacity encumbered for Grandfathered obligations”
- x. R10.13 – It appears as though the following is missing from the last right parenthesis: “(TRM”
- b. MOD-004
  - i. R1 – Should have a fourth sub-requirement added to explain that if there is insufficient capacity available to satisfy all requests for CBM, the Transmission Service Provider shall explain in its CBMID how allocation of CBM will occur
  - ii. R2 – Should be modified to the following: “...CBMID to the Transmission Operator, adjacent Transmission Service Provider...”
  - iii. R8 – Should be modified to the following: “...set aside as CBM unless affected by a declared NERC Energy Emergency Alert (EEA) 2 or higher”
- c. MOD-029
  - i. R1.4 – “Non-regulating” should not be capitalized
  - ii. R1.6 – “peak” should be deleted, as non-peak load forecasts may be used in TTC calculations
  - iii. R1.12 – “ACTID” should be changed to “ATCID”
  - iv. R2.2 – There appears to be a potential discrepancy between this requirement and other reliability requirements for establishing System Operating Limits.
  - v. R2.3 – “R1.2.1” should be changed to “R2.1”
  - vi. R5 – “reserved” should be changed to “encumbered” in the description of NL, GF, and OS, as these obligations may not have been reserved via an OASIS transaction – Additionally, the “Firm Transmission Service” in the description of GF should not be capitalized
  - vii. R6 – “reserved” should be changed to “encumbered” in the description of GF and OS, as these obligations may not have been reserved via an OASIS transaction –

Additionally, the "Transmission Service" in the description of GF should not be capitalized

- viii.R7 and R8 – "Counter-schedules" should be changed to "Counterflows" with the definition supplied above [Counterflow: the impact of schedules, reservations, or actual flows of energy in the direction opposite to the constraint]
- ix. R8 – "non-" should be deleted from the description of ETC
- d. MOD-030
  - i. R2.1 – Delete "for" after "Flowgates"
  - ii. R2.1.1 – BPA suggests the following clarification to this requirement, to avoid posting unnecessary data: "Any Facility within the Transmission Operator's area based on thermal, stability or voltage limits is a Flowgate if such limits reduce transfer capability on a Posted Path"
  - iii. MOD-001 allows an entity to select multiple methodologies to determine ATC. For example, an entity may elect to use Flowgates inside their affected area whereas they may also elect to use the Rated System Path Methodology at the interface of their affected area. Under this scenario, the applicable entity need not study Flowgates beyond the intercepting cut plane of its interface as the ATC at the interface falls not under MOD-030, but MOD-029. To prevent unneeded seams issues, the following rewrites are suggested:
    - 1. R2.1.2 – All first Contingency transfer analyses from all adjacent Balancing Authority source sink combinations such that at a minimum the first three limiting Elements/Contingency combinations within the Transmission Operator's system are included as Flowgates, unless the interface between such adjacent Balancing Authorities is accounted for using the Rated System Path Methodology
    - 2. If adopted, similar language should be applied to R3.5, R3.6, R5.1, R6.1, R6.3, R6.4, R7.2, and R7.4
  - iv. R4 – "Use" should not be capitalized – Additionally, two sub-requirements should be added to allow for the modeling of impacts of Network Integration Transmission Service and Grandfathered service in the base AFC calculations.
  - v. R6.1 – "Firm Network" should be changed to "Network Integration Transmission Service" to be consistent with how this service is identified in the OATT
  - vi. R6.1.1.1, R6.1.2.1, R6.1.3.1, and R6.1.4.1 – "Peak" should be deleted, as non-peak load forecasts may be used in ETC calculations – Additionally R6.1.3.1 is incorrectly identified as "R6.1.3.1.1"
  - vii. R6.3 – The last sentence should be a separate requirement, similar to R7.3 – this would result in the final sentence of R6.3 becoming R6.4 and the current R6.4 becoming R6.5. The new R6.4 and R6.5 should also be modified to the following to accommodate Grandfathered service or other statutory obligations for which a contract does not exist or scheduling requirements are not in place: "The impact of any firm Grandfathered obligations expected to be utilized..."

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- viii.R7.3, and R7.4 – Each should have the word “contracts” replaced with “obligations” to accommodate GF service that does not hold a contract.
  - ix. R7 – A sub-requirement should be added to allow for the inclusion of the impacts of Network Integration Transmission Service and Secondary Service
4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

- a. MOD-01
  - i. M9 – There is an unnecessary word “the” following the word “show” in the second line of the measure. Additionally, the timeline(s) for responding to a request for data in R10 and M9 should be made consistent with one another – is it a requirement to respond to the request for data w/in 14 days or to begin to respond?
  - ii. VSL for R4 – The word “Firm” should be inserted before the word ATC as R4 only refers to Firm ATC.
  - iii. VSL for R5 – The word “Non-Firm” should be inserted before the word ATC as R5 only refers to Non-Firm ATC.
- b. MOD-04
  - i. M1 – Suggested rewording: “Each Transmission Service Provider shall produce its CBMID evidencing inclusion of all specified information in R1.” This approach should also be taken at M1 for MOD-08.
  - ii. M5 – line 3 states “...they it has based its CBM...” Please change to “...that it has based its CBM...”
  - iii. VSL for R2 – The acronym “CBID” should be changed to “CBMID.”
  - iv. VSL for R10 – The VSL is unclear. The Team suggests it be rewritten to state, “The Transmission Service Provider failed to approve an Interchange Transaction Tag for CBM submitted by an Energy Deficient Entity under an EEA2 when CBM was available.”
  - v. D1.3 Data Retention – For clarity, the phrase “three calendar years” in the second through fifth bullets should be changed to “most recent three calendar years plus the current year.”
- c. MOD-08
  - i. M5 – M5 is missing the right parenthesis after the word “data” on the first line.
  - ii. VSL for R1 – In the Moderate Level column, change the phrase “changes been” to “changes that have been”.
- d. MOD-29
  - i. M1 – M1 inaccurately calls for production of “models” used to derive TTC. As there are multiple conditions under MOD-29, R2 where a model does not dictate the predicate for TTC, M1 should be reworded to state “...shall produce the models, contracts, nomograms, reports or study results...” – this corresponding to:
    1. Models in R2.1, R2.2. and R2.5
    2. Contracts in R.2.3 and R2.6
    3. Nomograms in R2.4
    4. Reports or studies in R2.7 and R2.8
  - ii. M1.3 – The Team suggests correcting M1.3 from “...as stated in R1.1 through R.12...” to “...as stated in R1.1 through R1.12...”
  - iii. M4 – If “M1” above is adopted, M4 is duplicative of M1 and should be deleted.
  - iv. VSL for R4 – An SOL does not exist for every Posted Path. This VSL should be amended by changing the words “the SOL” in the High and Severe columns to read “any



SOL". This makes the wording of the Requirement consistent with the wording of the Measure.

v. VSL R5, R6, R7, R8 – These VSLs call for only a "severe" determination. They also mandate that the TSP "use" all the elements defined. However, the TSP will not "use" all the defined elements if they are not applicable. Thus, if a TSP does not "use" all elements defined because all the elements were not applicable – the TSP is in violation for not including null elements in its calculation. The Team suggests these be rewritten to state: "The Transmission Service Provider did not use all affected elements as defined in..." This approach should help clarify that "zero" as an integer is an acceptable entry and that only those variables "affected" need be reported or acted upon.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: This response, however, is based on the understanding that BPA's statutory requirements to serve the load of other federal entities (i.e. the Corp of Engineers and the Bureau of Reclamation) are sufficiently accommodated within the GF or OS components of the ETC calculation in MOD-029 and the GF component of the ETC calculations in MOD-030. If these variables were not intended to accommodate non-contracted statutory obligations of this nature, please modify the ETC calculations to accommodate these obligations (see suggested modifications provided in earlier comments).

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

a. GENERAL

i. BPA supports retention of the three methods recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028).

ii. BPA supports the retention of the proposed one-year implementation period.

iii. BPA supports allowing NAESB to address all "posting" issues as they directly affect OASIS.

b. MOD-001

i. BPA supports allowing the use of more than one methodology for calculation of ATC by any one entity. For example, the Team supports allowing any entity to use the Flowgate methodology inside their affected area while also using the Rated System Path methodology at its boundaries.

ii. BPA supports allowing each entity to specify in its ATCID how it will treat counterflows.

iii. BPA supports the aggregation of transmission capacity for grandfathered contracts when shared with neighboring requestors.

iv. BPA supports the specifically limited universe of entities to which data sharing is required as prescribed in R10.

c. MOD-008

i.R2 – Add the following language to strengthen the distinction between TRM and CBM: “Transmission capacity required for the period immediately following a contingency and before the market can respond (up to 59 minutes following the contingency) are included in TRM”

d. MOD-029

i.BPA strongly supports retention of the requirement(s) in R2.2 that accommodate paths which are “flow limited” by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing and functional practices without re-inventing the wheel where no such effort is required to meet FERC’s goals of transparency and consistency.

ii.BPA strongly supports retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.

iii.BPA strongly supports retention of the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.

iv.BPA strongly supports retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts and potentially their associated operational agreements while supporting FERC’s mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.

v.BPA strongly supports the adoption of the proposed Counterflow definition as its adoption clarifies the application of Counterflows in each equation.

e. MOD-030

i.R10 – It is assumed this requirement has been included to promote transparency, but will in fact have the opposite effect due to a flood of posted data being required that is not used to process requests, and therefore is not used by market participants, and should be modified to the following: “The Transmission Service Provider shall provide a tool to convert...”

BPA has heard from a number of its Customers and other impacted parties that the posting of ATC, rather than AFC, will not promote transparency in the Northwest market or across BPA’s system. BPA provides several tools on its website and OASIS site to facilitate interested parties’ access to AFC-to-ATC conversions. These tools are easy to use and since a smaller quantity of data is posted to our OASIS site (i.e. 10 AFCs as opposed to several thousand ATCs), our OASIS system is more responsive and therefore, also easier to use.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Phil Park
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E-mail:	phil.park@bctc.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

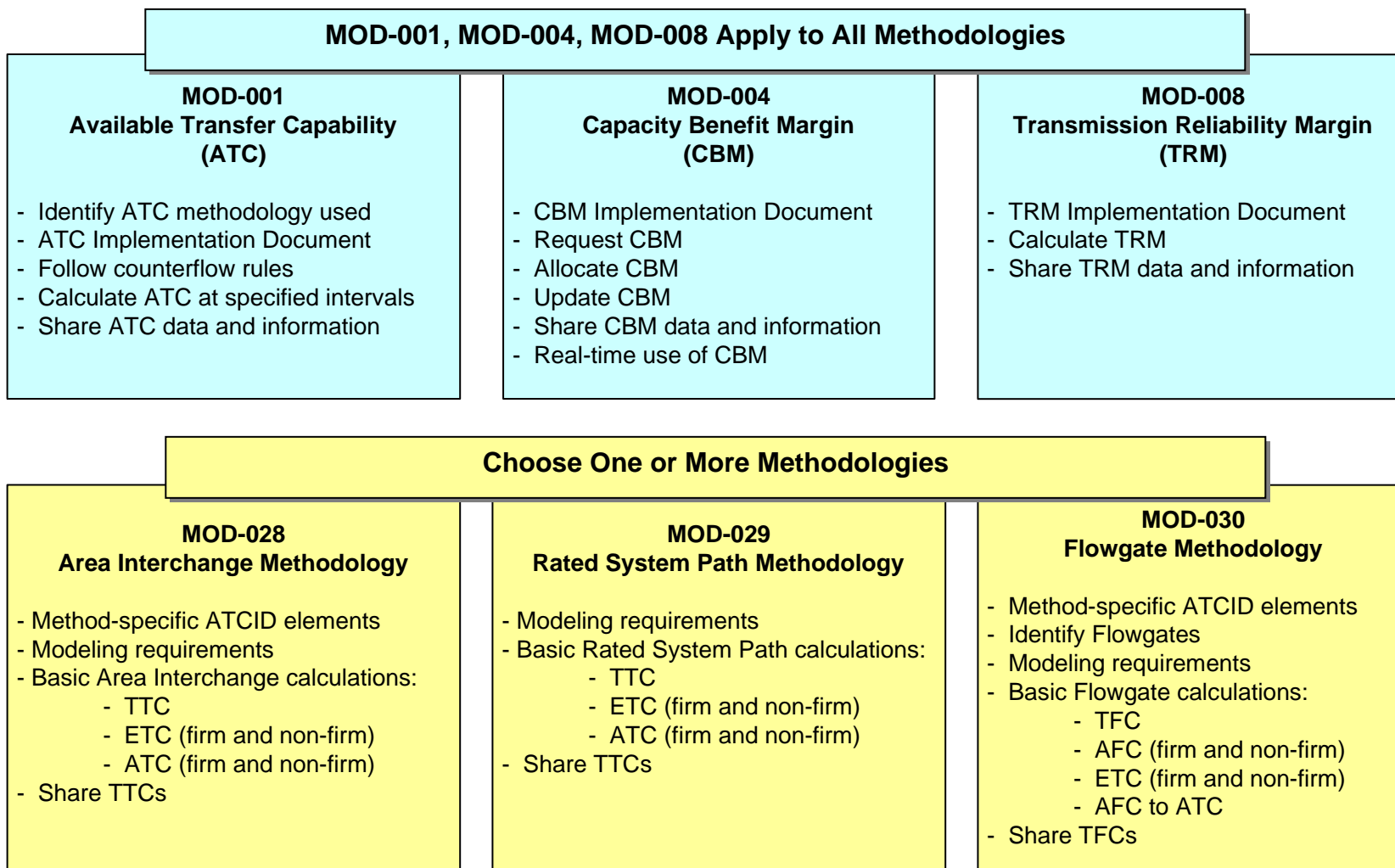
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: We have two concerns, discussed in our comments below, that if not addressed may be problematic for a 12 month implementation, as BCTC may have difficulty in achieving compliance with any of the three ATC methodologies within 12 months. Our first concern is discussed in our comment 6.3 below regarding MOD-028-1, R7. MOD-028-1 will not be an option for BCTC if we cannot continue to use interpolation between representative TTCs (that we calculate according to the process described in R7). It will take BCTC longer than 12 months, if it is even practical, to develop the systems to calculate TTC with the same level of accuracy as we do today without interpolation, given the complexity of our system, the range of variable, limitations, and contingencies we consider to determine TTCs. Our second concern is discussed in our comment 6.5 with respect to MOD-029-1 M-1. We believe that this requirement is redundant to M4. However, if it is retained as a specific requirement to produce models, BCTC will have a problem because it appears to retroactively require that models be produced for TTC calculations that were done in the past, and such models are no longer archived. BCTC does not use flowbased methods, so MOD-030-1 is not applicable to us. For these reasons, for BCTC to be compliant within 12 months, it is important to us that the concerns described above and discussed further in our comments 6.3 and 6.5 be accommodated within the standards.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

1. MOD-001-1, R3.3 - The word "Facility" should be replaced with "Posted Path".
2. MOD-029-1, R1.6 - We suggest that the word "peak" be removed. Often maximum TTC occur at off-peak conditions when load near to the generation is lower.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect,

please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

1. MOD-029-1, M4 and Compliance, 1.3 Data Retention, 4th bullet - The reference to R2.7 should be R2.6 (i.e. should be R2.1 through R2.6). There are no models, reports, or study results required by R2.7. Therefore, there is no point in having a Measure and a Compliance Process looking to see if models, reports, or study results have been produced and retained.

2. MOD-029-1, M7 - Should the reference be to R7 and R8? R6 does not require the use of TTC.

3. MOD-029-1, M7 - The reference to R.1.2 is not clear. Should this reference be to R2?

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1. MOD-028-1, R3.1 - We believe we understand the meaning of intra-day but are unfamiliar with the term intra-peak. Does this mean hourly peak?

2. MOD-028-1, R3.1, R3.2, R4.1, R4.2 - The parenthetical "(at a minimum)" is subject to interpretation. Does it mean that this is the minimum list of parameters to model or does it mean that these are the most conservative values allowed? If additional parameters or some other values are used, the references need to be specified somewhere. For example, if Peak Load is not used (because a higher TTC can be made available in shoulder hours), the ATCID needs a section describing what load to use. We suggest that "(at a minimum)" be replaced with "(or other values and additional parameters as specified in the ATCID)".

3. MOD-028-1, R7 - The process for calculating TTC should also the Transmission Operator to calculate TTC by interpolating between TTC values that have been calculated according to the process outlined. In complex systems with many assumptions in variables (e.g. load forecast, ambient temperature, generation dispatch), many possible limitations (e.g. thermal, transient stability, voltage stability, minimum voltage), and many single and multiple contingencies to run, it becomes impractical to calculate TTCs as described in R7. BCTC currently runs up to N-3 contingencies. BCTC, as well as an adjacent Transmission Operator, calculate TTCs using the process described in R7 for representative conditions, which on their own can require thousands of studies. TTCs for other conditions are then found by interpolation between the representative cases. Any margin we need to allow for "interpolation error" is much less than the margin we would need to allow if we generalize generation dispatch, ignore transient stability, or

omit multiple contingency studies. Under no conditions do we extrapolate outside of the conditions bracketed by the studies. We propose an item f be added as follows:

f. When two or more transfer capabilities have been established according to the above procedure which bracket the requirements described above, the TTC can be determined by interpolation between these established transfer capabilities.

4. MOD-029-1, R4 - The double use of TTC is potentially confusing. At a minimum we suggest rephrasing R4 to be "at the lesser of the TTC calculated in R1".

5. MOD-029-1, M1 - This measure is redundant. M4 requires that the TO produce the models, reports, or study results that it used to establish TTC. Since M4 already addresses models, M1 is redundant.



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<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	K. David Hagen, General Manager
Organization:	Clearwater Power Company
Telephone:	(208) 743-1501
E-mail:	dhagen@clearwaterpower.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
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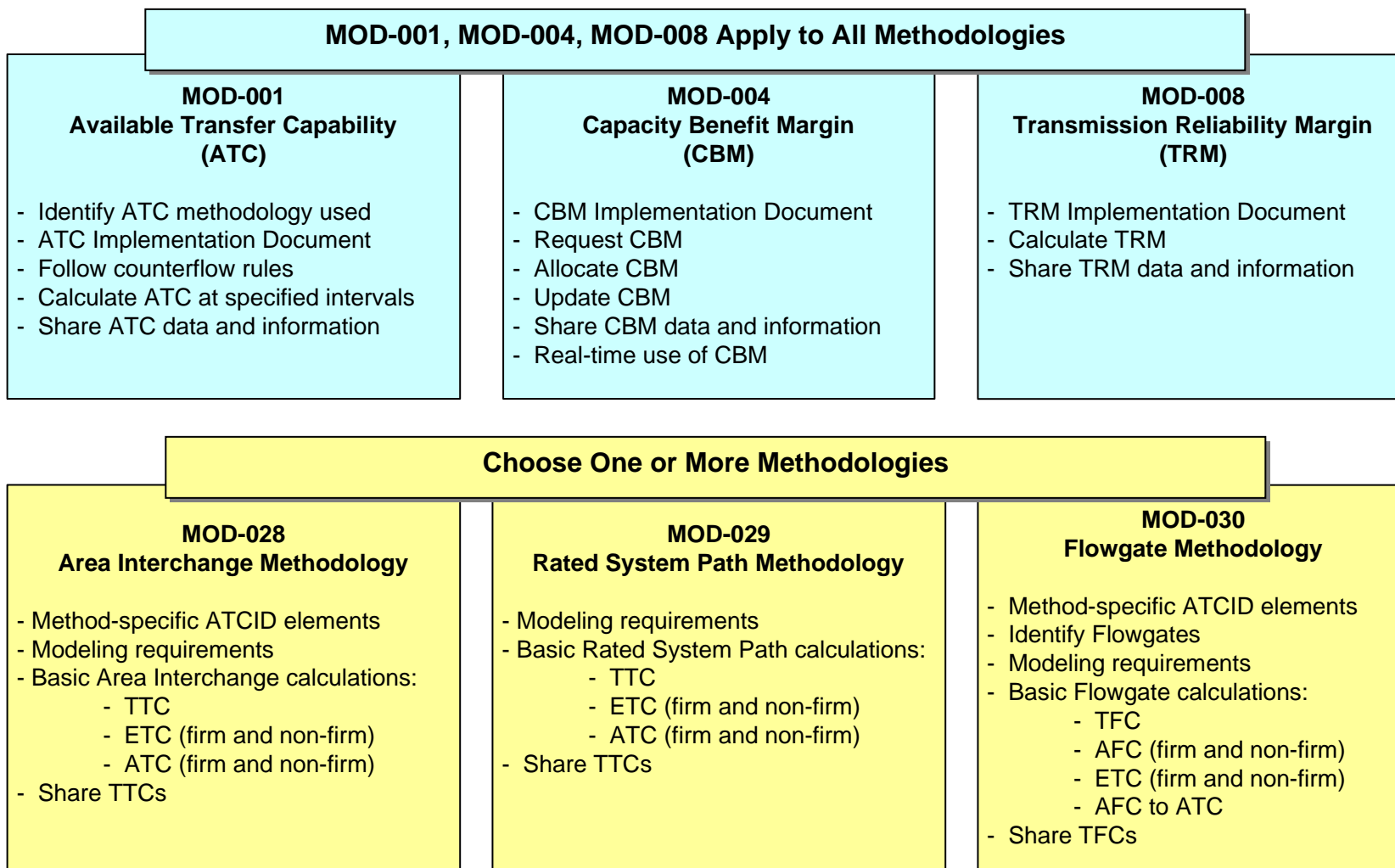
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards





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- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
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- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.  
Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1) We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2) In reference to MOD-030-1/R10, the requirement should be altered as follows: "The Transmission Service Provider shall [insert] provide a tool to [end insert] convert Flowgate AFCs to ATCs (and TFCs to TTCs) for Posted Paths. . . ." BPA calculates flowgate AFC's for its network and provides a tool for AFC-to-ATC conversion (in BPA's case, Power Utilization Factor Calculators). We believe at this time that this is sufficient for transmission customer needs and that the posting of ATCs, as opposed to AFCs, would result in less transparency due to the sheer number of combinations that could be required to be posted.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Paul Arnold --Vice President
Organization:	ColumbiaGrid, Inc.
Telephone:	503-943-4933
E-mail:	arnold@columbiagrid.org
<b>NERC Region</b> (check all Regions in which your company operates)	<b>Registered Ballot Body Segment</b> (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

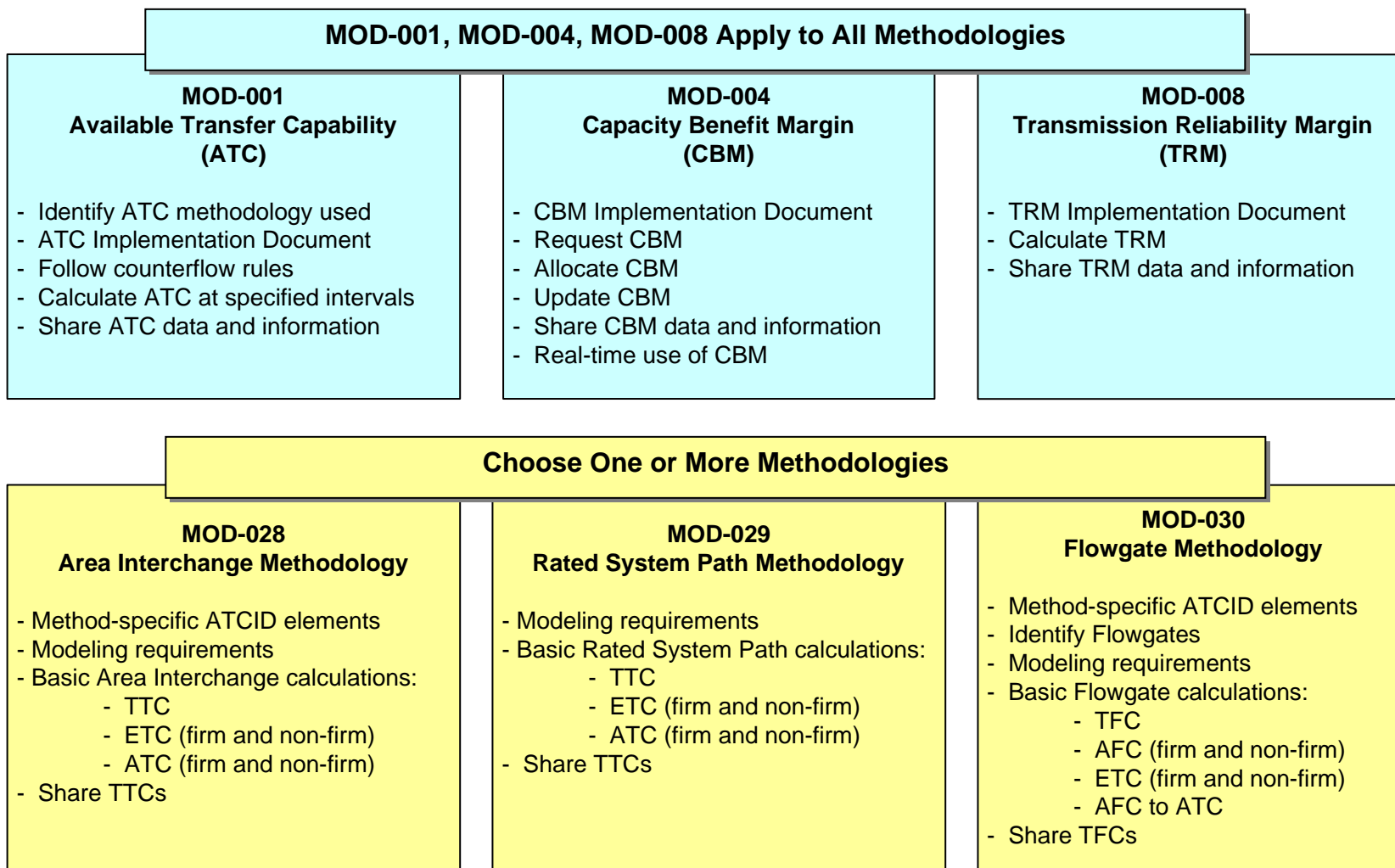
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: [Intentionally left blank.]

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: [Intentionally left blank.]

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

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Incorrect Measure or Compliance Element: [Intentionally left blank.]

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: [Intentionally left blank.]

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: Please see the comments below.

GENERAL COMMENTS:

a) ColumbiaGrid, a non profit corporation formed to promote the efficient operation, planning and use of the Northwest transmission grid, is generally supportive of the ATC Reliability Standards comments prepared by WECC. ColumbiaGrid believes that it is important to recognize and address the distinctive characteristics of the Western interconnected transmission grid. It should be noted that ColumbiaGrid has not attempted to address or comment on questions one through five, which address the specific language of the individual standards. ColumbiaGrid submits these general

comments on its own behalf, not on behalf of its members or other participating parties, each of whom may submit general or specific comments on its individual behalf.

b) ColumbiaGrid supports the inclusion and need for all three ATC methodologies, recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028). ColumbiaGrid believes that retention of all three ATC methodologies is necessary to ensure that differences in structure and operation of regional and individual transmission systems are accurately and efficiently accommodated.

c) MOD-029 – ColumbiaGrid supports the need for this methodology, which is commonly utilized in the Western region.

d) MOD 030 - R10:

R10 states that the TSP shall convert Flowgate AFCs to ATCs for Posted Paths. Posted Paths is defined in MOD 1 as:

1. Any Balancing Authority to Balancing Authority interconnection;
2. Any path for which service is denied, curtailed or interrupted for more than 24 hours in the past 12 month;
3. Any path for which a Transmission Customer requests to have Available Transfer Capability or Total Transfer Capability posted.

ColumbiaGrid is concerned that posted paths, as used in R10, could mean that AFCs must be converted to ATCs for any constrained POR/POD combination. ColumbiaGrid understands that this requirement has been included to promote transparency, but it may in fact have the opposite effect due to a flood of posted ATCs that are not used to process requests and of little value to transmission customers. BPA has provided a better alternative than converting AFCs to ATCs on constrained POR/POD combinations. BPA posts AFCs on internal flowgates and provides a tool for its customers to calculate the flow imposed on the flowgate relative to the POR/POD. ColumbiaGrid understands that BPA has heard from a number of its Customers and other impacted parties that the posting of ATC, rather than AFC, will not promote transparency in the Northwest market or across BPA's system. Further, ColumbiaGrid understands that BPA provides several tools on its website and OASIS site to facilitate interested parties' access to AFC-to-ATC conversions. These tools are easy to use and since a smaller quantity of data is posted to BPA's OASIS site (e.g. approximately 10 AFCs as opposed to potentially several thousand ATCs), BPA's OASIS system will likely be more responsive and therefore, also easier to use. ColumbiaGrid believes that this method eliminates burdensome postings of multiple POR/POD ATCs.

ColumbiaGrid proposes that R10 be modified as follows: "The Transmission Service Provider shall provide a tool to convert AFCs to ATCs for posted paths..."



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Roman Gillen
Organization:	Consumers Power, Inc.
Telephone:	541-929-8500
E-mail:	romang@cpic.coop
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
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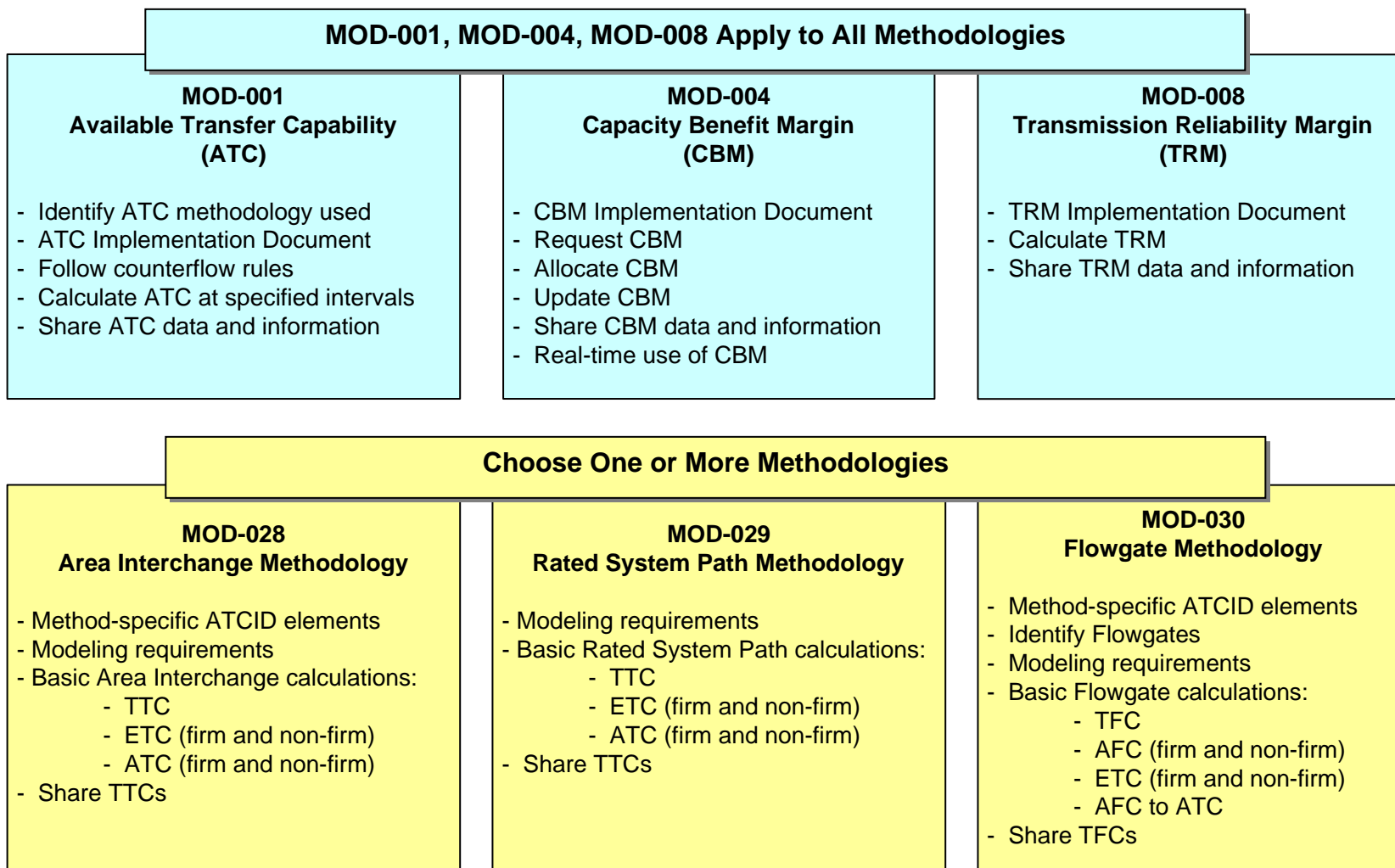
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

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(Complete this page for comments from one organization or individual.)	
Name:	Greg Rowland
Organization:	Duke Energy
Telephone:	704-382-5348
E-mail:	gdrowland@dukeenergy.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
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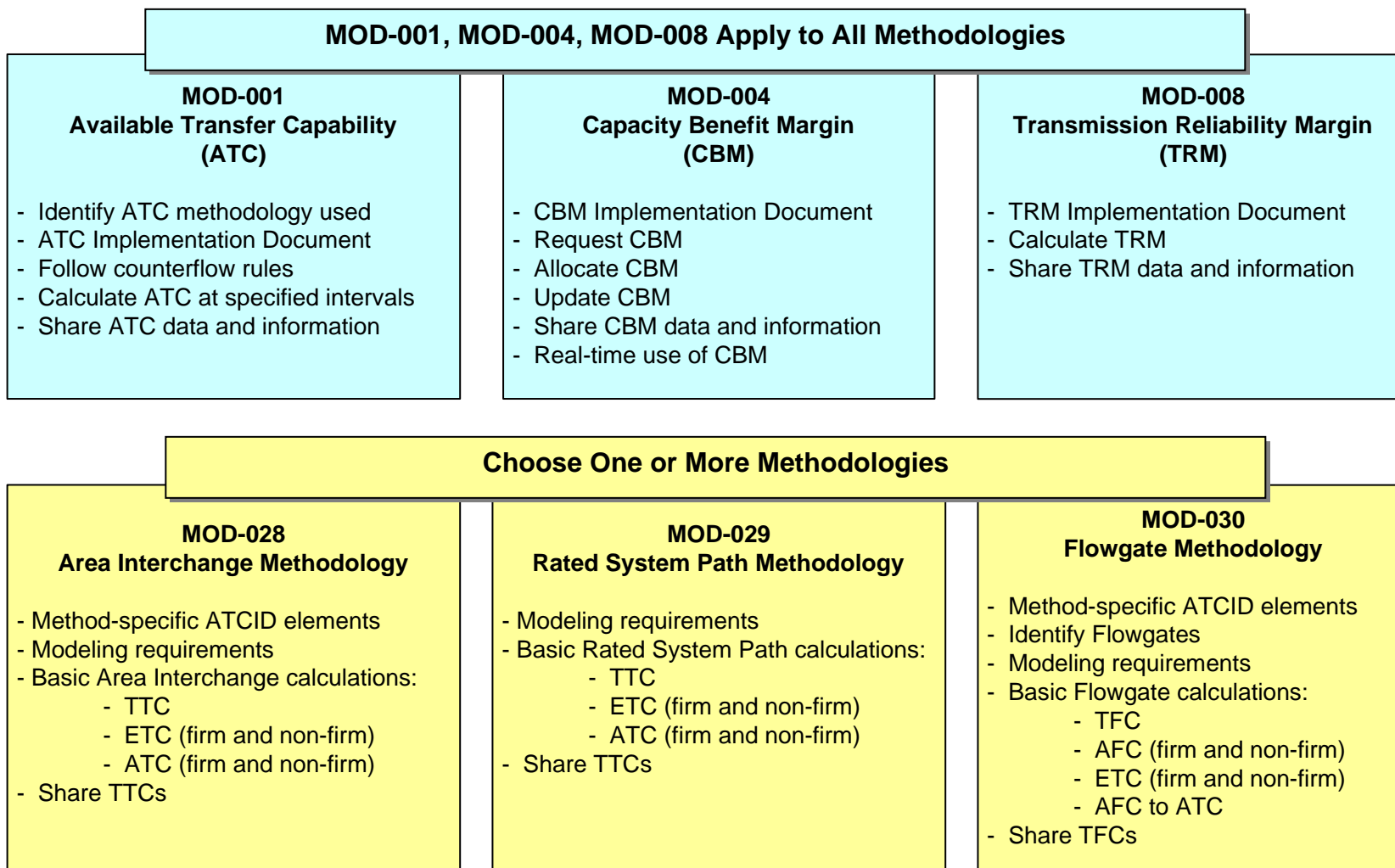
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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: Increased recalculation frequencies will require implementation of new methods and tools. Suggest effective date of 18 months after applicable regulatory approvals.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- MOD-001-1, R5.2 should say "approved Interchange Transaction Tags" instead of "schedules".

- MOD-001-1, R9 should say "recalculate" rather than "update".

- MOD-001-1, R10 should allow 30 days instead of 14 days to make data available after a request, since setting up the required data exchange protocols will be time-consuming.

MOD-004-1, R3.1.1.2 should be revised to require a monthly GCIR value for each month during the current year and the following two years for each Balancing Authority or Posted Path.

MOD-004-1, R3.2 should be revised as follows: Pursuant to the frequency established in the Transmission Service Provider's CBMID, update the request provided per 3.1 to reflect any changes that alter future needs for CBM or indicate that no change is needed.

- MOD-004-1 Requirements:
- R3.2 At least every thirty-one days, update the request provided per R3.1 to reflect any changes that alter future needs for CBM or indicate that no change is needed.
- M4. The Load-Serving Entity that wants CBM shall provide dated copies of its updated CBM requests as evidence that it has updated its CBM request or confirmed no update was needed at least every thirty-one days, per R3.2 (R3).

- VSLs tied to this measure increase in severity due to change in GCIR. (e.g., Moderate VSL is tied to failure to update and Generation Capability Import Requirement had changed by more than 20MW or 10%, whichever is smaller, and not more than 30MW or 20%, whichever is smaller. Severe VSL is tied to failure to update and Generation Capability Import Requirement had changed by more than 40MW or 30%, whichever is smaller.)
- Duke Comments:
  - 1. There is no basis in Order 890 for this requirement of updating every 31 days. This creates an unnecessary administrative burden on the Transmission Provider, the Transmission Planner, and the Load-Serving Entities.
  - 2. The VSLs are too severe; If an LSE's GCIR is 5 MW when the initial request was submitted and it later rose to 7 MW (40% change), the LSE would be subject to penalty based on SEVERE VSL. Severity should reflect magnitudes of MW values that have a meaningful impact on reliability, not arbitrarily defined calculations.
  - 3. The requirements and measure should be changed so that it more accurately reflects the VSLs and should require updating the CBM request if GCIR changes by more than xx MW.
  - 4. The only required timing update should be annual updates in order to provide requirements for the new 10th year.
- MOD-004-1 Requirements:
  - R3. A Load-Serving Entity (or group of Load-Serving Entities with an aggregated need for CBM) that wants Transfer Capability to be set aside in the form of CBM shall:
  - R6. Within five days of the determination of CBM as described in R4 or R5, the Transmission Service Provider shall provide each Load-Serving Entity (or group of Load-Serving Entities with an aggregated need for CBM) that requested CBM and the Balancing Authority hosting its (their) load with a report that includes: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]
  - R6.1. The total amount of CBM for each Posted Path or Flowgate on the Transmission Service Provider's system in each of the months or years specified in the original request. If less than the sum of all requests was established as the CBM for any period:
    - - For each Posted Path or Flowgate, a list of the values of each GCIR used to set the CBM for each of the months and years specified in the original request
    - - The option to request a system impact study.
- Duke Comments:
  - 1. How shall penalties be assessed for a group of Load-Serving Entities? Is each LSE subject to the full penalty or is the penalty allocated to each LSE in the group? If allocated, how is that done? Are there NERC rules to address this situation?
  - 2. We foresee difficulties in groups of LSEs making a request for a system impact study and think this option should be removed. CBM is a margin and not a transmission service

as defined by FERC, so there is no clearly defined mechanism for charging customers for such upgrades. The introduction of this option creates significant controversy which may delay approval of the standard.

- Typo in R2 – Replace CBID with CBMID
- R2. The Transmission Service Provider shall make available the CBMID and any changes to the CBMID to the Transmission Operator, Transmission Service Provider, Reliability Coordinator, Transmission Planner, and Planning Coordinator within seven days of a change.
- MOD-004-1 Requirements: Evaluation deadlines do not consider other received requests
- R4. Within fourteen calendar days of receiving a request or change to a request for CBM that meets the requirements defined in R3.1, the Transmission Service Provider shall set the CBM for the months requested...
- R5. Within sixty calendar days of receiving a request or change to a request for CBM that meets the requirements defined in R3.1, the Transmission Planner shall set the CBM for the years requested...
- R4 High VSL: The Transmission Service Provider set CBM for the months requested as described in R3.1.1.2 more than 14, but not more than 30, days after receiving a request for CBM.
- R4 Severe VSL: The Transmission Service Provider set CBM for the months requested as described in R3.1.1.2 more than 30 days after receiving a request for CBM.
- R5 High VSL: The Transmission Planner set CBM for the years requested as described in R3.1.1.3 more than 60, but not more than 120, days after receiving a request for CBM.
- R5 Severe VSL: The Transmission Planner set CBM for the years requested as described in R3.1.1.3 more than 120 days after receiving a request for CBM.
- Duke Comments:
- CBM requests should be evaluated in queue order along with other Firm service requests and all rules that apply to evaluation timing of firm service request should apply to CBM requests. Monthly CBM requests should have the same timing requirements as Monthly Firm Point-to-Point requests and Yearly CBM requests should have the same timing requirements as Yearly Firm Point-to-Point requests. Delays in processing CBM requests may legitimately be due to the need to fully process earlier queued requests but the NERC process does not make provisions for such delays. NAESB should revise these rules. Transmission Providers should not be subject to penalties for failure to evaluate on time by both NERC and NAESB rules.
- Modifying CBM after evaluations have been completed is not aligned with current request evaluation process and may cause billing issues
- MOD-004-1 Requirements:

- R4.3. If the sum of all CBM requests can not be met simultaneously, and during the evaluation of monthly ATC or AFC, additional capacity becomes available, increase the CBM based on availability up to a maximum of the sum of all CBM requests.
- R5.3. If the sum of all requests can not be met simultaneously, and during the planning process, additional capacity becomes available, increase the CBM based on availability up to a maximum of the sum of all requests.
- R4 High VSL: The Transmission Service Provider did not follow the process described in R4.1, R4.2, and R4.3.
- R4 Severe VSL: The Transmission Service Provider did not follow the process described in R4.1, R4.2, and R4.3, and the resource adequacy requirements of one or more Load Serving Entities requesting CBM were not met.
- R5 High VSL: The Transmission Planner did not follow the process described in R5.1, R5.2, R5.3, and R5.4.
- R5 Severe VSL: The Transmission Planner did not follow the process described in R5.1, R5.2, R5.3, and R5.4, and the resource adequacy requirements of one or more Load Serving Entities requesting CBM were not met.
- Duke Comments:
  - 1. The current request evaluation process concludes with granting of capacity. If additional capacity becomes available, all parties with an interest in that capacity are permitted to request it and it is made available in queue order under established rules. These rules circumvent the current evaluation process and grant higher priority to unfulfilled CBM requests.
  - 2. Once an LSE has been denied CBM, the LSE should make other arrangements to meet needs. For example, the LSE could request CBM on a different Posted Path. If other arrangements are made, the LSE no longer needs CBM on the requested path, even if capacity becomes available at a later time.
  - 3. If these rules were applied and CBM changed after a rate filings had been submitted by the Transmission Provider (as required in FERC Order 890 paragraphs 257 & 258), the Transmission Provider's filing will be inaccurate.
  - 4. Duke recommends removing these requirements. If additional ATC becomes available, LSEs should submit revised requests for CBM capacity.
- MOD-008-1, Requirements R3 and R4 should allow the Transmission Operator and Transmission Service Provider 14 days instead of 7 days to make the information available after a request, since the responsible individual could be on vacation. The 7 day requirement could be especially burdensome on small entities.
- MOD-028-1, This proposed change, and the corresponding change proposed below for MOD-030-1 (new R3.2) should both be made for consistency. The technical reason for the change is as follows: Each of the two methods needs to use a model large enough in scope to correctly evaluate TTC. The wording regarding equivalent representation of areas also needs to be refined. The base model that is used is already an equivalent model and the standard is allowing for further reduction of the model at greater

distances from the region under study. The wording implies that the base model cannot have any reduction for the RC area under study – it should allow for some reduction in the RC area under study and further reduction for the adjacent RC areas and complete elimination for 2nd tier RC areas. To make this proposed change, delete R2.2 and reword R2.1 as follows: Modeling data and topology of its Reliability Coordinator's area of responsibility and immediately adjacent synchronously connected Reliability Coordination areas.

- MOD-028-1, R3.1 Delete the word "intra-peak"

- MOD-028-1, Add new R6.3 to read as follows: Upon the occurrence of a significant contingency such as the loss of 500 MW generation at any location, or loss of any transformer with low side rated greater than 200 kV, or loss of any other transmission facility rated 500 kV or above.

- MOD-030-1, Delete R3.2, R3.3, R3.4, R3.5 and R3.6 and add new R3.2 to read as follows: Contains modeling data and topology of its Reliability Coordinator's area of responsibility and immediately adjacent synchronously connected Reliability Coordination areas.

- MOD-030-1, Add new R3.3 as follows: Updated as defined below, unless otherwise requested by the Transmission Service Provider: R3.3.1 Updated at least once per day for AFC calculations for intra-day, next day, and days two through 30. R3.3.2 Updated at least once per month for AFC calculations for months two through 13. R3.3.3 Updated upon the occurrence of a significant contingency such as the loss of 500MW generation at any location, or loss of any transformer with low side rated greater than 200 kV, or loss of any other transmission facility rated 500 kV or above.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

- MOD-001-1, M8 should say "recalculated" rather than "updated".

- MOD-001-1, VSLs for R10 should increase based upon increasing the time allowed to 30 days for making data available under R10 (see comment 3 above). Suggest Moderate VSL of 30 - 45 days, High VSL of 47 - 75 days, and Severe VSL of more than 75 days.

-

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: As proposed, MOD-004-1 would require monthly updates of CBM requests, and monthly reallocation of CBM upon changes that affect the amount of CBM available. Paragraphs 257 and 258 from FERC Order No. 890 require that CBM set-aside be

reflected in rates for point-to-point transmission service, such that point-to-point customers do not subsidize CBM for other customers. CBM values will have to be "locked down" to develop and make the rate filing, which FERC may take 60 days to approve. This defines a timing issue which suggests that CBM updates be made significantly less frequently than monthly, perhaps annually. Also, R6.1 includes a provision to request a system impact/facilities study, which suggests customers could pay for upgrades to create CBM. However CBM is a margin and not a transmission service as defined by FERC, so there is no clearly defined mechanism for charging customers for such upgrades. Detailed observations and comments on MOD-004-1 are as follows:  
Observations:

1. CBM requests should be evaluated in queue order, along with other OASIS requests for service and should be evaluated comparable with other firm requests (NAESB is developing these business practices).
2. In order to manage Rate filings to accommodate Order 890 paragraphs 257 and 263, CBM values must, at some point, be "locked in" prior to the filing.
3. Rates should not take effect until FERC approval is received, and at least 60 days should be set aside for the FERC to grant approval.
4. Rates should not change within a month (i.e., rates should be applied to all PTP reservations in full month intervals).
5. The tariff defines procedures for studies of firm point-to-point requests (Section 19) and of network integration transmission service requests (Section 32). These procedures are aligned with respect to response and study times, which are outlined below:
  - a. After receiving request for service, TSP has 30 days to tender a System Impact Study (SIS) agreement
  - b. Customer has 15 days execute SIS agreement and return it
  - c. TP has 60 days to complete SIS or, if unable, TSP must contact customer and provide estimated completion date and reason for delay
  - d. If all or part of the service can be accommodated, customer has 15 days to execute service agreement or request that it be filed unexecuted
  - e. If additional upgrades are needed, TSP has 30 days to tender a Facilities Study (FS) agreement
  - f. Customer has 15 days to execute and return the FS agreement
  - g. TP has 60 days to complete FS or, if unable, TSP must contact customer and provide estimated completion date and reason for delay
  - h. Customer provides letter of credit or other security equivalent to the cost of the new facilities or upgrades
  - i. Customer has 30 days to execute a service agreement or request that it be filed unexecuted
6. The procedure outlined in #5 is for transmission service, but CBM is a margin and not a transmission service. FERC has not provided a mechanism in the pro-forma tariff to charge customers for CBM and, also, FERC did not establish CBM as a separate service in Order 890. As such, there is no clearly defined mechanism for charging customers for transmission system upgrades specifically set aside for CBM.
7. MOD-004-1 establishes 14 days for setting CBM associated with monthly requests (R4.) and 60 days for setting CBM yearly requests (R5.). Requirement R6. establishes a procedure for requesting a system impact study after CBM has been established under Requirements R4. and R5.
8. It is impossible to apply the evaluation timing rules for both R4. and R5. whenever a single modification changes both monthly and yearly values (e.g., LSE submits an



update that requests increase of the monthly value 3 months from now and also requests increase of the yearly values for all subsequent years).

9. TPs must make rate filings to accommodate Order 890 paragraphs 257 and 263, CBM values must, at some point, be "locked in" prior to the filing.

10. Rates should not take effect until FERC approval is received, and at least 60 days should be set aside for the FERC to grant approval.

11. Rates should not change within a month (i.e., rates should be applied to all PTP reservations in full month intervals).

Recommendations:

The following changes are requested so that Transmission Service Providers may meet Order 890 requirement for filing Point-to-Point rates that do not include the cost of the CBM set-aside:

1. Monthly requests should be submitted for the current year and the following two years. (NERC)

a. This should constitute one request type which is only permitted to use available transmission capability (no upgrades). (NERC)

b. Evaluation shall be performed commensurate with reservation response timing rules for monthly firm Point-to-Point requests (NAESB)

c. During the evaluation of Monthly CBM requests, CBM requests should be assigned the same reservation priority as yearly firm PTP and designated network service.

(NAESB) This will assure that these requests will be evaluated in queue order and will not be superseded by higher priority requests.

d. The TSP shall establish in its CBMID rules for queuing of monthly CBM requests in order to accommodate the TP's tariff filing needs (each TSP shall establish when Monthly CBM requests are no longer permitted to change). (NERC)

2. Yearly requests should be submitted for the remaining years of the 10 year period.(NERC)

a. This constitutes a second request type which is only permitted to use available transmission capability (no upgrades).(NERC)

b. Yearly requests shall be updated at least yearly, but may be submitted more frequently. (NERC)

c. During the evaluation of Yearly CBM requests, CBM requests should be assigned the same reservation priority as yearly firm PTP and designated network service. (NAESB)

This will assure that these requests will be evaluated in queue order and will not be superseded by higher priority requests.

d. Evaluation shall be performed commensurate with reservation response timing rules for yearly firm Point-to-Point requests (NAESB)

e. The TSP shall establish in its CBMID any rules for queuing of yearly CBM requests in order to accommodate the TP's tariff filing needs (each TSP shall establish when Yearly CBM requests are no longer permitted to change). (NERC)

3. At no time shall the Monthly requests overlap the yearly requests. If overlap does occur, the monthly request shall take precedence over the overlapping yearly request. (NERC)

4. NERC should remove the last bullet in R6.1 (The option to request a system impact study.). This will streamline the evaluation process and simplify the Standards approval process (and subsequent FERC proceeding). NERC will not be forced to 1) develop a procedure similar to #5 in Duke Observations (above) or 2) defend why the proposed procedure is different.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:



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Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
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Organization:	EPSA
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E-mail:	jcashin@epsa.org/bgreenconsulting@rogers.com
<b>NERC Region (check all Regions in which your company operates)</b>	<b>Registered Ballot Body Segment (check all industry segments in which your company is registered)</b>
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input checked="" type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input checked="" type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

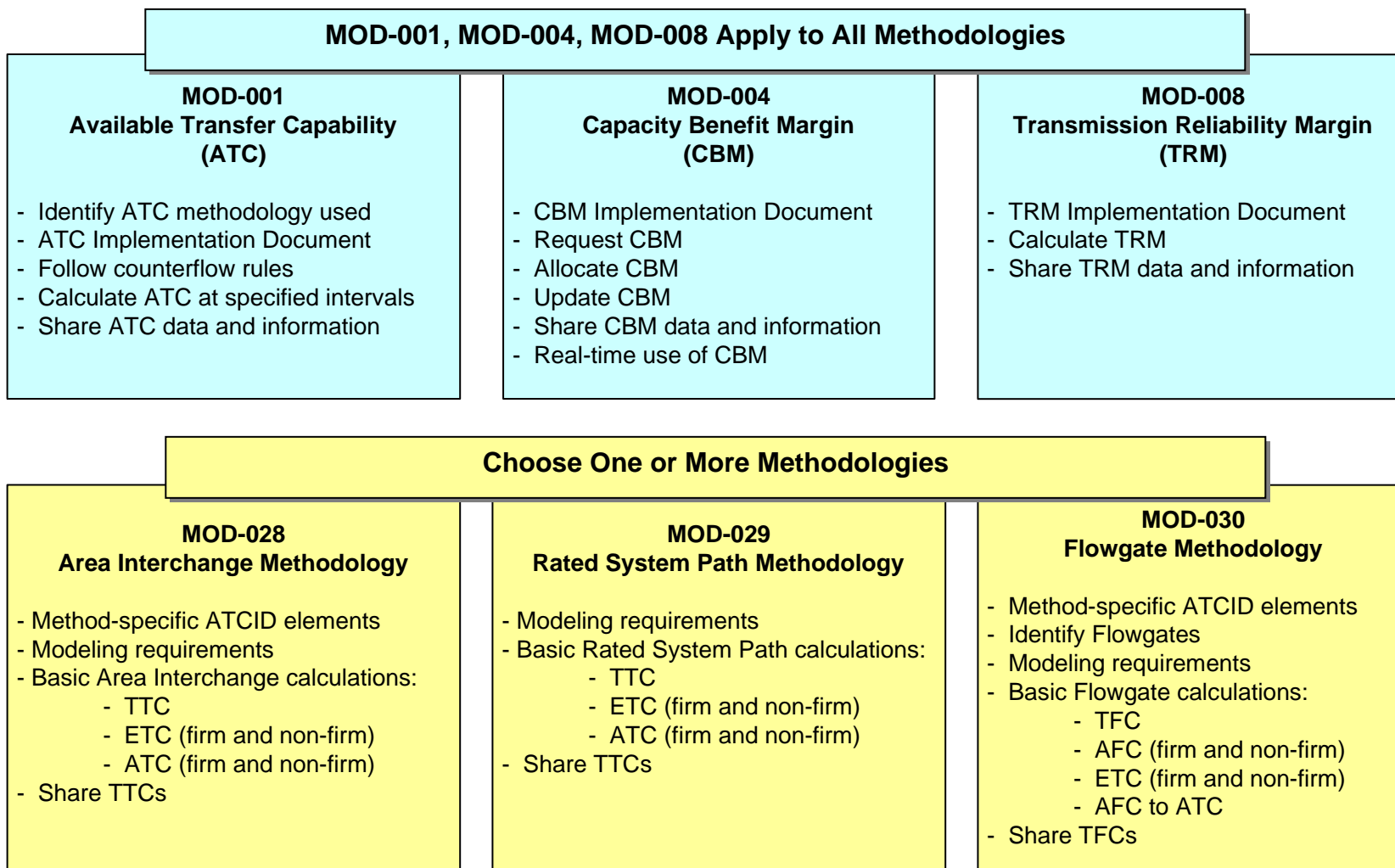
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: The implementation plan for the standard is too long. EPSA has not objected to NERC's recent request to FERC to extend by several months, the date when these standards will be submitted to FERC given the amount of work involved in developing these standards. However, to require up to 15 months beyond the date of regulatory approval for implementation of this standard is excessive.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: EPSA would like to provide the following additional comments:

1. MOD 001-1, R3.1 (similar language is used elsewhere) provides that information will be provided "in such detail that, given the same information used by the Transmission

Service Provider, the results of the ATC calculations may be validated." However it is also noted on page 4 of this document above, that all posting requirements will be as determined in the associated NAESB standards. While we are aware of the coordination with NAESB that is on-going and we are actively participating in it, EPSA's assessment of the appropriateness of this requirement can not be completed without knowing the outcome of the related NAESB standard drafting work that is on-going.

2. MOD 004-1, the CBM standard incorporates a number of principles with respect to allocation of CBM, both at the time of ATC calculation and at the time of scheduling deliveries, which EPSA summarizes as follows. CBM, by virtue of being determined as a "set-aside" has priority over all purchases of transmission service, even firm service. This extends into future time frames in that R4.3 states that, if there is initially insufficient CBM to meet all requests, any new interface capability coming available would be allocated first to unfilled CBM requests. Furthermore, when scheduling CBM, LSE's are entitled to utilize any available CBM, not just the quantity that they have requested.

EPSA accepts the notion of a set aside for CBM, contingent on acceptance of some additional principles.

CBM should be purchased by eligible LSEs at full embedded cost of the transmission. This is clearly a superior service that is being provided-it should not be available at a reduced cost.

In the event of an emergency at level EEA2 or higher, LSEs are granted access to all CBM reserved, even if reserved by other LSEs. EPSA acknowledges that under such emergency conditions, all possible accommodations should be made. However, this accommodation together with the charge for service as discussed above, provides considerable incentive to under-reserve CBM. As LSEs are required (R3.2) to update their CBM requirements at least every 31 days, scheduling beyond their reserved amount at the time of an emergency should be investigated, after the fact, for possible violation of this requirement.

R4.3 notes that CBM is made available as a set-aside, such that LSE's are granted priority access to available service, including service that becomes available in future if not all requests can be accommodated initially. Such priority access to future quantities should not receive priority over duly granted roll-over rights.

3. MOD 001-R4 and R5 define the default values for counterflows to be used in the calculations of firm and non-firm ATC. As stated, these values are extremely conservative. R4 and R5 should require an explanation, based on modelling or based on historical values, of whatever values of counterflows are adopted by the TSP.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Narinder K Saini
Organization:	Entergy Services Inc.
Telephone:	870-543-5420
E-mail:	nsaini@entergy.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
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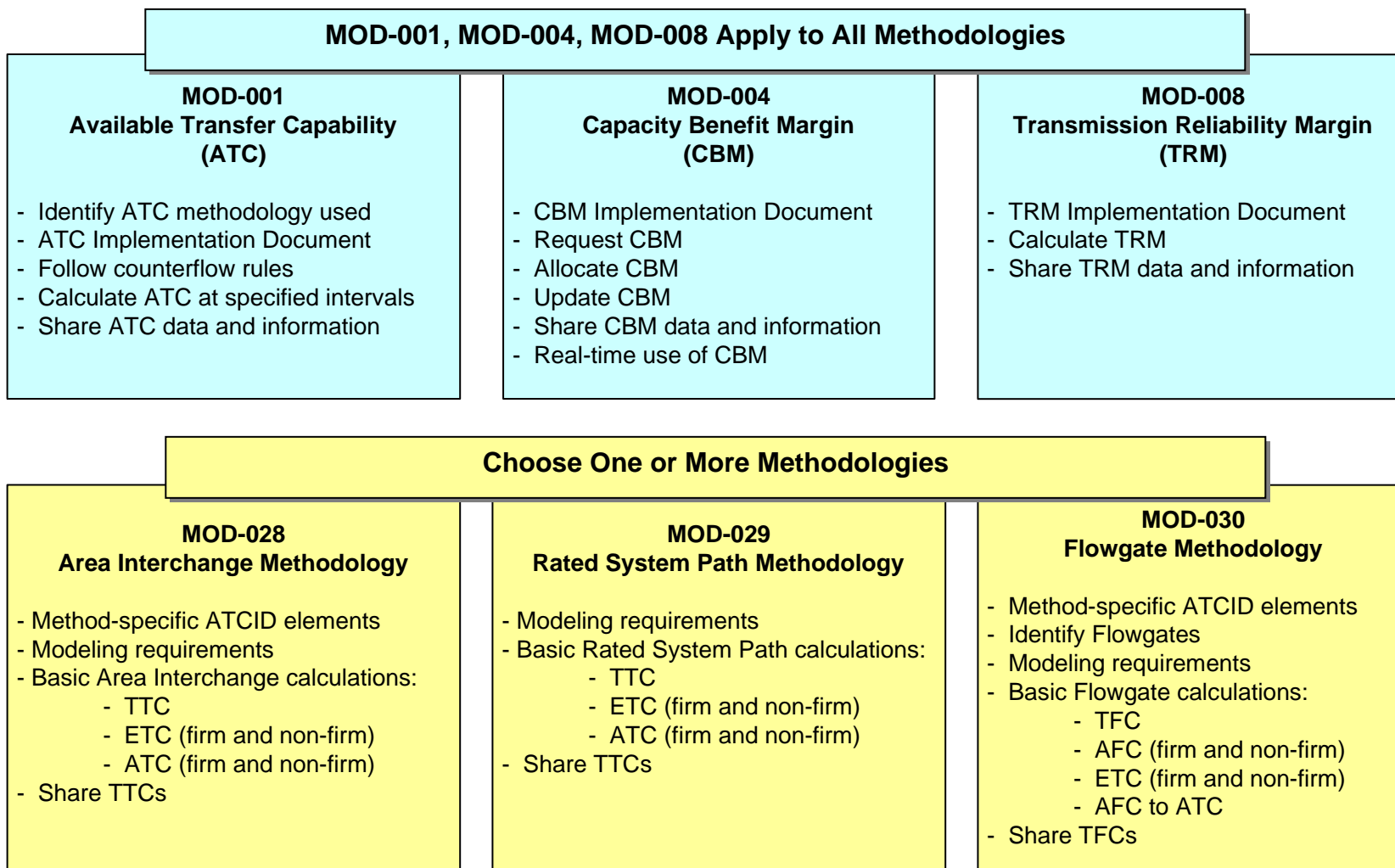
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: Definition of AFC in MOD-030-1 should be expanded to include CBM and TRM in addition to only committed uses similar to that for ATC in NERC standards.

MOD-028-1 R11 and R12 and MOD-030 R8 and R9 include a capitalized term Business Practices in Postback definition. The term Business Practices should either be defined, or clarified in the standard.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: MOD-001-R2.3 Monthly ATC time period is defined as lasting through month 12. This is not consistent with MOD-030-R3.3 which specifies monthly AFC calculations through month 13. Similar descriptions are included in MOD-028-1 and MOD-029-1. Add in parenthesis "(months 2 through 13)" at the end of this sentence for clarification.

MOD-001-1 R3.1 - replace "may" with "can" in 4<sup>th</sup> row of this requirement.

MOD-001-1 R3.6 - It is not clear what is expected under Allocation methodology and what needs to be allocated. This requirement should be deleted or Allocation methodology should be more clearly defined.

MOD-001-1 R5 along with R3.2 appears to be "fill in the blank standard" such that the TSP can use any counterflow percentage if they describe how they are accounting for counterflows in R3.2, then R5 is not applicable as it allows them to use their stated method. Therefore, either R5 should be strengthened to make it clear how counterflows and counter-schedules are to be accounted for, or TSP should be allowed to use their method of accounting for counterflows that is included in their ATCID per R3.2.

MOD-001-1 R6 - Minimum time of notification before implementing changes in ATCID should be included in this requirement. In addition, notification via electronic mail in

parenthesis appears to be the only medium allowed which may not be reliable. Reference to electronic mail should either be removed or other mediums allowed for notification.

MOD-001-1 R9.3 - Minimum frequency to update monthly ATC should be once a month rather than once a week.

MOD-001-1 R10.12 - This requirement should be deleted as counterflows is not the data to be shared, these are percentage of reservations that are to be used for ATC calculations in a direction opposite to that of reservation that result in increase of the ATC/AFC values.

MOD-004-1 Effective Date should included "(MOD-001-1, MOD-004-1, MOD-008-1, MOD-028-1, MOD-029-1, and MOD-030-1)" between the words six and standards similar to other standards.

MOD-004-1 R1.3 - Words "request the" should be removed as there is no request for schedule, procedure for scheduling of energy is enough.

MOD-004-1 R2 - The Transmission Service Provider needs to make the CBMID available only to the TOs, TSPs, RCs, TPs, and PCs that are in the TSP area or that are adjacent to its network and not to all TOs, TSPs, RCs, TPs, and PCs.

MOD-004-1 R3.1 - CBM is on a Posted Path basis or Flowgate basis whereas GCIR is on an entity basis, therefore either LSE should submit CBM on Posted Path basis or Flowgate basis (LSEs are not expected to know the impact on Posted Paths, or Flowgates of their GCIR, therefore they should preferably just request GCIR and leave calculation of CBM impact to TSP to be determined based on their CBMID under R1.2) which should be included in R3.1, or they can submit GCIR with additional information required in R3.1.1 and TSP shall allocate CBM on Posted Paths or Flowgates based on their CBMID. These requirements need to be made "either Posted Path or Flowgate basis or GCIR" rather than R3.1.1 as additional information required for submitting CBM request.

MOD-004-1 R3.1.2 through R3.1.4 should be deleted or reworded as TSP is not a monitoring entity and they do not have any use for this information. LSE should have this information available for monitoring for compliance. Therefore, these requirements should be reworded accordingly.

MOD-004-1 R3.2 "every thirty-one days" should be changed to "once a month". MOD-004-1 R3.3 - Add "studies conducted in accordance with" between the words "and" and "verifiable".

MOD-004-1 R4.1.1 implies that LSE is going to request GCIR on each path which is not realistic for all methods. Since TSPs are required to allocate GCIR on each Posted Path based on their procedure included in CBMID, it should be reflected in this requirement.

MOD-004-1 R4.1.2 should be modified to be made similar to R4.1.1 such that entities using Flowgate methodology will allocate GCIR on Flowgates based on R1.2 in their CBMID. A cut off limit of 3% or greater for Distribution Factor is not substantiated and should not be included in the standard. TSPs may be required to include their cut off limit in their CBMID.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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MOD-004-1 R4.2.1 second bullet and R4.2.2 second bullet - since ATC is calculated after deducting the CBM, TRM and Existing Transmission Commitments from TTC, it is unclear which ATC has to be used as limit for allocating CBM.

MOD-004-1 R 6.1 - This requirement should be split in two separate sub requirements, the first finishing after the first sentence, and the second sub requirement starts with "If..." and bullets should be made further sub requirements under this new sub requirement as these are applicable only to the situation "If less than the sum of all requests was established as the CBM for any period." System Impact Study is not a viable option, this should be changed to Facility Study.

MOD-004-1 R7 - "within seven calendar days of their making a request" should also be applicable to sub requirements R7.1, since there is no requirements for Transmission Operators to do anything with this data. They can request the data if they need it.

MOD-004-1 R8 - There should be a limit for LSEs to be allowed to schedule only upto the limit of CBM set aside for them as FERC is requiring LSEs to pay for the CBM, if LSEs have not paid for the CBM, they should not be allowed to schedule against the CBM that has been set aside for others. If LSEs do not request enough GCIR and are later allowed to schedule it can adversely impact the reliability of the system.

MOD-004-1 R10 - This should be modified to limit the schedule up to the limit of the LSE's CBM reservation or impact of their GCIR on the CBM on the Posted Path or Flowgate. Setting aside CBM is like reserving the Firm Transmission Service, therefore an entity not reserving enough CBM to start with will impact the reliability of the system by overselling the Firm Transmission Service to others.

MOD-008-1 R1.1 - It may not be possible to identify the impact of each of the uncertainties on each of its respective Posted Paths or Flowgates as included in this requirement. It should be sufficient to include method of coming up with TRM values in terms of percentage or MW taking into account the uncertainties included in this requirement. The language in this requirement should be reworded accordingly.

MOD-008-1 R2 - The first phrase covers the intent to only use the components of uncertainty from R1.1, the second phrase "and shall not include any of the components of Capacity Benefit Margin (CBM)" is redundant and should be deleted.

MOD-008-1 R4 - Parenthesis around the parenthetical statement "within seven days...." should be removed.

MOD-008-1 R5 - There is no justification for the 13 months frequency, it should be changed to once a year or 12 months to be more consistent with business cycles.

MOD-028-1 R1.1 - Word "may" should be replaced by the word "can" in last line.

MOD-028-1 R3 and R4- Insert a word "of" between "all" and "the" in third line.

MOD-028-1 R3.1 and 3.2 - Subrequirements R3.1.1 through R3.1.3 are similar to the sub requirements R3.2.1 through R3.2.3 except using the Load Forecast for corresponding period. The only difference between R3.1 and R3.2 is that one is for the on-peak and the second is for the off-peak with very similar subrequirements. These requirements should be combined into one requirement to simplify the standard and to be specific. Similar approach should be used for R4 to be merged into one requirement

with R3 as the only difference is the period of calculation and to use corresponding Load forecasts.

MOD-028-1 R5.3 - Sub requirements for using the sources and sinks included as bullets should be converted into numbered sub requirements.

MOD-028-1 R6.1 - Since forced outages during the week can impact Hourly and Daily TTCs, frequency of TTC calculations for hourly and Daily ATC calculations should be once a day rather than once a week.

MOD-028-1 R7 - It appears there is no consideration of contingencies in this process. Was this the intent of the SDT? If not, the incremental Transfer Capability should be changed to First Contingency Incremental Transfer Capability or impact of contingencies should be included in the language of the requirement.

MOD-028-1 R8 and R6.1 - If Transmission Operator calculates TTC once a week and provide those values to TSP within seven days of calculations, TTC used for Daily and hourly ATC calculations can be as old as 2 weeks, which is unrealistic. The time allowed to transfer TTC values from TO to TSP should be within one day of determination at the maximum, unless otherwise agreed to by the TSP.

MOD-028-1 R9 and R10 - Is Native Load included in NITS? If so, it should be included in the definition, otherwise, another term for Native Load should be included for ETC equation similar to that included in MOD-029-1 R5.

MOD-028-1 R11 and R12 - Postbacks in these requirements refer to as defined in Business Practices, are these NAESB Business Practices or TSP Business Practices? It should be clarified.

MOD-028-1 R12 - Unscheduled Firm reservation need to be offered as non firm, if schedules are not received upto the scheduling deadline. Are these included in the postback definition? If not, these should be included in the equation for non firm ATC calculations.

MOD-029-1 R1.10 - "Extra High Voltage (EHV)" should be defined.

MOD-029-1 R1.12 - "ACTID" is spelled incorrectly, it should be changed to "ATCID".

MOD-029-1 R2.7 - Regional Entity is indicated to have taken action to have the path rated using a different method. There is no requirement in NERC standards for Regional Entity to take action to rate the path, it should be clarified, or reference deleted.

MOD-029-1 R5 and R6 - Definitions of Native Load and NITS include "losses not otherwise included in TRM and CBM standards". There are no such provision to separately include losses in TRM or CBM calculations in current versions of MOD-004-1 and MOD-008-1. The difference should be reconciled or reference removed from this requirement.

MOD-029-1 R6 - There is no term for Native Load in this equation similar to that in R5. Is Native Load never served by a non-firm capacity reservation? If it can be served, the Native Load term should be included in R6 for consistency.

MOD-029-1 R7 and R8 - Postbacks use the term business practices with lower case in this standard. Which business practices this term refers to in this standard? Is it referring to the NAESB Business Practice Standards or TSP Business Practices? It should be clarified. If it means the same as in MOD-028-1 R11 and R12, it should be reconciled by capitalizing it and defining it.

MOD-030-1 R2.2 - Change "once per calendar quarter" to "once per calendar year" for the frequency of updating the list of Flowgates.

MOD-030-1 R3.4, R3.5, and R3.6 - The term "topology" should be replaced with "system topology" to reconcile it with the terms used in other NERC standards.

- MOD-030-1 R5.1 - Reword this requirement to allow the TSP to apply the outage rules defined in the TSP's ATCID and to include third party outage information "where available". It should read: "Include all expected generation and Transmission outages, additions, and retirements as modeled according to the Transmission Service Provider's outage rules defined in the ATCID during the period calculated for the Transmission Service Provider's area, and where available, for all adjacent Transmission Service Providers, and any Transmission Service Providers with which coordination agreements have been executed".
- MOD-030-1 R5.2 - Reword this requirement to make it consistent with R2.1.3.1 by adding a statement on the threshold limit as follows: "For external (third-party) Flowgates with at least a 5% TDF, use any AFC for each specific Flowgate provided by that third party as the AFC for that flowgate."

MOD-030-1 R6.1.4.2 - Reword to use TSP's rules defined in the ATCID as follows: "Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, as they are expected to run as defined by the Transmission Service Provider's ATCID."

MOD-030-1 R6.3 and 6.4, R7.2 and R7.3 - Threshold of 3% is specified in the requirement with a foot note that TSPs may use a lower than 3% threshold, if desired. The threshold appears to be at the discretion of the TSP, therefore, it should be stated clearly as such. TSPs may be required to disclose it and include it in their ATCID for transparency purposes.

MOD-030-1 R8 - The capitalized term Business Practices used in Postback seems to refer to some defined Business Practices like NAESB or TSP business practices. Either the term should be defined under definitions, or it should be clarified in the requirement. Also, this term is not capitalized in R9, does it mean it is different business practices. The difference should be reconciled.

MOD-030-1 R10 - To make this standard consistent with MOD-028-1 and MOD-029-1, there is no need to include an algorithm in this standard. In addition parenthetical "(and TFC to TTC)" should be deleted. The requirement can read "Transmission Service Provider shall convert or provide a tool to convert Flowgate AFCs to TTCs for Posted Paths by using appropriate distribution factors." and delete the remaining language from this requirement. In case this proposed change is not implemented by the SDT, Entergy proposes that the terms used in this requirement like OTDF Flowgate and PTDF Flowgate should either be defined or clarified.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: MOD-001-1 M5 - copies of dated electronic email for notification does not ensure that the email has been received by the receiving party. Other mediums should be included or receipt of the email notification should be required as a measure.

MOD-001-1 M6 - Reference to "such as demonstration" is unclear as to what is included in "demonstration" so parenthetical reference should be deleted.

MOD-001-1 M9 - Extra "the" from line 2 between the words "show" and "its" should be deleted.

MOD-004-1 M3 - The measure should also include group of LSEs with aggregated need for CBM as provided in R3.

MOD-004-1 First bullet under Data Retention should refer to CBMID rather than ATCID.

MOD-004-1 Violation Risk Factors - Correct typos in row for R2 "CBID" to be changed to "CBMID".

MOD-008-1 M2 - In case SDT removes reference to CBM as Entergy suggested above, SDT should remove reference to CBMID in this measure also.

MOD-080-1 M5 - In case SDT changes frequency or TRM calculation to 12 months as Entergy suggested above, SDT should make corresponding change in M5.

MOD-028-1 M9 - Correct typo in line 3 from "its" to "it".

MOD-029-1 M2 - Correct typo in line 3 from "ACTID" to "ATCID".

MOD-030-1 Violation Risk Factors - Correct typo in cells under Lower VSL, Moderate, and High VSL for R2 to change from "is" to "it" in last paragraph.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: SDT has done a great job!!!



NORTH AMERICAN ELECTRIC  
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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	H. Steven Myers
Organization:	ERCOT
Telephone:	512-248-3077
E-mail:	smyers@ercot.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input checked="" type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
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<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
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<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities





## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

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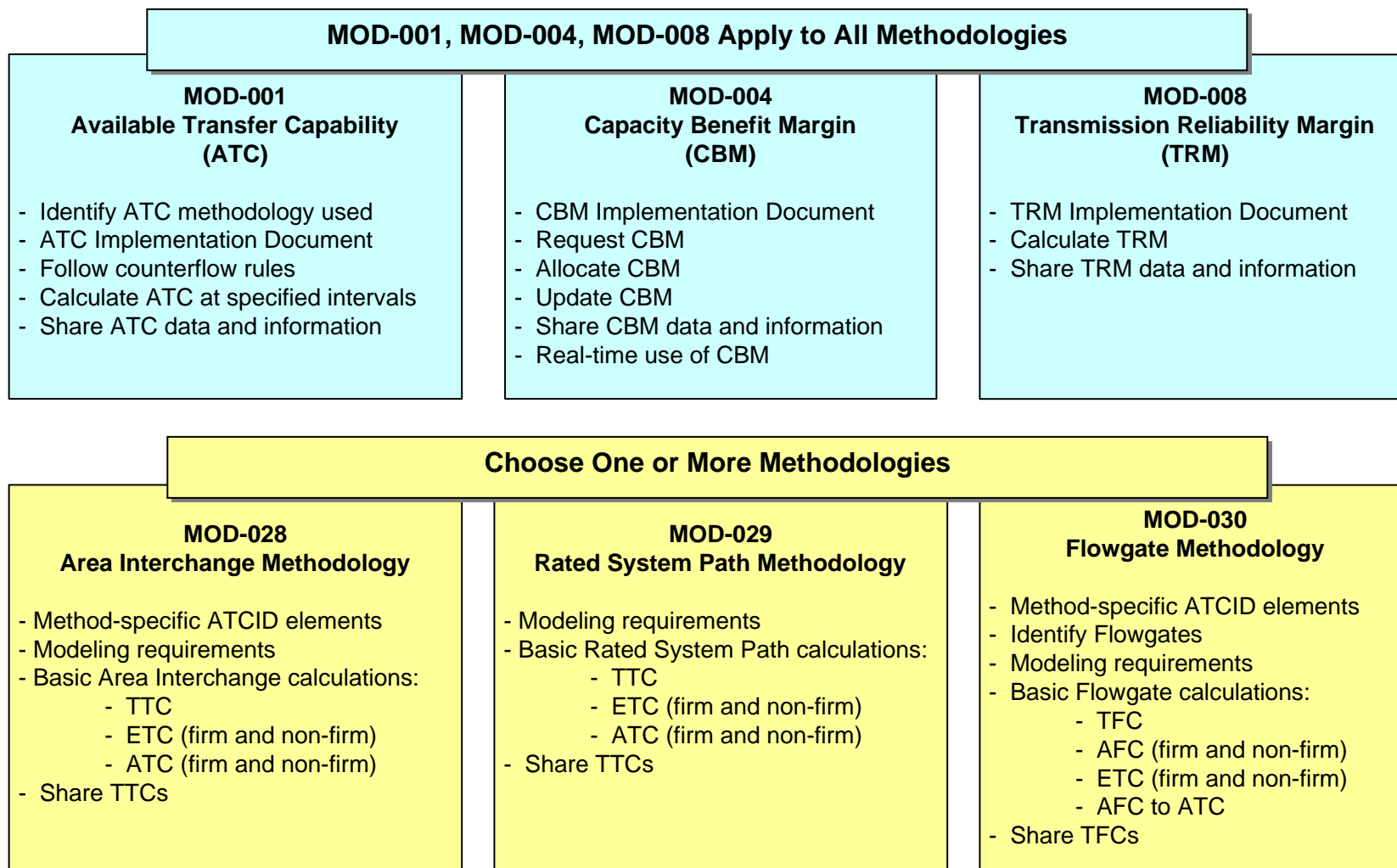
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

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Incorrect Definition:

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Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: For the entire ERCOT Interconnection, the market rules that govern establish, under Texas State Law, that the transmission system is to be operated in an open access process, much as a common carrier. As such, there is not a Transmission Service Market in the ERCOT Interconnection. Therefore, ATC, TTC, CBM, and TRM are not applicable within ERCOT operations. These Standards should have provisions that make it clear that these requirements apply only within market structures in which they are pertinent.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Doug Hohlbaugh
Organization:	FirstEnergy Corp.
Telephone:	(330) 384-4698
E-mail:	hohlbaughdg@firstenergycorp.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
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The drafting team has created the following proposed standards:

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**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
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- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

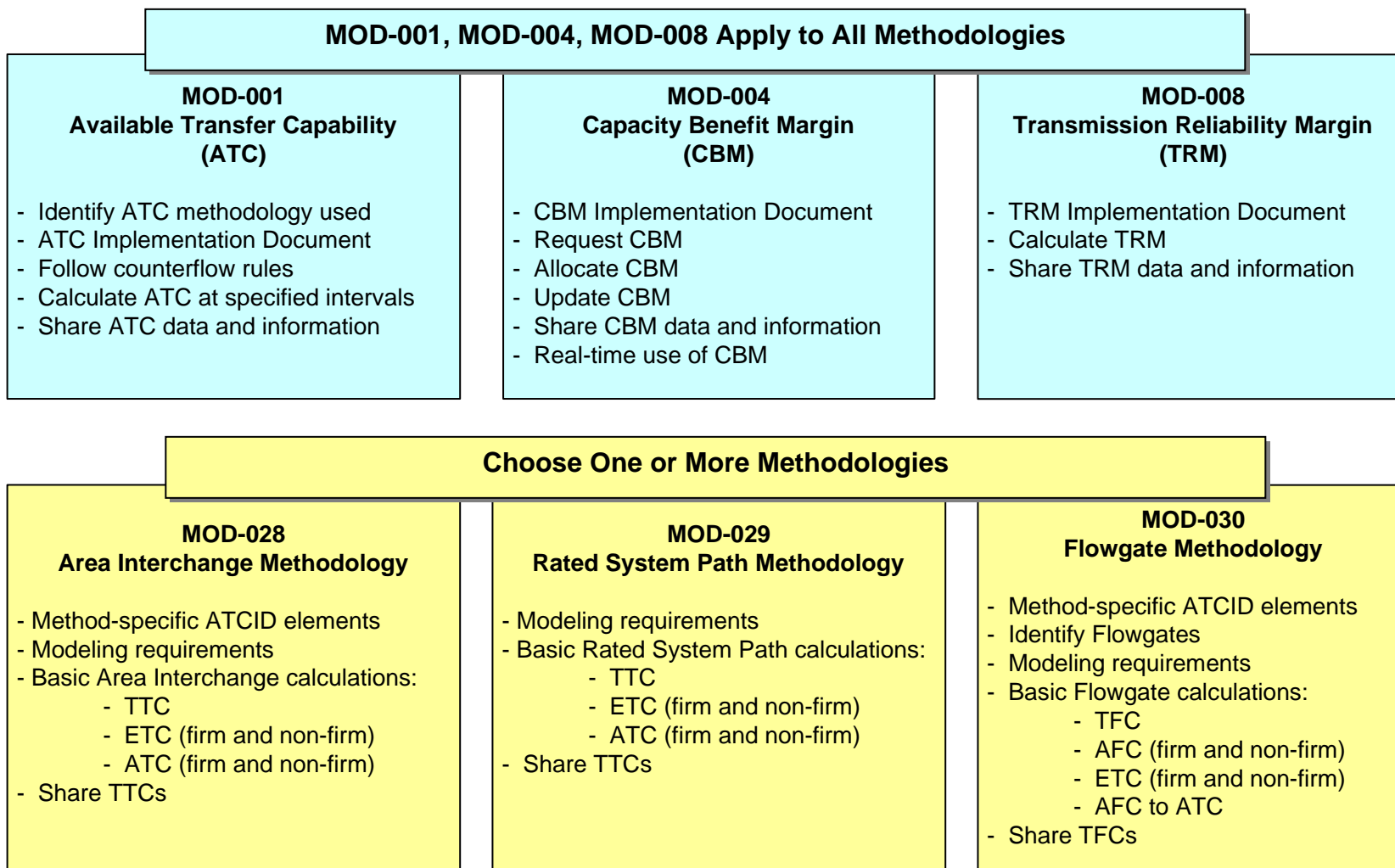


**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

1. While we agree that the proposed Implementation Plan allows for sufficient time to achieve compliance with the various requirements, a successful implementation is reliant on tasks that must be completed in succession by NERC Responsible Entities who are not within the same organization. We encourage the standards drafting team to consider setting midpoint milestone dates, where appropriate, to allow sufficient time for entities that have tasks that are dependent upon the timely completion of other work prior to their own. Requirements for "implementation documentation" would be effective after 12 months, but then other data that relies on these documents should have additional time for implementation.

2. The Implementation Plan shows a table of the applicable entities for each proposed standard. In this table, the Purchasing-Selling Entity (PSE) is shown as applicable to MOD-008, but it is not listed as an applicable entity within the text of this standard or any of the proposed standards.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

MOD-004-1 - GCIR Definition: This definition may incorrectly imply that this is merely another resource that an LSE can use to meet its Resource Adequacy Requirements (RAR). RAR, such as planning reserve requirements (PRM), cannot be met with the use of CBM. Also, the definition refers to GCIR as "an alternative to internal resources" which may be misleading. The definition needs to address the fact that GCIR (as CBM) can only be used in an emergency. It is a "contingency option" rather than a "resource alternative".

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

1. MOD-001-1:

- Applicability - Should include the Reliability Coordinator (RC). Per the NERC functional model, the RC is responsible for the "coordination of ATC with Transmission Service Providers".

- R1 - The Transmission Operator (TOP) should not be responsible for choosing an ATC methodology; any methodology should be coordinated with the TOP, but the ultimate responsibility should fall onto the TSP. Also, it should be made clear that the use of the three methodologies must be in accordance with the "MOD" standards. Therefore, we propose a rewording of R1 as follows: "The Transmission Service Provider, in coordination with the Reliability Coordinator and Transmission Operator, shall choose an ATC methodology [footnote 1] (Area Interchange methodology, Rated System Path methodology, or Flowgate methodology in accordance with MOD-028, MOD-029, and MOD-030, respectively) for each Posted Path per time period for use in determining Transfer Capabilities of those Facilities within its Planning Coordinator's planning area".

- R8 should not include the Transmission Operator. The TOP is not responsible for calculating the ATC, TTC, or AFC.

## 2. MOD-004-1:

- R3 - This requirement should either be eliminated or specified under R1, as applicable to TSPs. Where R1 requires the TSP to have a procedure for LSEs to request CBM, R3 prescribes part of that procedure. If R1 is intended to give TSPs full liberty to develop its CBM procedure, then R3 is an unnecessary requirement. If instead R3 is an element of the procedure that must be common to all, then it should be added as a requirement for TSPs to include in their procedures.

- R8 - This requirement should be included in a NAESB business standard. Any aspects of R8 as applicable to TSPs should remain.

- Effective Date: For consistency, the Effective Date section should be replaced to match what is in the other proposed standards under the Proposed Effective Date which references the other standards and is more complete than what is shown in MOD-004.

## 3. MOD-008-1:

- Applicability - Since TRM is a network-wide margin critical to calculating ATC, the TRM standard should also be applicable to the Reliability Coordinator (RC). Per the NERC functional model, the RC is responsible for the "coordination of ATC with Transmission Service Providers". Lastly, the RC must be included as an applicable entity as directed by FERC Order 693, Par. 1126.

- R1 - Since the Transmission Service Provider (TSP) is ultimately responsible for calculating and assuring proper ATC for its footprint, and since, per MOD-004-1 R1, the TSP is responsible for maintaining a CBMID, then it should follow that the TSP, and not the Transmission Operator (TOP), should be responsible for maintaining a TRMID. Plus, in R4 of MOD-008-1, the TSP has to make the TRMID available to other TSPs when requested. Wouldn't the process be smoother and more reliable if the TSP didn't first have to ask the TOP for the TRMID if the TSP already had and maintained its own

TRMID? Therefore R1 should be reworded as follows: "Each Transmission Service Provider, in coordination with the Transmission Operator and Reliability Coordinator, shall prepare and keep current a TRM Implementation Document (TRMID) that includes, as a minimum, the following information:"

Then, if R1 is changed as suggested, the following changes to other requirements to MOD-008-1 must be considered:

- R2 & R3 - Replace "Transmission Operator" with "Transmission Service Provider"
- R3.1 - Reword as follows: "The Transmission Operators with Facilities governed by the Transmission Service Provider".
- R4 - Remove "used by its Transmission Operator(s)"
- R5 - "Each Transmission Service Provider shall calculate, at least once every 13 months (in accordance with the definitions in its TRMID), a TRM value for the following time periods (on each Posted Path or Flowgate) and shall provide these TRM values to its Transmission Operator(s) and Transmission Planner(s) within seven calendar days of the calculation:

#### 4. MOD-030-1:

- Applicability - Since Flowgates are points within the Transmission system through which Interchange Distribution Calculations are performed by the Reliability Coordinator, this standard should also be applicable to the Reliability Coordinator (RC). Also, per the NERC functional model, the RC is responsible for the "coordination of ATC with Transmission Service Providers".

- R2 - Although the Transmission Operator assists with gathering this information, this requirement should ultimately be the responsibility of the Transmission Service Provider (TSP), since the TSP prepares and maintains the Available Transfer Capability Implementation Document (ATCID). Also, the Reliability Coordinator should assist in gathering this data since this entity is closely monitoring Flowgate capacities in its area. Therefore, we suggest rewording R2 as follows: "The Transmission Service Provider, in coordination with the Transmission Operator and Reliability Coordinator, shall perform the following:"

- R3 - Incorrectly states that the Transmission Operator (TOP) determines the AFC. R3 should be reworded as follows: "The Transmission Operator, in coordination with the Reliability Coordinator, shall make available to the Transmission Service Provider a Transmission model to determine Available Flowgate Capability (AFC) that meets the following criteria:"

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

1. MOD-001-1: Measure M2 - Change typographical error at the end of the measure that currently reads "(R1)" to "(R2)".

2. MOD-001-1: Measure M7 should not include the Transmission Operator. The TOP is not responsible for calculating the ATC, TTC, or AFC.

3. MOD-001-1: VSL-Severe for R2 incorrectly includes the Transmission Operator. This requirement is only applicable to the Transmission Service Provider.

4. Per our rewording suggestions in Question 3 and Question 6, several measures and compliance elements must be reviewed and revised by the SDT.

- E.g., MOD-030-1: Measure M7 - Per our rewording suggested in Question 3 for Requirement R3, M7 should be reworded as follows: "The Transmission Operator shall provide evidence (such as written documentation, logs, models, and data) that the Transmission model used to support the AFC calculated by the Transmission Service Provider contains the information specified in R3."

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1. MOD-001-1:

- R2 & R9 - There is no calculation requirement for yearly ATC in R2 or R9. Yet in MOD-004-1, R3.1 requires the identification of a CBM amount for, "each month for each year for the next ten year period."

- R6 - In addition to notification, before implementation of a new ATCID, the Transmission Service Provider should allow for a comment period. This will assure that all the affected entities have been given an opportunity to provide valuable clerical and technical input on the document.

- Counter-flow calculations in the past were difficult to justify and manage. This standard attempts to manage counter-flows by requiring TSPs to specify their accounting method in the ATCID, but does not require any justification of the method used for applying them. This situation could result in inconsistency in ATC calculations and application. Requirements should be developed that govern the calculation and application of counter-flows to ensure consistency and transparency.

2. MOD-004-1:

- The need for LSE involvement in setting CBM levels is completely dependent on the Resource Adequacy Requirement structure, and for some structures it would not be

appropriate for LSEs to have input into the CBM calculation. For example, in PJM, an individual LSE (1) may not know if there is enough capacity in the market to meet reliability needs, or even what are the specific resources serving their load; (2) may have no responsibility to identify specific capacity resources beyond the obligation to purchase capacity credits from unspecified sources. Overall capacity management, short-term and long-term reliability responsibility, resides at the ISO level.

- In general, this standard may lead to situations that cause CBM reservations to be excessively higher than needed. There is no reference to a CBM calculation methodology, leaving LSEs free to request CBM on any basis. Many LSEs do not have the necessary tools needed to make proper CBM calculation, which could lead to simplistic and conservatively high CBM requests.

- Further compounding the problem of over-reserving CBM is the provision that calls for the TSP and TP to set the aggregate CBM level as the sum of all LSE requests such that all requests can be met simultaneously. It is unlikely all LSE adverse scenarios will occur. It is even more unlikely that all will occur at the same time. These provisions will result with too much CBM being set aside. Diversity is not taken into account.

- There are no provisions for the TP or TSP to challenge unreasonable CBM requests.

- This standard does not incorporate the resource adequacy criteria into the process of setting the total CBM value. The simple summation of CBM requests ignores the uncertainty associated with the scenarios behind the CBM requests.

- R2 - "CBID" should be "CBMID"

- R3 & R4 - A monthly value is extremely difficult to administrate and implement in the ATC calculation. Such a requirement will incur significant cost and subject the TSP to significant increases in cost. We suggest leaving it to each region to decide on the time intervals.

- R3.1 – This section should be clarified. It states "requested for each month for each year for the next ten year period." Do we really want 120 months worth of requests, or 12 monthly requests and 9 yearly? Also, the ATC postings only cover at most a 12 month period in MOD-001-1. Why is it necessary to have such a disparity in the period of coverage? R3.2 requires updating this CBM request at least every 31 days to reflect any changes that alter future needs. New development projects influence future needs for load growth. The probability that these projects will come to fruition can change from month to month. Is it reasonable to require a ten year look ahead to be revised on a 31 day cycle?

- R3.1.1 - In some areas it may not be possible that CBM can be determined from GCIR at the LSE level, especially if the standard will require data ten years in the future. In retail choice areas, an LSE has few load responsibilities (therefore resource responsibilities) for more than a couple years.

- R3.1.1.1 - CBM will be called upon in an emergency. We are not sure that it is feasible to identify the Balancing Authority or Posted Paths in all areas. We assume CBM would be used to bring in the most appropriate resources at any given time, but can that be known now for an emergency in the future?

- R3.1.2 - The basis for the request of CBM is not clearly defined. This requirement indicates that GCIR must be based on standards, criteria, established by other authorities. The LSE must document the Resource Adequacy Requirement (RAR) standards & authorities that form the basis of their request, and all details of the associated resource studies. This implies that it is a clear, objectively-determined



parameter, yet it does not say how any particular elements of the results of the RAR study fit into the GCIR calculation.

- R4.1 either contains an extra colon that should be deleted, or is missing "(TRM"
- R4.3, R5.3, and R6 address the idea that the sum of all requests may be greater than the available capacity on the facility and directs the CBM to be increased based on availability up to the sum of all CBM requests. The standard is silent on what is to be done if the sum of all requests is greater and no additional capacity is made available on the facility. The standard should include the method for allocating the requests in this situation.
- R9 - Should be adjusted so that it explicitly states that only the timing requirements for the Real-Time market only will be waived. For example, the Day-Ahead Market timing requirements cannot be waived.
- R8, R9 & R10 - This standard refers to Interchange Transaction Tags. This has become problematic in that there are no requirements to tag interchange transactions in the NERC Standards posted on 10/23/07 with one exception. INT-004-1 still requires a modification to the tag for dynamic interchange transaction modifications. IRO-006 still relies heavily on interchange transaction tags for the TLR procedures, but without a requirement to tag a transaction, it is not clear how this procedure is accomplished under today's standards. Until transaction tags are required by the standards, the references in R9 and R10 that rely on interchange transaction tagging should be revised.

### 3. MOD-008-1:

- R1.3. - Should be revised to state the description of the method used to allocate TRM across Posted Paths or Flowgates. As currently stated, it appears to be a list of Posted Paths or Flowgates with a TRM value or percentage assigned.
- R3 - Should be revised to state within seven calendar days of the receipt of a written request.
- R4 - Should be revised to state within seven calendar days of the receipt of a documented request for such information.

### 4. MOD-028-1:

- R5.3 - The requirement states, "If the source has not been specified, use the interface point with the adjacent upstream Transmission Service Provider as the source." It may be difficult to determine the upstream Transmission Service Provider when the source has not been specified. The same is true for "If the sink has not been specified, use the interface point with the adjacent downstream Transmission Service Provider." These statements should be revised to state, "If the source has not been specified and the sink has, use the interface point with the adjacent Transmission Service Provider upstream from the source as the source." And "If the sink has not been specified and the source has, use the interface point with the adjacent Transmission Service Provider downstream from the sink as the sink."
- R11 & R12 - Use the term "postbacks" that is not defined in the NERC Glossary nor is it well defined in this standard. It appears the requirement is communicating that it is defined in Business Practices. We suggest it be defined in the ATCID much like the Counterflows are described in the ATCID.

5. MOD-029-1:

- R7 & R8 - See our comments regarding "Postbacks" above.

6. MOD-030-1:

- R2.1.2 - The phrase "first three limiting" is too prescriptive and should be removed. For example, if the most limiting first contingency transfer is a large value, say 10,000, adding the first three limiting elements/contingency combinations is not necessary. If the requirement cannot be removed, we suggest adding wording that sets a transfer level such that the first three constraints that cause the FCITC to fall under that level will be captured. Also, "source sink combinations" needs to be further defined as a calculation; an entity of any size could have thousands of these possible combinations. Also, if this in-depth study is required, the frequency in R2.2 should be decreased (as this is a minimum standard to maintain the reliability of the BES).

- R4 - The requirement states, "If the source has not been specified, use the interface point with the adjacent upstream Transmission Service Provider as the source." It may be difficult to determine the upstream Transmission Service Provider when the source has not been specified. The same is true for "If the sink has not been specified, use the interface point with the adjacent downstream Transmission Service Provider." These statements should be revised to state, "If the source has not been specified and the sink has, use the interface point with the adjacent Transmission Service Provider upstream from the source as the source." And "If the sink has not been specified and the source has, use the interface point with the adjacent Transmission Service Provider downstream from the sink as the sink."

- R5.2 - It is not clear to us what the definition of a "third-party" is and how it is used in AFC calculations. Please clarify.

- R8 & R9 - See our comments regarding "Postbacks" above.

- R9 - "Counterflows" is missing subscript "NFi" in the formula.

7. MOD-001-1 (R7, R10), MOD-004-1 (R2), MOD-008-1 (R4), and throughout other standards the drafting team uses the phrase, "make available." In addition, per FERC Order 693 (e.g. Par. 1023), wording should be added as to how it needs to be made available, such as on a website. Furthermore with regard to the sharing of information, requirements in these standards that require an entity provide information to another entity should have a standard method for providing the information or at a minimum require a negotiated method and format for providing the information. This will also require dispute resolution when two entities cannot agree on a method or format.

8. These standards do not address the market operation methods in use today. Currently, the Transmission Service Providers are the RTOs in some markets. These entities are also the market operators and not-for-profit organizations that have no vested financial interest in the amount of TTC assigned to a flow-gate or transmission facility. The modification of these standards to place the burden on the Transmission Operator for these calculations is a significant step backwards that should be revised to avoid the need for waivers or delegation agreements and to meet the needs of the old method of operation and the new market methodology.

9. Several requirements related to ATC have been incorporated into NAESB standards. It would be beneficial for these standards to be more transparent to the industry since it is challenging to find these standards on NAESB's website or some other means. It may help to have a direct link to these business practices on NERC's website in the future. Furthermore, it may help to incorporate these NAESB standards into NERC's standard review process for this and future projects in an effort to achieve full industry input on the development of these practices.

10. This set of ATC standards may need to go through a field test to determine how effective these calculations for ATC can be based on all the new requirements for Implementation Documents and Applicability to Transmission Operators and Load Serving entities that may not have ever dealt with these sorts of calculations in the past. If a field test is not an option due to time constraints, then the effective date should be pushed out another 12 months.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

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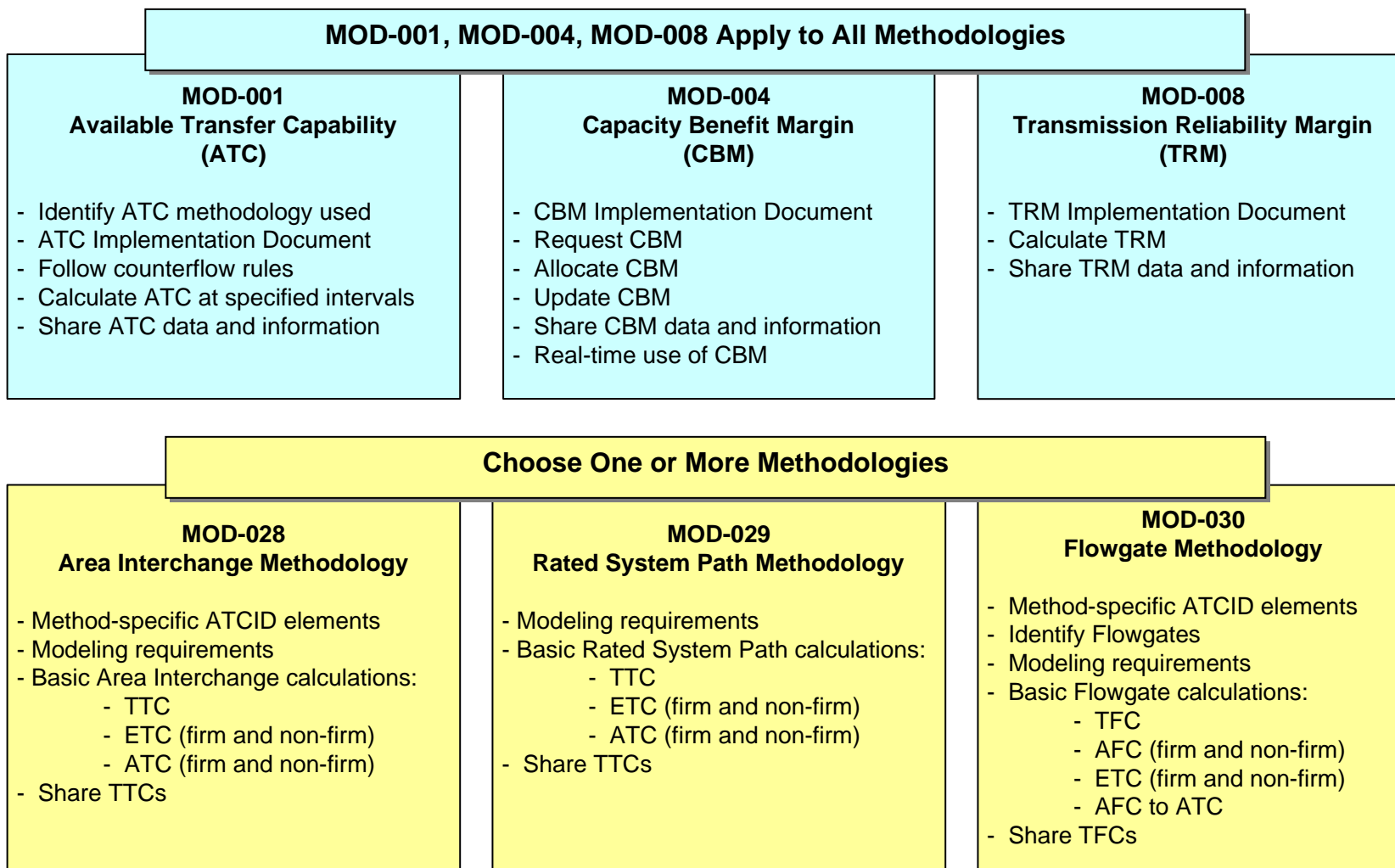
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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### Arrangement of Requirements within the Proposed Set of 'ATC' Standards





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- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: MOD-001-1: What is the "Time Horizon: Operations Planning"?

R8 specifies "associated operations studies or planning studies for the time period studied". In order to be consistent with Order 890, it should specify "associated operating horizon studies or planning horizon studies for the product time period being calculated" and further, since these horizons are being used in the context of ATC determination, the prefix "ATC" should be added to eliminate ambiguity, just as the TPL standards do with near-term planning horizon (year 1 to year 5) and longer term planning horizon (years 6 to 10)

MOD-028-1: R5.3 – define "interface point" and "adjacent upstream TSP". This requirement is complex and it should include examples with pictures.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

MOD 001: R9: This should be revised to indicate that updates are required only when data has changed. There are many entities whose ATC data may not change on a regular basis and requiring them to repost identical numbers on an hourly basis and maintain a log does not enhance reliability. Proposed wording "Each Transmission Service Provider shall update ATC at a minimum on the following frequency when the value has changed:"

MOD-004-1: CBM: There does not seem to be a way to not have a CBMID even though the TSP policy is not to reserve CBM on any of its interfaces. Could the applicability be modified to exclude entities that do not use CBM?

MOD-008-1: TRM: The sub-requirements in R1.4 and R5 describe the ATC Operating, ATC Scheduling, and ATC Planning horizons as specified by FERC in Order 890 and should be identified by name to be consistent with the other MOD standards.

MOD-028-1: Area Interchange Methodology: R3 appears to require calculating TTCs for Posted Paths for intra-day and next day, on-peak and off-peak, R4 requires calculating

TTCs for time periods beyond next day, and then R6 specifies frequencies that don't correspond. For example, R4.1.2 requires use of peak load forecast for the day being calculated, but R6.1 says calculate TTC for daily only once per week – which day's peak load forecast gets used?

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

MOD 001: M8 (referencing R9) should be revised to require proof of updates only when the information posted needs to be changed. For Example: "The Transmission Service Provider shall provide evidence (such as logs or data) that it has updated the hourly, daily and monthly ATC's on at least the minimum frequencies specified in R9 when those ATC values have changed.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

MOD 28 Requirements, Measures and VSL's for R9-R12 are not explicit that setting a value to "Zero" is "using" the value. This could cause confusion on audits. R9-R12 should be revised to indicate that "Zero" is an acceptable value and qualifies as "using" the element. For example under each item where the elements are defined a line could be added stating. "The Transmission Service Provider shall show all elements of the calculation even those that have a value of zero for the path being calculated, and that value of zero for an element is considered using the element."

MOD-001-1: ATC: The frequency of calculation in R9 for the same products in R2 adds little or no accuracy or value to the results, particularly towards the end of the horizon. For example, hourly ATC must be re-calculated for three to seven days out every hour, the same as for two to four hours out. This should be relaxed to a tiered requirement. The postings should be made out to 168 hours, however, the frequency could be relaxed so that the outer bounds of the horizon are updated less frequently. (i.e. R9.1 For next 4 hours, once per hour, for hours beyond 4 hours out until end of next day (midnight), once every 6 hours, for hours beyond end of next day, once per day.)

MOD-001-1: ATC: R10 is exhaustive. The requester should be required to have cause to request such information and be required to pay for the administrative costs of collecting and transmitting the information. Much of the listed information is embedded within the power-flow models, and transmitting models electronically on an hourly basis to potentially multiple requesters would be very costly and time-consuming. If a requester has a grievance or dispute, then the historical data should be sufficient to provide for the calculations in question.

MOD-028-1: Area Interchange Methodology: R7 – In step 'a' the 5% distribution factor should be specified as OTDF or PTDF (should be OTDF).

MOD -028-1: R7 – in Step 'A' the 5% distribution factor appears to only apply to adjacent systems. This could result in a scenario where Utility B prudently limits ATC based on a facility in their system between them and Utility C, however Utility A allows a transaction to C that has the same impact on the same facility because of the 5% rule. We suggest that the ATCID should specify the handling of off system non path impacts.

MOD-028-1: In R7 step 'c', Please further define "all impacts of firm transmission service included in the study model" and/or provide an example. In our region this phrase was interpreted by some to mean "firm point to point only" and by others to include network and native service.

MOD-029-1 R1 This section should specifically say that all the BA-BA transactions are removed from the load flow model. These transactions are accounted for under ETC.

MOD-29-1 R1-6 This section implies that load is in the model which means the TTC calculated would be reduced due to the load. In MOD-29-1 R5 load is again accounted for under ETC. It appears that the equation for ATC in MOD-29-2 R7 double counts the effect of load because it is included in the TTC and in ETC.

Mod-29-1 R5 More detail is needed as to how the components of ETC are to be determined from a load flow model. Particularly, NLF, NITSF and GFF.

MOD-029-1 R7 C: Assuming no other changes this sentence should be revised to state "Determine the impacts of Firm Transmission Service that were included in the study model." The summing of this item with the incremental Transfer Capability occurs in Step D and mentioning it here in C is redundant.

Mod 28 R7c: This term should have a defined variable name or acronym.

Mod 28 R7c, R9, R10, R11, R12: In R7c the "impacting firm transmission service" is determined and summed to the ITC results to get the TTC. In R9 & R10 an ETC is determined then in R11 & R12 that is deducted from the TTC to get ATC. However there is no tie made between the undefined "impacting Firm Transmission Service" R7c and the ETC in R9 & R10. So there is no requirement that would prevent a service from being modeled in the model, not included in the "Impacting Firm Transmission Service" (IFTS) but then included in the ETC calculation, thereby effectively double counting the service. The service was on in the model, thereby reducing the capacity, the service was not added to the model in the IFTS but was deducted from the capacity in the ETC as if it wasn't running in the model.

We suggest that the drafting develop a set of examples to clearly explain the principles and calculations laid out in the standards to help insure uniformity in interpretation of the standards. See that attached example, which while basic, could be modified to emphasize specific concepts like CBM, Postbacks, Counter Flows, TRM, "Impacting Firm Transmission Service", etc.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Ross Kovacs
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E-mail:	ross.kovacs@gatrans.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input checked="" type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

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The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

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**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

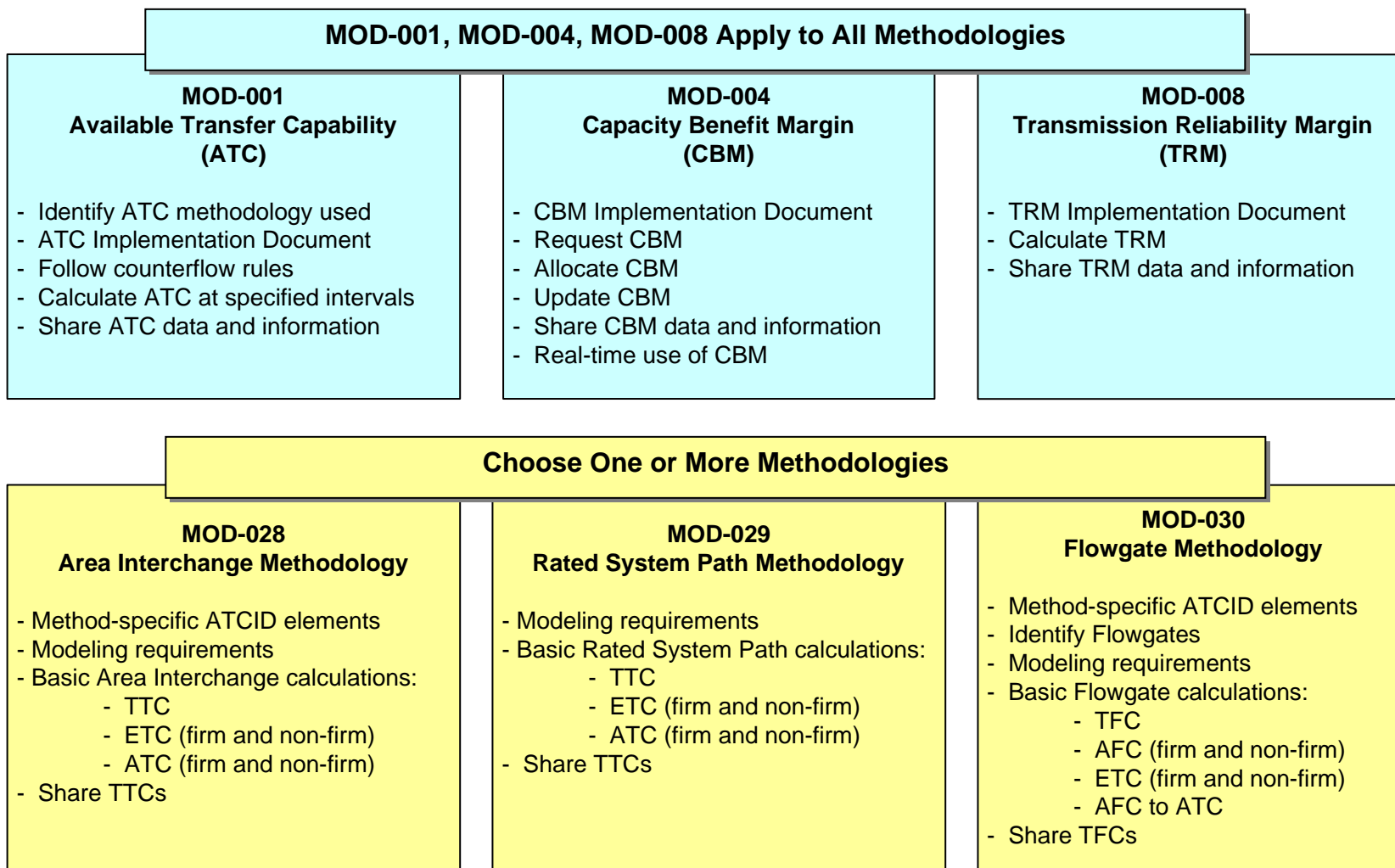
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: GTC does not think that additional time is needed; however, GTC would like to point out that the implementation period should not be shortened. The standards require development of extensive NAESB business practice standards. NAESB's working plan requires approximately six months after NERC approval of the NERC standards to create NAESB business practices that implement the NERC standards. Therefore, entities that must implement the NERC standards will only have approximately six months after the NAESB standards to implement the combination of NERC and NAESB standards.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: MOD-028, -029 and -030 refer to "Postbacks" with a definition that uses the term "postback". There is not a definition in the NERC Glossary for this term. The current NAESB draft definition (dated 9/12/07) is "The increase in ATC due to a change in status of a Transmission Service request or the release of unscheduled Transmission Service." The following definitions are suggested for MOD-028, -029 and -030:

"Postbacks(F) are the changes in Firm ATC due to a change in Firm Transmission Service during that period, as defined in Business Practices";

"Postbacks(NF) are the changes in non-firm ATC due to a change in non-firm Transmission Service, as defined in Business Practices".

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: In MOD-008-1, R5, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. An error in calculating TRM does not change the resulting TTC or TFC; therefore an error in calculating TRM cannot be a Medium or Severe Violation Risk Factor.

In MOD-028-1, R2, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should

be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-028-1, R3, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

MOD-028-1, R5 uses to the term "interface point" with the adjacent Transmission Service Provider; "interface point" is not defined. To meet MOD-028-1, R5 and MOD-030-1, R4, a Transmission Operator must define and simulate an artificial source or sink at the interface. The requirements should replace each occurrence of the phrase "use the interface point" with the phrase "use the adjacent Transmission Service Provider's area".

MOD-028-1, R8 is missing a Violation Risk Factor and a Time Horizon. They should be Violation Risk Factor: Lower and Time Horizon: Operations Planning.

In MOD-028-1, R9, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-028-1, R11, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-029-1, R1, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-029-1, R2, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-029-1, R5, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should

be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-029-1, R7, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-030-1, R2, the Violation Risk Factor is listed as Lower; it should be listed as Medium. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. MOD-030-1, R2 requires that the TFC be less than the SOL; therefore MOD-030-1, R2 should have a Medium Violation Risk Factor.

In MOD-030-1, R3, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

MOD-030-1,R4 uses the term "interface point" with the adjacent Transmission Service Provider; "interface point" is not defined. To meet MOD-028-1, R5 and MOD-030-1, R4, a Transmission Operator must define and simulate an artificial source or sink at the interface. The requirements should replace each occurrence of the phrase "use the interface point" with the phrase "use the adjacent Transmission Service Provider's area".

In MOD-030-1, R5, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-030-1, R6, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

In MOD-030-1, R9, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect,

please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: MOD-001-1, R9, Lower VSL says "For Hourly, not calculated within 5hrs". MOD-001-1, R9, Medium VSL says "For Hourly, not calculated in more than 5 hours but not more than 10 hours". This language appears to allow a TSP to not calculate for 4:59 hours, while not calculating for 5 hours is a Lower VSL and more than 5 hours is a Medium VSL. We suggest that the MOD-001-1, R9, Lower VSL should be re-written to say "For Hourly, not calculated in more than 2 hours but not more than 5 hours".

MOD-028-1, M5 requires Transmission Operators to "provide copies of contracts" without stating the entities that can receive (potentially) commercially sensitive "copies of contracts". MOD-028-1, M5 should state "The Transmission Operator shall make available, only to authorized individuals that have executed a Confidentiality Agreement and that are performing official RRO audit activities, copies of contracts that contain requirements to allocate TTCs to show that any contractual allocations of TTC were respected as required in R5.2. Transmission Operators may redact the copies of the contracts to omit commercially sensitive information."

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-001-1, R10 requires "within fourteen calendar days" for a TSP to begin supplying large amounts of data used in calculations. "Within thirty calendar days" is more realistic to supply large amounts data that could be extensive and detailed.

MOD-004-1, R2 requires a TSP to act within 7 calendar days, R6 requires a TSP to act within 5 calendar days, R7.1 and R7.2 require a TSP to act within 7 calendar days. R2, R6, R7.1 and R7.2 should be changed to match the 14 calendar days required by R4. 14 calendar days is more appropriate for data requests that are "reports", "supporting data", documentation, work papers, etc.

MOD-008-1 R3 and R4 require "seven calendar days" for a TSP to act. 14 calendar days is more appropriate for data requests that are "underlying documentation, work papers...", etc.

MOD-028-1, R5, it appear that the word "shall" is not needed in the following sentence. "-If the sink has been specified in the reservation and it is discretely modeled in the Transmission Service Provider's Transmission model, use the discretely modeled point shall as the sink."

MOD-028-1, the VSL for R8 is missing a measurement: The Transmission Operator has not provided its Transmission Service Provider with its Posted Path TTCs within \_\_\_\_ (should be seven) calendar days of their determination, but is has not been more than 21 calendar days since their determination.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Alessia Dawes
Organization:	Hydro One Networks
Telephone:	416-345-5286
E-mail:	alessia.dawes@hydroone.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
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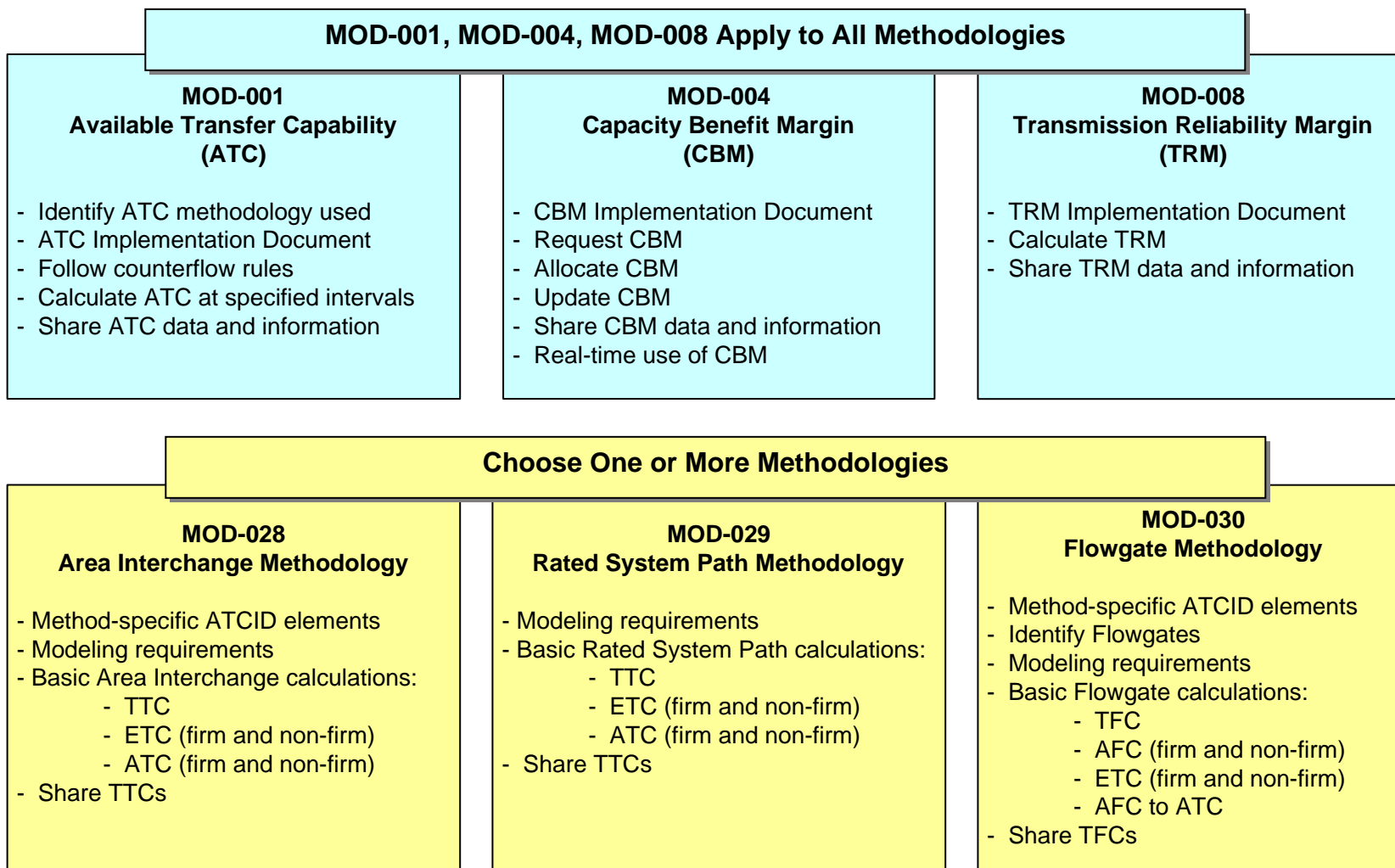
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- Converted descriptive language into algorithms for calculating ETC and ATC.
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
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- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-028-1(Area Interchange Methodology) VSL Requirement 2: The requirement talks about Facility ratings from both Transmission Owners and Generator Owners. The associated VSL description forgot to include Generator Owners. As well, this VSL talks about not using a certain number of Facility Ratings which I assume would result in some TTC error therefore I would propose changing how this requirement is measured:

Lower VSL: 1%<TTC error<5%

Moderate VSL:  $5\% < \text{TTC error} < 8\%$

High VSL:  $8\% < \text{TTC error} < 10\%$

Severe VSL:  $\text{TTC error} > 10\%$

As well this can be used for R3 and likely several other requirements were TTC and ATC errors can result from non-compliance.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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Organization:	Hydro-Québec TransÉnergie (HQT)
Telephone:	514 289-2211, X 2766
E-mail:	champagne.roger.2@hydro.qc.ca
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities





## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

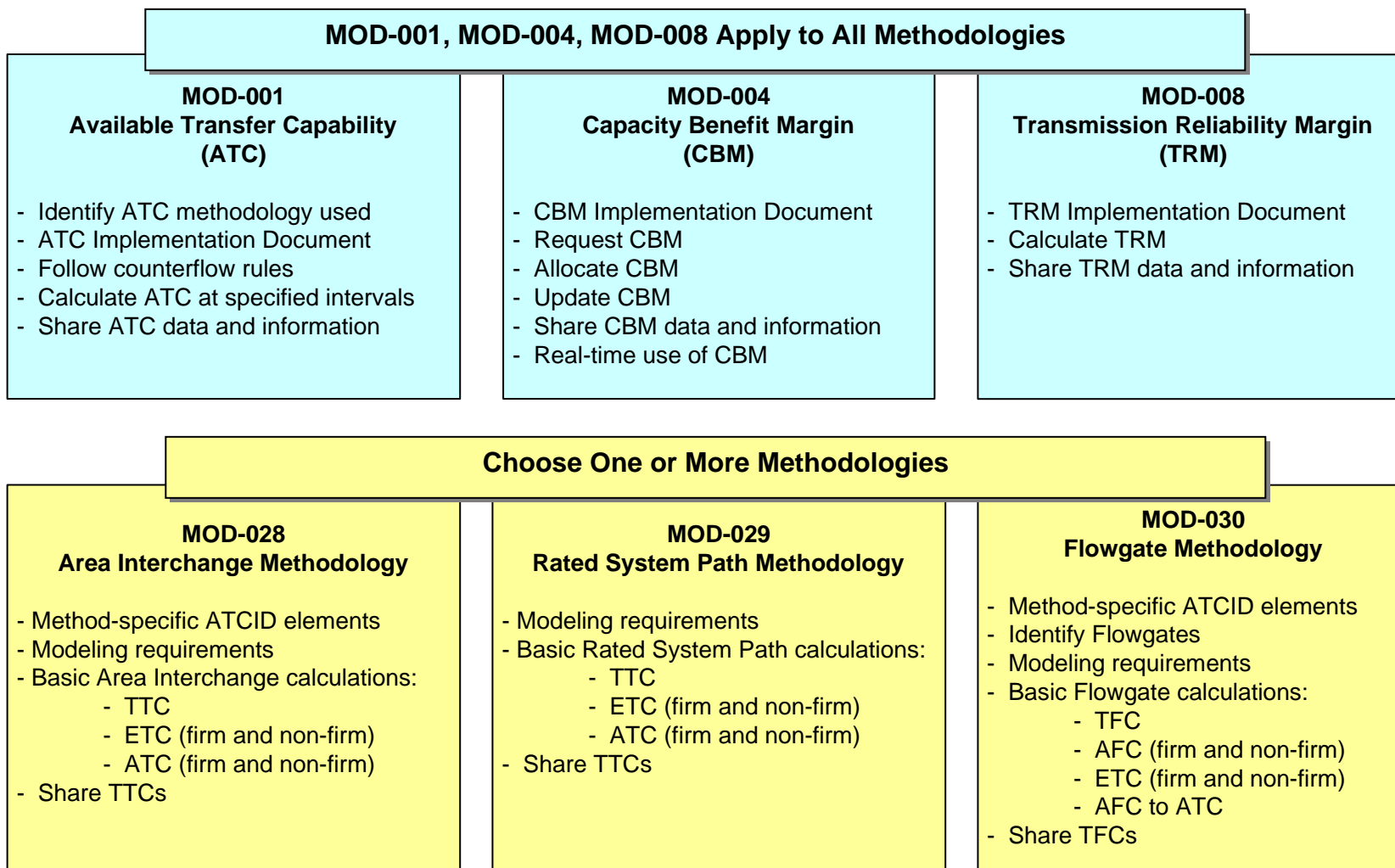
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
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### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

MOD-001

- 1. R1: The reference to the Planning Coordinator's planning area in R1 is not appropriate; the reference should be to the Transmission Operator's operating area.
- 2. R3.3: Since this standard deals with short-term Transmission Service, the reference to Planning Coordinator should be removed from R3.3, R6.1 and R6.4
- 3. R3.3: This should be reworded to be clear that the TOP is providing input (TTC or TFC) to the TSP to perform ATC calc. Also suggest removing reference to a 'tariff' since non-jurisdictional entities may not have a tariff. Suggest the following language: The identity of the Transmission Operators that provide data on each Posted Path for use by the Transmission Service Provider in calculating ATC. Acronyms TOP, TFC, and TSP need to be defined in the Background Information on p. 3. The abbreviation "calc." should be spelled out.
- 4. R4 and R5 should reference both the terms counter-schedules and counterflow throughout the requirements
- 5. R9 (or at a minimum the Measure for R9) must be modified to be clear that if TSP can demonstrate that no inputs to the ATC calculation have changed that an update of a 'timestamp' on an ATC value is not required. Suggested options for the language in R9: "Each TSP shall update ATC at a minimum on the following frequency, except that if all inputs to ATC are unchanged no update is required:" OR "Each TSP shall update ATC at a minimum on the frequencies listed below. However, if all inputs to ATC are unchanged no update is required."

MOD-029

- 1. R1.10 refers to EHV without it being a defined term and different regions could define EHV to be different voltage levels; suggest one of the following actions be taken: (a) include the desired kV level of the BPS system in the standard, (b) remove the reference to EHV entirely, (c) add a NERC glossary term. EHV should be defined in the Background Information on p.3 and be understood to be applicable to and restricted to the BPS irrespective of that voltage level. That definition must also include the BPS voltage level it refers to.
- 2. R2 language could be interpreted that all N-2 contingencies must be considered in a TTC study. If the intent that the TTC study should consider all currently required planning criteria, a general reference should be made to the planning standards rather than try to summarize and reiterate those requirements here.
- 3. R2.1.5 contains a very specific consideration for EHV contingencies to be considered in the TTC. Is there a reliability need for ALL regions to consider EHV in this manner? If not, we suggest removing this requirement from the NERC standard, where it can be added in a more detailed regional standard if required by a particular region. EHV should be defined in the Background Information on p. 3; the definition must include the BPS voltage level it refers to.
- 4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

1. VSL for MOD-028 R2 and R3 are is not clear if the 'errors' that are allowed are for a given TTC study or the allowed cumulative 'errors' since the last audit? (this language should also be clarified on comparable VSLs in MOD-029 and MOD-030). "Are is" in the first sentence needs to be corrected.
  2. If suggestions in Question 3 and 6 are accepted, the associated Measures and VSLs will also need to be updated accordingly.
5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: We would like confirmation from the Drafting Team that our interpretation of how the MOD-004 requirements can apply in areas that employ competitive wholesale markets in a manner that does not conflict with approved tariffs. In ISO/RTO markets where resource adequacy is performed by the ISO/RTO (i.e., an independent Balancing Authority), and by virtue of the market, the Transmission Service Provider does not offer transmission service in advance of physical flow, there is no ability for the LSE to 'request' CBM as defined in the standards. However, the reliability need for CBM by the LSE is satisfied by the market rules and associated tariffs. As such, the entities' CBMID would describe how the reliability needs of the LSEs, as relates to securing CBM is met and why there is no need for the LSE to 'request' CBM in the manner described in the standards. We would like confirmation from the Drafting Team that documentation of

CBMID in this manner – i.e., through specifying that an LSE need not “request” any particular transmission service – would satisfy the reliability requirements of MOD-004. LSE, and CBMID should be defined in the Background Information on p. 3.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

MOD-001

1.R1: While in many cases, the decision on which ATC methodology to use may be made jointly between the TSP and TOP. However, since you cannot have joint responsibility in the standard, the TOP is the appropriate Functional Model entity. Acronyms TSP, and TOP need to be defined in the Background Information on p. 3.

2.R8: Since this standard deals with short-term Transmission Service, the reference to planning studies should be removed from R8

3. R8 is an appropriate representation of the broad FERC requirement as-written that will force entities to make a conscious effort to ensure this consistency occurs. While the language is somewhat vague, we recognize that adding more detail would be unreasonably difficult. We would suggest that detail be added in the measures to provide examples of what a valid demonstration would be. For example, TOP/TSP may provide evidence to demonstrate that the source of the inputs used in the operational studies is the same as for the TTC/ATC studies. TOP and TSP need to be defined in the Background Information on p. 3.

MOD-028

1. R8 should be broken down into the different timeframes; sending TTC values used in hourly and daily ATC calculations seven days after being calculated is too late. Suggest: 8.1 within one calendar day of its determination for TTCs used in hourly and daily ATC calculations; 8.2 within seven calendar day of its determination for TTCs used in monthly ATC calculations.

MOD-030

1. R4 seems duplicative of MOD-001 R8
2. R6.3, 6.4 - The last sentence of R6.3 seems to belong in 6.4 not 6.3



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Ron Falsetti
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Telephone:	905-855-6187
E-mail:	ron.falsetti@ieso.ca
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
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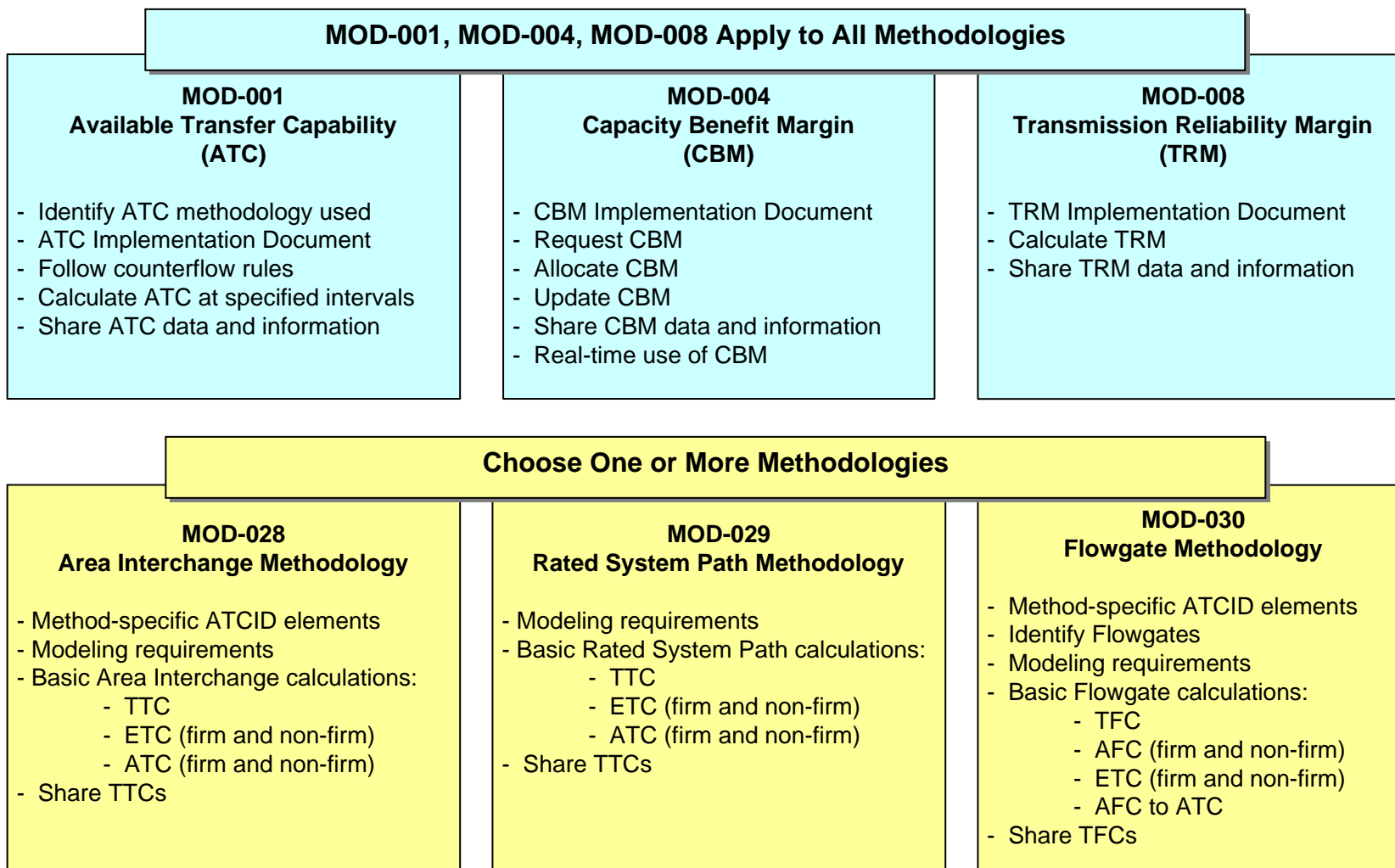
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: 1) The standards suggest retiring FAC-012 and FAC-013. We are uncomfortable with this since we strongly believe the MOD standards fall short of replacing these requirements and in our view the TTC should be determined within the FAC standards.

2) Tying the implementation date with the various regulatory approvals means that the effective dates will be all over the map. The effective dates should be set to a specific time after NERC BOT approval, that allows time for the appropriate regulatory approvals. These concerns were presented to NERC some time ago and it is our understanding that they had accepted this argument.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

MOD-004

CBM is intended to be used for accessing generation from external sources to meet the LSE's PLANNED capacity installation requirement. The word "planned" should be inserted in the definition for GCIR.

MOD-28 and MOD-029

The definitions for Area interchange Methodology and Rated System Path Methodology seem to be woefully inadequate - the "determination via simulation" explanation for the methodologies is pretty meaningless by itself - these should either be explained properly or be removed from the standards as "definitions" or could be added to the MOD-001 definition list.

MOD-030

Is the Flowgate Methodology definition needed. If it is, shouldn't it simply be the method used to determine key facilities for selling transmission service? The current definition at a minimum needs to consider IROL as potential TFC instead of just system facilities.

The Flowgate definition should add "monitored transmission" in front of Facilities. A generator is also a facility but is not included as part of a flowgate definition. Also, bullet one should start with: "Designated paths on..." It is not a point.

The definition of PTFD also needs to be modified - it could be modified to read: "In the pre-contingency configuration of a system under study, a measure of the responsiveness or change in electrical loadings on transmission system facilities due to a change in electric power transfer from one area to another, expressed in percent (up to 100%) of the change in power transfer."

The definition of OTDF also needs to be modified - it could be modified to read: "In the post-contingency configuration of a system under study, the electric Power Transfer Distribution Factor (PTDF) with one or more transmission facility element removed from service (outaged)." This is to ensure that PTDF is not confused with Generator Transfer Distribution Function (GTDF), as a generator is also a facility.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- MOD-001:
- R1: We question the appropriateness of retaining the calculation of TTC within the MOD series standards rather than inclusion with the FAC series standards to assure consistency with the calculation of Total Transfer Capability (TC). While FERC did not explicitly direct the ERO to develop the TTC in FAC-012 as the NOPR had proposed, it nonetheless directed that the short and long-term calculations be consistent with TC to the extent possible (Order 693 @ P1039). To achieve such consistency, and to avoid virtually identical requirements in 2 standards, it is our view that TTC calculation should be part of the FAC-012 standard.

Further, we are unable to see the relevance of a Planning Coordinator's "planning area" in the TOP's determination of TTC and TSP's determination of ATC since the areas under the purview of a TOP, TSP and PC may differ among them. If an appropriate area needs to be included in the requirements then we would suggest the a Transmission Operator's area be specified for a TOP's determination of TTC, and a Transmission Service Provider's area be specified for a TSP's determination of ATC.

- R3: We do not agree that R3.1 to R3.6 are sub-requirements. They are attributes that need to be included (at a minimum) in the ATCID. The violation severity level of R3 would then depend on the number of these attributes not included in the ATCID. Additionally, the IRC is concerned with the drafting teams approach to explicitly defining the method (ATCID) to be used to consolidate the required information. While we may agree the ATCID may be conducive for audit purposes, requirements should only specify "what" is required and leave the "how" it is to be compiled to the responsible entity.
- R6: We do not see the need to include Planning Coordinator in the list of entities to inform before a TSP implements a revised or new ATCID.
- R8: We suggest splitting this into two requirements - one for the TOP on TTC and one for TSP on ATC. Having a requirement to hold two entities to each comply with a specific part of it creates difficulties for developing violation risk factors, measures and violation severity level, and for compliance audit.

- R9: There are markets which do not require reservations and hence it does not make sense that the ATC values should be reviewed or posted per this requirement because by the very nature of such market operations, the ATC/TTC values are pretty much static and only change when system conditions change and have a direct impact on the values. The requirement must be modified with a qualifier statement so that these values need to be reviewed and posted for the following conditions and the fact that these can be applied to areas with and without reservations. The following qualfier could be added: "The ATC shall be updated by the Transmission Service Provider if (a)The ATC/TTC values have changed since the last update and the TSP can provide documentation as to why these numbers had not changed until then and (b) The other TSP has changed the ATC/TTC values." The main intention of the FERC Order 693 regarding the MOD standards was to ensure consistency, transparency, and communication and we believe that even though there is a mention of "frequency of posting" - section 1057, Order 693 - "...include a requirement that ATC be updated by all transmission providers on a consistent time interval..." the requirement, as is written now, is very prescriptive and the frequency of posting, especially the hourly postings/certifications is not required and is very cumbersome and extremely burdensome. The correct ATC/TTC values should always be posted on the appropriate website as this is a reliability consideration – this is what the standard requirement should capture - but the frequency of posting should be a NAESB requirement and not a "reliability standard".R10: The requirement as written is difficult to understand. Suggest to delete the phrase "to each requester" to add clarify. Further, similar to our comments on R3, R10.1 to R10.15 are the data to be provided. They are not sub-requirements.

#### MOD-004

R1: R1.1 to R1.3 are elements to be included in the CBMID, they are not sub-requirements.

R2: The TSP should post the CBMID on the OASIS rather than making it available to the selected entities only.

R5: We are unable to see the role of a Transmission Planner in setting the value of CBM. TP is a recipient of the CBM value for considering in its transmission planning process, not the setter. The TSP should be performing the tasks listed in R5 upon receiving requests from the LSEs.

R7: Accordingly, the TP should not be responsible for providing supporting data used for allocating CBM.

- MOD-008
- R1: R1.1 to R1.4 are elements to be included in the TRMID, they are not sub-requirements. R1.5 is a legitimate sub-requirement; it doesn't need to be changed.

R4: The TSP should post the TRMID and related information on the OASIS rather than making it available to the requesting TSPs only.

#### MOD-030

- R2.3 does not identify that TFC can be limited by an IROL but it should. If selling transmission service really requires development of a reliability standard, R2.4 should be



modified to require updating the TFC any time the underlying determinants, such as facility ratings, change.

- R3.4 requires that a TOP include all modeling and topology for Facilities in the Reliability Coordinator Area. For a small TOP within a large RC, this may be overkill. R3.5 arbitrarily requires a model to include 3 contiguous busses from the tie-line into synchronously connected systems and R3.6 requires at least an equivalent representation further in than that. These are not appropriate or acceptable methods for determining modelling detail level. There exist commercially available modeling packages that can be used to determine the impacts of the external system and how much detail should be kept. There should be a requirement(s) that establishes thresholds such as percent impact of flows on the TOP system for removal of facilities from the external footprint. If the impact exceeds that threshold, then the external facility should be modeled in detail.

This standard should not include any requirements on the Transmission Operator. R2 should be a requirement on the Transmission Service Provider. Ultimately, they will have to work with the TOP to identify the flowgates and it is in the best interest of the TOP to help the TSP but the requirement should not apply to the TOP. This drafting team should work with the appropriate drafting team developing TOP requirements to ensure that there is a requirement for the TOP to communicate limits to the TP. R3 should not apply to the TOP. It should apply to the TSP. The TSP should use system limit inputs such as SOL and IROL given by the TOP to determine TFC. Ultimately, R3 should be a simple requirement for the TSP to use the system limits determined by the TOP per FAC standard to define the TFC. No sub-requirements are then required.

#### MOD-028

R2.2 is not clear - modeling "beyond Reliability Coordination Areas" may not be feasible in many cases, especially when entire second or third tier RCs have to be modeled - adjacent RC area modeling is a must but modeling of beyond adjacent RC areas should be at the discretion of the Transmission Operator. Also, R2.1 through R2.3 are model parameters and not requirements per se.

#### MOD-029

R2.1.5 is worded inconsistently with the rest of the bullet points. It should read as: "System disturbances for stability studies by a three-phase-to-ground fault on all modeled "Extra High Voltage (EHV)" buses adjacent to the major interconnection point of the modeled Posted Path should not render the system unstable".

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

MOD-001:

If the SDT accepts our comments in (3) above, then the following Measures should be revised:

M1: changed to reflect new requirement language accordingly.

M7: Split this measure into two to reflect the split of R8 into two requirements.

M10: This measure needs to be reworded for clarity, as follows: "The Transmission Service Provider shall provide a copy of the dated request for ATC data as well as evidence to show it responded to that request (such as logs or data) within fourteen calendar days of receiving a request, and the requested data items were made available in accordance with R10."

MOD-004:

Assuming the above comments are accepted,

M2: Need to be changed to reflect posting on the OASIS.

M7: Need to change Transmission Planner to Transmission Service Provider.

M9: Remove Transmission Planner from this measure.

VSL for R1 should be changed to be associated with the number of elements (R1.1 to R1.3) not included.

MOD-008:

Assuming the above comments are accepted,

M4: Need to be changed to reflect posting on the OASIS.

VSL for R1 should be changed to be associated with the number of elements (R1.1 to R1.4) not included.

MOD-030

The Violation Risk Factor for R3, R5, R6, and R8 should be changed from Medium to Lower. In order for these requirements to have a medium VRF, according to the VRF criteria in Drafting Team Guidelines, they would have to directly affect the electrical state or capability of the bulk electric system or ability to effectively monitor and control the bulk electric system or in the planning time frame, or if violated, could under emergency, abnormal or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system. There is no direct link from this requirement because selling transmission service does not affect actual flows. The transmission service would have to be scheduled by the customer which he may not do and then the schedule has to be approved by all TPs on the path, and source and sink BA. These entities have tools that allow them to determine if a schedule should flow and the Reliability Coordinator acts as a backstop. When the RC issues a TLR, Interchange Distribution Calculator even reallocates and halts new schedules during regardless of how long ago the transmission service was sold. Thus, several other activities have to occur or fail to occur to impact directly the BES and thus, there is no direct link.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Selling transmission service is not really a reliability issue. It is a commercial issue. Additionally, FERC is very clear in its 693 Order that the primary purpose of ordering these changes to the reliability standards is to create transparency, eliminate undue discrimination, and ensure consistency. If existings standards were contributing to these problems, ordering these changes would be appropriate. However, using the reliability standards to effect these goals is an inappropriate use. Do we want to say anything like that here or let it go?

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

MOD-028 and MOD-029: We raise the question on the "purpose" of both MOD-028 and MOD-029, both of which are defined as: "...to support reliable system operations". Is the methodology to be used for calculating transfer capability for "Transmission services", or for supporting reliable system operations? For entities which do not provide physical point-to-point transmission services, like the IESO, why should we be held responsible for meeting the standard requirements for calculating TTCs that support transmission services?

MOD-030

Several requirements are written with sub-requirements that are really criteria. These sub-requirement should be incorporated directly into the requirement itself. Otherwise, we risk having the Commission assign a VRF to something that really is criteria or explanatory text. Some examples include R2, R3, and R4. R2 could be written as:

R2. The TSP shall identify Flowgates for use in the AFC process based on the following minimum criteria.

- Flowgates should be defined with contingencies that are used in operations and planning studies for the associated time horizon.

- At least the first Flowgates identified as limits to transfer from or to all adjacent BA within the TOP transmission system.

- Any modeled Flowgate that has been subjected to Interconnection wide congestion management procedure or another TP using methodogolies defined by MOD-28 or MOD-29 has requested that meets one of the following two criteria.

- Any generator within the Transmission Service Provider area has at least a 5% PTDF or OTDF impact on the Flowgate when delievered to aggregate load in the TSP areas or

- A transfer from any BA within the TSP's area to a BA adjacent that has at least a 5% PTDF or OTDF impact on the Flowgate

We agree with that the remaining sub-requirements of R2 are really sub-requirements.

R4 should be rewritten as because the assumptions should be specifically designed and it is too vague:

R4 The Transmission Service Provider shall use contingencies from its planning and operating studies for the applicable Time Horizon and should model the impact of point-to-point Transmission Service as:

- When the source or sink are specified in the reservation, the Transmission Service Provider should model the reservation in the following order of importance:

1. Model the reservation using the actual source and sink in the model.
2. Map to an "equivalence" or
3. Map to the interface point with the adjacent upstream Transmission Service Provider as the Source the adjacent downstream Transmission Service Provider as the Sink.

- When the source or sink are not specified, the Transmission Service Provider should map the reservation to the interface point with the adjacent upstream Transmission Service Provider as the Source the adjacent downstream Transmission Service Provider as the Sink.

R2.2 should also require a change to flowgates any time there is a topological change that impacts one.

The VSLs for R1 need to be defined according to the Violations Severity Levels Development Criteria document. R1 fits the procedure/program category. Lower, Moderate and High VSLs should be defined based on some of the criteria being included.

Counterflows - the treatment of counterflows is mentioned in all the MOD standards - MOD-001, MOD-028, MOD-029, and MOD-030 - all the formulae incorporate counterflows into the calculations but there seems to be a disconnect between the formulae and R5 of MOD-001 - if counterflow treatments are left to the discretion of the TSP in the respective ATCIDs, then why does R5 of MOD-001 exist - can it not be written as: "When determining the impact of counterflows in the determination of non-firm ATC or Available Flowgate Capability (AFC), the Transmission Service Provider shall apply counterflow treatment consistent with the Transmission Service Provider's ATCID". The counterflow treatment should also be consistent with transmission planning studies.

We agree with the NERC SDT that the TRM methodology should not be prescriptive.

MOD-008 (TRM) has a requirement when entities have a zero value for TRM - R1.5 of MOD-008 states that: "If TRM is zero for all the time periods...". There is no similar language for MOD-004 when entities have a zero value for CBM.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

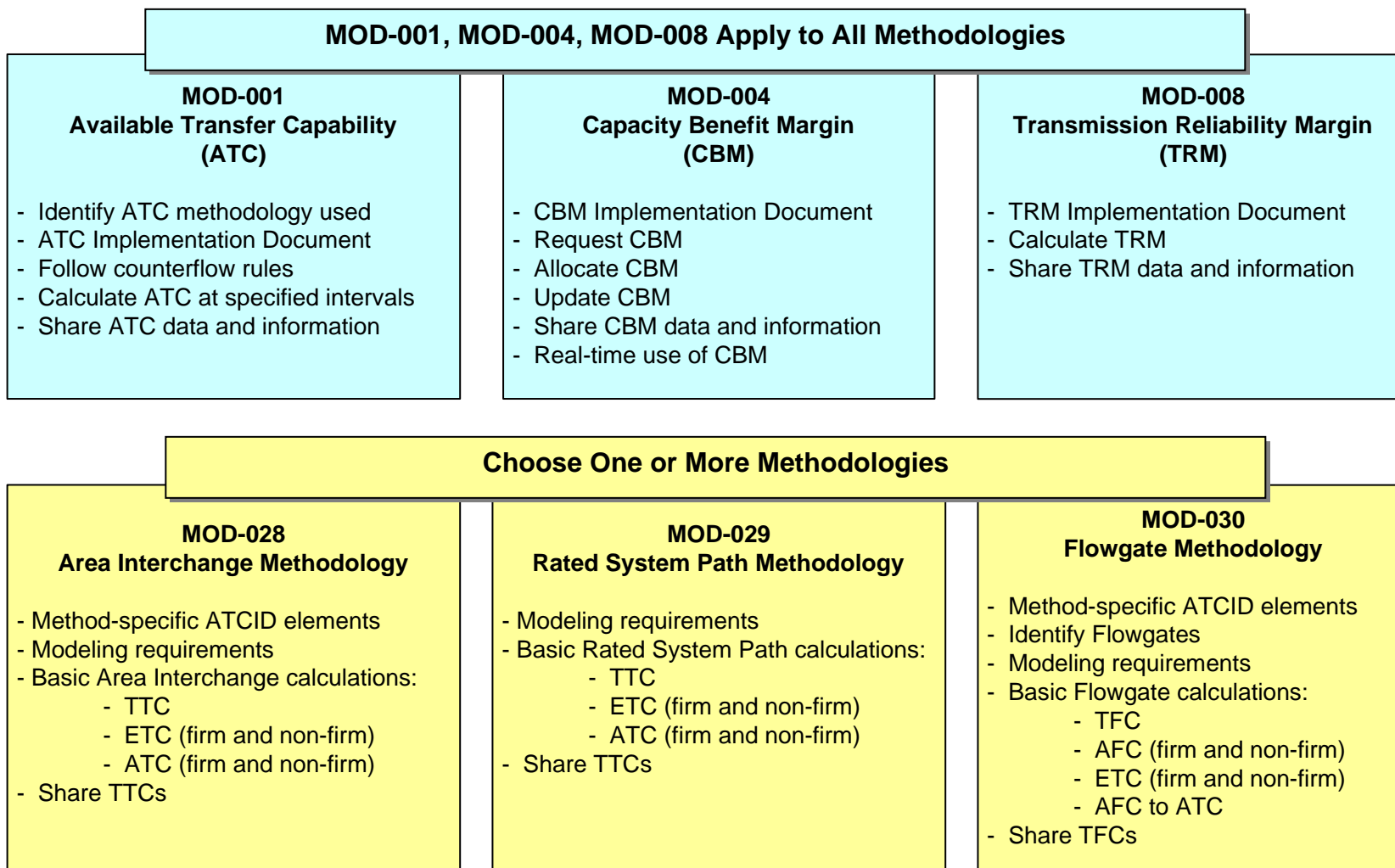
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: Tying the implementation date with the various regulatory approvals for the MOD standards could mean effective dates can be varied across North America. A definitive effective date should be set that accounts for the time needed for appropriate regulatory approvals.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

- Incorrect Definition: MOD-004

CBM is intended to be used for accessing generation from external sources to meet the LSE's PLANNED capacity installation requirement. The word "planned" should be inserted in the definition for GCIR.

- MOD-030

- Total Flowgate Capability does not consider that an IROL may be a limit.

- Is the Flowgate Methodology definition needed. If it is, shouldn't it simply be the method used to determine key facilities for selling transmission service? The current definition at a minimum needs to consider IROL as potential TFC instead of just system facilities.

The Flowgate definition should strike the word monitored and add transmission in front of Facilities. The NERC Glossary of Terms gives a generator as an example of Facility and the current definition would then allow a generator to define a flowgate. Also bullet one should start with: A designated set of transmission facilities. It is not a point.

MOD-029

The SRc notes that Order 890, P. 212 requires that the NERC Drafting Team address "counterflows" but does not provide direction as to the meaning of that term. As the term is often used interchangeably to mean actual flows of energy, scheduling of energy or reservations of transmission for possible scheduling of energy, the Team suggests that the NERC ATC Drafting Team clarify the meaning of the term as well as how it integrates into each proposed standard. Specifically, the NERC Drafting Team should clarify such items as: 1) is it a flow, a schedule or a reservation, 2) does it change characteristics based on the time frame examined (E.g. is it a reservation before it becomes a schedule?), 3) is it uni-directional or bi-directional. The term is used in

numerous calculations but as presented is too vague to calculate rendering the formula opaque.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- For MOD-001:
- R1 - We question the appropriateness of retaining the calculation of TTC within the MOD series standards rather than inclusion with the FAC series standards to assure consistence with the calculation of Total Transfer Capability (TC). While FERC did not explicitly direct the ERO to develop the TTC in FAC-012 as the NOPR had proposed, it nonetheless directed that the short and long-term calculations be consistent with TC to the extent possible (Order 693 @ P1039). To achieve such consistency, and to avoid virtually identical requirements in 2 standards, it is the IRC's view TTC calculation should be part of the FAC-012 standard. Further, we are unable to see the relevance of a Planning Coordinator's "planning area" in the TOP's determination of TTC and TSP's determination of ATC since the areas under the purview of a TOP, TSP and PC may differ among them. If an appropriate area needs to be included in the requirements then we would suggest the a Transmission Operator's area be specified for a TOP's determination of TTC, and a Transmission Service Provider's area be specified for a TSP's determination of ATC.
- R3: We do not agree that R3.1 to R3.6 are sub-requirements. They are attributes that need to be included (at a minimum) in the ATCID. The violation severity level of R3 would then depend on the number of these attributes not included in the ATCID. Additionally, the IRC is concerned with the drafting teams approach to explicitly defining the method (ATCID) to be used to consolidate the required information. While we may agree the ATCID may be conducive for audit purposes, requirements should only specify "what" is required and leave the "how" it is to be compiled to the responsible entity.
- R6: We do not see the need to include Planning Coordinator in the list of entities to inform before a TSP implements a revised or new ATCID.
- R8: We suggest splitting this into two requirements - one for the TOP on TTC and one for TSP on ATC. Having a requirement to hold two entities to each comply with a specific part of it creates difficulties for developing violation risk factors, measures and violation severity level, and for compliance audit.
- R9: There are markets which do not require reservations and hence it does not make sense that the ATC values should be reviewed or posted per this requirement because by the very nature of such market operations, the ATC/TTC values are pretty much static and only change when system conditions change and have a direct impact on the values. The requirement must be modified with a qualifier statement so that these values need to be reviewed and posted for the following conditions and the fact that these can be applied to areas with and without reservations. The following qualfier could be added: "The ATC shall be updated by the Transmission Service Provider if (a)The

ATC/TTC values have changed since the last update and the TSP can provide documentation as to why these numbers had not changed until then and (b) The other TSP has changed the ATC/TTC values." The main intention of the FERC Order 693 regarding the MOD standards was to ensure consistency, transparency, and communication and we believe that even though there is a mention of "frequency of posting" - section 1057, Order 693 - "...include a requirement that ATC be updated by all transmission providers on a consistent time interval..." the requirement, as is written now, is very prescriptive and the frequency of posting, especially the hourly postings/certifications is not required and is very cumbersome and extremely burdensome. The correct ATC/TTC values should always be posted on the appropriate website as this is a reliability consideration – this is what the standard requirement should capture - but the frequency of posting should be a NAESB requirement and not a "reliability standard".

- R10: The requirement as written is difficult to understand. Suggest to delete the phrase "to each requester" to add clarify. Further, similar to our comments on R3, R10.1 to R10.15 are the data to be provided. They are not sub-requirements.
- MOD-004
- R1: R1.1 to R1.3 are elements to be included in the CBMID, they are not sub-requirements.
- R5: We are unable to see the role of a Transmission Planner in setting the value of CBM. TP is a recipient of the CMB value for considering in its transmission planning process, not the setter. The TSP should be performing the tasks listed in R5 upon receiving requests from the LSEs.
- R7: Accordingly, TP should not be responsible for providing supporting data used for allocating CBM.
- MOD-008
- R1: R1.1 to R1.4 are elements to be included in the TRMID, they are not sub-requirements. R1.5 is a legitimate sub-requirement; it doesn't need to be changed.
- • MOD-29
- •
- • R1.6.
- • We suggest this bullet be deleted. This is already addressed in R2 wherein the modeling process is dictated. In the RSP methodology, "peak load forecasts" are not used to stress the system; rather, load and generation are simulated to stress the system to its greatest capacity. There are cases when the highest forecasted load may not stress the system to its greatest utilization – which is the goal of the R2 under the RSP.
- • R2.3
- • We suggest correcting "...as determined by R1.2.1..." to read "...as determined by R2.1."

- • R5.
  - • The language describing Native Load should be changed from “reserved” to “encumbered.” Encumbered is the word most frequently used in conjunction with OASIS to describe this condition. The same change should apply to GF sub F.
  - • The language describing Grandfathered capacity includes the defined terms “Firm” and “Transmission Service.” Use of these words as defined terms is inconsistent throughout the proposed standards. They should either be changed here to a lower case or all applicable areas in each proposed standard should be changed to the defined term.
  - MOD-030
  - R2.3 does not identify that TFC can be limited by an IROL but it should. If selling transmission service really requires development of a reliability standard, R2.4 should be modified to require updating the TFC any time the underlying determinants, such as facility ratings, change.
  - R3.4 requires that a TOP include all modeling and topology for Facilities in the Reliability Coordinator Area. For a small TOP within a large RC, this may be overkill. R3.5 arbitrarily requires a model to include 3 contiguous busses from the tie-line into synchronously connected systems and R3.6 requires at least an equivalent representation further in than that. These are not appropriate or acceptable methods for determining modeling detail level. The two involved TSPs for the given transmission system and adjacent transmission system should determine the appropriate level of modeling detail needed in the adjacent transmission system.
  - This standard should not include any requirements on the Transmission Operator. R2 should be a requirement on the Transmission Service Provider. Ultimately, they will have to work with the TOP to identify the flowgates and it is in the best interest of the TOP to help the TSP but the requirement should not apply to the TOP. This drafting team should work with the appropriate drafting team developing TOP requirements to ensure that there is a requirement for the TOP to communicate limits to the TSP. R3 should not apply to the TOP. It should apply to the TSP. The TSP should use system limit inputs such as SOL and IROL given by the TOP to determine TFC. Ultimately, R3 should be a simple requirement for the TSP to use the system limits determine by the TOP per FAC-014-1 standard to define the TFC. No sub-requirements are then required.
  - R10 requires that all TSPs convert their AFCs and TFCs to ATC and TTC values. The IRC supports an allowance for entities whose tariffs do not use ATC and TTC to meet this requirement through a tool rather than manual calculations. There is no value added to the customer to have ATC and TTC values for transmission service that is sold on a AFC and TFC basis. Therefore these TSPs should not be burdened with the added expense and effort to convert the values manually. The IRC proposes the following language, “The Transmission Service Provider shall convert or provide a tool to convert Flowgate AFCs to ATCs (and TFCs to TTCs) for Posted Paths.”
4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

For MOD-001:

If the SDT accepts our comments in (3) above, then the following Measures should be revised:

M1: changed to reflect new requirement language accordingly.

M7: Split this measure into two to reflect the split of R8 into two requirements.

M10: This measure needs to be reworded for clarity, as follows: "The Transmission Service Provider shall provide a copy of the dated request for ATC data as well as evidence to show it responded to that request (such as logs or data) within fourteen calendar days of receiving a request, and the requested data items were made available in accordance with R10."

MOD-004:

Assuming the above comments are accepted,

M7: Need to change Transmission Planner to Transmission Service Provider.

M9: Remove Transmission Planner from this measure.

VSL for R1 should be changed to be associated with the number of elements (R1.1 to R1.3) not included.

MOD-008:

Assuming the above comments are accepted,

VSL for R1 should be changed to be associated with the number of elements (R1.1 to R1.4) not included.

MOD-29

M1.

M1 inaccurately calls for production of "models" used to derive TTC. As there are multiple conditions under MOD-29, R2 where a model does not dictate the predicate for TTC, M1 should be reworded to state "...shall produce the models, contracts, nomograms, reports or study results..."

Corresponding to:

- 1) Models in R2.1, R2.2. and R2.5;
- 2) Contracts in R.2.3 and R2.6;
- 3) Nomograms in R2.4;
- 4) Reports or studies in R2.7 and R2.8.

M1.3

We suggest correcting M1.3 from "...as stated in R1.1 through R.12..." to "...as stated in R1.1 through R1.12..."

M4.

If "M1" above is adopted, M4 is duplicative of M1 and should be deleted.

VSL R5, R6, R7, R8

These VSLs call for only a "severe" determination. They also mandate that the TSP "use" all the elements defined. However, the TSP will not "use" all the defined elements if they are not applicable. Thus, if a TSP does not "use" all elements defined because all the elements were not applicable – the TSP is in violation for not including null elements in its calculation.

We suggest these be rewritten to state: "The Transmission Service Provider did not use all affected elements as defined in...." This approach should help clarify that "zero" as an integer is an acceptable entry and that only those variables "affected" need be reported or acted upon.

MOD-030

The Violation Risk Factor for R3, R5, R6, and R8 should be changed from Medium to Lower. In order for these requirements to have a medium VRF, according to the VRF criteria in Drafting Team Guidelines, they would have to directly affect the electrical state or capability of the bulk electric system or ability to effectively monitor and control the bulk electric system or in the planning time frame, or if violated, could under emergency, abnormal or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system. There is no direct link from this requirement because selling transmission service does not affect actual flows. The transmission service would have to be scheduled by the customer which he may not do and then the schedule has to be approved by all TSPs on the path, and source and sink BA. These entities have tools that allow them to determine if a schedule should flow and the Reliability Coordinator acts as a backstop. When the RC issues a TLR, the Interchange Distribution Calculator even reallocates and halts new schedules regardless of how long ago the transmission service was sold. Thus, several other activities have to occur or fail to occur to impact the BES and thus, there is no direct link.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: MOD-030

Selling transmission service is not a reliability issue. It is a commercial issue. Additionally, FERC is very clear in its 693 Order that the primary purpose of ordering these changes to the reliability standards is to create transparency, eliminate undue discrimination, and ensure consistency. If existings standards were contributing to these problems, ordering these changes would be appropriate. However, using the reliability standards to effect these goals is an inappropriate use because they do not affect reliability.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.



Comments:

MOD-029 RATED SYSTEM PATH TTC, ETC & ATC

- 1) The SRC supports retention of the requirement(s) in R2.2 that accommodate paths which are “flow limited” by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing practices without re-inventing the wheel where no such effort is required to meet FERC’s goals of transparency and consistency.
- 2) The SRC supports retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.
- 3) The SRC supports retention of the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.
- 4) The SRC supports retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts, associated litigation and potential renegotiation of associated operational agreements while supporting FERC’s mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.

MOD-030

Several requirements are written with sub-requirements that are really criteria. These sub-requirements should be incorporated directly into the requirement itself. Otherwise, we risk having the Commission assign a VRF to something that really is criteria or explanatory text. Some examples include R2, R3, and R4. R2 could be written as:

R2. The TSP shall identify Flowgates for use in the AFC process based on the following minimum criteria.

- Flowgates should be defined with contingencies that are used in operations and planning studies for the associated time horizon.

- At least the first Flowgates identified as limits to transfer from or to all adjacent BA within the TOP transmission system.

- Any modeled Flowgate that has been subjected to Interconnection wide congestion management procedure or another TP using methodologies defined by MOD-28 or MOD-29 has requested that meets one of the following two criteria.

- Any generator within the Transmission Service Provider area has at least a 5% PTDF or OTDF impact on the Flowgate when delivered to aggregate load in the TSP areas or

- A transfer from any BA within the TSP's area to a BA adjacent that has at least a 5% PTDF or OTDF impact on the Flowgate

We agree with that the remaining sub-requirements of R2 are really sub-requirements.

R4 should be rewritten as because the assumptions should be specifically designed and it is too vague:

R4 The Transmission Service Provider shall use contingencies from its planning and operating studies for the applicable Time Horizon and should model the impact of point-to-point Transmission Service as:

- When the source or sink are specified in the reservation, the Transmission Service Provider should model the reservation in the following order of importance:

1. Model the reservation using the actual source and sink in the model.
2. Map to an "equivalence" or
3. Map to the interface point with the adjacent upstream Transmission Service Provider as the Source the adjacent downstream Transmission Service Provider as the Sink.

- When the source or sink are not specified, the Transmission Service Provider should map the reservation to the interface point with the adjacent upstream Transmission Service Provider as the Source the adjacent downstream Transmission Service Provider as the Sink.

R2.2 should also require a change to flowgates any time there is a topological change that impacts one.

The VSLs for R1 need to be defined according to the Violations Severity Levels Development Criteria document. R1 fits the procedure/program category. Lower, Moderate and High VSLs should be defined based on some of the criteria being included.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input checked="" type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
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**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

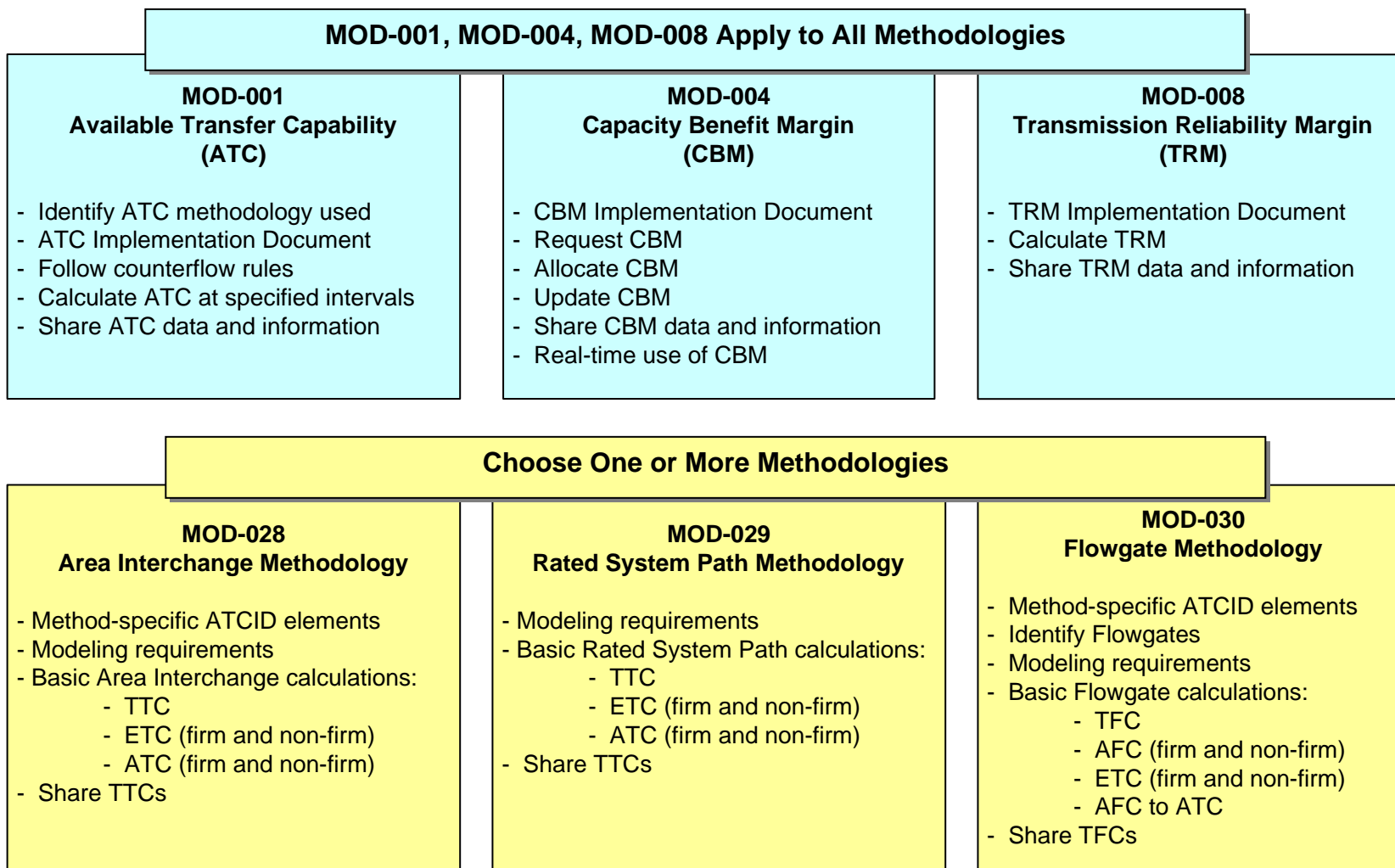
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- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: R.3.5 of MOD-030-1, arbitrarily requiring modeling data and topology for at least three contiguous busses is too prescriptive. Standards should set out goals and use measures to determine if these goals were achieved. How the goals are best achieved are best determined by the Transmission Owner/Operator. If the goal is to improve loop flow, then the measure should be developed that ascertains loop flow improvement. A prescriptive number of busses does not insure that loop flow is appropriately captured.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.  
Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: For Standard MOD-030-1, R2.1.2, the phrase "first three limiting" is too prescriptive and should be removed.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

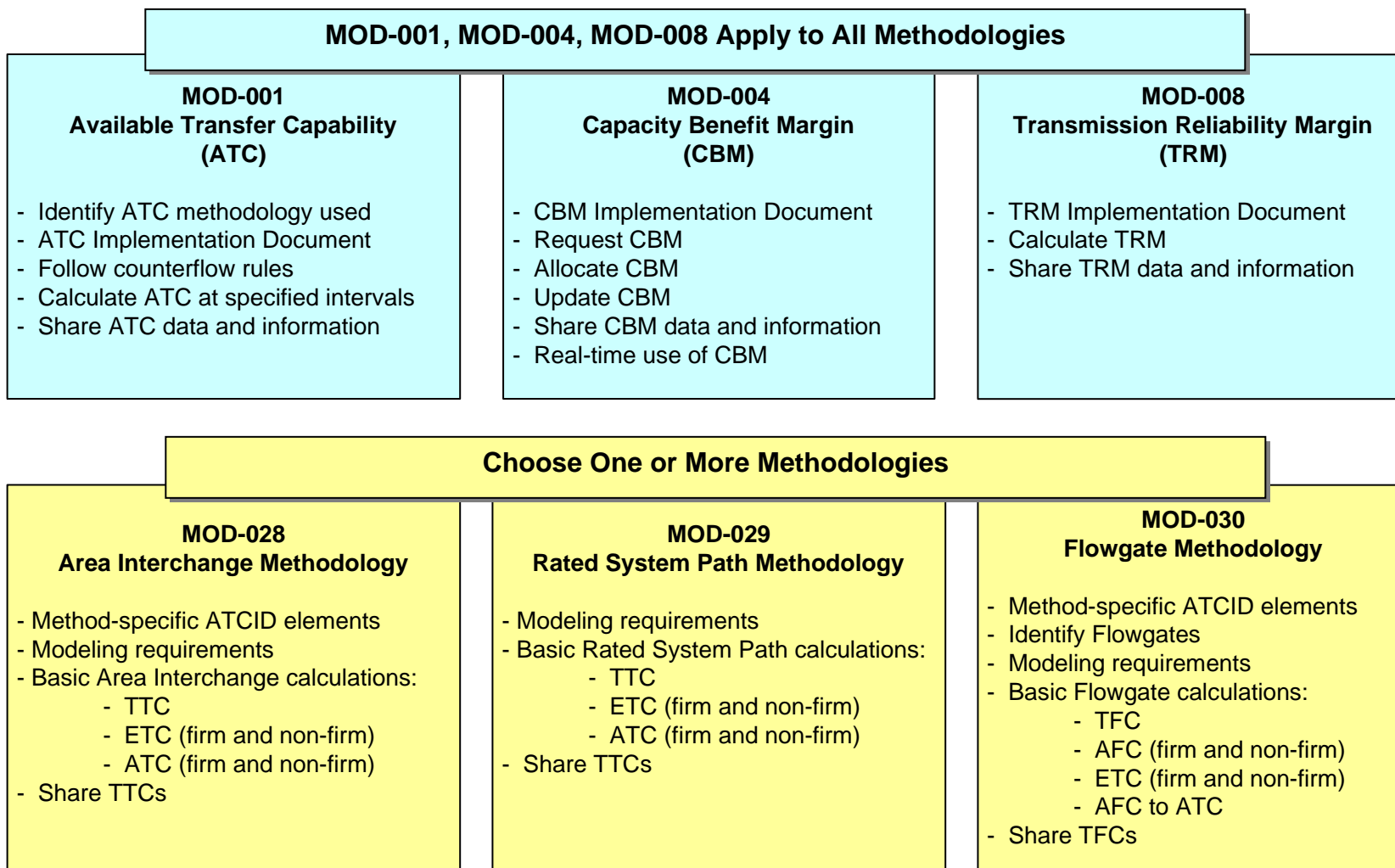
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

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Incorrect Definition:

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Incorrect Requirement:

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Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Standard MOD-001-1 Requirement R1, footnote 1

A primary intent of these related standards is to promote consistency among Transmission Service Providers in the calculation of ATC. This goal of consistency is violated by the provisions of footnote 1, which would permit a single Transmission Service Provider to use different methodologies on the same Posted Path at different points in time. MidAmerican also feels that there is absolutely no way each of the three methodologies would yield consistent and equivalent results.

While we acknowledge that Order No. 693 found that it is "not necessary to require a single industry-wide ATC calculation methodology" (Order No. 693, Paragraph 1030), the Commission's intent was that ATC be calculated in a manner that "provides predictable and sufficiently accurate, consistent, equivalent, and replicable ATC calculations regardless of the methodology used by the region" (Order No. 693, Paragraph 1034). Only under unusual conditions would there be a reason for a single



Transmission Service Provider to use differing ATC methodologies on different Posted Paths, and only rarely would there be a reason to use different methods on the same Posted Path at different points in time. Permitting these deviations would make it essentially impossible to verify the calculations of the Transmission Service Provider, because it would be difficult to determine what methodology was in effect on which Posted Path at which point in time. In addition, these deviations would permit manipulation of ATC calculations.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: Although the standards are heading in the right direction, two things that must be done are to create an on-the-path, off-the-path methodology for determining which facilities to include when determining an ATC and the standard must create rules on how to include partial path reservations. If these two things are not done in a consistent manner, the entire process falls apart.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Larry Middleton
Organization:	Midwest ISO
Telephone:	317-249-5447
E-mail:	lmiddleton@midwestiso.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
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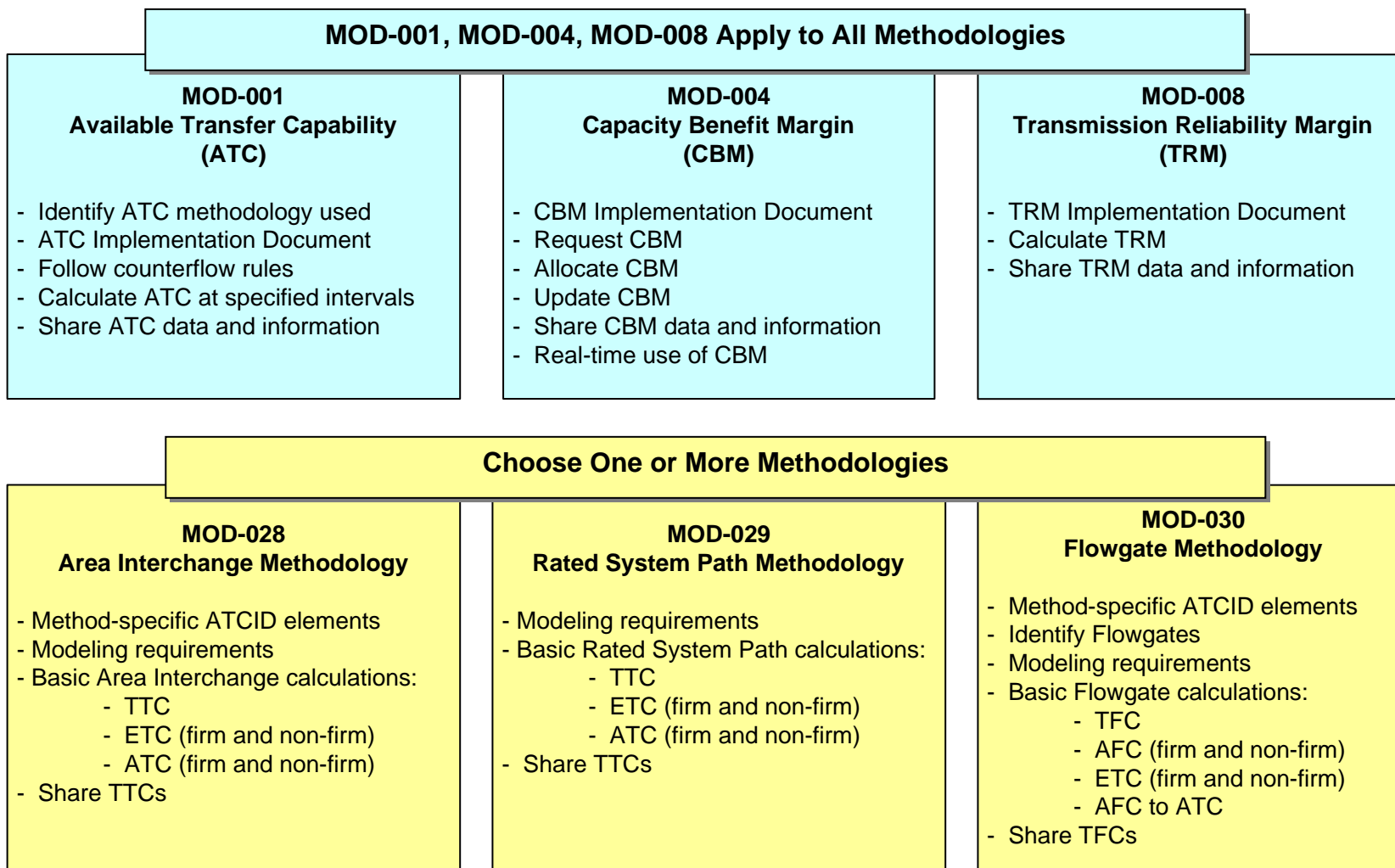
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Yes

No

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2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

- Incorrect Requirement:

- MOD-001-1:

- • R.3.3 of MOD-001-1 should read "The identity or a link to the identity of the Planning Coordinator...associated with each Flowgate...". Reasoning: Common practice is to include flowgates rather than all facilities. Also, the list of Flowgates may get updated often (monthly). We suggest including a link to the Flowgates. Having this link will reduce the burden of having to update the ATCID on a monthly basis.

- MOD-004-1:

- • R4.2 of MOD-004-1 should be reworded as: "...simultaneously, or a methodology to meet resource adequacy criteria that assumes an aggregated need for CBM, or all firm ATC or AFC has been allocated..." Reasoning: Assuming each LSE (or group of LSE) submits its GCIR based on 1day/10year criteria, preserving the "sum" of all such requests is equal to planning according to such 1day/10year emergency happens in all LSEs (or groups of LSE) at the same time. In a large capacity sharing pool such as MISO, this is to plan way beyond 1day/10year criteria. We recognize the right of LSE having special requirement based on state requirement. However, the original lingual doesn't allow MISO to continue its current methodology ("max" instead of "sum") even if all LSEs agree to do so. An alternative could be allowed by the standard such that regional TSP's like ISO/RTO's that develop a consensus method with stakeholders of evaluating CBM needs on a regional basis may base CBM on LSE load forecasts and firm generation commitments, and have the CBM calculated by the TSP as necessary to ensure resource reliability criteria.

- • R4.1.2.2 of MOD-004-1 should read "As a minimum standard, classify ... greater than 3% on an OTDF Flowgate or 5% on a PTDF Flowgate as a significant impact".



- • For R4.2.2. of MOD-004-1, since AFC is determined from CBM, CBM for each Flowgate should not be dependent on AFC. CBM can be big enough to drive AFC to zero or negative. This simply means that resource adequacy criteria can't be met, and no capacity will be available on that Flowgate (which is what the original wording of this requirement was trying to do anyway). Therefore we believe CBM should not be set to AFC, it should be left at whatever value was calculated. Suggestion language: For Flowgates, Entities may use a static number, which requires its CBMID describe the procedure of utilizing CBM, or set the CBM for each Flowgate equal to the lesser of:
- • For R4.3 and R5.3 of MOD-004-1, see the comment for R4.2.2. The same argument applies to these requirements.
- • For R5.2 of MOD-004-1, see the comment for R4.2. The same rewording is recommended.
- MOD-030-1:
  - • MOD-030-1, R2 should read "...Transmission Operator or Transmission Service Provider..." After hearing some industry comment that including this "or" (as we have in multiple comments) may not be possible in a standards requirement, we look to the team to determine how best to include some flexibility in which entity is required to meet the standard, to respect the varying distribution of work across these regions.
  - • R3 of MOD-030-1 should read "The Transmission Service Provider shall use a Transmission model to determine..." And then an additional criteria bullet could be added that states "Contains data provided by the Transmission Operator, to the extent that it is available." □ the wording on this comment is very draft
  - • R.3.5 of MOD-030-1, arbitrarily requiring modeling data and topology for at least three contiguous busses is too prescriptive. This requirement could be rewritten to as "Contains modeling data and topology agreed upon by each adjacent Reliability Coordinator Area and the Transmission Operator or the Transmission Service Provider." However it is worded, somehow the requirement has to be set based on the intention of improving loop flows, not getting to a certain number of busses.
  - • R4. of MOD-030-1 needs to be rewritten. First, we believe NERC standard shouldn't intervene with how TSP treats PTP reservations. TSP has the best knowledge of their system and knows what treatment gives the best AFC forecast. Second, if this treatment has to be discussed anyway, we believe that having some flexibility is better than requiring the use of source/sink. For example, one transaction going across multiple OASIS will have the same source/sink along the path. Using source/sink could result in double-counting, triple counting, etc. Another example is that, in large TSP area such as MISO, OASIS POR/POD or Source/Sink can't represent real-time market central dispatch. Reservations/schedules only determine overall MISO interchange, not interchange for MISO internal BAs. In other cases, some other method may be more desirable. If getting the most accurate calculation (while not hindering transparency) is the intent of the team, then the way in which the reservation is modeled should not solely depend on the information in the request, but rather on a methodology that can be reviewed by everyone. Suggested language? (maybe in the same line as "a methodology that can be reviewed by everyone"

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- • For R10. of MOD-030-1, the text describing "P" should read: "...as a minimum standard, a Flowgate is considered 'impacted' by a path if the Distribution Factor for that path is greater than 3% on an OTDF Flowgate or 5% on a PTDF Flowgate".
- 4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

General comments on MOD's:

- All Violation Risk Factors in MOD-001, -004, -008, and -030 should be Lower as none represent a risk of cascading outages if they are not met.
- Many of the "sub-requirements" listed in the standards should either be bulleted items under the standard or removed and placed in an Appendix, rather than being made actual requirements themselves. For example, in MOD-001, R3, the requirements R3.1 through R3.6 could be just bulleted or placed in an Appendix with R3 reworded to say that the ATCID must address all the items in Appendix xx.

MOD-001-1:

- MOD-001, R1, should read "...Transmission Operator or Transmission Service Provider..." After hearing some industry comment that including this "or" (as we have in multiple comments) may not be possible in a standards requirement, we look to the team to determine how best to include some flexibility in which entity is required to meet the standard, to respect the varying distribution of work across these regions.
- In MOD-001-1, R6, the method of notification should include an option for public posting such as OASIS.
- MOD-001-1, R10. 14 days can be too short when there are multiple requests pending. There should be a queue process. It is reasonable to request a response time for the first request in the queue, but not on all simultaneous requests.
- MOD-001-1, R10.12 Since there is a requirement to provide this information in 14 days, this needs to be clarified to say the information that must be provided is the rules for calculating counterflow used in the calculation of ATCs, not the actual MW values themselves. A database of the actual MW values for any given calculation would be extremely large and could not be provided, nor would it serve any real purpose.

MOD-004-1:

- For Standard MOD-004, R3 and R4, A monthly value is extremely difficult to administrate and implement in the ATC calculation. Such a requirement will subject the TSP to significant increases in cost (the vendor has to provide new code and the frequency of TSP updates would drastically increase). GCIR calculation part has to do a lot more studies. Midwest ISO suggests leaving it to each region to decide on the time intervals.

- MOD-004, R3.1 – This section should be updated to clarify what is meant to be requested. For example, it states “requested for each month for each year for the next ten year period.” Do you really want 120 months worth of requests, or 12 monthly requests and 9 yearly? Suggested wording “for each month for the first 12 months and for each year for the remainder of the ten year period”

- MOD-004, R3.2 – Why should LSE update every month if CBM is only calculated once per year? We suggest that these timelines be clarified.

- MOD-004, R9 -- Should be adjusted so that it explicitly states that only the timing requirements for the Real-Time market only will be waived. For example, the Day-Ahead Market timing requirements cannot be waived.

MOD-008-1:

- MOD-008, R1.5: "If TRM is zero for any of the time periods listed..."

MOD-030-1:

- MOD-030-1, change R1 language to affect M1 regarding criteria used by Transmission OwnerR1, TSP should not be responsible for actively notifying changes made to criteria set by TO. Suggested wording is "... shall include ... (ATCID) the practice or a link to the practice the TSP uses for adding Flowgates”.

- For Standard MOD-030-1, requirement R.2.1.1. is redundant with the definition of Flowgate given in the "definitions" section. This requirement should be removed, or at least reworded to read "...may be a Flowgate."

- For Standard MOD-030-1, R2.1.2, the phrase "first three limiting" is too prescriptive and should be removed. For example, if the most limiting first contingency transfer is a large value, say 10,000, adding first three limiting elements/contingency combinations is not necessary. If the requirement can't be deleted, we suggest adding wording that sets a transfer level such that the first three constraints that cause the FCITC to fall under that level will be captured. Also, “source sink combinations” needs to be further defined as a calculation entity of any size could have thousands of these possible combinations. Also, if this in-depth study is required, the frequency in R2.2 should be decreased (as this is a minimum standard).

- MOD-030-1, R2.3 rating issues, refer to comments from SRC, which says “MOD-030-1, R2.3 does not identify that TFC can be limited by an IROL but it should. If selling transmission service really requires development of a reliability standard, R2.4 should be modified to require updating the TFC any time the underlying determinants, such as facility ratings, change.”.

- MOD-030-1, R5.1. This is not always the best practice. For example, while using PSS/E model, some outage remote to the TSP service area can cause the case to not solve and the TSP has to either use DC power flow solution or ignore the outage. The impact from ignoring a remote outage on the accuracy of AFC is much smaller than that from using DC power flow. The TSP has to temporarily block the outage to achieve overall better accuracy. Suggestion wording is "... have been executed, to the extent it helps improve the AFC calculation accuracy.” Understanding that the ability to measure deviations may

become an issue, the wording could be adjusted to state "... have been executed, except for any outages that, if included, would force the calculation into a less accurate solution technique." We realize that the suggested wording is not perfect, but we're hoping that the team understands our intention and can adjust it accordingly.

- MOD-030-1, R5.2. Should add "to the extent they are available" to the end. Not all MISO third parties have that data available.

- In MOD-030-1, R8 and R9, "ATC" should be "AFC".

- MOD-030-1, R6.3 and 6.4, should say a 3% distribution factor or an impact of 3% of the total MW of the PTP request, not 3% of the distribution factor.

- MOD-030-1, R10 should be revised to say "The Transmission Service Provider shall convert or provide a tool to convert Flowgate AFCs to ATCs (and TFCs to TTCs) for Posted Paths."



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	David Olivares
Organization:	Modesto Irrigation District
Telephone:	209-526-7595
E-mail:	davido@mid.org
<b>NERC Region</b> (check all Regions in which your company operates)	<b>Registered Ballot Body Segment</b> (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

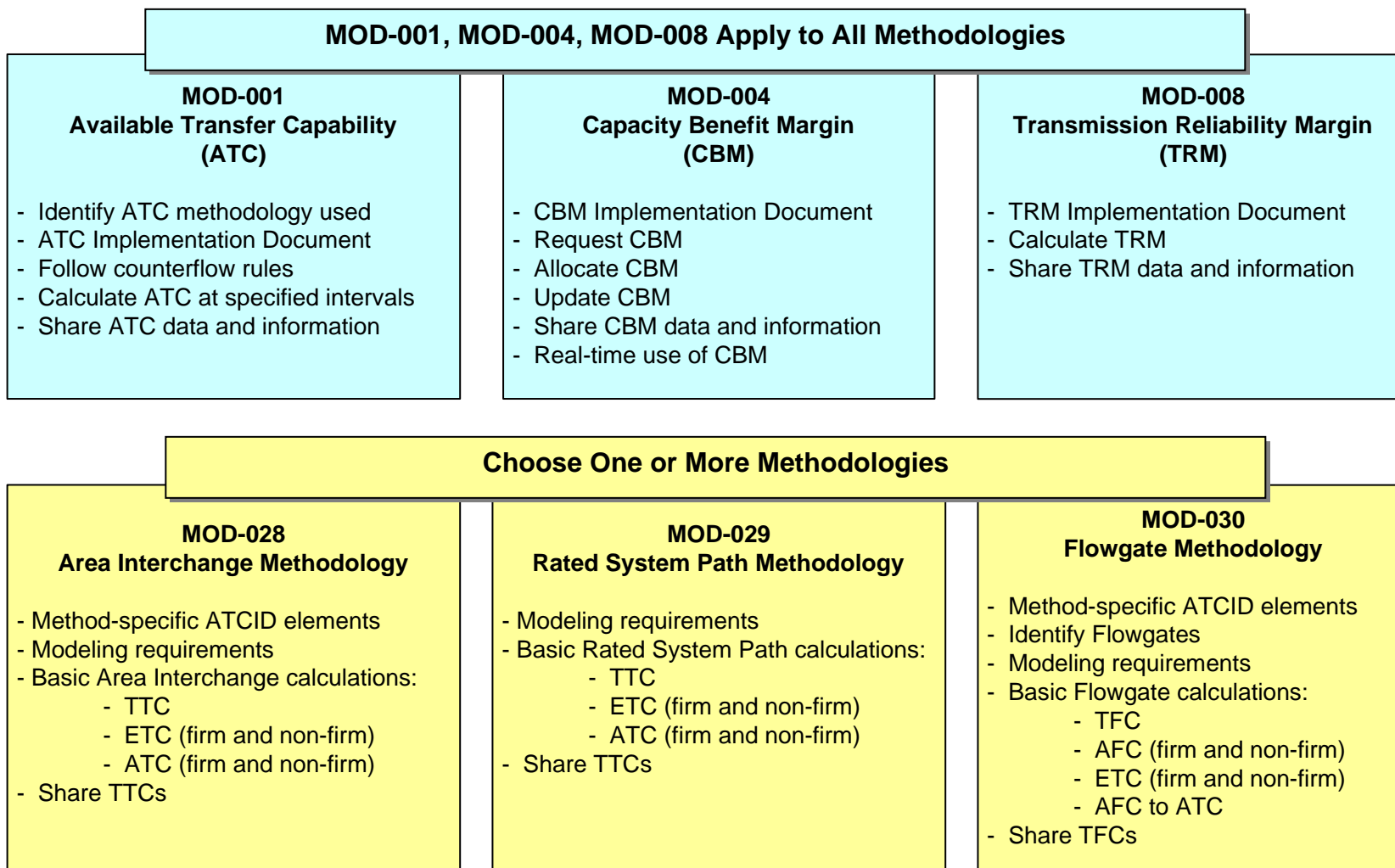
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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

MID supports the comments submitted by the Sacramento Municipal Utility District ("SMUD") on behalf of the WECC MIC MIS ATC Drafting Team as to this inquiry.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: MID supports the comments submitted by SMUD on behalf of the WECC MIC MIS ATC Drafting Team as to this inquiry.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

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5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

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Comments: MID supports the comments submitted by SMUD on behalf of the WECC MIC MIS ATC Drafting Team as to this inquiry.

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
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Group Comments (Complete this page if comments are from a group.)

**Group Name:** Midwest Reliability Organization (MRO)

**Lead Contact:** Tom Mielnik

**Contact Organization:** MRO

**Contact Segment:** 10

**Contact Telephone:** 563-333-8129

**Contact E-mail:** tcmielnik@midamerican.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Neal Balu	WPS	MRO	10
Terry Bilke	MISO	MRO	10
Robert Coish	MHEB	MRO	10
Carol Gerou	MP	MRO	10
Jim Haigh	WAPA	MRO	10
Ken Goldsmith	ALTW	MRO	10
Pam Oreschnick	XCEL	MRO	10
Dave Rudolph	BEPC	MRO	10
Eric Ruskamp	LES	MRO	10
Michael Brytowski	MRO	MRO	10
Ron Slagel	MISO	MRO	10
Kun Zhu	MISO	MRO	10
27 Additional MRO members	not mentioned above	MRO	10

\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

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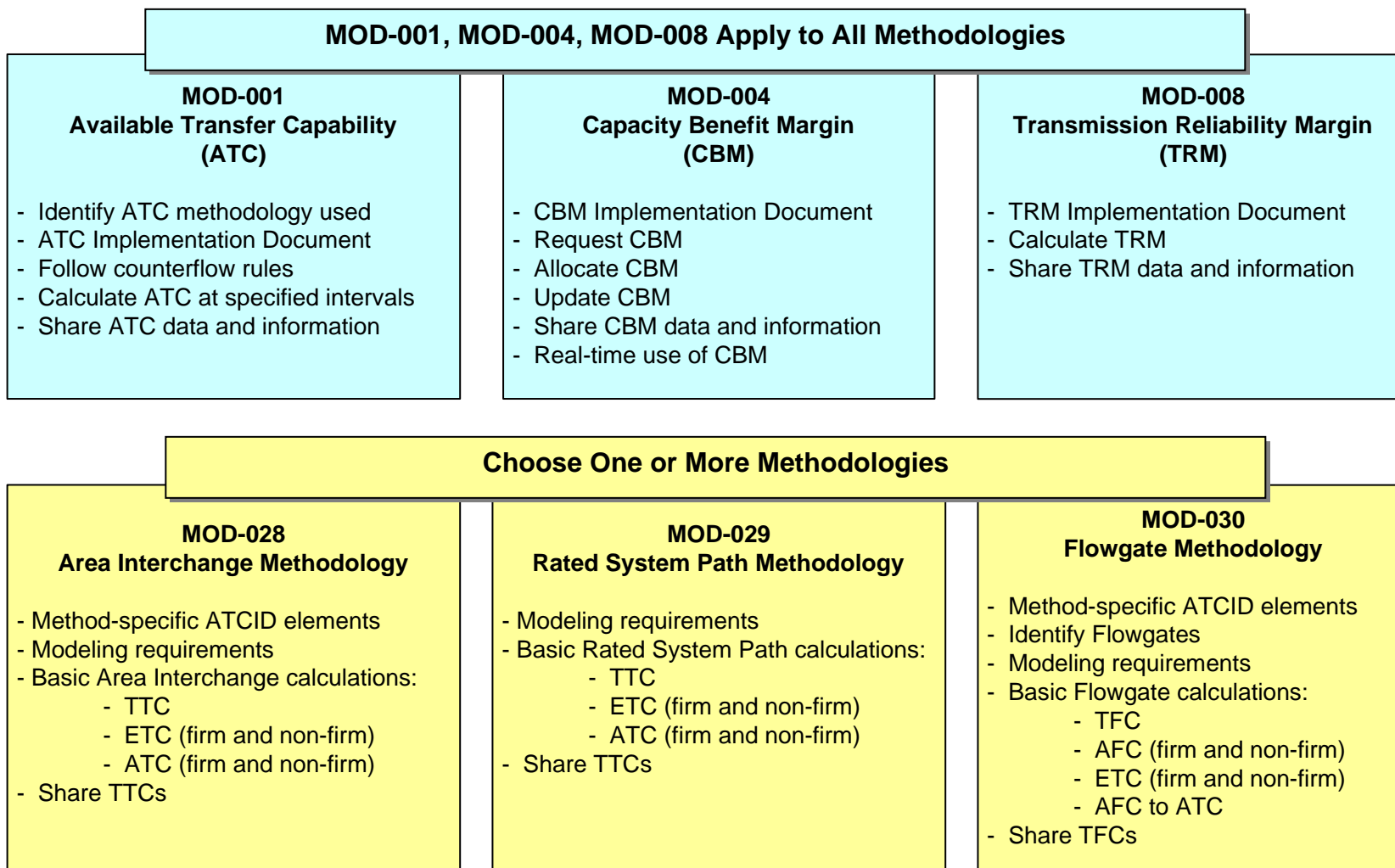
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Added measures and compliance elements.



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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: a. The Posted Path definition in MOD-001-1 that indicates it includes any "Balancing Authority to Balancing Authority interconnection" and then R1 of the standard says ATC must "select one ATC methodology... for each Posted Path" and then R2 states that the TSP "shall calculate ATC values...using the ATC methodologies." As a result, the TSP must calculate ATCs and post those ATCs and all the Posted Paths. Many of these BA to BA paths are not useful paths to post either for commercial or reliability reasons. Therefore the language in the definition or the requirements should clarify that the definition provides the items such as any BA to BA path, path on which there has been curtailment, etc. that may qualify for posting or else the requirements should be changed to indicate that postings are not developed for all such paths but are developed for those paths that such postings are required for commercial and/or reliability reasons.

b. Presuming that changes are made per our comment 2.a. so that the Posted Path definition is only including items that are eligible for Posted Path and does not include items that must be posted, we note that the Posted Path definition in MOD-001-1 does not cover all the instances of a posted path in that there are flowgates that should be set up for reliability purposes to cover a system constraint that is not properly represented in the transmission service request evaluation process and is not covered by the three items listed. Service may not have been denied, curtailed, or interrupted yet due to the constraint because the facilities were not included in a flow gate. The MRO recommends that the following be included as an item in the definition "4) Any flowgate."

Posted Path Definition: The MRO asks the SDT to consider adding some language onto the end of Item (2) to qualify the statement. Something like "...and for which congestion is expected to occur." This is needed because it could have been an unusual operating condition (multiple generator/line outages) that caused the curtailment and that condition is not expected to occur again.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

MOD-001, R1, should read "...Transmission Operator or Transmission Service Provider..." After hearing some industry comment that including this "or" (as we have in multiple comments) may not be possible in a standards requirement, we look to the team to determine how best to include some flexibility in which entity is required to meet the standard, to respect the varying distribution of work across these regions.

MOD-001-1 R1: The requirement to select one method for each path needs to be clarified. Some MRO members use the rated system path method for CA-CA hard-tie calculations and then use the flowgate method facilities expected to be congested. The requirement to translate AFC to ATC for each path could result in a conflict if the CA-CA path limit is based upon the rated path method when a flowgate limits the path rating when AFCs are converted to ATCs. The MRO recommends that the SDT clarify the requirement as necessary to explain how this conflict will be resolved.

MOD-001-1 R.3.3 should read "The identity or a link to the identity of the Planning Coordinator and Transmission Operator...associated with each Flowgate...". Reasoning: Common practice is to include flowgates rather than all facilities. Also, the list of Flowgates may get updated often (monthly). We suggest including a link to the Flowgates. Having this link will reduce the burden of having to update the ATCID on a monthly basis.

MOD-001-1 R3.6: The MRO does not understand what "allocation" is. The MRO asks that the SDT clarify this word in the standard.

MOD-001-1, R6, the method of notification should include an option for public posting such as OASIS.

MOD-001-1, R10. 14 days can be too short when there are multiple requests pending. There should be a queue process. It is reasonable to request a response time for the first request in the queue, but not on all simultaneous requests.

MOD-001-1 R10: The extent of data to be provided upon request is potentially too extensive to be workable or justified.

MOD-001-1 R10: The requirement should be to only provide your own data. Otherwise there can be issues of confidentiality with providing third party data.

MOD-001-1 R10: There should be a restriction that it is only required to provide data used in AFC calculations. This may be implied but it should be made clear.

MOD-001-1 R10.1: The need to provide transmission "additions and retirements" should be restricted to only those used in AFC calculations. The open planning process is the correct venue to request info on planned facilities, not the ATC standards.

MOD-001-1 R10.4" "details" needs to be expanded upon. The MRO does not understand what this means.

MOD-001-1, R10.12. Since there is a requirement to provide this information in 14 days, this needs to be clarified to say that information that must be provided is the rules for calculating counterflow used in the calculation of ATCs, not the actual MW values because the MW would be too much data to provide in 14 days.

MOD-004-1 does not seem to provide for those Transmission Service Providers who have a practice of maintaining zero CBM due to reserve sharing arrangements in which little outside assistance has been assumed in developing their historical generation reserve requirements. The MRO recommends that a requirement be added to MOD-004-1 outlining what descriptions must be provided in the CBMID to describe zero CBM practices such as under R3.1. For the SDT's information, MAPP historically has self provided its reserve requirements without outside assistance and therefore has historically set CBM to zero.

MOD-004, R3 and R4, A monthly value is extremely difficult to administrate and implement in the ATC calculation. Such a requirement will subject the TSP to significant increases in cost (the vendor has to provide new code and the frequency of TSP updates would drastically increase). GCIR calculation part has to do a lot more studies. Midwest ISO suggests leaving it to each region to decide on the time intervals.

MOD-004, R3.1 – This section should be updated to clarify what is meant to be requested. For example, it states “requested for each month for each year for the next ten year period.” Do you really want 120 months worth of requests, or 12 monthly requests and 9 yearly? Suggested wording “for each month for the first 12 months and for each year for the remainder of the ten year period”

MOD-004, R3.2 – Why should LSE update every month if CBM is only calculated once per year? We suggest that these timelines be clarified.

MOD-004-1 R4.2 should be reworded as: “...simultaneously, or a methodology to meet Resource Adequacy criteria that assumes an aggregated need for CBM, or all firm ATC or AFC has been allocated...” Reasoning: Assuming each LSE (or group of LSE) submits its GCIR based on 1day/10year criteria, preserving the “sum” of all such requests is equal to planning according to such 1day/10year emergency happens in all LSEs (or groups of LSE) at the same time. In a large capacity sharing pool such as MISO, this is to plan way beyond 1day/10year criteria. We recognize the right of LSE having special requirement based on state requirement. However, the original lingual doesn't allow MISO to continue its current methodology (“max” instead of “sum”) even though all LSEs agree to do so.

MOD-004-1 R4.1.2.2 should read “As a minimum standard, classify ... greater than 3% on an OTDF Flowgate or 5% on a PTDF Flowgate as a significant impact”.

MOD-004-1 R4.2.2. - since AFC is determined from CBM, CBM for each Flowgate should not be dependent on AFC. CBM can be big enough to drive AFC to zero or negative. This simply means that resource adequacy criteria can't be met, and no capacity will be available on that Flowgate (which is what the original wording of this requirement was trying to do anyway). Therefore we believe CBM should not be set to AFC, it should be left at whatever value was calculated. Suggestion language: For Flowgates, Entities may use a static number, which requires its CBMID describe the procedure of utilizing CBM, or set the CBM for each Flowgate equal to the lesser of:

MOD-004-1 R4.3 and R5.3 - , see the comment for R4.2.2. The same argument applies to these requirements.

MOD-004-1 R5.2 - see the comment for R4.2. The same rewording is recommended.

MOD-008-1 R1.1 indicates that one uncertainty that can be considered is "Aggregate Load forecast uncertainty (not included in determining generation reliability requirements)." The MRO understands that a concern is making sure that items are not double covered by CBM and TRM, however, this sub requirement is incorrect and needs to be modified because the same load forecast uncertainty will result in uncertainty in generation planning that may require a CBM amount--in other words we have to allow for additional transmission capacity to deliver generation reserves in an emergency when loads are higher. But that same load forecast uncertainty will result in uncertainty in the loadings on transmission facilities and will impact the need for having a margin to cover for loads on the system at all times. The MRO recommends that the SDT either delete the words "(not included in determining generation reliability requirements)" from the item or else revise the words to say something like the following which better describes what should be excluded, that is "(TRM is not to include impacts of load forecast uncertainty on CBM.)"

MOD-008-1 R1.2: The need to state that consistent assumptions are used for TRM as is used in the planning process needs to be clarified. The SDT should clarify that short-term TRM should be consistent with operational planning while long-term TRM should be consistent with long-term planning. The MRO recommends that the language here be modified to be similar to R8 of MOD-001-1 to say, "A statement to confirm that it shall use assumptions in calculating TRM that are consistent with those assumptions that are used in ANY ASSOCIATED OPERATIONS STUDIES OR PLANNING STUDIES FOR THE TIME PERIOD STUDIED." The words in caps are the new words that are added in place of the words in the draft standard for that part of R1.2.

MOD-008, R1.5: "If TRM is zero for any of the time periods listed.....".

MOD-008-1 R3. and R4 call for certain responsible entities to provide information in seven days. This is not enough time to allow for delays due to vacations and other absences. In smaller utilities, especially this seven days is not realistic. The MRO asks that the SDT increase this time and suggests 30 days as a more reasonable number.

MOD-030-1, change R1 language to affect M1 regarding criteria used by Transmission OwnerR1, TSP should not be responsible for actively notifying changes made to criteria set by TO. Suggested wording is "... shall include ... (ATCID) the practice or a link to the practice the TSP uses for adding Flowgates".

MOD-030-1 R2.1 has a typo, the word "for" should be deleted from the requirement.

MOD-030-1 R2.1.2 is too limiting in requiring that "at a minimum the first three limiting Elements/Contingency combinations within the Transmission Operator's system are included as Flowgates." The MRO believes there are smaller Transmission Operators with surrounding larger utilities with higher loaded facilities where this requirement would unnecessarily result in the establishment of additional flowgates. The MRO is not sure an across-NERC requirement for flowgate criteria is required; however, if the SDT gets comments to the contrary, the MRO suggests that the Transmission Provider be required to have documentation which includes an explanation for not using any of the three limitations. In this way, there is not a lot of needless work yet there is a provision which will result in protecting reliability. If TPs develop the documentation, if there are reliability issues, it will be obvious and the TPs will act to create the new flowgates.

MOD-030-1, R2 should read "...Transmission Operator or Transmission Service Provider..." After hearing some industry comment that including this "or" (as we have in multiple comments) may not be possible in a standards requirement, we look to the team to determine how best to include some flexibility in which entity is required to meet the standard, to respect the varying distribution of work across these regions.

MOD-030-1, requirement R.2.1.1. is redundant with the definition of Flowgate given in the "definitions" section. This requirement should be removed, or at least reworded to read "...may be a Flowgate."

MOD-030-1, R2.1.2, the phrase "first three limiting" is too prescriptive and should be removed. For example, if the most limiting first contingency transfer is a large value, say 10,000, adding first three limiting elements/contingency combinations is not necessary. If the requirement can't be deleted, we suggest adding wording that sets a transfer level such that the first three constraints that cause the FCITC to fall under that level will be captured. Also, "source sink combinations" needs to be further defined as a calculation entity of any size could have thousands of these possible combinations. Also, if this in-depth study is required, the frequency in R2.2 should be decreased (as this is a minimum standard).

MOD-030-1 R2.1.3: Before the first "OR" the MRO recommends that a qualifier like "experiencing at least 24 instances of congestion" and "expected to be a congested facility in the planning horizon" to limit the instances in which parties have to post a flowgate. If a facility has TLR because of some weird system condition not expected to occur again, it would be waste of time to post a flowgate for that.

MOD-030-1 R2.2 requires that the list of Flowgates be updated on a quarterly basis. Yet R2.4 requires that TFC only be updated on an annual basis. The MRO recommends that R2.2 be changes to updating on an annual basis. The quarterly basis is needless extra work.

MOD-030-1, R2.3 rating issues, refer to comments from SRC, which says "MOD-030-1, R2.3 does not identify that TFC can be limited by an IROL but it should. If selling transmission service really requires development of a reliability standard, R2.4 should be modified to require updating the TFC any time the underlying determinants, such as facility ratings, change."

MOD-030-1 R2.3: The MRO is aware of some processes that require that regional groups to approve new flowgate TTCs prior to posting so as to have a regional reliability and equity review prior to posting the new flowgate TTCs. If a flowgate line rating increases, there can be a time-lag until the regional groups approve the new operating study and operating guide required before the new TTC can be posted. Some words are needed to allow for the time lag for regional review since it benefits reliability and equity.

MOD-030-1 R3 should read "The Transmission Service Provider shall use a Transmission model to determine..." And then an additional criteria bullet could be added that states "Contains data provided by the Transmission Operator, to the extent that it is available."

MOD-030-1 R.3.5, arbitrarily requiring modeling data and topology for at least three contiguous busses is too prescriptive. This requirement could be rewritten to as "Contains modeling data and topology agreed upon by each adjacent Reliability Coordinator Area and the Transmission Operator or the Transmission Service Provider."

However it is worded, somehow the requirement has to be set based on the intention of improving loop flows, not getting to a certain number of busses.

MOD-030-1 R4 needs to be rewritten. First, we believe NERC standard shouldn't intervene with how TSP treats PTP reservations. TSP has the best knowledge of their system and knows what treatment gives the best AFC forecast. Second, if this treatment has to be discussed anyway, we believe that having some flexibility is better than requiring the use of source/sink. For example, one transaction going across multiple OASIS will have the same source/sink along the path. Using source/sink could result in double-counting, triple counting, etc. Another example is that, in large TSP area such as MISO, OASIS POR/POD or Source/Sink can't represent real-time market central dispatch. Reservations/schedules only determine overall MISO interchange, not interchange for MISO internal BAs. In other cases, some other method may be more desirable. If getting the most accurate calculation (while not hindering transparency) is the intent of the team, then the way in which the reservation is modeled should not solely depend on the information in the request, but rather on a methodology that can be reviewed by everyone. Suggested language? (maybe in the same line as "a methodology that can be reviewed by everyone"

MOD-030-1 R5.1 indicates that the TSP is to include all expected outages, additions, and retirements in effect in the TSP's area, adjacent TSPs, and any TSPs with coordination agreements have been executed. The MRO believes this is a nice goal but the TSP cannot be liable for a penalty for failing to include all expected outages, additions, and retirements that it hasn't been told about. The MRO recommends that "and known" be added to the requirement.

MOD-030-1, R5.1. This is not always the best practice. For example, while using PSS/E model, some outage remote to the TSP service area can cause the case to not solve and the TSP has to either use DC power flow solution or ignore the outage. The impact from ignoring a remote outage on the accuracy of AFC is much smaller than that from using DC power flow. The TSP has to temporarily block the outage to achieve overall better accuracy. Suggestion wording is "... have been executed, to the extent it helps improve the AFC calculation accuracy." Understanding that the ability to measure deviations may become an issue, the wording could be adjusted to state "... have been executed, except for any outages that, if included, would force the calculation into a less accurate solution technique." We realize that the suggested wording is not perfect, but we're hoping that the team understands our intention and can adjust it accordingly.

MOD-030-1 R5.1: The word "all" should be deleted. Only the one included in the calculation should be required. Also, same comment on the "additions and retirements" language. The need to provide transmission "additions and retirements" should be restricted to only those used in AFC calculations. The open planning process is the correct venue to request info on planned facilities, not the ATC standards.

MOD-030-1, R5.2. should add "to the extent they are available" to the end. Not all MISO third parties have that data available.

MOD-030-1 R6.1.3.1.1: Peak load forecast for the first 31 days needs to be clarified. The MRO is aware of some that prepare a peak load forecast only for the next 7-10 days. In such cases the load used in projections for days 11-31 is the monthly value. The accuracy of daily forecasts beyond the next 7-10 is questionable. Maybe the language should specifically allow this.



MOD-030-1 R6.2: "impact" needs to be defined a bit more. Some MRO members define impact as something like 85% of positive impacts, 100% if the flowgate has had firm TLR. Also, "expected to be scheduled" should be clarified because some Transmission Providers include all reservation impacts in AFCs. The "expected" language adds a complexity that will be hard to meet and for that reason the language should be deleted.

MOD-030-1 R6.3 and R6.4 provide a 3% but do not define what it is 3% of. The MRO recommends that the SDT add language to explain how it is calculated --what is the calculated in terms of percent of what. This also applies to R7.2 and R7.4 of the same standard.

MOD-030-1 R7.1: Again "impact" needs some more definition. Some presently use something like 50% counterflow in non-firm AFCs. Also, the language states that non-firm AFCs should only bring in non-firm reservations. The MRO believe this is wrong. Firm reservations NEED to be considered in non-firm AFCs.

MOD-030-1 R8 refers to postbacks but no definition is provided. The SDT should either provide a NERC definition, repeat the NAESB definition, or paraphrase a definition. Without it, the MRO and other responsible entities are not sure what is the requirement.

MOD-030-1, R8 and R9, "ATC" should be "AFC".

MOD-030-1 R10 is not understandable. The MRO has no idea what is meant by this Requirement and how to implement the requirement. The SDT should substantially increase the words that explain this requirement.

MOD-030-1 R10., the text describing "P" should read: "...as a minimum standard, a Flowgate is considered 'impacted' by a path if the Distribution Factor for that path is greater than 3% on an OTDF Flowgate or 5% on a PTDF Flowgate".

MOD-030-1 R10: In addition to the comments already supplied, explicit consideration of the concern raised above regarding those cases where a party uses CA-CA path limits to set hard tie limits and yet also posts flowgate limits where AFCs need to be converted to ATCs. The requirement to translate AFC to ATC for each path could result in a conflict if the CA-CA path limit is based upon the rated path method when a flowgate limits the path rating when AFCs are converted to ATCs. The MRO recommends that the SDT clarify the requirement as necessary to explain how this conflict will be resolved.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:



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Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
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<b>NERC Region (check all Regions in which your company operates)</b>	<b>Registered Ballot Body Segment (check all industry segments in which your company is registered)</b>
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

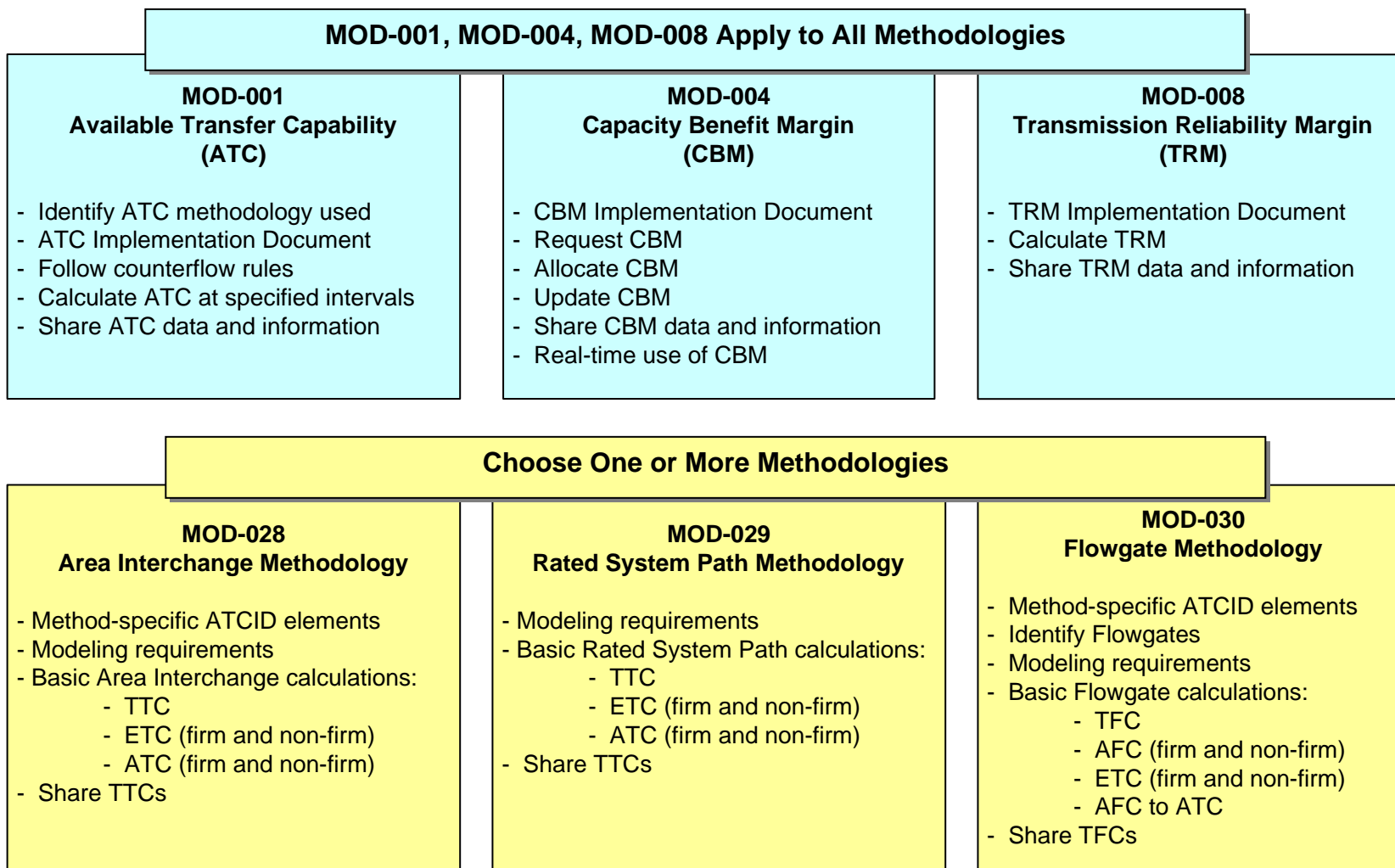
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1. Since a TTC limit may be due to thermal or stability limit, those limits that are considered IROL's should be required to be identified in the methodology.

2. If no inputs to an ATC have changed then an update should not be required. (MOD-001)





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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
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<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
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**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

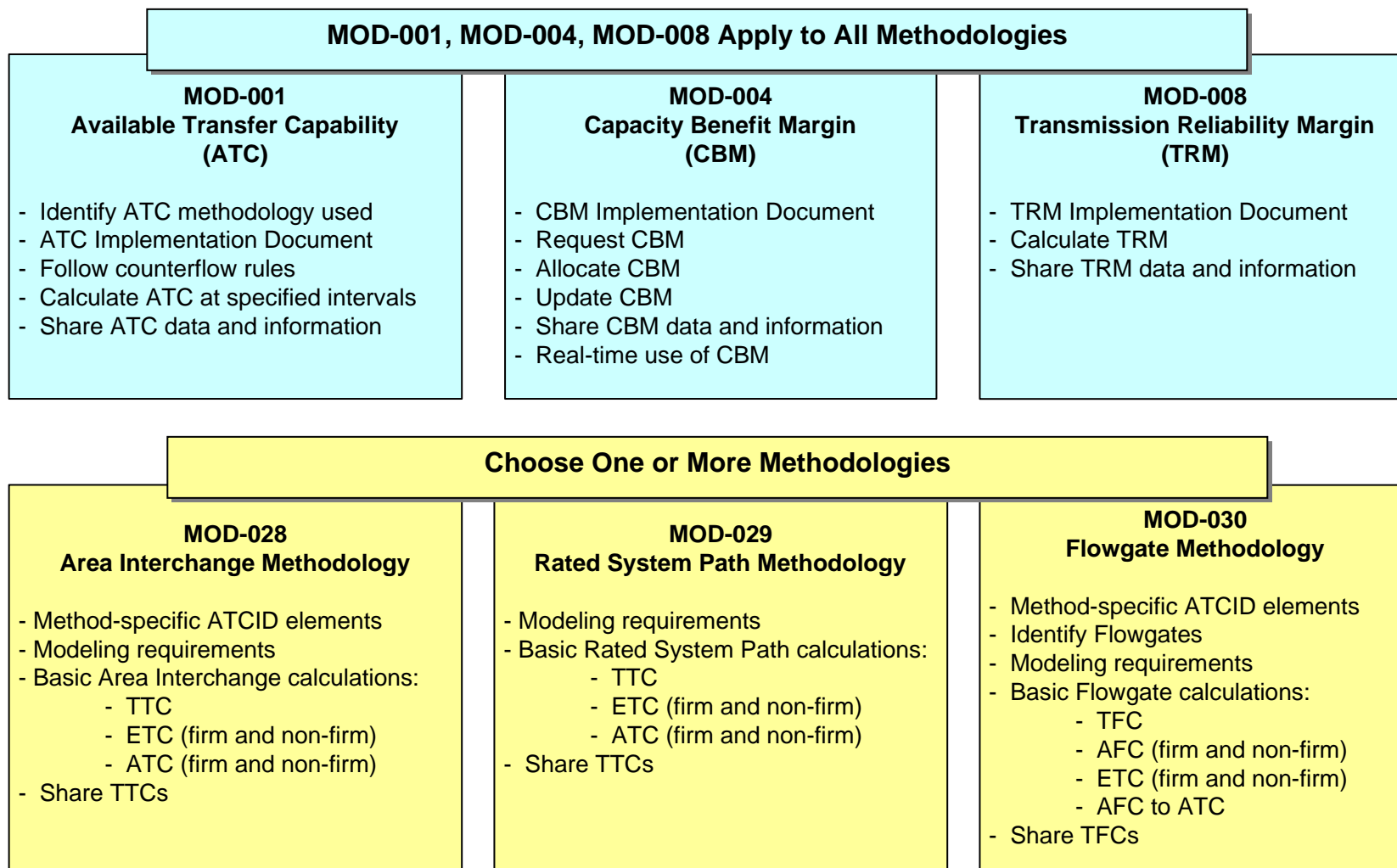
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: Not sure if this question is asking for additional time beyond the proposed implementation date or just a confirmation of what is proposed. I feel the proposed effective date language is sufficient. As mentioned below, the drafting team should review the effect date language in all six MODs to ensure consistency.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: In MOD-001, Posted Path is included in defined terms. This is a duplication of "Posted path" in 18 CFR Part 37.6 (b)(1)(i). Suggest that throughout these MODs, replace the term Posted Path with "paths required to be posted" or "paths requiring posting" or "paths for which ATC is calculated".

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: See comments below.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: The use of the term "horizon" in the violation risk labels has caused some confusion because of its use in ATC horizons (different time periods for which ATC is calculated in a specific manner).

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Throughout, these standards assert that the calculation of ATC is a reliability matter. This is incorrect. ATC is a commercial product, a commodity that is offered by transmission service providers, sold to transmission customers, and sometimes traded amongst transmission customers. FERC requires jurisdictional transmission providers to calculate and post ATC. 18 CFR Part 37.6 contains the standards of ATC calculation and

posting. It is not reasonable to be subject both to FERC enforcement of the CFRs and to NERC enforcement of these overlapping standards.

In the west, reliability is not impacted by the miscalculation, posting, or sale of ATC. It is when transactions are scheduled that reliability is potentially impacted. Improper TTCs impact reliability. Failure to evaluate proposed transactions and their impacts to the transmission system impact reliability. It is reasonable that NERC reliability standards cover the calculation of TTC, and some aspects of CBM and TRM.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-001-1, A., 3. the stated Purpose contains noble goals which are not required for reliable system operation but for viable commercial activity. Reliable system operations are impacted by incorrect TTC values and uncoordinated transaction scheduling activities.

MOD-001-1, A., 4. applicability, Transmission Service Provides calculate ATC. Transmission Operators (in the near term) and Transmission Planners (in the longer term) calculate TTC.

MOD-001-1, B., R1, Transmission Operators calculate transfer capability (TTC) of facilities within its TO area. Transmission Planners calculate transfer capability (TTC) of facilities within their TP areas. Transmission Service Providers calculate ATC for those paths that they are required to, choose to, or are asked to post.

MOD-001-1, B., R2 is a good requirement, but for commercial reasons, not reliability reasons. Transmission customers need to have access to more "granular" ATC closer to real-time. Also, why were weekly ATC values not included?

MOD-001-1, B., R3 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability. This requirement to create a separate document creates an undue burden on the industry - transmission customers will have two different documents to review, and transmission service providers will have two different documents to maintain.

MOD-001-1, B., R3 the term "Facility" is used several times in MOD-001-1. The NERC glossary says facility is "A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)". In R3.3 the requirement to list the Transmission Operators and Planning Coordinators for every facility under the TSP's tariff is burdensome and does not have value. Hundreds of facilities make-up even small systems. R3.3 should say "for each path for which the Transmission Service Provider calculates ATC, list the corresponding Transmission Operator and Transmission Planner and Reliability Coordinator".

MOD-001-1, B., R3.6 "Allocation methodologies" – it is not clear to what this means? Perhaps the following: "For paths where multiple Transmission Service Providers share

capacity or have rights, describe how the capacity is allocated among providers", or words to that effect.

MOD-001-1, B., R4 is not needed, it is already covered in R3.2. Since R4 leaves it open to each TSP's choice and requires them to document it, perhaps as a suggestion, the requirement could be to have the TSP do as they say they do in their Attachment C. The requirement might be rewritten to say "the TSP utilizes counter schedule information in their firm ATC calculations as specified in their Attachment C." Then, if the TSP fails to document or to do as they say they do, this could be a violation of the requirement.

MOD-001-1, B., R5 is not needed, it is already covered in R3.2. Since R4 leaves it open to each TSP's choice and requires them to document it, perhaps as a suggestion, the requirement could be to have the TSP do as they say they do in their Attachment C. The requirement might be rewritten to say "the TSP utilizes counter schedule information in their firm ATC calculations as specified in their Attachment C." Then, if the TSP fails to document or to do as they say they do, this could be a violation of the requirement.

MOD-001-1, B., R6 is not necessary. Revisions to Attachment C are to be filed and posted.

MOD-001-1, B., R7 Attachment C is already required to be posted (available) for any entity to review, subject to CEII concerns.

MOD-001-1, B., R8 does not read clearly. It can be interpreted as requiring any restudy of TTC to include previously used data rather than data that is reflective of the conditions of the time period being studied. Perhaps the requirement was for data used in the determination of TTC should be the most accurate, up-to-date data available and should reflect the expected conditions of the period of time under study.

MOD-001-1, B., R9 is not a reliability concern. In addition, it is unduly burdensome. Current and accurate ATCs are a commercial concern. In addition, performing 168 hourly calculations every hour when neither TTC nor ETC has changed, benefits no one and is costly. The commercial requirement should be to require the recalculation of hourly ATC once a day and whenever either TTC or ETC changes for any period of time between this hour and the next 168 hours. Also, require the recalculation of daily ATC once a day for the next 30 days and whenever either TTC or ETC changes for any period of time between this hour and the next 31 days.

MOD-001-1, B., R10, this requirement for data sharing between reliability entities is a good concept. However, as currently worded, all the burden to supply data is incorrectly placed totally upon the TSP and not on the Transmission Operator or Transmission Planner. Much of the data listed is critical for proper TTC calculation which the TSP may not have access to. The TSP calculates ATC based on upon TTC supplied by the Transmission Operator and/or Transmission Planner. This requirement does not specify

how the request is made or how the response or provision of data is dated. The corresponding measurement, M9, implies that all data items requested will be supplied within 14 days, but requirement states that the TSP will begin to make available at the 14 day mark. In addition, change first sentence words "...days of a request of any Transmission..." to "...days of a request made by any Transmission..." to read more in-line with the intent. Additionally, the requirement borders on a run-on sentence. Suggest moving the list of allowable requesters from R10 to be a sub-requirement R10.xx. The list of data is not all inclusive, there may other information needed. By each item, list what entity would have that data – TSPs would have ATC and ETC information, operators and planners would power flow data, etc.

MOD-004-1, A., Capacity Benefit Margin is a use of the transmission system that is requested by a load serving entity. This standard contains requirements for the interactions between the LSE and the transmission provider. These requirements are largely commercial in nature and should be under NAESB development. Reliability standards concerning CBM should only require LSEs to acquire minimum CBM to ensure service to load.

MOD-004-1, A., 6. Effective Date language is not but should be exactly the same for all six MOD draft standards.

MOD-004-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's CBM methodology. This requirement to create a separate document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and providers would have to maintain two different documents.

MOD-004-1, B., R2 is not necessary. Revisions to Attachment C are to be filed and posted (available) for any entity to review, subject to CEII concerns.

MOD-004-1, B., combine R3.3 language into R3.1.

MOD-004-1, B., R3.2 it seems more reasonable for the requirement to read "LSE shall review any active CBM requests at least every six months and submit updates as required."

MOD-004-1, B., R4 uses active verb "shall set...as follows:" but R4.1 says "Determine the amount of CBM...". To align the language a little better perhaps R4 should simply say "...the Transmission Service Provider shall:". In that way the TSP shall "determine" (R4.1), shall "set" (R4.2), shall "increase" (R4.3).

MOD-004-1, B., R4.3 contemplates the case where there is insufficient capacity to meet all the CBM requests on a particular path, but there is no discussion on allocation of

limited capacity to the requests. Is NAESB working on this aspect? If not, is it a TSP's discretion to develop a CBM allocation methodology?

MOD-004-1, B., R8, R9, R10, M11, M12, M13 use of the terms "tag" or "Interchange Transaction Tag" which is inconsistent with NERC INT and NAESB CI BP standards where specific reference to "tag" or "e-Tag" has purposefully been avoided in those standards. The term Request For Interchange (RFI) refers to a collection of data as defined in the NAESB RFI Datasheet, to be submitted to the Interchange Authority for the purpose of implementing bilateral Interchange between a Source and Sink BA. Or the term Arranged Interchange refers to The state where the Interchange Authority has received the Interchange information (initial or revised) and has distributed that information for reliability assessment. I believe that in these requirements, Arranged Interchange is the more appropriate language.

MOD-004-1, B., R10 requires, without exception, that all submitted Arranged Interchange using CBM must be approved. This would force TSPs to potentially approve malformed transactions possibly citing incorrect contract arrangements, incorrect connectivity, etc. Perhaps the requirement could state the TSP shall approve all valid requests to schedule CBM. The drafting team might consider requiring the TSP or other approval entities to supply a valid reason for denying a CBM schedule.

MOD-008-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's TRM methodology. This requirement to create a separate document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and TSPs two different documents to maintain.

MOD-008-1, B., R1.1 suggest modifying to read: "For each path or flowgate that ATC or AFC is calculated, describe how each of the following components of uncertainty are used in calculating TRM for each of the ATC time horizons (if not applicable, indicate as such):" The words "ATC time horizons" could be used to eliminate the need for R1.4.

MOD-008-1, B., R.3 what "request" is being referred to? Should it read "...seven calendar days of a request from:"? Or should "of a request" be removed as a typo?

MOD-008-1, B., it seems that R1, 2, and 5 could be merged together into a new R1 TRM calculation and documentation. R3 and 4 could merged together into a new R2 on TRM data sharing.

MOD-029-1 inclusion of the Rated System Path methodology is greatly needed and appreciated. The drafting team was wise in including it and should be thanked for their efforts.

MOD-029-1 suggest reordering R4 to be R1.

MOD-029-1 R1 (modeling requirements) should include the statement that the data listed below should reflect the expected conditions for the applicable time period.

MOD-029-1 R1.6 change "peak load forecast" to "applicable load forecast" since some SOLs, and ultimately TTCs, may be based upon light load conditions.

MOD-029-1 delete R2.7 as it, in its current form, does not provide the entire paradigm contained in the WECC's Procedures For Regional Planning Project Review And Rating Transmission Facilities.

MOD-029-1 in R6, is the "non-firm capacity reserved for NITS" the same as Secondary Network Service (i.e., NN-6)?

MOD-029-1 in R7 & R8, what are "Postbacks"? This term is not used in the west.

MOD-029-1 in R5, R6, R7, & R8, calculation of ETC and ATC are commercial concerns and should be addressed in business practice standards NAESB and enforced through FERC's adoption of those business practice standards into the CFR.

MOD-029-1 in R8 the requirement says we are to use the same formula for all horizons – this is incorrect. For the real-time, same-day time frame, we release all unscheduled capacity as non-firm ATC. As such, the formula would read:

$$\text{ATCNF} = \text{TTC} - \text{Scheduled ETCF} - \text{Scheduled ETCNF} - \text{CBMS} - \text{TRMU} + \text{Counter-schedulesF} + \text{Counter-schedulesNF}$$

MOD-029-1 in R8 the ETCF definition should be changed from "...existing non-firm commitments..." to "...existing non-firm commitments..."

MOD-030-1 it is unreasonable for TSPs to convert AFC values into ATC values simply because FERC regulations fail to contain the term AFC. For large systems using this methodology, posting thousands of ATC values benefits no one if AFC values can give transmission customers a better picture of available capability of the transmission system.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input checked="" type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** NPCC Regional Standards Committee

**Lead Contact:** Guy V. Zito

**Contact Organization:** Northeast Power Coordinating Council

**Contact Segment:** 10

**Contact Telephone:** 212-840-1070

**Contact E-mail:** gzito@npcc.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Donald E. Nelson	Massachusetts Dept. of Telecommunications and Energy	NPCC	9
Alan Adamson	New York State Reliability Council	NPCC	9
Kathleen M. Goodman	ISO-New England, Inc.	NPCC	2
Biju Gopi	IESO	NPCC	2
Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2
Greg Campoli	New York-ISO	NPCC	2
Ralph Rufrano	New York Power Authority	NPCC	1
David Kiguel	Hydro One Networks	NPCC	1
Ron Falsetti	IESO	NPCC	2
Murale Gopinathan	Northeast Utilities	NPCC	1

\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

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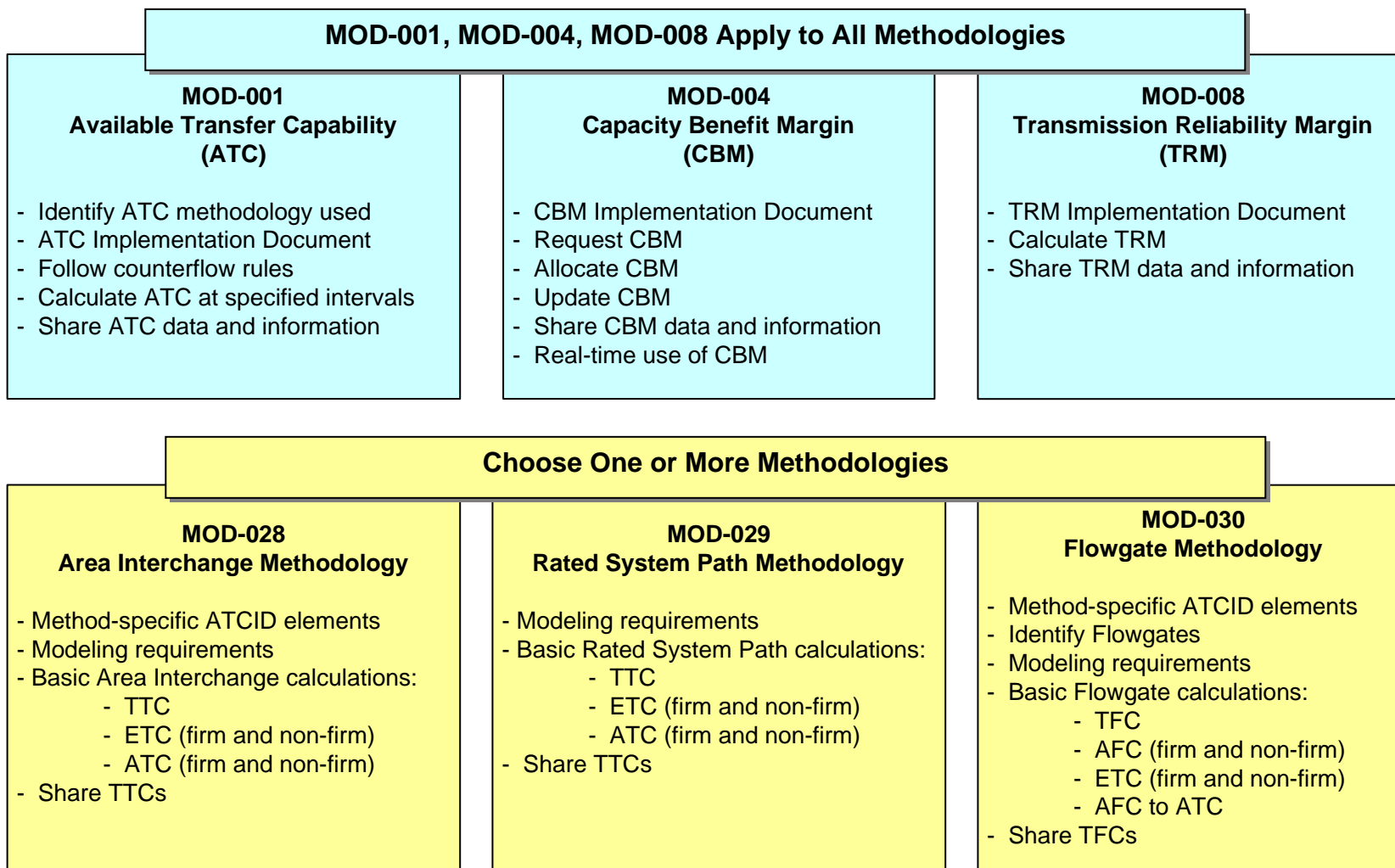
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- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
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- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

MOD-001

- 1. R1: The reference to the Planning Coordinator's planning area in R1 is not appropriate; the reference should be to the Transmission Operator's operating area.
- 2. R3.3: Since this standard deals with short-term Transmission Service, the reference to Planning Coordinator should be removed from R3.3, R6.1 and R6.4
- 3. R3.3: This should be reworded to be clear that the TOP is providing input (TTC or TFC) to the TSP to perform ATC calc. Also suggest removing reference to a 'tariff' since non-jurisdictional entities may not have a tariff. Suggest the following language: The identity of the Transmission Operators that provide data on each Posted Path for use by the Transmission Service Provider in calculating ATC. Acronyms TOP, TFC, and TSP need to be defined in the Background Information on p. 3. The abbreviation "calc." should be spelled out.
- 4. R4 and R5 should reference both the terms counter-schedules and counterflow throughout the requirements
- 5. R9 (or at a minimum the Measure for R9) must be modified to be clear that if TSP can demonstrate that no inputs to the ATC calculation have changed that an update of a 'timestamp' on an ATC value is not required. Suggested options for the language in R9: "Each TSP shall update ATC at a minimum on the following frequency, except that if all inputs to ATC are unchanged no update is required:" OR "Each TSP shall update ATC at a minimum on the frequencies listed below. However, if all inputs to ATC are unchanged no update is required."

MOD-029

- 1. R1.10 refers to EHV without it being a defined term and different regions could define EHV to be different voltage levels; suggest one of the following actions be taken: (a) include the desired kV level of the BPS system in the standard, (b) remove the reference to EHV entirely, (c) add a NERC glossary term. EHV should be defined in the Background Information on p.3 and be understood to be applicable to and restricted to the BPS irrespective of that voltage level. That definition must also include the BPS voltage level it refers to.
- 2. R2 language could be interpreted that all N-2 contingencies must be considered in a TTC study. If the intent that the TTC study should consider all currently required planning criteria, a general reference should be made to the planning standards rather than try to summarize and reiterate those requirements here.
- 3. R2.1.5 contains a very specific consideration for EHV contingencies to be considered in the TTC. Is there a reliability need for ALL regions to consider EHV in this manner? If not, we suggest removing this requirement from the NERC standard, where it can be added in a more detailed regional standard if required by a particular region. EHV should be defined in the Background Information on p. 3; the definition must include the BPS voltage level it refers to.
- 4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

1. VSL for MOD-028 R2 and R3 are is not clear if the 'errors' that are allowed are for a given TTC study or the allowed cumulative 'errors' since the last audit? (this language should also be clarified on comparable VSLs in MOD-029 and MOD-030). "Are is" in the first sentence needs to be corrected.
  2. If suggestions in Question 3 and 6 are accepted, the associated Measures and VSLs will also need to be updated accordingly.
5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: We would like confirmation from the Drafting Team that our interpretation of how the MOD-004 requirements can apply in areas that employ competitive wholesale markets in a manner that does not conflict with approved tariffs. In ISO/RTO markets where resource adequacy is performed by the ISO/RTO (i.e., an independent Balancing Authority), and by virtue of the market, the Transmission Service Provider does not offer transmission service in advance of physical flow, there is no ability for the LSE to 'request' CBM as defined in the standards. However, the reliability need for CBM by the LSE is satisfied by the market rules and associated tariffs. As such, the entities' CBMID would describe how the reliability needs of the LSEs, as relates to securing CBM is met and why there is no need for the LSE to 'request' CBM in the manner described in the standards. We would like confirmation from the Drafting Team that documentation of

CBMID in this manner – i.e., through specifying that an LSE need not “request” any particular transmission service – would satisfy the reliability requirements of MOD-004. LSE, and CBMID should be defined in the Background Information on p. 3.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

MOD-001

1.R1: While in many cases, the decision on which ATC methodology to use may be made jointly between the TSP and TOP. However, since you cannot have joint responsibility in the standard, the TOP is the appropriate Functional Model entity. Acronyms TSP, and TOP need to be defined in the Background Information on p. 3.

2.R8: Since this standard deals with short-term Transmission Service, the reference to planning studies should be removed from R8

3. R8 is an appropriate representation of the broad FERC requirement as-written that will force entities to make a conscious effort to ensure this consistency occurs. While the language is somewhat vague, we recognize that adding more detail would be unreasonably difficult. We would suggest that detail be added in the measures to provide examples of what a valid demonstration would be. For example, TOP/TSP may provide evidence to demonstrate that the source of the inputs used in the operational studies is the same as for the TTC/ATC studies. TOP and TSP need to be defined in the Background Information on p. 3.

MOD-028

1. R8 should be broken down into the different timeframes; sending TTC values used in hourly and daily ATC calculations seven days after being calculated is too late. Suggest: 8.1 within one calendar day of its determination for TTCs used in hourly and daily ATC calculations; 8.2 within seven calendar day of its determination for TTCs used in monthly ATC calculations.

MOD-030

1. R4 seems duplicative of MOD-001 R8
2. R6.3, 6.4 - The last sentence of R6.3 seems to belong in 6.4 not 6.3



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<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	Rick Gonzales
Organization:	New York Independent System Operator, Inc ("NYISO").
Telephone:	518 356 6116
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<b>NERC Region (check all Regions in which your company operates)</b>	<b>Registered Ballot Body Segment (check all industry segments in which your company is registered)</b>
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities





## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

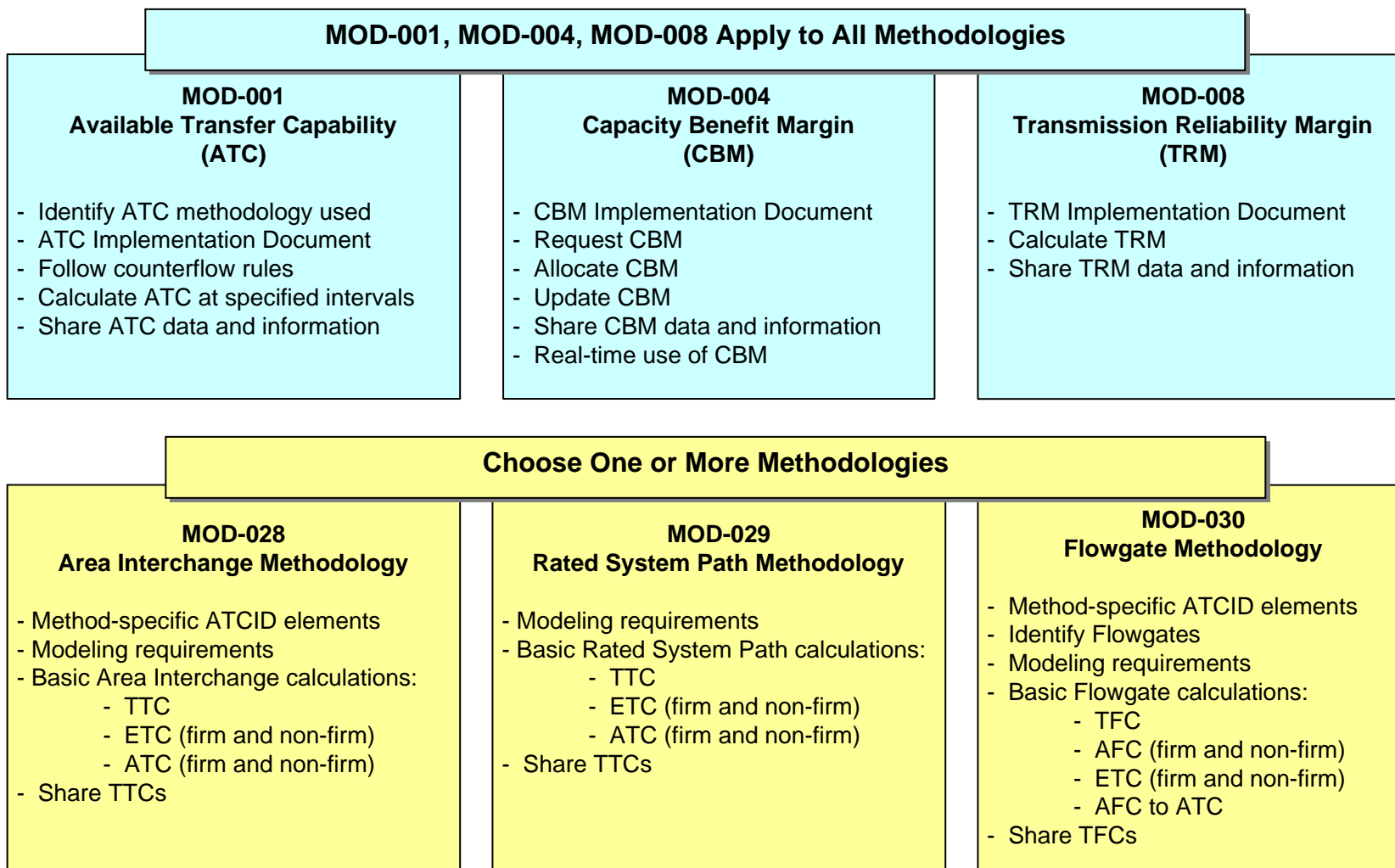
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: Not applicable.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: The NYISO supports the comments that the Northeast Power Coordinating Council ("NPCC") has submitted in response to this question.

Except as noted by the NPCC, all of the proposed definitions appear to be correct, assuming that NERC shares the NYISO's view that the definitions are sufficiently flexible to accommodate transmission providers that have obtained waivers from various FERC ATC and OASIS requirements and that do not offer transmission service based on physical reservations. As is discussed in more detail in response to Question Five, the NYISO, with FERC's approval, does not offer the kind of physical reservation transmission service that is the primary focus of Order Nos. 888 and 890. Nevertheless, the NYISO believes that its form of financial reservation transmission service fits within the framework of NERC's proposed definitions and standards.

It is very important to the NYISO that the proposed definition of "Existing Transmission Commitments" ("ETC") in MOD-028 and MOD-029 be interpreted flexibly. Many of the variables in the proposed ETC algorithm will not be applicable (or will always have a value of zero) in the NYISO's case. Specifically, the NYISO does not reserve capacity to serve native load growth, its customers do not hold physical reservations of point to point transmission service and have never taken Network Integration Transmission Service. On the other hand, the most important input into the NYISO's ATC calculations is "Transmission Flow Utilization," which is based on the security constrained network powerflow solutions determined by the NYISO's day-ahead and real-time market software. It appears that the OS(F) variable in the proposed ETC algorithm is broad enough for the NYISO to include Transmission Flow Utilization information when calculating ETC (and thus ATC). To the extent necessary, the NYISO will provide additional information concerning its market software's computation of Transmission Flow Utilization and its role in the ETC calculation in the NYISO's Available Transfer Capability Implementation Document ("ATCID").

If NERC disagrees with this interpretation then the NYISO requests that the MOD-028 and MOD-029 definition of ETC (and/or OS(F)) be revised to expressly allow ISO/RTO market software results, such as the NYISO's Transmission Flow Utilization information, to be considered in ETC calculations. Otherwise, the NYISO's existing method of calculating and posting ATC using market software outputs, which is a core feature of its FERC-approved market design, would be in conflict with NERC's standard. Additional

information on the NYISO's financial reservation system is provided in the response to Question Five, below.

Finally, the definition of the OS(F) variable in the MOD-29 description of the ETC algorithm (at R9) may be slightly narrower in scope than the MOD-28 version because the MOD-29 definition does not include the language referencing "any other firm adjustments to reflect impacts on other Posted Paths as described in the ATCID" that is found in MOD-28. Because it is not clear why the two OS(F) definitions should be different, the NYISO asks that NERC revise the MOD-29 version to conform to the MOD-28 version.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

**Incorrect Requirement:** The NYISO joins in, and supports, the comments submitted by the ISO/RTO Council ("IRC") in response to this question. The NYISO also supports the comments submitted by the NPCC. In particular, the NYISO strongly supports the NPCC's request that requirement R9 under MOD-01 be revised to clearly establish that ATC values need not be updated when the inputs to the ATC calculation have not changed. The NYISO also supports the NPCC's proposed revisions to the language of R9. The NYISO also has concerns on MOD-028 R3, R4 and R6 regarding the frequency of TTC calculations when inputs have not changed.

Except as noted by the IRC and NPCC, the NYISO does not believe that any of the proposed ATC standards are technically incorrect, so long as they are interpreted with sufficient flexibility to accommodate transmission providers that do not offer physical reservation transmission service.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

**Incorrect Measure or Compliance Element:** The NYISO joins in, and supports, the comments submitted by the IRC in response to this question. The NYISO also supports the comments submitted by the NPCC.

Except as noted by the IRC and NPCC, the NYISO does not believe that any of the proposed measures or compliance elements are incorrect based on its expectation that NERC will interpret the ATC standards in a way that accommodates the needs of transmission providers that do not offer physical reservation transmission service.

If, however, NERC were to interpret the standards in a manner that was inconsistent with the use of FERC-approved non-physical forms of transmission service then the proposed compliance and sanction requirements would be inappropriate, inequitable, and unlawful. The NYISO does not believe that this is NERC's intent. In any event, NERC should not develop standards, or interpret them in a way, that would expose transmission providers to enforcement action for implementing tariffs that have been approved by FERC, and that Order No. 890 does not require be changed, simply because their tariffs differ from the standard Order No. 890 model.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: The NYISO joins in, and supports, the comments submitted by the IRC in response to this question. The NYISO also supports the comments submitted by the NPCC.

Except as noted by the IRC and NPCC, the NYISO does not believe that there will be any conflict between the proposed ATC standards and anything in the NYISO's tariffs, the NYISO market design, or any FERC order related to them, provided that NERC interprets the standards with reasonable flexibility. So long as NERC takes this kind of approach, the NYISO expects to be able to apply its chosen NERC-approved ATC calculation methodology consistent with its use of a FERC-approved financial reservation transmission service model. The NYISO believes that NERC can interpret the standards with reasonable flexibility without reducing their technical accuracy or diminishing their effectiveness. Transmission providers that offer financial reservation transmission service would still be required to comply with all standards to the extent that they are applicable, exactly like transmission providers that offer physical reservation service.

By way of background, under the NYISO's financial reservation model, customers schedule transmission service "implicitly" when they submit energy schedules via the spot markets or arrange for bilateral transactions. There are no express reservations of physical transmission service and customers may schedule transactions between any two points, so long as doing so is not inconsistent with a security-constrained economic dispatch. All desired uses of the grid are scheduled to the extent that customers are willing to pay congestion charges, which can be hedged using financial rights. Stated differently, customers' ability to schedule transactions within New York is not limited by a pre-defined amount of ATC. Instead, the entire capacity of the New York State Transmission System is made available for both firm and non-firm service prior to the start of each market cycle. ATC is calculated and posted based on the transactions accepted in the day-ahead and real-time market. Consequently, the information conveyed by the NYISO's ATC postings is different than what is conveyed under physical reservation systems. As FERC has recognized, the NYISO's postings are really advisory "projections", albeit advisory projections that the Commission believes can be useful to customers.

Nothing in Order No. 890 required the NYISO to modify this system, no New York stakeholder has asked that it be changed, and there is no reason why it cannot be accommodated within a framework of rigorous and technically accurate ATC standards. NERC should not interpret the ATC standards in a way that would require the NYISO to perform functions that are inconsistent with its model or with past waivers it has received from FERC's OASIS/ATC regulations and related NAESB business practices. The NYISO identifies a limited number of requirements where this issue could arise in its response to Question Six, below. The NYISO believes that its ATC practices will comply with NERC's proposed requirements and that any differences between the details of its procedures and those of other transmission providers can be addressed in its ATCID.

For NERC's reference, the orders granting the NYISO waivers from various FERC OASIS and ATC requirements, and from related NAESB business practices, include New York Independent System Operator, Inc. 121 FERC 61,036 (2007); New York Independent



System Operator, Inc., 117 FERC ¶ 61,197 (2006); New York Independent System Operator, Inc., 94 FERC ¶ 61,215 (2001); and Central Hudson Gas & Electric Corp., et al., 88 FERC ¶ 61,253 at 61,803 (1999).

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: The NYISO joins in and supports the comments submitted by the IRC in response to this question. The NYISO also supports the comments submitted by the NPCC.

NERC's November 21 filing with FERC for an extension of time to complete the ATC standards development process described MOD-29 as a methodology used "exclusively" in the Western Interconnection. It also referred to MOD-28 as a methodology used "primarily" in the Southeast. Notwithstanding these descriptions, the NYISO is not aware of any NERC proposal to restrict the use of MOD-028 or MOD-29 to particular geographic regions. If, however, it is NERC's intent to impose such restrictions, the NYISO respectfully requests that NERC reconsider. Order No. 890 did not impose geographic restrictions or require all transmission providers in a given region to use the same methodology. Transmission Providers should be free to implement whichever methodology best suits them, their customers, and the needs of any markets they administer, so long as they comply with that methodology's requirements.

With respect to MOD-028, NERC should revise requirements R3 and R4 so that transmission providers are not required to re-calculate and re-post TTC at the specified intervals at times when none of the underlying inputs to the TTC calculation have changed. Under the NYISO system, TTC values do not change often. Accordingly, having to make more frequent TTC calculations would require the NYISO to adopt costly compliance measures that offer no benefit to its customers.

With respect to MOD-029, NERC should revise requirements R2.3 and R2.6 or, in the alternative, clarify in response to this comment that they do not apply to transmission providers, such as the NYISO, that do not offer physical transmission rights based on contract-path reservations.

Similarly, with respect to MOD-001, NERC should revise requirements R10.3 through R10.8, and R10.14, or in the alternative, clarify in response to this comment that they do not apply to transmission providers, such as the NYISO, that use financial reservation models and thus will not have the information that the proposed requirements direct them to make available on request. Otherwise, the R.10 information requirements would effectively call on the NYISO to perform functions that FERC's waiver orders excuse it from performing and that would serve no purpose under the NYISO model.

More specifically:

R10.3 -- Unit Commitments and Dispatch Orders -- Under the NYISO system, this information is only available for the day-ahead and real-time market horizons. The NYISO will not have this information for the "operations planning" horizon as the proposed language would require.

R10.4 -- Firm and Non-Firm Network Integration Transmission Service details -- The NYISO's OATT currently requires the NYISO to offer a "financial" version of this service but no customer has ever requested it. The NYISO anticipates that it will propose to FERC that the Network Integration Transmission Service provisions of its OATT be eliminated well before MOD-001 is implemented. The NYISO will therefore not have any information on such reservations to make available in response to requests under R10.

R10.5 -- Confirmed firm and non-firm Transmission reservations -- In the NYISO system, customers do not make express, physical firm or non-firm transmission reservations. The NYISO will, therefore, not have any information on such reservations to make available in response to requests under R10.

R10.6 -- Grandfathered firm and non-firm contracted transmission capacity on an aggregated basis -- Although the NYISO honors the grandfathered transmission arrangements that are listed in Attachment L to its OATT it does not make express physical transmission reservations in connection with them. The NYISO will, therefore, not have any aggregated information on grandfathered capacity reservations to make available in response to requests under R10.

R10.7 -- Firm Roll Over Rights -- The NYISO's FERC-approved OATT has never included the pro forma OATT's roll-over right provisions. The NYISO will, therefore, not have any information on such rights to make available in response to requests under R10.

R10.8 -- Firm and Non-Firm Adjustments to Reflect Parallel Path Impacts -- Because the NYISO does not support physical firm or non-firm reservations, it has no procedures for gauging their parallel path impacts and will, therefore, not have information to make available in response to requests under R10.

R10.14 -- Flowgate values - The NYISO does not utilize any flowgates. The NYISO will, therefore, not have any flowgate-related information to make available in response to requests.

Except to the extent that they are addressed by the IRC or NPCC, the NYISO has no comments on MOD-004 or MOD-008. The NYISO has never set aside transmission capacity for CBM and does not intend to do so in the future. Consistent with NERC's expectation, the NYISO would explain this practice to the extent required in its ATCID. Likewise, the NYISO uses TRM and intends to comply with all of NERC's requirements related to it.

Thank you very much for your attention to these comments.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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Organization:	PacifiCorp
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E-mail:	shayleah.labray@pacificorp.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
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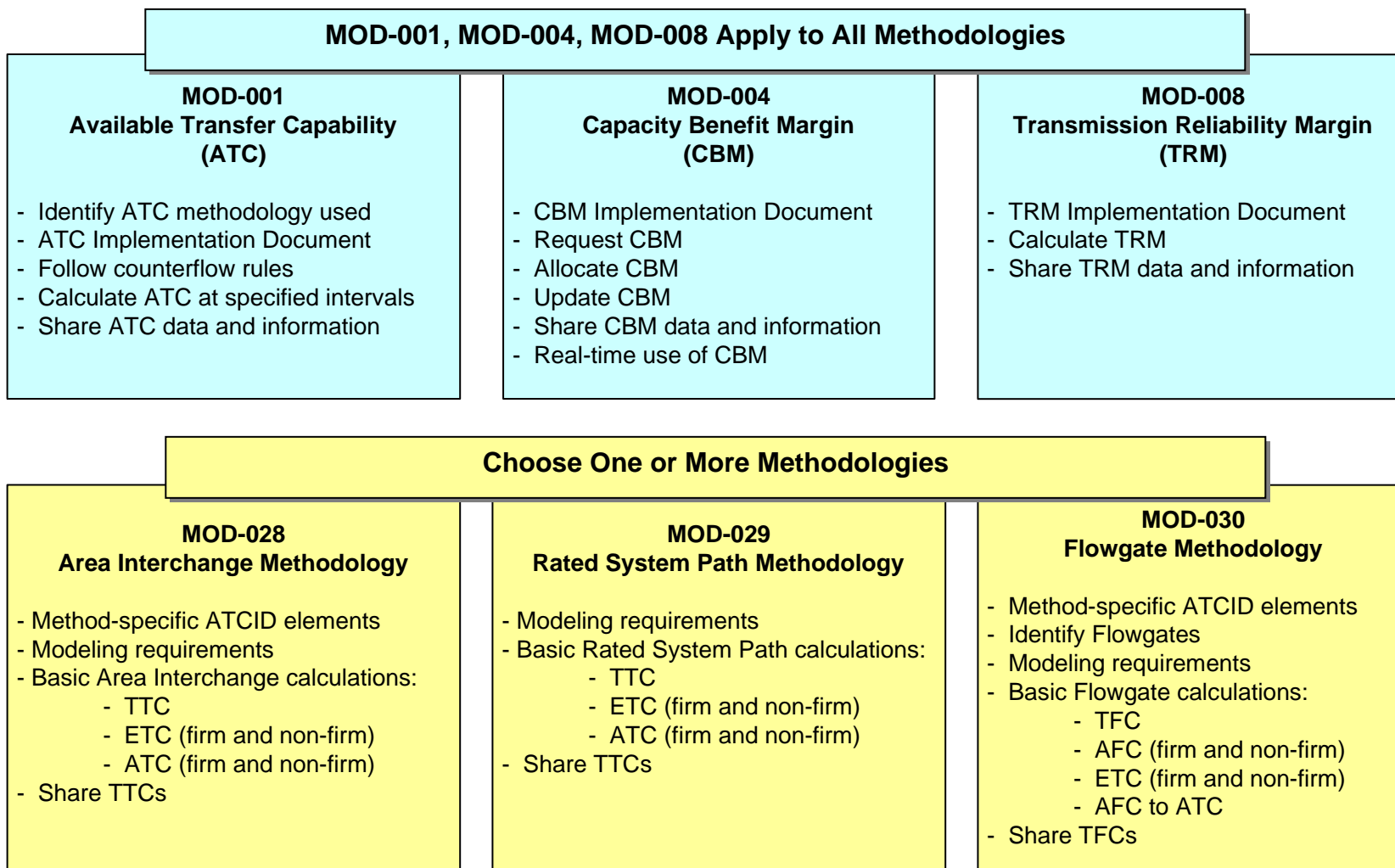
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
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- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

PacifiCorp strongly supports the inclusion of a 12 month implementation period for these standards. The entities electing the Rated System Path Methodology will require this much needed period to assure proper review of the Posted Paths under their purview.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

The WECC MIC MIS ATC Drafting Team suggests in its comments that the NERC ATC Drafting Team clarify the meaning of the term "counterflows." PacifiCorp suggests that with regard to this comment, any changes to clarify the term "counterflows" should not undermine the flexibility allowed in the definition of the term "counter-schedules" in MOD-029 that states "Counter-schedules are adjustments to firm/non-firm Available Transfer Capability as determined by the Transmission Service Provider and described in its Available Transfer Capability Implementation Document.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

- Incorrect Requirement:

- PacifiCorp supports the WECC MIC MIS ATC Drafting Team December 14, 2007 comments suggested redraft language of R10 as follows:

- "R10. Upon request from another Transmission Service Provider, Planning Coordinator or Reliability Coordinator, each Transmission Service Provider shall provide from the below specified list, only that data requested and only that data already in existence and in the possession of the Transmission Service Provider from which that specified data is requested. Provision of all data is subject to confidentiality and security requirements."

- In addition, PacifiCorp suggests that the following sentence be added to the above proposed language that states "The requirements of R10.1-R10.15 should not be interpreted as a comprehensive list of what is required to be included in an ATC calculation."

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

PacifiCorp supports the following general and affirmative comments related to MOD-01 and MOD-029 submitted by the WECC MIC MIS ATC Drafting Team December 14, 2007.

#### GENERAL

1) Supports retention of the three methods recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028).

2) Strongly supports the retention of the proposed one-year implementation period.

3) Supports allowing NAESB to address all "posting" issues as they directly affect OASIS.

In addition, PacifiCorp suggests that any standards set forth herein be subject to an acknowledgement by NERC that compliance should not be required until the related NAESB standards are complete.

#### MOD-001 UMBRELLA

1) Supports allowing the use of more than one methodology for calculation of ATC by any one entity.

2) Supports allowing each entity to specify in its ATCID how it will treat counterflows / schedules. (R4., R5.)

- 3) Supports the aggregation of transmission capacity for grandfathered contracts when shared with neighboring requestors.
- 4) Supports the specifically limited universe of entities to which data sharing is required as prescribed in R10.

MOD-029 RATED SYSTEM PATH TTC, ETC & ATC

- 1) Strongly supports retention of the requirement(s) in R2.2 that accommodate paths which are "flow limited" by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing practices without re-inventing the wheel where no such effort is required to meet FERC's goals of transparency and consistency.
- 2) Strongly supports retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.
- 3) Strongly supports the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.
- 4) Supports retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts, associated litigation and potential renegotiation of associated operational agreements while supporting FERC's mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.
- 5) Supports the adoption of a definition for counterflow to clarify its application in each equation. In addition PacifiCorp echos its earlier comment in Section 2 that any changes to clarify the term counterflow should not undermine the flexibility allowed in the definition of the term "counter-schedules" in MOD-029.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Chris Advena
Organization:	PJM Interconnection LLC
Telephone:	610-666-4240
E-mail:	advena@pjm.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input checked="" type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

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On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

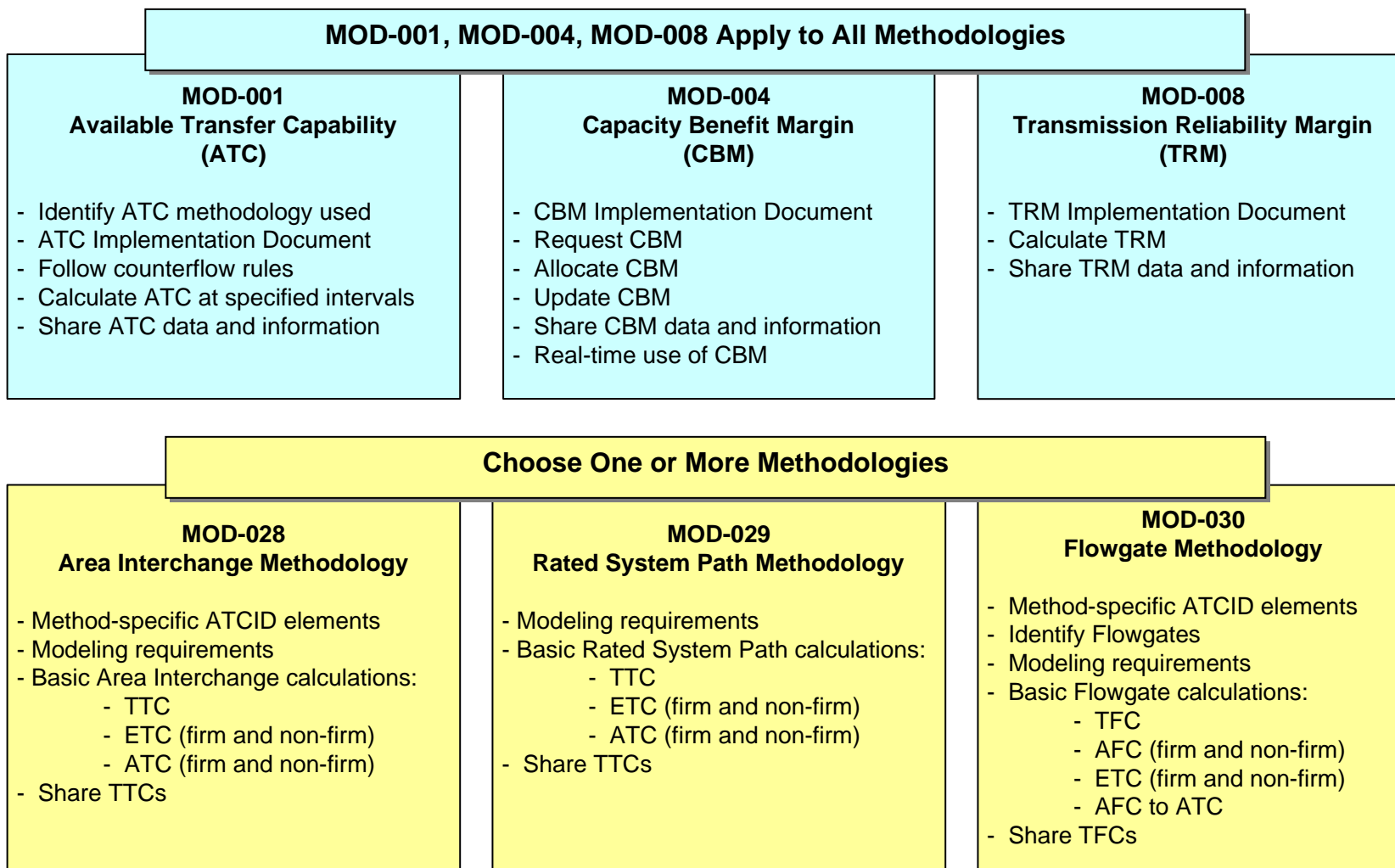
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- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards





The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: This time allotted is sufficient but, if shortened, would be a burden.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: GCIR should observe the practice of multiple LSEs aggregating and agreeing with other entities such as ISOs to determine such requirements. The GCIR for grouped LSEs would differ from the sum of the individual LSEs. In such a case CBM will be determined for the aggregate and processes/ procedures for individual LSEs to request CBM will not be observed.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: The requirements in MOD 1 to meet the update periods are not required to meet the reliability aspects of ATC implementation.

MOD 4:

PJM disagrees with the essence of the proposed Mod 4-CBM standard. As currently constructed, the requirements treat CBM as if it is an energy quantity as opposed to a reliability margin. The proposed standard reads more like a procedure manual applicable to a single vertically integrated utility. The majority of load served in the US does not use the CBM as a product construct. PJM will suggest modifications that will better reflect CBM as a margin, not a commercial product, used to preserve the reliability of multiple LSE's through various reliability agreements. The suggested changes will preserve the ability of a single LSE to treat CBM as a product, but will refocus the discussion to better articulate the concepts used in a market environment.

Provisions need to be made to allow the flexibility of LSEs to aggregate and allow the planning to be handled by an ISO. There are conflicts with the PJM Reliability Assurance Agreement Amongst Load Serving Entities.

The GCIR definition recognizes the aggregation of LSEs and the requirements in MOD 4 do not. For example R1.1 specifies LSE as a single entity. The requirements do not provide for other methods of managing CBM both in planning and operationally. It is recognized that multiple LSEs may aggregate but the procedural requirements of R3 for instance are on a LSE specific basis. The standards must recognize FERC accepted

practices for instance the definition and methods of addressing GCIR should recognize that the net CBM for an aggregate of LSEs may be less than the sum of the CBM needed for each LSE.

GCIR definition should recognize that the net CBM for an aggregate of LSEs may be less than the sum of the CBM needed for each LSE.

If these standards are to be as procedural/process specific as they are now written then alternate applications of CBM are necessary. Some examples include but are not limited to:

R1.1 The drafting team would need to add language to recognize processes such as PJM's IRM study as satisfying requirements to determine import requirements. For the group of LSE's with an aggregated need for CBM.

Language must be changed in the standard allowing flexibility to LSEs and Balance Authorities to apply different methods and procedures for instance:

R1.3 Remove the words "for a Load Serving Entity to request" would allow other entities or agents to act on behalf of LSEs.

R3 through R10 contain timeframes that would not apply when CBM is determined on differing intervals. This standard is too specific to processes implemented in specific regions. The GCIR and CBM may not change on these intervals and these requirements would be inappropriate. These requirements do not recognize the practice implemented by groups of LSEs acting through a stakeholder process in the determination of area wide CBM and reserve margins.

MOD - 008

R1.3 The TRM allocation method may include a process contained in the AFC or ATC calculator that overrides the base TRM value.

R1.6 There is a need to implement a requirement for cases where the TRM applied differs from the calculation. Such a number should be provided to the RC with sufficient documentation for the RC to approve the TRM prior to implementation. These instances should be documented in the TRMID.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:  
Violation Severity Levels

NERC Standards should be developed to assure reliability. Standard business practices related to fair market practices should be developed and implemented by NAESB.

PJM supports the IRC comment that in order for "requirements to have a medium VRF, according to the VRF criteria in Drafting Team Guidelines, they would have to directly

affect the electrical state or capability of the bulk electric system or ability to effectively monitor and control the bulk electric system or in the planning time frame, or if violated, could under emergency, abnormal or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state of capability of the bulk electric system.”

Further, a Violation Severity Level should be a measure of the potential impact to reliability. If a violation does not impact reliability, there should not be a VSL assigned at all.

PJM agrees with SERC comments that violation levels for TFC should only be moderate or higher if they exceed an SOL or IROL.

The VSLs set in the MOD standards are not consistent with the definitions the VSL definition in the Violation Severity Limit Definitions Table in Figure 1 of “Violation Severity Levels Development Guidelines Criteria October 10, 2007” (VSL Guidelines). The definition in the VSL Guidelines defines a Moderate Violation (VSL 2) as “non-compliant with respect to one significant element within the requirement.” For example, MOD-030-1 sets the Severe VSL for R3 as “The Transmission Operator did not update the Transmission model per the schedule specified in R3,” which is based on a violation of a single significant element. This clearly falls under the definition of a moderate VSL per the VSL Guidelines. The entire set of Violation Severity Levels in the MOD standards needs to be revised per the VSL Guidelines.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If “Yes,” please explain why and provide supporting information.

Comments: The requirements are procedural in nature and conflict with PJM's implementation of ATC and CBM. The LSEs have delegated authority to implement CBM and determine reserve margins to PJM in the RAA. The PJM membership have enjoyed the benefits of an area wide application of CBM. The standards specify requirements that do not observe differing implementations of CBM. The procedural requirements of the standards conflict with the procedures in PJM Manuals and implemented by PJM In the RAA, and JOAs. These standards additionally would then affect the ability for LSEs to delegate responsibility to ISOs by limiting both the general flexibility by which CBM may be implemented and the specific application in PJM.

The standards must state that the requirements do not apply in the event that the responsible parties have FERC approved agreements in place that differ in implementation. Such agreements may include the RAA, and JOAs between ISOs.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: PJM encourages further development that would include a diversity of implementations. PJM also wishes a clear distinction between reliability aspects and economic aspects in further revisions

#### MOD-001 Available Transfer Capability

R3.2 - Is this requirement consistent with use of the terms "counter flow" and "counter reservation" in the rest of the Standard?

R3.6 - What is the definition of "Allocation methodologies" and is it different for flowgate capabilities or paths?

R9: We believe the frequency could be better addressed and aligned with other posting requirements by NAESB in business practices.

R10: Insert "its own data" in the first sentence, 3rd line as follows: ...Provider shall begin to make "its own data" available on the schedule specified...

#### MOD-004 Capacity Benefit Margin

R2: The acronym "CBID" in the 2nd line of the first sentence should be "CBMID". Entities should have a more reasonable time frame of fourteen (14) calendar days to make CBMID and any changes available to applicable parties.

R6 - Fourteen (14) calendar days for providing requested CBM information would be more reasonable.

R7.1 and R7.2 - Fourteen calendar days for providing CBM supporting data would be more reasonable.

R9: Add "within the bounds of reliable operation" to the end of the R9 requirement description.

#### MOD-008 TRM Calculation Methodology

R3, R4, R5 - Fourteen calendar days for providing TRM calculations and supporting data would be more reasonable.

#### MOD-030 Flowgate Methodology

R2.1.1 - The current definition makes every facility a flowgate. Suggest changing the wording as follows, "Any facility within the Transmission Operator's area based on thermal, stability or voltage limits is eligible to become a flowgate." The requirements that follow (R2.1.2 and R2.1.3) would be sub-requirements of R2.1.1 that would be used to determine the subset of all transmission facilities described in R2.1.1 that become flowgates.

R2.1.2.1 - "This requirement is only applicable if the planning studies and operating studies use the same methodologies. If the planning studies use a TTC methodology then all transmission facilities may be contingencies. In AFC studies only the select flowgate definitions that contain contingency elements would be included. Recommend removing this requirement." If this requirement remains suggest following wording, "...Use Contingencies consistent with the Contingencies used in operations studies and planning studies for the applicable time", but not all contingencies used in studies need to be included in transfer analyses."

R2.2 - Should be yearly instead of quarterly. Delete the word "definitions" from the sentence.

R3.1 - Recommend that R3.1 be deleted since TFC may be derived from another source such as a flowgate parameter files. This is should be an acceptable practice since it is easier to maintain flowgate attributes/parameters in files included in the calculation process than in the load flow models.

R3.4 and R3.5 - Change Reliability Coordinator's area to Transmission Operator's area.

R4.2 - What is the definition of an interface point? It is suggested that the words "the interface point with" should be clarified or revised from the language in bullet points 3,4,7 and 8 under R4.2.

R5.1 - Recommend rewording of R5.1 to address outage rules. Outage rules used in the standard to define the set of outages to include in monthly or daily calculations where multiple outage periods exist. An example would be that in monthly AFC calculations all outages for the month are not included. Only the set of outages that meet the outage rules (for example all EHV with a duration of greater than 7 days or all outages that occur on the 3rd Wed of the month,etc) The requirement should be reworded to say "all outages that meet the outage rules as specified in the ATCID".

R5.2 - Replace the existing wording and deleting word "any" with the following: "For external third party flowgates, PDF greater than 5% and passing coordination agreement study process, if applicable, use the AFC for each specific flowgate provided by that third party as the AFC for that flowgate, except where there is a mutually agreed temporary problem with that value."

R6.3 and R6.4 - The threshold values for calculating impacts should be consistent with the threshold values contained in MOD-028.

R7.2 and R7.4 - The threshold values for calculating impacts should be consistent with the threshold values contained in MOD-028.

R8 - What is a "postback" as defined by NAESB?



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Brett Koelsch
Organization:	Progress Energy, Carolinas
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
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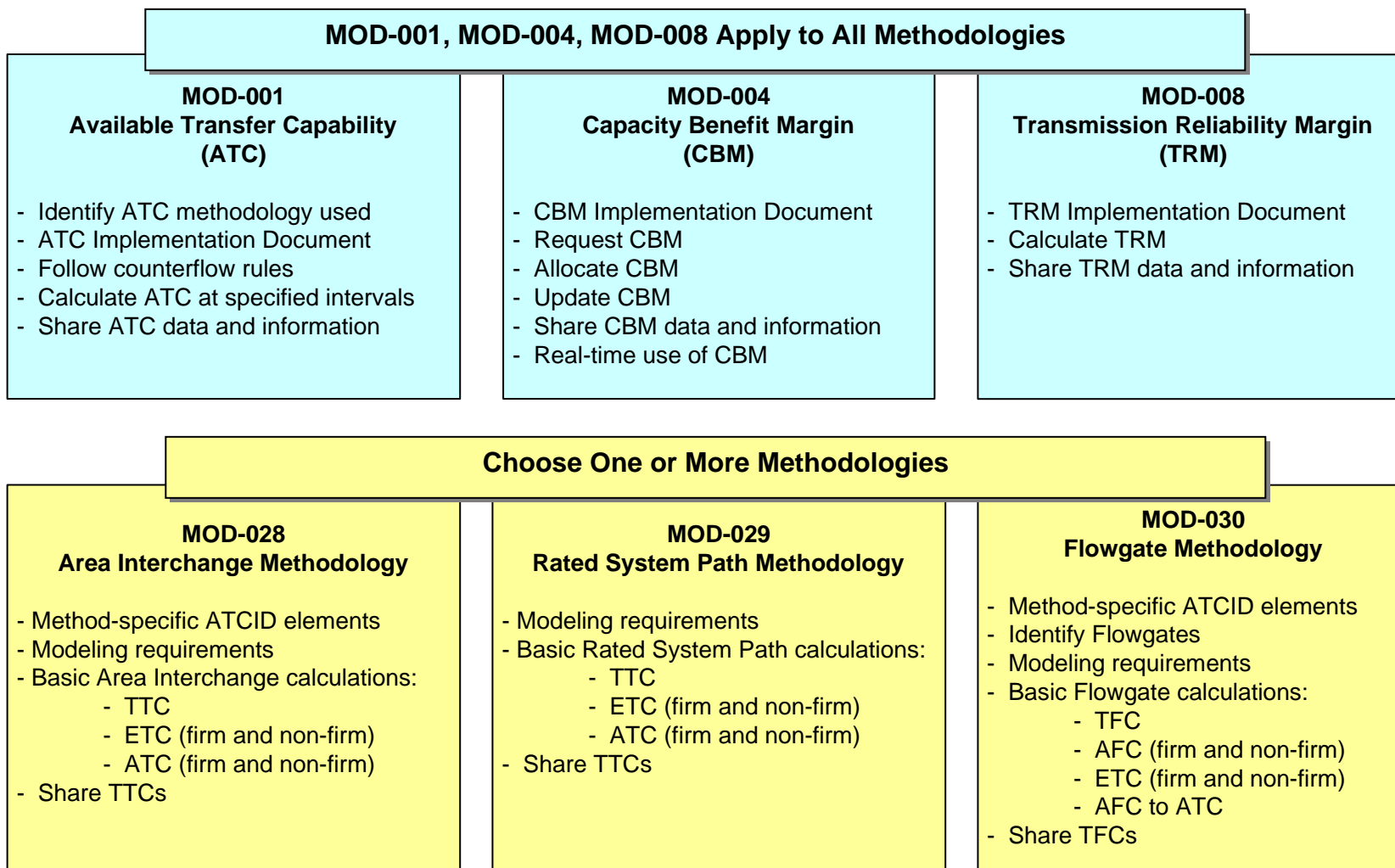
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

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*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

- Incorrect Requirement: MOD-28-1 R7, MOD-030-1 R2.1.3.1
- The distribution factor/impact value used in the analysis of ATC impacting calculations should be consistent in all related processes. The value used in the process to approve transmission service should provide at least as accurate/granular results as the TLR process that is used to relieve congestion. The current TLR process uses a 5% impact, but there is discussion of using a 3% impact for non-firm curtailments. The ATC processes should not use an impact/distribution factor above 3%.
- The 3% value is in MOD-004 -1 4.1.2.2, MOD-030-1 – R6.3, R6.4, R7.2, R7.4 and R10.
- A 5% value is used in MOD-028-1 R7, MOD-030-1 R2.1.3.1.

The 5% impact or distribution values used in the Standards should be changed to 3% to be consistent across processes and Standard requirements, and to support the TLR process.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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If "Yes," please explain why and provide supporting information.  
Comments:

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Comments:



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RELIABILITY CORPORATION

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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities





## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

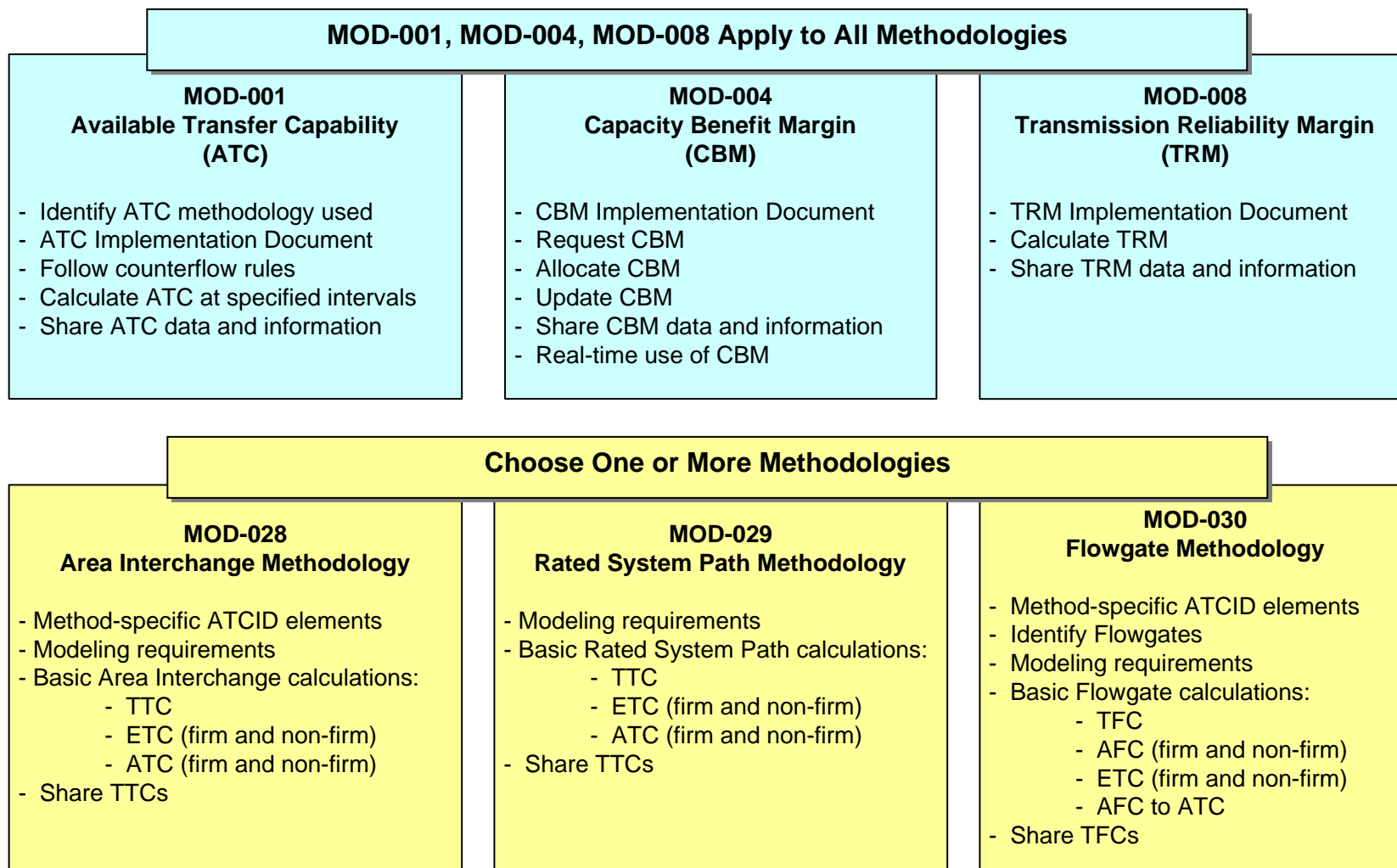
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

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Incorrect Measure or Compliance Element:

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: None.



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RELIABILITY CORPORATION

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<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	Robert Harshbarger
Organization:	Puget Sound Energy
Telephone:	425-462-3348
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
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- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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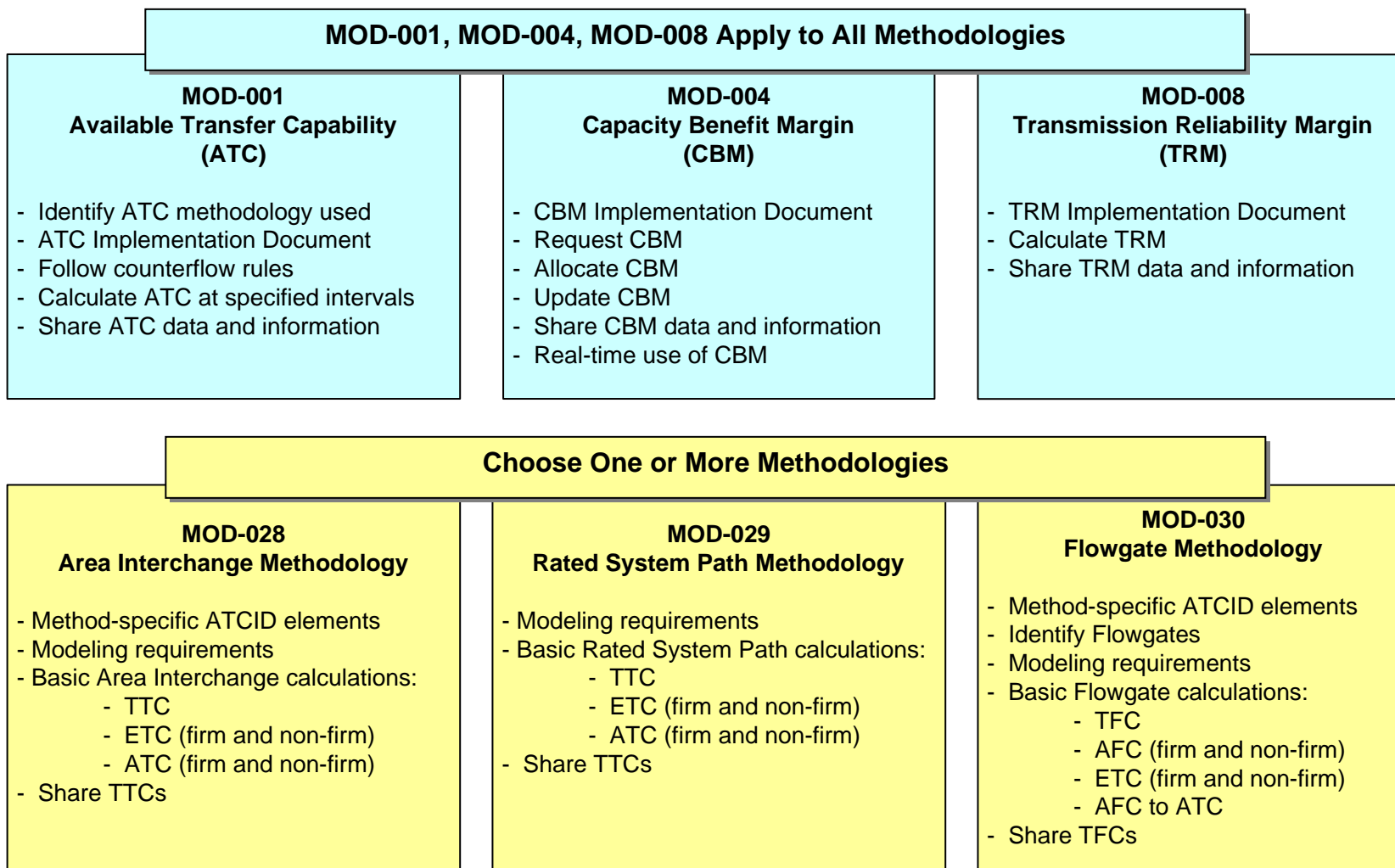


**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: The proposed effective date language is sufficient. As mentioned below, the drafting team should review the effect date language in all six MODs to ensure consistency.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: In MOD-001, Posted Path is included in defined terms. This is a duplication of "Posted path" in 18 CFR Part 37.6 (b)(1)(i). Suggest that throughout these MODs, replace the term Posted Path with "paths required to be posted" or "paths requiring posting" or "paths for which ATC is calculated".

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: See comments below.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: The use of the term "horizon" in the violation risk labels has caused some confusion because of its use in ATC horizons (different time periods for which ATC is calculated in a specific manner).

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Throughout, these standards assert that the calculation of ATC is a reliability matter. This is incorrect. ATC is a commercial product, a commodity that is offered by transmission service providers, sold to transmission customers, and sometimes traded amongst transmission customers. FERC requires jurisdictional transmission providers to calculate and post ATC. 18 CFR Part 37.6 contains the standards of ATC calculation and posting. It is not reasonable to be subject both to FERC enforcement of the CFRs and to NERC enforcement of these overlapping standards.

In the west, reliability is not impacted by the miscalculation, posting, or sale of ATC. Reliability is impacted when transactions are scheduled in a manner that causes flows to exceed a path's TTC. And, as such, improper TTCs impact reliability. Failure to evaluate proposed transactions and their impacts to the transmission system impacts reliability. It is reasonable that NERC reliability standards cover the calculation of TTC, and some aspects of CBM and TRM.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: MOD-001-1, A., 3. the stated Purpose contains noble goals which are not required for reliable system operation but for viable commercial activity. Reliable system operations are impacted by incorrect TTC values and uncoordinated transaction scheduling activities.

MOD-001-1, A., 4. applicability, the Transmission Service Provides calculate ATC. Transmission Operators (in the near term) and Transmission Planners (in the longer term) calculate TTC.

MOD-001-1, B., R1, Transmission Operators calculate transfer capability (TTC) of facilities within its TO area. Transmission Planners calculate transfer capability (TTC) of facilities within their TP areas. Transmission Service Providers calculate ATC for those paths that they are required to, choose to, or are asked to post.

MOD-001-1, B., R2 is a good requirement, but for commercial reasons, not reliability reasons. Transmission customers need to have access to more "granular" ATC closer to real-time. Also, why were weekly ATC values not included?

MOD-001-1, B., R3 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability. This requirement to create a separate implementation document creates an undue burden on the industry - transmission customers will have two different documents to review, and transmission service providers will have two different documents to maintain.

MOD-001-1, B., R3 the term "Facility" is used several times in MOD-001-1. The NERC glossary says facility is "A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)". In R3.3 the requirement to list the Transmission Operators and Planning Coordinators for every facility under the TSP's tariff is burdensome and does not have value. Hundreds of facilities make-up even small systems. R3.3 should say "for each path for which the Transmission Service Provider calculates ATC, list the corresponding Transmission Operator and Transmission Planner and Reliability Coordinator".

MOD-001-1, B., R3.6 "Allocation methodologies" – it is not clear to what this means? Perhaps the following: "For paths where multiple Transmission Service Providers share

capacity or have rights, describe how the capacity is allocated among providers", or words to that effect.

MOD-001-1, B., R4 is not needed, it is already covered in R3.2. If the drafting team wants to keep it, please move it MOD-028, MOD-029, and MOD-030. Since R4 leaves it open to each TSP's choice and requires them to document it, perhaps as a suggestion, the requirement could be to have the TSP do as they say they do in their Attachment C. The requirement might be rewritten to say "the TSP utilizes counter schedule information in their firm ATC calculations as specified in their Attachment C." Then, if the TSP fails to document or to do as they say they do, this could be a violation of the requirement.

MOD-001-1, B., R5 is not needed, it is already covered in R3.2. If the drafting team wants to keep it, please move it MOD-028, MOD-029, and MOD-030. Since R4 leaves it open to each TSP's choice and requires them to document it, perhaps as a suggestion, the requirement could be to have the TSP do as they say they do in their Attachment C. The requirement might be rewritten to say "the TSP utilizes counter schedule information in their firm ATC calculations as specified in their Attachment C." Then, if the TSP fails to document or to do as they say they do, this could be a violation of the requirement.

MOD-001-1, B., R6 is not necessary. Revisions to Attachment C are to be filed and posted.

MOD-001-1, B., R7 Attachment C is already required to be posted (available) for any entity to review, subject to CEII concerns.

MOD-001-1, B., R8 does not read clearly. Perhaps the phrase "categories of data" could be used. As R8 reads now, it can be interpreted as requiring any restudy of TTC to include previously used data rather than data that is reflective of the conditions of the time period being studied. Perhaps the requirement was for data used in the determination of TTC should be the most accurate, up-to-date data available and should reflect the expected conditions of the period of time under study.

MOD-001-1, B., R9 is not a reliability concern. In addition, it is unduly burdensome. Current and accurate ATCs are a commercial concern. In addition, performing 168 hourly calculations every hour when neither TTC nor ETC has changed, benefits no one and is costly. The commercial requirement should be to require the recalculation of hourly ATC once a day and whenever either TTC or ETC changes for any period of time between this hour and the next 168 hours. Also, require the recalculation of daily ATC once a day for the next 30 days and whenever either TTC or ETC changes for any period of time between this hour and the next 31 days.

MOD-001-1, B., R10, this requirement for data sharing between reliability entities is a good concept. However, as currently worded, all the burden to supply data is incorrectly placed totally upon the TSP and not on the Transmission Operator or Transmission

Planner. Much of the data listed is critical for proper TTC calculation which the TSP may not have access to. The TSP calculates ATC based on upon TTC supplied by the Transmission Operator and/or Transmission Planner. This requirement does not specify how the request is made or how the response or provision of data is dated. The corresponding measurement, M9, implies that all data items requested will be supplied within 14 days, but requirement states that the TSP will begin to make available at the 14 day mark. In addition, change first sentence words "...days of a request of any Transmission..." to "...days of a request made by any Transmission..." to read more in-line with the intent. Additionally, the requirement borders on a run-on sentence. Suggest moving the list of allowable requesters from R10 to be a sub-requirement R10.xx. The list of data is not all inclusive, there may other information needed. By each item, list what entity would have that data – TSPs would have ATC and ETC information, operators and planners would power flow data, etc.

MOD-004-1, A., Capacity Benefit Margin is a use of the transmission system that is requested by a load serving entity. This standard contains requirements for the interactions between the LSE and the transmission provider. These requirements are largely commercial in nature and should be under NAESB development. Reliability standards concerning CBM should only require LSEs to acquire a minimum CBM to ensure service to load.

MOD-004-1, A., 6. Effective Date language is not but should be exactly the same for all six MOD draft standards.

MOD-004-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's CBM methodology. This requirement to create a separate implementation document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and providers would have to maintain two different documents.

MOD-004-1, B., R2 is not necessary. Revisions to Attachment C are to be filed and posted (available) for any entity to review, subject to CEII concerns.

MOD-004-1, B., combine R3.3 language into R3.1.

MOD-004-1, B., R3.2 it seems more reasonable for the requirement to read "LSE shall review any active CBM requests at least every six months and submit updates as required."

MOD-004-1, B., R4 uses active verb "shall set...as follows:" but R4.1 says "Determine the amount of CBM...". To align the language a little better perhaps R4 should simply say "...the Transmission Service Provider shall:". In that way the TSP shall "determine" (R4.1), shall "set" (R4.2), shall "increase" (R4.3).

MOD-004-1, B., R4.3 contemplates the case where there is insufficient capacity to meet all the CBM requests on a particular path, but there is no discussion on allocation of limited capacity to the requests. Is NAESB working on this aspect? If not, is it a TSP's discretion to develop a CBM allocation methodology?

MOD-004-1, B., R8, R9, R10, M11, M12, M13 use of the terms "tag" or "Interchange Transaction Tag" which is inconsistent with NERC INT and NAESB CI BP standards where specific reference to "tag" or "e-Tag" has purposefully been avoided in those standards. The term Request For Interchange (RFI) refers to a collection of data as defined in the NAESB RFI Datasheet, to be submitted to the Interchange Authority for the purpose of implementing bilateral Interchange between a Source and Sink BA. Or the term Arranged Interchange refers to the state where the Interchange Authority has received the Interchange information (initial or revised) and has distributed that information for reliability assessment. I believe that in these requirements, Arranged Interchange is the more appropriate language.

MOD-004-1, B., R10 requires, without exception, that all submitted Arranged Interchange using CBM must be approved. This would force TSPs to potentially approve malformed transactions possibly citing incorrect contract arrangements, incorrect connectivity, etc. Perhaps the requirement could state the TSP shall approve all valid requests to schedule CBM. The drafting team might consider requiring the TSP or other approval entities to supply a meaningful reason for denying a CBM schedule.

MOD-008-1, B., R1 transmission service providers are already required by FERC to file and post Attachment C - Methodology To Assess Available Transfer Capability – which includes discussion of the provider's TRM methodology. This requirement to create a separate implementation document creates an undue burden on the industry. In addition, transmission customers will have two different documents to review and TSPs two different documents to maintain.

MOD-008-1, B., R1.1 suggest modifying to read: "For each path or flowgate that ATC or AFC is calculated, describe how each of the following components of uncertainty are used in calculating TRM for each of the ATC time horizons (if not applicable, indicate as such):" The words "ATC time horizons" could be used to eliminate the need for R1.4.

MOD-008-1, B., R.3 what "request" is being referred to? Should it read "...seven calendar days of a request from:"? Or should "of a request" be removed as a typo?

MOD-008-1, B., it seems that R1, 2, and 5 could be merged together into a new R1 TRM calculation and documentation. R3 and 4 could merged together into a new R2 on TRM data sharing.

MOD-029-1 inclusion of the Rated System Path methodology is greatly needed and appreciated. The drafting team was wise in including it and should be thanked for their efforts.



MOD-029-1 suggest reordering R4 to be R1.

MOD-029-1 R1 (modeling requirements) should include the statement that the data listed below should reflect the expected conditions for the applicable time period.

MOD-029-1 delete R2.7 as it, in its current form, does not provide the entire paradigm contained in the WECC's Procedures For Regional Planning Project Review And Rating Transmission Facilities.

MOD-029-1 in R6, is the "non-firm capacity reserved for NITS" the same as Secondary Network Service (i.e., NN-6)?

MOD-029-1 in R7 & R8, what are "Postbacks"? This term is not used in the west.

MOD-029-1 in R5, R6, R7, & R8, calculation of ETC and ATC are commercial concerns and should be addressed in business practice standards NAESB and enforced through FERC's adoption of those business practice standards into the CFR.

MOD-029-1 in R8 the requirement says we are to use the same formula for all horizons – this is incorrect. For the real-time, same-day time frame, we release all unscheduled capacity as non-firm ATC. As such, the formula would read:

$$\text{ATCNF} = \text{TTC} - \text{Scheduled ETCF} - \text{Scheduled ETCNF} - \text{CBMS} - \text{TRMU} + \text{Counter-schedulesF} + \text{Counter-schedulesNF}$$

MOD-030-1 it is unreasonable for TSPs to convert AFC values into ATC values simply because FERC regulations fail to contain the term AFC. For large systems using this methodology, posting thousands of ATC values benefits no one if AFC values can give transmission customers a better picture of available capability of the transmission system. It is recommended that TSPs using MOD-030-1 post AFCs and provide customers tools to either convert AFC information to specific POR-POD ATCs or tools which indicate the feasibility of a transaction from POR to POD.

Thank you for the opportunity to comment.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Rod Noteboom
Organization:	Public Utility District #2 of Grant County, Washington
Telephone:	509-766-2523
E-mail:	rnotebo@gcpud.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
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<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



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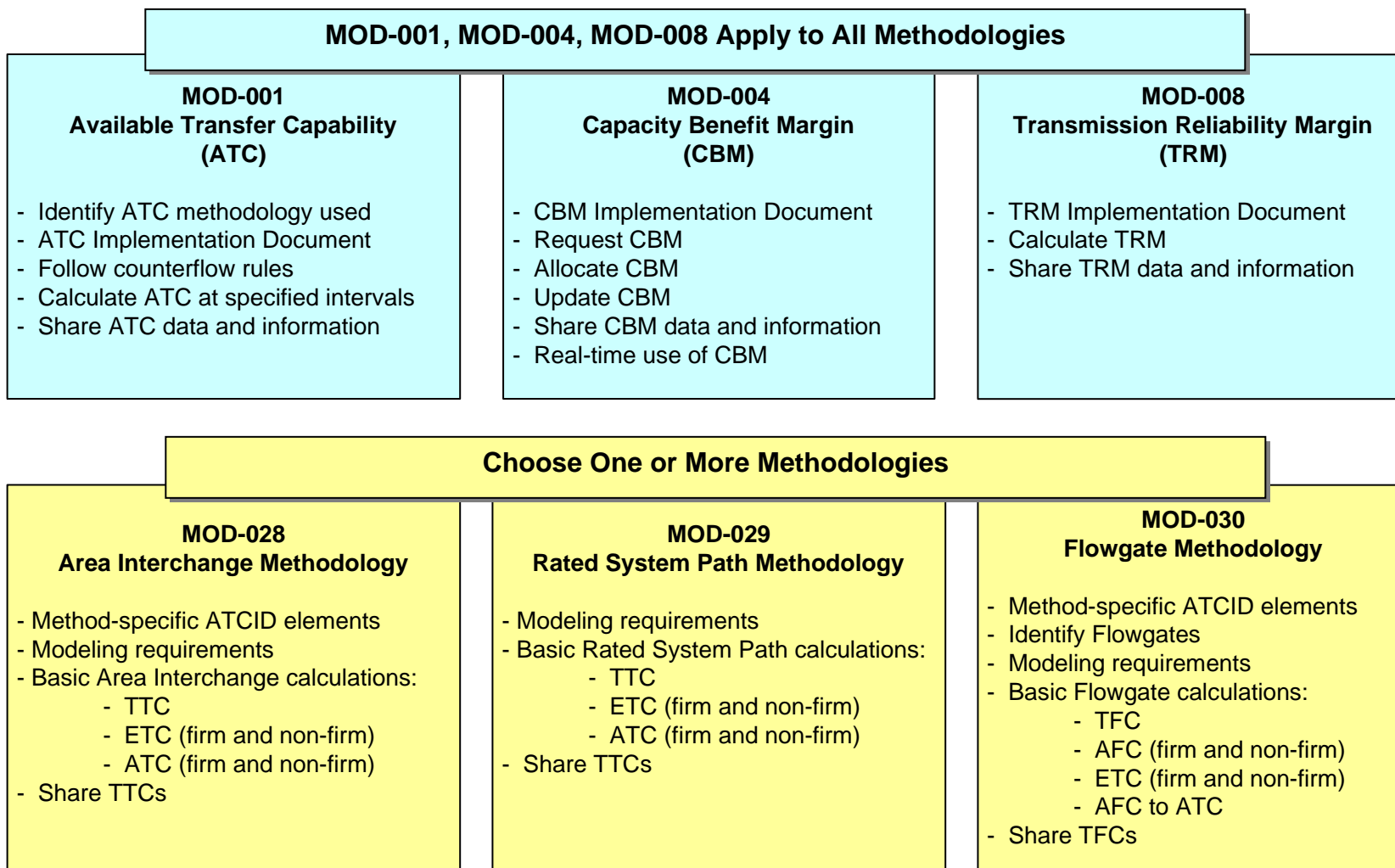
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- Converted descriptive language into algorithms for calculating ETC and ATC.
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
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### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

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Yes

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Comments:



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Ken Dizes
Organization:	Salmon River Electric Cooperative
Telephone:	208-879-2283 X 3010
E-mail:	ken@srec.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
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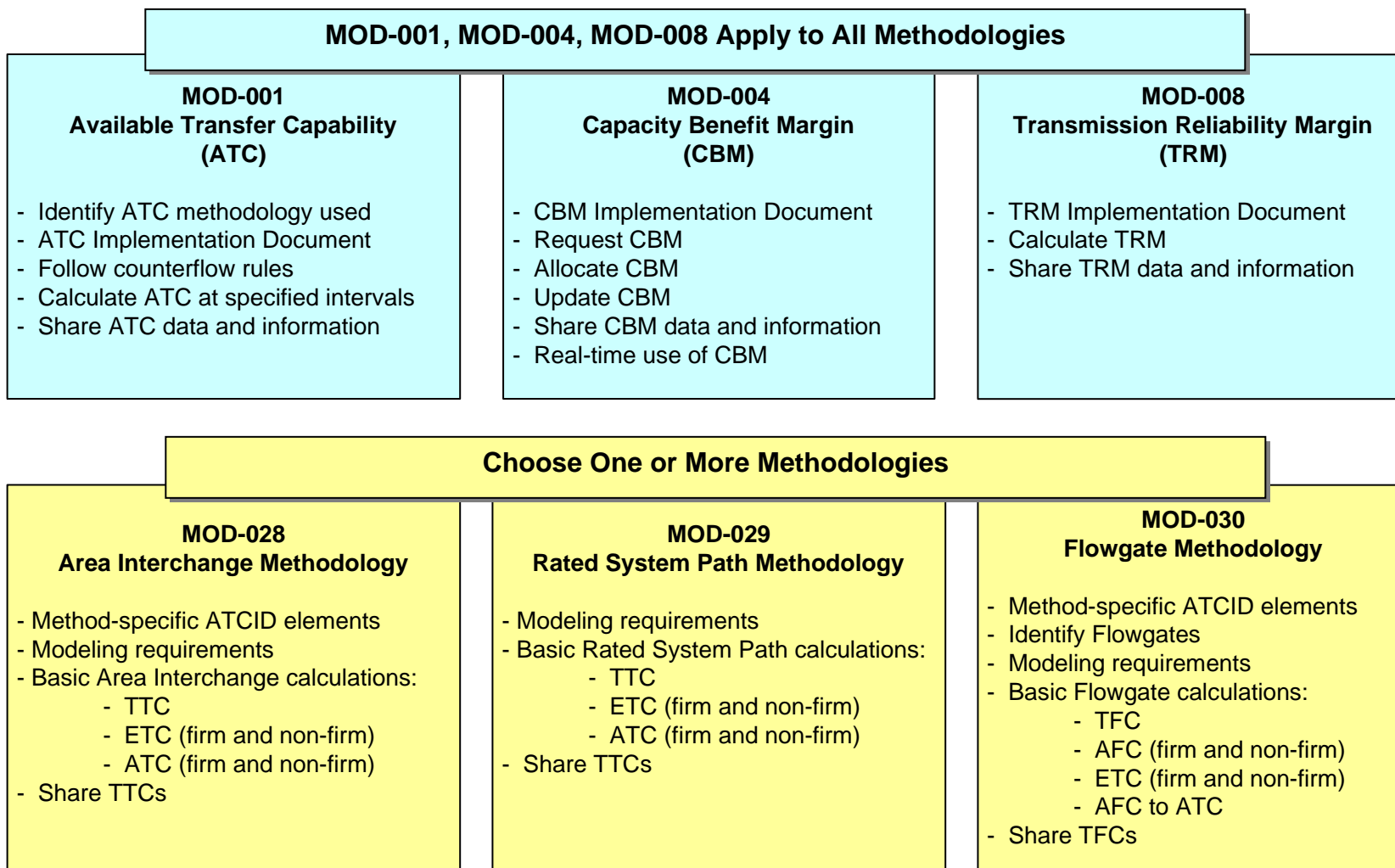
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Organization:	
Telephone:	
E-mail:	
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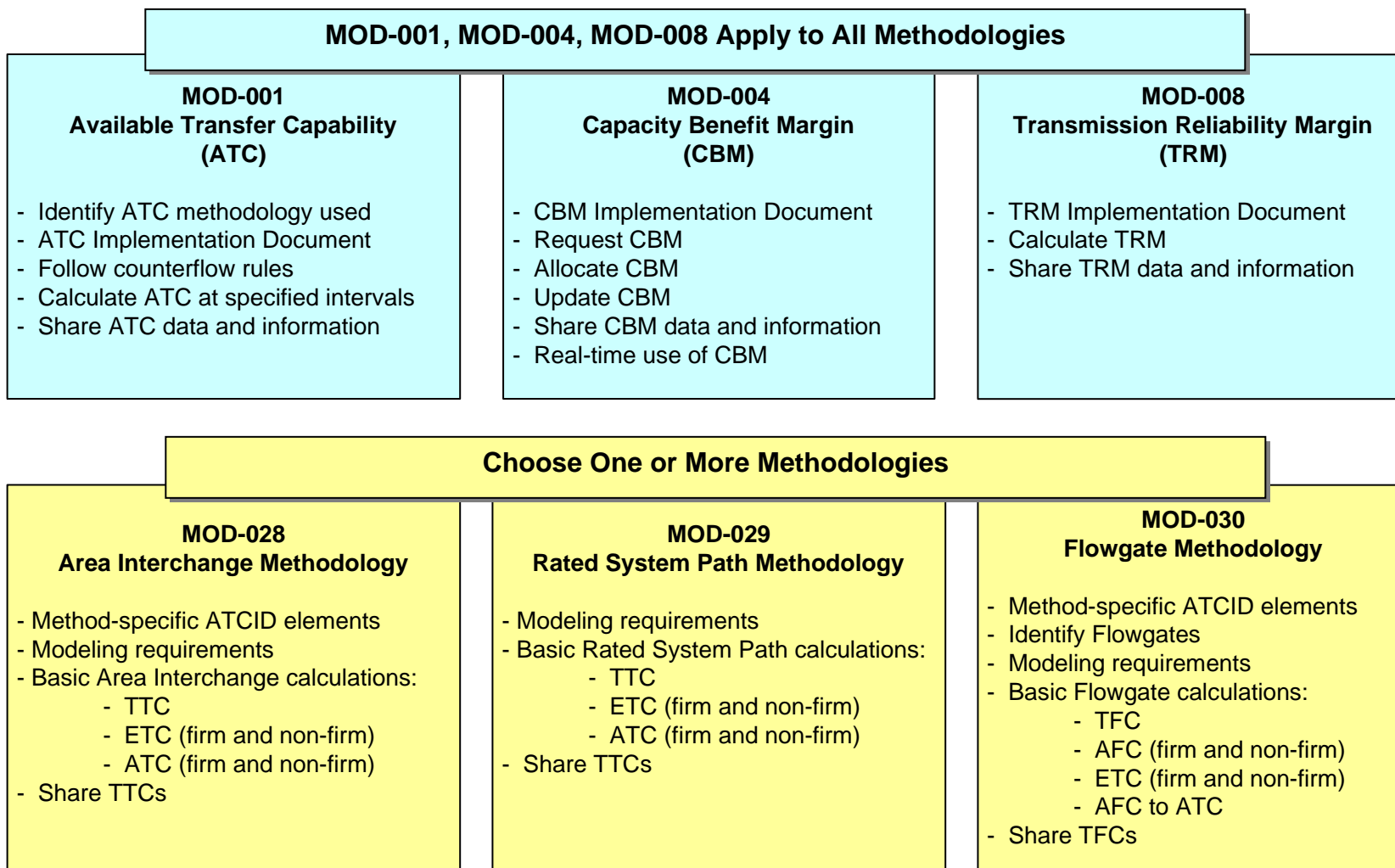
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No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: Recommend changing Posted Path 1) definition to read "Any Balancing Authority to Balancing Authority direct interconnection". Add the word direct.

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Incorrect Requirement: MOD028 R3.1 should read "For ..., and next-day on-peak TTCs". Remove intra-peak after next day.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

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Comments:

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Comments: MOD001 R3.3

Make sure that the data retention requirements are not more stringent than the FERC Requirements. Also, be consistent with the data retention requirements instead of having some that say most recent calendar year plus current year and some say three calendar years.

MOD004 Effective date should list the six standards consistent with all the other standard's effective date.



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MOD004 R6 need to be consistent with wording. It should either read "Within five business days" or "Within five calendar days".

MOD004 consider removing R8, R9, and R10 since these are related to Business Practices.

In MOD029 consider adding some detail requirements related to the ATCID similar to details outlined in MOD028.

Real-time Planning, Operations Planning, and Long-term Planning should be defined in the NERC Glossary.



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Group Comments (Complete this page if comments are from a group.)

**Group Name:** SERC ATCWG - MOD-001, MOD-004, MOD-008, MOD-028 and

**MOD-030 Comments**

**Lead Contact:** Doug Bailey

**Contact Organization:** Tennessee Valley Authority

**Contact Segment:** 1,3,5,9

**Contact Telephone:** 423-697-2906

**Contact E-mail:** dhbailey2@tva.gov

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Michael Toll	E.ON. U.S.	SERC	1,3,5
Helen Stines	APGI - Yadkin	SERC	1,5
Stan Shealy	South Carolina Electric & Gas	SERC	1,3,5
Ross Kovacs	Georgia Transmission Corp.	SERC	1,3,5
Phil Creech	Progress Energy - Carolinas	SERC	1,3,5
Eugene Warnecke	Ameren	SERC	1,3,5
Matt Burns	Big Rivers Electric Cooperative	SERC	1,3,5
Al McMeekin	South Carolina Electric & Gas	SERC	1,3,5
Don Reichenbach	Duke Energy - Carolinas	SERC	1,3,5
Kiet Nguyen	Associated Electric Cooperative, Inc	SERC	1,3,5
DuShaune Carter	Southern Company Transmission	SERC	1,3,5
Bryan Hill	Southern Company	SERC	1,3,5
Larry Rodriguez	Union Power Partners	SERC	4,5
Donald Williams	PJM	SERC	1,2,3,5
Larry Middleton	Midwest ISO	SERC	1,2,3,5
Jerry Tang	Municipal Electric Authority of GA	SERC	1,3,5
Joe Francois	Entergy	SERC	1,3,5
Laura Lee	Duke Energy Carolinas	SERC	1,3,5
Doug McLaughlin	Southern Co Transmission	SERC	1,3,5
John Troha	SERC Reliability Corporation	SERC	10

\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

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On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

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**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

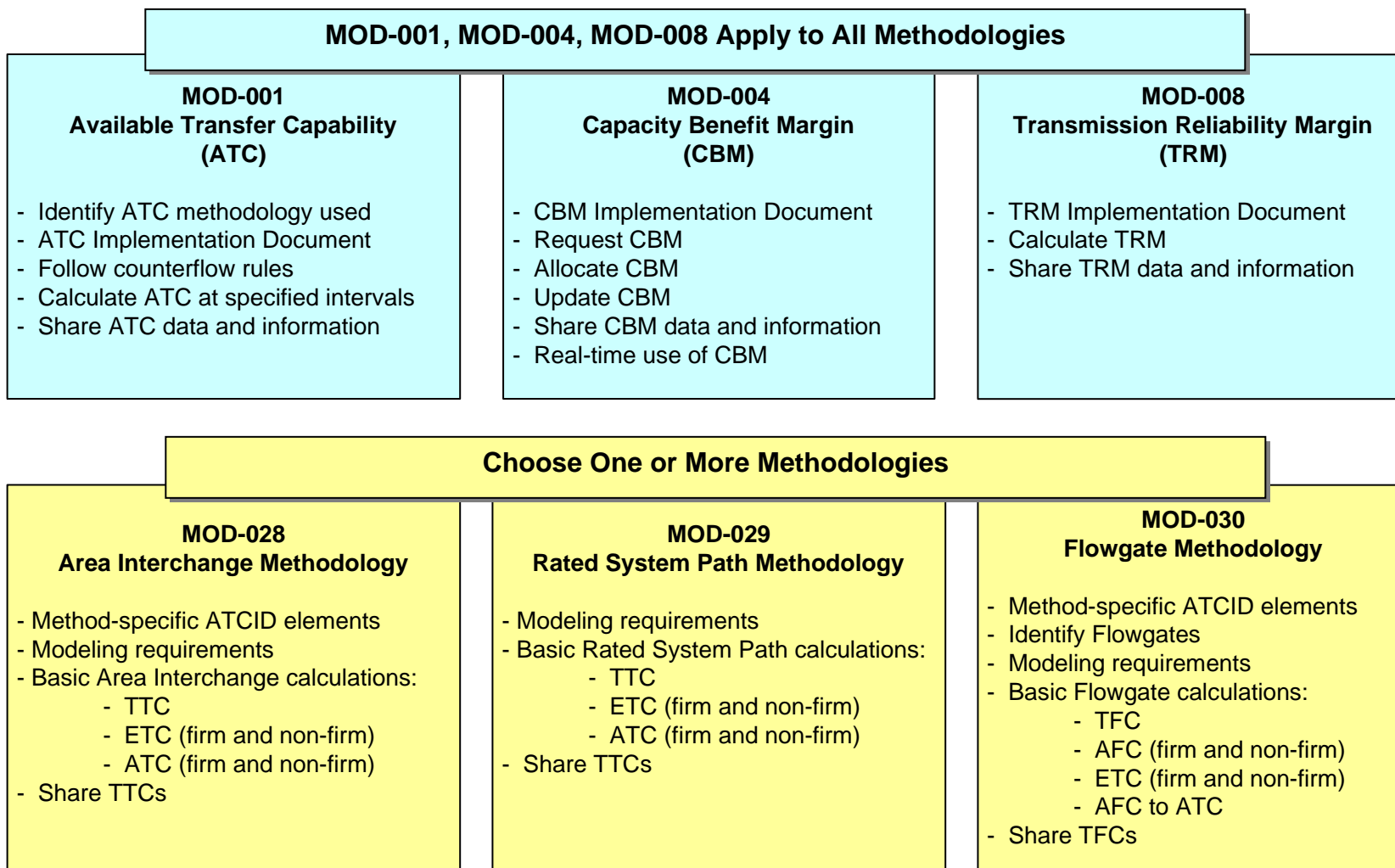
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: This time allotted is sufficient but, if shortened, would be a burden.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: MOD-0028, 029 and 030 refer to "postback". There is not a definition in the NERC Glossary for this term. Please consider the following as the definition: "Postbacks are increases to ATC values resulting from transmission service being redirected by customers to other paths or from transmission service not being scheduled by customers during that period, as defined in Business Practices."

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: MOD-028, Requirement R5 and MOD 030, Requirement R4, refer to the term "interface point" with the adjacent TSP. To meet this requirement, an entity must simulate an artificial source/sink at the interface point. It should utilize the adjacent TSP area as the source/sink.

TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL (which are defined in other standards, e.g., IRO-004-1 and IRO-005-1). Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1, and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL. The following Violation Risk Factors listed as Medium in the proposed MOD-028-1, MOD-029-1, and MOD-030-1 should be listed as Lower: MOD-028-1, R2; MOD-028-1, R3; MOD-028-1, R9; MOD-028-1, R11; MOD-029-1, R1; MOD-029-1, R2; MOD-029-1, R5; MOD-029-1, R7; MOD-030-1, R3; MOD-030-1, R5; MOD-030-1, R6; and MOD-030-1, R9. For clarity, the risk factor for each requirement is suggested below:

- In MOD-028-1, R2, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.



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- In MOD-028-1, R3, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-028-1, R9, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-028-1, R11, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-029-1, R1, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-029-1, R2, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-029-1, R5, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-029-1, R7, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-030-1, R2, the Violation Risk Factor is listed as Lower; it should be listed as Medium. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that

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should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

- In MOD-030-1, R3, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-030-1, R5, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-030-1, R6, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.
- In MOD-030-1, R9, the Violation Risk Factor is listed as Medium; it should be listed as Lower. TTC or TFC calculations and values can only be Medium or Higher Violation Risk Factors if the resulting TTC or TFC is greater than the SOL or the IROL. Therefore, the only requirements in the proposed MOD-028-1, MOD-029-1 and MOD-030-1 that should be Medium are MOD-028-1, R7, MOD-029-1, R4, and MOD-030-1, R2 which require that the TTC or the TFC be less than the SOL.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: Revise MOD-028-1, M5 to the following: The transmission operator shall describe in its ATCID the requirement to allocate TTC and show that any allocations of TTC were respected as required in R5.2.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

#### MOD-001 Available Transfer Capability

R3.1 - Is this requirement consistent with use of the terms "counter flow" and "counter reservation" in the rest of the Standard?

R3.6 - What is the definition of "Allocation" of flow gate capabilities or paths

R9: Is this consistent with communications protocols and NAESB Business Practices? In addition, it shouldn't be necessary to update a value that hasn't changed.

R10: Insert "its own data" in the first sentence, 3<sup>rd</sup> line as follows: ...Provider shall begin to make "its own data" available on the schedule specified... Fourteen (14) days appears to be unreasonably burdensome to supply the significant amount of data contemplated - thirty (30) days would be a more reasonable time period we would support. In addition, an entity should not be required to supply another entity's data that is used in their models.

R10.8 - This requirement needs clarification. Why isn't it covered by the rules of counterflow? If not, it should be explained why it isn't or removed from the standard. It seems to fall in and be a part of the TRM standard.

R10.13 - In an AFC environment, there should not be a requirement to post CBM and TRM on a Posted Path.

R10-13 and R10.14 - It appears that R10.13 and R10.14 should be combined under one Requirement as sections "a" and "b". R10.13 applies to Rated system Path and R10.14 applies to AFC. There should also be a measure that applies to the top level.

#### MOD-004 Capacity Benefit Margin

R2: The acronym "CBID" in the 2<sup>nd</sup> line of the first sentence should be "CBMID". Entities should have a more reasonable time frame of fourteen (14) calendar days to make CBMID and any changes available to applicable parties Requirement 4:

R4.1.2.2 - Entities should have the option to use a lower threshold than 3%, if desired.

R6 - Fourteen (14) calendar days for providing requested CBM information would be more reasonable.

R7.1 and R7.2 - Fourteen calendar days for providing CBM supporting data would be more reasonable.

R9: Add "within the bounds of reliable operation" to the end of the R9 requirement description.

#### MOD-008 TRM Calculation Methodology

R3, R4, R5 - Fourteen calendar days for providing TRM calculations and supporting data would be more reasonable.

#### MOD-028 Area Interchange Methodology

The existing wording for R3 (and R4) is very difficult to follow. Also, it appears that the drafting team intends that a peak and an off-peak TTC value will be calculated each day. Please consider using wording such as the following to add clarity:

R3 - When calculating TTC values (for intra-day and next day) for Posted Paths, the Transmission Operator shall include the following data for the Transmission Service Provider's Area. The Transmission Operator shall also include comparable data associated with external Facilities that are explicitly represented in the Transmission model, as provided by adjacent Transmission Service Providers, and by any other Transmission Service Providers with which coordination agreements have been executed. The Transmission Operator shall include (at a minimum):

R3.1. Expected generation and Transmission outages, additions, and retirements.

R3.2. Load forecasts for the on-peak periods and the off-peak periods being calculated. At a minimum, a peak value and an off-peak value shall be calculated for each day.

R3.3. Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, (within or out of economic dispatch) as they are expected to run.

R4 - Wording similar to R3 can be used in R4 (as shown below). Alternately, R4 could simply be combined into R3 by changing "(for intra-day and next day)" in the first sentence to "(for intra-day through Month 13.)"

R4. When calculating TTC values (for time periods beyond next day) for Posted Paths, the Transmission Operator shall include the following data for the Transmission Service Provider's Area. The Transmission Operator shall also include comparable data associated with external Facilities that are explicitly represented in the Transmission model, as provided by adjacent Transmission Service Providers, and by any other Transmission Service Providers with which coordination agreements have been executed. The Transmission Operator shall include (at a minimum):

R4.1. Expected generation and Transmission outages, additions, and retirements.

R4.2. Peak Load forecasts for the periods being calculated.

R4.3. Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, (within or out of economic dispatch) as they are expected to run.

R5.3 - What is the definition of an interface point? This would require artificially modeling a generator as a source or sink. It is suggested that the words "the interface point with" should be deleted from the language in bullet points 3,4,7 and 8 under R5.3.

R11 and R12 - What is a "postback" as defined by NAESB?

#### MOD-030 Flowgate Methodology

R2.1.1 - The current definition makes every facility a flowgate. Suggest changing the wording as follows, "Any facility within the Transmission Operator's area based on thermal, stability or voltage limits is eligible to become a flowgate." The requirements that follow (R2.1.2 and R2.1.3) would be sub-requirements of R2.1.1 that would be used to determine the subset of all transmission facilities described in R2.1.1 that become flowgates.

R2.1.2.1 - This requirement is only applicable if the planning studies and operating studies use the same methodologies. If the planning studies use a TTC methodology then all transmission facilities may be contingencies. In AFC studies only the select flowgate definitions that contain contingency elements would be included. Recommend removing this requirement.

R2.2 - Should be yearly instead of quarterly. Delete the word "definitions" from the sentence.

R3.1 - Recommend that R3.1 be deleted since TFC may be derived from another source such as a subsystem file. This is a common industry practice since it is easier to maintain flowgate attributes in external subsystem files than in the load flow models.

R3.4 and R3.5 - Change Reliability Coordinator's area to Transmission Operator's area.

R4.2 - What is the definition of an interface point? This would require artificially modeling a generator as a source or sink. It is suggested that the words "the interface point with" should be deleted from the language in bullet points 3,4,7 and 8 under R4.2.

R5.1 - Recommend rewording of R5.1 to address outage rules. Outage rules are used in to define the set of outages to include in monthly or daily calculations where multiple outage periods exist. An example would be that in monthly AFC calculations all outages for the month are not included. Only the set of outages that meet the outage rules (i.e. all EHV with a duration of greater than 7 days or all outages that occur on the 3rd Wed of the month,etc) The requirement should be reworded to say "all outages that meet the outage rules as specified in the ATCID".

R5.2 - Replace the existing wording with the following: "For external third party flowgates and PDF greater than 5%, Use the AFC for each specific flowgate provided by that third party as the AFC for that flowgate."

R6.3 and R6.4 - The threshold values for calculating impacts should be consistent with the threshold values contained in MOD-028.

R7.2 and R7.4 - The threshold values for calculating impacts should be consistent with the threshold values contained in MOD-028.

R8 - What is a "postback" as defined by NAESB?



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Jay Campbell
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Telephone:	775-834-3782
E-mail:	jcampbell@sppc.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



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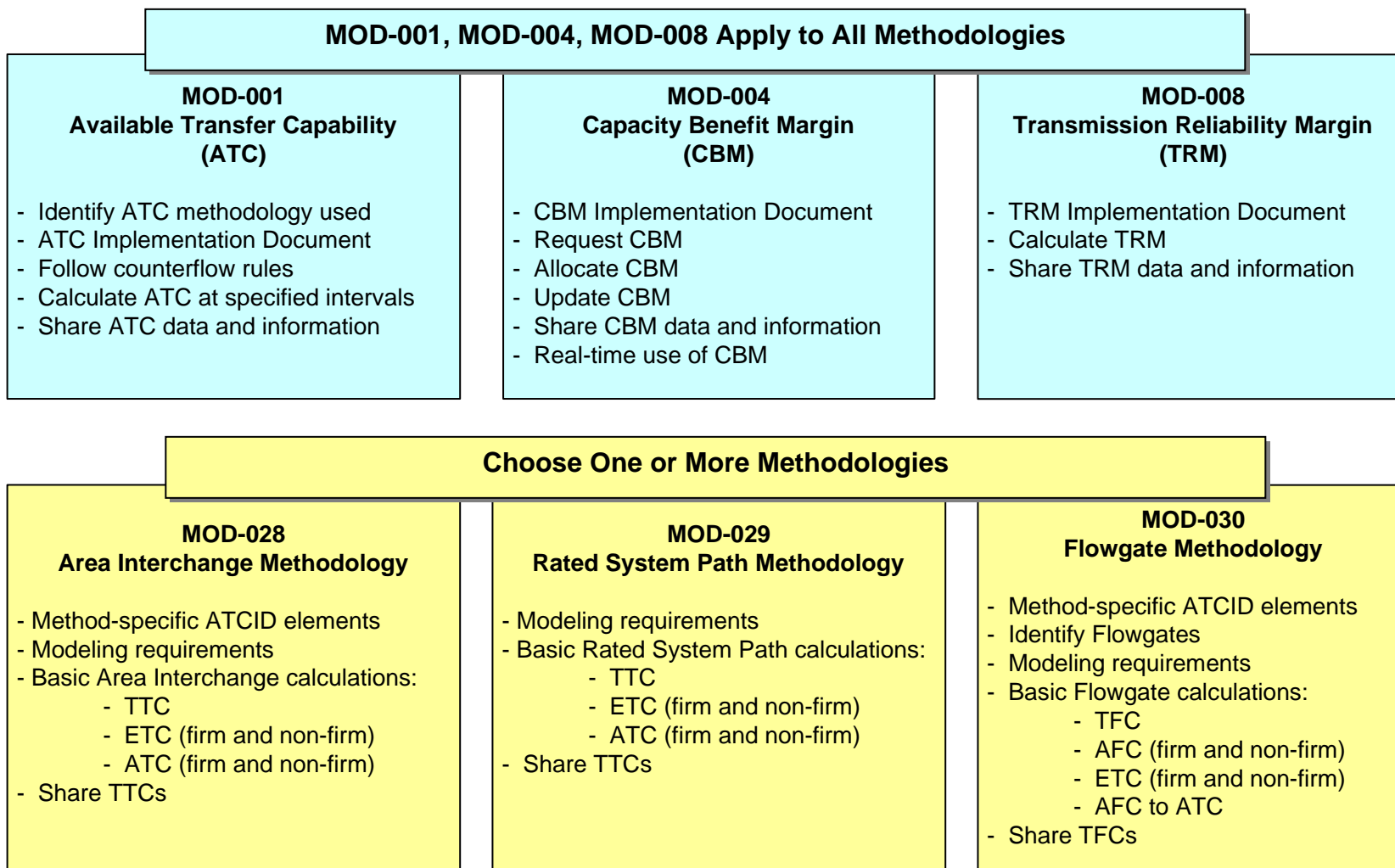


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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: NEVP and SPPC, the SPR companies, strongly support the inclusion of a 12 month implementation period for these standards. Particularly for MOD-29, the standard as drafted will require that numerous paths not previously exposed to the high rigors of the MOD-29 TTC determination process will have to be examined. Entities such as NEVP and SPPC electing the Rated System Path Methodology will require this period to assure proper review of the Posted Paths under their pervue. Should a shorter period be mandated, it is highly likely that entities electing the Rated System Path Methodology will be in non-compliance as of any implementation date short of the full 12 months recommended.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: MOD-001 "Posted Path" is included in defined terms. Because this is a duplication of "Posted Path" in 18 CFR Part 37.6 (b)(1)(i) it is suggested "paths where ATC is calculated" or similar definition be used. "Counterflows" appears to be used interchangeably to mean actual flows of energy, scheduling of energy or reservations of transmission for possible scheduling of energy. The SPR Companies suggest the NERC ATC Drafting Team clarify the meaning of the term as well as how it integrates into each proposed standard. Specifically, the NERC Team should clarify such items as: 1) is it a flow, a schedule or a reservation, 2) does it change characteristics based on the time frame examined (E.g. is it a reservation before it becomes a schedule?), 3) is it uni-directional or bi-directional. The term is used in numerous calculations but as presented is too vague to calculate in the formula.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: (All standards should be checked for consistency in the use of the terms "calendar days" and "days." In addition, these terms may differ between the Requirements and the corresponding VSLs. E.g. MOD-4, R4 specifies "calendar days" whereas the VSL for this requirement stipulates "days."

MOD-001 -

R1. and R2

States "...for each Posted Path per time period..." and "...values for the time periods listed..." respectively. The terms "time period" should be changed to "time horizon."

This locks the time window to a prescribed window and negates the ability to assign a random "time period."

The use of the term "horizon" as used with the Violation Risk Factors is confusing because of the way "horizon" is used to calculate ATC. Always qualifying the horizon with ATC Horizon or VRF Time Horizon would help clarify the way this term is used.

R3.3.

This requirement needs to be broken into to different requirements and a change to the term Facility needs to be made as follows:

- (New) R3.3 "The identity of the Planning Coordinator responsible for assessing the long term reliability of each path where ATC is calculated under the Transmission Provider's tariff."
- (New) R3.X "The identity of the Transmission Operator responsible for the real time operating reliability of each path where ATC is calculated under the Transmission Provider's tariff."

R3.6.

- The format of this sub-requirement does not match that of the other five sub-requirements ahead of it making the meaning unclear. Suggest the following:
- "R3.6. A description of the methodology(ies) used to allocate ATC among multiple lines or sub-paths within a larger Posted Path, including where applicable, any methodology(ies) used to allocate ATC among multiple owners of a single path."
- R4 and R5. "Counterflows" Requirements

R4 and R5 should be cut and counterflows should be addressed as subcomponents in MOD-028, R11 AND R12; MOD-029, R7 and R8; MOD-030, R8 and R9. Counterflows should be pasted into the MOD-028, MOD-029 and MOD-030 as the last element of requirements.

R6 E-Mail requirement when ATCID, TRMID, or CBMID are made

Recommend this be sent to NAESB to develop a place on OASIS for posting when changes are made.

R9 - "Update ATC"

Recommend R9 be removed and let NAESB handle ATC updates/postings in the NAESB standards. If not removed, ATC should only need to be reviewed and updated if necessary. Change wording to "shall review and update if necessary..."

R10. Making Requested Data Available

Needs to be reworded and clearly state only data that already exists can be requested or must be provided and should have points broken down into sub requirements. Suggested rewording:

- • "R10. Upon request from another Transmission Service Provider, Planning Coordinator or Reliability Coordinator, each Transmission Service Provider shall only provide requested data from the specified list below, and only that data already in existence and in the possession of the Transmission Service Provider. Provision of all data is subject to confidentiality and security requirements. Each Transmission Service Provider providing information pursuant R10 shall do so:
  - • RXX.1 Within fourteen days of a request
  - • RXX.2 On the interval specified by the requesting entity, not to exceed more frequently than once per hour unless mutually agreed upon by the requestor and provider.
  - • RXX.3 In the format in which the data exists at the time of the request, unless otherwise agreed upon by the requestor and provider.
  - Rxx.4 For the requested time period up to 13 months in the future."

R10.4. List of Data Elements that can be requested for NITS is too vague. Recommend changing to:

(New) R10.4 "Network Integration Transmission Service capacity on an aggregated basis."

R10.13.

- There is a stray right parenthesis after the word "Margin."

MOD-004 -

R1.3. Scheduling Over CBM

states that the Transmission Provider shall have a procedure that would allow a Load-Serving Entity (LSE) to request and schedule energy over (could be taken as in excess of the amount) that it has set-a-side for CBM. This requirement would be inconsistent and contradictory with the requirements that R3 has placed on the LSE with regards to the information that an LSE must provide prior to CBM being evaluated and set-a-side by the Transmission Provider if interpreted as such. Therefore a LSE should never be allowed to schedule energy over the amount of Transfer Capability set aside as CBM and suggest "over" to be changed to "on".

- • R2 CBMID Availability
  - The acronym "CBID" should be changed to "CBMID."

Requires a seven day turnaround time on providing the CBMID or other related information to requesting parties. We suggest a 14 day time period in which to allow the Transmission Provider to supply such information to requesting parties.

R3 LSE Requirements for Requesting CBM

Describes the requirements placed on the LSE that is requesting CBM. In being consistent with the rest of the MOD there needs to be specific timelines that the LSE must adhere to if their application is deemed insufficient and requires the LSE to submit additional information to the Transmission Provider. We suggest a 14 day requirement, or clarification that if an LSE's application is deemed insufficient it shall be immediately rejected and the LSE shall be removed from the que.

- R4.3.
- States that if during an evaluation of monthly ATC, additional firm capacity becomes available, the capacity shall be granted to CBM customers first. This requirement would appear to give CBM a preferential que position over Conditional Firm, which appears to be a stark contrast to the requirements set forth in FERC Order 890 with regards to Conditional Firm que position and the availability of new monthly firm ATC.
- R6 and Measure M9
- Both give the Transmission Provider only five days to provide information to requesting parties, we recommend both sections be changed to ten business days or 14 calendar days.

R7.1. and R7.2.

Refer to seven calendar days, we suggest that both requirements be changed to fourteen calendar days.

MOD-029 -

R1.6.

- Suggest this bullet be deleted. This is already addressed in R2 wherein the modeling process is dictated. Please note in the Rated System Path methodology, "peak load forecasts" are not used to stress the system; rather, load and generation are simulated to stress the system to its greatest capacity. There are cases when the highest forecasted load may not stress the system to its greatest utilization – which is the goal of the R2 under the Rated System Path.

R2

The performance criteria defined in R2 might, at some point be at odds with the proposed TPL standard. While the drafting team may not want to have references to another standard, the risk in not doing so would be that either standard would get modified an possibly create a contradiction that could be impossible to meet. Hence, MOD-029-1 should reference TPL for purposes of performance criteria.

R2.1.3.

Seems to contradict R2.1.2 regarding the facility ratings clause. All of R2.1 concerns n-0, 1 & 2 outages. R2.1.1 specifically refers to n-0 outages and R2.1.2 with n-1 & 2

outages. Further, R.2.1.2 requires "no Transmission Element modeled above its emergency rating" following an outage; R.2.1.1 requires no "Transmission Element above 100% of its continuous rating" for n-0. Then along comes R2.1.3 which basically says no element above its rating ever! I suggest striking R2.1.3. It's contradictory and excessive.

- • R2.3
- • Suggest correcting "...as determined by R1.2.1..." to read "...as determined by R2.1."
- R2.1.5.
- stating that a three-phase fault should be modeled on "all" busses could imply simultaneous faults at every point around a path. The intent is one fault at a time, on all surrounding busses. Replacing "all" with "each" would make the intent clear.
- • R5.
- • The language describing Native Load should be changed from "reserved" to "allocated." Allocated is the word most frequently used in conjunction with OASIS to describe this condition. The same change should apply to GF sub F.
  - The language describing Grandfathered capacity includes the defined terms "Firm" and "Transmission Service." Use of these words as defined terms is inconsistent throughout the proposed standards. They should either be changed here to a lower case or all applicable areas in each proposed standard should be changed to the defined term.

MOD-030 -

- An entity using both MOD-030 for some paths and MOD-029 for other paths that are adjacent to entities using MOD-029 need not study Flowgates beyond the intersecting cut plane of its interface as the ATC at the interface does not fall under MOD-30 but MOD-29. To prevent seams issues and unnecessary analysis the Team suggests the following rewrite(s):
  - • MOD-30, R2.1.2. All first Contingency transfer analyses from all adjacent Balancing Authority source/sink combinations either: a) to at least the first three limiting Elements / Contingency combinations within the Transmission Operator's system or b) to the interface of the adjacent Balancing Authority where the Transmission Operator utilizes the Rated System Path methodolgy whichever is applicable.
  - •
  - • If adopted, this same concept would be applied to: MOD-30, R3.5, R3.6, R5.1, R7.2 and R7.4.
- 4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.



Incorrect Measure or Compliance Element: The SPR companies are in support of lowering the Violation Risk Factors and Violation Severity Levels as specifically commented on by SERC. At best all Violation Risk Factors should be LOW, as none of these requirements pose risk to the reliability of the interconnected Bulk Electric System, and are only commercial in nature. (Please refer to the response to Q5 below regarding the lack of applicability of these Standards to the reliability of the BES.)

Specific:

MOD-01

M9

There is an unnecessary word "the" following the word "show" in the second line of the measure.

VSL for R4.

The word "Firm" should be inserted before the word ATC as R4 only refers to Firm ATC.

VSL for R5.

The word "Non-Firm" should be inserted before the word ATC as R5 only refers to Non-Firm ATC.

MOD-04

M1

Suggested rewording: "Each Transmission Service Provider shall produce its CBMID evidencing inclusion of all specified information in R1."

This approach should also be taken at M1 for MOD-08.

M5

M5, line 3 states "...they it has based its CBM..." Please change to "...that it has based its CBM..."

VSL for R2

The acronym "CBID" should be changed to "CBMID."

VSL for R10

The VSL is unclear. We suggest that it be rewritten to state, "The Transmission Service Provider failed to approve an Interchange Transaction Tag for CBM submitted by an Energy Deficient Entity under an EEA2 when CBM was available."

D1.3 Data Retention

For clarity and consistency, the phrase "three calendar years" in the second through fifth bullets should be changed to "most recent three calendar years plus the current year."

MOD-08

M5

M5 is missing the right parenthesis after the word "data" on the first line.

VSL for R1

In the Moderate Level column, change the phrase "changes been" to "changes that have been".

MOD-29

M1.

M1 inaccurately calls for production of “models” used to derive TTC. As there are multiple conditions under MOD-29, R2 where a model does not dictate the predicate for TTC, M1 should be reworded to state “...shall produce the models, contracts, nomograms, reports or study results...”

Corresponding to:

- 1) Models in R2.1, R2.2. and R2.5;
- 2) Contracts in R.2.3 and R2.6;
- 3) Nomograms in R2.4;
- 4) Reports or studies in R2.7 and R2.8.

M1.3

The Team suggests correcting M1.3 from “...as stated in R1.1 through R.12...” to “...as stated in R1.1 through R1.12...”

M4.

If “M1” above is adopted, M4 is duplicative of M1 and should be deleted.

VSL for R4.

An SOL does not exist for every Posted Path. This VSL should be amended by changing the words “the SOL” in the High and Severe columns to read “any SOL”. This makes the wording of the Requirement consistent with the wording of the Measure.

VSL R5, R6, R7, R8

These VRFs call for only a “severe” determination. They also mandate that the TSP “use” all the elements defined. However, the TSP will not “use” all the defined elements if they are not applicable. Thus, if a TSP does not “use” all elements defined because all the elements were not applicable – the TSP is in violation for not including null elements in its calculation.

The SPR companies suggest these be rewritten to state: “The Transmission Service Provider did not use all affected elements as defined in...” This approach should help clarify that “zero” as an integer is an acceptable entry and that only those variables “affected” need be reported or acted upon.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If “Yes,” please explain why and provide supporting information.

Comments: Throughout, these standards assert that the calculation of ATC is a reliability matter. This is incorrect. ATC is a commercial product, a commodity that is offered by transmission service providers, sold to transmission customers, and sometimes traded amongst transmission customers. FERC requires jurisdictional transmission providers to calculate and post ATC. 18 CFR Part 37.6 contains the standards of ATC calculation and posting. It is not reasonable to be subject both to FERC enforcement of the CFRs and to NERC enforcement of these overlapping standards.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

In MOD-001, not one Requirement should have a VRF other than Lower. Certainly for the Rated System Path Methodology, not calculating ATC means not posting ATC, means not selling Transmission, means not allowing any flow. No flow is less reliable (i.e., greater risk?) than some flow? No. While it is certainly important to have transparency in the ATC methodology, including ATC/TTC calculations, a VRF of Medium is excessive. Having an incorrect ATC value 13 months in the future is in no way materially affecting reliability.

#### GENERAL

- 1) The SPR companies support retention of the three methods recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028).
- 2) The SPR companies strongly support the retention of the proposed one-year implementation period.
- 3) The SPR companies support allowing NAESB to address all "posting" issues as they directly affect OASIS and any reference to postings should be removed.

#### MOD-001 Umbrella

- 1) The SPR companies support allowing the use of more than one methodology for calculation of ATC by any one entity. For example, the SPR companies support allowing any entity to use the Flowgate methodology inside their affected area while also using the Rated System Path methodology at its boundaries.
- 2) The SPR companies support allowing each entity to specify in its ATCID how it will treat counterflows / schedules. (R4., R5.) within the methodology each entity chooses. This will allow the entity to use counter schedules instead of counterflows where applicable.
- 3) The SPR companies support the aggregation of transmission capacity for grandfathered contracts when shared with neighboring requestors.
- 4) The SPR companies support the specifically limited universe of entities to which data sharing is required as prescribed in R10.
- 5) The SPR companies support those comments submitted by SERC specifying suggested changes to the VRFs. However, this Team makes no comment on the VRFs as they affect MOD-28.

#### MOD-029 RATED SYSTEM PATH TTC, ETC & ATC

- 1) The SPR companies support retention of the requirement(s) in R2.2 that accommodate paths which are "flow limited" by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing practices without re-inventing the wheel where no such effort is required to meet FERC's goals of transparency and consistency.
- 2) The SPR companies support retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.
- 3) The SPR companies support retention of the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.
- 4) The SPR companies support retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts, associated litigation and potential renegotiation of associated operational agreements while supporting FERC's mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.
- 5) The SPR companies support the adoption of a definition for counterflow to clarify its application in each equation."

#### MOD-004 CBM

- 1) The SPR companies support the concept of allowing the LSE to decide how much CBM it needs to satisfy its resource adequacy requirements and the TSP determining how the total CBM requirement for all requesting LSE's is allocated among paths. This is the proper division of labor.
- 2) The SPR companies support allowing the LSE scheduling rights to the CBM after declaration of an EEA2 or higher condition.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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Organization:	Snohomish PUD
Telephone:	425 783 1990
E-mail:	lafinley@snopud.com
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input checked="" type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

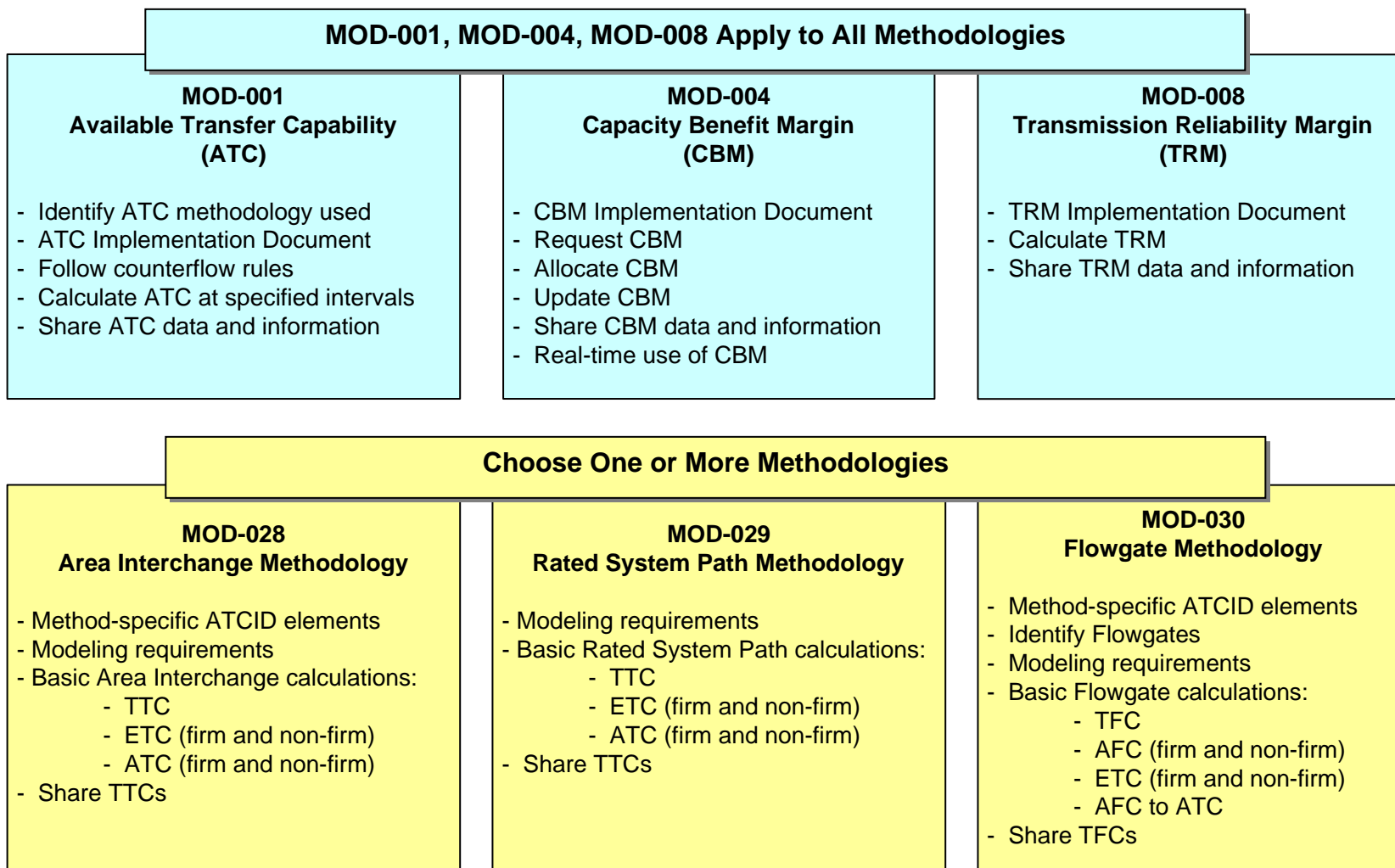
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments: This allotted time is sufficient and if shortened, would be a burden, especially for those entities electing to use the Rated System Path methodology that will require a much more rigorous TTC determination process than has historically been used.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

MOD -001

R3.2 – "counter-schedules" should be deleted and "counterflows" should be capitalized with the definition supplied above [Counterflow: the impact of schedules, reservations, or actual energy flows in the direction opposite to the constraint

R3.3 – We agree with BPA about removal of this requirement, as it would require extensive modification to existing databases without serving a great need.

In addition we support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Throughout, these standards assert that the calculation of ATC is a reliability matter. This is incorrect. ATC is a commercial product, a commodity that is offered by transmission service providers, sold to transmission customers, and sometimes traded amongst transmission customers. FERC requires jurisdictional transmission providers to calculate and post ATC. 18 CFR Part 37.6 contains the standards of ATC calculation and posting. It is not reasonable to be subject both to FERC enforcement of the CFRs and to NERC enforcement of these overlapping standards.

In the West, reliability is not impacted by the miscalculation, posting, or sale of ATC. It is when transactions are scheduled that reliability is potentially impacted. Improper TTCs impact reliability. Failure to evaluate proposed transactions and their impacts to the transmission system impact reliability. It is reasonable that NERC reliability standards cover the calculation of TTC, and some aspects of CBM and TRM.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1) We support the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2) MOD-030-1

R10 states that the TSP shall convert Flowgate AFCs to ATC for Posted Paths. Snohomish, as a major BPA customer, has a concern that if AFCs must be converted to ATCs for any possible constrained POR/POD combination then conducting with our transmission provider will become very difficult. This would not have the effect that the Commission wanted as far as transparency. The explosion of data from ten flow gates to thousands of POR/POD's on the OASIS site will make it difficult to do business. BPA already provides its' customers with an easy to use tools to calculated the impact a request has on a flow gate.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
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	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** Southern Company Transmission  
**Lead Contact:** Jim Busbin  
**Contact Organization:** Southern Company Services, Inc.  
**Contact Segment:** 1  
**Contact Telephone:** 205-257-6357  
**Contact E-mail:** jybusbin@southernco.com

Additional Member Name	Additional Member Organization	Region*	Segment*
DuShaune Carter	Southern Company Transmission	SERC	1
Doug McLaughlin	Southern Company Transmission	SERC	1
Marc Butts	Southern Company Transmission	SERC	1
J T Wood	Southern Company Transmission	SERC	1
Roman Carter	Southern Company Transmission	SERC	1
Jim Viikinsalo	Southern Company Transmission	SERC	1
Ron Carlsen	Southern Company Transmission	SERC	1

\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

## **Background Information**

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On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

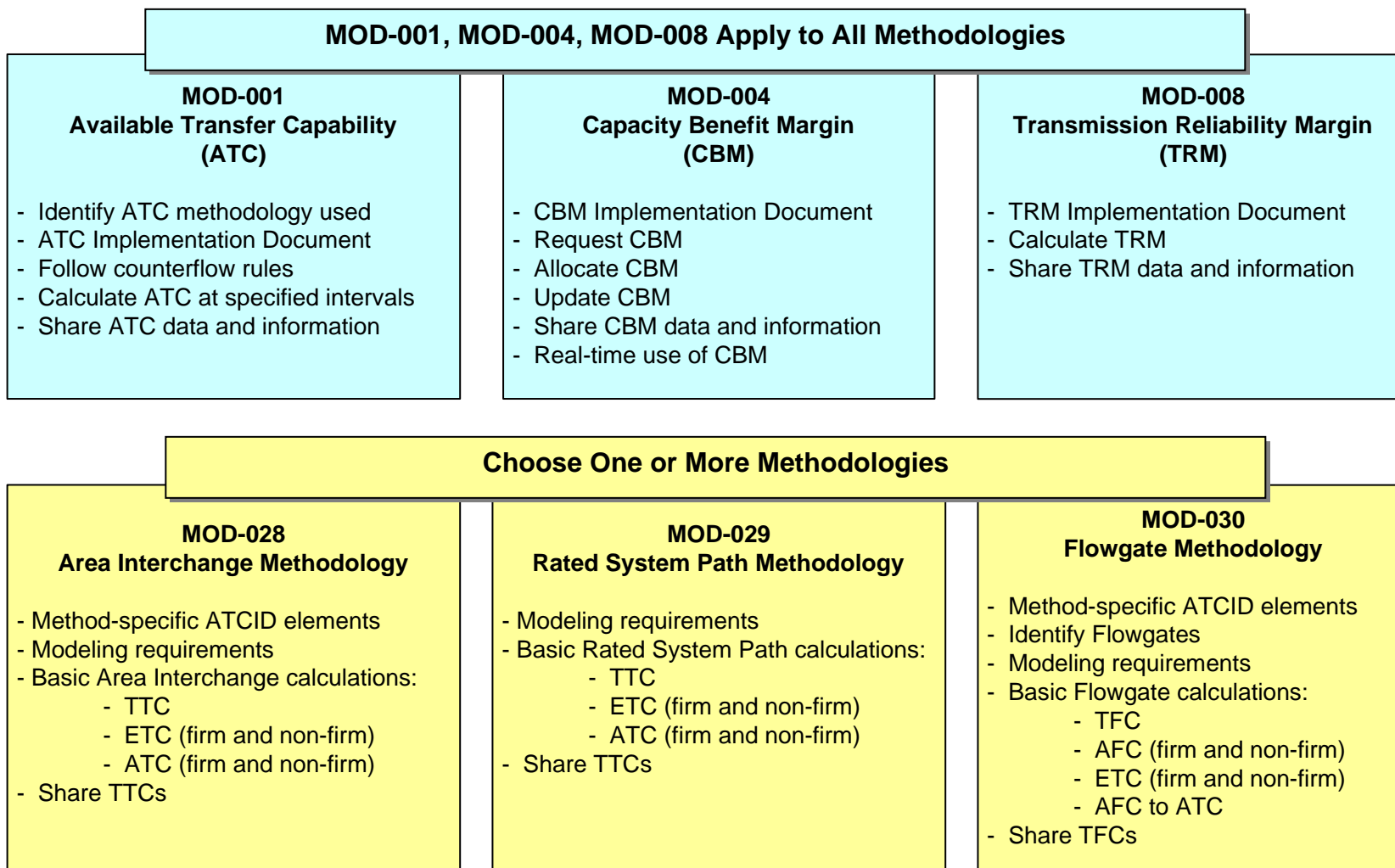
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
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- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

MOD-028-1.

Suggest adding the following language to the end of the "Area Interchange Methodology" definition: "Under the Area Interchange Methodology, TTC results are generally reported on an area to area basis, as opposed to being based upon a specific Transmission Path." Please see 1995 TTC Reference Document Reporting of transfer Capability on pages A-6.

MOD-029-1.

Suggest adding the following language to the end of the "Rated System Path Methodology" definition: "Under the Rated System Path Methodology, TTC results are reported with a focus toward specific transmission path capabilities." Please see 1995 TTC Reference Document Reporting of transfer Capability on pages A-7.

MOD-030.

TFC is generally based upon ratings, not SOL. Suggest the following language.

Total Flowgate Capability (TFC): The maximum flow capability on a Flowgate, not to exceed its thermal rating, or in the case of a proxy flowgate used to represent a specific operating constraint (such as a stability limit), not to exceed the associated System Operating Limit.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect,

please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: MOD-028 M5 is inappropriate. There is no reliability need to provide copies of contracts which may in themselves be difficult to interpret. R1.3 should be changed to read as follows. "Any provisions for calculating allocations of TTC." M5 should be changed to read as follows. "The Transmission Service Providers's ATCID includes provisions for the allocation of TTC."

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

MOD-001 Comments:

R10. The language "any Transmission Service Provider, Planning Coordinator, Reliability Coordinator, or Transmission Operator, each Transmission Service Provider shall begin to make available on the schedule specified by the requester (but no more frequently than once per hour" is too broad. "Any" provider, operator, etc. does not have reliability need for this information on an hourly basis. Much of the information does not change on an hourly basis. Please consider rewording as follows.

Proposed wording: any Transmission Service Provider, Planning Coordinator, Reliability Coordinator, or Transmission Operator having a reliability need, each Transmission Service Provider shall begin to make available on a schedule mutually agreed to by the requester and the provider.

MOD-028 Comments:

R3. The existing wording for R3 (and R4) is very difficult to follow. Also, it appears that the drafting team intends that a peak and an off-peak TTC value will be calculated each day. Please consider using wording such as the following to add clarity.

Proposed wording: R3. When calculating TTC values (for intra-day and next day) for Posted Paths, the Transmission Operator shall include the following data for the Transmission Service Provider's Area. The Transmission Operator shall also include comparable data associated with external Facilities that are explicitly represented in the Transmission model, as provided by adjacent Transmission Service Providers, and by any other Transmission Service Providers with which coordination agreements have been executed. The Transmission Operator shall include (at a minimum):

R3.1. Expected generation and Transmission outages, additions, and retirements.

R3.2. Load forecasts for the on-peak periods and the off-peak periods being calculated. At a minimum, a peak value and an off-peak value shall be calculated for each day.

R3.3. Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, (within or out of economic dispatch) as they are expected to run.

R4. Wording similar to R3 can be used in R4 (as shown below). Alternately, R4 could simply be combined into R3 by changing "(for intra-day and next day)" in the first sentence to "(for intra-day through Month 13.)"

Proposed wording: R4. When calculating TTC values (for time periods beyond next day) for Posted Paths, the Transmission Operator shall include the following data for the Transmission Service Provider's Area. The Transmission Operator shall also include comparable data associated with external Facilities that are explicitly represented in the Transmission model, as provided by adjacent Transmission Service Providers, and by any other Transmission Service Providers with which coordination agreements have been executed. The Transmission Operator shall include (at a minimum):

R4.1. Expected generation and Transmission outages, additions, and retirements.

R4.2. Peak Load forecasts for the periods being calculated.

R4.3. Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, (within or out of economic dispatch) as they are expected to run.

R5.3. R5 appears to apply to all TTC calculations, however R5.3 appears to be specific to monthly analysis; "the expected schedules using monthly or longer firm Transmission service". Please consider using the same wording as used in MOD-30 R4.

Proposed wording: When calculating TTCs for Posted Paths, the Transmission Service Provider shall Use assumptions consistent with the assumptions used in operations studies and planning studies for the applicable time periods, including: [Violation Risk Factor: Lower] [Time Horizon: Operations Planning]

R5.1. Use all Contingencies meeting the criteria described in its ATCID.

R5.2. Respect any contractual allocations of TTC.

R5.3. Modeling the impact of point-to-point reservations as follows:

Also, the term "interface point" is used several times both in MOD-28 and MOD-30. Please consider a more appropriate term such as balancing area.

R6.1. For Daily TTCs, it has been common practice to use the Monthly TTC value up until a few days prior to when the Daily service commences. This is done because weather and outage information is not substantially more accurate 7 days out than it is 30 days out. Day specific calculations are then performed several times during the current week as weather and outage information becomes more clear. Please consider the following wording.

Proposed wording: R6.1. At least once in the calendar week prior to the specified period for TTCs used in hourly, and daily ATC calculations.

R7. The wording in R7 appears to describe transfers involving single balancing area. Also, the wording does not mention contingency analysis. Please consider the following wording.

Proposed wording: Determine the first contingency incremental Transfer Capability for each Posted Path by increasing generation and/or decreasing load within the source Balancing Authority area(s) and decreasing generation and/or increasing load within the sink Balancing Authority area(s) until either:

The wording in b) is confusing. This also might fit better as another bullet under a). Please consider rewording b) and adding it as a bullet under a).

The language in c) "sum the incremental Transfer Capability and all impacts of Firm Transmission Service that were included in the study model" requires some clarification. It would be helpful to clarify that it may not be appropriate to represent TTC as a simple sum of FCITC and net base transfers. If base transfers are in the same direction as the TTC being calculated, (i.e. base imports modeled when calculating import TTC), a simple summation is appropriate ( $TTC_{import} = FCITC + \text{base imports}$ ). However, if base transfers are in the opposite direction to the TTC being calculated (i.e. base exports when calculating import TTC), a simple summation is not appropriate ( $TTC_{import} = FCITC - \text{base exports}$  is not accurate). The reason is that the counterflow effect of the base transfer usually does not correspond to a 1:1 increase in FCITC, and hence, summing a "negative" base transfer may significantly understate or overstate the TTC. The drafting team appears to have decided to address counterflow impacts in the calculation of ATC in R11 and R12. This approach will work if coordinated with the treatment of base flows in R7c&d. Please consider adding language such as the following.

Proposed wording: "Base transfers in the same direction as a TTC path shall be summed with the Incremental Transfer Capability to determine TTC. Base transfers in the opposite direction of a TTC path (i.e. net base exports when calculating import TTC and net base imports when calculating export TTC), which create counterflow effects that cannot generally be reconciled by a simple summation, shall be addressed in the calculation of TTC/ATC as described in the Transmission Operator's ATCID document."

R9. Need to add Conditional Firm Service to the ETCF equation. GFF needs to have the phrase "reserved on posted Paths" added similar to NITSF.

R10. GFNF needs to have the phrase "reserved on posted Paths" added similar to NITSNF.

R11. To the extent base transfers provide counterflow impacts, these are already embedded in the TTC values. Is the "CounterflowsF" component of the equation intended to adjust the impact of counterflows resulting from the base transfers, or is it intended to account for counterflow impacts related to new transmission service commitments made prior to new models and transfer capabilities being developed? Please add clarification.

R12. Same comments as R11. Also, please consider using the term TRMNf instead of TRMu.

CBM should not be in the ATCNf equation as this will result in double counting. CBM is a reservation of TTC which prevents it from being sold on a firm basis. This capacity is sold on a non-firm basis. When an LSE needs to utilize the capacity it reserved as CBM to address a capacity shortfall, the LSE submits a transmission service request providing the specific source and sink information and referencing the need to access CBM capacity. To the extent the CBM capacity had been sold non-firm, those non-firm schedules would be curtailed to enable the LSE's to schedule its firm usage of CBM. This TSR or the subsequent schedule would be reflected in the ETCf value.

double count example)  $ATCNf = TTC - ETCf$  (includes 100 sched) -CBMs (100). Please consider this definition change.

Proposed wording: ETCf is the sum of existing firm Transmission commitments for the Posted Path during that period, which will include any transactions scheduled utilizing CBM capacity,

Please consider this definition for postbacks.

Proposed wording: PostbacksNF are increases to ATC values resulting from transmission service being redirected by customers to other paths or from transmission service not being scheduled by customers during that period, as defined in Business Practices

#### MOD-30 Comments

R2.1.1. This does not appear to be a criteria.

R2.1.2. This language is confusing regarding first three limiting elements. Also, planning and operating contingencies may include all elements, circumventing the concept of using representative flowgates. Please add clarification of what is intended.

R2.1.3 Any limiting element interconnection wide-seems overly broad. Should this be limited to those in which the TSPs area had some minimum impact?

R2.3. Since SOL is associated with contingency loading, the TFC is associated with the thermal ratings of the facility, not necessarily the SOL of the flowgate. Please see suggested TFC definition.

R3 This section describes modeling requirements. It does not include provisions for outages, load forecasts, etc. R5 discusses outages when calculating AFCs. Is this intended to be done by inclusion in the modeling? If so, should this be moved into R3? Similarly, R6 discusses peak load forecasts when determining the impact to ETC. Is this intended to be included in the modeling. If so, should this be moved into R3?

R9. See comments related to CBM in R12 of Mod 28.

R10. This language is confusing. Also, although "P" is defined, it is not used in the equation. Please consider adding some simple language such as the following.

Proposed wording: "TTC is determined by dividing the most limiting flowgate capacity associated with a posted path by the path's distribution factor for that flowgate."



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	
Organization:	
Telephone:	
E-mail:	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** The Southeast Coalition  
**Lead Contact:** Roberto Paliza  
**Contact Organization:** Paliza Consulting, LLC.  
**Contact Segment:** Consultant on behalf of clients  
**Contact Telephone:** 317-818-4588  
**Contact E-mail:** roberto@palizaconsulting.com

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Tina Lee	KGEN Hinds LLC & KGEN Hot Spring LLC	SERC	5
David Baugh Woody Saylor	Cottonwood Energy LLC	SERC	5
Larry Rodriguez	Entegra Power Services	SERC & WECC	5 & 6
Rebecca Turner	Entegra Power Services	SERC & WECC	5 & 6
Terri Clynes	ConocoPhillips	ERCOT, FRCC, MRO, RFC, SERC, SPP & WECC	5 & 6
Ralph Honeycutt	Suez Energy Marketing	ERCOT, RFC, NPCC, SERC & WECC	5 & 6
Andy Sharer	LaGen/NRG Energy	SERC	3, 4, 5 & 6

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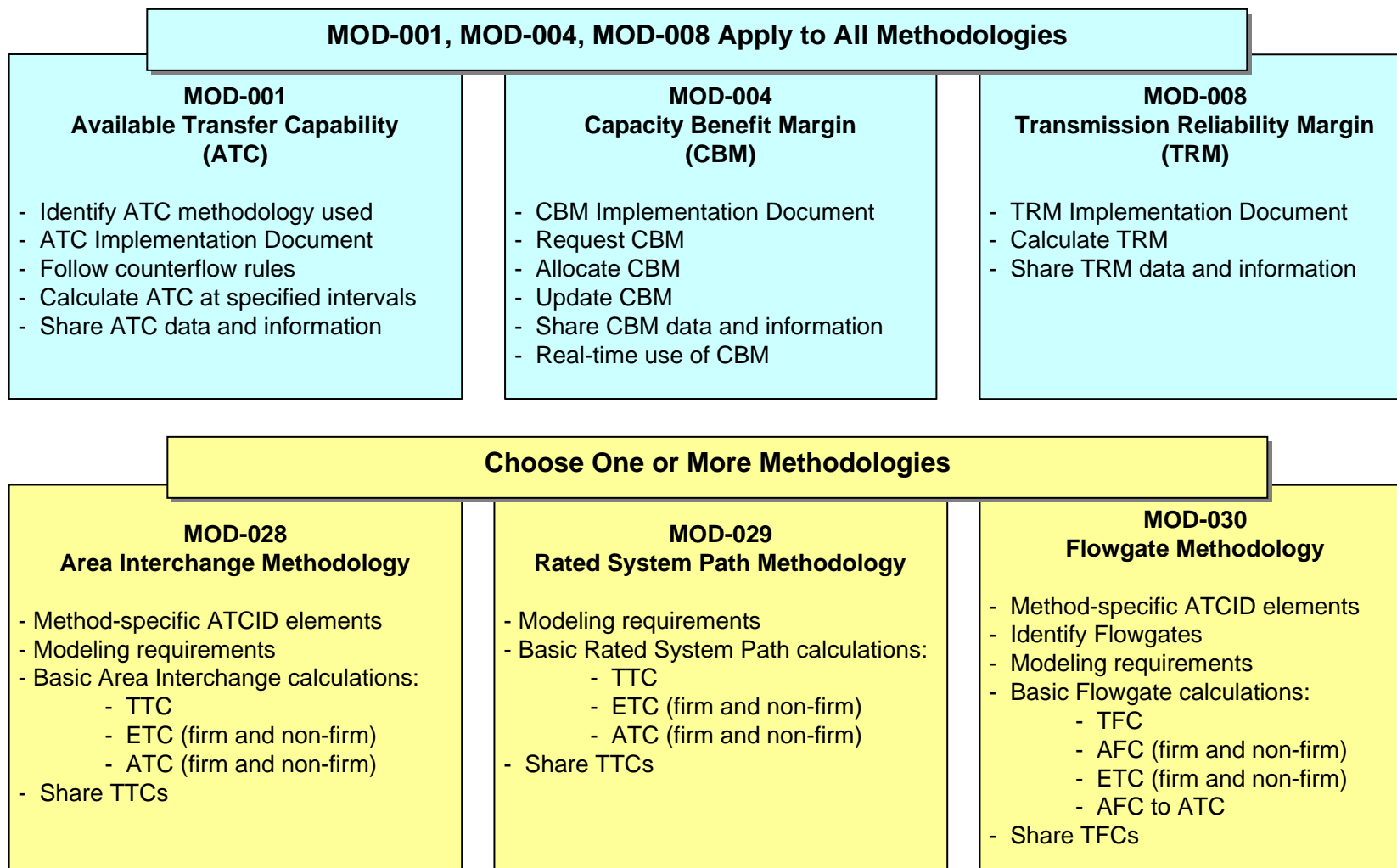
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

We strongly support the one year time-frame for complete implementation of the Standard and believe that some requirements of the Standard could be implemented earlier. TSPs should be encouraged and provided with flexibility to phase-in changes to their ATC calculations to meet the new requirements with the objective to complete all changes in one year.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

The term "Postback" is not standard in the industry and has not been defined in the Standard. A definition for this term should be included in the Standard.

Requirements R6.2, R6.3, and R6.4 of MOD-030 refer to transmission service "expected to be scheduled". Is this term being used to refer to reservations that are frequently scheduled as opposed to those that are infrequently scheduled? Please clarify.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: Please see list below.

Counterflow:

MOD-001 (R4, R5.1). Requirements R4 and R5.1 of MOD-001 set the impact of counterflow to 0% in the calculation of firm ATC/AFC based on reservations and/or schedules, and calculation of non-firm ATC/AFC based on reservations. These requirements are not only technically incorrect because they do not provide any justification for the 0% counterflow setting and do not require Transmission Service Providers (TSPs) to provide any analyses, work papers, statistical scheduling data, etc. to justify a 0% counterflow or any other setting in their ATC/AFC calculations, they are also inadequate because they do not meet Order 890 Cite 293. The Standard should ensure consistent modeling of counterflows and require TSPs to provide a justification, along with work papers and analyses, for the counterflow percentage used in their calculations of firm and non-firm ATC/AFC. Additionally, a measurement to ensure that TSPs comply with providing justification for their counterflow settings should be added to the Standard.

- **Updating of ATC Models:**  
MOD-030 (R3). Requirement 9.3 of MOD-001 states that, at a minimum, monthly ATC values should be updated once a week. However, requirement 3.3 of MOD-030 states that the monthly models used for calculating monthly ATCs should be updated at least once per month. Requirement 3.3 is inconsistent with requirement 9.3 because monthly models should be updated at the same frequency as the monthly ATC values are updated, i.e. once a week. Otherwise, monthly ATC values may be inaccurate. Consistent with Cite 301 of Order 890, the Standard must “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”. The Standard, as proposed, is silent in regards to updating models and ATC values when a serious event such as the unplanned outage/return of a major transmission line occurs or a serious modeling error in ATC calculations is uncovered. In these situations, TSPs should be required to update models and ATC values as soon as practical rather than waiting for the scheduled update.
- **Adjacent Systems Representation:**  
MOD-030 (R3.5, R3.6). Requirements 3.5 & 3.6 establish the scope of adjacent systems to be included in ATC calculations. These requirements do not specifically require that adjacent systems be represented in a realistic manner or updated at the same frequency as the TSP system. Including three contiguous buses of the adjacent systems, as R3.5 requires, will not ensure an accurate representation of adjacent systems in the AFC models. These requirements fail to satisfy Order 890 at Cite 311 “to produce accurate determinations of ATC...”. Furthermore, the Standard does not have a measure to assess the validity of adjacent systems representation and limits itself to only check that adjacent systems are included in the model (MOD-030, M7).

In order to produce accurate ATCs, it is not enough to merely check that adjacent systems are included in the model. Instead, it is critical to validate the performance of these models on an on-going basis and ensure that adjacent systems are being properly updated in TSP models with data such as: load, generation profile, net interchange, transactions, and outages, provided by adjacent system entities.

Use of PTDF term:

MOD-030 (R2.1.3.1) Requirement 2.1.3.1 refers to generators that have at least a 5% Power Transfer Distribution Factor (PTDF) impact on a flowgate. Rather than PTDF, the proper term in this circumstance is Transfer Distribution Factor (TDF) because the flowgate could be either a PTDF or OTDF flowgate. The TDF term covers both cases.

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:



5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: Please see list below.

Consistency Between ATC calculations and Operational & Long-Term Expansion Studies: MOD-001 (R8). Requirement 8 of MOD-001 does not fully include the goals and requirements established in FERC Order 890/Cite 292 & 237 which are very clear about requiring TSPs to use data and modeling assumptions for ATC calculations that are consistent with those used in operations planning and long-term system expansion studies. FERC clearly states its expectation in the following extract of Order 890/Cite 292: "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". Furthermore, FERC establishes the following requirement in Citation 237 of Order 890: "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"

It is known that some Transmission Providers use a number of procedures such as: switching operating guides, generation re-dispatch, dropping load, etc. to mitigate transmission limit violations when performing reliability assessments of their systems in the planning horizon. Based on the application of mitigation procedures, these TSPs conclude that their transmission systems are reliable and thus, no transmission upgrades/reinforcements are needed. However, these mitigation procedures are not made available to third parties requesting transmission service and, as a result of this, transmission service requests are refused or the requestor is assigned financial responsibility for upgrading constrained facilities which could be mitigated by the application of the TSP operating procedures. Furthermore, these mitigation procedures typically are not included in the ATC models, which leads to artificial overloads, negative ATC/AFC, and the unduly discriminatory denial of transmission service.

We believe that requirement 8 of MOD-001 should fully incorporate the FERC directive in Order 890/Cite 292 & 237 and explicitly require TSPs to incorporate ALL data, modeling assumptions, and mitigation procedures used in operations planning and long-term expansion studies in their ATC/AFC models and calculations. A measurement to ensure full compliance with this requirement should be added to the Standard.

Over-Generation:

Order 890 at Cite 245 clearly establishes the requirement by which reservations from a generator in excess of the generator's nameplate capacity should not be simultaneously included in the calculation of ETC. Furthermore, FERC directed NERC to develop requirements in MOD-001 that lay out clear instructions on how to model a generator, which has reservations in excess of its nameplate capacity for a given time frame, to prevent unrealistic utilization of transmission capacity associated with over-generation. MOD-001 does not include the requirements directed by FERC to ensure that over-generation does not occur in the calculation of ETC.

ATC/AFC Coordination:

Requirement 10 of MOD-001 identifies the data set to be made available by Transmission Service Providers for ATC/AFC coordination purposes. Requirement 10 also establishes that this data needs to be made available by a TSP if there is a request by another TSP, Planning Coordinator, Reliability Coordinator, or Transmission Operator. Requirement 10 does not require the data set be exchanged by TSPs or the use of the data for coordination purposes. Thus, this requirement is inconsistent with Order 890 at Cite 310 wherein FERC directed TSPs to coordinate ATC/AFC and, as part of this directive, requires the establishment of a standard data exchange mechanism to enable the coordination process. Cite 310 of Order 890 states the following: "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...". Furthermore, FERC in the last sentence of Cite 310 makes it clear that "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".

Therefore, it is clear to us that FERC's ultimate objective is the on-going coordination of TTC/TFC and ATC/AFC by transmission providers. To achieve this objective, requirement 10 of MOD-001 should be changed to mandate data exchange and on-going coordination of TTC/TFC and ATC/AFC among adjacent Transmission Service Providers.

#### Benchmarking of ATC Models:

Order 890 at Cite 290 & 291 requires NERC to modify ATC-related standards to incorporate requirements for the periodic review, update, and benchmark of models used for ATC calculations. FERC states the following in Cite 290: "this [requirement] 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".

This cornerstone of Order 890, the accuracy of ATC calculations through review, updating, and benchmarking to actual events, has not been included in the ATC standard. Even if these requirements have been included in other reliability standards associated with ATC calculations, there should be a clear reference to these requirements in the ATC standard. Enforcing the above requirements - to review, update, and benchmark models used in ATC calculations - is essential to instill confidence in the market place and to obtain accurate and realistic ATC values.

#### Transparency:

Throughout Order 890, FERC has included various requirements to increase transparency in ATC calculations. In the spirit of Order 890 Cite 210 & 471 requirements, TSPs should be required to post all non-confidential input data & power flow models necessary to replicate their ATC calculations & results. If a data item used in ATC calculations is considered to be confidential, this data item should be identified as such and accordingly, documented in the TSP ATCID. Order 890 Cite 323 requires TSPs to document modeling assumptions, parameters, and methodologies used in their ATC calculations, and to make this documentation available along with work papers and analyses necessary to justify settings of ATC parameters.

We believe that requiring TSPs to post a comprehensive set of ATC input data, models, and documentation of their methodologies, is not only necessary to provide the transparency required by Order 890, but will enable market participants, transmission customers and regulators, to validate ATC calculations and use the models in their own analyses. This will increase confidence in ATC calculations, provide meaningful transparency, and significantly improve the overall ATC process.

Further, the general posting requirements to meet Order 890 transparency requirements should be included in MOD-001 and the posting details should be included in the business practices currently being developed by NAESB.

It is important to note that, currently, there are TSPs who post a great deal of ATC input data and power flow models. It is commendable that these TSPs have taken great strides in providing transparency. It is now time for other TSPs to follow suit.

**Consistency of Modeling Practices:**

Although MOD-001 states that its purpose is to promote “consistent application of ATC calculations” (as required by Order 890), this standard does not explicitly require consistent modeling practices to calculate ATC values for different time frames. It is known that some TSPs use different transmission models and modeling practices when calculating ATC values for different time frames. For example, the dispatch model used in the calculation of daily ATC values may be different than the dispatch model used in monthly ATC calculations. Another example is the representation of external systems in ATC models used for daily vs. monthly ATC calculations. These inconsistent modeling practices lead to inconsistent ATC values and reduced confidence in ATC calculations. TSPs should be required to eliminate or minimize inconsistent modeling practices. If inconsistent modeling practices can not be eliminated, TSPs should identify and document differences in models and modeling practices due to ATC calculation time frames and provide justification for them.

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: Please see below.

**ATCID, TRMID, and CBMID Documentation:**

Transmission Service Providers should make their ATCID, TRMID, and CBMID documentation publicly available as soon as these documents are ready but no later than 60 days before implementation. This is a very important issue for market participants who need to be aware of the TSP changes with enough lead time so that they can adjust their business processes accordingly. For those regions which have not had CBM in the past but TSPs decide to set aside transmission capacity for this purpose, according to the Standard, the CBMID should be posted 90 days before implementation to allow for consultation with NERC and a meaningful vetting of issues.

**Stakeholders Participation:**

Stakeholders’ participation in the development and continued improvement of ATC standards and associated implementation is a key element to achieve success. NERC itself recognized the benefit and significance of the stakeholder process in the development of reliability standards. Order 693 at Cite 183. Thus, establishing forums and processes for stakeholders’ on-going participation at NERC and regional levels is a MUST. These stakeholder processes are required to vet issues and gain support for the initial approval of the ATC standard and on-going changes to it. NERC should clearly set out and document the processes by which comments and suggestion of stakeholders will be gathered, evaluated, and incorporated in the Standard.

**Distribution Factor Cut-Off:**

MOD-030 (R10). Requirement 10 of MOD-030 establishes the mathematical equation to convert AFC values to ATC values and sets the distribution factor cut-off to 3% for ATC

calculations. The following statement is included in requirement 10 of MOD-030: “a flowgate is impacted by a path if the Distribution Factor for that path is greater than 3%”. Although most TSPs currently use a 3% distribution factor cut-off, there is no need to “hard-code” a value in the Standard and, by doing so, take away the flexibility of selecting a more appropriate value which could be set on a per flowgate basis. Furthermore, the TLR process uses a 5% distribution factor cut-off for transmission service curtailments which raises a potential conflict with the 3% cut-off value proposed for ATC calculation purposes.

NERC should address the difference between distribution factor cut-off values for ATC calculations and the TLR process to ensure that this difference does not create undue discrimination. Additionally, a minimum value of 3% for distribution factor cut-off could be included in the ATC standard provided TSPs are given flexibility to use a higher cut-off value which could be set on a per flowgate basis. Further, consistent with the transparency requirement of Order 890, TSPs should be required to provide justification for the distribution factor cut-off value(s) used in their ATC calculations.

#### ETC Calculation and Base Case Contingency Overloads:

MOD-030 (R6). Requirement 6 of MOD-030 attempts to define calculation of ETC based on flowgate impacts of various transmission service and load components. However, the ETC calculation as defined in requirement 6 is loose and unclear. More importantly, this requirement - as currently stated in the Standard - does not ensure that TSPs do not overstate flowgate capacity set aside for ETC purposes. FERC, in Order 890 Cite 243 & 244, has directed NERC to define ETC in a transparent and consistent manner to reduce the potential for undue discrimination. The following is an extract of Order 890 Cite 243: “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”.

In some regions, overstatement of ETC leads to the appearance of “Base Case Contingency Overloads” (BCOs) which effectively means that the ETC impact on certain OTDF flowgates is greater than the flowgates capacity and thus, these flowgates are overloaded in the ATC power flow models. BCOs can be expressed by the following relationship:

$$\text{BCO on a flowgate} = \text{ETC impact on the flowgate} > \text{Flowgate TFC}$$

BCOs can occur in any of the ATC calculation time frames and may be spread over an entire region or be localized. In some TSP areas, BCOs have become a chronic situation and are mainly due to modeling flaws in the calculation of ETC. This causes serious problems for customers trying to get access to the transmission system. One of the main causes of chronic BCOs is the dispatch model which does not take into account transmission limitations and thus, yields unrealistic results.

Requirement 6 of MOD-030 does not address the dispatch model in enough detail to prevent unrealistic ETC results nor includes sanity checks to validate ETC calculations. Furthermore, TSPs are not required to show that the dispatch model in their ATC calculations is feasible and resembles actual system operation. Thus, it is our opinion

that the ATC standard has not fully met the ETC calculation requirement established in Order 890 at Cite 243 & 244.

We believe that, in the calculation of ETC, all resources should be dispatched in a feasible and realistic manner such that transmission limitations are respected to the extent possible. The ATC standard should include clear & detailed guidelines for dispatching generating resources so that accurate and realistic models are used in ATC calculations which in turn should yield realistic ETC values.

As required in Order 890 Cite 290 & 291, TSPs must be required to benchmark ETC calculations against real-time flows to ensure that these values are not being overstated. This will go a long way in reducing the potential for undue discrimination. Furthermore, TSPs should be required to identify and report, on a periodic basis, all BCOs over 5% and chronic BCOs to NERC for further investigation and action.

#### Monthly ATC Values:

MOD-001 (R2.3). Requirement 2.3 of MOD-001 states that TSPs shall calculate monthly ATC values at least for the current month plus the next 12 months. This requirement should clarify that TSPs currently calculating and posting monthly ATC values for a longer time period should continue doing so. For example, some TSPs have been posting monthly ATC values for 18 months which is useful in providing information to the market and enabling new business. The requirement should be drafted to encourage such TSPs to continue their existing posting practices rather than falling back to the minimum requirement.

#### Outages and Monthly ATC Values:

The Standard does not address in enough detail the modeling of transmission and generation outages in the monthly models used for monthly ATC/AFC calculation. Currently, there are no consistent practices in the industry for including or excluding outages of short duration, i.e. a few hours or days, in the monthly ATC calculations. Consistent with the Order 890 goals of accuracy and transparency, NERC should set clear guidelines on the duration and type of outages to be included in the calculation of monthly ATCs so that this process is transparent and consistent across the various regions.

#### Dispatch Model and Must Run Units:

The Standard has little detail and, practically, no guidelines on the dispatch model used in ATC/AFC calculations, except for the following statement included throughout the Standard: "Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run as they are expected to run". This is a high level statement that needs to be developed into clear and measurable requirements to ensure consistency and fairness in ATC calculations. The dispatch model is the most important single factor in the determination of ATC values and, in particular, the modeling of Must Run Units, which is a critical issue. Consistent with the transparency requirement of Order 890, the generation dispatch model used in ATC calculations must be transparent and this issue must be addressed by the Standard.

To reduce both the potential for undue discrimination and the number of "phantom congestion" incidents, and to improve accuracy of ATC calculations, NERC must develop

detailed requirements for the dispatch model used in ATC calculations and establish measurements to evaluate compliance with the requirements. These requirements should be focused on the development and use of dispatch models that are realistic and consistent with well-established operational practices. To ensure that the model resembles actual system operation, the dispatch model should be benchmarked against real-time dispatch and consistency checks should be performed across the various ATC time frames.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
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NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input checked="" type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities





## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

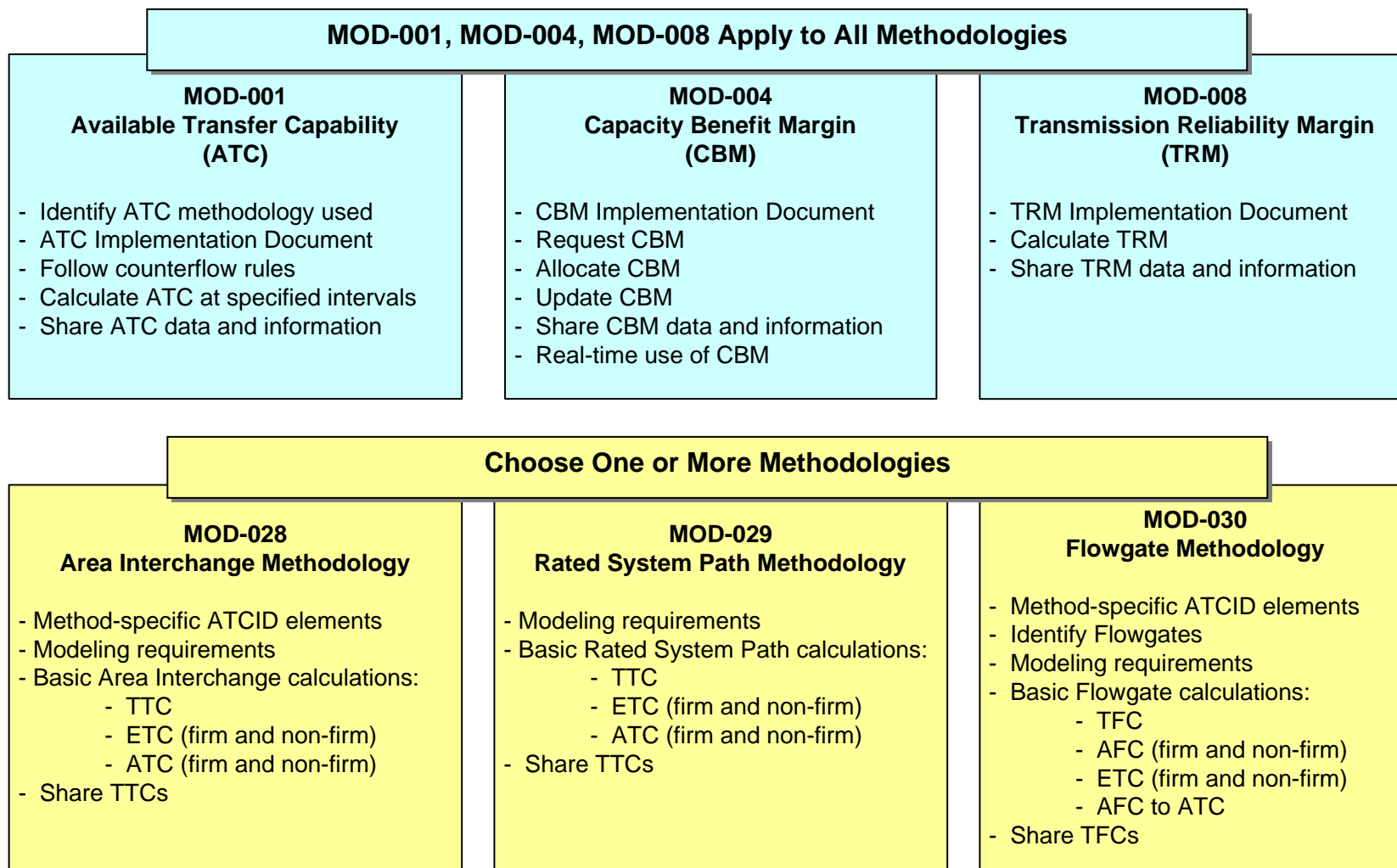
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

- Incorrect Definition: SRP supports those definitions provided in MOD-4, MOD-08 and MOD-29. SRP does not elect to comment on defined terms offered in MOD-28 or MOD-30.
- MOD-001-01 The term Posted Path should not be defined in the standard. Defining Posted Path conflicts with the Background Information provided by the Standards Drafting Team and duplicates FERC regulations in 18CFR37.6. Specifically, the request for comments stated
- "...Major Changes include-removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB business practices."

Therefore, because Postings are not being addressed and because Posted Path is defined in CFR37.6, the term Posted Path should not be defined in a NERC standard and should be referenced as a FERC term.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement: Please refer to answers to question Q6 for examples

4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element: Please refer to answers to question Q6 for examples

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments: See Answer to question Q2

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: SRP supports the WECC MIC MIS ATC Drafting Team and WestConnect responses to this questionnaire. The comments offered below represent additional comments that have not been addressed by the WECC or WestConnect comments but are noteworthy nevertheless.

MOD-001

MOD-001-1 R1. "Each Transmission Operator shall select one ATC methodology..." should be changed to "Each Transmission Service Provider shall select one ATC methodology..." to allow the entity that calculates ATC (R2) to choose the methodology.

MOD-001-1 R2 FERC regulations in 18CFR37.6 require postings for the time periods in R2.1, R2.2 and R2.3 for only constrained paths and only for firm ATC.

(1) Please explain the rationale for applying this regulation to unconstrained paths and to non-firm ATC for which FERC has different rules in place.

(2) Also, please explain the rationale for calculating more frequently than data is required by FERC to be posted.

(3) Consider removing R2 from the standard and instead referring to FERC regulations.

MOD-001-1 R2. If R2 remains, "Each Transmission Service Provider shall calculate ATC values for the time periods listed below..." should read "Each Transmission Service Provider shall calculate Firm ATC values for each constrained Posted Path for the time periods listed below..."

MOD-001-1 R3.4 and R3.5 The term "transfer capability" is used in these two standards. As R3. describes the ATCID presumably the term used here means "Available Transfer Capability" and should be changed to this term for clarity.

MOD-001-1 R4. and R5. While MOD-001-1 R4. directs the Transmission Service Provider to set the value of counterflows to zero for the calculation of firm ATC unless otherwise specified within the Transmission Service Provider's ATCID, no such similar standard exists to direct the Transmission Service Provider to set counterschedules to zero for the calculation of firm ATC under MOD-029-1.

This presumed oversight points out the risk involved when having one standard require use of a variable while another standard sets the value of that variable.

Another reason MOD-001 R4. and R5. should be moved from MOD-001-1 is that they do not fit into the Standard Drafting Team's explanation of the standard which is the following:

"MOD-001 – Available Transfer Capability. An "umbrella" standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data."

SRP, therefore, recommends that:

(1) MOD-001-1 R4. and R5. be moved into each of MOD-028, MOD-029, and MOD-030.  
(2) SRP also recommends that when R4 and R5 are moved into MOD-029 they be modified to use the same term used in MOD-029 R7 and R8. That is, MOD-029 R7 and R8 currently use the term Counter-Schedules and MOD-001-1 R4 and R5 currently use the term counterflows. These terms should be the same.

MOD-001-1 R6. Perhaps instead of requiring e-mails it would be more efficient for the NERC Standards Drafting Team to request that NAESB develop a standard to require the ATCID, TRMID, and CBMID be posted on OASIS. Then R6 could be removed as a standard.

MOD-001-1 R9. (1) Please explain how "update ATC" is different from "Post ATC" and (2) If it is the same thing, please remove the standard and work with NAESB to develop such a standard.

MOD-001-1 R9. (1) Please explain the rationale for requiring the Transmission Service Provider to "update" ATC at minimum frequencies as this standard does not support the goals of consistency or transparency. Each unnecessary calculation is a chance for the calculation, no matter how automated it is, to miscalculate and lead to lack of consistency. (2) If R.9 is not removed, it should be reworded from "...shall update ATC at a minimum on the following frequency" to "shall review and update if necessary ATC at a minimum on the following frequency". The way this would be measured is there would be a violation if a variable changed and the ATC calculation was not updated within a certain time frame.

MOD-001-1 R10. As currently worded the data items listed must be provided by any of the entities listed and anyone can ask for the data. R10 should be reworded from "Within 14 calendar days of a request of any Transmission Service Provider, Planning Coordinator..." to "Within fourteen calendar days of a request by any Transmission Service Provider, Planning Coordinator..."

Violation Severity Level for R9. (1) The level of complexity suggested in this violation severity level will be very difficult to track and police. It is impractical and should be greatly simplified to make it manageable. (2) The use of the phrase "not calculated" also makes the description difficult to understand if not incorrect. For example, the description in the Lower VSL column reads "For Hourly, not calculated within 5hrs ... etc"

Reading that literally if I calculate Hourly 5 or more hours after the hour in question I have satisfied the criteria for the Lower VSL. This was obviously not the intent. A more appropriate wording for this description would be "For Hourly, calculated from 1 to 5 hours after the fact ... etc" It is recommended that the description for all the levels of compliance for this requirement be changed replacing the phrase "not calculated" with "calculated" and changing the rest of the descriptions appropriately.

#### MOD-029

MOD-029-1 R1.12 The wording of this requirement does not match the form of those that precede it (i.e. R1.1 thru R1.11). It is a sub-requirement of the overall requirement R1. which stipulates that the TOP use a model to calculate TTC that "meets the following criteria:" The other sub-requirements stipulate that the model "includes" or "uses" or "models" certain items. R1.12 as written stipulates that the model "identifies" the percent fault damping used. This requirement would be more appropriately located in the requirement which stipulates what the study report must identify (R2.8) rather than what the model must identify.

MOD-029-1 Violation Severity Level for R1. This is a two part requirement for each of the four levels of severity. The first part is reasonable but the second part is not practical. To verify that the facility ratings used by the TOP in the model he used to calculate TTC are the same as those specified by the TO, the compliance person would have to manually compare the rating supplied with the rating used for hundreds even thousands of facilities in the model. Moreover, this would have to be done for every model used for every TTC established for every Posted Path. There may be many models representing several different years in the future. Even if you could overcome that hurdle and you found a few facility ratings that were wrong in a model, how would you verify that "...one of those Facility Ratings were used (or should have been used) to establish a TTC for one or more Posted Paths?" An erroneous facility rating is only important if it should have been the limiting factor but wasn't. You could only determine that if you corrected the erroneous facility rating in the model and rerun the study. Thus this test for compliance is very impractical and should be modified.

In the WECC, facility rating coordination is done by sharing the model with the effected entities before running the study. Once the affected entities have reviewed the model and are satisfied that it models their system appropriately they give their ok to run the study. (1) The requirement should be changed to say that the TSP shared the model with affected entities for their review of facility ratings. (2) The measure would be that the TSP can demonstrate that each of the affected entities reviewed the model and are satisfied with it. (3) The vsl would be that the TSP was able to demonstrate that all but one or two etc of the affected entities reviewed the model and were satisfied with it.

MOD-029-1 R7 Please explain the reliability reason for requiring Counter-SchedulesF in the formula for ATCF.



Paragraph 212 of Order 890 reads in part, "(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 account for both firm and non-firm commitments, postbacks of redirected services, unscheduled service, and counterflows."

#### MOD-004

MOD-004-1 Violation Severity Level for R3 The Moderate and High VSL columns each have two subparts. The wording for the first subpart for each is identical. Thus if I don't comply with the first subpart it is unclear whether the level of non-compliance is Moderate or High. Also, the second subpart for the Moderate and High VSL columns are very similar in wording and are overlapping. If the GCID changed by more than 20MW but not more than 30MW the noncompliance falls into both the Moderate and the High VSL.

MOD-004-1 Violation Severity Level for R7 The phrase "did not provide" should be changed to "provided" in all four levels of severity because the way it is currently written an entity could provide the requested data within the required seven days and still be non-compliant.

#### MOD-008

MOD-008-1 Throughout MOD-008-01 including in the "Applicability" section the term "Transmission Operator" should be replaced with the term "Transmission Owner". In cases where a line is jointly owned, the Transmission Operator will calculate TTC of the facility, but each individual Transmission Owner will calculate their own TRM. It is not correct to say the Transmission Operator of the line tells the other line owners what their TRM will be.

MOD-008-1 Future Development Plan: Anticipated Actions #7 (first page of the standard) The phrase "Board Adopts MOD-001-1" should be changed to read "Board adoption" to be consistent with the other standards.

MOD-008-1 Violation Severity Level for R3 "Moderate Level" should be reworded as follows: The Transmission Operator provided its TRMID to all but one entity specified in R3. OR provided its TRMID to all entities in 14 calendar days or more but less than 30 calendar days.

MOD-008-1 Violation Severity Level for R3 "High VSL" should be reworded as follows:

The Transmission Operator provided its TRMID to all but two entities specified in R3. OR provided its TRMID to all entities in 30 calendar days or more but less than 60 calendar days.

MOD-008-1 Violation Severity Level for R3 "Severe VSL" should be reworded as follows:

The Transmission Operator did not provide the TRMID to any of the entities specified in R3 OR provided its TRMID to all entities in 30 calendar days or more but less than 60 calendar days.

**AFFIRMATIVE COMMENTS:**

In addition to the affirmative comments provided in the WECC and the WestConnect comments SRP wishes to emphasize that it is very supportive of the drafting team's incorporation of the following attributes into the draft standards:

Twelve Month Implementation Plan – The draft standards impose new requirements for the calculation of ATC and its components that will require substantial effort and time in order to implement. It is envisioned that at a minimum twelve months will be required to make the changes necessary to conform to the new standards.

MOD029 Modeled after WECC Path Rating Methodology – SRP congratulates the drafting team for giving full consideration of the WECC Path Rating Methodology when drafting the MOD029 Rated System Path Methodology Standard. The WECC methodology has been developed and refined over a number of years and has served the west well. We are happy that the key features have been retained in MOD029. The requirements in R2, and its sub-requirements are particularly important to us and we would be very disappointed if any of the features of these requirements are degraded as a result of the drafting teams response to industry comments.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	Dolores Stegeman, Assistant Power Manager
Organization:	Tacoma Power
Telephone:	(253) 502-8342
E-mail:	dstegema@cityoftacoma.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input checked="" type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input checked="" type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input checked="" type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

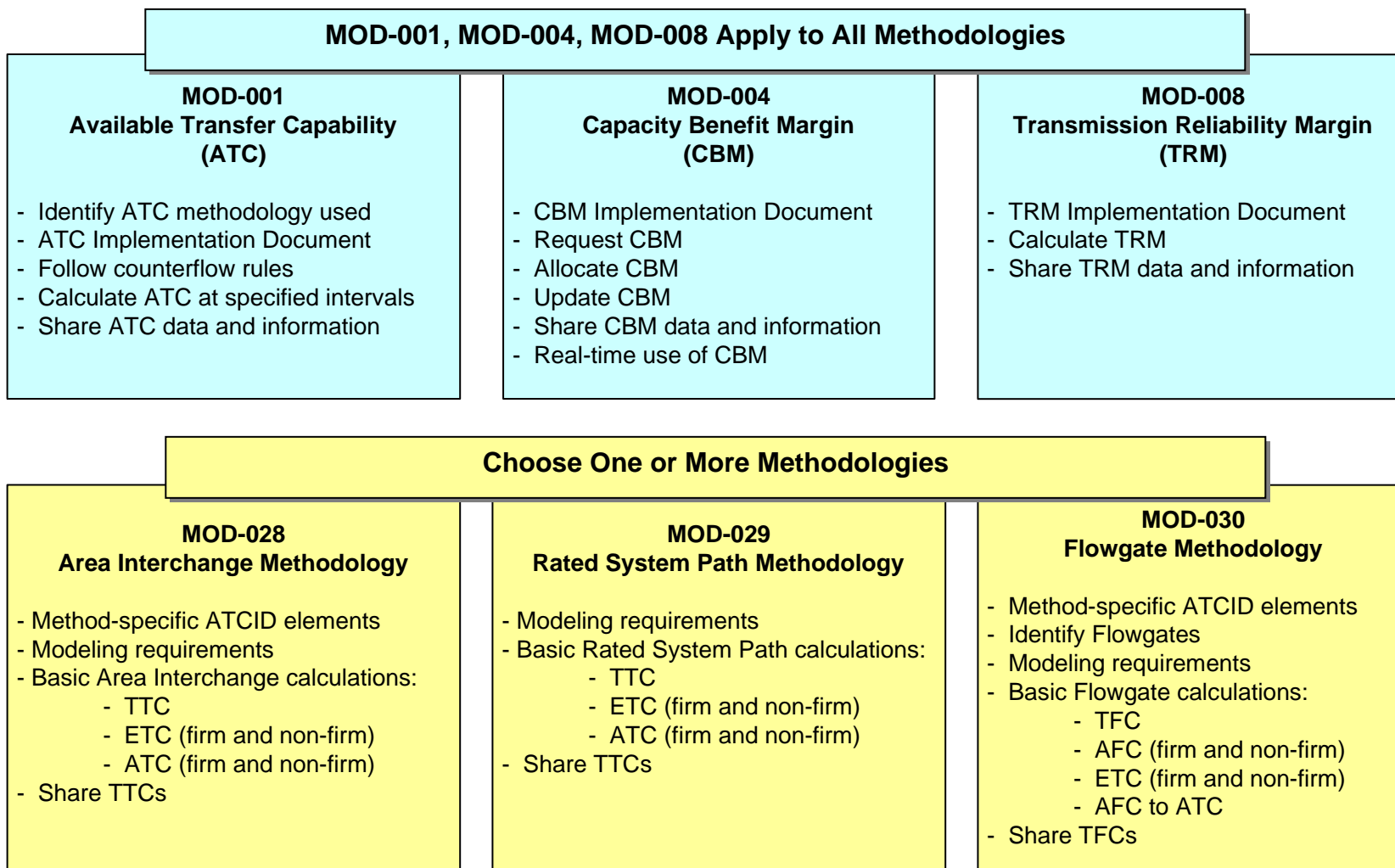
- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**



**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

Tacoma Power supports the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

Tacoma Power supports the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

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4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

Tacoma Power supports the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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If "Yes," please explain why and provide supporting information.  
Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

1) Tacoma Power supports the comments of the WECC MIC MIS ATC Drafting Team in regard to this question.

2) In reference to MOD-030-1/R10, the requirement should be altered as follows: "The Transmission Service Provider shall [insert] provide a tool to [end insert] convert Flowgate AFCs to ATCs (and TFCs to TTCs) for Posted Paths. . . ." BPA calculates flowgate AFC's for its network and provides a tool for AFC-to-ATC conversion (in BPA's case, Power Utilization Factor Calculators). At this time, this is sufficient for transmission customer needs and that the posting of ATCs, as opposed to AFCs, would result in less transparency due to the sheer number of combinations that could be required to be posted.



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<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Mark Graham
Organization:	Tri-State Generation and Transmission Association
Telephone:	303-452-6111
E-mail:	mgraham@tristategt.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input checked="" type="checkbox"/> 3 – Load-serving Entities
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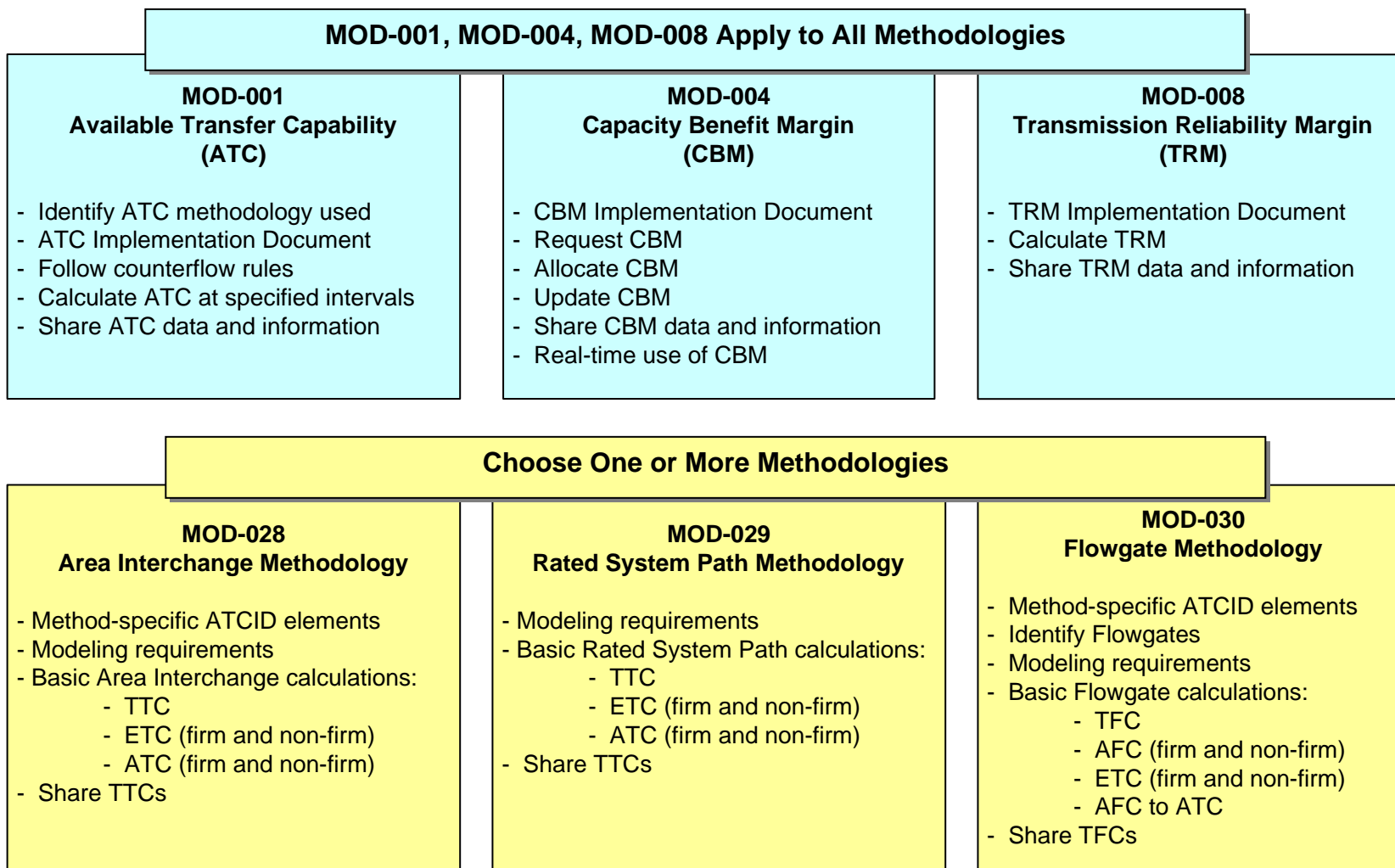
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1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition:

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

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Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments: General comments:

Calculation and posting of hourly ATC will require knowledge of actual, preschedule, and real-time loads and other information. Tri-State is concerned that such information is to be shared only with TOs and other reliability entities, and encourages the drafting team to retain this limited distribution feature. On another level, compilation of this data comprises another set of confidential information the TO/TSP must track. These are now limited to transmission entities, but all it would take to violate confidentiality is one stroke of the pen - or one knowledgeable hacker.

The standard does not require validation. Tri-State finds that this may be a serious shortcoming of the proposed standards. Without some mechanism to verify actual flows from time to time, including loop-flow accommodation, the standards are nothing more than a documentation and data storage burden to utilities. It is difficult to imagine a simple validation method and process, but if there was one in place it might be possible to evaluate how accurate ATC values were after the fact.

Related to this, no load-forecast probability level is specified for calculation of TRM/CBM/ETC. While we use low-exceedance probability forecasts for long-range transmission studies, this is not appropriate for short term ATC calculations. On the hourly time-frame, this would be manifested as load forecast bias. In other words, the firm ATC calculation process would naturally include some load margin to ensure that resulting ATC values will meet a defined risk level. Risk-level is a matter of company policy, so ATC will not necessarily be consistent from one utility to another. However, there should be a requirement to state the forecast probability level.



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<b>Individual Commenter Information</b>	
<b>(Complete this page for comments from one organization or individual.)</b>	
Name:	W. Shannon Black ON BEHALF OF WECC MIC MIS ATC & OTHERS LISTED
Organization:	Sacramento Municipal Utility District
Telephone:	916-732-5734
E-mail:	sblack@smud.org
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/> 2 – RTOs and ISOs
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**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Group Comments (Complete this page if comments are from a group.)			
<b>Group Name:</b>		WECC MIC MIS ATC TF Drafting Team ****	
<b>Lead Contact:</b>		W. Shannon Black ****	
<b>Contact Organization:</b>		SMUD	
<b>Contact Segment:</b>		See below.	
<b>Contact Telephone:</b>		(916) 732-5734	
<b>Contact E-mail:</b>		sblack@smud.org	
<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Abbey Nulph - WECC MIC MIS ATC TF Drafting Team	BPA	WECC	1-3-5-9
Chuck Falls - WECC MIC MIS ATC TF Drafting Team	SRP	WECC	1-3-5-9-
Dave Lunceford - WECC MIC MIS ATC TF Drafting Team	CAISO	WECC	2
Jerry Smith - WECC MIC MIS ATC TF Drafting Team	APS	WECC	1-3-5-9
W. Shannon Black- WECC MIC MIS ATC TF Drafting Team	SMUD	WECC	1-3-5-9-
**** Comments drafted by the WECC MIC MIS ATC TF Drafting Team are not those solely of the drafting team but represent the technical support and expertise of multiple agencies and entities. Those names and entities appearing below provided technical support and review of these comments and stand "in support" of these comments in addition to any additional comments their firms may	****These comments represent 37 individuals from varying technical backgrounds representing 25 separate entities and approximately 35-45 million people.		

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

make aside from these WECC comments. It is estimated that these entities will implement ATC for an estimated 35-45 million people.			
Ron Schellberg	Idaho Power Company	<b>WECC</b>	1-3-5-9
John Collins	Platte River Power Authority	<b>WECC</b>	1-3-5-9
Rich Salgo	SPPC	<b>WECC</b>	1-3-5
Rich Salgoz	Nevada Power Company (NEVP - the Nevada Companies)	<b>WECC</b>	1-3-5
Brian Jobson	SMUD	<b>WECC</b>	1-3-5-9
Patricia vanMidde, FERC Case Manager	SDG&E	<b>WECC</b>	1-3-4-5-
Mariam Mirzadeh P.E.	Western Area Power Administration - SNR	<b>WECC</b>	1-3-4-5-6-7-8-9-
Jason Murray, MBA	Alberta Electric System Operator (AESO)	<b>WECC</b>	1-9
John Dalessi, Director, (Navigant Consulting)	Transmission Administration of Northern California	<b>WECC</b>	1
Paul Arnold, Vice President	Columbia Grid	<b>WECC</b>	1
Marc E. Donaldson, P.E., MGR	NorthWestern Energy	<b>WECC</b>	1-3
Rob Potter, FERC Analyst	Portland General Electric	<b>WECC</b>	1-3-5-6-7-8
Bob Easton	WAPA: RMR, DSW and SNR regions	<b>WECC</b>	1-3-4-5-6-7
John Burnett / Sueyen McMahon	LADWP	<b>WECC</b>	1-3-5-6-9
Raquel Aguilar / Ron Belva	Tuscon Power	<b>WECC</b>	1-3
Carol Ballantine	Platte River Power Authority	<b>WECC</b>	1-3-4-5-6-9
Dick Buckingham	SMUD	<b>WECC</b>	1-3-5-9
Mee Charles	St. of Ca.	<b>WECC</b>	3-4-5-6-7-9
Patrick Damiano	Consultant	<b>WECC</b>	1-2-3-4-5-6
Maria Denton / Dennis Gerlach	SRP	<b>WECC</b>	1-3-5-9
Teresa Kuehneman	SRP	<b>WECC</b>	1-3-5-9
Linda Finley	Snohomish Public Power	<b>WECC</b>	1-3-5-9
Steve Knudsen	BPA	<b>WECC</b>	1-3-5-9
Dilip Mahendra / Phil O'Donnel	SMUD	<b>WECC</b>	1-3-5-9
Robert Schwermann / Tad Simms	SMUD	<b>WECC</b>	1-3-5-9
Steve Sorey, MRG	SMUD	<b>WECC</b>	1-3-5-9
Casey Sprouse	SMUD	<b>WECC</b>	1-3-5-9

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Gary Tarplee	SMUD	<b>WECC</b>	1-3-5-6
Phil Tice	SMUD	<b>WECC</b>	1-3-5-6
Raymond Vojandi	Grant County Public Utility	<b>WECC</b>	1-3-4-5-6-7
Lou Ann Westerfield	SCE	<b>WECC</b>	9
	Deseret Power	<b>WECC</b>	6
	WAPA	<b>WECC</b>	1-3-4-5-6-9
	Regulator	<b>WECC</b>	9

\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

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**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

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The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
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- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

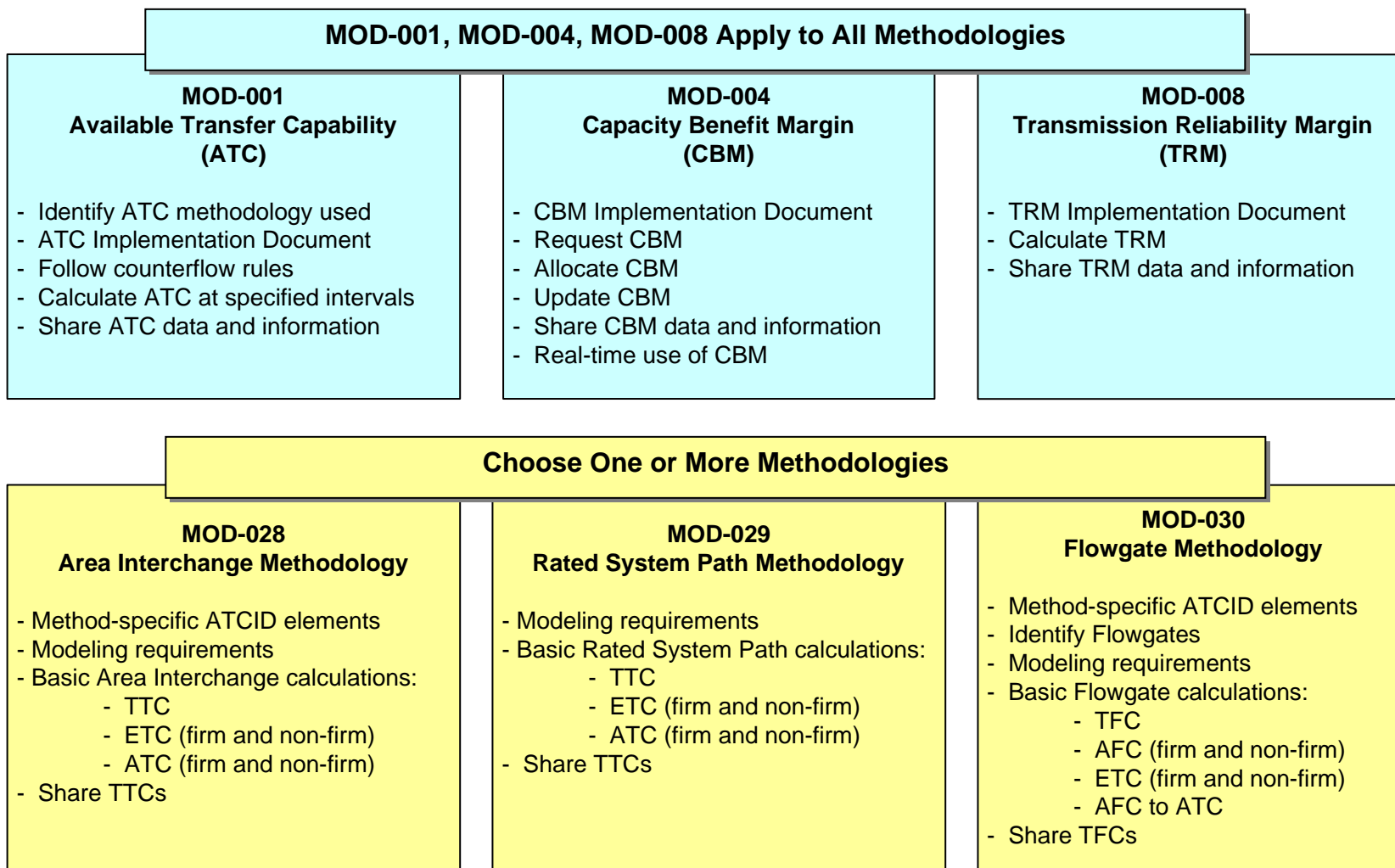
**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

The WECC MIC MIS ATC Drafting Team (hereafter "Team") solicited comments WECC-wide on all matters associated with this ATC filing. The Team solicited "in person" comments from 50+ members as well as the approximately 40 members of the WECC MIC MIS ATC TF advisory panel that served to provide the Team with continuing telephone and email advisory support on the technical issues associated with these filings.

The Team and those listed above echo the concerns of the NERC Standards Drafting Team and strongly supports the inclusion of a 12 month implementation period for these standards. Particularly for MOD-29, the standard as drafted will require that numerous paths not previously exposed to the high rigors of the MOD-29 TTC determination process will have to be examined. Those entities electing the Rated System Path Methodology will require this much needed period to assure proper review of the Posted Paths under their perview. Without this period, or in the alternative, should a shorter period be mandated, it is highly likely that entities electing the RSP methodology will be in non-compliance as of any implementation date short of the full 12 months recommended.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: The Team and those listed above support those definitions provided in MOD-01, MOD-4, MOD-08. The Team and those listed above do not elect to comment on defined terms offered in MOD-28.

The Team and those listed above note that Order 890, P. 212 requires that the NERC Drafting Team address "counterflows" but does not provide direction as to the meaning of that term. As the term is often used interchangeably to mean actual flows of energy, scheduling of energy or reservations of transmission for possible scheduling of energy, the Team and those listed above suggest that the NERC ATC Drafting Team clarify the meaning of the term as well as how it integrates into each proposed standard. Specifically, the NERC Team should clarify such items as: 1) is it a flow, a schedule or a reservation, 2) does it change characteristics based on the time frame examined (E.g. is it a reservation before it becomes a schedule?), 3) is it uni-directional or bi-directional. The term is used in numerous calculations but as presented is too vague to calculate rendering the formula opaque.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If

possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- General Comments
- 
- All standards should be checked for consistency in the use of the terms “calendar days” and “days.” Of note, these terms may differ between the Requirements and the corresponding VSLs. E.g. MOD-4, R4 specifies “calendar days” whereas the VSL for this requirement stipulates “days.”
- 
- MOD-01
- 
- R1. and R2.
- State “...for each Posted Path per time period...” and “...values for the time periods listed...” respectively. The term “time period” should be changed to “time horizon.” This makes the language consistent with 890.
- R3.3.
- The Team and those listed above suggest breaking the “R” into two pieces for clarity. The existing wording of being “associated” with each Facility is overly vague.
- 
- (New) R3.3 “The identity of the Planning Coordinator responsible for assessing the long term reliability of each Facility under the Transmission Provider’s tariff.” (This verbiage comes from the NERC Functional Model. As an alternative to the word “Facility”, “Posted Path” should be considered.)
- (New) R3.X “The identity of the Transmission Operator responsible for the real time operating reliability of each Facility under the Transmission Provider’s tariff.” (This verbiage comes from the NERC Functional Model. As an alternative to the word “Facility”, “Posted Path” should be considered.)
- R3.6
- The format of this sub-requirement does not match that of the other five sub-requirements ahead of it making the meaning unclear. The Team and those listed above suggest the following rewording:
-

- "R3.6. A description of the methodology(ies) used to allocate ATC among multiple lines or sub-paths within a larger Posted Path, including where applicable, any methodology(ies) used to allocate ATC among multiple owners of a single path."
- R4 and R5.
- These describe how counterflows are to be dealt with even though counterflows as a subcomponent of ETCs are addressed in MOD-28, R11 and R12; MOD-29, R7 and R8, and MOD-30, R8 and R9. The Team and those listed above suggest MOD-01, R4/R5 should be "cut" from MOD-01 and "pasted" into each of the MODs 28, 29 and 30 so that the reader / Applicable Entity can see the self-contained algorithm requirements in each of those three methodologies rather than having to cross reference (hunt and peck) between 28/29/30 and MOD-01. Since counterflows are always the last element mentioned in 28/29/30, the Team and those listed above would suggest pasting the MOD-01 counterflow requirement into each standard as the last requirement in each.
- R10.
- The wording is difficult to follow and could be clearer as to which entity must provide what information. The Team and those listed above suggest the following rewrite without doing damage to the substance.
- Suggested redraft:
  - 
  - "R10. Upon request from another Transmission Service Provider, Planning Coordinator or Reliability Coordinator, each Transmission Service Provider shall provide from the below specified list, only that data requested and only that data already in existence and in the possession of the Transmission Service Provider from which that specified data is requested. Provision of all data is subject to confidentiality and security requirements.
- R10.1 et al
- Keep the list of data as drafted except for R10.4. which is overly vague. Change R10.4 to read:
- (New) R10.4 "Network Integration Transmission Service capacity on an aggregated basis."
- ADD AN ADDITIONAL REQUIREMENT FOR CLARITY; BREAK THE EXISTING R10 INTO TWO PIECES:
- RXX. Each Transmission Service Provider providing information pursuant R10 shall do so:
  - RXX.1 Within fourteen days of a request
  - RXX.2 On the interval specified by the requesting entity, not to exceed more frequently than once per hour unless mutually agreed upon by the requestor and provider.

- RXX.3 In that format in which the data exists at the time of the request, unless otherwise agreed upon by the requestor and provider.
- Rxx.4 For the requested time period up to 13 months in the future.
- 
- R10.13
- There is a stray right parenthesis after the word "Margin."
- MOD-04
- 
- R2
- The acronym "CBID" should be changed to "CBMID."
- MOD-29
- 
- R1.6.
- The Team and those listed above suggest this bullet be deleted. This is already addressed in R2 wherein the modeling process is dictated. In the RSP methodology, "peak load forecasts" are not used to stress the system; rather, load and generation are simulated to stress the system to its greatest capacity. There are cases when the highest forecasted load may not stress the system to its greatest utilization – which is the goal of Order 890 as addressed in R2 under the RSP.
- 
- R2.3
- The Team and those listed above suggest correcting "...as determined by R1.2.1..." to read "...as determined by R2.1."
- 
- R5.
- The language describing Native Load should be changed from "reserved" to "allocated." Allocated is the word most commonly used in conjunction with OASIS to describe this condition. The same change should apply to GF sub F.
- The language describing Grandfathered capacity includes the defined terms "Firm" and "Transmission Service." Use of these words as defined terms is inconsistent throughout the proposed standards. They should either be changed here to a lower case or all applicable areas in each proposed standard should be changed to the defined term.
- MOD-30

- - MOD-01 allows an entity to select multiple methodologies to determine ATC. For example, an entity may elect to use Flowgates inside their affected area whereas they may also elect to use the Rated System Path methodology at the interface of their affected area. Under this scenario, the applicable entity need not study Flowgates beyond the intersecting cut plane of its interface as the ATC at the interface falls not under MOD-30 but MOD-29. To prevent seams issues and unnecessary analysis the Team and those listed above highly recommend the following rewrite(s):
  - 
  - MOD-30, R2.1.2. All first Contingency transfer analyses from all adjacent Balancing Authority source/sink combinations either: a) to at least the first three limiting Elements / Contingency combinations within the Transmission Operator's system or b) to the interface of the adjacent Balancing Authority where the Transmission Operator utilizes the Rated System Path methodology.
  - 
  - This concept also applies to: MOD-30, R3.5, R3.6, R5.1, R7.2 and R7.4.
4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

General:

The Team and those listed above are in support of changing the Violation Risk Factors as specifically commented on by SERC.

Specific:

MOD-01

M9

There is an unnecessary word "the" following the word "show" in the second line of the measure.

VSL for R4.

The word "Firm" should be inserted before the word ATC as R4 only refers to Firm ATC.

VSL for R5.

The word "Non-Firm" should be inserted before the word ATC as R5 only refers to Non-Firm ATC.

MOD-04

M1

Suggested rewording: "Each Transmission Service Provider shall produce its CBMID evidencing inclusion of all specified information in R1."

This approach should also be taken at M1 for MOD-08.

M5

M5, line 3 states "...they it has based its CBM..." Please change to "...that it has based its CBM..."

VSL for R2

The acronym "CBID" should be changed to "CBMID."

VSL for R10

The VSL is unclear. The Team suggests it be rewritten to state, "The Transmission Service Provider failed to approve an Interchange Transaction Tag for CBM submitted by an Energy Deficient Entity under an EEA2 when CBM was available."

D1.3 Data Retention

For clarity and consistency, the phrase "three calendar years" in the second through fifth bullets should be changed to "most recent three calendar years plus the current year."

MOD-08

M5

M5 is missing the right parenthesis after the word "data" on the first line.

VSL for R1

In the Moderate Level column, change the phrase "changes been" to "changes that have been".

MOD-29

M1.

M1 inaccurately calls for production of "models" used to derive TTC. As there are multiple conditions under MOD-29, R2 where a model does not dictate the predicate for TTC, M1 should be reworded to state "...shall produce the models, contracts, nomograms, reports or study results..."

Corresponding to:

- 1) Models in R2.1, R2.2. and R2.5;
- 2) Contracts in R.2.3 and R2.6;
- 3) Nomograms in R2.4;
- 4) Reports or studies in R2.7 and R2.8.

M1.3

The Team suggests correcting M1.3 from "...as stated in R1.1 through R.12..." to "...as stated in R1.1 through R1.12..."

M4.

If "M1" above is adopted, M4 is duplicative of M1 and should be deleted.



VSL for R4.

An SOL does not exist for every Posted Path. This VSL should be amended by changing the words "the SOL" in the High and Severe columns to read "any SOL". This makes the wording of the Requirement consistent with the wording of the Measure.

VSL R5, R6, R7, R8

These VSLs call for only a "severe" determination. They also mandate that the TSP "use" all the elements defined. However, the TSP will not "use" all the defined elements if they are not applicable. Thus, if a TSP does not "use" all elements defined because all the elements were not applicable – the TSP is in violation for not including null elements in its calculation.

The Team and those listed above suggest these be rewritten to state: "The Transmission Service Provider did not use all affected elements as defined in...." This approach should help clarify that "zero" as an integer is an acceptable entry and that only those variables "affected" need be reported or acted upon.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

AFFIRMATIVE COMMENTS:

The NERC Team and those listed above are reminded that the WECC MIC MIS ATC TF Drafting Team has solicited its responses face-to-face from 50+ individuals on 11/28/07 in Portland (attendance sheet retained by WECC and can be made available on request) and has also been supported by the ongoing technical support from the 40+ members of the WECC MIC MIS ATC Advisory Panel (16 separate entities) over the last year of drafting. As such, the WECC Team comments have been widely vetted and represent a substantial base of technical knowledge and veracity and are not merely the comments of a single entity.

The WECC Team and those listed above make the following "positive" proactive comments that the below listed features and attributes are essential to the standards as proposed and should be retained in the event a counter-position may be suggested by any singular entity.

GENERAL

1) The Team and those listed above support retention of the three methods recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028).

- 2) The Team and those listed above strongly support the retention of the proposed one-year implementation period.
- 3) The Team and those listed above support allowing NAESB to address all “posting” issues as they directly affect OASIS.

#### MOD-001 UMBRELLA

- 1) The Team and those listed above support allowing the use of more than one methodology for calculation of ATC by any one entity. For example, the Team supports allowing any entity to use the Flowgate methodology inside their affected area while also using the Rated System Path methodology at its boundaries.
- 2) The Team and those listed above support allowing each entity to specify in its ATCID how it will treat counterflows / schedules. (R4., R5.)
- 3) The Team and those listed above support the aggregation of transmission capacity for grandfathered contracts when shared with neighboring requestors.
- 4) The Team and those listed above support the specifically limited universe of entities to which data sharing is required as prescribed in R10.
- 5) The Team and those listed above are in support of changing the Violation Risk Factors as specifically commented on by SERC.

#### MOD-029 RATED SYSTEM PATH TTC, ETC & ATC

- 1) The Team and those listed above strongly support retention of the requirement(s) in R2.2 that accommodate paths which are “flow limited” by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing practices without re-inventing the wheel where no such effort is required to meet FERC’s goals of transparency and consistency.
- 2) The Team and those listed above strongly support retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.
- 3) The Team and those listed above strongly support retention of the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.

4) The Team and those listed above strongly support retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts, associated litigation and potential renegotiation of associated operational agreements while supporting FERC's mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.

5) The Team and those listed above strongly support the adoption of a definition for counterflow to clarify its application in each equation.

#### MOD-004 CBM

1) The Team and those listed above support the concept of allowing the LSE to decide how much CBM it needs to satisfy its resource adequacy requirements and the TSP determining how the total CBM requirement for all requesting LSE's is allocated among paths. This is the proper division of labor.

2) The Team and those listed above strongly support allowing the LSE scheduling rights to the CBM after declaration of an EEA2 or higher condition.

#### MOD-30

1) The Team and those listed above support the MOD-30, R3 and R6 requirements only as to those sub-bullets addressing the most reasonable approach to how often information should be updated.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name: .,	
Organization: WestConnect	
Telephone: 602-250-1135	
E-mail: Jerry.Smith@aps.com	
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

Group Comments (Complete this page if comments are from a group.)

**Group Name:** WestConnect Transfer Capability Workgroup

**Lead Contact:** Jerry Smith

**Contact Organization:** Arizona Public Service Co.

**Contact Segment:**

**Contact Telephone:** 602-250-1135

**Contact E-mail:** jerry.smith@aps.com

<b>Additional Member Name</b>	<b>Additional Member Organization</b>	<b>Region*</b>	<b>Segment*</b>
Jerry Smith	Arizona Public Service Co.	WECC	TO
Chuck Falls	Salt River Project	WECC	TO
W. Shannon Black	SMUD	WECC	TO
Phil Sanchez	Westen Area Power Administration - SNR	WECC	TO
Charlie Reinhold	WestConnect	WECC	TO
Sueyen McMahon	Las Angeles Department of Water and Power	WECC	TO
Leonard York	Westen Area Power Administration	WECC	TO
Jeni Mistry	Salt River Project	WECC	TO
John Hernandez	Salt River Project	WECC	TO
Jose Solva	Salt River Project	WECC	TO
Maria Denton	Salt River Project	WECC	TO
Brian Cole	Arizona Public Service	WECC	TO
Marilyn Franz	Sierra Pacific Power Corp./Nevada Power	WECC	TO
John Steward	Western Area Power Administration	WECC	TO
Terri Kuehneman	Salt River Project	WECC	TO
James Hsu	Salt River Project	WECC	TO

**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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\*If more than one region or segment applies, please indicate all that do apply. Regional acronyms and segment numbers are shown on prior page.

## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

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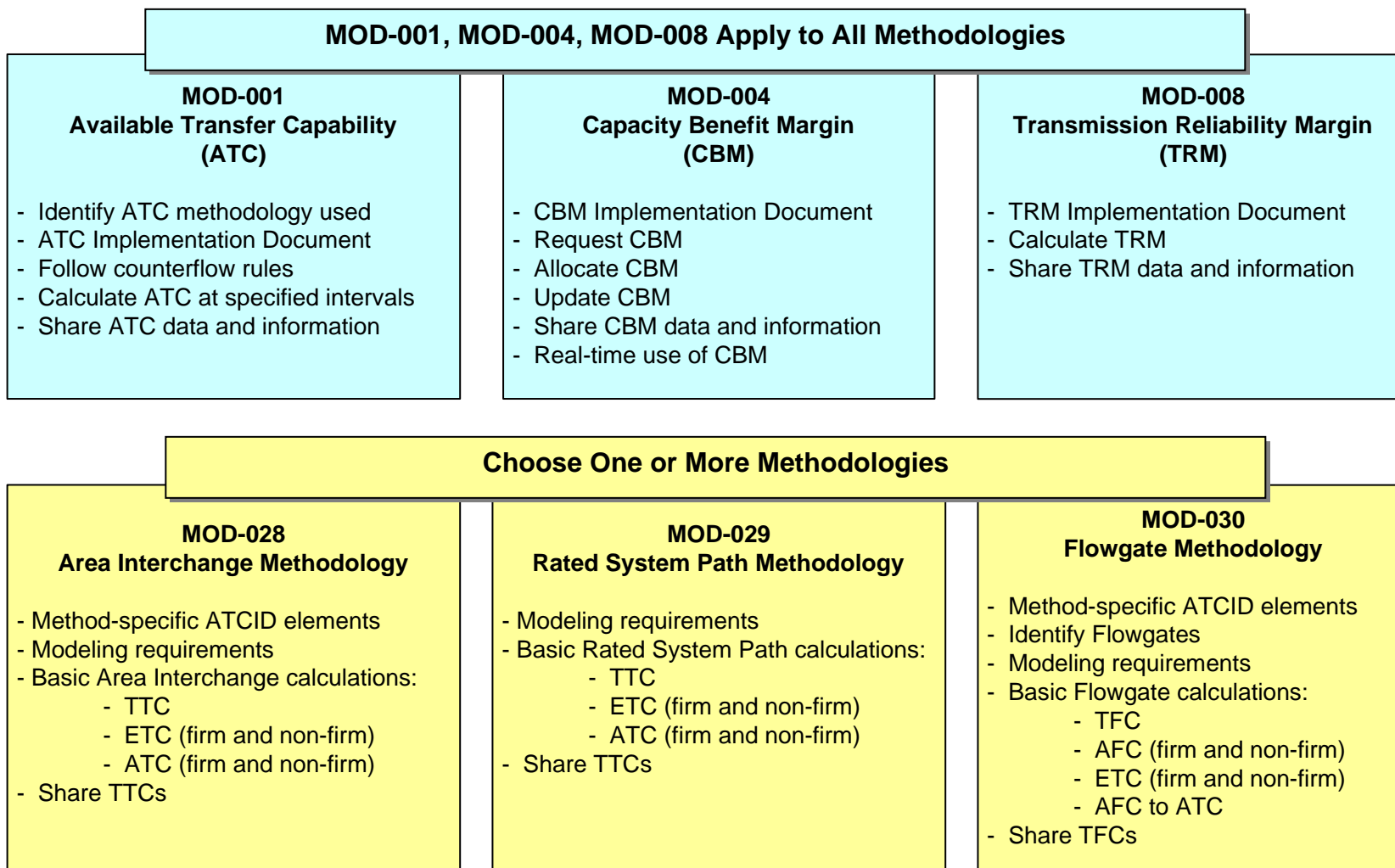
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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.



### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

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The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

The Team strongly supports the inclusion of a 12 month implementation period for these standards. Particularly for MOD-29, the standard as drafted will require that numerous paths not previously exposed to the high rigors of the MOD-29 TTC determination process will have to be examined.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: The Team agrees with the WECC's Comment that the NERC ATC Drafting team should clarify the meaning of the term counterflows.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- General
- In General the WestConnect Teams agrees with the WECC Comments. In addition the WestConnect Team adds the following comments.
- 
- All of the MODs should be reviewed for consistency in terminology. In particular the terms "day" and "calendar days".
- 
- MOD-01
- R4. and R5. address how counter flows are dealt with in determining ATC. In MODs 28, 29 and 30 the use of counter flows are again addressed in the determining ATC. This leads to having to refer to two different documents when addressing counter flows. The WestConnect Team suggest using the WECC suggestion. WECC suggestion is "The Team suggests MOD-01, R5 should be "cut" from MOD-01 and "pasted" into each of the MODs 28, 29 and 30 so that the reader / applicable entity can see the self-contained algorithm requirements in each of those three methodologies rather than having to cross reference

(hunt and peck) between 28/29/30 and MOD-01. Since counterflows are always the last element mentioned in 28/29/30, the team would suggest pasting the MOD-01 counterflow requirement into each standard as the last requirement in each."

- Requirement R10. should be rewritten to clarify that Transmission Service Provider is required to provide only the data requested and only the existing data that the Transmission Service Provider has possession of and in the format that this existing data is in.
- Change R10.4 so that the Transmission Service Provider provides Network Integration Transmission Service details on an aggregated basis.
- 
- MOD-04
- The Team suggest changing R2. to "within seven days of the effective day of a change."
- 
- MOD-08
- For a system where the Rated System Path method is used to determin ATC, the Transmission Operator for a path with multiple owners only operates the path. The Transmission Owner gets its contractual share of the TTC. In addition it is responsible for all the ATC calculation and determining the TRM associated with it contractual share of the path. In MOD-08 as currently written the Transmission Operator is responsible for requirements R1., R2., R4. and R5.. The Team recomends that requirements R1., R2., R4. and R5. be rewritten to make this the responsibility of the Transmission Owner for entities using Rated System Path.
- R.5 the Team suggest change "shall calculate" to "shall review and recalculate as necessary "
- 
- MOD-29
- R1.6. The bullet should be deleted. In the Rated System Path methodology "peak load forecast are not used to stress the system; rather, load and generation are simulated to stress the system. This is already addressed in R.2.
- 
- 4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

The WestConnect Team is in support of lowering the VRFs as proposed in the SERC comments.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

In General the WestConnect Teams agrees with the WECC Comments. In addition the WestConnect Team adds the following comment.

Order 890 stresses transparency for ATC. The Team does not believe that Implementation Documents are transparent to the transmission users in that there are no requirements for the documents to be made available to the users. The WestConnect Team suggest that all the Implementation Documents be made public on the TSP's OASIS.



NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

Please use this form to submit comments on the proposed set of ATC standards (MOD-001, MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030). Comments must be submitted by **December 14, 2007**. You may submit the completed form by e-mail to [sarcomm@nerc.net](mailto:sarcomm@nerc.net) with the abbreviation "ATC Standards" in the subject line. If you have questions please contact **Andy Rodriquez** at [Andy.Rodriquez@nerc.net](mailto:Andy.Rodriquez@nerc.net) or by telephone at 609-947-3885.

<b>Individual Commenter Information</b>	
(Complete this page for comments from one organization or individual.)	
Name:	Robert H. Easton
Organization:	Western Area Power Administration - RMR
Telephone:	970-461-7272
E-mail:	aeaston@wapa.gov
NERC Region (check all Regions in which your company operates)	Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input checked="" type="checkbox"/> 1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/> 2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/> 3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/> 4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/> 5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/> 6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/> 7 – Large Electricity End Users
<input checked="" type="checkbox"/> WECC	<input type="checkbox"/> 8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input checked="" type="checkbox"/> 9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/> 10 – Regional Reliability Organizations and Regional Entities



## **Background Information**

Project 2006-07 was initiated in 2006 to revise the then existing NERC reliability modeling standards to ensure the consistent and transparent calculation, verification, and use of Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), Total Transfer Capability (TTC), Available Flowgate Capability (AFC), and Available Transfer Capability (ATC). Project 2006-07 requires specific reliability practices be incorporated into these standards. Such changes will enhance the reliable use of the bulk power transmission system without arbitrarily limiting commercial activity.

On February 17, 2007 FERC issued Order 890 which directed, among other things, a number of reforms in the determination of ATC by requiring consistency and transparency in how CBM, TRM, TTC, AFC and ATC are calculated and allocated. Then on March 16, 2007 FERC issued Order 693 which provided directives on modifying the NERC standards, including those modeling standards related to the determination of ATC.

The drafting team has created the following proposed standards:

**MOD-001 – Available Transfer Capability.** An “umbrella” standard requires the selection of a methodology, the updating of values, and the sharing of procedures and data.

**MOD-004 – Capacity Benefit Margin.** A standard that describes the requesting, calculation, and use of CBM.

**MOD-008 – Transmission Reliability Margin.** A standard that describes the calculation and use of TRM.

**MOD-028 – Area Interchange Methodology (previously called the Network Response ATC Methodology).** A standard that describes the calculation of TTC and ATC, as performed primarily in the Eastern Interconnection.

**MOD-029 – Rated System Path Methodology.** A standard that describes the calculation of TTC and ATC, as performed primarily in the Western Interconnection.

**MOD-030 – Flowgate Methodology (previously called the Network Response Flowgate Methodology).** A standard that describes the calculation of TFC and AFC, as well as the conversion of those values to TTC and ATC.

The diagram on the next page shows, at a very high level, the arrangement of requirements within the revised set of standards. The drafting team made many major changes to the standards based on feedback from stakeholders submitted in response to the last posting of these standards as well as feedback from NAESB and FERC. Major changes include:

- Defined several new terms – and changed the names of some of the methodologies. The most significant new term is, ‘Posted Path’ – this is used to define the boundaries for determining TTCs, TFCs, and ATCs.
- Changed the applicability so that the Transmission Operator determines TTC or TFC and the Transmission Service Provider determines ATC.
- Converted descriptive language into algorithms for calculating ETC and ATC.
- MOD-001 includes the basic requirement for the TSP to have an Available Transfer Capability Implementation Document (ATCID) – but if a particular method of calculating TTC or TFC requires that the TSP’s ATCID have additional data or information, then the requirement for the TSP’s ATCID to have that additional data or information is in the standard that includes the method for calculating TTC or TFC.

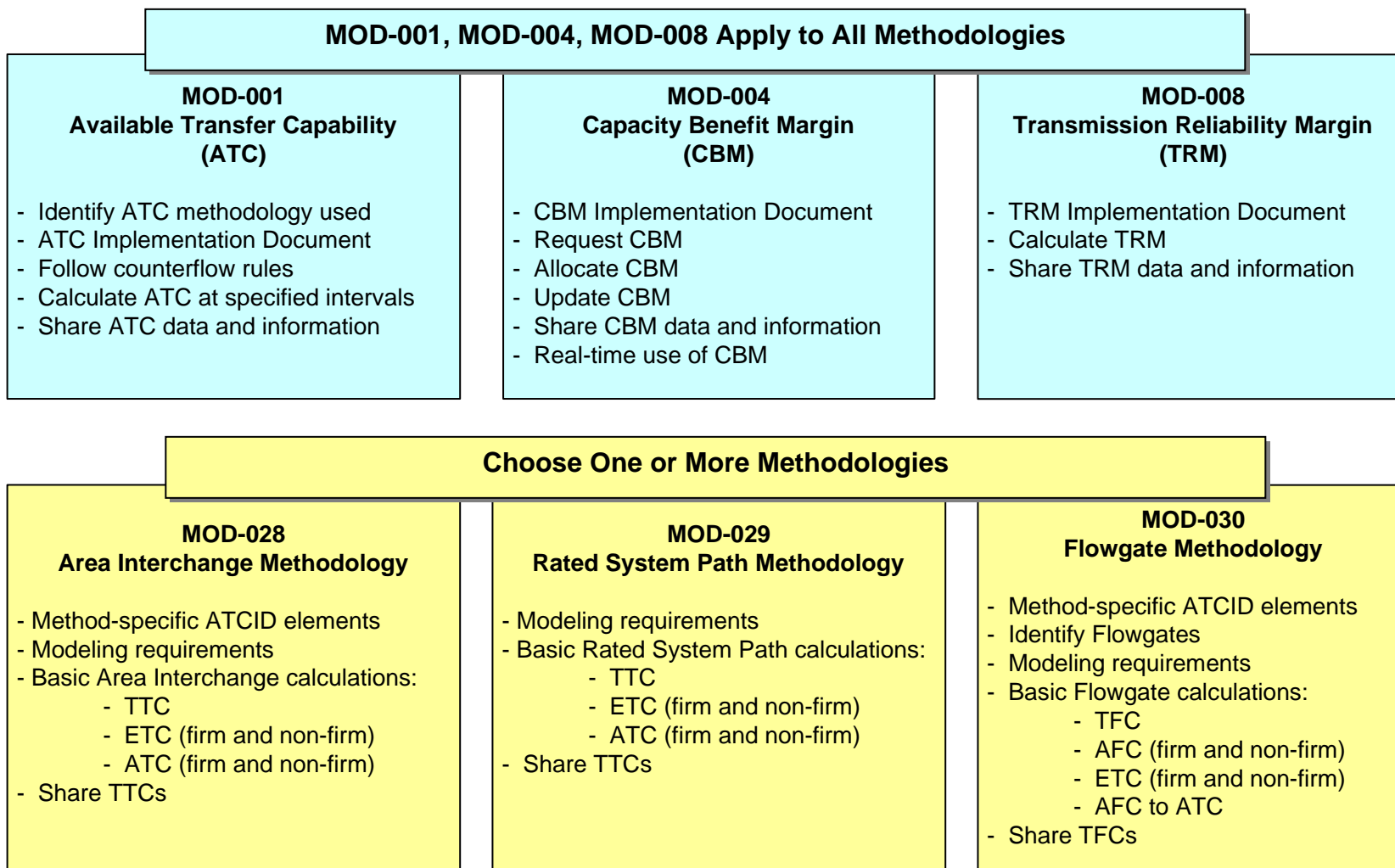


**Comment Form — 3<sup>rd</sup> Draft of Standard MOD-001; 2<sup>nd</sup> Draft of Standards MOD-004, MOD-008, MOD-028, MOD-029, and MOD-030 — Project 2006-07**

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- Removed all requirements to make data or information 'publicly available' – the drafting team has been working cooperatively with NAESB and all posting requirements will be addressed in NAESB Business Practices.
- Added measures and compliance elements.

### Arrangement of Requirements within the Proposed Set of 'ATC' Standards



The implementation plan includes the proposed retirement of the following standards:

- **FAC-012 – Transfer Capability Methodology.** Now addressed in MOD-028, MOD-029, and MOD-030.
- **FAC-013 – Establish and Communicate Transfer Capabilities.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-002 – Review of TTC and ATC Calculations and Results.** Now addressed in MOD-028, MOD-029, and MOD-030. Also to be addressed in future NAESB Business Practices.
- **MOD-003 – Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values.** To be addressed in future NAESB Business Practices.
- **MOD-005 – Procedure for Verifying Capacity Benefit Margin Values.** Now addressed in MOD-004.
- **MOD-006 – Procedures for the Use of Capacity Benefit Margin Values.** Now addressed in MOD-004
- **MOD-007 – Documentation of the Use of Capacity Benefit Margin.** Now addressed in MOD-004
- **MOD-009 – Procedure for Verifying Transmission Reliability Margin Values.** Now addressed in MOD-008

The standard drafting team was charged with revising the ATC-related modeling standards to comply with the FERC directives and industry participant consensus recommendations and is coordinating its efforts with NAESB to ensure that there are no gaps and no overlaps in the combined requirements. Please review the revised standards and the implementation plan and then answer the questions on the following pages. Please submit comments by **December 14, 2007.**

**You do not have to answer all questions. Enter All Comments in Simple Text Format.**

*Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.*

1. The drafting team has proposed an Implementation Plan for these standards. Should additional time be provided for successful implementation?

Yes

No

If "Yes," please identify your concerns. Comments:

The WECC MIC MIS ATC Drafting Team (hereafter "Team") solicited comments WECC-wide on all matters associated with this ATC filing. The Team solicited "in person" comments from 50+ members as well as the 43 members of the WECC MIC MIS ATC TF advisory panel that served to provide the Team with continuing telephone and email advisory support on the technical issues associated with these filings. Western was part of the Team review, however, did not get consensus on it's comments in time to be included in the overall WECC response. Therefore, Western has submitted the WECC comments with our additional comments included as follows and in the appropriate location in this comment form:

General - Document is very wordy - beginning with the definition of "Proposed Effective Date" - need to cut down language throughout.

MOD-001 -  
Posted Path definition clarification question.  
M5 and D1.3 suggestions

MOD-004 -  
point on R4.2.1

MOD-029 -  
General comment regarding R2 conflicting with FAC-012  
R6 - what is meant by "non-firm NITS"?  
M1.2 and M1.3 are redundant; M8.1 and M9.1 are redundant  
M7 - R.2.1 wrong reference.

General - under D1.3 - data retention - why not require ONE retention time frame?

The Team echoes the concerns of the NERC Standards Drafting Team and strongly supports the inclusion of a 12 month implementation period for these standards. Particularly for MOD-29, the standard as drafted will require that numerous paths not previously exposed to the high rigors of the MOD-29 TTC determination process will have to be examined. Those entities electing the Rated System Path Methodology will require this much needed period to assure proper review of the Posted Paths under their pervue. Without this period, or in the alternative, should a shorter period be mandated, it is highly likely that entities electing the RSP methodology will be in non-compliance as of any implementation date short of the full 12 months recommended.

2. If there are any proposed definitions that you believe are incorrect, please identify the term and provide a substitute definition.

Incorrect Definition: The Team supports those definitions provided in MOD-01, MOD-4, MOD-08. The Team does not elect to comment on defined terms offered in MOD-28.

The Team notes that Order 890, P. 212 requires that the NERC Drafting Team address "counterflows" but does not provide direction as to the meaning of that term. As the term is often used interchangeably to mean actual flows of energy, scheduling of energy or reservations of transmission for possible scheduling of energy, the Team suggests that the NERC ATC Drafting Team clarify the meaning of the term as well as how it integrates into each proposed standard. Specifically, the NERC Team should clarify such items as: 1) is it a flow, a schedule or a reservation, 2) does it change characteristics based on the time frame examined (E.g. is it a reservation before it becomes a schedule?), 3) is it uni-directional or bi-directional. The term is used in numerous calculations but as presented is too vague to calculate rendering the formula opaque.

3. If there is a requirement in any of the proposed standards that you believe is technically incorrect, please identify the standard and requirement and identify what is incorrect. If possible, provide alternate language that you believe would make the requirement technically correct.

Incorrect Requirement:

- General Comments
- 
- All standards should be checked for consistency in the use of the terms "calendar days" and "days." Of note, these terms may differ between the Requirements and the corresponding VSLs. E.g. MOD-4, R4 specifies "calendar days" whereas the VSL for this requirement stipulates "days."
- The documentation overall is very wordy - starting with the "Proposed Effective Date." - need to cut down language throughout.
- MOD-01
- Posted Path Definition - "Any BA to BA interconnections." Most TPs in the Western Interconnection do not post BA-BA interconnections as "paths". Is the intent here to be interpreted as "if you post BA-BA paths" vs. you shall post all interconnections?
- R1. and R2.
- State "...for each Posted Path per time period..." and "...values for the time periods listed..." respectively. The terms "time period" should be changed to "time horizon." This locks the time window to a prescribed window and negates the ability to assign a random "time period."
- 
- R3.3.

- The Team suggests breaking the "R" into two pieces for clarity. The existing wording of being "associated" with each Facility is overly vague.
- (New) R3.3 "The identity of the Planning Coordinator responsible for assessing the long term reliability of each Facility under the Transmission Provider's tariff." (As an alternative to the word "Facility", "Posted Path" should be considered.)
- (New) R3.X "The identity of the Transmission Operator responsible for the real time operating reliability of each Facility under the Transmission Provider's tariff." (As an alternative to the word "Facility", "Posted Path" should be considered.)
- R3.6
- The format of this sub-requirement does not match that of the other five sub-requirements ahead of it making the meaning unclear. The Team suggests the following rewording:
  - "R3.6. A description of the methodology(ies) used to allocate ATC among multiple lines or sub-paths within a larger Posted Path, including where applicable, any methodology(ies) used to allocate ATC among multiple owners of a single path."
- R4 and R5.
- These describe how counterflows are to be dealt with even though counterflows as a subcomponent of ETCs are addressed in MOD-28, R11 and R12; MOD-29, R7 and R8, and MOD-30, R8 and R9. The Team suggests MOD-01, R5 should be "cut" from MOD-01 and "pasted" into each of the MODs 28, 29 and 30 so that the reader / applicable entity can see the self-contained algorithm requirements in each of those three methodologies rather than having to cross reference (hunt and peck) between 28/29/30 and MOD-01. Since counterflows are always the last element mentioned in 28/29/30, the team would suggest pasting the MOD-01 counterflow requirement into each standard as the last requirement in each.
- R10.
- The wording is difficult to follow and could be clearer as to which entity must provide what information. The Team suggests the following rewrite without doing damage to the substance.
- Suggested redraft:
  - "R10. Upon request from another Transmission Service Provider, Planning Coordinator or Reliability Coordinator, each Transmission Service Provider shall provide from the below specified list, only that data requested and only that data already in existence and in the possession of the Transmission Service Provider from which that specified data is requested. Provision of all data is subject to confidentiality and security requirements.
- R10.1 et al
- Keep the list of data as drafted except for R10.4. which is overly vague. Change R10.4 to read:

- (New) R10.4 "Network Integration Transmission Service capacity on an aggregated basis."
- ADD AN ADDITIONAL REQUIREMENT FOR CLARITY; BREAK THE EXISTING R10 INTO TWO PIECES:
- RXX. Each Transmission Service Provider providing information pursuant R10 shall do so:
- RXX.1 Within fourteen days of a request
- RXX.2 On the interval specified by the requesting entity, not to exceed more frequently than once per hour unless mutually agreed upon by the requestor and provider.
- RXX.3 In the format in which the data exists at the time of the request, unless otherwise agreed upon by the requestor and provider.
- Rxx.4 For the requested time period up to 13 months in the future.
- R10.13
- There is a stray right parenthesis after the word "Margin."
- D1.3 - data retention - why not make it all the same time period - say two years?
- MOD-04
- R2
- The acronym "CBID" should be changed to "CBMID."
- R4.2.1 - Western interconnection puts reserve sharing requirements in TRM, not CBM.
- MOD-29
- R1.6.
- The Team suggests this bullet be deleted. This is already addressed in R2 wherein the modeling process is dictated. In the RSP methodology, "peak load forecasts" are not used to stress the system; rather, load and generation are simulated to stress the system to its greatest capacity. There are cases when the highest forecasted load may not stress the system to its greatest utilization – which is the goal of the R2 under the RSP.
- General comment/question - does R.2 conflict with FAC-012?
- R2.3
- The team suggests correcting "...as determined by R1.2.1..." to read "...as determined by R2.1."
- R5.

- The language describing Native Load should be changed from "reserved" to "encumbered." Encumbered is the word most frequently used in conjunction with OASIS to describe this condition. The same change should apply to GF sub F.
  - The language describing Grandfathered capacity includes the defined terms "Firm" and "Transmission Service." Use of these words as defined terms is inconsistent throughout the proposed standards. They should either be changed here to a lower case or all applicable areas in each proposed standard should be changed to the defined term.
  - R6 - what is "non-firm capacity reserved for NITS"?
  - D1.3 - why not require one retention time period - say two years?
  - MOD-30
  - MOD-01 allows an entity to select multiple methodologies to determine ATC. For example, an entity may elect to use Flowgates inside their affected area whereas they may also elect to use the Rated System Path methodology at the interface of their affected area. Under this scenario, the applicable entity need not study Flowgates beyond the intersecting cut plane of its interface as the ATC at the interface falls not under MOD-30 but MOD-29. To prevent seams issues and unnecessary analysis the Team suggests the following rewrite(s):
  - MOD-30, R2.1.2. All first Contingency transfer analyses from all adjacent Balancing Authority source/sink combinations either: a) to at least the first three limiting Elements / Contingency combinations within the Transmission Operator's system or b) to the interface of the adjacent Balancing Authority where the Transmission Operator utilizes the Rated System Path methodology.
  - If adopted, this same concept would be applied to: MOD-30, R3.5, R3.6, R5.1, R7.2 and R7.4.
4. The drafting team has proposed a set of measures and compliance elements for the standards. If there is a measure or compliance element that you believe is incorrect, please identify this for us, being as specific as possible with a suggestion for revising the language so it is correct.

Incorrect Measure or Compliance Element:

General:

The Team is in support of lowering the VSLs as specifically commented on by SERC.

Specific:

MOD-01

M9

There is an unnecessary word "the" following the word "show" in the second line of the measure.

VSL for R4.

The word "Firm" should be inserted before the word ATC as R4 only refers to Firm ATC.



VSL for R5.

The word "Non-Firm" should be inserted before the word ATC as R5 only refers to Non-Firm ATC.

M5 - R5 is incorrect reference.

MOD-04

M1

Suggested rewording: "Each Transmission Service Provider shall produce its CBMID evidencing inclusion of all specified information in R1."

This approach should also be taken at M1 for MOD-08.

M5

M5, line 3 states "...they it has based its CBM..." Please change to "...that it has based its CBM..."

VSL for R2

The acronym "CBID" should be changed to "CBMID."

VSL for R10

The VSL is unclear. The Team suggests it be rewritten to state, "The Transmission Service Provider failed to approve an Interchange Transaction Tag for CBM submitted by an Energy Deficient Entity under an EEA2 when CBM was available."

D1.3 Data Retention

Why not require one retention timeframe - say two years?

MOD-08

M5

M5 is missing the right parenthesis after the word "data" on the first line.

VSL for R1

In the Moderate Level column, change the phrase "changes been" to "changes that have been".

MOD-29

M1.

M1 inaccurately calls for production of "models" used to derive TTC. As there are multiple conditions under MOD-29, R2 where a model does not dictate the predicate for TTC, M1 should be reworded to state "...shall produce the models, contracts, nomograms, reports or study results..."

Corresponding to:

- 1) Models in R2.1, R2.2. and R2.5;
- 2) Contracts in R.2.3 and R2.6;
- 3) Nomograms in R2.4;
- 4) Reports or studies in R2.7 and R2.8.

M1.3

The Team suggests correcting M1.3 from "...as stated in R1.1 through R.12..." to "...as stated in R1.1 through R1.12..."

M4.

If "M1" above is adopted, M4 is duplicative of M1 and should be deleted.

M1.2 and M1.3 are redundant - remove one.

M7 - reference to R.1.2 seems incorrect.

M8.1 and M9.1 are redundant - remove one.

VSL for R4.

An SOL does not exist for every Posted Path. This VSL should be amended by changing the words "the SOL" in the High and Severe columns to read "any SOL". This makes the wording of the Requirement consistent with the wording of the Measure.

VSL R5, R6, R7, R8

These VSLs call for only a "severe" determination. They also mandate that the TSP "use" all the elements defined. However, the TSP will not "use" all the defined elements if they are not applicable. Thus, if a TSP does not "use" all elements defined because all the elements were not applicable – the TSP is in violation for not including null elements in its calculation.

The Team suggests these be rewritten to state: "The Transmission Service Provider did not use all affected elements as defined in..." This approach should help clarify that "zero" as an integer is an acceptable entry and that only those variables "affected" need be reported or acted upon.

5. Are you aware of any conflicts between the proposed standard and any regulatory function, rule/order, tariff, rate schedule, legislative requirement or agreement?

Yes

No

If "Yes," please explain why and provide supporting information.

Comments:

6. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standards.

Comments:

AFFIRMATIVE COMMENTS:

The NERC Team is reminded that the WECC MIC MIS ATC TF Drafting Team has solicited its responses face-to-face from 50+ individuals on 11/28/07 in Portland (attendance sheet retained by WECC and can be made available on request) and has also been supported by the ongoing technical support from the 43 members of the WECC MIC MIS ATC Advisory Panel (16 separate entities) over the last year of drafting. As such, the WECC Team comments have been widely vetted and represent a substantial base of technical knowledge and veracity and are not merely the comments of a single entity.

The WECC Team makes the following "positive" proactive comments that the below listed features and attributes should be retained in the event a counter-position may be suggested by any singular entity.

#### GENERAL

- 1) The Team supports retention of the three methods recognizing the differences between the Rated System Path (MOD-029), Flowgate Methodology (MOD-030) and the Area Interchange Methodology (MOD-028).
- 2) The Team strongly supports the retention of the proposed one-year implementation period.
- 3) The Team supports allowing NAESB to address all "posting" issues as they directly affect OASIS.

#### MOD-001 UMBRELLA

- 1) The Team supports allowing the use of more than one methodology for calculation of ATC by any one entity. For example, the Team supports allowing any entity to use the Flowgate methodology inside their affected area while also using the Rated System Path methodology at its boundaries.
- 2) The Team supports allowing each entity to specify in its ATCID how it will treat counterflows / schedules. (R4., R5.)
- 3) The Team supports the aggregation of transmission capacity for grandfathered contracts when shared with neighboring requestors.
- 4) The Team supports the specifically limited universe of entities to which data sharing is required as prescribed in R10.
- 5) The Team supports those comments submitted by SERC specifying suggested changes to the VSLs. However, this Team makes no comment on the VSLs as they affect MOD-28.

#### MOD-029 RATED SYSTEM PATH TTC, ETC & ATC

- 1) The Team strongly supports retention of the requirement(s) in R2.2 that accommodate paths which are "flow limited" by allowing the rating in the flow limited direction to be equal to the rating in the reliability limited direction. This accommodates existing practices without re-inventing the wheel where no such effort is required to meet FERC's goals of transparency and consistency.
- 2) The Team strongly supports retention of the requirement(s) in R2.5 verifying that a given Posted Path does not adversely impact the TTC value of any existing path.
- 3) The Team strongly supports retention of the requirement(s) in R2.7 allowing the retention of existing and operationally proven TTCs without requiring a superfluous and redundant re-rating.
- 4) The Team strongly supports retention of the requirement(s) in R2.6 allowing for allocation of TTC via contract. This avoids the needless renegotiation of contracts, associated litigation and potential renegotiation of associated operational agreements while supporting FERC's mandate of transparency and consistency via MOD-01, R.3.6 wherein disclosure of allocation methodologies is required.
- 5) The Team strongly supports the adoption of a definition for counterflow to clarify its application in each equation."

#### MOD-004 CBM

- 1) The Team supports the concept of allowing the LSE to decide how much CBM it needs to satisfy its resource adequacy requirements and the TSP determining how the total

CBM requirement for all requesting LSE's is allocated among paths. This is the proper division of labor.

2) The Team strongly supports allowing the LSE scheduling rights to the CBM after declaration of an EEA2 or higher condition.

MOD-30

1) The Team supports the MOD-30, R3 and R6 requirements as representing the most reasonable approach to frequency of updating information.