Entity	Segment	Vote	Comment
Ameren Services Company	1	Negative	Ameren would like to thank the SDT for the considerable effort invested in drafting this standard. However, Ameren cannot support this version of MOD-030-1. (1) AFC is a market parameter and as such is applicable to the Transmission Service Provider. (2) Definition of an adequate flowgate population is required to adequately constrain the sale of transmission service, as such this would appear to be a market not a reliability issue. (3) Under R2 the calculation of TFC is applicable to the Transmission Operator. This is not consistent with the current version of the Functional Model. The Transmission Planner is responsible for supporting the development of TTC (TFC). (3) Under R3 the Transmission Service Provider not the Transmission Operator should be responsible for the calculation of ATC/AFC and any modeling data. This is especially true when the Transmission Service Provider determines ATC for the transmission systems of several Transmission Operators as would occur in an RTO/ISO such as the MISO. (4) That said we are aware that the oversubscription of transmission service can lead to reliability problems. (5)AFC issues affect long term planning as well as planning in the Operating Time Horizon.
American Transmission Company, LLC	1	Negative	R2.1.3: Midwest ISO believes that this requirement is too onerous and leaves no allowance for an Interconnection-wide congestion management process to be enacted due to a forced outage or any other system condition unforeseen by forecasted system conditions. Also, the SDT did not respond to Midwest ISO comment concerning temporary flowgates in TLR. Midwest ISO questions the reliability benefit gained by calculating AFCs for a flowgate which was only created for a temporary system condition. Midwest ISO also believes that a flowgate referenced by R3.5 should be added by process established in R2.1.4. Otherwise, as the requirement is written, if a forced outage causes an Interconnection-wide congestion management procedure to be enacted in on a limiting element/contingency in PJM, then Midwest ISO would be required to add that facility as a flowgate despite the opinion of PJM or even if a transfer from Midwest ISO to PJM does not have an impact greater than the 5% threshold. R2.2: Midwest ISO continues to believe that the text of this requirement is not clear. Midwest ISO asks the drafting team to consider the following language. At a minimum, establish the list of internal flowgates to create, modify, or delete at least once per calendar year. R2.3: Midwest ISO continues to believe that the text of this requirement is not clear. Midwest ISO asks the drafting team to consider the following language. At a minimum, establish the list of external flowgates to create, modify, or delete that have been requested as part of R2.1.4 within thirty calendar days from the request. R2.4: Both sub bullets instruct the entity to use the SOL for the flowgate. If this were to be the case, then R2.4 could be revised to just require the use of the SOL of the flowgate. Otherwise, the requirement should be revised to precisely capture the intention of the SDT. R5.3: How can this requirement be enforceable for entities that are non-FERC jurisdictional? We are concerned of the situation where a non-FERC jurisdictional neighboring entity doesn't provide such data to the Midwest ISO. We request clarification. R6.2/R6.4/R6.6/R7.2/R7.4/R7.6: Midwest ISO is not convinced that similar seams coordination requirements exist for the other two standards, especially for MOD-029. This continues to demonstrate that more stringent requirements are placed on MOD-030 than the other methodologies. We request to remove these requirements from MOD-030 to achieve

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			more unbiased standards. R11: Midwest ISO continues to question the language of this requirement for three reasons. First, the response from the SDT to our previous round of comments indicates that the TTC would remain constant because the flowgate with the lowest TFC would generally remain constant relative to each path. However, the SDT ignored the fact that the distribution factor for that same flowgate changes due to system topology changes. Hence, the TTC value will almost always change each time the model is updated, which is currently once per day as stated in R3. Second, the TTC value back calculated for the Flowgate methodology is not as valuable as it is in the Rated System Path methodology or the Area Interchange Methodology. If a flowgate will never limit an ATC, why would anyone be interested to know a TTC calculated by this flowgate? As the requirement is written, the Transmission Service Provider will be expected to incur additional cost, with no benefit to either the reliability or transmission customers, to separately account for the flowgate with the smallest TFC value in order to back calculate a TTC value. Third, when you use the same flowgate for all value conversions, the formula "ATC=TTC-CBMpath-TRMpath-ETCpath" still holds if you simply divide everything in formula "AFC=TFC-CBMflowgate-TRMflowgate-ETCflowgate" by the flowgate distribution factor. However, using different flowgates would make the formula "ATC=TTC-CBM-TRM-ETC" invalid. This result eliminates the usefulness of the TTC value for the Flowgate methodology. Therefore, we request this requirement to be rewritten if the SDT believes a formula to calculate TTC must be included in the standard.
Avista Corp.	1	Negative	The standard needs some flexibility due to regional differences. Support comments submitted by the Bonneville Power Administration.
Bonneville Power Administration	1	Negative	BPA believes this forces undue complication for our utility that could, in fact, lessen attention to reliability by adding extensive additional work without any gain in reliability. Our comments: 1. R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability where the specific characteristics of: load, generation, configuration of extensive special protection schemes (SPS), and WECC's more stringent (greater than n-1) performance requirements determine which varying specific lines or equipment determine the capacity of the flowgate. While being made up of different named elements, BPA's existing flowgates do not always include the first three limiting Elements and their worst associated Contingency combinations, yet they still protect the area of transmission constraint. An example of a basis for an ATC capacity that does not fit the proposed standard's language is a two Palo Verde nuclear unit outage in Arizona which is often the critical contingency that causes voltage stability limitations on BPA's North of Hanford Path in Washington over 1000 miles away from the Palo Verde units. While the proposed MOD-30 Flowgate Methodology may provide sufficient reliability for

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			(n-1) thermally limited constraints where the impact of an outage is on parallel transmission, the above example describes a limiting outage that is not in the area of the transmission constraint, thus it does not make sense to define it as part of a flowgate. In regards to capacity, BPA's existing flowgates can be dynamically changed to maximize capacity based on specific operating conditions. If the language in R2.1.1 and R2.1.2 of MOD-30 is adopted, it will require defining many additional "flowgates" with no added reliability or capacity compared to the method BPA has in place today. This would unnecessarily introduce significant workload and computation to BPA and many others in the western interconnection that could, in fact, complicate the understanding of operational constraints. For these reasons, BPA believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2 for WECC entities as a regional difference: RX. WECC: Results of transfer analyses, consistent with those studies required in FAC-010 and FAC-011, or their successors, for ATC Paths up to the path capability. RX.1. Only the most limiting element in a series configuration needs to be included in a Flowgate. If these "RX" requirements are added, to replace R2.1.1-2.1.2.2 for WECC entities, R2.4 would also require modification as follows ("red/underlined" language indicates additions): R2.4. Establish the TFC of each of the defined Flowgates as equal to: For thermal limits, the lowest System Operating Limit (SOL) included in the definition of the Flowgate. For voltage or stability limits, the flow that will respect the lowest SOL included in the definition of the Flowgate. 2. Additionally, there are typos at the following locations: Applicability 4.1.1, where a space is missing between "(AFCs)" and "on"; R1, where a colon is missing following the "(ATCID)"; R2.1.2, where "analyses" should not be plural; and "R"s appear to be missing from all "fourth-tier" requirements (2.1.1.1 for example).
Brazos Electric Power Cooperative, Inc.	1	Negative	A NEGATIVE vote is cast for this standard as written as it imposes obligations on entities in the ERCOT region that do not utilize ATC paths and calculation methodologies to manage congestion or for reliability operations. Our previous submitted comments suggested that applicability language be included in the requirements to recognize that such market difference exists.
Central Lincoln PUD	1	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the "Hub and Spoke" nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many

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			additional “flowgates” in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Public Power Council’s members and other transmission customers will ultimately have to fund. Because the standard would unnecessarily impose these burdens without any incremental improvement in reliability, Central Lincoln PUD respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. Central Lincoln PUD supports Bonneville’s proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
City of Tacoma, Department of Public Utilities, Light Division, dba Tacoma Power	1	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the “Hub and Spoke” nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional “flowgates” in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Tacoma Power and other transmission customers will ultimately have to fund. Because the standard would unnecessarily these burdens without any incremental improvement in reliability, Tacoma Power respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. Tacoma Power supports Bonneville’s proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
Exelon Energy	1	Affirmative	General comment These standards bring the industry closer to a unified ATC calculation methodology by requiring that one of three calculation methodologies be utilized and documented. This is an improvement from where the industry is today but falls short of FERC Order No. 890. The standards still lack a requirement for ATC or AFC calculations to be consistent with criteria used in operating and planning studies for corresponding time periods. Exelon's comments reflect these deficiencies and

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			Exelon will be making these same points to FERC if these standards are approved, requesting that the FERC direct NERC to approve the standards but modify the standards to be consistent with Order No. 890. Suggested modifications to the standards to achieve this consistency are included in our comments. MOD-030-1 Flowgate Methodology Â· Requirement 2.1.1.1. and 2.1.2.1. need to be revised as follows: Use first Contingency criteria consistent with those first Contingency used in operations studies and planning studies for the applicable time periods, including use of Special Protection Systems. A requirement that the Available Transfer Capability Implementation Document specify the following: o PTDF and OTDF cutoff values used
FirstEnergy Energy Delivery	1	Negative	FirstEnergy Corp. (FE) appreciates the hard work put forth by the NERC ATC/CBM/TRM standard drafting team (SDT). However, based on difficulties of efficiently and effectively implementing the proposed MOD-030 standard within the Midwest ISO (MISO) footprint, FE is voting NEGATIVE to the standard as written. In prior comment periods, FE has indicated its concerns with requirements assigned to NERC registered entity classifications that apply to FE, but in actuality are performed by the MISO. The SDT has not changed its position and has indicated that FE could delegate responsibility to MISO. However, as previously stated, FE believes a standard should not be written in a way that would knowingly require delegation agreements for a large number of responsible entities. Therefore, in order for FE to support this standard, we request that the SDT work with MISO and its member companies to complete a regional variance for the MISO regional transmission organization and include it within the standard as a Regional Difference. A variance is needed to explain the MOD-030 requirements that describe tasks which have been transferred by the MISO member transmission companies to the MISO organization. This transfer of responsibility is described in the MISO Transmission Owners Agreement and Attachment C of the MISO Open Access Transmission and Energy Market Tariff. It is FE's opinion that an Entity Variance as described in the NERC Reliability Standards Development Procedure is the appropriate mitigation measure and that including the variance with the initial development of the standard is appropriate per the NERC standard development procedure. As described in the procedure, "Variances should be identified and considered when a SAR is posted for comment. Variances should also be considered in the drafting of a standard, with the intent to make any necessary variances a part of the initial development of a standard. The public posting allows for all impacted parties to identify the requirements of a NERC reliability standard that might require a variance." FE believes it is important to complete and include the MISO variance in conjunction with the drafting of the MOD-030 standard. FE requests the variance to cover TOP tasks as described in the following requirements: - R2: Flowgate determination and calculation of TFC on flowgates. The variance would not be applicable to the TOP assignment in requirement R3, which requires the TOP to provide transmission modeling data to the TSP for the calculation of AFC. Additional Comments: In response to FE's most recent MOD-030 comments, the drafting team indicated that it felt the TOP is the appropriate entity for Requirement R2 since they are responsible for

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			keeping the system within its operating limits. While it is true that TOPs identify SOLs and are required to maintain SOLs, the use of flowgates is primarily a market function used in evaluating interchange transactions. Per FAC-014 requirement R5.2, TOPs are required to submit SOL information to TSPs and therefore the TSP would have the information available for the determination of Total Flow Capacity (TFC) for a given flowgate. Therefore, it is FE's position that R2 is better assigned to the TSP, but if the SDT elects not to change the standard, the above request for a MISO variance will satisfy our needs.
Great River Energy	1	Negative	GRE is concerned with the Transmission Operator being the responsible entity for MOD-030_R2 and R3. GRE believes that the responsible entity for these requirements should be the Transmission Service Provider. It is GRE's opinion that a standard should not knowingly be written in a manner that requires delegation agreements to be created for a large number of responsible entities, doing so is an inefficient use of resources.
Manitoba Hydro	1	Negative	R2.1.3 - This requirement seems onerous. Having to calculate AFCs for a flowgate that was created for a temporary system configuration, once that system configuration has resolved, seems like work for little/no benefit. R2.2 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of internal flowgates to create, modify or delete at least once per calendar year. R2.3 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of external flowgates to create, modify or delete that have been requested as part of R2.1.4 within thirty calendar days from the request. R2.4 - It is unclear why the SDT differentiated between thermal and voltage/stability limits, when the instructions were to use the SOL regardless. R11 - Manitoba Hydro is not convinced that conversion from AFC to ATC can be easily calculated in a formula when different assumptions are used for calculating transmission capability. Manitoba Hydro also questions why is it only MOD 30 that requires a conversion formula? If standards are to be fair, shouldn't all three standards (MOD 28, MOD 29 and MOD 30) have as a requirement to convert transmission capability from one method to the other? Manitoba Hydro re-iterates that there shouldn't be 3 ways to calculate transmission capability. The standards should specify one methodology with consistent assumptions to preserve reliability.
PacifiCorp	1	Negative	PacifiCorp agrees with Bonneville Power's comments, listed below: 1. R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the Eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability where the specific characteristics of: â€¢ Load â€¢ Generation â€¢ Configuration of extensive special protection schemes (SPS) and â€¢ WECC's more stringent (greater than n-1) performance requirements determine which varying specific lines or equipment determine the capacity of the flowgate. While being made up of different named elements, BPA's existing flowgates do not always include the first three limiting Elements and their worst associated contingency combinations,

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			yet they still protect the area of transmission constraint. An example of a basis for an ATC capacity that does not fit the proposed standard's language is a two Palo Verde nuclear unit outage in Arizona which is often the critical contingency that causes voltage stability limitations on BPA's North of Hanford Path in Washington over 1000 miles away from the Palo Verde units. While the proposed MOD-30 Flowgate Methodology may provide sufficient reliability for (n-1) thermally limited constraints where the impact of an outage is on parallel transmission, the above example describes a limiting outage that is not in the area of the transmission constraint, thus it does not make sense to define it as part of a flowgate. In regards to capacity, BPA's existing flowgates can be dynamically changed to maximize capacity based on specific operating conditions. If the language in R2.1.1 and R2.1.2 of MOD-30 is adopted, it will require defining many additional "flowgates" with no added reliability or capacity compared to the method BPA has in place today. This would unnecessarily introduce significant workload and computation to BPA and many others in the western interconnection that could, in fact, complicate the understanding of operational constraints. For these reasons, BPA believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2 for WECC entities as a regional difference: RX. WECC: Results of transfer analyses, consistent with those studies required in FAC-010 and FAC-011, or their successors, for ATC Paths up to the path capability. RX.1. Only the most limiting element in a series configuration needs to be included in a Flowgate. If these "RX" requirements are added, to replace R2.1.1-2.1.2.2 for WECC entities, R2.4 would also require modification as follows ("red/underlined" language indicates additions): R2.4. Establish the TFC of each of the defined Flowgates as equal to: â€“ For thermal limits, the lowest System Operating Limit (SOL) included in the definition of the Flowgate. â€“ For voltage or stability limits, the flow that will respect the lowest SOL included in the definition of the Flowgate.
PP&L, Inc.	1	Negative	The R2.1.1 thru R2.1.2.2 requirements are inconsistent with western interconnection practices and may complicate the understanding of operational constraints which may negatively impact reliability. Therefore, PPL EU is in agreement with the comments posted by the Bonneville Power Administration, WECC and MISO and the recommendation to vote NO for this standard.
Seattle City Light	1	Abstain	The draft standard, in R2.1, proposes requirements for defining flowgates that appear to be inconsistent with approaches currently used in parts of the Western Interconnection to designate flowgate elements. The linear analysis method proposed will not sufficiently consider other System Operating Limits (SOLs) that may factor into flowgate designations. Specifically, the 5% Outage Transfer Distribution Factor (OTDF) threshold proposed for identifying flowgate elements does not reflect the methods currently used in WECC to designate flowgates. While application of OTDF methods is straight-forward, and provides a simple screening tool, it may be excessively burdensome to Transmission Operators to designate and redesignate flowgates using the proposed criteria. Furthermore, it may be impractical for Transmission Service Providers to manage requests for transmission services under pro forma OATT service provisions if the proposed criteria results in a large number of flowgates subject to simultaneous limits. SCL is in agreement with the apparent purpose of the R2.1 - establishing objective criteria with distinct metrics for flowgate designation. However, the

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			requirement R2.1 proposed in the draft should be replaced, perhaps using a WECC variance, to ensure that it results in a manageable number of flowgates that promote reliable operation of the Bulk Electric System. In standards FAC-010-1 and FAC-011-1 NERC has granted Regional Differences for establishing SOLs in the Western Interconnection. A similar Regional Difference should be developed and granted with respect to the establishment and designation of flowgates in the Western Interconnection.
Southwest Transmission Cooperative, Inc.	1	Abstain	SWTC does not use this methodology.
Western Area Power Administration	1	Negative	As written, complying with the standard would add substantial burden to "Flowgate" entities within the WECC while adding no additional reliability value.
California ISO	2	Negative	Implementation is incompatible with current operating practices in the Western Interconnection
Independent Electricity System Operator	2	Affirmative	R2.5 does not require a recalculation of TFC if the TOP becomes aware of a change to the transmission configuration such as an outage to a transmission facility. This should be required in addition to having to recalculating TFC upon being notified of a facility rating change.
Midwest ISO, Inc.	2	Abstain	R2.1.3: Midwest ISO believes that this requirement is too onerous and leaves no allowance for an Interconnection-wide congestion management process to be enacted due to a forced outage or any other system condition unforeseen by forecasted system conditions. Also, the SDT did not respond to Midwest ISO comment concerning temporary flowgates in TLR. Midwest ISO questions the reliability benefit gained by calculating AFCs for a flowgate which was only created for a temporary system condition. The response from the SDT to include limiting element/contingency combinations in R3.5 does not limit the potential list of flowgates to only adjacent Reliability Coordinator Areas as was originally intended. Language in R3.5 states “immediately adjacent and beyond Reliability Coordination Areas”, which implies the inclusion of Reliability Coordination Areas that are not adjacent. The Midwest ISO asks the SDT to clarify. Midwest ISO also believes that a flowgate referenced by R3.5 should be added by the process established in R2.1.4. Otherwise, as the requirement is written, if a forced outage causes an Interconnection-wide congestion management procedure to be enacted in on a limiting element/contingency in PJM, then Midwest ISO would be required to add that facility as a flowgate despite the opinion of PJM or even if a transfer from Midwest ISO to PJM does not have an impact greater than the 5% threshold. R2.2: Midwest ISO continues to believe that the text of this requirement is not clear. Midwest ISO asks the drafting team to consider the following language: R2.2: At a minimum, establish the list of internal flowgates to create, modify, or delete at least once per calendar year. R2.3: Midwest ISO continues to believe that the text of this requirement is not clear. Midwest ISO asks the drafting team to consider the following language: R2.3: At a minimum, establish the list of external flowgates to create, modify, or delete that have been requested as part of R2.1.4 within thirty calendar days from the request. R2.4: Both sub bullets instruct the entity to use the SOL for the flowgate. If this were to be the case, then R2.4 could be revised to just require the use of the SOL of the flowgate. Otherwise, the requirement should be revised to precisely capture the intention of

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			the SDT. R5.3: How can this requirement be enforceable for entities that are non-FERC jurisdictional? We are concerned of the situation where a non-FERC jurisdictional neighboring entity doesn't provide such data to the Midwest ISO. We request clarification. R6.2/R6.4/R6.6/R7.2/R7.4/R7.6 â€“ The Midwest ISO is not convinced that similar seams coordination requirements exist for the other two standards, especially for MOD-029. This continues to demonstrate that more stringent requirements are placed on MOD-030 than the other methodologies. We request to remove these requirements from MOD-030 to achieve more unbiased standards. R11: Midwest ISO continues to question the language of this requirement for three reasons. First, the response from the SDT to our previous round of comments indicates that the TTC would remain constant because the flowgate with the lowest TFC would generally remain constant relative to each path. However, the SDT ignored the fact that the distribution factor for that same flowgate changes due to system topology changes. Hence, the TTC value will almost always change each time the model is updated, which is currently once per day as stated in R3. Second, the TTC value back calculated for the Flowgate methodology is not as valuable as it is in the Rated System Path methodology or the Area Interchange Methodology. If a flowgate will never limit an ATC, why would anyone be interested to know a TTC calculated by this flowgate? As the requirement is written, the Transmission Service Provider will be expected to incur additional cost, with no benefit to either the reliability or transmission customers, to separately account for the flowgate with the smallest TFC value in order to back calculate a TTC value. Third, when you use the same flowgate for all value conversions, the formula "ATC=TTC-CBMpath-TRMpath-ETCpath"still holds if you simply divide everything in formula "AFC=TFC-CBMflowgate-TRMflowgate-ETCflowgate" by the flowgate distribution factor. However, using different flowgates would make the formula "ATC=TTC-CBM-TRM-ETC" invalid. This result eliminates the usefulness of the TTC value for the Flowgate methodology. Therefore, we request this requirement to be rewritten if the SDT believes a formula to calculate TTC must be included in the standard. The Midwest ISO acknowledges the fact that there can be three methodologies for calculating ATC values. The Midwest ISO continues to believe that a single standard that qualitatively judges the reliability of all three methodologies is the right form to ensure reliability of the interconnected bulk power systems rather than the current approach of having a separate standard for each methodology. The Midwest ISO believes that three different standards for three different methodologies have created requirements and measures to ensure that each entity is executing its methodology per the guidelines prescribed by the standards and do not necessarily ensure reliability of the interconnected system. For example, while the MOD-030 includes several requirements for Constraints (Flowgates) used in that methodology, the other standards do not include similar requirements with the premise that those methodologies do not use flowgates. For the system to be reliable, the constraints that impact an energy transfer should be the same irrespective of the methodology. The Midwest ISO sees these standards as guidelines to ensure documentation of the methodologies being executed as opposed to consistency amongst the methodologies to ensure system reliability. Midwest ISO also believes that the Flow based methodology is an advanced technique with a high level of detail and alignment with congestion management procedures such as the NERC IDC. The Midwest ISO continues to observe a significantly higher number of compliance

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			requirements under MOD-030 than entities using a methodology that is subject to either MOD-028 or MOD-029. The Midwest ISO believes that a single ATC standard and the termination of the three previously mentioned standards would eliminate any compliance concerns related to improperly aligned standards. Flow based methodology entities under MOD 030 are held to a higher degree of compliance for volunteering to use the Flow based methodology; when regardless of methodology the highest degree of compliance must required for all three methodologies. Therefore, the Midwest ISO believes it is imperative to draft a single ATC standard that would apply to all entities regardless of the methodology selected.
Ameren Services Company	3	Negative	Ameren would like to thank the SDT for the considerable effort invested in drafting this standard. However, Ameren cannot support this version of MOD-030-1. AFC is a market parameter and as such is applicable to the Transmission Service Provider. Definition of an adequate flowgate population is required to adequately constrain the sale of transmission service, as such this would appear to be a market not a reliability issue. Under R2 the calculation of TFC is applicable to the Transmission Operator. This is not consistent with the current version of the Functional Model. The Transmission Planner is responsible for supporting the development of TTC (TFC). Under R3 the Transmission Service Provider not the Transmission Operator should be responsible for the calculation of ATC/AFC and any modeling data. This is especially true when the Transmission Service Provider determines ATC for the transmission systems of several Transmission Operators as would occur in an RTO/ISO such as the MISO. That said we are aware that the oversubscription of transmission service can lead to reliability problems. AFC issues affect long term planning as well as planning in the Operating Time Horizon.
Avista Corp.	3	Negative	The standard needs some flexibility due to regional differences. Support comments submitted by the Bonneville Power Administration.
Blachly-Lane Electric Co-op	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Bonneville Power Administration	3	Negative	1. R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability where the specific characteristics of: load, generation, configuration of extensive special protection schemes (SPS), and WECC's more stringent (greater than n-1) performance requirements determine which varying specific lines or equipment determine the capacity of the flowgate. While being made up of different named elements, BPA's existing flowgates do not always include the first three limiting Elements and their worst associated Contingency combinations, yet they still protect the area of transmission constraint. An example of a basis for an ATC capacity that does not fit the proposed standard's language is a two

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			Palo Verde nuclear unit outage in Arizona which is often the critical contingency that causes voltage stability limitations on BPA's North of Hanford Path in Washington over 1000 miles away from the Palo Verde units. While the proposed MOD-30 Flowgate Methodology may provide sufficient reliability for (n-1) thermally limited constraints where the impact of an outage is on parallel transmission, the above example describes a limiting outage that is not in the area of the transmission constraint, thus it does not make sense to define it as part of a flowgate. In regards to capacity, BPA's existing flowgates can be dynamically changed to maximize capacity based on specific operating conditions. If the language in R2.1.1 and R2.1.2 of MOD-30 is adopted, it will require defining many additional "flowgates" with no added reliability or capacity compared to the method BPA has in place today. This would unnecessarily introduce significant workload and computation to BPA and many others in the western interconnection that could, in fact, complicate the understanding of operational constraints. For these reasons, BPA believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2 for WECC entities as a regional difference: RX. WECC: Results of transfer analyses, consistent with those studies required in FAC-010 and FAC-011, or their successors, for ATC Paths up to the path capability. RX.1. Only the most limiting element in a series configuration needs to be included in a Flowgate. If these "RX" requirements are added, to replace R2.1.1-2.1.2.2 for WECC entities, R2.4 would also require modification as follows: R2.4. Establish the TFC of each of the defined Flowgates as equal to: For thermal limits, the lowest System Operating Limit (SOL) included in the definition of the Flowgate. For voltage or stability limits, the flow that will respect the lowest SOL included in the definition of the Flowgate. 2. Additionally, there are typos at the following locations: Applicability 4.1.1, where a space is missing between "(AFCs)" and "on"; R1, where a colon is missing following the "(ATCID)"; R2.1.2, where "analyses" should not be plural; and "R"s appear to be missing from all "fourth-tier" requirements (2.1.1.1 for example).
City of McMinnville	3	Negative	Inappropriate methodology for WECC specific entities
City Public Service of San Antonio	3	Negative	I cannot vote for this standard as written. It needs to acknowledge definitive alternatives to ATC for regions or markets such as ERCOT where transmission service markets are not used.
Clatskanie People's Utility District	3	Negative	The requirement of substantial additional flowgate analysis does not add reliability and instead offers the possibility of a lower standard of understanding of system operation.
Clearwater Power Co.	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Coos-Curry Electric Cooperative, Inc	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Cowlitz County PUD	3	Negative	Cowlitz County PUD No.1 (District) Comments on MOD-030-1 Adapted from PPC Recommendations 7/29/08 The Northwest uses a flow-based ATC determination consistent with the main concepts of the

Entity	Segment	Vote	Comment
			proposed MOD-030 standard. However, Northwest flowgates are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition, these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology is specifically designed to the "Hub and Spoke" nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. The District disagrees with current language in R2.1.1 and R2.1.2 of MOD-030 which will require the creation of many additional "flowgates" in the Northwest with no added reliability benefits. The current proven methodology used by the Bonneville Power Administration is sufficient. Adopting R2.1.1 and R2.1.2 of MOD-030 as it now stands will unnecessarily increase workload and cost. The District is not willing to help fund complicated reliability measures where there is no benefit. The District respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current methodology used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. The District supports Bonneville's proposed changes to R2.1 of this proposed standard.
Duke Energy Carolina	3	Affirmative	While we support approval of this standard, bulk electric system facilities 161kV and below may have significant network response. Since these facilities may have significant impact on TTC/AFC, documentation should be required by the standard for those facilities 161kV and below which are equivalized. This will provide transparency for impacted stakeholders.
FirstEnergy Solutions	3	Negative	FirstEnergy Corp. (FE) appreciates the hard work put forth by the NERC ATC/CBM/TRM standard drafting team (SDT). However, based on difficulties of efficiently and effectively implementing the proposed MOD-030 standard within the Midwest ISO (MISO) footprint, FE is voting NEGATIVE to the standard as written. In prior comment periods, FE has indicated its concerns with requirements assigned to NERC registered entity classifications that apply to FE, but in actuality are performed by the MISO. The SDT has not changed its position and has indicated that FE could delegate responsibility to MISO. However, as previously stated, FE believes a standard should not be written in a way that would knowingly require delegation agreements for a large number of responsible entities. Therefore, in order for FE to support this standard, we request that the SDT work with MISO and its member companies to complete a regional variance for the MISO regional transmission organization and include it within the standard as a Regional Difference. A variance is needed to explain the MOD-030 requirements that describe tasks which have been transferred by the MISO member transmission companies to the MISO organization. This transfer of responsibility is described in the MISO

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			Transmission Owners Agreement and Attachment C of the MISO Open Access Transmission and Energy Market Tariff. It is FE's opinion that an Entity Variance as described in the NERC Reliability Standards Development Procedure is the appropriate mitigation measure and that including the variance with the initial development of the standard is appropriate per the NERC standard development procedure. As described in the procedure, "Variances should be identified and considered when a SAR is posted for comment. Variances should also be considered in the drafting of a standard, with the intent to make any necessary variances a part of the initial development of a standard. The public posting allows for all impacted parties to identify the requirements of a NERC reliability standard that might require a variance." FE believes it is important to complete and include the MISO variance in conjunction with the drafting of the MOD-030 standard. FE requests the variance to cover TOP tasks as described in the following requirements: - R2: Flowgate determination and calculation of TFC on flowgates. The variance would not be applicable to the TOP assignment in requirement R3, which requires the TOP to provide transmission modeling data to the TSP for the calculation of AFC. Additional Comments: In response to FE's most recent MOD-030 comments, the drafting team indicated that it felt the TOP is the appropriate entity for Requirement R2 since they are responsible for keeping the system within its operating limits. While it is true that TOPs identify SOLs and are required to maintain SOLs, the use of flowgates is primarily a market function used in evaluating interchange transactions. Per FAC-014 requirement R5.2, TOPs are required to submit SOL information to TSPs and therefore the TSP would have the information available for the determination of Total Flow Capacity (TFC) for a given flowgate. Therefore, it is FE's position that R2 is better assigned to the TSP, but if the SDT elects not to change the standard, the above request for a MISO variance will satisfy our needs.
Lost River Electric Cooperative	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Manitoba Hydro	3	Negative	R2.1.3 - This requirement seems onerous. Having to calculate AFCs for a flowgate that was created for a temporary system configuration, once that system configuration has resolved, seems like work for little/no benefit. R2.2 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of internal flowgates to create, modify or delete at least once per calendar year. R2.3 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of external flowgates to create, modify or delete that have been requested as part of R2.1.4 within thirty calendar days from the request. R2.4 - It is unclear why the SDT differentiated between thermal and voltage/stability limits, when the instructions were to use the SOL regardless. R11 - Manitoba Hydro is not convinced that conversion from AFC to ATC can be easily calculated in a formula when different assumptions are used for calculating transmission capability. Manitoba Hydro also questions why is it only MOD 30 that requires a conversion formula? If standards are to be fair, shouldn't all three standards (MOD 28, MOD 29 and MOD 30) have as a requirement to convert transmission capability from one method to the other? Manitoba Hydro re-iterates that there shouldn't be 3 ways to calculate transmission capability. The standards should specify one methodology with consistent assumptions to preserve reliability.
Response:			

Entity	Segment	Vote	Comment
MidAmerican Energy Co.	3	Negative	I am concerned that R2.1 requires the Transmission Operator to set up a certain number of flowgates at a minimum. With smaller Transmission Service Providers, I believe this will result unnecessarily in additional flow gates in the interconnection. I believe R2.1. should be greatly simplified, deleted, or else changes should be made to R2.1.3. Add at the end of R2.1.3 an exclusion from the requirement of adding flowgates for situations that resulted in congestion management "unless the need for Interconnection-wide congestion management was a result of unusual operating conditions that are not reasonably expected to frequently occur again (such as multiple prior outages of transmission facilities and/or critical generators)."
Northern Lights Inc.	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Northern Wasco County People's Utility District (PUD)	3	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the “Hub and Spoke” nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional “flowgates” in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Northern Wasco County PUD and other transmission customers will ultimately have to fund. Because the standard would unnecessarily impose these burdens without any incremental improvement in reliability, Northern Wasco County PUD respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. Northern Wasco County PUD supports Bonneville’s proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
Okanogan County Electric Cooperative, Inc.	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Public Utility	3	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed

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District No. 1 of Benton County			MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the "Hub and Spoke" nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional "flowgates" in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Public Utility District No. 1 of Benton County (Benton PUD) and other transmission customers will ultimately have to fund. Because the standard would unnecessarily impose these burdens without any incremental improvement in reliability, Benton PUD respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. Benton PUD supports Bonneville's proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
Public Utility District No. 2 of Grant County	3	Negative	The additional requirements add no reliability to the system in the western interconnection.
Raft River Rural Electric Cooperative	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Salmon River Electric Cooperative	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Seattle City Light	3	Abstain	The draft standard, in R2.1, proposes requirements for defining flowgates that appear to be inconsistent with approaches currently used in parts of the Western Interconnection to designate flowgate elements. The linear analysis method proposed will not sufficiently consider other System Operating Limits (SOLs) that may factor into flowgate designations. Specifically, the 5% Outage Transfer Distribution Factor (OTDF) threshold proposed for identifying flowgate elements does not reflect the methods currently used in WECC to designate flowgates. While application of OTDF

Entity	Segment	Vote	Comment
			methods is straight-forward, and provides a simple screening tool, it may be excessively burdensome to Transmission Operators to designate and redesignate flowgates using the proposed criteria. Furthermore, it may be impractical for Transmission Service Providers to manage requests for transmission services under pro forma OATT service provisions if the proposed criteria results in a large number of flowgates subject to simultaneous limits. SCL is in agreement with the apparent purpose of the R2.1 - establishing objective criteria with distinct metrics for flowgate designation. However, the requirement R2.1 proposed in the draft should be replaced, perhaps using a WECC variance, to ensure that it results in a manageable number of flowgates that promote reliable operation of the Bulk Electric System. In standards FAC-010-1 and FAC-011-1 NERC has granted Regional Differences for establishing SOLs in the Western Interconnection. A similar Regional Difference should be developed and granted with respect to the establishment and designation of flowgates in the Western Interconnection.
Umatilla Electric Cooperative	3	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Wisconsin Public Service Corp.	3	Negative	R2 needs to be simplified.
Alliant Energy Corp. Services, Inc.	4	Negative	We believe that R2.1 requires the Transmission Operator to set up a certain number of flowgates. We believe this will require that many flowgates will be needlessly set up.
Eugene Water & Electric Board	4	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the “Hub and Spoke” nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional “flowgates” in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Eugene Water & Electric Board (EWEB) and other transmission customers will ultimately have to fund. Because the standard would unnecessarily these burdens without any incremental improvement in reliability, EWEB respectfully requests that alternate WECC-specific requirements be added to replace

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			R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. EWEB supports Bonnevilleâ€™s proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
Pacific Northwest Generating Cooperative	4	Negative	We suggest a rewrite of requirement 2 that will work for the Western Interconnection.
Public Power Council	4	Negative	The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. Northwest flowgates, however, are defined with adequate granularity to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying temperatures, loads and ratings, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider or operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the “Hub and Spoke” nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional “flowgates” in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 without further revision would unnecessarily introduce significant workload, cost, and complications that Public Power Council’s members and other transmission customers will ultimately have to fund. Because the standard would unnecessarily impose these burdens without any incremental improvement in reliability, Public Power Council respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The current method used by the Bonneville Power Administration is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection. Public Power Council supports Bonneville’s proposed approach and proposed revisions to R2.1 to address the needs of the Western Interconnection in this proposed standard.
Public Utility District No. 1 of Douglas County	4	Negative	We have not had sufficient time to adequately review and coordinate the issue within our region.
Public Utility District No. 1 of Snohomish County	4	Negative	The District Intends To Vote As Follows: MOD-001: votes Abstain, with no comments MOD-030 comments: The Northwest uses a flow-based ATC determination consistent with the concepts of the proposed MOD-030 standard. However northwest flowgates are defined to provide adequate granularity needed to identify varying sets of critical contingencies and impacted lines under changing system conditions. Seasonal operating nomograms are developed using varying

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			temperatures/loads/rating, generation dispatch, and contingency analysis (that meeting greater than n-1 performance requirements) to determine reliable operating capabilities. These operating nomograms allow the transmission provider/operator to maximize capacity based on specific operating conditions. In addition these seasonal operating nomograms are reviewed by the region and posted in advance of the operating season, addressing both transparency and coordinating requirements. This methodology accommodates and is tailored to the "Hub and Spoke" nature of the Western Interconnection system. Large generation resources are located long distances from large loads verses the tightly meshed systems in the Eastern Interconnection where load and generation are located very close together. Due to the remote nature of generation and load in the west, transient and voltage stability considerations must be taken into consideration. If the language in R2.1.1 and R2.1.2 of MOD-030 is adopted, it will require many additional "flowgates" in the Northwest that will result in no added reliability benefits compared to the method our transmission provider has in place today. Adopting R2.1.1 and R2.1.2 of MOD-030 would unnecessarily introduce significant workload, cost, and complications that the District and other transmission customers will ultimately have to fund. For these reasons, the District believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-specific requirements be added to replace R2.1.1-2.1.2.2. The District supports the Bonneville Power Administration proposed "WECC-specific" language to address the hybrid AFC-contract-path calculation used in the Northwest. This hybrid method is ultimately more reliable, given the specific nature of the transmission and generation resources in the Western Interconnection.
Seattle City Light	4	Abstain	The draft standard, in R2.1, proposes requirements for defining flowgates that appear to be inconsistent with approaches currently used in parts of the Western Interconnection to designate flowgate elements. The linear analysis method proposed will not sufficiently consider other System Operating Limits (SOLs) that may factor into flowgate designations. Specifically, the 5% Outage Transfer Distribution Factor (OTDF) threshold proposed for identifying flowgate elements does not reflect the methods currently used in WECC to designate flowgates. While application of OTDF methods is straight-forward, and provides a simple screening tool, it may be excessively burdensome to Transmission Operators to designate and redesignate flowgates using the proposed criteria. Furthermore, it may be impractical for Transmission Service Providers to manage requests for transmission services under pro forma OATT service provisions if the proposed criteria results in a large number of flowgates subject to simultaneous limits. SCL is in agreement with the apparent purpose of the R2.1 - establishing objective criteria with distinct metrics for flowgate designation. However, the requirement R2.1 proposed in the draft should be replaced, perhaps using a WECC variance, to ensure that it results in a manageable number of flowgates that promote reliable operation of the Bulk Electric System. In standards FAC-010-1 and FAC-011-1 NERC has granted Regional Differences for establishing SOLs in the Western Interconnection. A similar Regional Difference should be developed and granted with respect to the establishment and designation of flowgates in the Western Interconnection.
WPS Resources	4	Negative	R2.1 requires that the Transmission Operator shall set up a certain number of flowgates at a minimum.

Entity	Segment	Vote	Comment
Corp.			This could result in a certain flowgates that are not needed on an on-going basis. This requirement should be simplified, deleted, and/or changed. R2.1.3. presently states that "Any limiting Element/Contingency combination at least within the Transmission model identified in R3.4 and R3.5 that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months, unless the limiting Element/Contingency combination is accounted for using another ATC methodology." This requirement should provide another condition when the requirement is waived by adding the following words at the end of the requirement "or unless the need for Interconnection-wide congestion management was a result of unusual operating conditions that are not reasonably expected to frequently occur again (such as multiple prior outages of transmission facilities and/or critical generators)." Also, the Transmission Operator is the responsible entity for R2 through R3 for MOD-030. The responsible entity for these requirements should be the Transmission Service Provider.
Avista Corp.	5	Negative	This standard needs to incorporate the need for regional differences. We support the comments submitted by BPA.
Bonneville Power Administration	5	Negative	1. R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the eastern interconnection. However, existing practices in BPA's part of the western interconnection use flow based ATC determination which, while consistent with the concepts of this proposed standard, use a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability - where the specific characteristics of load, generation, configuration of extensive special protection schemes (SPS), and WECC's more stringent (greater than n-1) performance requirements - to determine which varying specific lines or equipment determine the capacity of the flowgate. While made up of different named elements, BPA's existing flowgates do not always include the first three limiting elements and their worst associated Contingency combinations, yet they still protect the area of transmission constraint. An example of a basis for an ATC capacity that does not fit the proposed standard's language is a two Palo Verde nuclear unit outage in Arizona which is often the critical contingency that causes voltage stability limitations on BPA's North of Hanford Path in Washington over 1000 miles away from the Palo Verde units. While the proposed MOD-30 Flowgate Methodology may provide sufficient reliability for (n-1) thermally limited constraints where the impact of an outage is on parallel transmission, the above example describes a limiting outage that is not in the area of the transmission constraint, thus it does not make sense to define it as part of a flowgate. In regards to capacity, BPA's existing flowgates can be dynamically changed to maximize capacity based on specific operating conditions. If the language in R2.1.1 and R2.1.2 of MOD-30 is adopted, it will require defining many additional "flowgates" with no added reliability or capacity compared to the method BPA has in place today. This would unnecessarily introduce significant workload and computation to BPA and many others in the western interconnection that could, in fact, complicate the understanding of operational constraints. For these reasons, BPA believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-

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			specific requirements be added to replace R2.1.1-2.1.2.2 for WECC entities as a regional difference: RX. WECC: Results of transfer analyses, consistent with those studies required in FAC-010 and FAC-011, or their successors, for ATC Paths up to the path capability. RX.1. Only the most limiting element in a series configuration needs to be included in a Flowgate. If these "RX" requirements are added, to replace R2.1.1-2.1.2.2 for WECC entities, R2.4 would also require modification as follows ("red/underlined" language indicates additions): R2.4. Establish the TFC of each of the defined Flowgates as equal to: For thermal limits, the lowest System Operating Limit (SOL) included in the definition of the Flowgate. For voltage or stability limits, the flow that will respect the lowest SOL included in the definition of the Flowgate. 2. Additionally, there are typos at the following locations: Applicability 4.1.1, where a space is missing between "(AFCs)" and "on"; R1, where a colon is missing following the "(ATCID)"; R2.1.2, where "analyses" should not be plural; and "R"s appear to be missing from all "fourth-tier" requirements (2.1.1.1 for example).
FirstEnergy Solutions	5	Negative	FirstEnergy Corp. (FE) appreciates the hard work put forth by the NERC ATC/CBM/TRM standard drafting team (SDT). However, based on difficulties of efficiently and effectively implementing the proposed MOD-030 standard within the Midwest ISO (MISO) footprint, FE is voting NEGATIVE to the standard as written. In prior comment periods, FE has indicated its concerns with requirements assigned to NERC registered entity classifications that apply to FE, but in actuality are performed by the MISO. The SDT has not changed its position and has indicated that FE could delegate responsibility to MISO. However, as previously stated, FE believes a standard should not be written in a way that would knowingly require delegation agreements for a large number of responsible entities. Therefore, in order for FE to support this standard, we request that the SDT work with MISO and its member companies to complete a regional variance for the MISO regional transmission organization and include it within the standard as a Regional Difference. A variance is needed to explain the MOD-030 requirements that describe tasks which have been transferred by the MISO member transmission companies to the MISO organization. This transfer of responsibility is described in the MISO Transmission Owners Agreement and Attachment C of the MISO Open Access Transmission and Energy Market Tariff. It is FE's opinion that an Entity Variance as described in the NERC Reliability Standards Development Procedure is the appropriate mitigation measure and that including the variance with the initial development of the standard is appropriate per the NERC standard development procedure. As described in the procedure, "Variances should be identified and considered when a SAR is posted for comment. Variances should also be considered in the drafting of a standard, with the intent to make any necessary variances a part of the initial development of a standard. The public posting allows for all impacted parties to identify the requirements of a NERC reliability standard that might require a variance." FE believes it is important to complete and include the MISO variance in conjunction with the drafting of the MOD-030 standard. FE requests the variance to cover TOP tasks as described in the following requirements: - R2: Flowgate determination and calculation of TFC on flowgates. The variance would not be applicable to the TOP assignment in requirement R3, which requires the TOP to provide transmission modeling data to the TSP for the calculation of AFC. Additional Comments: In response to FE's most recent MOD-030 comments, the drafting team

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			indicated that it felt the TOP is the appropriate entity for Requirement R2 since they are responsible for keeping the system within its operating limits. While it is true that TOPs identify SOLs and are required to maintain SOLs, the use of flowgates is primarily a market function used in evaluating interchange transactions. Per FAC-014 requirement R5.2, TOPs are required to submit SOL information to TSPs and therefore the TSP would have the information available for the determination of Total Flow Capacity (TFC) for a given flowgate. Therefore, it is FE's position that R2 is better assigned to the TSP, but if the SDT elects not to change the standard, the above request for a MISO variance will satisfy our needs.
IBERDROLA RENEWABLES	5	Negative	R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the Eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability where the specific characteristics of: – Load – Generation – Configuration of extensive special protection schemes (SPS) and – WECC's more stringent (greater than n-1) performance requirements determine which varying specific lines or equipment determine the capacity of the flowgate. While being made up of different named elements, BPA's existing flowgates do not always include the first three limiting Elements and their worst associated contingency combinations, yet they still protect the area of transmission constraint. An example of a basis for an ATC capacity that does not fit the proposed standard's language is a two Palo Verde nuclear unit outage in Arizona which is often the critical contingency that causes voltage stability limitations on BPA's North of Hanford Path in Washington over 1000 miles away from the Palo Verde units. While the proposed MOD-30 Flowgate Methodology may provide sufficient reliability for (n-1) thermally limited constraints where the impact of an outage is on parallel transmission, the above example describes a limiting outage that is not in the area of the transmission constraint, thus it does not make sense to define it as part of a flowgate. In regards to capacity, BPA's existing flowgates can be dynamically changed to maximize capacity based on specific operating conditions. If the language in R2.1.1 and R2.1.2 of MOD-30 is adopted, it will require defining many additional "flowgates" with no added reliability or capacity compared to the method BPA has in place today. This would unnecessarily introduce significant workload and computation to BPA and many others in the western interconnection that could, in fact, complicate the understanding of operational constraints. For these reasons, BPA believes that implementation of R2.1.1-2.1.2.2 does not make sense within WECC and respectfully requests that alternate WECC-

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			specific requirements be added to replace R2.1.1-2.1.2.2 for WECC entities as a regional difference: RX. WECC: Results of transfer analyses, consistent with those studies required in FAC-010 and FAC-011, or their successors, for ATC Paths up to the path capability. RX.1. Only the most limiting element in a series configuration needs to be included in a Flowgate. If these "RX" requirements are added, to replace R2.1.1-2.1.2.2 for WECC entities, R2.4 would also require modification as follows ("red/underlined" language indicates additions): R2.4. Establish the TFC of each of the defined Flowgates as equal to: – For thermal limits, the lowest System Operating Limit (SOL) included in the definition of the Flowgate. – For voltage or stability limits, the flow that will respect the lowest SOL included in the definition of the Flowgate. 2. Additionally, there are typos at the following locations: Applicability 4.1.1, where a space is missing between"(AFCs)" and "on"; R1, where a colon is missing following the "(ATCID)"; R2.1.2, where "analyse" should not be plural; and "R"s appear to be missing from all "fourth-tier" requirements (2.1.1.1 for example).
Manitoba Hydro	5	Negative	R2.1.3 - This requirement seems onerous. Having to calculate AFCs for a flowgate that was created for a temporary system configuration, once that system configuration has resolved, seems like work for little/no benefit. R2.2 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of internal flowgates to create, modify or delete at least once per calendar year. R2.3 - Manitoba Hydro agrees with MISO's proposed wording changes of: At a minimum, establish the list of external flowgates to create, modify or delete that have been requested as part of R2.1.4 within thirty calendar days from the request. R2.4 - It is unclear why the SDT differentiated between thermal and voltage/stability limits, when the instructions were to use the SOL regardless. R11 - Manitoba Hydro is not convinced that conversion from AFC to ATC can be easily calculated in a formula when different assumption are used for calculating transmission capability. Manitoba Hydro also questions why is it only MOD 30 that requires a conversion formula? If standards are to be fair, shouldn't all three standards (MOD 28, MOD 29 and MOD 30) have as a requirement to convert transmission capability from one method to the other? Manitoba Hydro re-iterates that there shouldn't be 3 ways to calculate transmission capability. The standards should specify one methodology with consistent assumptions to preserve reliability.
PPL Generation LLC	5	Negative	We are respecting BPA's and MISO's position on this ballot in our decision to vote negative.
Bonneville Power Administration	6	Negative	1. R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria

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FirstEnergy Solutions	6	Negative	FirstEnergy Corp. (FE) appreciates the hard work put forth by the NERC ATC/CBM/TRM standard drafting team (SDT). However, based on difficulties of efficiently and effectively implementing the proposed MOD-030 standard within the Midwest ISO (MISO) footprint, FE is voting NEGATIVE to the standard as written. In prior comment periods, FE has indicated its concerns with requirements assigned to NERC registered entity classifications that apply to FE, but in actuality are performed by the MISO. The SDT has not changed its position and has indicated that FE could delegate responsibility to MISO. However, as previously stated, FE believes a standard should not be written in a way that would knowingly require delegation agreements for a large number of responsible entities. Therefore,

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			in order for FE to support this standard, we request that the SDT work with MISO and its member companies to complete a regional variance for the MISO regional transmission organization and include it within the standard as a Regional Difference. A variance is needed to explain the MOD-030 requirements that describe tasks which have been transferred by the MISO member transmission companies to the MISO organization. This transfer of responsibility is described in the MISO Transmission Owners Agreement and Attachment C of the MISO Open Access Transmission and Energy Market Tariff. It is FE's opinion that an Entity Variance as described in the NERC Reliability Standards Development Procedure is the appropriate mitigation measure and that including the variance with the initial development of the standard is appropriate per the NERC standard development procedure. As described in the procedure, "Variances should be identified and considered when a SAR is posted for comment. Variances should also be considered in the drafting of a standard, with the intent to make any necessary variances a part of the initial development of a standard. The public posting allows for all impacted parties to identify the requirements of a NERC reliability standard that might require a variance." FE believes it is important to complete and include the MISO variance in conjunction with the drafting of the MOD-030 standard. FE requests the variance to cover TOP tasks as described in the following requirements: - R2: Flowgate determination and calculation of TFC on flowgates. The variance would not be applicable to the TOP assignment in requirement R3, which requires the TOP to provide transmission modeling data to the TSP for the calculation of AFC. Additional Comments: In response to FE's most recent MOD-030 comments, the drafting team indicated that it felt the TOP is the appropriate entity for Requirement R2 since they are responsible for keeping the system within its operating limits. While it is true that TOPs identify SOLs and are required to maintain SOLs, the use of flowgates is primarily a market function used in evaluating interchange transactions. Per FAC-014 requirement R5.2, TOPs are required to submit SOL information to TSPs and therefore the TSP would have the information available for the determination of Total Flow Capacity (TFC) for a given flowgate. Therefore, it is FE's position that R2 is better assigned to the TSP, but if the SDT elects not to change the standard, the above request for a MISO variance will satisfy our needs.
IBERDROLA RENEWABLES	6	Negative	R2.1.1 thru R2.1.2.2 appear to well reflect existing practices in the Eastern interconnection with its commensurate characteristics. However, practices that are in place in BPA's part of the western interconnection use flow based ATC determination consistent with the concepts of this proposed standard, but they are based on using a set of designated flowgates that could have a varying set of critical contingencies and impacted lines depending on the system conditions. MOD-30 as written would require many new "flowgates" based on varying system conditions without providing any increased reliability benefit. This is because BPA determines their capacity based on WECC criteria which test for thermal restrictions, voltage stability, and transient stability where the specific characteristics of: – Load – Generation – Configuration of extensive special protection schemes (SPS) and – WECC's more stringent (greater than n-1) performance requirements determine which varying

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Public Utility District No. 1 of Chelan County	6	Negative	Standard as written complicates transmission service from the Bonneville Power Authority without adding reliability.
Electric Reliability Council of Texas, Inc.	10	Abstain	Although stated in the Applicability Section, the Requirements and Measures contain no clear applicability only to those Transmission Operators and Transmission Service providers who utilize the Flowgate methodology in calculating Available Flowgate Capabilities.
Midwest Reliability Organization	10	Negative	The MRO is concerned with the R2.1 that requires that the Transmission Operator shall set up a certain number of flowgates at a minimum. The MRO is concerned that this will require a certain number of flowgates will be needlessly set up by smaller Transmission Service Providers as a result of this requirement. The MRO believes that this will result in a certain number of flowgates be needlessly set up. We believe that this requirement should be greatly simplified, deleted, and/or changes to R2.1.3 should be made. R2.1.3. presently states that "Any limiting Element/Contingency combination at least within the Transmission model identified in R3.4 and R3.5 that has been subjected to an Interconnection-wide congestion management procedure within the last 12 months, unless the limiting Element/Contingency combination is accounted for using another ATC methodology." We believe that this requirement should provide another condition when the requirement is waived by adding the following words at the end of the requirement "or unless the need for Interconnection-wide congestion management was a result of unusual operating conditions that are not reasonably expected to frequently occur again (such as multiple prior outages of transmission facilities and/or critical generators)." Also, the MRO is concerned with the Transmission Operator being the responsible entity for R2 through R3 for MOD-030. We believe that the responsible entity for these requirements should be the Transmission Service Provider.