NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Standards Authorization Request Form

When completed, please email this form to: sarcomm@nerc.com.

NERC welcomes suggestions to improve the reliability of the Bulk-Power System through improved Reliability Standards. Please use this Standard Authorization Request (SAR) form to submit your request to propose a new Reliability Standard, a revision to a Reliability Standard, or the retirement of a Reliability Standard.

Request to propose a new Reliability Standard, a revision to a Reliability Standard, or the retirement of a Reliability Standard			
Title of Proposed Reliability Standard:	BAL-005-3 – Automatic Generation Control and BAL-006-3 – Inadvertent Interchange		
Date Submitted:	February 18, 2014		
SAR Requester Information			
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SAR Type (Check as many as applicable)			
☐ New Reliability Standard ☒ Revision to existing Reliability Standards		☐ Retirement of existing Reliability Standard ☐ Urgent Action	

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Industry Need (What is the industry problem this request is trying to solve?):
The North American Electric Reliability Corporation (NERC) is required to conduct a periodic review of each NERC Reliability Standard at least once every ten years, or once every five years for Reliability Standards approved by the American National Standards Institute as an American National Standard. Project 2010-14.2 - Phase 2 of Balancing Authority Reliability-based Controls (BARC 2) was included in the current cycle of periodic reviews.

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The NERC Standards Committee appointed eleven industry subject matter experts to serve on the BARC 2 periodic review team (BARC 2 PRT) in the fall of 2013. The BARC 2 PRT used background information on the standards and the questions set forth in the Periodic Review Template developed by NERC and approved by the Standards Committee, along with associated worksheets and reference documents, to determine whether BAL-005-0_2b and BAL-006-2 should be: (1) affirmed as is (i.e., no changes needed); (2) revised (which may include revising or retiring one or more requirements); or (3) withdrawn. As a result of that examination, the BARC 2 PRT recommends to REVISE BAL-005-0_2b and BAL-006-2, and has therefore developed this Standard Authorization Request (SAR) outlining the proposed scope and technical justification for the revisions.
Purpose or Goal (How does this request propose to address the problem described above?):
This SAR proposes revising BAL-005 and BAL-006 in line with the recommendations of the BARC 2 PRT as described in the *PRT Recommendation to Revise BAL-005 and BAL-006*, (Attachment 1). The proposed changes to the standards add clarity, remove redundancy, take into account technological changes since the last versions of the standards, address FERC directives, and bring compliance elements in accordance with NERC guidelines. A detailed description of the PRT's recommended changes are contained later in this SAR.
Identify the Objectives of the proposed Reliability Standard's requirements (What specific reliability deliverables are required to achieve the goal?):
The objective of BAL-005 is to establish requirements for acquiring necessary data for the Balancing Authority to calculate Reporting ACE so that balancing of resources and demand can be achieved under Tie-Line Bias Control. The current objective of BAL-006 is to define define a process for monitoring Balancing Authorities to ensure that, over the long term, Balancing Authority Areas do not excessively depend on other Balancing Authority Areas in the Interconnection for meeting their demand or Interchange obligations. As the revisions proposed for BAL-006 focus on the minimum requirements for Adjacent Balancing Authorities to agree upon the hourly MW amounts of scheduled and actual Interchange between them, which reinforces that errors in coordination or process will be identified, the PRT recommends that the SDT revise the Purpose statement to be consistent with the Requirements as further developed under this SAR.

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Brief Description (Provide a paragraph that describes the scope of this Reliability Standard action.)
The scope of this standard action is to revise BAL-005 and BAL-006 in accordance with the recommendations made by the PRT in the *PRT Recommendation to Revise BAL-005 and BAL-006*, (Attachment 1), and consistent with industry consensus to make additional standard revisions to the extent such consensus develops.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also provide a justification for the development or revision of the Reliability Standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the Reliability Standard action.)

1. BAL-005

The BARC2 PRT has completed its review of BAL-005, and, among other recommendations, proposes certain revisions below which would remove references to the types of resources and reserves utilized by the Balancing Authority to balance resources and demand. The PRT recommendations focus on the components that make up the Reporting ACE, and not on the ancillary service aspects of resource control that drew criticism from the industry for being specific to generation when BAL-005 was originally filed with the FERC. Among other recommendations, for the implementation of Tie-Lines, Pseudo-Ties, and Dynamic Schedules (all similar in that they utilize real-time data from an agreed-upon common source between Adjacent BAs), the PRT recommends requirements focused on the real-time values operated to. The PRT's recommendations for BAL-005 are fully detailed below.

1) **Title**: The PRT recommends changing the title of BAL-005 to "Balancing Authority Control" to remove the implication that BAL-005 pertains exclusively to generation, and better reflect the focus on the BA acquiring necessary data to calculate Reporting ACE so that balancing of resources and demand can be achieved under Tie-Line Bias Control. Based upon the input from the industry, the PRT recommends that the SDT consider whether the term AGC should be retained within any requirements. The PRT also recommends that the SDT pursue revisions to the definition of AGC as proposed below to be resource-neutral.

AGC: Equipment that automatically adjusts ~~generation~~ resources utilized in a Balancing Authority Area from a central location to maintain the Balancing Authority's Reporting ACE within the bounds required under the NERC Reliability Standards. Resources utilized under AGC may include conventional generation, variable energy resources, storage devices and loads acting as resources, such as Demand Response. ~~may interchange~~

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~~schedule plus Frequency Bias.~~ ~~AGC may also accommodate automatic inadvertent payback and time error correction.~~

2) **Purpose**: The SDT would also be tasked with consideration of revising the "Purpose" statement to focus on acquiring the information necessary for calculating Reporting ACE, while remaining neutral on the types of reserves or resources utilized. The PRT recommends the following revised Purpose statement for SDT consideration:

> This standard establishes requirements for acquiring necessary data for the Balancing Authority so that balancing of resources and demand can be achieved under Tie-Line Bias Control.

Within the Purpose statement or Applicability section, the PRT also recommends that the SDT consider addressing the Hydro Quebec exception for tie line bias control in some form, or a single-BA exception.

3) **Applicability**: The SDT should remove "Generator Operators", "Transmission Operators", and "Load Serving Entities" as applicable entities unless specificially added into a Standard requirement by the SDT.

4) **Requirement R1**: The PRT recommends that the content of Requirement R1 be split between what is needed for ensuring facilities are within a BA Area prior to MW being generated or consumed, and what is needed for ensuring balanced operation within an Interconnection. First, the PRT recommends that the SDT consider continuing discussions with the FAC SDT moving and restating or clarifying the TOP, LSE, and GOP requirements in a FAC Standard to ensure facilities are within the metered boundaries of a BA prior to transmission operation, resource operation, or load being served. The PRT discussed that the ownership of metering and other factors may drive why the LSE is included in this standard, along with other entities; however, consideration should be given to moving requirements for these facilities to be within a BA Area into a FAC standard. The PRT is concerned that removing any such requirements of the LSE, TOP, and GOP and not reflecting them within another standard may inadvertently transfer certain obligations to the BA to ensure that such loads, resources, and facilities are within the BA's metered boundaries. The SDT should explore whether the role of the TOP would appropriately cover the loads interconnected to that TOP, such that the LSE requirement may not be necessary. Second, the PRT recommends that the SDT revise Requirements R1 and R2 to be BA requirements that all Actual Net Interchange and Scheduled Net Interchange used by the BA in its Reporting ACE

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calculation also have an Adjacent BA, as proposed in the redlined Requirements R1 and R2. Note that the PRT does not intend with the proposed language to impose any additional requirements on the BA that currently apply to the LSE, GOP, and TOP, but also believes that the requirements to identify the applicable BA should perhaps be in the interconnection agreements (via FERC's OATT or NAESB, for example) or a FAC requirement. With respect to proposed R2, the SDT should ensure that the requirement cannot be misinterpreted to imply that Dynamic Schedules can only be with physically adjacent BAs. The intent is to address adjacency in a manner consistent with the scheduling path no differently than used for interchange schedules.

5) **Requirement R2**: Retirement approved by FERC effective January 21, 2014.

6) **Requirement R3**: The PRT recommends that the SDT not use the term "Regulation Service," as in general this statement could apply to implementation of Dynamic Schedules or Pseudo-Ties, and the desire to have a common point for the data shared between the BAs implementing the Dynamic Transfer. The PRT recommends removing "adequate" and "Burden" from the requirement. The PRT recommends expanding Requirement R3 to be applicable to the implementation of tie lines, Pseudo-Ties, and Dynamic Schedules, as all require agreement between adjacent BAs on the agreed-upon points to be implemented. The PRT recommends that the SDT review the other standards such as TOP-005 to assure there is no duplication or redundancy. Specific to the concern on swapping hourly values in BAL-005 posted for industry comment. The PRT recommends deleting the proposed R3.2 and the first sentence of the proposed R3.5.2, the PRT also recommends the SDT develop a guideline document to accompany BAL-005 covering some of the suggested best practices.

7) **Requirement R4**: The PRT reviewed Requirement R4 with respect to what notification or coordination is necessary that could be considered with the other requirements in this Standard regarding Interchange. Initially the PRT was considering a recommendation that the SDT consider the requirement as it applies to Dynamic Transfer implementation as discussed in the Dynamic Transfer reliability guideline, and as it applies to the practice of implementing multiple-BA Dynamic Transfers under a process referred to as ACE Diversity Interchange. The PRT also considered recommendations to delete or modify Requirement R4 so that it requires communication with not only the BAs, but any other affected entities, and also to strike "providing Regulation Service." However, after further review, the PRT recommends retiring Requirement R4, as the basis for coordination of common values between adjacent BAs is covered in Requirement R3, and correction of information not available has also been addressed. These requirements should ensure that any failure to perform would be reflected in the BA performance under BAL-001-2.

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8) **Requirement R5**: The PRT recommends retiring Requirement R5, as the requirements placed upon the implementation of Dynamic Transfers are covered within Requirement R3. With respect to having a backup plan to the extent that a service may no longer be provided, the PRT believes this would be covered in the terms agreed to between the parties implementing the Dynamic Transfer. As proposed by the PRT, the requirements remaining in BAL-005 would ensure that any failure to perform would be reflected in the BA performance under BAL-001-2.

9) **Requirement R6**: The PRT recommends that the sentence "Single Balancing Authorities operating asynchronously may employ alternative ACE calculations such as (but not limited to) flat frequency control" be captured in the definition of "Reporting ACE.". The terms used in the Requirement R6 need to be consistent with those used in Reporting ACE if the Requirement is retained. The SDT should consider whether the 30-minute requirement for RC notification is sufficient or excessive. The PRT recommends that if a timing requirement remains in the standard that it be structured in a manner to not require communication with the RC if the capability to calculate Reporting ACE is restored within the defined notification period.

10) **Requirement R7**: The PRT recommends retiring this Requirement under Paragraph 81. The first sentence covers having a functional EMS or other system capable of calculating Reporting ACE and controlling resources, which can be done manually without any detriment to reliability. EOP-008-1 Requirement R1 recognizes that such automated capability may not be available for up to two hours for loss of control center functionality. In addition, the second sentence is not needed, as such actions would be covered under EOP-008. The PRT believes that the term "Operating AGC" in Requirement R7 refers to the capability to continuously calculate ACE (not automatic control of resources), which should be considered one of the BAs functional obligations with regard to the reliable operations and situational awareness of the BES. Though redundancy and other provisions may be in place to maintain EMS functionality, there are times when the information may not be available where the provisions under EOP-008-1 would apply.

11) **Requirement R8**: The PRT recommends that the SDT revise the Requirement with the proper context of a minimum normal scan rate and clarify how frequently all components must be factored into the Reporting ACE equation under normal operation. With respect to the sub-requirements, the SDT should ensure that any proposed revisions accommodate abnormal and emergency operations, including the possibility that the EMS or supporting telemetry may not be available, such as during an evacuation to a backup site. The PRT notes that the SDT should consider a requirement focused on a minimum scan-rate expectation under normal operations, rather than a requirement that could be interpreted as if systems have 100% availability.

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12) **Requirement R8, Part 8.1**: The BA should have visibility of system frequency within parameters consistent with EOP-008, however the PRT recommends that the requirement not be prescriptive. The SDT should review EOP-008 to ensure that this requirement is covered there. In addition, the SDT should also consider remote and redundant frequency resources to the extent that the information that is otherwise available to the BA may not be available upon loss of control center functionality. Such capability may already be anticipated under EOP-008. The SDT should consider the following questions in the development of the revised requirement:

    a) How much time is allowed to pass if the redundancy is lost before it must be restored?

    b) Does the PRT believe it is acceptable for the second and independent frequency device to be one used by another Balancing Authority?

13) **Requirement R9, Part 9.1**: The PRT recommends retiring this Requirement. The Actual Net Interchange and Scheduled Net Interchange values in the Reporting ACE calculation include provisions for the Balancing Authority to include its high voltage direct (HVDC) link to another asynchronous interconnection. By assuring the values are handled consistently in the actual and scheduled Interchange terms included in the real-time Reporting ACE by definition, the Balancing Authority is not being instructed "how" to implement the HVDC link, but allowed to decide the method it will use. By focusing on real-time Reporting ACE, we are assuring reliability is addressed and maintained at all times.

14) **Requirement R10 and R11**: The PRT recommends retiring these requirements, as the basics of both requirements are factored into the definition of Scheduled Net Interchange used in the Reporting ACE calculation as defined in the NERC Glossary.

    The PRT noted that Requirement R10 is written as if "Net Scheduled Interchange" is the value used in the ACE equation; however, Net Scheduled Interchange has two meanings – the algebraic sum of all Interchange Schedules across a given path, or between Balancing Authorities for a given period or instant in time. Aside from the concern of having a definition with two different meanings, the PRT believes that neither choice in the definition accurately depicts the value inserted into the ACE or Reporting ACE, which would be the algebraic sum of all Net Scheduled Interchange with all Adjacent Balancing Authorities, including Dynamic Schedules. In addition, the PRT could not find a definition of Scheduled Interchange as used in Requirement R11. Under Section 3 below, the PRT recommends changes to certain NERC definitions.

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15) **Requirement R12**: The PRT took a holistic approach to Requirement R12 and other requirements related to the implementation of Tie-Lines, Pseudo-Ties, and Dynamic Schedules, as all relate to the information exchanged between adjacent BAs.

The PRT recommends a new Requirement R3 related to the implementation of Tie-Lines, Pseudo-Ties, and Dynamic Schedules, where each respective Adjacent BA has agreed to common measuring points that produce an agreed-to value to be included in the calculation of Reporting ACE. The SDT should review the requirement as it relates to current practices to ensure the reliability needs are met.

The PRT suggests that the holistic approach shall only be achieved if there is a comprehensive definition of ACE. Therefore, the PRT recommends the ACE and Reporting ACE definitions be reviewed (understanding and identifying as well why there is a difference) to assure that they are comprehensive (including items such as all AC Tie-Lines, Pseudo-ties, and all other necessary Adjacent BA information). The PRT notes that the comprehensive details of the ACE calculation in BAL-001-1 will be retired upon implementation of BAL-001-2, where ACE will only be defined in the NERC Glossary. The PRT suggests that a complete review of all the NERC Standards for use of the term "ACE" is necessary to assure that any update to the ACE definition would not impact any other Standard.

16) **Requirement R13**: The PRT suggests deleting the first sentence of R13, and suggests that the SDT include in a guideline document the practice of performing hourly error checks of the Actual Net Interchange ($NI_{A)}$ operated to for the hour against an end-of-the-hour reference.

The PRT also recommends a separate requirement specific to adjustments as needed to the Reporting ACE to reflect the meter error adjustment. However, the PRT is concerned that requiring correction of a component of ACE when in error (no matter how negligible) would be problematic in that not all errors require correction. The PRT recommends that the SDT consider stating the requirement in such a manner that I_{ME} is required to be zero except during times needed to compensate for any data or equipment error affecting a component of the Reporting ACE calculation (interchange or frequency). When writing the requirement, the SDT should also consider that there are other means of addressing metering corrections besides use of the I_{ME} term, which may include possible revision to real-time metering data. Uses of the I_{ME} term in the Reporting ACE may also be an appropriate subject for the guideline document the PRT is

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recommending that the SDT develop to accompany BAL-005 covering some of the suggested best practices.

Requirement R14: The PRT recommends that the SDT delete the first sentence in R14 and revise the second sentence to cover the minimum amount of information expected for the BA to provide in real-time to its operator. The PRT also recommends that the individual components of actual and scheduled interchange with each Adjacent Balancing Authority also be captured (Tie-Lines, Pseudo-Ties, Dynamic Schedules, block schedules as needed for coordination, and real-time schedules). Based on industry comments, the SDT should consider whether this requirement is needed in the BAL standards, whether it is adequately covered elsewhere in the standards, or whether it should be moved to the NERC Rules of Procedure for certification of the Functional Entity.

17) **Requirement R15**: The SDT should consider placing a requirement in a FAC Standard with respect to supporting infrastructure or functionality, or review EOP-008 to determine if existing requirements adequately address primary control center functionality.

18) **Requirement R16**: The PRT recommends moving the requirement for flagging bad data to revisions made in Requirement R14.

19) **Requirement R17**: The PRT recommends that this requirement be written to be specific to the equipment used to determine the frequency component required for Reporting ACE. The PRT also recommends that the SDT move any accuracy requirements applicable to the needs of the Transmission Operator, (which may include MW, MVAR, voltage, potential transformer, current transformer, and remote terminal unit or equivalent) to a TOP or FAC standard. Further study would be needed on the ".25% of full scale" and the "appropriate accuracy" language.

2. BAL-006

The BARC2 PRT has completed its review of BAL-006 and recommends that it be revised. The recommendations below include moving any requirements with implications for real-time operations into BAL-005.

Among other work, the review team considered a FERC directive that recommended the development of a metric to bound the magnitude of inadvertent accumulations, as those accumulations may be indicative of a BA excessively leaning on the resources of others in its Interconnection. The review team

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consensus was that an Inadvertent Interchange accumulation value alone cannot yield useful information concerning whether a BA is operating reliably. The PRT document on the consideration of issues and directives more fully covers the PRT recommendations related to the FERC directives. The PRT's recommendations for BAL-006 are fully detailed below.

1) **Purpose**: As the revisions proposed for BAL-006 focus on the minimum requirements for Adjacent Balancing Authorities to agree upon the hourly MW amounts of scheduled and actual Interchange between them, which reinforces that errors in coordination or process will be identified, the PRT recommends that the SDT revise the Purpose statement to be consistent with the Requirements as further developed under the SAR posted with this recommendation.

2) **Requirement R1**: The PRT recommends removing Requirement R1 as written and recommends that the SDT determine if there is merit in developing a reliability metric specific to this standard to measure performance to certain requirements under BAL-006, including the consideration of including the calculation of Inadvertent Interchange. In development of any metric, the PRT recommends that the SDT determine the appropriate time-frame for reliability (as close to real-time as possible). Similar to how BAL-001-2 has CPS1 and BAAL measures dependent upon the BA calculating its Reporting ACE without a stated requirement that "Each BA shall calculate its Reporting ACE", the PRT felt that if the industry supports a measure being developed that uses Inadvertent Interchange in the measure of performance, that the BA would calculate Inadvertent Interchange as needed to comply. Also, similar to the approach taken for defining Reporting ACE in the Glossary with all of the components necessary for the calculation, the PRT is recommending in Requirement R2 below that the definition of Inadvertent Interchange also be updated so that all components necessary for the calculation are identified.

3) **Requirement R2**: The PRT recommends incorporating Requirement R2 into a revised definition of Inadvertent Interchange: The PRT recommends that this definition be modified to capture that the calculation is on an hourly basis and includes the megawatt-hour values for Tie-Lines, Pseudo-Ties, and Dynamic Schedules, along with other scheduled interchange implemented under block scheduling, which does not include the effect of the ramps. The PRT recommends that the definition also include the NERC definitions of On-Peak Accounting and Off-Peak Accounting, which reference the NAESB business practice for inadvertent interchange accounting. The PRT also recommends that the definition clarify the treatment of scheduled and actual interchange associated with asynchronous ties between Interconnections.

4) **Requirement R3**: The PRT recommends incorporating Requirement R3 into BAL-005, as the requirement relates to the agreement on common values used in Real-time and also

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recommends developing a guideline to cover the practice of comparing the hourly megawatt-hour values gathered at the end of the hour against the hourly integrated values of the scan-rate data operated to, in order to determine if significant error exists. 5) **Requirement R4**: The SDT should review current practices for confirmation of interchange after-the-fact to determine and justify a shorter duration for agreement on such values for reliability purposes. The PRT also recommends that Requirement R4 be restated to require that the agreement is based upon the aggregate net schedules and net actuals by adjacent BAs as further defined in the new definition of Inadvertent Interchange. In concept, every Tie-Line, Pseudo-Tie, and Interchange Schedule (including Dynamic Schedules) implemented in the Reporting ACE calculation should have an accompanying after-the-fact megawatt-hour value accounted for in the calculation of Inadvertent Interchange. 6) **Requirement R4, Part 4.2**: The SDT should evaluate whether to retire this Requirement, as it is addressed in the new definition of Inadvertent Interchange by the proposed reference to On-Peak Accounting and Off-Peak Accounting. 7) **Requirement R4.3**: The SDT should review this requirement to determine what elements of the requirement are necessary to support reliability. The SDT also should consider including in a guideline document a practice to support providing operations personnel with information on the comparison of monthly revenue class meters to meters used for real-time operation. 8) **Requirement R5**: The SDT should review whether the practice that requires BAs to mutually agree by the 15th calendar day is needed for reliability. The PRT believes there may be merit in requiring BAs to identify the cause of the dispute, and to either correct it within a prescribed number of days, or follow a dispute resolution process. The SDT should ensure that the requirement is clear and distinct, which may require modifying or striking the language regarding dispute resolution.

Reliability Functions	
The Reliability Standards will Apply to the Following Functions (Check each one that applies.)	
☐ Regional Reliability Organization	Conducts the regional activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the Bulk Electric System within the region and adjacent regions.
☐ Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
☒ Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
☐ Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
☐ Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
☐ Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
☐ Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
☐ Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
☐ Transmission Owner	Owns and maintains transmission facilities.
☐ Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
☐ Distribution Provider	Delivers electrical energy to the End-use customer.
☐ Generator Owner	Owns and maintains generation facilities.
☐ Generator Operator	Operates generation unit(s) to provide real and reactive power.

Reliability Functions		
☐	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
☐	Market Operator	Interface point for reliability functions with commercial functions.
☐	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles	
Applicable Reliability Principles (Check all that apply).	
☒	1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Reliability Standards.
☒	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
☒	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
☐	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
☐	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
☐	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
☐	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
☐	8. Bulk power systems shall be protected from malicious physical or cyber attacks.

Does the proposed Reliability Standard comply with all of the following Market Interface Principles?	Enter (yes/no)
1. A Reliability Standard shall not give any market participant an unfair competitive advantage.	Yes.
2. A Reliability Standard shall neither mandate nor prohibit any specific market structure.	Yes.
3. A Reliability Standard shall not preclude market solutions to achieving compliance with that Reliability Standard.	Yes.

Reliability and Market Interface Principles	
4. A Reliability Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with Reliability Standards.	Yes.

Related Reliability Standards	
Reliability Standard No.	Explanation
BAL-001-2 and draft BAL-002-2	Some of the proposed revisions to BAL-005 focus on the components used to calculate Reporting ACE, used to measure compliance to CPS1 and BAAL in BAL-001-2, and measure compliance in the draft BAL-002-2 revisions.
EOP-008-1	The purpose of EOP-008-1 is to ensure continued reliable operations of the Bulk Electric System (BES) in the event that a control center becomes inoperable. For certain proposed revisions to BAL-005 in this SAR, the PRT recommends that the SDT consider provisions in EOP-008-1 for the loss of control center functionality.
FAC-001-1	With respect to BAL-005 Requirement R1, the PRT recommends that the SDT consider moving and restating the TOP, LSE, and GOP requirements in an FAC Standard to ensure facilities are within the metered boundaries of a BA prior to transmission operation, resource operation, or load being served. The PRT recommends that the SDT explore whether the role of the TOP would appropriately cover the loads interconnected to that TOP, such that the LSE requirement may not be necessary.
Other	The PRT recommendations include that the ACE and Reporting ACE definitions be reviewed (understanding and identifying as well why there is a difference) to assure that they are comprehensive (including items such as all AC Tie-Lines, Pseudo-ties, and all other necessary Adjacent BA information). As the comprehensive details of the ACE calculation in BAL-001-1 will be retired upon implementation of BAL-001-2, where ACE will only be defined in the NERC Glossary, the PRT suggests that a complete review of all the NERC Standards is necessary to assure where ACE is utilized in a Standard, that any update to the ACE definition would not impact any other Standard.

Related SARs – N/A	
SAR ID	Explanation

Regional Variances – N/A	
Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
RFC	
SERC	
SPP	
WECC	