

Mapping Document for FAC-014-2

Project 2015-09 Establish and Communicate System Operating Limits

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
<p><u>FAC-014-2, Requirement R1</u></p> <p>R1. The Reliability Coordinator shall ensure that SOLs, including Interconnection Reliability Operating Limits (IROLs), for its Reliability Coordinator Area are established and that the SOLs (including Interconnection Reliability Operating Limits) are consistent with its SOL Methodology.</p>	<p><u>Requirements R1, R2, and R4 of FAC-014-3</u></p> <p>R1. Each Reliability Coordinator shall establish Interconnection Reliability Operating Limits (IROLs) for its Reliability Coordinator Area in accordance with its System Operating Limit Methodology (SOL Methodology).</p> <p>R2. Each Transmission Operator shall establish System Operating Limits (SOLs) for its portion of the Reliability Coordinator Area in accordance with its Reliability Coordinator’s SOL Methodology.</p> <p>R4. Each Reliability Coordinator shall establish stability limits to be used in operations when the limit impacts more than one Transmission Operator in its Reliability Coordinator Area in accordance with its SOL Methodology.</p>	<p>Requirements R1, R2, and R4 of FAC-014-3 ensure that SOLs are established in accordance with the Reliability Coordinator’s (RC’s) SOL Methodology.</p> <p>Requirement R1 was changed to address an issue with the existing language in FAC-014-2, Requirement R1. With the original language, the RC is responsible for ensuring that SOLs established by the Transmission Operator (TOP) per FAC-014-2, Requirement R2 are consistent with the RC’s SOL Methodology. This creates a situation where the RC is responsible for “ensuring” the actions of the TOP.</p> <p>Accordingly, if the TOP does not establish SOLs per its RC’s SOL Methodology, then 1) the TOP is in violation of Requirement R2, and 2) the RC by default is in violation of Requirement R1 because the RC did</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
		<p>not ensure that the TOP’s SOL was consistent with its SOL Methodology.</p> <p>The proposed revision addresses this issue and clarifies the appropriate responsibilities of the respective functional entities.</p> <p>Additionally, this requirement carries forward the obligation of the RC to establish IROLs for its RC Area. The RC maintains primary responsibility for establishment of IROLs because these limits have the potential to impact a Wide-area.</p> <p>FAC-011-4 requirement R4 further addresses the RC responsibilities (beyond IROL establishment) for stability limit establishment where more than one TOP is impacted.</p>
<p><u>FAC-014-2, Requirement R2</u></p> <p>R2. The Transmission Operator shall establish SOLs (as directed by its Reliability Coordinator) for its portion of the Reliability</p>	<p><u>FAC-014-3, Requirement R2</u></p> <p>R2. Each Transmission Operator shall establish System Operating Limits (SOLs) for its portion of the Reliability Coordinator Area in accordance with its Reliability Coordinator’s SOL Methodology.</p>	<p>The language from the existing FAC-014-2, Requirement R2 that states the TOP, “(as directed by its Reliability Coordinator)” was removed because it causes confusion and may be incorrectly understood to mean that the TOPs are</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
<p>Coordinator Area that are consistent with its Reliability Coordinator’s SOL Methodology.</p>		<p>only required to establish SOLs if they have been “directed to by their RC.” This is not the intended meaning of the requirement, thus, the drafting team has removed the unnecessary and potentially confusing language. The proposed language makes clear that the TOP is the entity responsible for establishing SOLs, and that these SOLs must be established in accordance with the RC’s SOL Methodology.</p>
<p><u>FAC-014-2, Requirements R3 and R4</u></p> <p>R3. The Planning Authority shall establish SOLs, including IROLs, for its Planning Authority Area that are consistent with its SOL Methodology.</p> <p>R4. The Transmission Planner shall establish SOLs, including IROLs, for its Transmission Planning Area that are consistent with its Planning Authority’s SOL Methodology.</p>	<p>FAC-011-4, Requirement R8<u>R9</u>, Part 8<u>9</u>.2, Subpart <u>9.2.2</u></p> <p>FAC-015-1, Requirements R 1 – R6<u>R1 – R3</u></p> <p>FAC-011-4, Requirement R8<u>R9</u>, Part 8<u>9</u>.2:</p> <p>R9. R8. Each Reliability Coordinator shall provide its new or revised SOL Methodology to: <u>[Violation Risk Factor: Lower] [Time Horizon: Operations Planning]</u></p> <p><u>9.2 8.2.</u>—<u>Each of the following entities 30 days prior to the effective date of the SOL methodology or as soon as</u></p>	<p><u>The SDT is proposing a construct that does not make use of an SOL Methodology applicable to the planning horizon or the establishment of SOLs consistent with the PC’s SOL Methodology.</u></p> <p>The PCs and TOPs responsible for planning any portion of the RC’s Area are made aware of the RC’s SOL Methodology through FAC-011-4, Requirement R8, Part 8<u>R9, Part 9.2.2</u>. By having the RC’s SOL Methodology, PCs and TPs who plan any portion of the System in the RC Area have knowledge of the methods and criteria for establishing SOLs, including the</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

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	<p><u>practicable if a change must be implemented in less than 30 days to address a reliability issue:</u></p> <p>9.2.2 Each Planning Coordinator and Transmission Planner <u>that is</u> responsible for planning any portion of the Reliability Coordinator Area <u>prior to the effective date of the SOL Methodology;</u></p> <p><u>FAC-015-1 Requirement R1 – R3:</u></p> <p>1. <u>R1.—</u>Each Planning Coordinator <u>and each of its Transmission Planners,</u> when developing its steady-state modeling data requirements, shall implement a process to ensure that Facility Ratings used in its Planning Assessment of the Near-Term Transmission Planning Horizon are equally limiting or more limiting than <u>those established the owner-provided Facility Ratings used in accordance with its operations per the Reliability Coordinator’s SOL Methodology.</u> if</p>	<p>stability performance criteria used for establishing stability limits in the operations horizon.</p> <p>New Reliability Standard FAC-015-1 along with the changes made to <u>in the proposed</u> FAC-011-4 and FAC-014-3 represent an improvement for planning and operations to better work together to address the reliability issues that are ultimately faced in Real-time operations. FAC-015-1, Requirements R1 – R3 ensures <u>ensure</u> that Planning Assessments performed for the Near-Term Transmission Planning Horizon (required by TPL-001-4), are bounded by modeling data and performance criteria that are equally limiting or more limiting than those established in accordance with the RC’s SOL Methodology.</p> <p>FAC-015-1, Requirement R1 addresses Facility Ratings used in Planning Assessments, Requirement R2 addresses the System steady state voltage limits <u>used in Planning Assessments,</u> and Requirement R3 addresses the stability performance criteria used in Planning</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>The process may allow the Planning Coordinator use of less limiting Facility Ratings than the Facility Ratings established in accordance with its Reliability Coordinator's SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator. if: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]</p> <ul style="list-style-type: none"> ● R2.—The Facility has higher Facility Ratings as a result of a planned upgrade, addition, or Corrective Action Plan, ● Facility Rating differences are due to variations in ambient temperature assumptions, ● The Planning Coordinator provided a technical rationale for using a less limiting Facility Rating to each affected Transmission Planner and Reliability Coordinator, or ● The Transmission Planner provided a technical rationale for using a less limiting Facility Rating to each affected 	<p>Assessments. These requirements address the three components of SOLs used in operations and facilitates continuity between operations and planning.</p> <p>Implementing the processes required in FAC-015-1, Requirements R1—R3 provides the PC with Facility Ratings, System steady-state voltage limits, and stability performance criteria that are equally limiting or more limiting than those established in accordance with the RC's SOL Methodology.</p> <p>FAC-015-1, Requirement R4 requires the PC to provide those Facility Ratings, System steady-state voltage limits, and stability performance criteria for use in its Planning Assessment to its TPs and to requesting PCs.</p> <p>FAC-015-1, Requirement R5 requires the TP to use the Facility Ratings, System steady-state voltage limits, and stability performance criteria in its Planning Assessment that are equally limiting or more limiting than the Facility Ratings,</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p><u>Planning Coordinator and Reliability Coordinator.</u></p> <p>2. Each Planning Coordinator <u>and each of its Transmission Planners</u> shall implement a process to ensure that System steady-state voltage limits used in its Planning Assessment of the Near-Term Transmission Planning Horizon are equally limiting or more limiting than the System Voltage Limits established<u>used</u> in accordance with its operations per the Reliability Coordinator’s SOL Methodology. #The process may allow the Planning Coordinator uses<u>use of</u> less limiting System steady-state voltage limits than the System Voltage Limits established in accordance with its Reliability Coordinator’s SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator. if: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]</p> <ul style="list-style-type: none"> R3. <u>The Planning Coordinator provides a technical rationale for using a less limiting System steady-state voltage limit</u> 	<p>System steady-state voltage limits, and stability criteria provided by its PC.</p> <p>By implementing Requirements R1 – R5<u>R3</u> of FAC-015-1, equally limiting or more limiting Facility Ratings, System steady-state voltage limits and stability criteria that are established in accordance with the RC’s SOL Methodology are ultimately implemented in the Planning Assessments performed by the PCs and TPs, thus improving reliability by ensuring continuity between planning and operations.</p> <p>FAC-015-1, Requirement R6 requires the PC to communicate any instability, Cascading or uncontrolled separation identified in the Planning Assessments to the RC and to impacted TOPs. The subparts of Requirement R6 require the communication of key information that can be useful to the RC and TOP to establish stability limits and IROLs that will ultimately be used in real-time operations.</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p><u>to each affected Transmission Planner and Reliability Coordinator, or</u></p> <ul style="list-style-type: none"> • <u>The Transmission Planner provides a technical rationale for using a less limiting System steady-state voltage limit to each affected Planning Coordinator and Reliability Coordinator.</u> <p>3. Each Planning Coordinator <u>and each of its Transmission Planners</u> shall implement a process to ensure the stability performance criteria used in its Planning Assessment of the Near-Term Transmission Planning Horizon are equally limiting or more limiting than the stability performance criteria established used <u>in its operations per the Reliability Coordinator’s SOL Methodology.</u> if The process may allow the Planning Coordinator uses use of <u>less limiting stability performance criteria than the stability performance criteria specified in its Reliability Coordinator’s SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator.</u> if: [Violation Risk Factor:</p>	

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p><u>Medium</u>] <u>[Time Horizon: Long-term Planning]</u></p> <p>R4. Each <u>The</u> Planning Coordinator shall provide the <u>Facility Ratings, System steady state voltage limits, and provides a technical rationale for using a less limiting stability performance criteria for use in its Planning Assessment to its Transmission Planners and to requesting Planning Coordinators.</u></p> <ul style="list-style-type: none"> R5. Each <u>criteria to each affected</u> Transmission Planner shall use <u>Facility Ratings, System steady state voltage limits, and and Reliability Coordinator, or</u> <p><u>The Transmission Planner provides a technical rationale for using a less limiting stability performance criteria in its Planning Assessment that are equally limiting or more limiting than the Facility Ratings, System steady state voltage limits, and stability criteria provided by its Planning Coordinator.</u></p> <ul style="list-style-type: none"> R6. Each <u>criteria to each affected</u> Planning Coordinator shall <u>communicate any instability, Cascading or uncontrolled separation identified in</u> 	

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>either its Planning Assessment of the Near-Term Transmission Planning Horizon or its Transfer Capability assessment to each impacted and Reliability Coordinator and Transmission Operator. This communication shall include:</p> <p>6.1 — The type of instability identified (e.g., voltage collapse, angular instability, transient voltage dip criteria violation);</p> <p>6.2 — The associated stability criteria used as part of determining the instability;</p> <p>6.3 — The associated Contingency(ies) which result(s) in the instability, Cascading or uncontrolled separation;</p> <p>6.4 — Any Remedial Action Scheme action, under voltage load shedding (UVLS) action, under frequency load shedding (UFLS) action, interruption of Firm Transmission Service, or Non-Consequential Load Loss required to address the instability, Cascading or uncontrolled separation;</p> <p>6.5 — Any Corrective Action Plan associated with the instability, Cascading or uncontrolled separation.</p>	

Standard: FAC-014-2 Establish and Communicate System Operating Limits

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<p><u>FAC-014-2, Requirement R5, R5.1</u></p> <p>R5. The Reliability Coordinator, Planning Authority and Transmission Planner shall each provide its SOLs and IROLs to those entities that have a reliability-related need for those limits and provide a written request that includes a schedule for delivery of those limits as follows:</p> <p>R5.1. The Reliability Coordinator shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Reliability Coordinators and Reliability Coordinators who indicate a reliability-related need for those limits, and to the Transmission Operators, Transmission Planners, Transmission Service Providers and Planning Authorities within its Reliability Coordinator Area. For each IROL, the Reliability Coordinator shall provide the following supporting information:</p> <p>R5.1.1. Identification and status of the associated Facility (or group of Facilities) that is (are) critical to the derivation of the IROL.</p>	<p>The communication of SOL and IROL information from the Reliability Coordinator is addressed by:</p> <ol style="list-style-type: none"> 1. FAC-014-3, Requirement R5 (addresses communication from the Reliability Coordinator to other entities) 2. IRO-014-3, Requirement R1 (addresses communication between Reliability Coordinators to support reliable operations) <p><u>FAC-014-3, Requirement R5:</u></p> <p>R5. Each Reliability Coordinator shall provide:</p> <p>5.1. Each Planning Coordinator within its Reliability Coordinator Area, SOLs for its Reliability Coordinator Area (including the subset of SOLs that are IROLs) at least once every twelve calendar months.</p> <p>5.2. Each impacted Planning Coordinator within its Reliability Coordinator Area, the following information for each established stability limit and each established IROL at least once every twelve calendar months:</p> <p>5.2.1. The value of the stability limit or IROL;</p>	<p>Reference the description above for Requirement R3 which describes a different set of roles and responsibilities for the PC and TP as defined in FAC-015-1.</p> <p>While the existing requirements in FAC-014-2, Requirement R5 are preserved in FAC-014-3, Requirement R5, FAC-014-3, Requirement R5 more specifically address the communications requirements for the RC. Each recipient of the RC communications is addressed in a separate subpart because each recipient has a slightly different need. This approach represents an improvement over the former approach.</p> <p>IRO-014-3, Requirement R1 and subparts addresses RC communication of critical operational information to adjacent RCs, which addresses RC-to-RC communication and coordinated operations issues.</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
<p>R5.1.2. The value of the IROL and its associated Tv.</p> <p>R5.1.3. The associated Contingency(ies).</p> <p>R5.1.4. The type of limitation represented by the IROL (e.g., voltage collapse, angular stability).</p>	<p>5.2.2. Identification of the Facilities that are critical to the derivation of the stability limit or IROL;</p> <p>5.2.3. The associated IROL Tv for any IROL;</p> <p>5.2.4. The associated Contingency(ies); and</p> <p><u>5.2.5.5.2.5. A description of the associated system conditions; and</u></p> <p><u>5.2.6.</u> The type of limitation represented by the stability limit or IROL (e.g., voltage collapse, angular stability).</p> <p>5.3. Each impacted Transmission Operator within its Reliability Coordinator Area, the value of the stability limits established pursuant to Requirement R4 and each IROL established pursuant to Requirement R1, in an agreed upon time frame necessary for inclusion in the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</p> <p>5.4. Each impacted Transmission Operator within its Reliability Coordinator Area, the information identified in Requirement R5 Parts 5.2.2 – 5.2.5 for each established stability limit or each IROL, and any updates to that information</p>	

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>within an agreed upon time frame necessary for inclusion in the Transmission Operator’s Operational Planning Analyses.</p> <p>5.5. Each requesting Transmission Operator within its Reliability Coordinator Area, requested SOL information for its Reliability Coordinator Area, on a mutually agreed upon schedule.</p> <p><u>IRO-014-3, Requirement R1</u></p> <p>R1. Each Reliability Coordinator shall have and implement Operating Procedures, Operating Processes, or Operating Plans, for activities that require notification or coordination of actions that may impact adjacent Reliability Coordinator Areas, to support Interconnection reliability. These Operating Procedures, Operating Processes, or Operating Plans shall include, but are not limited to, the following:</p> <p>1.1. Criteria and processes for notifications.</p> <p>1.2. Energy and capacity shortages.</p> <p>1.3. Control of voltage, including the coordination of reactive resources.</p> <p>1.4. Exchange of information including planned and unplanned outage information to support its</p>	

Standard: FAC-014-2 Establish and Communicate System Operating Limits

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	<p>Operational Planning Analyses and Real-time Assessments.</p> <p>1.5. Provisions for periodic communications to support reliable operations.</p>	
<p><u>FAC-014-2, Requirement R5, R5.2</u></p> <p>R5.2 The Transmission Operator shall provide any SOLs it developed to its Reliability Coordinator and to the Transmission Service Providers that share its portion of the Reliability Coordinator Area.</p>	<p>1. FAC-014-3, Requirement R3</p> <p>2. MOD-028-2, Requirement R7</p> <p>3. MOD-029-2a, Requirement R4</p> <p>4. MOD-030-3, Requirement R2.6</p> <p><u>FAC-014-3, Requirement R3</u></p> <p>R3. The Transmission Operator shall provide its SOLs to its Reliability Coordinator in accordance with its Reliability Coordinator’s SOL Methodology.</p> <p><u>MOD-028-2, Requirement R7:</u></p> <p>R7. The Transmission Operator shall provide the Transmission Service Provider of that ATC Path with the most current value for TTC for that ATC Path no more than:</p> <p>R7.1. One calendar day after its determination for TTCs used in hourly and daily ATC calculations.</p> <p>R7.2. Seven calendar days after its determination for TTCs used in monthly ATC calculations.</p> <p><u>MOD-029-2a, Requirement R4:</u></p>	<p>The communication of SOLs from the TOP to its RC is preserved in FAC-014-3, Requirement R3. The revised language represents an improvement on the current standard because the specifics of TOP communication to the RC is now addressed in the RC’s SOL Methodology. This revised requirement has a companion Requirement R7 in FAC-011-4 which states:</p> <p>R7. Each Reliability Coordinator shall include in its SOL Methodology the method and periodicity for Transmission Operators to communicate SOLs it established to its RC(s).</p> <p>The Transmission Service Provider (TSP) was removed from the SOL communication chain because the TSP does not need SOLs to perform its</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>R4. Within seven calendar days of the finalization of the study report, the Transmission Operator shall make available to the Transmission Service Provider of the ATC Path, the most current value for TTC and the TTC study report documenting the assumptions used and steps taken in determining the current value for TTC for that ATC Path.</p> <p><u>MOD-030-3, Requirement R2.6:</u></p> <p>[The TOP shall...] R2.6. Provide the Transmission Service Provider with the TFCs within seven calendar days of their establishment.</p>	<p>obligations specified in the Modeling, Data, and Analysis (MOD) standards; rather, they need Total Transfer Capability (TTC) and Total Flowgate Capability (TFC) from the TOPs as required in Requirement R7 of MOD-028-2, Requirement R4 of MOD-029-2a, and Requirement R2.6 of MOD-030-3. The TTCs and TFCs provided to the TSPs already reflect the impact of any SOLs.</p>
<p><u>FAC-014-2, Requirement R5, R5.3 and R5.4</u></p> <p>R5.3 The Planning Authority shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Planning Authorities, and to Transmission Planners, Transmission Service Providers, Transmission Operators and Reliability Coordinators that work within its Planning Authority Area.</p> <p>R5.4 The Transmission Planner shall provide its SOLs (including the subset of SOLs that are IROLs) to its Planning Authority, Reliability Coordinators, Transmission Operators, and Transmission Service Providers that work</p>	<ol style="list-style-type: none"> 1. FAC-015-1, Requirements R1 – R6<u>R4</u> 2. MOD-028-2, Requirement R7 3. MOD-029-2a, Requirement R4 4. MOD-030-3, Requirement R2 5. TPL-001-4, Requirement R8 <p><u>FAC-015-1, Requirements R1 –R6: R3 (See Requirements R3 and R4 section above.)</u></p> <p>R1. — Each Planning Coordinator, when developing its steady-state modeling data requirements, shall implement a process to ensure that Facility Ratings used in its Planning Assessment of the Near Term Transmission Planning Horizon are equally limiting or more</p>	<p>Reference the description above for Requirement R3 which describes a different set of roles and responsibilities for the PC and TP as defined in FAC-015-1.</p> <p>Implementing the processes required in FAC-015-1, Requirements R1 – R3 provides the PC with Facility Ratings, System steady-state voltage limits, and stability performance criteria that are equally limiting or more limiting than those established in accordance with the RC’s SOL Methodology.</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
<p>within its Transmission Planning Area and to adjacent Transmission Planners.</p>	<p>limiting than those established in accordance with its Reliability Coordinator’s SOL Methodology. If the Planning Coordinator uses less limiting Facility Ratings than the Facility Ratings established in accordance with its Reliability Coordinator’s SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator.</p> <p>R2. — Each Planning Coordinator shall implement a process to ensure that System steady state voltage limits used in its Planning Assessment of the Near-Term Transmission Planning Horizon are equally limiting or more limiting than the System Voltage Limits established in accordance with its Reliability Coordinator’s SOL Methodology. If the Planning Coordinator uses less limiting System steady state voltage limits than the System Voltage Limits established in accordance with its Reliability Coordinator’s SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator.</p> <p>R3. — Each Planning Coordinator shall implement a process to ensure the stability performance criteria used in its Planning Assessment of the Near-Term Transmission Planning Horizon are</p>	<p>FAC-015-1, Requirement R4 addresses the PC’s role for providing the Facility Ratings, System steady state voltage limits and stability performance criteria derived from Requirements R1 — R3 to the TPs and to requesting PCs for their use in performing Planning Assessments.</p> <p>FAC-015-1, Requirement R5 requires the TP to use the Facility Ratings, System steady state voltage limits, and stability performance criteria in its Planning Assessment that are equally limiting or more limiting than the Facility Ratings, System steady state voltage limits, and stability criteria provided by its PC.</p> <p><u>FAC-015-1, Requirements R1 — R5 result in PC/FAC-015-1, Requirements R1 – R3 result in PCs</u> and TPs using Facility Ratings, System steady state voltage limits, and stability performance criteria in their Planning Assessments that are equally limiting or more limiting than the Facility Ratings, System Voltage Limits, and stability performance criteria</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>equally limiting or more limiting than the stability performance criteria established in its Reliability Coordinator's SOL Methodology. If the Planning Coordinator uses less limiting stability performance criteria than the stability performance criteria specified in its Reliability Coordinator's SOL Methodology, the Planning Coordinator shall provide a technical justification to its Reliability Coordinator.</p> <p>R4. Each Planning Coordinator shall provide the Facility Ratings, System steady-state voltage limits, and stability performance criteria for use in its Planning Assessment to its Transmission Planners and to requesting Planning Coordinators.</p> <p>R5. Each Transmission Planner shall use Facility Ratings, System steady-state voltage limits, and stability performance criteria in its Planning Assessment that are equally limiting or more limiting than the Facility Ratings, System steady-state voltage limits, and stability criteria provided by its Planning Coordinator.</p> <p>R6. Each Planning Coordinator shall communicate any instability, Cascading or uncontrolled separation identified in either its Planning Assessment of the Near-Term</p>	<p>established in accordance with the RC's SOL Methodology.</p> <p>FAC-015-1, Requirement R6R4 requires the PC <u>and TP</u> to communicate any instability, Cascading or uncontrolled separation identified in the Planning Assessments to the RC and <u>Transfer Capability assessments</u> to impacted <u>RCs, TOPs, TOs, and GOs</u>. The subparts of Requirement R6R4 require the communication of key information that can be useful to the RC and TOP to establish stability limits and IROLs that will ultimately be used in real-time operations. <u>This information is also necessarily communicated to TOs and GOs for their use in identifying Facilities that require higher levels of vegetative management or cyber protection.</u></p> <p>The TSP was removed from the SOL communication chain. The TSP does not need SOLs from the PCs or TPs; rather, TSPs need TTC and TFC from the TOPs as required in Requirement R7 of MOD-028-2, Requirement R4 of MOD-029-2a, and</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

Requirement in Approved Standard	Translation to New Standard or Other Action	Description and Change Justification
	<p>Transmission Planning Horizon or its Transfer Capability assessment (<u>Planning Coordinator only</u>) to each impacted Reliability Coordinator and, Transmission Operator, <u>Transmission Owner, and Generation Owner</u>. This communication shall include:</p> <p>6.4.1 The type of instability identified (e.g., voltage collapse, angular instability, transient voltage dip criteria violation);</p> <p>6.4.2 The associated stability criteria used as part of determining the instability;</p> <p>6.4.3 The associated Contingency(ies) which result(s) in <u>and any Facilities critical to</u> the instability, Cascading or uncontrolled separation;</p> <p>6.4.4 <u>A description of the studied system conditions when the instability, Cascading or uncontrolled separation was identified;</u></p> <p>4.5 Any Remedial Action Scheme action, under voltage load shedding (UVLS) action, under frequency load shedding (UFLS) action, interruption of Firm Transmission Service, or Non-Consequential Load Loss required to</p>	<p>Requirement R2.6 of MOD-030-3. The TTCs and TFCs provided to the TSPs already reflect the impact of any SOLs.</p> <p>TPL-001-4, Requirement R8 requires each PC and TP to distribute its Planning Assessment results to adjacent PCs and adjacent TPs within 90 calendar days of completing its Planning Assessment, and to any functional entity that has a reliability related need and submits a written request for the information within 30 days of such a request.</p> <p>With this requirement, any functional entity with a reliability-related need for a PC's or TP's Planning Assessment can obtain that Planning Assessment. Requesting entities are then made aware of any system performance issues identified by these Planning Assessments.</p>

Standard: FAC-014-2 Establish and Communicate System Operating Limits

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	<p>address the instability, Cascading or uncontrolled separation;</p> <p>4.6-5 Any Corrective Action Plan associated with the instability, Cascading or uncontrolled separation.</p> <p><u>MOD-028-2, Requirement R7:</u></p> <p>R7. The Transmission Operator shall provide the Transmission Service Provider of that ATC Path with the most current value for TTC for that ATC Path no more than:</p> <p>R7.1. One calendar day after its determination for TTCs used in hourly and daily ATC calculations.</p> <p>R7.2. Seven calendar days after its determination for TTCs used in monthly ATC calculations.</p> <p><u>MOD-029-2a, Requirement R4:</u></p> <p>R4. Within seven calendar days of the finalization of the study report, the Transmission Operator shall make available to the Transmission Service Provider of the ATC Path, the most current value for TTC and the TTC study report documenting the assumptions used and steps taken in determining the current value for TTC for that ATC Path.</p>	

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	<p><u>MOD-030-3, Requirement R2.6:</u></p> <p>R2.6. [The TOP shall...] R2.6. Provide the Transmission Service Provider with the TFCs within seven calendar days of their establishment.</p> <p><u>TPL-001-4, Requirement R8:</u></p> <p>R8. Each Planning Coordinator and Transmission Planner shall distribute its Planning Assessment results to adjacent Planning Coordinators and adjacent Transmission Planners within 90 calendar days of completing its Planning Assessment, and to any functional entity that has a reliability related need and submits a written request for the information within 30 days of such a request.</p> <p>8.1. If a recipient of the Planning Assessment results provides documented comments on the results, the respective Planning Coordinator or Transmission Planner shall provide a documented response to that recipient within 90 calendar days of receipt of those comments.</p>	

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<p><u>FAC-014-2, Requirement R6</u></p> <p>R6. The Planning Authority shall identify the subset of multiple contingencies (if any), from Reliability Standard TPL-003 which result in stability limits.</p> <p>R6.1 The Planning Authority shall provide this list of multiple contingencies and the associated stability limits to the Reliability Coordinators that monitor the facilities associated with these contingencies and limits.</p> <p>R6.2 If the Planning Authority does not identify any stability-related multiple contingencies, the Planning Authority shall so notify the Reliability Coordinator.</p>	<p><u>FAC-015-1, Requirement R6R4</u></p> <p>R6. — Each Planning Coordinator shall communicate any instability, Cascading or uncontrolled separation identified in either its Planning Assessment of the Near Term Transmission Planning Horizon or its Transfer Capability assessment to each affected Reliability Coordinator and Transmission Operator. This communication shall include:</p> <p>6.1 — The type of the instability identified (e.g., voltage collapse, angular instability, transient voltage dip criteria violation);</p> <p>6.2 — The associated stability criteria used as part of determining the instability;</p> <p>6.3 — The associated Contingency(ies) which result(s) in the instability, Cascading or uncontrolled separation;</p> <p>6.4 — Any Remedial Action Scheme action, under voltage load shedding (UVLS) action, under frequency load shedding (UFLS) action, interruption of Firm Transmission Service, or Non-Consequential Load Loss required to address the instability, Cascading or uncontrolled separation;</p>	<p>FAC-015-1, Requirement R6 cover the content of FAC-014-2, Requirement R6 and improves upon it as follows:</p> <ul style="list-style-type: none"> FAC-015-1, Requirement R6R4 addresses not only the identification of multiple contingencies that result in stability limits, but also address the key information RCs need to establish stability limits and IROLs used in operations. Unlike FAC-014-2, Requirement R6, FAC-015-1, Requirement R6R4 ensures the type of instability, relevant stability criteria, and mitigation assumptions used by the PC are communicated to the appropriate RC. Additionally, FAC-015-1, Requirement R6R4 includes all planning events (single and multiple contingencies) that result in instability, Cascading, or uncontrolled separation.

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	<p>6.5 — Any Corrective Action Plan associated with the instability, Cascading or uncontrolled separation. (See Requirements R5.3 and R5.4 section above.)</p>	<ul style="list-style-type: none"> FAC-014-2, Requirement R6, R6.2 is addressed by FAC-015-1, Requirement R6R4 because all instances of instability identified by the PC are to be communicated to the RC in accordance with FAC-015-1, Requirement R6R4. In addition, FAC-014-2, Requirement R6, R6.2 is administrative in nature, given that the existing FAC-014-2, Requirement R6, R6.1 and proposed FAC-015-1, Requirement R6R4s both require communication of a defined set of stability related data. The absence of any communication of stability related data inherently implies the PC has not identified any instability and therefore has nothing to communicate.