

Standard Authorization Request Form

E-mail completed form to rsm@texasre.org

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| Texas RE to Complete |
| SAR No: |

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|----------------------------|---|
| Title of Proposed Standard | IRO-006-TRE-1 IROL and SOL Mitigation in the ERCOT Region |
| Request Date | June 27, 2017 |

| SAR Requester Information | SAR Type <i>(Check a box for each one that applies.)</i> |
|----------------------------------|---|
| Name Elizabeth Axson | <input type="checkbox"/> New Standard <input type="checkbox"/> |
| Primary Contact Elizabeth Axson | <input type="checkbox"/> Revision to existing Standard <input type="checkbox"/> Revision to the Standard Development Process |
| Telephone 512-275-7439 | <input checked="" type="checkbox"/> Withdrawal of existing Standard <input type="checkbox"/> |
| Fax 512-225-7079 | <input type="checkbox"/> Variance to a NERC Standard (Indicate which one) <input type="checkbox"/> |
| E-mail Elizabeth.axson@ercot.com | <input type="checkbox"/> Urgent Action <input type="checkbox"/> |

Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

Retire IRO-006-TRE-1 due to redundancy with existing NERC requirements.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

IRO-006-TRE-1 should be retired because its requirements are redundant of those in NERC standards IRO-002-4, IRO-008-2, IRO-009-2, TOP-001-3, and TOP-002-4. Eliminating this redundancy will not impact reliability or market interface principles.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

ERCOT recommends the retirement of regional reliability standard IRO-006-TRE-1 – *IROL and SOL Mitigation in the ERCOT Region*. Reliability Standards IRO-002-4, IRO-008-2, TOP-001-3, and TOP-002-4 became effective on April 1, 2017 and cover the same obligations as the requirements in IRO-

006-TRE-1, rendering the regional standard redundant and eligible for retirement. IRO-009-2, effective since January 1, 2016, also covers certain requirements in IRO-006-TRE-1.

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

ERCOT recommends the retirement of regional reliability standard IRO-006-TRE-1 – *IROL and SOL Mitigation in the ERCOT Region*. Reliability Standards IRO-002-4, IRO-008-2, TOP-001-3, and TOP-002-4 became effective on April 1, 2017 and cover the same obligations as the requirements in IRO-006-TRE-1, rendering the regional standard redundant and eligible for retirement. IRO-009-2, effective since January 1, 2016, also covers certain requirements in IRO-006-TRE-1.

Paragraph 81 Criteria

FERC’s 2012 order approving NERC’s Find, Fix, and Track (FFT) compliance program included a recommendation that NERC develop criteria for retirement of reliability standard requirements that are “unnecessary or redundant.” 138 FERC ¶ 61,193 at P 81 (2012). In Paragraph 81 of the order, the Commission stated: “If NERC believes that specific Reliability Standards or specific requirements within certain Standards should be revised or removed, we invite NERC to make specific proposals to the Commission identifying the Standards or requirements and setting forth in detail the technical basis for its belief.” *Id.*

In response, NERC developed the “Paragraph 81 project.” See NERC Project 2013-02. Under this project, NERC created criteria to identify requirements that should be retired or modified. One of these criteria considers whether “[t]he Reliability Standard requirement is redundant with: (i) another FERC-approved Reliability Standard requirement(s); (ii) the ERO compliance and monitoring program or (iii) a governmental regulation (e.g., Open Access Transmission Tariff, North American Energy Standards Board (“NAESB”), etc.)” IRO-006-TRE-1 qualifies for retirement under this criterion.

IRO-006-TRE-1 Background

IRO-006-TRE-01 was originally intended to codify existing ERCOT congestion relief procedures under the NERC standard template, similar to other IRO-006 Standards that address such procedures for other regions like WECC and the Eastern Interconnection. Requirement 1 of IRO-006-TRE-1 requires ERCOT, as the sole RC in the ERCOT Region, to have procedures to identify and mitigate exceedances of any System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL), and Requirement 2 of the Standard requires ERCOT to act on those procedures when IROLs and SOLs are exceeded. These same obligations are already captured in Reliability Standards IRO-002-4, IRO-008-2, IRO-009-2, TOP-001-3, TOP-002-4.

Coverage of IRO-006-TRE-1 Requirement 1

R1 of IRO-006-TRE-1 requires ERCOT, as a Reliability Coordinator (RC), to have procedures to identify and mitigate exceedances of IROLs and SOLs. Several other existing requirements already require these procedures. IRO-008-2, R1, requires ERCOT, as an RC, to perform an Operational Planning Assessment (OPA) to determine if next-day planned operations will exceed any SOL or IROL. R2 of this same standard requires ERCOT to have an Operating Plan to address SOL and IROL exceedances. IRO-009-2, R1, requires RCs who identify an IROL one or more days in advance to have Operating Processes, Procedures, or Plans for RCs to take or direct actions to prevent or mitigate each IROL exceedance. Similarly, TOP-002-4, R1, requires ERCOT, in its capacity as a Transmission Operator (TOP), to have an OPA to determine if next-day operations will exceed any SOL. (Under the TOP Coordinated Functional Registration for the Texas RE region, ERCOT is the only TOP responsible for performing OPAs and Real-Time Assessments (RTAs).)

Coverage of IRO-006-TRE-1 Requirement 2

R2 of IRO-006-TRE-1 requires ERCOT, as RC, to identify and mitigate exceedances of identified IROLs and SOLs. These actions are also covered by requirements in other standards. IRO-002-4, R3, requires RCs to “monitor Facilities, the status of Special Protection Systems, and non-BES facilities... within its Reliability Coordinator Area and neighboring Reliability Coordinator Areas to identify any System Operating Limit exceedances and to determine any Interconnection Reliability Operating Limit exceedances within its Reliability Coordinator Area.” IRO-008-2, R4, requires ERCOT to perform an RTA at least once every 30 minutes, and R5 of the same standard requires ERCOT to share results of an RTA that identifies an SOL or IROL exceedance with those entities who need to take action to prevent or mitigate the exceedance. IRO-009-2, R2 and R3, direct RCs to initiate actions to prevent or mitigate IROL exceedances. Similarly, TOP-001-3 requires ERCOT, as a TOP, to determine SOL exceedances through monitoring (R10) and to conduct a Real-Time Assessment every 30 minutes (R13), including an identification of SOL exceedances (R14). R14 of TOP-001-3 further requires ERCOT to initiate its Operating Plan to mitigate an identified SOL exceedance.

ERCOT provides the attached mapping table to show how existing standards fully cover the two IRO-006-TRE-1 requirements (see “IRO-006-TRE-1 Retirement Mapping Document).

Reliability Functions

For a more detailed description of the Reliability Functions, please refer to [NERC Function Model V5](#)

| The Standard will Apply to the Following Functions (Check box for each one that applies.) | |
|---|--|
| <input type="checkbox"/> Transmission Owner | <input type="checkbox"/> Transmission Service Provider |
| <input type="checkbox"/> Generator Owner | <input type="checkbox"/> Generator Operator |
| <input type="checkbox"/> Balancing Authority | <input type="checkbox"/> Interchange Authority |
| <input checked="" type="checkbox"/> Reliability Coordinator | <input type="checkbox"/> Purchasing-Selling Entity |
| <input type="checkbox"/> Resource Planner | <input type="checkbox"/> Load-Serving Entity |
| <input type="checkbox"/> Distribution Provider | <input type="checkbox"/> Planning Coordinator |
| <input type="checkbox"/> Transmission Planner | <input type="checkbox"/> Transmission Operator |

Reliability and Market Interface Principles

| Applicable Reliability Principles (Check box for all that apply.) | |
|---|---|
| <input type="checkbox"/> | 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 Standards. |
| <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | 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. |
| <input type="checkbox"/> | 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented. |

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| <input type="checkbox"/> | 5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems. |
| <input type="checkbox"/> | 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions. |
| <input type="checkbox"/> | 7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis. |
| <input type="checkbox"/> | 8. Bulk power systems shall be protected from malicious physical or cyber attacks. |
| Does the proposed Standard comply with all of the following Market Interface Principles? (Select 'yes' or 'no' from the drop-down box.) | |
| 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 standard. Yes | |
| 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 Standards

| Standard No. | Explanation |
|----------------------|--|
| IRO-002-4 | Reliability Coordination – Responsibilities |
| IRO-008-2 | Reliability Coordinator Operational Analyses and Real-time Assessments |
| IRO-009-2 | Reliability Coordinator Actions to Operate Within IROLs |
| TOP-001-3, TOP-002-4 | Transmission Operations; Operations Planning |

Related SARs

| SAR ID | Explanation |
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ERCOT – IRO-006-TRE-1 Retirement Mapping Document

| IRO-006-TRE-1 Requirement Language | Standard | Requirement | Existing Requirement Language |
|--|-----------|-------------|---|
| <p>R1. The RC shall have procedures to identify and mitigate exceedances of identified Interconnection Reliability Operating Limits (IROL) and System Operating Limits (SOL) that will not be resolved by the automatic actions of the ERCOT Nodal market operations system. The procedures shall address, but not be limited to, one or more of the following: redispatch of generation; reconfiguration of the Transmission system; controlled load reductions (including both firm and non-firm load shedding).</p> | IRO-008-2 | R1 | <p>Each Reliability Coordinator shall perform an Operational Planning Analysis that will allow it to assess whether the planned operations for the next-day will exceed System Operating Limits (SOLs) and Interconnection Operating Reliability Limits (IROLs) within its Wide Area.</p> |
| | IRO-008-2 | R2 | <p>Each Reliability Coordinator shall have a coordinated Operating Plan(s) for next-day operations to address potential System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) exceedances identified as a result of its Operational Planning Analysis as performed in Requirement R1 while considering the Operating Plans for the next-day provided by its Transmission Operators and Balancing Authorities.</p> |
| | IRO-009-2 | R1 | <p>For each IROL (in its Reliability Coordinator Area) that the Reliability Coordinator identifies one or more days prior to the current day, the Reliability Coordinator shall have one or more Operating Processes, Procedures, or Plans that identify actions the Reliability Coordinator shall take or actions the Reliability Coordinator shall direct others to take (up to and including load shedding):</p> <p>1.1. That can be implemented in time to prevent the identified IROL exceedance.</p> <p>1.2. To mitigate the magnitude and duration of an IROL exceedance such that the IROL exceedance is relieved within the IROL's Tv.</p> |
| | TOP-002-4 | R1 | <p>Each Transmission Operator shall have an Operational Planning Analysis that will allow it to assess whether its planned operations for the next day within its Transmission</p> |

ERCOT – IRO-006-TRE-1 Retirement Mapping Document

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| | | | Operator Area will exceed any of its System Operating Limits (SOLs). |
| R2. The RC shall act to identify and mitigate exceedances of identified Interconnection Reliability Operating Limits and System Operating Limits that will not be resolved by the automatic actions of the ERCOT Nodal market operations system, in accordance with the procedures required by R1. | IRO-002-4 | R3 | Each Reliability Coordinator shall monitor Facilities, the status of Special Protection Systems, and non-BES facilities identified as necessary by the Reliability Coordinator, within its Reliability Coordinator Area and neighboring Reliability Coordinator Areas to identify any System Operating Limit exceedances and to determine any Interconnection Reliability Operating Limit exceedances within its Reliability Coordinator Area. |
| | IRO-008-2 | R4 | Each Reliability Coordinator shall ensure that a Real-time Assessment is performed at least once every 30 minutes. |
| | IRO-008-2 | R5 | Each Reliability Coordinator shall notify impacted Transmission Operators and Balancing Authorities within its Reliability Coordinator Area, and other impacted Reliability Coordinators as indicated in its Operating Plan, when the results of a Real-time Assessment indicate an actual or expected condition that results in, or could result in, a System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) exceedance within its Wide Area. |
| | IRO-009-2 | R2 | Each Reliability Coordinator shall initiate one or more Operating Processes, Procedures, or Plans (not limited to the Operating Processes, Procedures, or Plans developed for Requirement R1) that are intended to prevent an IROL exceedance, as identified in the Reliability Coordinator's Real-time monitoring or Real-time Assessment. |
| | IRO-009-2 | R3 | Each Reliability Coordinator shall act or direct others to act so that the magnitude and duration of an IROL exceedance is mitigated within the IROL's Tv, as identified in the Reliability Coordinator's Real-time monitoring or Real-time Assessment. |
| | TOP-001-3 | R10 | Each Transmission Operator shall perform the following as necessary for determining System Operating Limit (SOL) exceedances within its Transmission Operator Area: 10.1. Within its Transmission Operator Area, monitor Facilities and the status of Special Protection Systems, and 10.2. Outside its Transmission Operator Area, obtain and utilize status, voltages, and flow data for Facilities and the status of Special Protection Systems. |

ERCOT – IRO-006-TRE-1 Retirement Mapping Document

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| | TOP-001-3 | R13 | Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes. |
| | TOP-001-3 | R14 | Each Transmission Operator shall initiate its Operating Plan to mitigate a SOL exceedance identified as part of its Real-time monitoring or Real-time Assessment. |