CALIFORNIA INDEPENDENT SYSTEM OPERATOR

AND

LONE STAR TRANSMISSION, LLC

COORDINATED FUNCTIONAL REGISTRATION AGREEMENT
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This Coordinated Functional Registration Agreement ("Agreement") is entered into by and between the California Independent System Operator Corporation, a California non-profit public benefit corporation ("ISO") and Lone Star Transmission, LLC, a Delaware limited liability company with its principal place of business in Austin, Texas (the "Transmission Entity" or "TE"). In this Agreement, the ISO and TE are jointly referred to as the "Parties" and individually as a "Party."

RECITALS

WHEREAS, the Energy Policy Act of 2005 was signed into law in August 2005, which added a new Section 215 to the Federal Power Act ("FPA") giving the Federal Energy Regulatory Commission ("FERC") authority over developing and enforcing Reliability Standards for the Bulk Power System;

WHEREAS, in Docket RM06-16-000, 118 FERC ¶ 61,218 ("Order No. 693"), FERC approved various Reliability Standards applicable to users, owners and operators of the Bulk Power System developed by the North American Electric Reliability Corporation ("NERC"), the entity certified by FERC as the Electric Reliability Organization ("ERO"), and FERC has since then continued to approve additional and modified Reliability Standards;

WHEREAS, NERC, through the Western Electricity Coordinating Council ("WECC") Delegation Agreement (filed with FERC in Docket No. RR07-7) has delegated authority to the WECC for the purposes of proposing Reliability Standards to the ERO and enforcing Reliability Standards within the WECC;

WHEREAS, the ISO is registered with NERC as a Transmission Operator ("TOP") with respect to certain transmission facilities under its operational control in accordance with the NERC compliance registry process and is responsible for complying with certain Reliability Standards that are subject to enforcement by the Compliance Enforcement Authority designated by NERC;

WHEREAS, the TE is registered with NERC as a TOP in accordance with NERC’s compliance registry process, has contracted with the asset owner of the transmission facilities covered by this Agreement to provide TOP services for those facilities, and is responsible for complying with certain Reliability Standards that are subject to enforcement by the Compliance Enforcement Authority designated by NERC; and

WHEREAS, the Parties intend by this Agreement to effectuate a Coordinated Functional Registration ("CFR"), as provided for in Rule 508 of the NERC Rules of
Procedure, specifying their respective compliance responsibilities as TOPs for the transmission facilities covered by this Agreement.

AGREEMENT

NOW THEREFORE, in view of the recitals set forth above, which the Parties acknowledge and agree are accurate representations of the facts and are hereby incorporated by reference, the ISO and TE agree to the terms of this Agreement as set forth herein.

1. DEFINITIONS.

Unless otherwise defined herein, all capitalized terms shall have the meaning set forth in the FERC-approved NERC Glossary of Terms or the definitions appendix for the NERC Rules of Procedure.

“ISO Tariff” means the California Independent System Operator Corporation Operating Agreement and Tariff, dated March 31, 1997, as it may be modified from time to time.

“Confidential Information” means (i) all materials marked “Confidential,” “Proprietary” or with words of similar import, and (ii) all observations of equipment (including computer screens) and oral disclosures related to either Party’s systems, operations and activities that are indicated as such at the time of observation or disclosure, that are provided to either Party by the other Party in connection with performing the Parties’ responsibilities as set forth in this Agreement. Confidential Information includes portions of documents, records and other material forms or representations that either Party may create, including but not limited to, handwritten notes or summaries that contain or are derived from such Confidential Information.

“Good Utility Practice” has the meaning set forth in Appendix A (the master definitions supplement) of the ISO Tariff.

“Participating Transmission Owner” has the meaning set forth in Appendix A (the master definitions supplement) of the ISO Tariff.

“Penalty” or “Penalties” means any fine, reprimand or monetary or non-monetary penalty issued or assessed by a Compliance Enforcement Authority and/or by FERC.

“Responsible Entity” means the Party that, as set forth in the CFR Matrix attached as Appendix 3 to this Agreement, has responsibility for compliance with a particular Requirement or sub-Requirement of an applicable Reliability Standard or for compliance with a particular activity or responsibility associated with that Requirement or sub-Requirement as identified in the “Responsibility Details” column of the CFR Matrix.
“Reliability Standard” means a NERC, or WECC regional, mandatory reliability standard requirement approved by the FERC under Section 215 of the FPA to provide for reliable operation of the Bulk Power System.

The terms “Each,” “Single,” “Split,” and “Not Applicable” as used in the CFR Matrix attached to this Agreement are defined in Section 4.2 of this Agreement.

2. TERM.

2.1 Effective Date. This Agreement shall be effective as of the date on which it has been executed by both Parties.

2.2 Termination. This Agreement shall remain in effect until (1) a date upon which the Parties agree in writing to terminate it, (2) the effective date of the withdrawal of the TE’s transmission facilities from the ISO Balancing Authority Area, or (3) six (6) months after timely written notice of termination has been provided by either Party.

2.3 Surviving Obligations. This Agreement shall continue in effect after termination to the extent necessary to complete corrective mitigating actions identified in the Compliance monitoring process as well as satisfy all other obligations including any financial responsibilities arising under the Agreement prior to its termination. Upon termination of this Agreement, any outstanding financial or confidentiality right or obligation, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied.

3. PURPOSE OF AGREEMENT.

The Parties agree that the purpose of this Agreement is to identify the Parties’ respective compliance responsibilities with respect to each applicable Reliability Standard and each applicable Requirement or sub-Requirement of an applicable Reliability Standard relating to the TOP function for the transmission facilities identified in Appendix 1 of this Agreement. This Agreement is limited to the Reliability Standards that are applicable to TOPs, which are identified in the CFR Matrix attached as Appendix 3, and applies only the transmission facilities identified in Appendix 1. Each Party shall remain wholly and separately responsible for any Reliability Standards compliance obligations that are outside the scope of this Agreement.
4. DELINEATION OF RESPONSIBILITIES BETWEEN THE ISO AND TE; CFR MATRIX.

4.1 CFR Matrix. To identify the responsibilities of each Party and to avoid gaps or redundancy in the performance of their responsibilities, the Parties have mutually collaborated in developing a CFR Matrix that identifies each Party’s respective responsibilities for each Reliability Standard Requirement and sub-Requirement applicable to the ISO and the TE as TOPs registered with NERC. The Parties have determined their respective responsibilities for each such requirement based upon consideration of past practice, practicality, efficiency and Good Utility Practice. The CFR Matrix is attached as Appendix 3 to this Agreement.

4.2 Delineation of Responsibilities. The CFR Matrix sets forth the text of each Reliability Standards Requirement or sub-Requirement applicable to the TOP function and, for each such Requirement or sub-Requirement, sets forth the division of responsibility between the Parties. For each applicable Requirement or sub-Requirement, the CFR Matrix identifies the responsibility as Single, Split, Each, or Not Applicable and includes a “Responsibility Details” column that provides additional information. A “Single” designation means that only one of the Parties, as identified in the Matrix, is responsible for compliance with the specified Requirement or sub-Requirement with respect to the transmission facilities covered by the Agreement. A “Split” designation means that the Parties each have certain responsibilities with respect to the specified Requirement or sub-Requirement, which are then delineated in the Responsibility Details column. An “Each” designation means that each Party is separately and wholly responsible for compliance with the Requirement or sub-Requirement as it may pertain to that Party, though only to the extent that the Requirement or sub-Requirement pertains to that Party’s activities, personnel or operations as set forth in the corresponding Responsibility Details column of the Matrix. For each of these designations, the Parties intend that, in the case of an alleged violation of a Reliability Standards Requirement or sub-Requirement, only the Party whose designated obligation has been violated should be held liable, and one Party should not be held liable for the alleged violation of a responsibility that pertains to the other Responsible Entity. A “Not Applicable” designation means that the Requirement or sub-Requirement is not applicable at all to either of the Parties because (1) the Parties do not have the type of facilities or operations to which the requirement or sub-requirement applies, or (2) the requirement or sub-requirement has been superseded by a WECC regional variance or other similar provision. In each instance where a Party is designated in the Matrix as having a responsibility for a particular Requirement, sub-Requirement, or portion of a Requirement or sub-Requirement, that Party holds full compliance responsibility for the designated obligation pursuant to Rule 508 of the NERC Rules of Procedure, as it may be modified from time to time.
4.3 Process for Revising the CFR Matrix.

4.3.1 Upon approval by the FERC of any new Reliability Standard(s) or change(s) to existing Reliability Standards, the Parties shall promptly confer regarding their respective compliance responsibilities for the new or revised Standard(s) and agree upon a revision to the CFR Matrix to address the new or revised Standard(s). The Parties shall complete the revision to the CFR Matrix before the effective date of the new or revised Standard(s). The revised CFR Matrix shall replace and supersede the previous version on a going-forward basis. Such revision to the CFR Matrix does not constitute an amendment to this Agreement.

4.3.2 Upon ten (10) business days’ written notice, either Party may initiate a review of the CFR Matrix for purposes of redefining or changing the Parties’ respective responsibilities for a given Requirement or sub-Requirement.

4.3.3 The Parties shall keep a mutually agreed upon revision history document that tracks each revision to the CFR Matrix, identifying the date of each revision and the change(s) made. The Parties shall also retain copies of each of the superseded versions of the CFR Matrix for reference.

5. MUTUAL COOPERATION; RESPONSE TO NOTICES OF POSSIBLE OR ALLEGED VIOLATION; ALLOCATION OF PENALTIES.

5.1 Mutual Cooperation. In addition to any obligations set forth in the CFR Matrix, the Parties agree to cooperate fully to provide each other the information, documentation and assistance necessary to demonstrate compliance with their respective obligations for the Reliability Standards requirements covered by this Agreement. This cooperation shall include, without limitation, providing each other information, documentation and assistance in connection with any audit, spot-check, investigation or inquiry brought by a Compliance Enforcement Authority or by FERC, or in connection with any self-certification or self-report, relating to one or more of the Reliability Standards requirements covered by this Agreement. Unless otherwise agreed, the Parties agree that upon fifteen (15) days receipt of a written notice from the Party requesting the information, the other Party responsible for providing the information shall timely deliver the requested information. The written notice shall be delivered as set forth in Section 9.18 of this Agreement, unless the Parties have agreed in writing upon an alternative person and/or means of communication.
5.2 **Response to Notices of Possible or Alleged Violations.** In the event that either Party receives a Notice of Possible Violation or a Notice of Alleged Violation from a Compliance Enforcement Authority or FERC with respect to one or more Reliability Standards requirements covered by this Agreement and for which the Parties’ responsibility is designated as either “Not Applicable,” “Split” or “Each” in the CFR Matrix, the Party receiving the notice shall notify the other Party in writing within seven (7) days of receiving the written notice. In the event that there is a disagreement between the Parties as to which of the Parties is the Responsible Entity with respect to the subject matter that is at issue in the notice, the disagreement shall be resolved in the manner set forth in Rule 508 of the NERC Rules of Procedure.

5.3 **Allocation of Penalties.** For any monetary Penalty imposed upon the ISO by a Compliance Enforcement Authority or FERC for a violation of any Reliability Standards Requirement or sub-Requirement covered by this Agreement, the ISO may seek authority from FERC to impose a direct or indirect allocation of the Penalty, as appropriate, through the procedure set forth in Section 14.7 of the ISO Tariff.

6. **AMENDMENT TO AGREEMENT.**

This Agreement may not be amended or otherwise modified without the written consent of both Parties.

7. **USE OF CONTRACTORS.**

Nothing in this Agreement shall prevent either the ISO or the TE from using qualified third party contractors to meet the Party's rights or obligations under this Agreement. However, under no circumstances shall the use or hiring of a qualified third party contractor or agent relieve the Responsible Entity of any liability hereunder.

8. **PERFORMANCE STANDARDS.**

Each Party shall perform all of its obligations under this Agreement in accordance with applicable laws and regulations, applicable Reliability Standards, and Good Utility Practice.

9. **GENERAL TERMS AND CONDITIONS.**

9.1 **Liability.** Except for Penalties assessed by a Compliance Enforcement Authority or FERC, no Party to this Agreement shall be liable to the other Party, or to any other person or entity, for any indirect, special, incidental or consequential losses, damages, claims, liabilities, costs or expenses (including
attorneys’ fees and court costs) arising from the performance or non-performance of its obligations under this Agreement, regardless of the cause (including intentional action, willful action, gross or ordinary negligence, or force majeure); provided, however, that a Party may seek equitable or other non-monetary relief as may be necessary to enforce this Agreement and that damages for which a Party may be liable to another Party under another agreement will not be considered damages under this Agreement. This provision, also shall not limit the ISO’s authority to seek approval from FERC for allocation of a monetary penalty as set forth in Section 5.3.

9.2 Confidentiality.

9.2.1 Treatment of Confidential Information. The Parties recognize and agree that for the purposes of demonstrating compliance with the Reliability Standards and preparing for a self-certification or responding to a Compliance Audit, spot-check, investigation, or inquiry by the Compliance Enforcement Authority or FERC, they may receive information from each other that has been marked as Confidential Information. Except as set forth herein, the Parties agree to keep in confidence and not to copy, disclose, or distribute to any other person or entity any Confidential Information or any part thereof provided for these evidentiary purposes, without the prior written permission of the other Party.

9.2.1.1 Location of Confidential Information. Confidential Information that the Parties have given to each other in hard copy form that is intended for disclosure to the Compliance Enforcement Authority or to FERC during the course of a Compliance Audit or other investigation or inquiry will be kept in a secure and restricted location and clearly marked so as to distinguish it from the business records of the Party receiving the Confidential Information.

9.2.1.2 Provision of Confidential Information to Compliance Enforcement Authority. During the course of a Compliance Audit or other investigation or inquiry, the Party providing the Confidential Information to the Compliance Enforcement Authority or FERC shall notify the receiving Party if and when the Compliance Enforcement Authority or FERC takes physical possession of the Confidential Information. If the Compliance Enforcement Authority or FERC takes physical possession of the Confidential Information, the receiving Party shall be permitted to make one copy of the Confidential Information that will be afforded confidential treatment pursuant to this Agreement. To the extent the Compliance Enforcement Authority or FERC does not take physical possession of the Confidential Information, or if a copy has been made of the Confidential Information, the receiving Party shall return the Confidential Information to the providing Party.
promptly after the conclusion of the Compliance Audit or other applicable proceeding, including the appeal of Alleged Violations or Penalties. The Party providing the other Party's Confidential Information to the Compliance Enforcement Authority or FERC has the affirmative duty to request that the Compliance Enforcement Authority or FERC treat the Confidential Information as Confidential Information under NERC Rules of Procedure Section 1500.

9.2.2 Disclosure of Confidential Information. If, while in the possession of the receiving Party, disclosure of the Confidential Information is required to respond to a subpoena, law, or other directive of a court, administrative agency, or arbitration panel, the receiving Party hereby agrees to provide the providing Party with prompt written notice of such request or requirement in order to enable the providing Party to (a) seek an appropriate protective order or other remedy, (b) consult with the receiving Party with respect to taking steps to resist or narrow the scope of such request or legal process, or (c) waive compliance, in whole or in part, with the terms of this Section. The receiving Party agrees to work with the providing Party to obtain assurance that confidential treatment will be accorded to such Confidential Information and will cooperate to the maximum extent practicable to minimize the disclosure of the Confidential Information consistent with applicable law.

9.2.3 Exceptions to Non-Disclosure. Notwithstanding Sections 9.2.1 and 9.2.2 above, each Party to this Agreement shall not have breached any obligation under this Agreement if Confidential Information is disclosed to a third party when the Confidential Information:

(a) was in the public domain at the time of such disclosure or is subsequently made available to the public consistent with the terms of this Agreement; or

(b) had been received by either Party at the time of disclosure through other means without restriction on its use, or had been independently developed by either Party as shown through documentation; or

(c) is subsequently disclosed to either Party by a third party without restriction on use and without breach of any agreement or legal duty; or

(d) subject to the provisions of Sections 9.2.1 and 9.2.2, is used or disclosed pursuant to statutory duty or an order, subpoena or other lawful process issued by a court or other governmental authority of competent jurisdiction.
9.2.4 Other Parties. The receiving Party shall keep Confidential Information in confidence and shall not disclose such information or otherwise make it available, in any form or manner, to any other person or entity other than its employees, contractors and subcontractors as necessary for mandatory Reliability Standards compliance, without the prior written consent of the providing Party.

9.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

9.4 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows:

(1) the singular number includes the plural number and vice versa;

(2) reference to any person includes such person’s successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually;

(3) reference to any agreement, document, instrument, or tariff means such agreement, document, instrument, or tariff as amended or modified from time to time and in effect at the time of interpretation, including, if applicable, rules and regulations promulgated thereunder;

(4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect at the time of interpretation, including, if applicable, rules and regulations promulgated thereunder;

(5) unless expressly stated otherwise, reference to any Article, Section, or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement;

(6) “hereunder,” “hereof,” “herein,” “hereto,” and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Section;

(7) “including” (and with correlative meaning “include”) means including without limiting the generality of any description preceding such term;
(8) relative to the determination of any period of time, “from” means “from and including,” “to” means “to but excluding,” and “through” means “through and including;” and

(9) “days” shall mean calendar days unless otherwise specified; if the last calendar day falls on a weekend or national holiday, the specified deadline shall fall on the next calendar day that is not a weekend or national holiday.

9.5 Entire Agreement. This Agreement, including all Attachments, Exhibits and Appendices hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants, which constitute any part of the consideration for, or any condition to, any Party’s compliance with its obligations under this Agreement.

9.6 General Interpretation. The terms of this Agreement have been negotiated by the Parties hereto and the language used in this Agreement shall be deemed the language chosen by the Parties to express their mutual intent. This Agreement shall be construed without regard to any presumption or rule requiring construction against the party causing such instrument or portion hereof to be drafted or in favor of the party receiving a particular benefit under this Agreement. No rule of strict construction will be applied against any Party.

9.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

9.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Any waiver of this Agreement shall, if requested, be provided in writing. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.
9.9 **Headings.** The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

9.10 **Authority.** The undersigned hereby represents and warrants that he or she has the requisite power and authority to bind the applicable Party to the terms and obligations of this Agreement.

9.11 **Multiple Counterparts.** This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

9.12 **No Partnership.** This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

9.13 **Assignment.** This Agreement may be assigned by a Party only with the written consent of the other Party; a Party may, however, assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement. Any attempted assignment that violates this Section 9.13 is void and ineffective. If this Agreement is assigned, the assignee shall accept full responsibility of all the assignor’s duties and obligations and the assignor will be free of its duties and obligations under this Agreement, except for assignor’s residual confidentiality obligations, which are meant to survive assignment or termination of this Agreement. Any assignment shall not enlarge a Party’s obligations, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed. Notwithstanding the above, this Agreement may be assigned by a governmental Party without consent of the other Parties, if the United States, a state, or a local government with jurisdiction over such Party orders such governmental Party to assign this Agreement.

9.14 **Specific Performance.** Each Party’s obligations under this Agreement are unique. The Parties each acknowledge that, if any Party should default in performance of the duties and obligations imposed by this Agreement, it would be extremely impracticable to measure the resulting damages. Accordingly, the non-defaulting Party, in addition to any other available rights or remedies, may seek specific performance and the Parties each expressly waive the defense that a remedy in damages will be adequate.
9.15 **Force Majeure.** No Party shall be liable for any failure to perform its obligations in connection with any action described in this Agreement, if such failure results from an Uncontrollable Force as defined in the ISO Tariff (including any mechanical, electronic, or communication failures, but excluding failure caused by a party’s financial condition or negligence).

9.16 **Governing Law.** The rights and obligations of the Parties and the interpretation and performance of this Agreement shall be governed by the law of California, excluding its conflicts of law rules, except if a federal Party is involved, in which case federal law shall apply as if performed within the state of California. Notwithstanding the foregoing, nothing shall affect the rights of the Parties under the FPA, any applicable agreement, the NERC Rules of Procedure, or rules or orders promulgated by FERC.

9.17 **Consistency with Federal Laws and Regulations.** Section 22.9 of the ISO Tariff titled "Consistency with Federal Laws and Regulations" is hereby incorporated herein by reference, providing however, that the references to the ISO Tariff in Section 22.9 shall include this Agreement.

9.18 **Notices.** Any written notice provided for in this Agreement shall be in writing transmitted via electronic mail to the persons identified in Appendix 2, followed with a hard copy delivered in person or sent by overnight mail or United States certified mail within three (3) days of the electronic mail transmission. Electronic mail notice shall be deemed effective upon transmission unless the Party sending the electronic mail learns that delivery was unsuccessful, in which case notice is deemed effective upon service of the hard copy. Any Party may at any time, by at least fifteen (15) days’ notice to the other Party, change the designation or address of a person specified in Appendix 2. Such a change to Appendix 2 must include an effective date and shall not constitute an amendment to this Agreement.

9.19 **FERC Jurisdiction.** Nothing in this Agreement shall be meant to imply or cede jurisdiction to FERC, NERC or any other regulatory or Compliance Enforcement Authority, to the extent that FERC, NERC or other regulatory or Compliance Enforcement Authority does not have jurisdiction over a Party to this Agreement. FERC, NERC and other regulatory or Compliance Enforcement Authority entities have limited jurisdiction over certain Parties and, by executing this Agreement, no Party is waiving or conceding any defenses it has to assert jurisdictional defenses, including, but not limited to, sovereign immunity, intergovernmental immunities, or lack of subject matter jurisdiction.

9.20 **Severability.** If any term or provision of this Agreement is held to be illegal, invalid, or unenforceable under any present or future law or by FERC, (a) such term or provision shall be fully severable, (b) this Agreement shall be construed and enforced as if such illegal, invalid or unenforceable provision had
never comprised a part hereof, and (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom.

**IN WITNESS WHEREOF,** the Parties have executed this Agreement and it is effective as of the effective date pursuant to Section 2.1.

**California Independent System Operator Corporation**

By:  
Name: **Eric J. Schmitt**  
Title: **VP, Operations**  
Date: **1/22/2020**

**Lone Star Transmission, LLC**

By:  
Name:  
Title:  
Date: 
never comprised a part hereof, and (c) the remaining provisions of this Agreement shall remain in full force and effect and shall not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom.

IN WITNESS WHEREOF, the Parties have executed this Agreement and it is effective as of the effective date pursuant to Section 2.1.

California Independent System Operator Corporation

By: __________________________
Name: _________________________
Title: __________________________
Date: __________________________

Lone Star Transmission, LLC

By: __________________________
Name: _________________________
Title: __________________________
Date: 1/21/2020
For purposes of this Agreement, the TE’s transmission system includes:

Those transmission facilities that, pursuant to the Transmission Control Agreement, the Participating Transmission Owner Horizon West Transmission, LLC has turned over operational control to the CAISO as specified in the CAISO Register of transmission facilities and as the CAISO Register may be amended from time to time.
APPENDIX 2

Lone Star Transmission, LLC

Name of Primary Representative: Justin Welty
Title: Manager, NERC Reliability Standards
Company: NextEra Energy, Inc.
Address: 9250 W. Flagler Street
City/State/Zip Code: Miami, FL. 33174
Email Address: Justin.Welty@nee.com
Phone: 305-552-3536
Fax No:

Name of Alternative Representative: Jerry Willms
Title: Senior Manager, Lone Star Operations
Company: Lone Star Transmission
Address: 5920 W William Cannon Drive (Bldg 2)
City/State/Zip Code: Austin, TX. 78749
Email Address: Jerry.Willms@Lonestar-transmission.com
Phone: 512-236-3170
Fax No:
**ISO**

**Name of Primary Representative:** Lisa Milanes  
**Title:** Director, Compliance and Corporate Affairs  
**Address:** 250 Outcropping Way  
**City/State/Zip Code:** Folsom, CA  95630  
**Email address:** lmilanes@caiso.com  
**Phone:** (916) 351-2172  
**Fax:** (916) 608-7222

**Name of Alternative Representative:** Burton Gross  
**Title:** Deputy General Counsel - Legal  
**Address:** 250 Outcropping Way  
**City/State/Zip Code:** Folsom, CA  95630  
**Email address:** bgross@caiso.com  
**Phone:** (916) 608-7268  
**Fax:** (916) 608-7222
APPENDIX 3

CFR Matrix
<table>
<thead>
<tr>
<th>Standard</th>
<th>Req.</th>
<th>Text of Requirement</th>
<th>CAISO</th>
<th>TE</th>
<th>Responsibility (either Each, Split, Single or N/A)</th>
<th>Responsibility Details</th>
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</table>
| CIP-002-5.1a  | R1   | Each Responsible Entity shall implement a process that considers each of the following assets for purposes of parts 1.1 through 1.3:  
   i. Control Centers and backup Control Centers;  
   ii. Transmission stations and substations;  
   iii. Generation resources;  
   iv. Systems and facilities critical to system restoration, including Blackstart Resources and Cranking Paths and initial switching requirements;  
   v. Special Protection Systems that support the reliable operation of the Bulk Electric System; and  
   vi. For Distribution Providers, Protection Systems specified in Applicability section 4.2.1 above.                                                                 |       | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
<p>| CIP-002-5.1a  | R1.1 | Identify each of the high impact BES Cyber Systems according to Attachment 1, Section 1, if any, at each asset;                                                                                                                             | x     | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-002-5.1a  | R1.2 | Identify each of the medium impact BES Cyber Systems according to Attachment 1, Section 2, if any, at each asset; and                                                                                                                      | x     | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-002-5.1a  | R1.3 | Identify each asset that contains a low impact BES Cyber System according to Attachment 1, Section 3, if any (a discrete list of low impact BES Cyber Systems is not required).                                                             | x     | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-002-5.1a  | R2   | The Responsible Entity shall:                                                                                                                                                                                                           |       | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-002-5.1a  | R2.1 | Review the identifications in Requirement R1 and its parts (and update them if there are changes identified) at least once every 15 calendar months, even if it has no identified items in Requirement R1, and   |       | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-002-5.1a  | R2.2 | Have its CIP Senior Manager or delegate approve the identifications required by Requirement R1 at least once every 15 calendar months, even if it has no identified items in Requirement R1.                                                               |       | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |
| CIP-003-8     | R1.  | Each Responsible Entity shall review and obtain CIP Senior Manager approval at least once every 15 calendar months for one or more documented cyber security policies that collectively address the following topics: |       | x  | x                                                | Each                                                                                       | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                                                                                     |</p>
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<th>Responsibility (either Each, Split, Single or N/A)</th>
<th>Responsibility Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP-003-8</td>
<td>R1.1</td>
<td>For its high impact and medium impact BES Cyber Systems, if any:</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.1</td>
<td>Personnel and training (CIP-004);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.2</td>
<td>Electronic Security Perimeters (CIP-005) including Interactive Remote Access;</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.3</td>
<td>Physical security of BES Cyber Systems (CIP-006);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.4</td>
<td>System security management (CIP-007);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.5</td>
<td>Incident reporting and response planning (CIP-008);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.6</td>
<td>Recovery plans for BES Cyber Systems (CIP-009);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.7</td>
<td>Configuration change management and vulnerability assessments (CIP-010);</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.8</td>
<td>Information protection (CIP-011); and</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.1.9</td>
<td>Declaring and responding to CIP Exceptional Circumstances.</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2</td>
<td>For its assets identified in CIP-002 containing low impact BES Cyber Systems, if any:</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2.1</td>
<td>Cyber security awareness;</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2.2</td>
<td>Physical security controls;</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2.3</td>
<td>Electronic access controls;</td>
<td>x x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
</tbody>
</table>
# APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

## Version 8.0

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<tbody>
<tr>
<td>CIP-003-8</td>
<td>R1.2.4.</td>
<td>Cyber Security Incident response;</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2.5.</td>
<td>Transient Cyber Assets and Removable Media malicious code risk mitigation; and</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R1.2.6.</td>
<td>Declaring and responding to CIP Exceptional Circumstances.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R2.</td>
<td>Each Responsible Entity with at least one asset identified in CIP-002 containing low impact BES Cyber Systems shall implement one or more documented cyber security plan(s) for its low impact BES Cyber Systems that include the sections in Attachment 1.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R3.</td>
<td>Each Responsible Entity shall identify a CIP Senior Manager by name and document any change within 30 calendar days of the change.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-003-8</td>
<td>R4.</td>
<td>The Responsible Entity shall implement a documented process to delegate authority, unless no delegations are used. Where allowed by the CIP Standards, the CIP Senior Manager may delegate authority for specific actions to a delegate or delegates. These delegations shall be documented, including the name or title of the delegate, the specific actions delegated, and the date of the delegation; approved by the CIP Senior Manager; and updated within 30 days of any change to the delegation. Delegation changes do not need to be reinstated with a change to the delegator.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R1.</td>
<td>Each Responsible Entity shall implement one or more documented processes that collectively include each of the applicable requirement parts in CIP-004-6 Table R1 – Security Awareness Program.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO</td>
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</tr>
<tr>
<td>CIP-004-6</td>
<td>R1.1</td>
<td>Security awareness that, at least once each calendar quarter, reinforces cyber security practices (which may include associated physical security practices) for the Responsible Entity’s personnel who have authorized electronic or authorized unescorted physical access to BES Cyber Systems.</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2</td>
<td>Each Responsible Entity shall implement one or more cyber security training program(s) appropriate to individual roles, functions, or responsibilities that collectively includes each of the applicable requirement parts in CIP-004-6 Table R2 – Cyber Security Training Program.</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1</td>
<td>Training content on:</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.1</td>
<td>Cyber security policies;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.2</td>
<td>Physical access controls;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.3</td>
<td>Electronic access controls;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.4</td>
<td>The visitor control program;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.5</td>
<td>Handling of BES Cyber System Information and its storage;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.6</td>
<td>Identification of a Cyber Security Incident and initial notifications in accordance with the entity’s incident response plan;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.7</td>
<td>Recovery plans for BES Cyber Systems;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.1.8</td>
<td>Response to Cyber Security Incidents; and</td>
<td>x</td>
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## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

**Version 8.0**

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<tr>
<td>CIP-004-6</td>
<td>R2.1.9</td>
<td>Cyber security risks associated with a BES Cyber System’s electronic interconnectivity and interoperability with other Cyber Assets, including Transient Cyber Assets, and with Removable Media.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.2</td>
<td>Require completion of the training specified in Part 2.1 prior to granting authorized electronic access and authorized unescorted physical access to applicable Cyber Assets, except during CIP Exceptional Circumstances.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R2.3</td>
<td>Require completion of the training specified in Part 2.1 at least once every 15 calendar months.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R3</td>
<td>Each Responsible Entity shall implement one or more documented personnel risk assessment program(s) to attain and retain authorized electronic or authorized unescorted physical access to BES Cyber Systems that collectively include each of the applicable requirement parts in CIP-004-6 Table R3 – Personnel Risk Assessment Program.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R3.1</td>
<td>Process to confirm identity.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R3.2</td>
<td>Process to perform a seven year criminal history records check as part of each personnel risk assessment that includes: current residence, regardless of duration; and other locations where, during the seven years immediately prior to the date of the criminal history records check, the subject has resided for six consecutive months or more. (If it is not possible to perform a full seven year criminal history records check, conduct as much of the seven year criminal history records check as possible and document the reason the full seven year criminal history records check could not be performed.)</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO</td>
<td>TE</td>
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</tr>
<tr>
<td>CIP-004-6</td>
<td>R3.3</td>
<td>Criteria or process to evaluate criminal history records checks for authorizing access.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R3.4</td>
<td>Criteria or process for verifying that personnel risk assessments performed for contractors or service vendors are conducted according to Parts 3.1 through 3.3.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R3.5</td>
<td>Process to ensure that individuals with authorized electronic or authorized unescorted physical access have had a personnel risk assessment completed according to Parts 3.1 to 3.4 within the last seven years.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4</td>
<td>Each Responsible Entity shall implement one or more documented access management program(s) that collectively include each of the applicable requirement parts in CIP-004-6 Table R4 – Access Management Program.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.1</td>
<td>Process to authorize based on need, as determined by the Responsible Entity, except for CIP Exceptional Circumstances:</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.1.1</td>
<td>Electronic access;</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.1.2</td>
<td>Unescorted physical access into a Physical Security Perimeter; and</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.1.3</td>
<td>Access to designated storage locations, whether physical or electronic, for BES Cyber System Information.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.2</td>
<td>Verify at least once each calendar quarter that individuals with active electronic access or unescorted physical access have authorization records.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.3</td>
<td>For electronic access, verify at least once every 15 calendar months that all user accounts, user account groups, or user role categories, and their specific, associated privileges are correct and are those that the Responsible Entity determines are necessary.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO</td>
<td>TE</td>
</tr>
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</tr>
<tr>
<td>CIP-004-6</td>
<td>R4.4</td>
<td>Verify at least once every 15 calendar months that access to the designated storage locations for BES Cyber System Information, whether physical or electronic, are correct and are those that the Responsible Entity determines are necessary for performing assigned work functions.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5</td>
<td>Each Responsible Entity shall implement one or more documented access revocation program(s) that collectively include each of the applicable requirement parts in CIP-004-6 Table R5 – Access Revocation.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5.1</td>
<td>A process to initiate removal of an individual’s ability for unescorted physical access and Interactive Remote Access upon a termination action, and complete the removals within 24 hours of the termination action (Removal of the ability for access may be different than deletion, disabling, revocation, or removal of all access rights).</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5.2</td>
<td>For reassignments or transfers, revoke the individual’s authorized electronic access to individual accounts and authorized unescorted physical access that the Responsible Entity determines are not necessary by the end of the next calendar day following the date that the Responsible Entity determines that the individual no longer requires retention of that access.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5.3</td>
<td>For termination actions, revoke the individual’s access to the designated storage locations for BES Cyber System Information, whether physical or electronic (unless already revoked according to Requirement R5.1), by the end of the next calendar day following the effective date of the termination action.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5.4</td>
<td>For termination actions, revoke the individual’s non-shared user accounts (unless already revoked according to Parts 5.1 or 5.3) within 30 calendar days of the effective date of the termination action.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>Responsibility Details</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CIP-004-6</td>
<td>R5.5</td>
<td>For termination actions, change passwords for shared account(s) known to the user within 30 calendar days of the termination action. For reassignments or transfers, change passwords for shared account(s) known to the user within 30 calendar days following the date that the Responsible Entity determines that the individual no longer requires retention of that access. If the Responsible Entity determines and documents that extenuating operating circumstances require a longer time period, change the password(s) within 10 calendar days following the end of the operating circumstances.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.</td>
<td>Each Responsible Entity shall implement one or more documented processes that collectively include each of the applicable requirement parts in CIP-005-7 Table R1 – Electronic Security Perimeter.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.1.</td>
<td>All applicable Cyber Assets connected to a network via a routable protocol shall reside within a defined ESP.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.2.</td>
<td>All External Routable Connectivity must be through an identified Electronic Access Point (EAP).</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.3.</td>
<td>Require inbound and outbound access permissions, including the reason for granting access, and deny all other access by default.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.4.</td>
<td>Where technically feasible, perform authentication when establishing Dial-up Connectivity with applicable Cyber Assets.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R1.5.</td>
<td>Have one or more methods for detecting known or suspected malicious communications for both inbound and outbound communications.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.</td>
<td>Each Responsible Entity shall implement one or more documented processes that collectively include the applicable requirement parts, where technically feasible, in CIP-005-7 Table R2 – Remote Access Management.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.1.</td>
<td>For all Interactive Remote Access, utilize an Intermediate System such that the Cyber Asset initiating Interactive Remote Access does not directly access an applicable Cyber Asset.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.2</td>
<td>For all Interactive Remote Access sessions, utilize encryption that terminates at an Intermediate System.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.3</td>
<td>Require multi-factor authentication for all Interactive Remote Access sessions.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.4</td>
<td>Have one or more methods for determining active vendor remote access sessions (including Interactive Remote Access and system-to-system remote access).</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R2.5</td>
<td>Have one or more method(s) to disable active vendor remote access including Interactive Remote Access and system-to-system remote access.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R3</td>
<td>Each Responsible Entity shall implement one or more documented processes that collectively include the applicable requirement parts in CIP-005-7 Table R3 –Vendor Remote Access Management for EACMS and PACS.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R3.1</td>
<td>Have one or more method(s) to determine authenticated vendor-initiated remote connections.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-005-7</td>
<td>R3.2</td>
<td>Have one or more method(s) to terminate authenticated vendor-initiated remote connections and control the ability to reconnect.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1</td>
<td>Each Responsible Entity shall implement one or more documented physical security plan(s) that collectively include all of the applicable requirement parts in CIP-006-6 Table R1 – Physical Security Plan.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.1</td>
<td>Define operational or procedural controls to restrict physical access.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.2</td>
<td>Utilize at least one physical access control to allow unescorted physical access into each applicable Physical Security Perimeter to only those individuals who have authorized unescorted physical access.</td>
<td>x</td>
<td>x</td>
</tr>
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<td>Text of Requirement</td>
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<td>TE</td>
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</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.3</td>
<td>Where technically feasible, utilize two or more different physical access controls (this does not require two completely independent physical access control systems) to collectively allow unescorted physical access into Physical Security Perimeters to only those individuals who have authorized unescorted physical access.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.4</td>
<td>Monitor for unauthorized access through a physical access point into a Physical Security Perimeter.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.5</td>
<td>Issue an alarm or alert in response to detected unauthorized access through a physical access point into a Physical Security Perimeter to the personnel identified in the BES Cyber Security Incident response plan within 15 minutes of detection.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.6</td>
<td>Monitor each Physical Access Control System for unauthorized physical access to a Physical Access Control System.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.7</td>
<td>Issue an alarm or alert in response to detected unauthorized physical access to a Physical Access Control System to the personnel identified in the BES Cyber Security Incident response plan within 15 minutes of the detection.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.8</td>
<td>Log (through automated means or by personnel who control entry) entry of each individual with authorized unescorted physical access into each Physical Security Perimeter, with information to identify the individual and date and time of entry.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R1.9</td>
<td>Retain physical access logs of entry of individuals with authorized unescorted physical access into each Physical Security Perimeter for at least ninety calendar days.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO Responsibility</td>
<td>TE Responsibility (either Each, Split, Single or N/A)</td>
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<tr>
<td>CIP-006-6</td>
<td>R1.10</td>
<td>Restrict physical access to cabling and other nonprogrammable communication components used for connection between applicable Cyber Assets within the same Electronic Security Perimeter in those instances when such cabling and components are located outside of a Physical Security Perimeter. Where physical access restrictions to such cabling and components are not implemented, the Responsible Entity shall document and implement one or more of the following: - encryption of data that transits such cabling and components; or - monitoring the status of the communication link composed of such cabling and components and issuing an alarm or alert in response to detected communication failures to the personnel identified in the BES Cyber Security Incident response plan within 15 minutes of detection; or - an equally effective logical protection.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R2</td>
<td>Each Responsible Entity shall implement one or more documented visitor control program(s) that include each of the applicable requirement parts in CIP-006-6 Table R2 – Visitor Control Program.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R2.1</td>
<td>Require continuous escorted access of visitors (individuals who are provided access but are not authorized for unescorted physical access) within each Physical Security Perimeter, except during CIP Exceptional Circumstances.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R2.2</td>
<td>Require manual or automated logging of visitor entry into and exit from the Physical Security Perimeter that includes date and time of the initial entry and last exit, the visitor’s name, and the name of an individual point of contact responsible for the visitor, except during CIP Exceptional Circumstances.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R2.3</td>
<td>Retain visitor logs for at least ninety calendar days.</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>Responsibility (either Each, Split, Single or N/A)</td>
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</tr>
<tr>
<td>CIP-006-6</td>
<td>R3</td>
<td>Each Responsible Entity shall implement one or more documented Physical Access Control System maintenance and testing program(s) that collectively include each of the applicable requirement parts in CIP-006-6 Table R3 – Maintenance and Testing Program.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-006-6</td>
<td>R3.1</td>
<td>Maintenance and testing of each Physical Access Control System and locally mounted hardware or devices at the Physical Security Perimeter at least once every 24 calendar months to ensure they function properly.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R1</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-007-6 Table R1 – Ports and Services.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R1.1</td>
<td>Where technically feasible, enable only logical network accessible ports that have been determined to be needed by the Responsible Entity, including port ranges or services where needed to handle dynamic ports. If a device has no provision for disabling or restricting logical ports on the device then those ports that are open are deemed needed.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R1.2</td>
<td>Protect against the use of unnecessary physical input/output ports used for network connectivity, console commands, or Removable Media.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R2</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-007-6 Table R2 – Security Patch Management.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R2.1</td>
<td>A patch management process for tracking, evaluating, and installing cyber security patches for applicable Cyber Assets. The tracking portion shall include the identification of a source or sources that the Responsible Entity tracks for the release of cyber security patches for applicable Cyber Assets that are updateable and for which a patching source exists.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
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<td>TE</td>
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<tr>
<td>CIP-007-6</td>
<td>R2.2</td>
<td>At least once every 35 calendar days, evaluate security patches for applicability that have been released since the last evaluation from the source or sources identified in Part 2.1.</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>
| CIP-007-6 | R2.3 | For applicable patches identified in Part 2.2, within 35 calendar days of the evaluation completion, take one of the following actions:  
- Apply the applicable patches; or  
- Create a dated mitigation plan; or  
- Revise an existing mitigation plan.  
Mitigation plans shall include the Responsible Entity’s planned actions to mitigate the vulnerabilities addressed by each security patch and a timeframe to complete these mitigations. | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R2.4 | For each mitigation plan created or revised in Part 2.3, implement the plan within the timeframe specified in the plan, unless a revision to the plan or an extension to the timeframe specified in Part 2.3 is approved by the CIP Senior Manager or delegate.   | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R3   | Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-007-6 Table R3 – Malicious Code Prevention. | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R3.1 | Deploy method(s) to deter, detect, or prevent malicious code.                                                                                                                                                        | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R3.2 | Mitigate the threat of detected malicious code.                                                                                                                                                                     | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R3.3 | For those methods identified in Part 3.1 that use signatures or patterns, have a process for the update of the signatures or patterns. The process must address testing and installing the signatures or patterns.           | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
| CIP-007-6 | R4   | Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-007-6 Table R4 – Security Event Monitoring.          | x     | x  | Each                                               | The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities                        |
## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

### Version 8.0

<table>
<thead>
<tr>
<th>Standard</th>
<th>Req.</th>
<th>Text of Requirement</th>
<th>CAISO</th>
<th>TE</th>
<th>Responsibility (either Each, Split, Single or N/A)</th>
<th>Responsibility Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP-007-6</td>
<td>R4.1</td>
<td>Log events at the BES Cyber System level (per BES Cyber System capability) or at the Cyber Asset level (per Cyber Asset capability) for identification of, and after-the-fact investigations of, Cyber Security Incidents that includes, as a minimum, each of the following types of events:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.1.1</td>
<td>Detected successful login attempts;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.1.2</td>
<td>Detected failed access attempts and failed login attempts;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.1.3</td>
<td>Detected malicious code.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.2</td>
<td>Generate alerts for security events that the Responsible Entity determines necessitates an alert, that includes, as a minimum, each of the following types of events (per Cyber Asset or BES Cyber System capability):</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.2.1</td>
<td>Detected malicious code from Part 4.1; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.2.2</td>
<td>Detected failure of Part 4.1 event logging.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.3</td>
<td>Where technically feasible, retain applicable event logs identified in Part 4.1 for at least the last 90 consecutive calendar days except under CIP Exceptional Circumstances.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R4.4</td>
<td>Review a summarization or sampling of logged events as determined by the Responsible Entity at intervals no greater than 15 calendar days to identify undetected Cyber Security Incidents.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-007-6 Table RS – System Access Controls.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.1</td>
<td>Have a method(s) to enforce authentication of interactive user access, where technically feasible.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
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<tr>
<td>CIP-007-6</td>
<td>R5.2</td>
<td>Identify and inventory all known enabled default or other generic account types, either by system, by groups of systems, by location, or by system type(s).</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.3</td>
<td>Identify individuals who have authorized access to shared accounts.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.4</td>
<td>Change known default passwords, per Cyber Asset capability</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.5</td>
<td>For password-only authentication for interactive user access, either technically or procedurally enforce the following password parameters:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.5.1</td>
<td>Password length that is, at least, the lesser of eight characters or the maximum length supported by the Cyber Asset; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.5.2</td>
<td>Minimum password complexity that is the lesser of three or more different types of characters (e.g., uppercase alphabetic, lowercase alphabetic, numeric, non-alphanumeric) or the maximum complexity supported by the Cyber Asset.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.6</td>
<td>Where technically feasible, for password-only authentication for interactive user access, either technically or procedurally enforce password changes or an obligation to change the password at least once every 15 calendar months.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-007-6</td>
<td>R5.7</td>
<td>Where technically feasible, either: - Limit the number of unsuccessful authentication attempts; or - Generate alerts after a threshold of unsuccessful authentication attempts.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1</td>
<td>Each Responsible Entity shall document one or more Cyber Security Incident response plan(s) that collectively include each of the applicable requirement parts in CIP-008-6 Table R1 – Cyber Security Incident Response Plan Specifications.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.1</td>
<td>One or more processes to identify, classify, and respond to Cyber Security Incidents.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.2</td>
<td>One or more processes:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
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<td>Text of Requirement</td>
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</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.2.1</td>
<td>That include criteria to evaluate and define attempts to compromise;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.2.2</td>
<td>To determine if an identified Cyber Security Incident is:</td>
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<td></td>
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<td>• A Reportable Cyber Security Incident; or</td>
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<td>• An attempt to compromise, as determined by applying the criteria from Part 1.2.1.</td>
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<td></td>
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<td>one or more systems identified in the “Applicable Systems” column for this Part; and</td>
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<tr>
<td>CIP-008-6</td>
<td>R1.2.3</td>
<td>To provide notification per Requirement R4.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.3</td>
<td>The roles and responsibilities of Cyber Security Incident response groups or individuals.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R1.4</td>
<td>Incident handling procedures for Cyber Security Incidents.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R2</td>
<td>Each Responsible Entity shall implement each of its documented Cyber Security Incident response plans to collectively include each of the applicable requirement parts in CIP-008-6 Table R2 – Cyber Security Incident Response Plan Implementation and Testing.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R2.1</td>
<td>Test each Cyber Security Incident response plan(s) at least once every 15 calendar months:</td>
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<tr>
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<td></td>
<td>- By responding to an actual Reportable Cyber Security Incident;</td>
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<td>- With a paper drill or tabletop exercise of a Reportable Cyber Security Incident; or</td>
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<td></td>
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<td>- With an operational exercise of a Reportable Cyber Security Incident.</td>
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<tr>
<td>CIP-008-6</td>
<td>R2.2</td>
<td>Use the Cyber Security Incident response plan(s) under Requirement R1 when responding to a Reportable Cyber Security Incident, responding to a Cyber Security Incident that attempted to compromise a system identified in the “Applicable Systems” column for this Part, or performing an exercise of a Reportable Cyber Security Incident. Document deviations from the plan(s) taken during the response to the incident or exercise.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>Standard</td>
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<td>Text of Requirement</td>
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</tr>
<tr>
<td>CIP-008-6</td>
<td>R2.3</td>
<td>Retain records related to Reportable Cyber Security Incidents and Cyber Security Incidents that attempted to compromise a system identified in the “Applicable Systems” column for this Part as per the Cyber Security Incident response plan(s) under Requirement R1.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3</td>
<td>Each Responsible Entity shall maintain each of its Cyber Security Incident response plans according to each of the applicable requirement parts in CIP-008-6 Table R3 – Cyber Security Incident Response Plan Review, Update, and Communication.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.1</td>
<td>No later than 90 calendar days after completion of a Cyber Security Incident response plan(s) test or actual Reportable Cyber Security Incident response:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.1.1</td>
<td>Document any lessons learned or document the absence of any lessons learned;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.1.2</td>
<td>Update the Cyber Security Incident response plan based on any documented lessons learned associated with the plan; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.1.3</td>
<td>Notify each person or group with a defined role in the Cyber Security Incident response plan of the updates to the Cyber Security Incident response plan based on any documented lessons learned.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.2</td>
<td>No later than 60 calendar days after a change to the roles or responsibilities, Cyber Security Incident response groups or individuals, or technology that the Responsible Entity determines would impact the ability to execute the plan:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.2.1</td>
<td>Update the Cyber Security Incident response plan(s); and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R3.2.2</td>
<td>Notify each person or group with a defined role in the Cyber Security Incident response plan of the updates.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
</tbody>
</table>
### APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

**Version 8.0**

<table>
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<tbody>
<tr>
<td>CIP-008-6</td>
<td>R4</td>
<td>Each Responsible Entity shall notify the Electricity Information Sharing and Analysis Center (E-ISAC) and, if subject to the jurisdiction of the United States, the United States National Cybersecurity and Communications Integration Center (NCCIC), 1 or their successors, of a Reportable Cyber Security Incident and a Cyber Security Incident that was an attempt to compromise, as determined by applying the criteria from Requirement R1, Part 1.2.1, a system identified in the “Applicable Systems” column, unless prohibited by law, in accordance with each of the applicable requirement parts in CIP-008-6 Table R4 – Notifications and Reporting for Cyber Security Incidents.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.1</td>
<td>Initial notifications and updates shall include the following attributes, at a minimum, to the extent known:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.1.1</td>
<td>4.1.1 The functional impact;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.1.2</td>
<td>4.1.2 The attack vector used; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.1.3</td>
<td>4.1.3 The level of intrusion that was achieved or attempted.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.2</td>
<td>After the Responsible Entity’s determination made pursuant to documented process(es) in Requirement R1, Part 1.2, provide initial notification within the following timelines: • One hour after the determination of a Reportable Cyber Security Incident. • By the end of the next calendar day after determination that a Cyber Security Incident was an attempt to compromise a system identified in the “Applicable System</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-008-6</td>
<td>R4.3</td>
<td>Provide updates, if any, within 7 calendar days of determination of new or changed attribute information required in Part 4.1.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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<tr>
<td>CIP-009-6</td>
<td>R1</td>
<td>Each Responsible Entity shall have one or more documented recovery plan(s) that collectively include each of the applicable requirement parts in CIP-009-6 Table R1 – Recovery Plan Specifications.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R1.1</td>
<td>Conditions for activation of the recovery plan(s).</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R1.2</td>
<td>Roles and responsibilities of responders.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R1.3</td>
<td>One or more processes for the backup and storage of information required to recover BES Cyber System functionality.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R1.4</td>
<td>One or more processes to verify the successful completion of the backup processes in Part 1.3 and to address any backup failures.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R1.5</td>
<td>One or more processes to preserve data, per Cyber Asset capability, for determining the cause of a Cyber Security Incident that triggers activation of the recovery plan(s). Data preservation should not impede or restrict recovery.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R2</td>
<td>Each Responsible Entity shall implement its documented recovery plan(s) to collectively include each of the applicable requirement parts in CIP-009-6 Table R2 – Recovery Plan Implementation and Testing.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R2.1</td>
<td>Test each of the recovery plans referenced in Requirement R1 at least once every 15 calendar months: - By recovering from an actual incident; - With a paper drill or tabletop exercise; or - With an operational exercise.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R2.2</td>
<td>Test a representative sample of information used to recover BES Cyber System functionality at least once every 15 calendar months to ensure that the information is useable and is compatible with current configurations. An actual recovery that incorporates the information used to recover BES Cyber System functionality substitutes for this test.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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### APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tbody>
<tr>
<td>CIP-009-6</td>
<td>R2.3</td>
<td>Test each of the recovery plans referenced in Requirement R1 at least once every 36 calendar months through an operational exercise of the recovery plans in an environment representative of the production environment. An actual recovery response may substitute for an operational exercise.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3</td>
<td>Each Responsible Entity shall maintain each of its recovery plan(s) in accordance with each of the applicable requirement parts in CIP-009-6 Table R3 – Recovery Plan Review, Update and Communication.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.1</td>
<td>No later than 90 calendar days after completion of a recovery plan test or actual recovery:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.1.1</td>
<td>Document any lessons learned associated with a recovery plan test or actual recovery or document the absence of any lessons learned;</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.1.2</td>
<td>Update the recovery plan based on any documented lessons learned associated with the plan; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.1.3</td>
<td>Notify each person or group with a defined role in the recovery plan of the updates to the recovery plan based on any documented lessons learned.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.2</td>
<td>No later than 60 calendar days after a change to the roles or responsibilities, responders, or technology that the Responsible Entity determines would impact the ability to execute the recovery plan:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.2.1</td>
<td>Update the recovery plan; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-009-6</td>
<td>R3.2.2</td>
<td>Notify each person or group with a defined role in the recovery plan of the updates.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.</td>
<td>R1. Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-010-4 Table R1 – Configuration Change Management.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.</td>
<td>Develop a baseline configuration, individually or by group, which shall include the following items:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
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</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.1.</td>
<td>Operating system(s) (including version) or firmware where no independent operating system exists;</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.2.</td>
<td>Any commercially available or open-source application software (including version) intentionally installed;</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.3.</td>
<td>Any custom software installed;</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.4.</td>
<td>Any logical network accessible ports; and</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.1.5.</td>
<td>Any security patches applied.</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.2.</td>
<td>Authorize and document changes that deviate from the existing baseline configuration.</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.3.</td>
<td>For a change that deviates from the existing baseline configuration, update the baseline configuration as necessary within 30 calendar days of completing the change.</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.4.</td>
<td>For a change that deviates from the existing baseline configuration:</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.4.1.</td>
<td>Prior to the change, determine required cyber security controls in CIP-005 and CIP-007 that could be impacted by the change;</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.4.2.</td>
<td>Following the change, verify that required cyber security controls determined in 1.4.1 are not adversely affected; and</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.4.3.</td>
<td>Document the results of the verification.</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.5.</td>
<td>Where technically feasible, for each change that deviates from the existing baseline configuration:</td>
<td>CAISO x TE x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities.</td>
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</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.5.1.</td>
<td>Prior to implementing any change in the production environment, test the changes in a test environment or test the changes in a production environment where the test is performed in a manner that minimizes adverse effects, that models the baseline configuration to ensure that required cyber security controls in CIP-005 and CIP-007 are not adversely affected; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.5.2.</td>
<td>Document the results of the testing and, if a test environment was used, the differences between the test environment and the production environment, including a description of the measures used to account for any differences in operation between the test and production environments.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.6.</td>
<td>Prior to a change that deviates from the existing baseline configuration associated with baseline items in Parts 1.1.1, 1.1.2, and 1.1.5, and when the method to do so is available to the Responsible Entity from the software source:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.6.1.</td>
<td>Verify the identity of the software source; and</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R1.6.2.</td>
<td>Verify the integrity of the software obtained from the software source.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R2.</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-010-4 Table R2 – Configuration Monitoring</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R2.1.</td>
<td>Monitor at least once every 35 calendar days for changes to the baseline configuration (as described in Requirement R1, Part 1.1). Document and investigate detected unauthorized changes.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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<tr>
<td>CIP-010-4</td>
<td>R3.</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include each of the applicable requirement parts in CIP-010-3 Table R3–Vulnerability Assessments.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R3.1.</td>
<td>At least once every 15 calendar months, conduct a paper or active vulnerability assessment.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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<tr>
<td>CIP-010-4</td>
<td>R3.2</td>
<td>Where technically feasible, at least once every 36 calendar months:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R3.2.1</td>
<td>Perform an active vulnerability assessment in a test environment, or perform an active vulnerability assessment in a production environment where the test is performed in a manner that minimizes adverse effects, that models the baseline configuration of the BES Cyber System in a production environment; and</td>
<td></td>
<td></td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R3.2.2</td>
<td>Document the results of the testing and, if a test environment was used, the differences between the test environment and the production environment, including a description of the measures used to account for any differences in operation between the test and production environments.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R3.3</td>
<td>Prior to adding a new applicable Cyber Asset to a production environment, perform an active vulnerability assessment of the new Cyber Asset, except for CIP Exceptional Circumstances and like replacements of the same type of Cyber Asset with a baseline configuration that models an existing baseline configuration of the previous or other existing Cyber Asset</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R3.4</td>
<td>Document the results of the assessments conducted according to Parts 3.1, 3.2, and 3.3 and the action plan to remediate or mitigate vulnerabilities identified in the assessments including the planned date of completing the action plan and the execution status of any remediation or mitigation action items.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-010-4</td>
<td>R4</td>
<td>Each Responsible Entity, for its high impact and medium impact BES Cyber Systems and associated Protected Cyber Assets, shall implement, except under CIP Exceptional Circumstances, one or more documented plan(s) for Transient Cyber Assets and Removable Media that include the sections in Attachment 1.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
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## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tr>
<td>CIP-011-2</td>
<td>R1</td>
<td>Each Responsible Entity shall implement one or more documented information protection program(s) that collectively includes each of the applicable requirement parts in CIP-011-2 Table R1 – Information Protection.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-011-2</td>
<td>R1.1</td>
<td>Method(s) to identify information that meets the definition of BES Cyber System Information.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-011-2</td>
<td>R1.2</td>
<td>Procedure(s) for protecting and securely handling BES Cyber System Information, including storage, transit, and use.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-011-2</td>
<td>R2</td>
<td>Each Responsible Entity shall implement one or more documented process(es) that collectively include the applicable requirement parts in CIP-011-2 Table R2 – BES Cyber Asset Reuse and Disposal.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-011-2</td>
<td>R2.1</td>
<td>Prior to the release for reuse of applicable Cyber Assets that contain BES Cyber System Information (except for reuse within other systems identified in the “Applicable Systems” column), the Responsible Entity shall take action to prevent the unauthorized retrieval of BES Cyber System Information from the Cyber Asset data storage media.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-011-2</td>
<td>R2.2</td>
<td>Prior to the disposal of applicable Cyber Assets that contain BES Cyber System Information, the Responsible Entity shall take action to prevent the unauthorized retrieval of BES Cyber System Information from the Cyber Asset or destroy the data storage media.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-012-1</td>
<td>R1.</td>
<td>The Responsible Entity shall implement, except under CIP Exceptional Circumstances, one or more documented plan(s) to mitigate the risks posed by unauthorized disclosure and unauthorized modification of Real-time Assessment and Real-time monitoring data while being transmitted between any applicable Control Centers. The Responsible Entity is not required to include oral communications in its plan. The plan shall include:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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<tr>
<td>CIP-012-1</td>
<td>R1.1</td>
<td>Identification of security protection used to mitigate the risks posed by unauthorized disclosure and unauthorized modification of Real-time Assessment and Real-time monitoring data while being transmitted between Control Centers;</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-012-1</td>
<td>R1.2</td>
<td>Identification of where the Responsible Entity applied security protection for transmitting Real-time Assessment and Real-time monitoring data between Control Centers; and</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-012-1</td>
<td>R1.3</td>
<td>If the Control Centers are owned or operated by different Responsible Entities, identification of the responsibilities of each Responsible Entity for applying security protection to the transmission of Real-time Assessment and Real-time monitoring data between those Control Centers.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.</td>
<td>Each Responsible Entity shall develop one or more documented supply chain cyber security risk management plan(s) for high and medium impact BES Cyber Systems and their associated Electronic Access Control or Monitoring Systems (EACMS) and Physical Access Control Systems (PACS). The plan(s) shall include:</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.1</td>
<td>One or more process(es) used in planning for the procurement of BES Cyber Systems and their associated EACMS and PACS to identify and assess cyber security risk(s) to the Bulk Electric System from vendor products or services resulting from: (i) procuring and installing vendor equipment and software; and (ii) transitions from one vendor(s) to another vendor(s).</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2</td>
<td>One or more process(es) used in procuring BES Cyber Systems, and their associated EACMS and PACS, that address the following, as applicable:</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2.1</td>
<td>Notification by the vendor of vendor-identified incidents related to the products or services provided to the Responsible Entity that pose cyber security risk to the Responsible Entity;</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2.2</td>
<td>Coordination of responses to vendor-identified incidents related to the products or services provided to the Responsible Entity that pose cyber security risk to the Responsible Entity;</td>
<td>The CAISO and the TE shall each separately maintain compliance with this Standard Requirement for their respective facilities</td>
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<tr>
<td>CIP-013-2</td>
<td>R1.2.3.</td>
<td>Notification by vendors when remote or onsite access should no longer be granted to vendor representatives;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2.4.</td>
<td>Disclosure by vendors of known vulnerabilities related to the products or services provided to the Responsible Entity;</td>
<td>x</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2.5.</td>
<td>Verification of software integrity and authenticity of all software and patches provided by the vendor for use in the BES Cyber System and their associated EACMS and PACS; and</td>
<td>x</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R1.2.6.</td>
<td>Coordination of controls for vendor-initiated remote access.</td>
<td>x</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R2.</td>
<td>Each Responsible Entity shall implement its supply chain cyber security risk management plan(s) specified in Requirement R1.</td>
<td>x</td>
</tr>
<tr>
<td>CIP-013-2</td>
<td>R3.</td>
<td>Each Responsible Entity shall review and obtain CIP Senior Manager or delegate approval of its supply chain cyber security risk management plan(s) specified in Requirement R1 at least once every 15 calendar months.</td>
<td>x</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R4.</td>
<td>Each Transmission Owner that identified a Transmission station, Transmission substation, or a primary control center in Requirement R1 and verified according to Requirement R2, and each Transmission Operator notified by a Transmission Owner according to Requirement R3, shall conduct an evaluation of the potential threats and vulnerabilities of a physical attack to each of their respective Transmission station(s), Transmission substation(s), and primary control center(s) identified in Requirement R1 and verified according to Requirement R2. The evaluation shall consider the following:</td>
<td></td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R4.1.</td>
<td>Unique characteristics of the identified and verified Transmission station(s), Transmission substation(s), and primary control center(s);</td>
<td></td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R4.2.</td>
<td>Prior history of attack on similar facilities taking into account the frequency, geographic proximity, and severity of past physical security related events; and</td>
<td></td>
</tr>
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</tr>
<tr>
<td>CIP-014-2</td>
<td>R4.3</td>
<td>Intelligence or threat warnings received from sources such as law enforcement, the Electric Reliability Organization (ERO), the Electricity Sector Information Sharing and Analysis Center (ES-ISAC), U.S. federal and/or Canadian governmental agencies, or their successors.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R5.</td>
<td>Each Transmission Owner that identified a Transmission station, Transmission substation, or primary control center in Requirement R1 and verified according to Requirement R2, and each Transmission Operator notified by a Transmission Owner according to Requirement R3, shall develop and implement a documented physical security plan(s) that covers their respective Transmission station(s), Transmission substation(s), and primary control center(s). The physical security plan(s) shall be developed within 120 calendar days following the completion of Requirement R2 and executed according to the timeline specified in the physical security plan(s). The physical security plan(s) shall include the following attributes:</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R5.1</td>
<td>Resiliency or security measures designed collectively to deter, detect, delay, assess, communicate, and respond to potential physical threats and vulnerabilities identified during the evaluation conducted in Requirement R4.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R5.2</td>
<td>Law enforcement contact and coordination information.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R5.3</td>
<td>A timeline for executing the physical security enhancements and modifications specified in the physical security plan.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R5.4</td>
<td>Provisions to evaluate evolving physical threats, and their corresponding security measures, to the Transmission station(s), Transmission substation(s), or primary control center(s).</td>
<td>X</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO</td>
</tr>
<tr>
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</tr>
<tr>
<td>CIP-014-2</td>
<td>R6.</td>
<td>Each Transmission Owner that identified a Transmission station, Transmission substation, or primary control center in Requirement R1 and verified according to Requirement R2, and each Transmission Operator notified by a Transmission Owner according to Requirement R3, shall have an unaffiliated third party review the evaluation performed under Requirement R4 and the security plan(s) developed under Requirement R5. The review may occur concurrently with or after completion of the evaluation performed under Requirement R4 and the security plan development under Requirement R5.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R6.1</td>
<td>Each Transmission Owner and Transmission Operator shall select an unaffiliated third party reviewer from the following: - An entity or organization with electric industry physical security experience and whose review staff has at least one member who holds either a Certified Protection Professional (CPP) or Physical Security Professional (PSP) certification. - An entity or organization approved by the ERO. - A governmental agency with physical security expertise. - An entity or organization with demonstrated law enforcement, government, or military physical security expertise.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R6.2</td>
<td>The Transmission Owner or Transmission Operator, respectively, shall ensure that the unaffiliated third party review is completed within 90 calendar days of completing the security plan(s) developed in Requirement R5. The unaffiliated third party review may, but is not required to, include recommended changes to the evaluation performed under Requirement R4 or the security plan(s) developed under Requirement R5.</td>
<td>X</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO Responsibility (either Each, Split, Single or N/A)</td>
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</tr>
<tr>
<td>CIP-014-2</td>
<td>R6.3.</td>
<td>If the unaffiliated third party reviewer recommends changes to the evaluation performed under Requirement R4 or security plan(s) developed under Requirement R5, the Transmission Owner or Transmission Operator shall, within 60 calendar days of the completion of the unaffiliated third party review, for each recommendation: - Modify its evaluation or security plan(s) consistent with the recommendation; or - Document the reason(s) for not modifying the evaluation or security plan(s) consistent with the recommendation.</td>
<td>X</td>
</tr>
<tr>
<td>CIP-014-2</td>
<td>R6.4.</td>
<td>Each Transmission Owner and Transmission Operator shall implement procedures, such as the use of non-disclosure agreements, for protecting sensitive or confidential information made available to the unaffiliated third party reviewer and to protect or exempt sensitive or confidential information developed pursuant to this Reliability Standard from public disclosure.</td>
<td>X</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.</td>
<td>Each Transmission Operator shall have Interpersonal Communication capability with the following entities (unless the Transmission Operator detects a failure of its Interpersonal Communication capability in which case Requirement R10 shall apply):</td>
<td>X</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.1.</td>
<td>Its Reliability Coordinator.</td>
<td>X</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.2.</td>
<td>Each Balancing Authority within its Transmission Operator Area.</td>
<td>X</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.3.</td>
<td>Each Distribution Provider within its Transmission Operator Area.</td>
<td></td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.4.</td>
<td>Each Generator Operator within its Transmission Operator Area.</td>
<td></td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R3.5.</td>
<td>Each adjacent Transmission Operator synchronously connected.</td>
<td>X</td>
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<tr>
<td>COM-001-3</td>
<td>R3.6</td>
<td>Each adjacent Transmission Operator asynchronously connected.</td>
<td></td>
<td></td>
<td>N/A</td>
<td>There are no adjacent Transmission Operators asynchronously connected to the TE facilities subject to this agreement</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R4</td>
<td>Each Transmission Operator shall designate an Alternative Interpersonal Communication capability with the following entities:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R4.1</td>
<td>Its Reliability Coordinator.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R4.2</td>
<td>Each Balancing Authority within its Transmission Operator Area.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R4.3</td>
<td>Each adjacent Transmission Operator synchronously connected.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R4.4</td>
<td>Each adjacent Transmission Operator asynchronously connected.</td>
<td></td>
<td></td>
<td>N/A</td>
<td>There are no adjacent Transmission Operators asynchronously connected to the TE facilities subject to this agreement</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R9</td>
<td>Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R10</td>
<td>Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
</tr>
<tr>
<td>COM-001-3</td>
<td>R12</td>
<td>Each Reliability Coordinator, Transmission Operator, Generator Operator, and Balancing Authority shall have internal Interpersonal Communication capabilities for the exchange of information necessary for the Reliable Operation of the BES. This includes communication capabilities between Control Centers within the same functional entity, and/or between a Control Center and field personnel.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Interpersonal Communication capabilities.</td>
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</tr>
<tr>
<td>COM-002-4</td>
<td>R1</td>
<td>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall develop documented communications protocols for its operating personnel that issue and receive Operating Instructions. The protocols shall, at a minimum:</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
<td></td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R1.1</td>
<td>Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
<td></td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R1.2</td>
<td>Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions: - Confirm the receiver’s response if the repeated information is correct. - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver. - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
<td></td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R1.3</td>
<td>Require its operating personnel that receive an oral two-party, person-to-person Operating Instruction to take one of the following actions: - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct. - Request that the issuer reissue the Operating Instruction.</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
<td></td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R1.4</td>
<td>Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
<td></td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R1.5</td>
<td>Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.</td>
<td>CAISO: x</td>
<td>TE: x</td>
<td>Each [The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols]</td>
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<tr>
<td>COM-002-4</td>
<td>R1.6</td>
<td>Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R2</td>
<td>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall conduct initial training for each of its operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System on the documented communications protocols developed in Requirement R1 prior to that individual operator issuing an Operating Instruction.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R4</td>
<td>Each Balancing Authority, Reliability Coordinator, and Transmission Operator shall at least once every twelve (12) calendar months</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R4.1</td>
<td>Assess adherence to the documented communications protocols in Requirement R1 by its operating personnel that issue and receive Operating Instructions, provide feedback to those operating personnel and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R4.2</td>
<td>Assess the effectiveness of its documented communications protocols in Requirement R1 for its operating personnel that issue and receive Operating Instructions and modify its documented communication protocols, as necessary.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective communications protocols</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R5</td>
<td>Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: - Confirm the receiver’s response if the repeated information is correct (in accordance with Requirement R6), - Reissue the Operating Instruction if the repeated information is incorrect or if requested by the receiver, or - Take an alternative action if a response is not received or if the Operating Instruction was not understood by the receiver.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
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# APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tbody>
<tr>
<td>COM-002-4</td>
<td>R6</td>
<td>Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, shall either: - Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or - Request that the issuer reissue the Operating Instruction.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel.</td>
</tr>
<tr>
<td>COM-002-4</td>
<td>R7</td>
<td>Each Balancing Authority, Reliability Coordinator, and Transmission Operator that issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency shall confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel.</td>
</tr>
<tr>
<td>EOP-004-4</td>
<td>R1.</td>
<td>Each Responsible Entity shall have an event reporting Operating Plan in accordance with EOP-004-4 Attachment 1 that includes the protocol(s) for reporting to the Electric Reliability Organization and other organizations (e.g., the Regional Entity, company personnel, the Responsible Entity’s Reliability Coordinator, law enforcement, or governmental authority).</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>EOP-004-4</td>
<td>R2</td>
<td>Each Responsible Entity shall report events specified in EOP-004-4 Attachment 1 to the entities specified per their event reporting Operating Plan by the later of 24 hours of recognition of meeting an event type threshold for reporting or by the end of the Responsible Entity’s next business day (4 p.m. local time will be considered the end of the business day).</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
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<tr>
<td>EOP-005-3</td>
<td>R1.</td>
<td>Each Transmission Operator shall develop and implement a restoration plan approved by its Reliability Coordinator. The restoration plan shall be implemented to restore the Transmission Operator’s System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shutdown area to a state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage regardless of whether the Blackstart Resource is located within the Transmission Operator’s System. The restoration plan shall include:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE will each have a Restoration Plan as set forth in R1. The CAISO and the TE’s restoration plans shall include, to the extent applicable, the R1 sub-requirements as detailed below.</td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.1</td>
<td>Strategies for System restoration that are coordinated with its Reliability Coordinator’s high level strategy for restoring the Interconnection.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.2</td>
<td>A description of how all Agreements or mutually-agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.3</td>
<td>Procedures for restoring interconnections with other Transmission Operators under the direction of its Reliability Coordinator.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.4</td>
<td>Identification of each Blackstart Resource and its characteristics including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.5</td>
<td>Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started.</td>
<td></td>
<td></td>
<td>N/A</td>
<td>The Parties do not have the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.6</td>
<td>Identification of acceptable operating voltage and frequency limits during restoration.</td>
<td>X</td>
<td>X</td>
<td>Split</td>
<td>The CAISO will identify acceptable frequency limits to be used during restoration. The TE will identify acceptable voltage limits to be used during restoration.</td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.7</td>
<td>Operating Processes to reestablish connections within the Transmission Operator’s System for areas that have been restored and are prepared for reconnection.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
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### APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tr>
<td>EOP-005-3</td>
<td>R1.8</td>
<td>Operating Processes to restore Loads required to restore the System, such as station service for substations, units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control.</td>
<td>X X</td>
<td>Split</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The CAISO shall identify loads required to restore the System, such as units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control. The TE shall identify station service loads required to restore the System.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R1.9</td>
<td>Operating Processes for transferring authority back to the Balancing Authority in accordance with its Reliability Coordinator’s criteria.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R2</td>
<td>Each Transmission Operator shall provide the entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the effective date of the plan.</td>
<td>X X</td>
<td>Each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R3</td>
<td>Each Transmission Operator shall review its restoration plan and submit it to its Reliability Coordinator annually on a mutually-agreed, predetermined schedule.</td>
<td>X X</td>
<td>Split</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and TE shall each review their restoration plans. The CAISO will submit the TE’s restoration plan and the CAISO’s overarching plan to the RC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R4</td>
<td>Each Transmission Operator shall submit its revised restoration plan to its Reliability Coordinator for approval, when the revision would change its ability to implement its restoration plan, as follows:</td>
<td>X X</td>
<td>Split</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and TE shall each revise their restoration plans in accordance with this requirement. The CAISO will submit the TE’s revised restoration plan and the CAISO’s revised overarching plan to the RC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R4.1</td>
<td>Within 90 calendar days after identifying any unplanned permanent BES modifications.</td>
<td>X X</td>
<td>Split</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and TE shall each revise their restoration plans in accordance with this requirement. The CAISO will submit the TE’s revised restoration plan and the CAISO’s revised overarching plan to the RC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R4.2</td>
<td>Prior to implementing a planned permanent BES modification subject to its Reliability Coordinator approval requirements per EOP-006.</td>
<td>X X</td>
<td>Split</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and TE shall each revise their restoration plans in accordance with this requirement. The CAISO will submit the TE’s revised restoration plan and the CAISO’s revised overarching plan to the RC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R5</td>
<td>Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms so that it is available to all of its System Operators prior to its effective date.</td>
<td>X X</td>
<td>Each</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective control rooms.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>EOP-005-3</td>
<td>R6</td>
<td>Each Transmission Operator shall verify through analysis of actual events, a combination of steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed at least once every five years. Such analysis, simulations or testing shall verify:</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R6.1</td>
<td>The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R6.2</td>
<td>The location and magnitude of Loads required to control voltages and frequency within acceptable operating limits.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R6.3</td>
<td>The capability of generating resources required to control voltages and frequency within acceptable operating limits.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7</td>
<td>Each Transmission Operator shall have Blackstart Resource testing requirements to verify that each Blackstart Resource is capable of meeting the requirements of its restoration plan. These Blackstart Resource testing requirements shall include:</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7.1</td>
<td>The frequency of testing such that each Blackstart Resource is tested at least once every three calendar years.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7.2</td>
<td>A list of required tests including:</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7.2.1</td>
<td>The ability to start the unit when isolated with no support from the BES or when designed to remain energized without connection to the remainder of the System.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7.2.2</td>
<td>The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits.</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R7.3</td>
<td>The minimum duration of each of the required tests.</td>
<td>X</td>
<td></td>
</tr>
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<td>Responsibility Details</td>
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</tr>
<tr>
<td>EOP-005-3</td>
<td>R8</td>
<td>Each Transmission Operator shall include within its operations training program, annual System restoration training for its System Operators. This training program shall include training on the following:</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R8.1.</td>
<td>System restoration plan including coordination with its Reliability Coordinator and Generator Operators included in the restoration plan.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans. The TE’s training shall include training on coordination with the CAISO, rather than with the RC and with Generator Operators.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R8.2.</td>
<td>Restoration priorities.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R8.3.</td>
<td>Building of cranking paths.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R8.4.</td>
<td>Synchronizing (re-energized sections of the System).</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective restoration plans.</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R8.5.</td>
<td>Transition of Demand and resource balance within its area to the Balancing Authority.</td>
<td>With respect to the facilities subject to this agreement, the TE does not have any load or generation, therefore has no ability to transition demand and resource balance to the Balancing Authority</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R9</td>
<td>Each Transmission Operator, each applicable Transmission Owner, and each applicable Distribution Provider shall provide a minimum of two hours of System restoration training every two calendar years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator’s restoration plan that are outside of their normal tasks.</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-005-3</td>
<td>R10</td>
<td>Each Transmission Operator shall participate in its Reliability Coordinator’s restoration drills, exercises, or simulations as requested by its Reliability Coordinator.</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
<td></td>
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<tr>
<td>EOP-005-3</td>
<td>R11.</td>
<td>Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement. Such Agreements shall include references to the Blackstart Resource testing requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a current Operating Plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the BES in the event that its primary control center functionality is lost. This Operating Plan for backup functionality shall include:</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.1</td>
<td>The location and method of implementation for providing backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2</td>
<td>A summary description of the elements required to support the backup functionality. These elements shall include:</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2.1</td>
<td>Tools and applications to ensure that System Operators have situational awareness of the BES.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2.2</td>
<td>Data exchange capabilities.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2.3</td>
<td>Interpersonal Communications.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2.4</td>
<td>Power source(s).</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.2.5</td>
<td>Physical and cyber security.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.3.</td>
<td>An Operating Process for keeping the backup functionality consistent with the primary control center.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
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<td>Req.</td>
<td>Text of Requirement</td>
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<tr>
<td>EOP-008-2</td>
<td>R1.4.</td>
<td>Operating Procedures, including decision authority, for use in determining when to implement the Operating Plan for backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.5.</td>
<td>A transition period between the loss of primary control center functionality and the time to fully implement the backup functionality that is less than or equal to two hours.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.6.</td>
<td>An Operating Process describing the actions to be taken during the transition period between the loss of primary control center functionality and the time to fully implement backup functionality elements identified in Requirement R1, Part 1.2. The Operating Process shall include:</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.6.1.</td>
<td>A list of all entities to notify when there is a change in operating locations.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.6.2.</td>
<td>Actions to manage the risk to the BES during the transition from primary to backup functionality as well as during outages of the primary or backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R1.6.3.</td>
<td>Identification of the roles for personnel involved during the initiation and implementation of the Operating Plan for backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R2.</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have a copy of its current Operating Plan for backup functionality available at its primary control center and at the location providing backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
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<td>Text of Requirement</td>
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<tr>
<td>EOP-008-2</td>
<td>R4.</td>
<td>Each Balancing Authority and Transmission Operator shall have backup functionality (provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location) that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all Reliability Standards that are applicable to a Balancing Authority’s and Transmission Operator’s primary control center functionality. To avoid requiring tertiary functionality, backup functionality is not required during: • Planned outages of the primary or backup functionality of two weeks or less • Unplanned outages of the primary or backup functionality</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R5.</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall annually review and approve its Operating Plan for backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R5.1.</td>
<td>An update and approval of the Operating Plan for backup functionality shall take place within sixty calendar days of any changes to any part of the Operating Plan described in Requirement R1.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R6</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have primary and backup functionality that do not depend on each other for the control center functionality required to maintain compliance with Reliability Standards.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R7.</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall conduct and document results of an annual test of its Operating Plan that demonstrates:</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R7.1.</td>
<td>The transition time between the simulated loss of primary control center functionality and the time to fully implement the backup functionality.</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EOP-008-2</td>
<td>R7.2.</td>
<td>The backup functionality for a minimum of two continuous hours.</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
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# APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tr>
<td>EOP-008-2</td>
<td>R8.</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator that has experienced a loss of its primary or backup functionality and that anticipates that the loss of primary or backup functionality will last for more than six calendar months shall provide a plan to its Regional Entity within six calendar months of the date when the functionality is lost, showing how it will re-establish primary or backup functionality.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to its primary or backup functionality.</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>R3</td>
<td>Each Transmission Operator shall develop, maintain, and implement a GMD Operating Procedure or Operating Process to mitigate the effects of GMD events on the reliable operation of its respective system. At a minimum, the Operating Procedure or Operating Process shall include:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>R3.1</td>
<td>Steps or tasks to receive space weather information.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>R3.2</td>
<td>System Operator actions to be initiated based on predetermined conditions.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>R3.3</td>
<td>The conditions for terminating the Operating Procedure or Operating Process.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>R1.</td>
<td>Each Transmission Operator shall develop, maintain, and implement one or more Reliability Coordinator-reviewed Operating Plan(s) to mitigate operating Emergencies in its Transmission Operator Area. The Operating Plan(s) shall include the following, as applicable:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE will each have an Operating Plan as set forth in R1. The CAISO and the TE's operating plans shall include, to the extent applicable, the R1 sub-requirements as detailed below.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.1.</td>
<td>Roles and responsibilities for activating the Operating Plan(s);</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.</td>
<td>Processes to prepare for and mitigate Emergencies including:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately include processes to prepare for and mitigate Emergencies in their respective Operating Plans to the extent applicable in the R1.2 sub-requirements detailed below.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.1</td>
<td>Notification to its Reliability Coordinator, to include current and projected conditions, when experiencing an operating Emergency;</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
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### APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tr>
<td>EOP-011-2</td>
<td>1.2.2.</td>
<td>Cancellation or recall of Transmission and generation outages;</td>
<td>X</td>
<td>X</td>
<td>Split</td>
<td>The ISO and TE shall each have processes for the cancellation or recall of Transmission outages.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The ISO shall have a process for the cancellation or recall of generation outages.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.3.</td>
<td>Transmission system reconfiguration;</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.4.</td>
<td>Redispatch of generation request;</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.5.</td>
<td>Provisions for operator-controlled manual Load shedding that minimizes the overlap with automatic Load shedding and are capable of being implemented in a timeframe adequate for mitigating the Emergency; and</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>1.2.6.</td>
<td>Provisions to determine reliability impacts of:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td></td>
<td>1.2.6.1.</td>
<td>cold weather conditions; and</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td></td>
<td>1.2.6.2.</td>
<td>extreme weather conditions.</td>
<td></td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td>EOP-011-2</td>
<td>R4.</td>
<td>Each Transmission Operator and Balancing Authority shall address any reliability risks identified by its Reliability Coordinator pursuant to Requirement R3 and resubmit its Operating Plan(s) to its Reliability Coordinator within a time period specified by its Reliability Coordinator.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective Operating Plans.</td>
</tr>
<tr>
<td>FAC-014-2</td>
<td>R2.</td>
<td>The Transmission Operator shall establish SOLs (as directed by its Reliability Coordinator) for its portion of the Reliability Coordinator Area that are consistent with its Reliability Coordinator’s SOL Methodology.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>FAC-014-2</td>
<td>R5.2.</td>
<td>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.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
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</tr>
<tr>
<td>IRO-001-4</td>
<td>R2.</td>
<td>Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall comply with its Reliability Coordinator’s Operating Instructions unless compliance with the Operating Instructions cannot be physically implemented or unless such actions would violate safety, equipment, regulatory, or statutory requirements.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>IRO-001-4</td>
<td>R3.</td>
<td>Each Transmission Operator, Balancing Authority, Generator Operator, and Distribution Provider shall inform its Reliability Coordinator of its inability to perform the Operating Instruction issued by its Reliability Coordinator in Requirement R1.</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>IRO-010-4</td>
<td>R3.</td>
<td>Each Reliability Coordinator, Balancing Authority, Generator Owner, Generator Operator, Transmission Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R2 shall satisfy the obligations of the documented specifications using:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>IRO-010-4</td>
<td>3.1.</td>
<td>A mutually agreeable format</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>IRO-010-4</td>
<td>3.2.</td>
<td>A mutually agreeable process for resolving data conflicts</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>IRO-010-4</td>
<td>3.3.</td>
<td>A mutually agreeable security protocol</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>IRO-017-1</td>
<td>R2.</td>
<td>Each Transmission Operator and Balancing Authority shall perform the functions specified in its Reliability Coordinator’s outage coordination process.</td>
<td>X</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
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</tr>
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| MOD-001-1a  | R1.  | Each Transmission Operator shall select one of the methodologies listed below for calculating Available Transfer Capability (ATC) or Available Flowgate Capability (AFC) for each ATC Path per time period identified in R2 for those Facilities within its Transmission operating area:  
- The Area Interchange Methodology, as described in MOD-028  
- The Rated System Path Methodology, as described in MOD-029  
- The Flowgate Methodology, as described in MOD-030                                                                 | X     | X  | Single                                             | Single                |
| MOD-001-1a  | R6.  | When calculating Total Transfer Capability (TTC) or Total Flowgate Capability (TFC) the Transmission Operator shall use assumptions no more limiting than those used in the planning of operations for the corresponding time period studied, providing such planning of operations has been performed for that time period. | X     | X  | Single                                             | Single                |
| MOD-008-1   | R1.  | Each Transmission Operator shall prepare and keep current a TRM Implementation Document (TRMID) that includes, as a minimum, the following information:                                                                 | X     | X  | Single                                             | Single                |
### APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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| MOD-008-1 | R1.1 | Identification of (on each of its respective ATC Paths or Flowgates) each of the following components of uncertainty if used in establishing TRM, and a description of how that component is used to establish a TRM value:  
- Aggregate Load forecast.  
- Load distribution uncertainty.  
- Forecast uncertainty in Transmission system topology (including, but not limited to, forced or unplanned outages and maintenance outages).  
- Allowances for parallel path (loop flow) impacts.  
- Allowances for simultaneous path interactions.  
- Variations in generation dispatch (including, but not limited to, forced or unplanned outages, maintenance outages and location of future generation).  
- Short-term System Operator response (Operating Reserve actions).  
- Reserve sharing requirements.  
- Inertial response and frequency bias.                                                                                     | X     | Single |                                                        |                       |
<p>| MOD-008-1 | R1.2 | The description of the method used to allocate TRM across ATC Paths or Flowgates.                                                                                                                                                        | X     | Single |                                                        |                       |
| MOD-008-1 | R1.3 | The identification of the TRM calculation used for the following time periods:                                                                                                                                                           | X     | Single |                                                        |                       |
| MOD-008-1 | R1.3.1 | Same day and real-time.                                                                                                                                                                                                                   | X     | Single |                                                        |                       |
| MOD-008-1 | R1.3.2 | Day-ahead and pre-schedule.                                                                                                                                                                                                                | X     | Single |                                                        |                       |
| MOD-008-1 | R1.3.3 | Beyond day-ahead and pre-schedule, up to thirteen months ahead.                                                                                                                                                                          | X     | Single |                                                        |                       |
| MOD-008-1 | R2   | Each Transmission Operator shall only use the components of uncertainty from R1.1 to establish TRM, and shall not include any of the components of Capacity Benefit Margin (CBM). Transmission capacity set aside for reserve sharing agreements can be included in TRM. | X     | Single |                                                        |                       |</p>
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<tr>
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<th>CASO</th>
<th>TE</th>
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<tr>
<td>MOD-008-1</td>
<td>R3.</td>
<td>Each Transmission Operator shall make available its TRMID, and if requested, underlying documentation (if any) used to determine TRM, in the format used by the Transmission Operator, to any of the following who make a written request no more than 30 calendar days after receiving the request. - Transmission Service Providers - Reliability Coordinators - Planning Coordinators - Transmission Planner - Transmission Operators</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-008-1</td>
<td>R4.</td>
<td>Each Transmission Operator that maintains TRM shall establish TRM values in accordance with the TRMID at least once every 13 months.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-008-1</td>
<td>R5.</td>
<td>The Transmission Operator that maintains TRM shall provide the TRM values to its Transmission Service Provider(s) and Transmission Planner(s) no more than seven calendar days after a TRM value is initially established or subsequently changed.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R2.</td>
<td>When calculating TTC for ATC Paths, the Transmission Operator shall use a Transmission model that contains all of the following:</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R2.1</td>
<td>Modeling data and topology of its Reliability Coordinator’s area of responsibility. Equivalent representation of radial lines and facilities 161 kV or below is allowed.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R2.2</td>
<td>Modeling data and topology (or equivalent representation) for immediately adjacent and beyond Reliability Coordination areas.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R2.3</td>
<td>Facility Ratings specified by the Generator Owners and Transmission Owners.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.</td>
<td>When calculating TTCs for ATC Paths, the Transmission Operator shall include the following data for the Transmission Service Provider’s area. The Transmission Operator shall also include the following data associated with Facilities that are explicitly represented in the Transmission model, as provided by adjacent Transmission Service Providers and any other Transmission Service Providers with which coordination agreements have been executed:</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>MOD-028-2</td>
<td>R3.1.</td>
<td>For TTCs, use the following (as well as any other values and additional parameters as specified in the ATCID):</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.1.1.</td>
<td>Expected generation and Transmission outages, additions, and retirements, included as specified in the ATCID.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.1.2.</td>
<td>A daily or hourly load forecast for TTCs used in current-day and next-day ATC calculations.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.1.3.</td>
<td>A daily load forecast for TTCs used in ATC calculations for days two through 31.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.1.4.</td>
<td>A monthly load forecast for TTCs used in ATC calculations for months two through 13 months TTCs.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R3.1.5.</td>
<td>Unit commitment and dispatch order, to include all designated network resources and other resources that are committed or have the legal obligation to run, (within or out of economic dispatch) as they are expected to run.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R4.</td>
<td>When calculating TTCs for ATC Paths, the Transmission Operator shall meet all of the following conditions:</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R4.1.</td>
<td>Use all Contingencies meeting the criteria described in the ATCID.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R4.2.</td>
<td>Respect any contractual allocations of TTC.</td>
<td>X</td>
<td>Single</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CASO</td>
<td>TE</td>
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<td>------</td>
<td>----</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R4.3</td>
<td>Include, for each time period, the Firm Transmission Service expected to be scheduled as specified in the ATCID (filtered to reduce or eliminate duplicate impacts from transactions using Transmission service from multiple Transmission Service Providers) for the Transmission Service Provider, all adjacent Transmission Service Providers, and any Transmission Service Providers with which coordination agreements have been executed modeling the source and sink as follows: - If the source, as specified in the ATCID, has been identified in the reservation and it is discretely modeled in the Transmission Service Provider's Transmission model, use the discretely modeled point as the source. - If the source, as specified in the ATCID, has been identified in the reservation and the point can be mapped to an “equivalence” or “aggregate representation” in the Transmission Service Provider’s Transmission model, use the modeled equivalence or aggregate as the source. - If the source, as specified in the ATCID, has been identified in the reservation and the point cannot be mapped to a discretely modeled point, an “equivalence,” or an “aggregate representation” in the Transmission Service Provider’s Transmission model, use the immediately adjacent Balancing Authority associated with the Transmission Service Provider from which the power is to be received as the source. - If the source, as specified in the ATCID, has not been identified in the reservation.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R5.</td>
<td>Each Transmission Operator shall establish TTC for each ATC Path as defined below:</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R5.1</td>
<td>At least once within the seven calendar days prior to the specified period for TTCs used in hourly and daily ATC calculations.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R5.2</td>
<td>At least once per calendar month for TTCs used in monthly ATC calculations.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R5.3</td>
<td>Within 24 hours of the unexpected outage of a 500 kV or higher transmission Facility or a transformer with a low-side voltage of 200 kV or higher for TTCs in effect during the anticipated duration of the outage, provided such outage is expected to last 24 hours or longer.</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>MOD-028-2</td>
<td>R6.</td>
<td>Each Transmission Operator shall establish TTC for each ATC Path using the following process:</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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</table>
| MOD-028-2  | R6.1 | Determine the incremental Transfer Capability for each ATC Path by increasing generation and/or decreasing load within the source Balancing Authority area and decreasing generation and/or increasing load within the sink Balancing Authority area until either:  
- A System Operating Limit is reached on the Transmission Service Provider’s system, or  
- A SOL is reached on any other adjacent system in the Transmission model that is not on the study path and the distribution factor is 5% or greater.1. | X    |    | Split                                             | Single                 |
| MOD-028-2  | R6.2 | If the limit in step R6.1 can not be reached by adjusting any combination of load or generation, then set the incremental Transfer Capability by the results of the case where the maximum adjustments were applied. | X    |    | Split                                             | Single                 |
| MOD-028-2  | R6.3 | Use (as the TTC) the lesser of:  
- The sum of the incremental Transfer Capability and the impacts of Firm Transmission Services, as specified in the Transmission Service Provider’s ATCID, that were included in the study model, or  
- The sum of Facility Ratings of all ties comprising the ATC Path. | X    |    | Split                                             | Single                 |
<p>| MOD-028-2  | R6.4 | For ATC Paths whose capacity uses jointly-owned or allocated Facilities, limit TTC for each Transmission Service Provider so the TTC does not exceed each Transmission Service Provider’s contractual rights. | X    |    | Split                                             | Single                 |
| MOD-028-2  | 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:                                                                 | X    |    | Split                                             | Single                 |
| MOD-028-2  | R7.1 | One calendar day after its determination for TTCs used in hourly and daily ATC calculations.                                                                                                                      | X    |    | Split                                             | Single                 |
| MOD-028-2  | R7.2 | Seven calendar days after its determination for TTCs used in monthly ATC calculations.                                                                                                                             | X    |    | Split                                             | Single                 |
| MOD-029-2a | R1   | When calculating TTCs for ATC Paths, the Transmission Operator shall use a Transmission model which satisfies the following requirements:                                                                                                                     | x    |    | Split                                             | Single                 |
| MOD-029-2a | R1.1 | The model utilizes data and assumptions consistent with the time period being studied and that meets the following criteria:                                                                                                                                             | x    |    | Split                                             | Single                 |</p>
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<tr>
<td>MOD-029-2a</td>
<td>R1.1.1</td>
<td>Includes at least:</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.1.1</td>
<td>The Transmission Operator area. Equivalent representation of radial lines and facilities 161kV or below is allowed.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.1.2</td>
<td>All Transmission Operator areas contiguous with its own Transmission Operator area. (Equivalent representation is allowed.)</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.1.3</td>
<td>Any other Transmission Operator area linked to the Transmission Operator’s area by joint operating agreement. (Equivalent representation is allowed.)</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.2</td>
<td>Models all system Elements as in-service for the assumed initial conditions.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.3</td>
<td>Models all generation (may be either a single generator or multiple generators) that is greater than 20 MVA at the point of interconnection in the studied area.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.4</td>
<td>Models phase shifters in non-regulating mode, unless otherwise specified in the Available Transfer Capability Implementation Document (ATCID).</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.5</td>
<td>Uses Load forecast by Balancing Authority.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.6</td>
<td>Uses Transmission Facility additions and retirements.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.7</td>
<td>Uses Generation Facility additions and retirements.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.8</td>
<td>Uses Remedial Action Scheme (RAS) models where currently existing or projected for implementation within the studied time horizon.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.9</td>
<td>Models series compensation for each line at the expected operating level unless specified otherwise in the ATCID.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R1.1.10</td>
<td>Includes any other modeling requirements or criteria specified in the ATCID.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.</td>
<td>The Transmission Operator shall use the following process to determine TTC:</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
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## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

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<tr>
<td>MOD-029-2a</td>
<td>R2.1.</td>
<td>Except where otherwise specified within MOD-029-2a, adjust base case generation and load levels within the updated power flow model to determine the TTC (maximum flow or reliability limit) that can be simulated on the ATC Path while at the same time satisfying all planning criteria contingencies as follows:</td>
<td>x</td>
<td></td>
<td>Split, Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.1.1.</td>
<td>When modeling normal conditions, all transmission elements will be modeled at or below 100% of their continuous rating.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.1.2.</td>
<td>When modeling contingencies the system shall demonstrate transient, dynamic and voltage stability, with no transmission element modeled above its emergency rating.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.1.3</td>
<td>Uncontrolled separation shall not occur.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.2</td>
<td>Where it is impossible to actually simulate a reliability-limited flow in a direction counter to prevailing flows (on an alternating current transmission line), set the TTC for the non-prevailing direction equal to the TTC in the prevailing direction. If the TTC in the prevailing flow direction is dependent on a Remedial Action Scheme (RAS), set the TTC for the non-prevailing flow direction equal to the greater of the maximum flow that can be simulated in the non-prevailing flow direction or the maximum TTC that can be achieved in the prevailing flow direction without use of a RAS.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.3</td>
<td>For an ATC Path whose capacity is limited by contract, set TTC on the ATC Path at the lesser of the maximum allowable contract capacity or the reliability limit as determined by R2.1.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.4</td>
<td>For an ATC Path whose TTC varies due to simultaneous interaction with one or more other paths, develop a nomogram describing the interaction of the paths and the resulting TTC under specified conditions.</td>
<td>x</td>
<td></td>
<td>Single</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.5</td>
<td>The Transmission Operator shall identify when the TTC for the ATC Path being studied has an adverse impact on the TTC value of any existing path. Do this by modeling the flow on the path being studied at its proposed new TTC level simultaneous with the flow on the existing path at its TTC level while at the same time honoring the reliability criteria outlined in R2.1. The Transmission Operator shall include the resolution of this adverse impact in its study report for the ATC Path.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.6</td>
<td>Where multiple ownership of Transmission rights exists on an ATC Path, allocate TTC of that ATC Path in accordance with the contractual agreement made by the multiple owners of that ATC Path.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.7</td>
<td>For ATC Paths whose path rating, adjusted for seasonal variance, was established, known and used in operation since January 1, 1994, and no action has been taken to have the path rated using a different method, set the TTC at that previously established amount.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R2.8</td>
<td>Create a study report that describes the steps above that were undertaken (R2.1 – R2.7), including the contingencies and assumptions used, when determining the TTC and the results of the study. Where three phase fault damping is used to determine stability limits, that report shall also identify the percent used and include justification for use unless specified otherwise in the ATCID.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R3.</td>
<td>Each Transmission Operator shall establish the TTC at the lesser of the value calculated in R2 or any System Operating Limit (SDL) for that ATC Path.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-029-2a</td>
<td>R4.</td>
<td>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.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.</td>
<td>The Transmission Operator shall perform the following:</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
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</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.</td>
<td>Include Flowgates used in the AFC process based, at a minimum, on the following criteria:</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.1.</td>
<td>Results of a first Contingency transfer analysis for ATC Paths internal to a Transmission Operator’s system up to the path capability such that at a minimum the first three limiting Elements and their worst associated Contingency combinations with an OTDF of at least 5% and within the Transmission Operator’s system are included as Flowgates.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.1.1.</td>
<td>Use first Contingency criteria consistent with those first Contingency criteria used in planning of operations for the applicable time periods, including use of Remedial Action Schemes.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.1.2.</td>
<td>Only the most limiting element in a series configuration needs to be included as a Flowgate.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.1.3.</td>
<td>If any limiting element is kept within its limit for its associated worst Contingency by operating within the limits of another Flowgate, then no new Flowgate needs to be established for such limiting elements or Contingencies.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.2.</td>
<td>Results of a first Contingency transfer analysis from all adjacent Balancing Authority source and sink (as defined in the ATCID) combinations up to the path capability such that at a minimum the first three limiting Elements and their worst associated Contingency combinations with an Outage Transfer Distribution Factor (OTDF) of at least 5% and within the Transmission Operator’s system are included as Flowgates unless the interface between such adjacent Balancing Authorities is accounted for using another ATC methodology.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.2.1.</td>
<td>Use first Contingency criteria consistent with those first Contingency criteria used in planning of operations for the applicable time periods, including use of Remedial Action Schemes.</td>
<td>x</td>
<td>Single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.2.2.</td>
<td>Only the most limiting element in a series configuration needs to be included as a Flowgate.</td>
<td>x</td>
<td>Single</td>
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<tr>
<td>MOD-030-3</td>
<td>R2.1.2.3.</td>
<td>If any limiting element is kept within its limit for its associated worst Contingency by operating within the limits of another Flowgate, then no new Flowgate needs to be established for such limiting elements or Contingencies.</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.3</td>
<td>Any limiting Element/Contingency combination at least within its Reliability Coordinator’s Area 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 or was created to address temporary operating conditions.</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.4.</td>
<td>Any limiting Element/Contingency combination within the Transmission model that has been requested to be included by any other Transmission Service Provider using the Flowgate Methodology or Area Interchange Methodology, where:</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.4.1.</td>
<td>The coordination of the limiting Element/Contingency combination is not already addressed through a different methodology, and - Any generator within the Transmission Service Provider’s area has at least a 5% Power Transfer Distribution Factor (PTDF) or Outage Transfer Distribution Factor (OTDF) impact on the Flowgate when delivered to the aggregate load of its own area, or - A transfer from any Balancing Area within the Transmission Service Provider’s area to a Balancing Area adjacent has at least a 5% PTDF or OTDF impact on the Flowgate. - The Transmission Operator may utilize distribution factors less than 5% if desired.</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.1.4.2.</td>
<td>The limiting Element/Contingency combination is included in the requesting Transmission Service Provider’s methodology.</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.2.</td>
<td>At a minimum, establish a list of Flowgates by creating, modifying, or deleting Flowgate definitions at least once per calendar year.</td>
<td>ISO</td>
<td>Single</td>
</tr>
<tr>
<td>Standard</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>MOD-030-3</td>
<td>R2.3</td>
<td>At a minimum, establish a list of Flowgates by creating, modifying, or deleting Flowgates that have been requested as part of R2.1.4 within thirty calendar days from the request.</td>
<td>x</td>
<td>Single</td>
</tr>
</tbody>
</table>
| MOD-030-3 | R2.4 | Establish the TFC of each of the defined Flowgates as equal to:  
- For thermal limits, the System Operating Limit (SOL) of the Flowgate.  
- For voltage or stability limits, the flow that will respect the SOL of the Flowgate. | x | Single | |
<p>| MOD-030-3 | R2.5 | At a minimum, establish the TFC once per calendar year. | x | Single | |
| MOD-030-3 | R2.5.1 | If notified of a change in the Rating by the Transmission Owner that would affect the TFC of a flowgate used in the AFC process, the TFC should be updated within seven calendar days of the notification. | x | Single | |
| MOD-030-3 | R2.6 | Provide the Transmission Service Provider with the TFCs within seven calendar days of their establishment. | x | Single | |
| MOD-030-3 | R3. | The Transmission Operator shall make available to the Transmission Service Provider a Transmission model to determine Available Flowgate Capability (AFC) that meets the following criteria: | x | Single | |
| MOD-030-3 | R3.1 | Contains generation Facility Ratings, such as generation maximum and minimum output levels, specified by the Generator Owners of the Facilities within the model. | x | Single | |
| MOD-030-3 | R3.2 | Updated at least once per day for AFC calculations for intra-day, next day, and days two through 30. | x | Single | |
| MOD-030-3 | R3.3 | Updated at least once per month for AFC calculations for months two through 13. | x | Single | |
| MOD-030-3 | R3.4 | Contains modeling data and system topology for the Facilities within its Reliability Coordinator’s Area. Equivalent representation of radial lines and Facilities161kV or below is allowed. | x | Single | |
| MOD-030-3 | R3.5 | Contains modeling data and system topology (or equivalent representation) for immediately adjacent and beyond Reliability Coordination Areas. | x | Single | |</p>
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<td>MOD-033-2</td>
<td>R2.</td>
<td>Each Reliability Coordinator and Transmission Operator shall provide actual system behavior data (or a written response that it does not have the requested data) to any Planning Coordinator performing validation under Requirement R1 within 30 calendar days of a written request, such as, but not limited to, state estimator case or other Real-time data (including disturbance data recordings) necessary for actual system response validation.</td>
<td>x x Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R2.</td>
<td>The Nuclear Plant Generator Operator and the applicable Transmission Entities shall have in effect one or more Agreements that include mutually agreed to NPIRs and document how the Nuclear Plant Generator Operator and the applicable Transmission Entities shall address and implement these NPIRs</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R3.</td>
<td>Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall incorporate the NPIRs into their planning analyses of the electric system and shall communicate the results of these analyses to the Nuclear Plant Generator Operator.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R4.</td>
<td>Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall:</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R4.1</td>
<td>Incorporate the NPIRs into their operating analyses of the electric system.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R4.2</td>
<td>Operate the electric system to meet the NPIRs.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R4.3</td>
<td>Inform the Nuclear Plant Generator Operator when the ability to assess the operation of the electric system affecting NPIRs is lost.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
</tr>
</tbody>
</table>
## APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC
Version 8.0

<table>
<thead>
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<tbody>
<tr>
<td>NUC-001-4</td>
<td>R6.</td>
<td>Per the Agreements developed in accordance with this standard, the applicable Transmission Entities and the Nuclear Plant Generator Operator shall coordinate outages and maintenance activities which affect the NPIRs.</td>
<td>N/A</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R8.</td>
<td>Per the Agreements developed in accordance with this standard, the applicable Transmission Entities shall inform the Nuclear Plant Generator Operator of actual or proposed changes to electric system design (e.g., protective relay setpoints), configuration, operations, limits, or capabilities that may impact the ability of the electric system to meet the NPIRs.</td>
<td>N/A</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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</table>
| NUC-001-4 | R9. | R9. The Nuclear Plant Generator Operator and the applicable Transmission Entities shall include the following elements in aggregate within the Agreement(s) identified in R2.  
- Where multiple Agreements with a single Transmission Entity are put into effect, the R9 elements must be addressed in aggregate within the Agreements; however, each Agreement does not have to contain each element. The Nuclear Plant Generator Operator and the Transmission Entity are responsible for ensuring all the R9 elements are addressed in aggregate within the Agreements.  
- Where Agreements with multiple Transmission Entities are required, the Nuclear Plant Generator Operator is responsible for ensuring all the R9 elements are addressed in aggregate within the Agreements with the Transmission Entities. The Agreements with each Transmission Entity do not have to contain each element; however, the Agreements with the multiple Transmission Entities, in the aggregate, must address all R9 elements. For each Agreement(s), the Nuclear Plant Generator Operator and the Transmission Entity are responsible to ensure the Agreement(s) contain(s) the elements of R9 applicable to that Transmission Entity. | N/A | N/A | With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies. |
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<tbody>
<tr>
<td>NUC-001-4</td>
<td>R9.2</td>
<td>Technical requirements and analysis:</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.2.1.</td>
<td>Identification of parameters, limits, configurations, and operating scenarios included in the NPIRs and, as applicable, procedures for providing any specific data not provided within the Agreement.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.2.2.</td>
<td>Identification of facilities, components, and configuration restrictions that are essential for meeting the NPIRs.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.2.3.</td>
<td>Types of planning and operational analyses performed specifically to support the NPIRs, including the frequency of studies and types of Contingencies and scenarios required.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.3.</td>
<td>Operations and maintenance coordination</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.3.1.</td>
<td>Designation of ownership of electrical facilities at the interface between the electric system and the nuclear plant and responsibilities for operational control coordination and maintenance of these facilities.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.3.2.</td>
<td>Identification of any maintenance requirements for equipment not owned or controlled by the Nuclear Plant Generator Operator that are necessary to meet the NPIRs.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.3.3.</td>
<td>Coordination of testing, calibration and maintenance of on-site and off-site power supply systems and related components.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.3.4.</td>
<td>Provisions to address mitigating actions needed to avoid violating NPIRs and to address periods when responsible Transmission Entity loses the ability to assess the capability of the electric system to meet the NPIRs. These provisions shall include responsibility to notify the Nuclear Plant Generator Operator within a specified time frame.</td>
<td></td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.3.5.</td>
<td>Provision for considering, within the restoration process, the requirements and urgency of a nuclear plant that has lost all off-site and on-site AC power.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.3.6.</td>
<td>Coordination of physical and cyber security protection at the nuclear plant interface to ensure each asset is covered under at least one entity’s plan.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.3.7.</td>
<td>Coordination of the NPIRs with transmission system Remedial Action Schemes and any programs that reduce or shed load based on underfrequency or undervoltage.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.4.</td>
<td>Communications and training Administrative elements:</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
<td></td>
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</tr>
<tr>
<td>NUC-001-4</td>
<td>R9.4.1.</td>
<td>Provisions for communications affecting the NPIRs between the Nuclear Plant Generator Operator and Transmission Entities, including communications protocols, notification time requirements, and definitions of applicable unique terms</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.4.2.</td>
<td>Provisions for coordination during an off-normal or emergency event affecting the NPIRs, including the need to provide timely information explaining the event, an estimate of when the system will be returned to a normal state, and the actual time the system is returned to normal.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.4.3.</td>
<td>Provisions for coordinating investigations of causes of unplanned events affecting the NPIRs and developing solutions to minimize future risk of such events.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.4.4.</td>
<td>Provisions for supplying information necessary to report to government agencies, as related to NPIRs.</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>NUC-001-4</td>
<td>R9.4.5.</td>
<td>Provisions for personnel training, as related to NPIRs</td>
<td>N/A</td>
<td>With respect to the facilities covered in this agreement, the TE does not own or operate the type of facilities or operations to which the requirement or sub-requirement applies.</td>
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<tr>
<td>PER-003-2</td>
<td>R2.</td>
<td>Each Transmission Operator shall staff its Real-time operating positions performing Transmission Operator reliability-related tasks with System Operators who have demonstrated minimum competency in the areas listed by obtaining and maintaining one of the following valid NERC certificates:</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1</td>
<td>Areas of Competency</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1.1</td>
<td>Transmission operations</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1.2</td>
<td>Emergency preparedness and operations</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1.3</td>
<td>System operations</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1.4</td>
<td>Protection and control</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.1.5</td>
<td>Voltage and reactive</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-003-2</td>
<td>R2.2.</td>
<td>Certificates</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R1</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall use a systematic approach to develop and implement a training program for its System Operators</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R1.1</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall create a list of Bulk Electric System (BES) company-specific Real-time reliability-related tasks based on a defined and documented methodology.</td>
<td>x</td>
<td>x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
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<tr>
<td>PER-005-2</td>
<td>R1.1.1</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall review, and update if necessary, its list of BES company-specific Real-time reliability-related tasks identified in part 1.1 each calendar year.</td>
<td>CAISO: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R1.2</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall design and develop training materials according to its training program, based on the BES company-specific Real-time reliability-related task list created in part 1.1.</td>
<td>TE: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R1.3</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall deliver training to its System Operators according to its training program.</td>
<td>CAISO: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R1.4</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall conduct an evaluation each calendar year of the training program established in Requirement R1 to identify any needed changes to the training program and shall implement the changes identified.</td>
<td>TE: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R3</td>
<td>Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner shall verify, at least once, the capabilities of its personnel, identified in Requirement R1 or Requirement R2, assigned to perform each of the BES company-specific Real-time reliability-related tasks identified under Requirement R1 part 1.1 or Requirement R2 part 2.1.</td>
<td>CAISO: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
</tr>
<tr>
<td>PER-005-2</td>
<td>R3.1</td>
<td>Within six months of a modification or addition of a BES company-specific Real-time reliability-related task, each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner shall verify the capabilities of each of its personnel identified in Requirement R1 or Requirement R2 to perform the new or modified BES company-specific Real-time reliability-related tasks identified in Requirement R1 part 1.1 or Requirement R2 part 2.1.</td>
<td>TE: x</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
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<tr>
<td>PER-005-2</td>
<td>R4</td>
<td>Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner that (1) has operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) has established protection systems or operating guides to mitigate IROL violations, shall provide its personnel identified in Requirement R1 or Requirement R2 with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES.</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
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<tr>
<td>PER-005-2</td>
<td>R4.1</td>
<td>A Reliability Coordinator, Balancing Authority, Transmission Operator, or Transmission Owner that did not previously meet the criteria of Requirement R4, shall comply with Requirement R4 within 12 months of meeting the criteria.</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
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<tr>
<td>PER-005-2</td>
<td>R5</td>
<td>Each Reliability Coordinator, Balancing Authority, Transmission Operator shall use a systematic approach to develop and implement training for its identified Operations Support Personnel on how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1 part 1.1.</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
<td></td>
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</tr>
<tr>
<td>PER-005-2</td>
<td>R5.1</td>
<td>Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall conduct an evaluation each calendar year of the training established in Requirement R5 to identify and implement changes to the training.</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with respect to their respective operating personnel</td>
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<tr>
<td>TOP-001-5</td>
<td>R1</td>
<td>Each Transmission Operator shall act to maintain the reliability of its Transmission Operator Area via its own actions or by issuing Operating Instructions.</td>
<td>Each</td>
<td>The CAISO and TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
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<tr>
<td>TOP-001-5</td>
<td>R5</td>
<td>Each Transmission Operator, Generator Operator, and Distribution Provider shall comply with each Operating Instruction issued by its Balancing Authority, unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements.</td>
<td>Single</td>
<td></td>
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<tr>
<td>TOP-001-5</td>
<td>R6.</td>
<td>Each Transmission Operator, Generator Operator, and Distribution Provider shall inform its Balancing Authority of its inability to comply with an Operating Instruction issued by its Balancing Authority.</td>
<td>X Single</td>
<td>The CAISO and TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
<td></td>
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</tr>
<tr>
<td>TOP-001-5</td>
<td>R7.</td>
<td>Each Transmission Operator shall assist other Transmission Operators within its Reliability Coordinator Area, if requested and able, provided that the requesting Transmission Operator has implemented its comparable Emergency procedures, unless such assistance cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements.</td>
<td>X X Each</td>
<td>The CAISO is responsible for informing its RC and any known impacted Balancing Authorities and Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency. The TE is responsible for informing any known impacted Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R8.</td>
<td>Each Transmission Operator shall inform its Reliability Coordinator, known impacted Balancing Authorities, and known impacted Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency.</td>
<td>X X Split</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOP-001-5</td>
<td>R9.</td>
<td>Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.</td>
<td>X X Split</td>
<td>The CAISO is responsible for notifying its RC of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities. The TE is responsible for notifying CAISO and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.</td>
<td>Each Transmission Operator shall perform the following for determining System Operating Limit (SOL) exceedances within its Transmission Operator Area:</td>
<td>X Single</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOP-001-5</td>
<td>R10.1.</td>
<td>Monitor Facilities within its Transmission Operator Area;</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.2.</td>
<td>Monitor the status of Remedial Action Schemes within its Transmission Operator Area;</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.3.</td>
<td>Monitor non-BES facilities within its Transmission Operator Area identified as necessary by the Transmission Operator;</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.4.</td>
<td>Obtain and utilize status, voltages, and flow data for Facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator;</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.5.</td>
<td>Obtain and utilize the status of Remedial Action Schemes outside its Transmission Operator Area identified as necessary by the Transmission Operator; and</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R10.6.</td>
<td>Obtain and utilize status, voltages, and flow data for non-BES facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator.</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R12.</td>
<td>Each Transmission Operator shall not operate outside any identified Interconnection Reliability Operating Limit (IROL) for a continuous duration exceeding its associated IROL Tv.</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R13.</td>
<td>Each Transmission Operator shall ensure that a Real-time Assessment is performed at least once every 30 minutes.</td>
<td></td>
<td>X</td>
<td>Single</td>
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<tr>
<td>TOP-001-5</td>
<td>R14.</td>
<td>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.</td>
<td></td>
<td>X</td>
<td>Single</td>
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</tr>
<tr>
<td>TOP-001-5</td>
<td>R15.</td>
<td>Each Transmission Operator shall inform its Reliability Coordinator of actions taken to return the System to within limits when a SOL has been exceeded.</td>
<td></td>
<td>X</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R16.</td>
<td>Each Transmission Operator shall provide its System Operators with the authority to approve planned outages and maintenance of its telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between affected entities.</td>
<td></td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>Responsibility (either Each, Split, Single or N/A)</td>
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<tr>
<td>TOP-001-5</td>
<td>R18.</td>
<td>Each Transmission Operator shall operate to the most limiting parameter in instances where there is a difference in SOLs.</td>
<td>X</td>
<td>Single</td>
<td></td>
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</tr>
<tr>
<td>TOP-001-5</td>
<td>R20.</td>
<td>Each Transmission Operator shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Transmission Operator’s primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Balancing Authority, and the entities it has identified it needs data from in order for it to perform its Real-time monitoring and Real-time Assessments.</td>
<td>N/A</td>
<td>LST does not provide data exchange to or from its Control Center, but provides data flow directly from its SVC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP-001-5</td>
<td>R21.</td>
<td>Each Transmission Operator shall test its primary Control Center data exchange capabilities specified in Requirement R20 for redundant functionality at least once every 90 calendar days. If the test is unsuccessful, the Transmission Operator shall initiate action within two hours to restore redundant functionality.</td>
<td>N/A</td>
<td>R21 is dependent on R20 applicability, therefore N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOP-002-4</td>
<td>R1.</td>
<td>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 Operator Area will exceed any of its System Operating Limits (SOLs).</td>
<td>X</td>
<td>Single</td>
<td></td>
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</tr>
<tr>
<td>TOP-002-4</td>
<td>R2.</td>
<td>Each Transmission Operator shall have an Operating Plan(s) for next-day operations to address potential System Operating Limit (SOL) exceedances identified as a result of its Operational Planning Analysis as required in Requirement R1.</td>
<td>X</td>
<td>Single</td>
<td></td>
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</tr>
<tr>
<td>TOP-002-4</td>
<td>R3.</td>
<td>Each Transmission Operator shall notify entities identified in the Operating Plan(s) cited in Requirement R2 as to their role in those plan(s).</td>
<td>X</td>
<td>Single</td>
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<td></td>
</tr>
<tr>
<td>TOP-002-4</td>
<td>R6.</td>
<td>Each Transmission Operator shall provide its Operating Plan(s) for next-day operations identified in Requirement R2 to its Reliability Coordinator.</td>
<td>X</td>
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<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO</td>
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<td>Responsibility (either Each, Split, Single or N/A)</td>
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<td>TOP-003-5</td>
<td>R1.</td>
<td>Each Transmission Operator shall maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments. The data specification shall include, but not be limited to:</td>
<td>X</td>
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<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.1.</td>
<td>A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and external network data as deemed necessary by the Transmission Operator.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.2.</td>
<td>Provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.3.</td>
<td>Provisions for notification of BES generating unit(s) during local forecasted cold weather to include:</td>
<td>X</td>
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<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.3.1.</td>
<td>Operating limitations based on:</td>
<td>X</td>
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<td>TOP-003-5</td>
<td>1.3.1.1.</td>
<td>capability and availability;</td>
<td>X</td>
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<td>TOP-003-5</td>
<td>1.3.1.2.</td>
<td>fuel supply and inventory concerns;</td>
<td>X</td>
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<td>TOP-003-5</td>
<td>1.3.1.3.</td>
<td>fuel switching capabilities; and</td>
<td>X</td>
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<td>TOP-003-5</td>
<td>1.3.1.4.</td>
<td>environmental constraints</td>
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<td>TOP-003-5</td>
<td>1.3.2.</td>
<td>Generating unit(s) minimum:</td>
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<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.3.2.1.</td>
<td>design temperature; or</td>
<td>X</td>
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<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.3.2.2.</td>
<td>historical operating temperature; or</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.3.2.3.</td>
<td>current cold weather performance temperature determined by an engineering analysis.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<td>TOP-003-5</td>
<td>1.4.</td>
<td>A periodicity for providing data.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>1.5.</td>
<td>The deadline by which the respondent is to provide the indicated data.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>R3.</td>
<td>Each Transmission Operator shall distribute its data specification to entities that have data required by the Transmission Operator’s Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.</td>
<td>X</td>
<td></td>
<td>Single</td>
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<tr>
<td>TOP-003-5</td>
<td>R5.</td>
<td>Each Transmission Operator, Balancing Authority, Generator Owner, Generator Operator, Transmission Owner, and Distribution Provider receiving a data specification in Requirement R3 or R4 shall satisfy the obligations of the documented specifications using:</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
</tbody>
</table>
# APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC

## Version 8.0

<table>
<thead>
<tr>
<th>Standard</th>
<th>Req.</th>
<th>Text of Requirement</th>
<th>CAISO</th>
<th>TE</th>
<th>Responsibility (either Each, Split, Single or N/A)</th>
<th>Responsibility Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOP-003-5</td>
<td>5.1.</td>
<td>A mutually agreeable format</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>TOP-003-5</td>
<td>5.2.</td>
<td>A mutually agreeable process for resolving data conflicts</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>TOP-003-5</td>
<td>5.3.</td>
<td>A mutually agreeable security protocol</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and TE shall each maintain compliance with this requirement with respect to its operations as identified in agreed upon procedure(s) established by the CAISO.</td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R1.</td>
<td>Each Transmission Operator shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. The Operating Process or Operating Procedure shall include:</td>
<td>X</td>
<td>X</td>
<td>Split</td>
<td>The CAISO shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring and Real-time Assessments. The TE shall implement an Operating Process or Operating Procedure to address the quality of the Real-time data necessary to perform its Real-time monitoring.</td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R1.1.</td>
<td>Criteria for evaluating the quality of Real-time data;</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R1.2.</td>
<td>Provisions to indicate the quality of Real-time data to the System Operator; and</td>
<td>X</td>
<td>X</td>
<td>Each</td>
<td>The CAISO and the TE shall each separately maintain compliance with this requirement with respect to their respective operations.</td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R1.3.</td>
<td>Actions to address Real-time data quality issues with the entity(ies) responsible for providing the data when data quality affects Real-time Assessments.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R3.</td>
<td>Each Transmission Operator shall implement an Operating Process or Operating Procedure to address the quality of analysis used in its Real-time Assessments. The Operating Process or Operating Procedure shall include:</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R3.1.</td>
<td>Criteria for evaluating the quality of analysis used in its Real-time Assessments;</td>
<td>X</td>
<td></td>
<td>Single</td>
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</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R3.2.</td>
<td>Provisions to indicate the quality of analysis used in its Real-time Assessments; and</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R3.3.</td>
<td>Actions to address analysis quality issues affecting its Real-time Assessments.</td>
<td>X</td>
<td></td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>CAISO Responsibility</td>
<td>TE Responsibility (either Each, Split, Single or N/A)</td>
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<td></td>
</tr>
<tr>
<td>TOP-010-1(i)</td>
<td>R4.</td>
<td>Each Transmission Operator and Balancing Authority shall have an alarm process monitor that provides notification(s) to its System Operators when a failure of its Real-time monitoring alarm processor has occurred.</td>
<td></td>
<td>X</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R1.</td>
<td>Each Transmission Operator shall specify a system voltage schedule (which is either a range or a target value with an associated tolerance band) as part of its plan to operate within System Operating Limits and Interconnection Reliability Operating Limits.</td>
<td></td>
<td>x</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R1.1.</td>
<td>Each Transmission Operator shall provide a copy of the voltage schedules (which is either a range or a target value with an associated tolerance band) to its Reliability Coordinator and adjacent Transmission Operators within 30 calendar days of a request.</td>
<td></td>
<td>x</td>
<td>Single</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R2.</td>
<td>Each Transmission Operator shall schedule sufficient reactive resources to regulate voltage levels under normal and Contingency conditions. Transmission Operators can provide sufficient reactive resources through various means including, but not limited to, reactive generation scheduling, transmission line and reactive resource switching, and using controllable load.</td>
<td></td>
<td>x</td>
<td>Split</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R3.</td>
<td>Each Transmission Operator shall operate or direct the Real-time operation of devices to regulate transmission voltage and reactive flow as necessary.</td>
<td></td>
<td>x</td>
<td>Each</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R4.</td>
<td>The Transmission Operator shall specify the criteria that will exempt generators: 1) from following a voltage or Reactive Power schedule, 2) from having its automatic voltage regulator (AVR) in service or from being in voltage control mode, or 3) from having to make any associated notifications.</td>
<td></td>
<td>N/A</td>
<td>This requirement has been superseded by a WECC regional variance.</td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R4.1.</td>
<td>If a Transmission Operator determines that a generator has satisfied the exemption criteria, it shall notify the associated Generator Operator.</td>
<td></td>
<td>N/A</td>
<td>This requirement has been superseded by a WECC regional variance.</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>Req.</td>
<td>Text of Requirement</td>
<td>Responsibility Details</td>
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</tr>
<tr>
<td>VAR-001-5</td>
<td>R5.</td>
<td>Each Transmission Operator shall specify a voltage or Reactive Power schedule (which is either a range or a target value with an associated tolerance band) at either the high voltage side or low voltage side of the generator step-up transformer at the Transmission Operator’s discretion.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R5.1</td>
<td>The Transmission Operator shall provide the voltage or Reactive Power schedule (which is either a range or a target value with an associated tolerance band) to the associated Generator Operator and direct the Generator Operator to comply with the schedule in automatic voltage control mode (the AVR is in service and controlling voltage).</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>VAR-001-5</td>
<td>R5.2</td>
<td>The Transmission Operator shall provide the Generator Operator with the notification requirements for deviations from the voltage or Reactive Power schedule (which is either a range or a target value with an associated tolerance band).</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAR-001-5</td>
<td>R5.3</td>
<td>The Transmission Operator shall provide the criteria used to develop voltage schedules Reactive Power schedule (which is either a range or a target value with an associated tolerance band) to the Generator Operator within 30 days of receiving a request.</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| VAR-001-5 | E.A.13 | Each Transmission Operator shall issue any one of the following types of voltage schedules to the Generator Operators for each of their generation resources that are on-line and part of the Bulk Electric System within the Transmission Operator Area:  
• A voltage set point with a voltage tolerance band and a specified period.  
• An initial volt-ampere reactive output or initial power factor output with a voltage tolerance band for a specified period that the Generator Operator uses to establish a generator bus voltage set point.  
• A voltage band for a specified period. | N/A There are no Generator Operators connected to the TE facilities subject to this agreement |
<table>
<thead>
<tr>
<th>Standard</th>
<th>Req.</th>
<th>Text of Requirement</th>
<th>CAISO</th>
<th>TE Responsibility (either Each, Split, Single or N/A)</th>
<th>Responsibility Details</th>
</tr>
</thead>
</table>
| VAR-001-5 | E.A.14 | Each Transmission Operator shall provide one of the following voltage schedule reference points for each generation resource in its area to the Generator Operator.  
- The generator terminals.  
- The high side of the generator step-up transformer.  
- The point of interconnection.  
- A location designated by mutual agreement between the Transmission Operator and Generator Operator.                                                                                                                                                               |      | N/A                                                   | There are no Generator Operators connected to the TE facilities subject to this agreement |
| VAR-001-5 | E.A.16 | Each Transmission Operator shall provide to the Generator Operator, within 30 calendar days of a request for data by the Generator Operator, its transmission equipment data and operating data that supports development of the voltage set point conversion methodology.                                                                                  |      | N/A                                                   | There are no Generator Operators connected to the TE facilities subject to this agreement |
| VAR-001-5 | R6.  | After consultation with the Generator Owner regarding necessary step-up transformer tap changes and the implementation schedule, the Transmission Operator shall provide documentation to the Generator Owner specifying the required tap changes, a timeframe for making the changes, and technical justification for these changes.                                                     |      | N/A                                                   | There are no Generator Owners connected to the TE facilities subject to this agreement |
APPENDIX 3: CFR Matrix for Coordinated Functional Registration Agreement Between California ISO and Lone Star Transmission, LLC
Version 8.0

Matrix Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Standard</th>
<th>Change</th>
<th>Date</th>
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<td>1.0</td>
<td>All</td>
<td>Original CFR matrix developed</td>
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<td>2.0</td>
<td>CIP-003-8</td>
<td>Substituted CIP-003-8 for CIP-003-7</td>
<td>3/16/2020</td>
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<td>3.0</td>
<td>CIP-005-6</td>
<td>Substituted CIP-005-6 for CIP-005-5</td>
<td>8/12/2020</td>
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<td>CIP-010-3</td>
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<td>8/12/2020</td>
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<td>CIP-013-1</td>
<td>New Standard</td>
<td>8/12/2020</td>
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<td>4.0</td>
<td>CIP-008-6</td>
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<td>12/10/2020</td>
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<td>4.0</td>
<td>PRC-004-WECC-2</td>
<td>Removed PRC-004-WECC-2 - retired 1/1/2021</td>
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<td>5.0</td>
<td>IRO-010-3</td>
<td>Substituted IRO-010-3 for IRO-010-2</td>
<td>3/4/2021</td>
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CAISO Authorized Representative

[Signature]

Date
3/22/2023

TE Authorized Representative

[Signature]

Date
3/22/2023