

California Independent System Operator Corporation

**Compliance Assessment Relating to
Specified Control Room Operational Processes**

Report of Independent Accountants

December 5, 2014



Report of Independent Accountants

To the Board of Governors of the
California Independent System Operator Corporation:

We have examined Management's Assertion Regarding Compliance with Selected Operating Procedures (management's assertion) for the periods of August 4 through 8, 2014 and September 15 through 19, 2014 in accordance with the criteria set forth in Attachment I of management's assertion. The California Independent System Operator Corporation's (the "ISO") management is responsible for the assertion. Our responsibility is to express an opinion on the assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants and, accordingly, included examining, on a test basis, evidence supporting management's assertion and performing such other procedures as we considered necessary in the circumstances. We believe that our examination provides a reasonable basis for our opinion.

As described in management's assertion, ISO management has disclosed noncompliance with respect to specific elements of the Transmission Corridor (TCOR) and Nomogram Update Process and the Assessment of Conforming Limits Process. Specifically relating to the TCOR and Nomogram Update Process, the fifteen TCOR and one Nomogram updates that occurred during the assessment period did not follow the ISO's required standard naming convention; additionally, the Nomogram update did not have the *Activate Period* set as required by the ISO. Specifically relating to the Assessment of Conforming Limits Process, Scheduling and Logging for ISO of California (SLIC) log entries were not made for six of the 224 times during the assessment period where conformances did not equal 100% or 100.01%.

In our opinion, except for the noncompliance set forth in management's assertion and as described in the above paragraph, the ISO complied in all material respects with the aforementioned compliance requirements for the periods of August 4 through 8, 2014 and September 15 through 19, 2014.

PRICEWATERHOUSE COOPERS LLP

PricewaterhouseCoopers LLP
December 5, 2014

Management's Assertion Regarding Compliance with Selected Operating Procedures

November 26, 2014

To the Board of Governors of the
California Independent System Operator Corporation:

The management of the California Independent System Operator Corporation ("the ISO") is responsible for the implementation of procedures necessary to comply with requirements of its Tariff associated with managing system operating limits and related congestion conforming. The Operating Procedural Elements described in Attachment I ("Procedural Elements") to this Management Assertion represent a subset of the Operating Procedures placed into operation by management to meet the requirements of the ISO's Tariff and to carry out these operational objectives. These Procedural Elements are not intended to represent the entire set of procedures placed into operation for management to meet its requirements associated with setting transmission operating limits or transmission conforming objectives.

Scope of Management Assertion and Limitations

The overall objective of this Management Assertion is to report on compliance of the actual operating practices of ISO staff with the primary guidance for managing system operating limits and related congestion conforming, the ISO's Operating Procedures. All of the Procedural Elements that are the subject of this Management Assertion, with the exception of Transmission Conforming Procedure No. 2220, are publicly available at www.caiso.com, the Company's website.

This Management Assertion provides a comparative assessment of actual practice occurring during the periods of August 4 through 8, 2014 and September 15 through 19, 2014 ("Assessment Period") and the procedural guidelines for such activities during the Assessment Period. It is limited to the specific Procedural Elements included in this report which comprise the operational functions associated with managing system operating limits and related congestion conforming.

The elements of the ISO's Operating Procedures included by management in this assertion were selected by management on the basis that they were integral to the operational functions associated with managing system operating limits and related congestion conforming and could be objectively compared against actual operating practice.

The specific scope of this Management Assertion is presented in Attachment I which contains the Procedural Elements associated with managing system operating limits and related congestion conforming, criteria by which these Procedural Elements were assessed, and the ISO's self-assessment of compliance, whereby deviation conditions, if present, are reported. Such deviation conditions are identified when actual practice was not consistent with the Procedural Element's criteria. Attachment II is a narrative description of managing system operating limits and related congestion conforming and Attachment III is management's discussion and actions on deviations identified, both of which are included for informational purposes only and are not a component of this Management Assertion, and is therefore not subject to the examination described in the Report of Independent Accountants.

Summary Assertion

This Management Assertion encompasses the specific activities of managing system operating limits and related congestion conforming described in Attachment I. The level of compliance of actual operating practices of ISO staff during the Assessment Period compared with the Procedural Element's criteria is set forth in Attachment I. In Attachment I we are disclosing noncompliance with respect to specific elements of the Transmission Corridor and Nomogram Update Process and the Assessment of Conforming Limits Process. The ISO was in compliance with all other elements set forth in Attachment I during the Assessment Period.

The scope of this Management Assertion is limited to the activities of managing system operating limits and related congestion conforming described herein and does not extend to any other procedures or functions of the ISO.

Procedural Elements

Ref. No.	Operating Procedure Element	Criteria to Test Operating Procedure Element	Compliance Assessment
<p>1</p>	<p>System Operating Limit Establishment Procedure for the Operations Horizon Procedure No. 3100, Version No. 4.0, Effective Date 6/1/14 3.3.1 Determining Post-Contingency Steady State Limits</p> <p>Following a single contingency, the flow on all facilities must be within their short-term facility ratings and thermal ratings, and post-contingency voltage limits. In addition, voltage instability, cascading outages, or uncontrolled separation must not occur. The thermal rating for post-contingency operation is defined as the short-term thermal rating (if a short-term rating is not available, the California ISO will utilize the normal/continuous rating).</p> <p>For single and multiple credible contingencies, the following post-contingency voltage deviation guideline should be applied to identify contingencies for potential further evaluation:</p> <ul style="list-style-type: none"> • Voltage deviation threshold is 5% for a single contingency, and 10% for a credible multiple contingency. <p>The ISO engineers will work with PTO engineers to discuss further actions, if needed, about the contingencies causing voltage deviation beyond the above guideline.</p> <p>In the post-contingency steady-state assessment, system reconfiguration through manual or automatic control or special protection scheme actions are allowed if it has been proven that these adjustments can be done in timely manner and will be sufficient to prevent the system from equipment damage, voltage collapse, cascading outages or uncontrolled separation. This includes automatic voltage regulators, automatic fast-switched shunt capacitors, and</p>	<p>Determining Post-Contingency Steady State Limits</p> <p>Operating Engineers (OE) monitor Real-Time Contingency Analysis (RTCA) results that present current facility short-term ratings to determine if the ratings have exceeded the established facility, thermal or voltage rating limits. This activity occurs at least hourly.</p> <p>Specifically, the OE monitors the following for single and credible multiple contingencies:</p> <ul style="list-style-type: none"> • Single contingencies: <ul style="list-style-type: none"> - The facility and thermal rating is within the short-term limit. - The voltage deviation has not exceeded the established 5% threshold. • Credible multiple contingencies: <ul style="list-style-type: none"> - The facility and thermal rating is within the short-term limit. - The voltage deviation has not exceeded the established 10% threshold. <p>The OE investigates facility or thermal exceedance for validity in one of three ways:</p> <ul style="list-style-type: none"> - Monitors Plant Information (PI) calculated results for confirmation of the RTCA results for the exceedance. - Manually runs the contingency in Dispatcher's Load Flow (DLF) for confirmation of the RTCA results for the exceedance. - Verifies Transmission Registry (TR) short-term emergency ratings and monitors system topology for confirmation of the RTCA results for the exceedance. <p>The OE investigates voltage deviation exceedances for validity by manually running the contingency in DLF for confirmation of the RTCA results. The OE notifies the Participating Transmission Owner (PTO) Engineers of confirmed deviations for remediation of the constraint.</p> <p>In the event of an exceeded facility, thermal or voltage limit, the OE</p>	<p>No Deviations Noted.</p>

	special protection scheme.	makes an entry in the Outage Management System (OMS) or in the Scheduling and Logging for ISO of California (SLIC) log that includes remedial actions.	
2	<p>System Operating Limit Establishment Procedure for the Operations Horizon Procedure No. 3100, Version No. 4.0, Effective Date 6/1/14 3.3.2 Determining Post-Transient and Voltage Stability Limits</p> <p>The California ISO performs post-transient and voltage stability simulations for the areas and paths that have been known to have potential post-transient or voltage stability issues.</p> <p>Following single or credible multiple contingencies, voltage instability, cascading outages and uncontrolled separation must not occur.</p> <p>The following margins should be applied when setting voltage stability limited SOLs that are in proximity of power flow solution divergence:</p> <p>For the worst single contingency, a 5% MW margin from the last good power flow solution. For the worst credible multiple contingency, a 2.5% MW margin from the last good power flow solution.</p>	<p>Determining Post-Transient and Voltage Stability Limits</p> <p>Operating Engineers (OE) monitor post-transient and voltage stability results using the Voltage Stability Assessment Real-Time (VSA-RT) for San Diego and Humboldt (areas and paths that have been known to have potential post-transient or voltage stability issues). This activity occurs throughout the day, at least hourly.</p> <p>Specifically, the OE monitors the following for single and credible multiple contingencies:</p> <ul style="list-style-type: none"> • Single contingencies: <ul style="list-style-type: none"> - Monitors facility System Operating Limits (SOLs) (5% margin incorporated into SOL limit). • Credible multiple contingencies: <ul style="list-style-type: none"> - Monitors facility SOL limit (2.5% margin incorporated into SOL limit). <p>In the event of an SOL exceedance, the OE creates an entry in the Scheduling and Logging for ISO of California (SLIC) log that includes the remediation actions taken so that the facility marginal limits are met.</p>	No Deviations Noted.

<p>3</p>	<p>Normal Operations Planning Process</p> <p>Procedure No. 3200, Version No. 3.3, Effective Date 6/01/14</p> <p>3.2.1 Current Day Planning Process</p> <p>The current-day operations planning process is further described as follows:</p> <ul style="list-style-type: none"> • OE performs daily assessment of Current-Day system conditions after midnight for the current operating day and updates the Next-Day Planning studies as required. 	<p>Current Day Planning Process</p> <p>The Operations Engineer (OE) performs a daily assessment of Current-Day system conditions after midnight for the current operating day and updates the Next-Day Planning studies as necessary.</p> <p>The "Current Day Reliability Analysis" results are retained in the "CAISO eRecords Repository."</p>	<p>No Deviations Noted.</p>
<p>4</p>	<p>Normal Operations Planning Process</p> <p>Procedure No. 3200, Version No. 3.3, Effective Date 6/01/14</p> <p>3.2.2 Next Day Planning Process</p> <p>OEs follow these steps as appropriate in planning for the next day operations:</p> <ul style="list-style-type: none"> • Set up study base case(s) to account for expected system conditions, including, but not limited to, system load, generation pattern, import/export levels and expected planned Outages within the CAISO and neighboring region. • Run power flow and contingency analysis for all credible contingencies and document the mitigation steps in Day Ahead Reliability Analysis (DARA) report. • Run additional stability studies for normal and/or contingency conditions, as appropriate and determined by the responsible engineer(s). • Analyze the study results to ascertain reliability risks and to determine any reliability requirements in the form of SOLs that protect for normal conditions and against all credible contingencies. • Share the DARA report with WECC RC by uploading the report to the secure www.weccrc.org site. 	<p>Next Day Planning Process</p> <p>The Operations Engineer (OE) runs power flow and contingency analysis daily for all single and credible multiple contingencies. This analysis is performed to determine reliability risks and any reliability requirements in the form of System Operating Limits (SOLs) that protect for normal (<i>base case</i>) conditions and against credible contingencies.</p> <p>This analysis, and related remediation procedures, is captured in the "Day Ahead Reliability Analysis" (DARA) report.</p>	<p>No Deviations Noted.</p>

<p>5</p>	<p>Nomograms, TCORs, Flowgates, Contingencies, and MOC</p> <p>Procedure No. 3610, Version No. 7.1, Effective Date 7/09/14</p> <p>3.1 Market Modeling Flowchart</p> <p>The following flowchart is a guideline for modeling a constraint for an SOL in the market system. At least one of the action items highlighted in blue should be completed for a market constraint. Please note that if there is no generation mitigation for an SOL or if the generation does not participate in the CAISO market (Ex. QF's, renewables, RMR condition 2, Biomass, generators without bids like hydro with water limitations), monitor it outside the market and no market constraint is needed.</p>	<p>Modeling Market Constraints</p> <p>For all new or updated constraints, the Operating Engineers (OE) model every market constraint and ensure completion of at least one of the actions listed below based on the type of change being made.</p> <ul style="list-style-type: none"> • OE will instruct the Day-Ahead Operator to create the Must Offer Commitment (MOC). • OE will instruct the Day-Ahead Operator to reinforce the Flowgate based on Operating Procedure 3610B. • OE will activate or define a contingency. • OE will create a new Nomogram or Branch Group, or modify an existing Nomogram or Branch Group. • OE will instruct the Participating Transmission Owner (PTO) to manage the constraint. • OE will instruct the Generation Dispatcher to manage the constraint utilizing the RT Exceptional Dispatch (RT ExD) process. <p>The OE makes an entry in the Outage Management System (OMS) and/or in the Scheduling and Logging for ISO of California (SLIC) log to document these activities. The RT ExD activities are recorded in the SLIC log or the Real-Time Nodal (RTN) application by the Generation Dispatcher.</p>	<p>No Deviations Noted.</p>
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<p>6</p>	<p>Nomograms, TCORs, Flowgates, Contingencies, and MOC</p> <p>Procedure No. 3610, Version No. 7.1, Effective Date 7/09/14</p> <p>3.4 Transmission Corridor Update Process</p> <p>Step 1: Define the following attributes of the TCOR: a. TCOR name. Reference OES-OEP-016 CTGS Group Definitions Naming Convention. b. Seasonal limits: Seasonal TCOR limits “to” and “from” if applicable. c. Flowgate: Flowgate associated with the TCOR. d. STNAME: Station name where the Flowgate will be measured from. e. DA_ENABLE_FLAG and RT_ENABLE_FLAG.</p> <p>Step 2: Enter the definition in CAISO Operating Procedure 3610A Nomograms, TCORs and Contingency Data. Enter the default enforcement status (normally unenforced) in CAISO Operation Procedure 3610B Default Enforcement Status of Flowgates.</p>	<p>Transmission Corridor Update Process</p> <p>For Transmission Corridor updates, Operating Engineers (OE) create and/or modify topology changes into the "Nomogram, TCors, and Contingency Data" (Operating Procedure 3610A) and "Default Enforcement Status of Flowgates" (Operating Procedure 3610B) spreadsheets.</p> <p>The activities that the OEs perform as part of this process includes the following:</p> <p>The OEs define the following attributes of the Transmission Corridor:</p> <ol style="list-style-type: none"> Transmission Corridor name. Seasonal limits: Seasonal Transmission Corridor limits “to” and “from.” Flowgate: Flowgate associated with the Transmission Corridor. STNAME: Station name where the Flowgate will be measured from. DA_ENABLE_FLAG and RT_ENABLE_FLAG. <p>The OEs enter the Transmission Corridor definition in the Operating Procedure 3610A and enter the default enforcement status (normally unenforced) in Operating Procedure 3610B.</p> <p>These activities occur during the database modeling promotion process.</p>	<p>Deviations Noted.</p> <p>During the Assessment Period the ISO updated 15 TCORs, none of which followed the standard naming convention as required by the ISO. No other deviations were noted with respect to other aspects of this Operating Procedure Element.</p>
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<p>7</p>	<p>Nomograms, TCORs, Flowgates, Contingencies, and MOC</p> <p>Procedure No. 3610, Version No. 7.1, Effective Date 7/09/14</p> <p>3.5 Nomogram Update Process</p> <p>Step 1: Define the following attributes of the Base Nomogram: a. Nomogram name. Reference OES-OEP-016 CTGS Group Definitions Naming Convention . b. RHS_COEFF: The right-hand side coefficient. c. COEFF: TCOR coefficient. d. Activate Period: The time period that the Nomogram is active in the market. If the Nomogram is continuously active, enter the end date to be 12/31/2020 23:59. e. Market Type: All market type, day ahead, real time, etc. f. TCOR_NAME: Transmission Corridor(s) associated with the Nomogram. g. Flowgate: List of Flowgates associated with the TCOR. h. STNAME: Station name where the Flowgate will be measured. i. DA_ENABLE_FLAG and RT_ENABLE_FLAG.</p> <p>Step 2 Modify/delete existing Nomogram or create new Nomogram in the market systems. Note: Lead Transmission Dispatcher (LTD) and RT OE can do this in real time if necessary.</p> <p>Step 3: Update CAISO Operating Procedures 3610A Nomograms, TCORs and Contingency Data and 3610B Default Enforcement Status of Flowgates and any other applicable Operating Procedures And Notify the Operating Procedures Group.</p>	<p>Nomogram Update Process</p> <p>For all new Nomogram creations and updates to existing Nomograms, Operating Engineers (OE) create and/or modify the Nomogram based on system topology changes into the "Nomogram, TCors, and Contingency Data" (Operating Procedure 3610A) and "Default Enforcement Status of Flowgates" (Operating Procedure 3610B) spreadsheets.</p> <p>The activities that the OEs perform as part of this process includes the following:</p> <p>The OEs define the following attributes of the Base Nomogram:</p> <p>a. Nomogram name. b. RHS_COEFF: The right-hand side coefficient. c. COEFF: Transmission Corridor coefficient. d. Activate Period: The time period that the Nomogram is active in the market. If the Nomogram is continuously active, enter the end date to be 12/31/2020 23:59. e. Market Type: All market types, Day Ahead, Real Time, etc. f. TCOR_NAME: Transmission Corridor(s) associated with the Nomogram. g. Flowgate: List of Flowgates associated with the TCOR. h. STNAME: Station name where the Flowgate will be measured. i. DA_ENABLE_FLAG and RT_ENABLE_FLAG</p> <p>The OEs update Operating Procedures 3610A with the Nomogram definition and 3610B with the default enforcement status (normally unenforced) and highlight these updates as notification to the Operating Procedures Group.</p> <p>These activities occur based on outage studies that result in a change to a Nomogram during the database model promotion process.</p>	<p>Deviations Noted.</p> <p>During the Assessment Period the ISO updated 1 Nomogram which did not follow the standard naming convention nor did it have the Activate Period set as required by the ISO. No other deviations were noted with respect to other aspects of this Operating Procedure Element.</p>
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<p>8</p>	<p>Transmission Conforming Procedure No. 2220, Version No. 5.0, Effective Date 7/08/14</p> <p>3.1 Conforming TCORS, Individual Components and Nomograms</p> <p>Generation Dispatcher Actions</p> <p>Step 1 If: TCOR, Individual Component, or Nomogram Conforming is necessary, Then: Conform in small increments, as time allows, while ensuring reliability criteria is met, to prevent market disruption. Do not conform with a difference greater than 5% between RTPD and RTD.</p> <p>Note: Additional bias could be used if necessary for reliability. Do not bias RTPD down to start or transition a unit. If the market is not dispatching appropriately in either RTPD (starting up or shutting down units) or RTD, then issue an Exceptional Dispatch as needed. Log in SLIC any additional biasing that resulted in a difference greater than 5%.</p>	<p>Assessment of Conforming Limits</p> <p>The Generation Dispatcher monitors the Real Time Market (RTM) tool at least hourly for conformance not equal to 100% and creates an entry in the Scheduling and Logging for ISO of California (SLIC) log when conforming to a difference greater than 5% between Real-Time Pre-Dispatch (RTPD) and Real-Time Dispatch (RTP). Note that a conforming level of 100.01% is considered to be 100%, entered only due to a market application constraint.</p>	<p>Deviations Noted.</p> <p>During the Assessment Period the ISO conformed 224 times and did not create an entry in SLIC for 6 of those conformance. No other deviations were noted with respect to other aspects of this Operating Procedure Element.</p>
<p>9</p>	<p>Transmission Conforming Procedure No. 2220, Version No. 5.0, Effective Date 7/08/14</p> <p>3.1 Conforming TCORS, Individual Components and Nomograms</p> <p>Generation Dispatcher Actions</p> <p>Step 1 Verify the new conformance level has been sent to the market in the RTM application.</p>	<p>Conforming Limit Entry</p> <p>The Generation Dispatcher sends the new conformance percentage levels to the market by entering conforming percentage information into the Real Time Market (RTM) tool and then determines that the information is received by the market by monitoring the "Critical Constraints" and "Binding Transmission Constraints" displays in the RTM tool for flowgates and nomograms, respectively. This activity occurs at least daily.</p>	<p>No Deviations Noted.</p>

<p>10</p>	<p>Transmission Conforming Procedure No. 2220, Version No. 5.0, Effective Date 7/08/14</p> <p>3.2 Logging</p> <p>Generation Dispatcher Actions</p> <p>Step 1: Create a log for each TCOR, Individual Component, or Nomogram that has been set to have a limit of anything other than 100% in any market run. Log all Conformed elements in the same log titled "Transmission Conforming Log".</p> <p>Step 2: Create a new daily log for any changes to the bias that occur in subsequent days for any TCOR, ITC, Individual Component or Nomogram conformance that lasts longer than one calendar day.</p>	<p>Logging of Conforming Limits</p> <p>All Nomograms, TCORs and Flowgates that are conformed to a level other than 100% are logged in the Scheduling and Logging for ISO of California (SLIC) log by the Generation Dispatcher. Note that a conforming level of 100.01% is considered to be 100%, entered only due to a market application constraint.</p> <p>The Generation Dispatcher enters conforming percentages into Real-Time Pre-Dispatch (RTPD) or Real-Time Dispatch (RTD) display into Market, and an entry into the SLIC Transmission Conforming Log is made.</p> <p>The Generation Dispatcher creates a new daily log for any changes to the conforming percentages that last longer than one calendar day.</p>	<p>No Deviations Noted.</p>
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Attachment II**Other Information Provided by Management****Narrative Description of Congestion Management Processes****Overview**

This narrative description of the Congestion Management processes is presented as supplemental information to aid in understanding the operational areas covered by the Management Assertion. This information is summarized from the same Operating Procedures that are the subject of the Management Assertion, and as specified below. As such, this Attachment is presented as unaudited supplemental information and is not a part of the Management Assertion that is reported on in the Report of Independent Accountants.

The processes are set forth in System Operating Limit Establishment Procedure for the Operations Horizon Procedure No. 3100, Normal Operations Planning Process Procedure No. 3200, Nomograms, TCORs, Flowgates, Contingencies, and MOC Procedure No. 3610, and Transmission Conforming Procedure No. 2220.

System Operating Limit Establishment

Following a single contingency, the ISO Operating Engineer (OE) validates in Real-Time that the flow on all facilities are within their short-term facility ratings and thermal ratings, and post-contingency voltage limits. In addition, the limits are set so that voltage instability, cascading outages, or uncontrolled separation do not occur.

Real-Time Contingency Analysis (RTCA) results are monitored by the OE for single and credible multiple contingencies. For all single contingencies, the OE validates that the facility or thermal rating is within the short term limit and voltage deviation has not exceeded the established 5% threshold. For credible multiple contingencies, the OE validates that the facility or thermal rating is within the short term limit and voltage deviation has not exceeded the established 10% threshold.

If facility or thermal exceedances are detected, the OE validates the RTCA results in one of three ways:

1. Reviews Plant Information (PI) calculated results for confirmation of the RTCA results for the exceedance.
2. Manually runs the contingency in Dispatcher's Load Flow (DLF) for confirmation of the RTCA results for the exceedance.
3. Verifies Transmission Registry (TR) short-term emergency ratings and reviews system topology for confirmation of the RTCA results for the exceedance.

In the event of a facility with exceeded thermal or voltage limit, the OE should make an entry in the Outage Management System (OMS) or in the Scheduling and Logging for ISO of California (SLIC) log that includes remedial actions.

Determining Post-Transient and Voltage Stability Limits

The OE performs post-transient and voltage stability simulations for areas and paths that have been known to have potential post-transient or voltage stability issues (San Diego and Humbolt). This is done by monitoring the results in the Voltage Stability Assessment Real-Time (VSA-RT) tool.

Limits are set so that following single or credible multiple contingencies, voltage instability, cascading outages and uncontrolled separation do not occur.

In the event VSA-RT results in an SOL divergence or insufficient margin (exceeded facility, thermal, or voltage limit), the OE will verify the diverging results by checking contingency via VSA Study Mode. The OE will notify the Energy Management System (EMS) support resource if the State Estimator (SE) is not resolving the SOL divergence or insufficient margin, or if there is a server connection failure. In the event of an SOL exceedance, the OE must create an entry in the SLIC log that includes the remediation actions taken so that the facility marginal limits are met.

Normal Operations Planning Process for Current Day

The ISO OE performs daily assessment of Current-Day system conditions after midnight for the current operating day and updates the Next-Day Planning studies as required. This current day assessment is performed in the event that there have been changes to the system since the Next-Day Planning studies were completed. The studies are designed to determine if further generation is required and to identify thermal voltage violations for current day conditions.

Normal Operations Planning Process for Next Day

The ISO OEs follow these steps as appropriate in planning for the next day operations:

- Set up study base case(s) to account for expected system conditions, including, but not limited to, system load, generation pattern, import/export levels and expected planned Outages within the ISO and neighboring region.
- Run power flow and contingency analysis for all credible contingencies and document the mitigation steps in Day Ahead Reliability Analysis (DARA) report.
- Run additional stability studies for normal and/or contingency conditions, as appropriate, and as determined by the responsible engineer(s).
- Analyze the study results to ascertain reliability risks and to determine any reliability requirements in the form of SOLs that protect for normal conditions and against all credible contingencies.
- Share the DARA report with Peak Reliability by uploading the report to the secure www.peakrc.org site.

Modeling Market Constraints

For all new or updated constraints, the OEs model every market constraint and ensure completion of at least one of the actions listed below based on the type of change being made:

- OE will instruct the Day-Ahead Operator to create the Must Offer Commitment (MOC).

- OE will instruct the Day-Ahead Operator to enforce or unenforce the Flowgate based on Operating Procedure 3610B.
- OE will activate or define a contingency.
- OE will create a new Nomogram or Branch Group, or modify an existing Nomogram or Branch Group.
- OE will instruct the Participating Transmission Owner (PTO) to manage the constraint.
- OE will instruct the Generation Dispatcher to manage the constraint utilizing the RT Exceptional Dispatch (RT ExD) process.

The OE then documents the modeling method used in the OMS or SLIC log.

Transmission Corridor and Nomogram Update Process

During the database modeling process, the ISO OE defines/inserts the attributes of Transmission Corridor (TCOR) and Nomograms in the 3610A and 3610B spreadsheets. The attribute naming conventions are detailed in the OES-OEP-106 desktop procedure. The OE then sets the enforcement status accordingly.

The input data for the 3610A and 3610B comes from the Network Applications group and includes created and/or modified system topology changes from the previous database model.

Transmission Conforming

Transmission Conforming is a process that is utilized for congestion management in Real-Time by the Generation Dispatchers. This is used when a constraint that is enforced in the market becomes binding but then in real time has actual flows that are well within the line limit. Based on good utility practice the ISO Generation Dispatcher may decide to adjust (conform) the rating on the facility that is used in the markets to compensate for a systematic discrepancy between the market power flow and the actual real-time flow, in preference to turning off the constraint entirely and ceasing to enforce it.

These adjustments are made in the market system and must be logged into the SLIC application by the Generation Dispatcher. SLIC entries must also be made when conforming to a difference greater than 5% between Real-Time Pre-Dispatch (RTPD) and Real-Time Dispatch (RTP) market runs. New SLIC logs are to be created for each Trading Day.

Attachment III**Other Information Provided by Management****Management Discussion and Actions on Deviations Identified**

ISO management agrees with the Compliance Assessment results as documented in Attachment I of this report. Although the identified deviations did not impact the actual reliability of Bulk Electric System (BES) system or the CAISO market operations, the ISO culture of compliance underlies our core values, and is a key component in achieving our corporate mission and vision. The Operations Procedure deviations detected in this assessment will be addressed with the highest level of thoroughness.

Compliance Deviations**Transmission Corridor and Nomogram Standard Naming Convention**

This deviation does not have an impact on reliability or market systems. ISO Operations will review and train Operations Engineers on the new standardized naming convention.

Nomogram “Active Period” Setting

This deviation does not have an impact on reliability or any current date market activity. ISO Operations has reviewed all Nomogram “Active Period” dates to ensure they conform to the procedure.

Conformance Logging

This deviation does not have an impact on reliability or market systems. ISO Operations will review the logging requirement for current relevance and to the extent relevant the ISO will retrain the Generation Dispatchers on the need for logging conformances.