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Purpose

Provides a documented specification to applicable NERC functional entities of the data necessary for California ISO to perform its Balancing Authority and Transmission Operator Planning Analyses, Real-time monitoring, and Real-time Assessments. It is also data which is necessary for Lone Star (LST, TOP for Horizon West), Pacific Gas & Electric (PG&E), Southern California Edison (SCE), San Diego Gas & Electric (SDG&E), Trans Bay Cable (TBC) and Valley Electric (VEA) to perform Transmission Operator Planning Analyses, Real-time monitoring, and Real-time Assessments for their respective areas.

1. Responsibilities


California ISO (CAISO or ISO)	As applicable, the ISO may be responsible for requirements as a NERC Registered Balancing Authority (BA), Transmission Operator (TOP), Planning Authority (PA) or Transmission Service Provider (TSP).
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Adjacent BAs	All neighboring BAs which have formed an Adjacent BA or Interconnected Control Area Operating Agreement with the ISO and share critical data and information regarding adjacent and shared facilities – refer to publicly posted list: http://www.caiso.com/Documents/Guide-InterconnectedControlAreaorInterconnectedBalancingAuthorityAreaOperatingAgreements_ICAOAorIBAAOA_.pdf
Adjacent TOPs	All neighboring TOPs, which have formed interconnected operating agreements with LST, PG&E, SCE, SDG&E, TBC or VEA, share critical data and information regarding adjacent and shared facilities.
LST, PG&E, SCE, SDG&E, TBC, VEA (PTOs)	Participating Transmission Owners (PTOs) that are part of the Transmission Control Agreement (TCA), are NERC registered TOPs and are part of the Coordinated Functional Registration (CFR) Agreement with the ISO – Lone Star, Pacific Gas & Electric, Southern California Edison, Trans Bay Cable, Valley Electric Association – refer to publicly posted CFR agreements: http://www.caiso.com/rules/Pages/Compliance/Default.aspx
AEPCO, CDWR, HHWP, SVP	The registered TOs and TOPs within the ISO BA footprint, which are not under the TCA or the CFR Agreements – Arizona Electric Power Cooperative (AEPCO) for MWD area, California Department of Water Resources (CDWR), Hetch Hetchy Water and Power, Silicon Valley Power, refer to WECC Functional Entity mapping.
Participating Generators	All registered GOs and/or GOPs under any type of Participating Generator agreement with the ISO, including Pseudo-ties and Dynamic Transfer resources – refer to WECC Functional Entity mapping and publicly posted Master Control Area Generating Capability List – posted on OASIS.
Distribution Providers	All registered DPs within the ISO BA and/or TOP footprint – refer to WECC Functional Entity mapping.
Load Serving Entities	All load serving entities under a Utility Distribution Company or Metered Sub System Agreement with the ISO – refer to publicly posted ISO Operating Procedure 4510A Load Shed Calculation Guideline – Public

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2. Scope/Applicability

2.1 Background

In order to ensure that the Transmission Operator (TOP) and Balancing Authority (BA) have data needed to fulfill their operational and planning responsibilities, TOP-003-3 states that each Transmission Operator and Balancing Authority shall maintain a documented specification for the data necessary for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

2.2 Scope / Applicability

Scope of this document is consistent with the scope of RC West’s IRO-010-2 Data Request and Specification.

APPLICABILITY: Balancing Authorities, Generation Owners, Generation Operators, Load Serving Entities, Transmission Operators, Transmission Owners, Interchange Authorities, Distribution Providers.

This data request applies specifically to the below listed Registered Entities that are classified in the Responsible Party column of Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification according to the following legend:

AF = Applicable to Adjacent Facilities

SF = Applicable to Shared Facilities

DT = Applicable to Dynamic Transfer Entities

NE = Applicable to Neighboring Entities


WB = Applicable to Within the Balancing Authority area

WT = Applicable to Within the Transmission Operator area

NA = Not Applicable – if California ISO does not need this data to be submitted by another entity:

Registered Entity	Responsible Party
Adjacent BAs: APS, BANC, BPA, CENACE, IID, LADWP, NEV, PACE-PACW, SRP, TID and WALC *Note only applicable for entities currently hosting Dynamic Transfer resources	DT*, NE
Adjacent TOPs: APS, BPA, CENACE, HHWP, IID, LADWP, MID, NEV, PACE-PACW, SMUD, SRP, SVP, TID, WALC and WASN	AF, SF
Interconnected TOPs within ISO BAA: AEPCO, HHWP, SVP	WB

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Registered Entity	Responsible Party
All registered TOPs under a Coordinated Functional Registration (CFR) Agreement with the ISO: LST, PGAE, SCE, SDG&E, TBC and VEA	WT
All registered GOs and/or GOPs under a Participating Generator (or similar) Agreement with the ISO or an interconnection agreement with PGAE, SCE, SDG&E or VEA	WB, DT
All registered TOs under the Transmission Control Agreement with the ISO	WT
All registered DPs within the ISO BA and/or TOP footprint	WB, WT
All load serving entities under a Utility Distribution Company or Metered Sub System Agreement with the ISO	WB

This data specification documents the BA and TOP requirements (TOP-003-3 R1, R2, R3, R4) which will be maintained by ISO and in accordance with the CFR Agreements between the ISO and LST, PGAE, SCE, SDG&E, TBC and VEA (for TOP-003-3 R1 and R3).

TOPs, which are not a party to the CFR Agreement with the ISO, are responsible for maintaining their own TOP-003-3 Data Request and Specifications document.

3. Procedure Detail

3.1 Introduction


A detailed list of data and information needed by the BA or TOP is captured in Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification. The data requested includes, but is not limited to, non-BES and external network data, notification of current Protection System and Special Protection System status or degradation that impacts System reliability , real-time facility data, schedule type data, facility outage information, and electronic modeling data. The periodicity for providing data and the deadline by which the respondent is to provide the indicated data are specified in Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification.

3.2 Data Specification Distribution

To meet NERC Reliability Standard TOP-003-3 R3, an electronic notification shall be distributed to the applicable entities that this data request and specification is in effect and available. California ISO's primary methods for posting the data specifications are 1)

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posting on the RC Portal at <https://rc.caiso.com> in the TOP-003 Reference Data library and 2) posting with Operating Procedures on www.caiso.com.

Entities that subscribe to notifications via the RC Portal TOP-003 Reference Data library or to Notices on <http://www.caiso.com> will receive electronic notifications of any future revisions to this data request and specification.

3.3 Applicable Entity Obligations

Each applicable entity shall satisfy the obligations of the documented specifications in accordance with (TOP-003-3, R5, 5.1, 5.2, 5.3) by using:

- A mutually agreeable format.
- A mutually agreeable process for resolving data conflicts.
- A mutually agreeable security protocol.

3.4 Data Format

Each applicable entity that is required to provide data to California ISO, LST, PG&E, SCE, SDG&E, TBC and/ or VEA shall appoint at least one contact who is responsible for working with TOP-003-3 implementation items in order to provide the requested data in the specified format. If applicable, contacts for each section are preferred. Please maintain Data Exchange Working Group contacts on the RC Portal.


The specified formats and security protocols below have been previously recognized as mutually agreeable. The appointed contact person shall notify California ISO via the email operationscompliance@caiso.com of any instances where the specified formats or security protocols are not agreeable to the entity. California ISO will collaborate with the entities and involved PTOs (LST, PG&E, SCE, SDG&E, TBC and/or VEA) to resolve data conflicts in a mutually agreed upon manner that ensures System reliability.

The formats for the data to be delivered are as follows:

Inter Control Center Protocol Data (ICCP):

- Real-time Analog and Status point data as detailed in Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification.
- The data provider must include data quality along with the data. This data quality shall follow the ICCP Data Quality Standards as described in the IEC ICCP User's Guide (870-6-505).
- If real-time ICCP data transfer is unavailable for any reason, the responsible entity will provide critical real-time system data via phone to the TOP or BA's real-time desk. Data or data points that are considered critical may change based on current system conditions. It is expected that the RC and Responsible Parties will communicate and coordinate on which data is needed at a particular time as well

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as a periodicity for providing updates until the normal data communication methods are back in place.

- California ISO's and/or applicable PTO's (LST, PG&E, SCE, SDG&E, TBC and/or VEA) technical staff will work with each entity's technical staff on ICCP implementation.
- The ISO currently retrieves Real-Time Balancing Authority calculated data from neighboring entities via ICCP from the Western Data Sharing Pool (WDSP).

Outage Coordination Process:

- webOMS is the primary mechanism for required outage submittals to the ISO.
- Adjacent BAs and TOPs shall submit outages to their RC and communicate outages via email to California ISO's Operations Planning Engineers.
- Scheduled and unscheduled outages for the ISO's Participating Transmission Owners and Participating Generators shall continue to be submitted in accordance with the California ISO's technical specifications located at:
 - <http://www.caiso.com/market/Pages/OutageManagement/Default.aspx>, which are consistent with the ISO's Business Practice Manual (BPM) for Outage Management posted at: <https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Outage%20Management>, and are implemented according to the ISO's 3200 series Operating Procedures posted at: <http://www.caiso.com/rules/Pages/OperatingProcedures/Default.aspx>
- Contacts are contained in the distribution restricted ISO Operating Procedure [3210F CAISO Outage Coordination Contact Information](#) that is shared with the RC and NERC registered adjacent and interconnected BAs and TOPs.
- California ISO's technical staff will work with each entity's technical staff on WSDL, XSD, and XML implementation.


Topology Update Process for the Western Interconnection Model (WIM):

- The ISO retrieves Western Interconnection Model data from neighboring entities via the RC West EMS Model update process.
- Entities within the ISO Balancing Authority and Transmission Operator areas must submit model updates per the instructions in Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification.

Note: *EIM market participants are an exception. EIM entities submit the CIMXML export of their entire model to the ISO along with description of incremental model changes implemented in that model. ISO processes implement the incremental changes in the ISO representation of the EIM entity's model.*

- Adjacent BAs and TOPs shall continue to submit topology updates through the RC Model Update Process.

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- Model updates for the ISO’s Participating Transmission Owners and Participating Generators shall be submitted to RIMS for both transmission and generation projects in accordance with the ISO’s Business Practice Manual (BPM) for Managing the Full Network Model:

<https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Managing%20Full%20Network%20Model>.

- California ISO needs full and complete data and information well in advance of the time that the Market Participant expects its new or modified facilities to connect to or disconnect from the grid. See the current Full Network Model Schedule posted on the public website at:

<http://www.caiso.com/market/Pages/NetworkandResourceModeling/Default.aspx>.

- ISO’s Transmission Registry Business user documentation is located at the following link:

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=6CB3BA36-B21A-47E6-BAA9-BF76090A087E>.


Other Data Formats:

Other data formats and submittal processes include, but are not limited to, the use of email, use of the Western Data Sharing Pool (WDSP) RC West’s RC Portal <https://rc.caiso.com>, RC West’s GMS messages and phone calls to California ISO Operators.

Operating Procedure Attachment 3140A TOP-003 TOP - BA Data Request and Specification - contains the specific data California ISO and/or applicable PTO’s (LST, PGAE, SCE, SDG&E, TBC and/or VEA) requires from each Responsible Party and contains columns which denote the:

- Request Number – Used for document coordination and communication purposes.
- Responsible Party – Applicable entity or entities responsible for ensuring their data is being provided to California ISO.
 - Adjacent/ Shared Facility (TOP) = Applicable to Adjacent and/or Shared Transmission Facilities
 - DT = Applicable to Dynamic Transfer Entities, including host and receiving BAs
 - NE (BA) = Applicable to Neighboring BA Entities
 - WB = Applicable to Within the Balancing Authority area
 - WT = Applicable to Within the Transmission Operator area
 - NA = Not Applicable - if California ISO does not need this data to be submitted by another entity
- Data Request Effective Date – Date by which specified data is to begin being provided to California ISO.
- Data Item – Specific data being requested.

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- Data Transfer Method – Method by which data is provided to California ISO and applicable PTOs
 - Data Transfer Method to CAISO and its PTOs from entities within CAISO BA/ TOP area
 - Data Transfer Method to CAISO and its PTOs from entities within RC West area
 - Data Transfer Method to CAISO and its PTOs from entities within Adjacent RC area
- Data Update Frequency – Periodicity for providing the specified data.
- Notes – Additional clarifying information

3.5 Questions and Comments

California ISO and the Participating Transmission Owners under the CFR Agreement with the ISO currently receive the data necessary to perform their reliability functions. This request formalizes the documentation that these parties will utilize in the future to request and receive data.

California ISO and the applicable PTOs will work with each entity to address questions, requests for clarification or to address issues related to the technical nature of the data. Refer to CAISO’s Data Exchange Working Group contacts maintained on RC West’s RC Portal. All other data specification inquiries should be sent to California ISO at operationscompliance@caiso.com, legal and broader compliance inquiries can be sent to compliance@caiso.com.

4. Supporting Information

Operationally Affected Parties


AEPCO, APS, BANC, BPA, CDWR, CENACE, HHWP, IID, LADWP, LST, MID, NEV, PACE-PACW, PGAE, SCE, SDG&E, SMUD, SRP, SVP, TBC, TID, VEA, WALC, and WASN; Public

References

Resources studied in the development of this procedure and that may have an effect upon some steps taken herein include but are not limited to:

CAISO Tariff	
NERC Standards	TOP-003-3

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Transmission Control Agreement (TCA)	http://www.caiso.com/rules/Pages/ContractsAgreements/Default.aspx
Coordinated Functional Registration (CFR) Matrix	CFR Agreements

Definitions

Unless the context otherwise indicates, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have that meaning when capitalized in this Operating Procedure.


The following additional terms are capitalized in this Operating Procedure when used as defined below:

None.

Version History

Version	Change	Date
1.0	Original BA/TOP Data Request	1/01/17
1.1	Updated data request to be consistent with Peak RC DR 12.2 effective 4/1/2017. Added new item 1.14; collapsed items which are only applicable to the ISO in sections 3.6.2, 3.6.3, 3.6.7; clarified requirements throughout the document.	4/01/17
2.0	Split OP 3140 table content into spreadsheet format; Verified consistency with Peak RC's DR v13.1 effective 12/8/17. Refer to yellow highlighted changes throughout document Added AEPCO as an Operationally Affected Party Errata change effective date in Version History table to 12/28/17	12/28/17
3.0	Added CDWR to Responsibilities section. Updated for transition from Peak RC to RC West. Clarifications only, no new requirements for submission of data to CAISO or RC West. Refer to yellow highlighted changes throughout document. Minor format and grammar updates throughout.	7/01/19
3.1	Updated references to the Western Interconnection Model process. Removed reference to Peak RC.	1/01/20

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Version	Change	Date
3.2	Added Lone Star Transmission (LST) throughout document and to Operationally Affected Parties.	2/29/20
4.0	Periodic Review: Minor format and grammar edits only.	11/02/20

5. Periodic Review Procedure

Review Criteria & Incorporation of Changes

Will be reviewed based on current RC West Data Request requirements. Will provide to PTOs for review and comment in advance of changes being implemented. Otherwise, there are no additional specific review criteria identified for this procedure, follow instructions in Procedure 5510.

Frequency

Every **three (3)** years.

Appendix

3140A - TOP-003 TOP - BA Data Request and Specifications for Data Provision