



AUSTIN ENERGY DATA AND INFORMATION SPECIFICATION

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1. PURPOSE

This document outlines the data and information specifications necessary for AE to perform Real-time monitoring of its portion of the Bulk Electric System (BES), in accordance with NERC Standard TOP-003-6.1. AE maintains a publicly available copy of its *Data and Information Specification* within its Public website and distributes it, as needed, to entities that have data and information required by AE to perform Real-time monitoring. In specific situations, if necessary, AE will include additional specifications in an appendix to this document or by another agreement.

2. SCOPE

In accordance with the Transmission Operator Coordinated Functional Registration (TOP CFR) agreement with ERCOT, AE as a Local control Center (LCC) does not perform Operational Planning Analyses (OPA) or Real-time Assessments (RTA), and ERCOT performs those actions instead within the entire ERCOT Interconnection.

ERCOT maintains an Excel spreadsheet titled “Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1” and the document, “Addendum to Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1”, both of which are publicly available in the [Compliance in ERCOT](#) section of the ERCOT website. These documents have been widely distributed to all ERCOT market participants and include the specifications for data and information that ERCOT requires and obtains from all NERC and ERCOT registered entities in order to perform its Operational Planning Analyses, Real-time monitoring and Real-time Assessments and analysis functions.

Through the above established ERCOT mandated data & information specifications, all the following responsible entities submit data/information to ERCOT through different methods, including Network Operations Model, Resource Registration and Real-time telemetry:

- NERC Transmission Owner (TO) / ERCOT Transmission Service Provider (TSP)
- NERC Distribution Provider (DP)/ ERCOT Distribution Service Provider (DSP)
- NERC Generator Owner (GO)/ ERCOT Resource Entity (RE)
- NERC Generator Operator (GOP)/ ERCOT Qualified Scheduling Entity (QSE)
- NERC Transmission Operator (TOP)/ ERCOT Transmission Operator (TO)

Austin Energy obtains data and information from the above entities indirectly from ERCOT via ICCP connections. ERCOT is solely the data provider and not the responsible entity or data originator of the data and information received via ICCP.

In specific cases, AE may enter into a direct agreement with another functional entity to establish direct links to obtain additional real-time data on equipment within shared facilities, if deemed necessary.

3. DEFINITIONS

NERC defines Real-time as “Present time as opposed to future time.”

4. REFERENCES

- NERC Standard TOP-003-6.1 – Transmission Operator and Balancing Authority Data and Information Specification and Collection
- NERC Glossary



- ERCOT Nodal Operating Guide §7.3.3 (4), §7.3.3 (5)
- ERCOT Nodal Protocols §3.10.7.5.4, §3.10.7.5.5, §3.10.7.5.8.2, §6.5.5.2
- ERCOT's NERC IRO-010 and TOP-003 Mapping Document.
- ERCOT ICCP Handbook

5. AUSTIN ENERGY DATA & INFORMATION SPECIFICATIONS

5.1 Data & Information Required [TOP-003-6.1, R1.1, R1.2, R1.5.1, R1.5.4 and R1.5.5]

The following table contains a list of data and information required to support AE's Real-time monitoring of its portion of the BES, including BES, non-BES and external network data along with associated data providers and entities responsible for responding to the specification. In addition, the table lists the specified periodicity/deadline for providing the data and information in a mutually agreeable format.

Data & Information	Data Provider	Periodicity/Deadline	Format /method	Responsible entities
Breaker and line switch status of ERCOT Transmission level Grid devices	AE for Owned Equipment, ERCOT for non-owned equipment	10 seconds /Continuous	RTU, ICCP	TSP/TO and QSE/GOP
Network Line flow MW and MVar	AE for Owned Equipment, ERCOT for non-owned equipment	10 seconds/ Continuous	RTU, ICCP	TSP/TO and QSE/GOP
Network Breaker and switch status connected to any Resource	AE for Owned Equipment, ERCOT for non-owned equipment	10 seconds/ Continuous	RTU, ICCP	TSP/TO and QSE/GOP
Network Transmission Facility voltages	AE for Owned Equipment, ERCOT for non-owned equipment	10 seconds/ Continuous	RTU, ICCP	TSP/TO
Network Transformer MW, MVar and tap- positions	AE for owned equipment	10 seconds/ Continuous	RTU, ICCP	TSP/TO
Generation Resource breaker and switch status	ERCOT	As needed / 2 seconds/	ICCP	QSE/GOP
Generation Resource AVR and Power System Stabilizer (PSS) status as necessary for units providing voltage support	AE (Voice) and ERCOT (ICCP)	2 seconds/ Continuous	Voice, ICCP	QSE/GOP



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Generation Resource gross/net real power (in MW), Gross/net reactive power (in MVar)	ERCOT	As needed or 2 seconds / As needed or continuous	ICCP	QSE/GOP
Load Resource net real power consumption (MW)	ERCOT	2 seconds/ Continuous	ICCP	QSE/GOP
Load Resource breaker status, if applicable	ERCOT	2 seconds/ Continuous	ICCP	QSE/GOP
Remedial Action Schemes (internal to AE) – as deemed necessary by AE TP	Austin Energy	Immediately upon occurrence and 2 seconds / as needed	Voice	TSP/TO
		10 seconds/ Continuous	ICCP	
Remedial Action Schemes (external to AE) - as deemed necessary by AE TP	ERCOT	10 seconds/ Continuous	ICCP	TSP/TO and QSE/GOP

AE receives its Real-time monitoring data from the RTU at AE owned substations. AE may receive other Entities' Real-time data from a dedicated serial port on the RTU at its shared substations. If no dedicated port exists or at substations where AE does not own any equipment, AE transmits and receives its Real-time monitoring data via ICCP communication.

The data and information specifications listed above have been mutually agreed upon with ERCOT and other responsible entities through a stakeholder process led by ERCOT. The data specifications including format and security protocol for transferring data outlined in ERCOT's "Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1" and referenced ICCP Communications Handbook have been distributed for review, comments and adoption to all NERC and ERCOT registered entities within the ERCOT interconnection via market notices and review meetings led by ERCOT [TOP-003-6.1, R1.54, R1.5.5].

AE's Real-time monitoring of its portion of the BES may require data and information associated with any interconnected entity, such as generator owners or operators, transmission owners or operators, distribution owners or operators, customers or any other entity AE deems necessary to maintain system reliability. ERCOT is the regulatory body responsible for coordinating real-time telemetry for each Transmission Operator (TOP) within its region. Austin Energy receives real-time telemetry from ERCOT via ICCP for its jointly owned substations and other entities as described in ERCOT Nodal Protocol §6.5.5.2.

5.2 Performance Criteria for Availability & Accuracy of Data & Information [TOP-003-6.1, R1.5.2]

All data and information shared within the ERCOT region by any data originator is required to meet the availability and accuracy criteria outlined in ERCOT Nodal Protocols §3.10.7.5.4, and §3.10.7.5.5. Data and information delivered via ICCP associations must also meet the additional criteria outlined in ERCOT Nodal Protocol §3.10.7.5.8.2.



Each data originator is responsible for meeting the performance criteria of their own data and information.

5.3 Provisions to Update or Correct Data & Information [TOP-003-6.1, R1.5.3]

For provisions to update or correct data and information specified and required to be submitted directly to ERCOT, entities should reference section 4.2 of ERCOT's "Addendum to Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1".

If Real-time monitoring data and information directly linked to AE and provided through an entity other than ERCOT requires correction or updates, the supplying entity shall notify AE (by email at TOP-003dataspecification@austinenergy.com) of any known data telemetry issues and shall treat telemetry issues per ERCOT Nodal Operating Guide §7.3.3 (4), and §7.3.3 (5). If a conflict in Real-time data and information occurs, AE will operate to the most limiting value until the discrepancy is resolved, following the provisions to update or correct data and information.

5.4 Mutually agreeable process for resolving conflicts [TOP-003-6.1, R1.4]

In accordance with section 3 of ERCOT's "Addendum to Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1", responsible entities with a disagreement or conflict regarding data or information required by the ERCOT Nodal Protocols, Operating Guides, Planning Guide, or ICCP Communications Handbook listed in ERCOT's "Mapping Document Related to NERC Reliability Standards IRO-010-5 & TOP-003-6.1" are advised to submit and resolve their request through the established ERCOT stakeholder revision request process.

For data and information submitted directly to AE from entities other than ERCOT, the responsible entity may submit its exceptions to the data specification and proposed solutions via email to TOP-003dataspecification@austinenergy.com. AE staff will coordinate and work with the entity to reach a mutually agreeable alternative or temporary solution.

6. DISTRIBUTING SPECIFICATIONS [TOP-003-6.1, R3]

AE will distribute this *Data and Information Specification* document to entities which have data required to be linked directly to AE's system for Real-time monitoring. In addition, AE maintains a publicly available copy of its *Data and Information Specification* within its Public website.

7. RESPONDING TO DATA SPECIFICATION REQUESTS [TOP-003-6.1, R5]

If AE receives a valid data and information specification request from another entity, AE will satisfy the obligations of the documented specification.



DOCUMENT REVIEW/REVISION HISTORY

Effective	Description	Participants	Version
Jan. 1, 2017	Initial Version	Energy Control Center and Reliability Compliance Office staff	1.0
May 18, 2021	Update	Kurt Hammons, Shan Yaun, Rosemary Haarer, Andy Ibarra	2021.05
March 23, 2023	Remove SPS and updated to newest NERC Standard	Andy Ibarra, Michael Dieringer	2023.03
May 19, 2025	Updated to meet TOP-003 version 6.1 requirements	Andy Ibarra, Shan Yuan, Hong Hoang, Nicholas Randall, Imane Mrini, Christopher Allen	2025.05
July 29, 2025	Minor clarifying update to address ERCOT's comments	Nicholas Randall, Imane Mrini	2025.07