Checklist – Communication Block Diagram Requirements

REVISION HISTORY

VERSION NO. (Must match header)	DATE	REVISED BY	DESCRIPTION
1.1	07/03/2017	MU	Created Document
1.2	08/07/2017	RLS	Removed watermark. No technical changes.
1.3	01/12/2021	MU	Performed Review and updates.

	Operations	ISO Version:	1.3
Communication Block Diagram Requirements		**Effective Date:**	**08/07/2017**

Contents

Purpose

The purpose of this document is to provide a checklist of items the ISO will use to determine whether the required New Resource Implementation Communication Block Diagram drawings are acceptable.

*All drawings must be submitted into [RIMS](#) following the file naming convention as outlined in the NRI Guide.

Definitions

This definitions in this table are identical to the definitions used in CAISO's BPM for Direct Telemetry and the DNP Protocol.	
Term	**Definition**
Originating Device	An *originating device* is one that gathers field data directly (for inputs) or issues controls directly to the field (for outputs).
Non-Originating Device	A *non-originating device* is one that obtains input data or issues control commands via a communications link from *originating* or *non-originating devices*.
Reporting Device	A *reporting device* is a device that acts as a DNP3 outstation, sending DNP3 messages to an upstream device.

Note that it is possible for an electronic element to function as an Originating Device for one data point and function as a Non-Originating Device for another data point.

Term	**Definition**
RIG/Real Time Device	The term "RIG/Real Time Device" when referenced in this document refers to a Reporting Device at the remote site that communicates directly with the ISO. A "RIG/Real Time Device" may function as a Non-Originating Device for some points and as an Originating Device for other points.

Checklist

A. Information that links the drawings to CAISO records:
1. ☐ Interconnection Agreement Project Name (available in the executed 2-Party or 3-Party Interconnection Agreements)
2. ☐ At least one of the following:
    a. The Project Address (the location of the facility where the resource exists.
    b. The 2-Party queue number (only when a 2-Party Interconnection Agreement exists)
    c. The New Resource Implementation Number (ISO Project Number)

B. Overall
1. ☐ Drawing shall be final. Preliminary or conceptual drawings shall not be accepted.
2. ☐ Drawing must be submitted through RIMS. No files shall be accepted unless through the normal NRI process.
3. ☐ Clearly label the ISO Revenue Meters.

C. Architecture and Physical Communication
1. ☐ Depict all Originating Devices, Non-Originating Devices, Meters and the RIG/Real Time Device on the drawing.
2. ☐ Depict all communication devices such as but not limited to fiber mux(s), router(s), transceiver(s) and network switch(es) etc.
3. ☐ Physical connections:
    a. ☐ Show the physical connection between all of the devices.
    b. ☐ Depict the communication path from the RIG/Real Time Device to the CAISO Folsom EMS.
    c. ☐ Depict the communication path from the RIG/Real Time Device to the CAISO Lincoln EMS.
    d. ☐ Depict the communication path from the meters to the CAISO MV90 system in Folsom.
    e. ☐ Depict the communication path from the meters to the CAISO MV90 system in Lincoln.
    f. ☐ Identify the physical cabling type between each connection point (i.e. copper Ethernet, serial, radio, etc.).
4. ☐ List all of the analog input and status points generated by each Originating Device near the depiction of the Originating Device.

D. Logical Data Paths and Protocols
1. ☐ Show all logical data paths between each Originating Device and each device that polls or processes the data from the Originating Device.
2. ☐ Show the real-time communication protocol(s) used over each logical data path between the RIG/Real Time Device and all Originating Devices. Show the real-time communication protocol(s) on each segment between each Originating Device, all intervening Non-Originating Devices and the RIG/Real Time Device.
3. ☐ Show the real-time communication protocol used over each logical data path between each meter and the CAISO's MV90 System at Folsom and Lincoln.

E. Backup Power
1. ☐ Clearly indicate that all communication devices, RIG/Real Time Device(s), and Revenue Metering will have backup electrical power and capacity that will support all devices for the duration of a loss of the generator facility utility electrical power.
2. ☐ Indicate how the backup power source maintains power until the generator facility utility electrical power is restored. Note that line powered CAISO revenue metering **is not** considered a backup power source. Also, stand-alone battery backup power (such as the batteries installed in a meter) **is not** considered as a backup power source.

Security

For the Interconnection Customers' security, IP addresses are not required on the drawing.