<table>
<thead>
<tr>
<th>California ISO</th>
<th>Operations</th>
<th>ISO Version:</th>
<th>1.2</th>
</tr>
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<tr>
<td>Communication Block Diagram Requirements</td>
<td>Effective Date:</td>
<td>08/07/2017</td>
<td></td>
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Checklist
## REVISION HISTORY

<table>
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<tr>
<th>VERSION NO.</th>
<th>DATE</th>
<th>REVISED BY</th>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>1.1</td>
<td>07/03/2017</td>
<td></td>
<td>Created Document</td>
</tr>
<tr>
<td>1.2</td>
<td>08/07/2017</td>
<td>RLS</td>
<td>Removed watermark. No technical changes.</td>
</tr>
</tbody>
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**Purpose**

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

*All drawing submittals must be emailed to nri@caiso.com. Following the file naming convention as outlined in the NRI Guide.*

**Definitions**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Originating Device</td>
<td>An <em>originating device</em> is one that gathers field data directly (for inputs) or issues controls directly to the field (for outputs).</td>
</tr>
<tr>
<td>Non-Originating Device</td>
<td>A <em>non-originating device</em> is one that obtains input data or issues control commands via a communications link from <em>originating or non-originating devices</em>.</td>
</tr>
<tr>
<td>Reporting Device</td>
<td>A <em>reporting device</em> is a device that acts as a DNP3 outstation, sending DNP3 messages to an upstream device.</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIG/Real Time Device</td>
<td>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.</td>
</tr>
</tbody>
</table>
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 NRI. 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.