

4.3.2 Cellular Telephones

Cellular telephones are used by PJM dispatchers as an alternate method of voice communication. Cellular phones can be used to coordinate activities while physically moving personnel to the PJM emergency dispatch center.

4.4 Interpersonal Communication (Voice Communication) Capability Failure

In the event that PJM detects a failure of its Interpersonal Communication (voice communication) capability that lasts 30 minutes or longer, PJM will notify member Transmission Owners, Generator Operators, adjacent Reliability Coordinators, Balancing Authorities, and synchronously-connected Transmission Operators within 60 minutes of the detection of the failure of its Interpersonal Communication capability.

Each Transmission Owner shall notify PJM and the following entities within 60 minutes of the detection of a failure of the Transmission Owner's Interpersonal Communication (voice communication) capability that lasts 30 minutes or longer:

- Distribution Providers in the Transmission Owner area
- Generator Operators in the Transmission Owner area
- Neighboring Transmission Owners external to PJM with standing Interpersonal Communication paths to the PJM Transmission Owner

4.5 PJM Communication Protocol

4.5.1 Purpose

PJM has developed these Communication Protocols in accordance with NERC Standard COM-002-4 and TOP-001-3. The purpose of these protocols is to improve communications for the issuance of Operating Instructions to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES).

4.5.2 Applicability

These protocols apply to all PJM operators and operators/dispatchers at member companies that issue and/or receive Operating Instructions.

4.5.3 Definitions

Operating Instruction – A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System.

Note: A discussion of general information and of potential options or alternatives to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.

Examples of Operating Instructions (not all-inclusive):

- Ordering transmission equipment in or out of service
- Load shed instructions
- Ordering generation MW/MVAR output changes
- Ordering generation online or offline (either in real time or scheduled in advance)

Examples of communications not considered Operating Instructions (not all-inclusive):

- Confirmation of ratings or power flows
- Discussions of operational options
- Discussions of generator status or availability

Three Part Communication – Verbal communication process between an issuer and receiver whereby:

1. Issuer clearly delivers the message
2. Receiver repeats (not necessarily verbatim) the message OR
 - a. requests the issuer to reissue the message
3. Issuer confirms the receiver's response if the repeated message was correct OR
 - a. reissues the message if the repeated information was incorrect or if requested by the receiver OR
 - b. takes an alternative action if a response is not received or if the message was not understood by the receiver.

Note: It is the issuer's responsibility to ensure the key components of the message were repeated correctly.

All-Call – Verbal message delivered to PJM members via a one-way single party to multiple parties burst messaging system.

4.5.4 Communication Protocols

1. All operators should use their last name (at a minimum) and company name when answering a phone call and identify themselves using their last name (at a minimum) and company when initiating a phone call.
2. All operators shall issue and receive written and oral Operating Instructions using the English language.
3. All operators shall issue and receive Operating Instructions using Three Part Communication (as defined above) during both normal and emergency operations.
4. PJM shall confirm or verify that an Operating Instruction was received by at least one party when delivering the Operating Instruction via the All-Call system.

Note: PJM Members can acknowledge receipt and understanding of All-Call messages by pressing two on the telephone keypad.

Note: PJM operators can verify receipt of All-Call by recipients on the All-Call system and via an email report from the All-Call system.

Note: When delivering All-Call messages, PJM operators will announce, their name (or position) and the type and number of messages at the start of the All-Call. The All-Call will be concluded with the operators name (or position) and “That is all”.

5. For Operating Instructions that are issued with a time reference, the time identification shall be in 24 hour format. For Operating Instructions to entities in different time zones, the appropriate time zone shall be included (i.e. 17:00 EDT). Time identification is not required for Operating Instructions that are expected to be implemented immediately.
6. For Operating Instructions that reference transmission lines (including Transmission interface Elements and Transmission interface Facilities), the line identification shall include Terminal to Terminal designation, voltage level and line number. When referencing other equipment at a substation in an Operating Instruction, the designation shall include substation name, equipment number and equipment type. Voltage level can be used as a clarifier if needed. When referencing a generating unit in an Operating Instruction, the designation shall include the generating station name and unit number.

Examples:

- Transmission Line: Bedington-Black Oak 500 kV 544 line
- Substation Equipment: Limerick 325 CB (500 kV)

7. For Operating Instructions that reference alphanumeric information, phonetically correct alphanumeric clarifiers can be used, if needed, to minimize misinterpretation.

Note 1: PJM members are obligated to follow all instructions as described in the PJM Operating Agreement, NERC Standards and PJM Manuals. If a PJM member is unable to comply with a PJM Operating Instruction, the member should notify PJM of the restriction (based on safety, loss of life, damage to equipment, or regulatory or statutory requirements) so PJM is able to implement other actions to alleviate the operational problems.

Note 2: Refer to M-13, Section 5 for communications of long lead unit commitments.

4.5.5 Communications Protocols Training Requirements

All operators listed in section 4.5.2 (Applicability) are required to complete initial training on these Communication Protocols and Definitions prior to issuing and/or receiving Operating Instructions. PJM will make this training available through the PJM LMS and track operator completion of this required training. Member company training liaisons will also ensure completion of this training by the required operators.

4.5.6 Communication Protocol Assessment

Each entity listed in section 4.5.2 (Applicability) shall assess adherence to these Communication Protocols following the process below.

This assessment of the individual operators will:

- Evaluate each of an entity's operators/dispatchers adherence to the Communication Protocols outlined in section 4.5.4 at least once every 12 months.
- Provide feedback to each operator based on the results of this assessment.
- Take corrective actions, as deemed necessary by the entity, to address deviations from the documented protocols.
- These corrective actions could include performance coaching, additional training or other methods determined by the entity as effective in correcting the identified deficiency.

Note: If the assessment reveals that these protocols were not used in an Emergency, it may constitute a violation of COM-002-4, R5, R6 or R7.

PJM will utilize the System Operations Subcommittee to assess the effectiveness of these Communication Protocols at least once every 12 calendar months.

The assessment of the Communication Protocols will:

- Evaluate any operating errors or events that involved communication errors or misunderstandings
- Evaluate the effectiveness and efficiency of operator communications utilizing the Communication Protocols.
- Evaluate whether or not any modifications to the Communication Protocols are required (while ensuring continued compliance with COM-002-4).