
003.3 OPERATIONAL VOICE COMMUNICATIONS FOR THE AIES

1. Purpose

To assist the ISO and Participants in the Alberta Interconnected Electric System (AIES) in applying basic criteria for operational voice communications. This standard details Participant interconnection requirements and the preferred technologies to be used.

2. Background

The ISO, via the System Controller (SC), operates a spot electric energy market and is the real-time operating authority for the AIES. Reliable telephone voice communications between the SC and Participants is fundamental to the safe, reliable and economic operation of the power system and energy market.

Initially, a highly-reliable system was installed between the SC and Transmission Facility Owners to meet this requirement. However, that system's overall reliability was affected by a number of changes over time and the increased number of Participants.

In March 2000, the Power Pool of Alberta initiated a feasibility study for improving the requirements for operational communications with Participants. The study group made recommendations on the communication requirements that included the implementation of the automated dispatch and messaging system, development of voice communications standards to support the SC function, and involvement by the stakeholder community in development of these standards.

The resulting new voice communication standard takes into account the different roles of Participants and their impact on the electric system.

As a result of the AESO's automated dispatch and messaging system, a number of telephone voice conversations are eliminated with Participants. In other cases, normal telephone services are used. In some cases, additional steps must be taken to ensure that voice communication capability is not interrupted due to a failure of one or more communication systems.

3. Definitions

The following definitions apply within this document.

Dedicated 2 wire telephone service

A telecommunication facility that directly connects two parties with dedicated equipment that is for the exclusive use of the two parties and does not use common switching equipment.

Direct access number

A telephone number dedicated to the functionality associated with the Participant role at that location. For example, at a marketing location the direct access number is one dedicated to the marketing function. The telephone number requires a primary number with automatic forwarding to another number if the primary number is busy, or a primary number with an alternate number available if the primary number is busy.

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MSAT telephone service

A commercially available satellite voice communications service in which telephone service is provided for the purpose of dialing and communicating with other parties, usually on a one-to-one basis.

MSAT dispatch service

A commercially available satellite voice communications service in which specified Participants can enter into a multi-party communication, with each party having access to all parties at the same time.

Normal telephone service

Private line telephone service provided by a commercial supplier of telephone services.

Operational voice communications

Voice communications required for the operation and security of the AIES and occurring between the SC and Participants, Wire Service Providers, power system operators and interconnected control area operators.

PNSC

Pacific Northwest Security Coordinator.

RTO

Regional Transmission Organization.

4. Guidelines and References

4.1 Guidelines

- In developing this standard, the advisory group used the following principles as guidelines:
 - Voice communication standards must meet criteria set by NERC and the WECC.
 - Voice communication standards must be fair and equitable to all Participants and provide reasonable opportunity for Participants to take part in the electric system market.
 - The standards must not prevent the participation of any stakeholder in the Alberta electric system.
 - The standards must meet the needs of all Participants, both current and anticipated.
 - The standards must meet the needs for the safe, reliable and economic operation of the power system.

4.2 Related documents

- AESO ICCP Network Interface Control Document
- ISO Operating Policies and Procedures - [Technical Standard 003.1](#) Electric Facility Data and Communications for the Alberta Control Area
- Power Pool of Alberta Feasibility Study - Operational Communication Requirements

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- ISO Rules
- ISO Participants Manual
- Electric Utilities Act
- ISO Operating Policies and Procedures - [Technical Standard 003.2](#) Automated Dispatch and Messaging System (ADAMS)
- The Transmission Administrators technical requirements for the provision of ancillary services

5. Standards

5.1 Operational voice communications standards

1. Operational voice communications standards define the types and application of voice communication services for different forms of participation in the AIES. They apply to all Participants in the AIES (see [Table 1](#)).
2. All Participants are responsible for ensuring the operational voice communications systems as specified by the standard are in place and maintained.
3. The ISO will coordinate all operational voice communications requirements by ensuring conformance to the standards and maintaining centralized records of the systems and phone numbers in place.
4. The ISO will initiate and coordinate any testing requirements of the operational voice communications systems.

6. Revisions and Approval

Issued	Description
2003-07-28	Revised to ISO Operating Policies and Procedures
2001-12-21	New Issue in Pool Code

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Table 1

Operational voice communication standards for Participants

Participant Type	Applicable To	Standard Requirement	Reason for Standard
Generation	Generation facilities connected to the distribution system (interconnection ≤ 25 kV).	Normal telephone service to the generation facility's operating authority location.	Minimal telephone service required for power system operation.
	Generation facilities connected to the transmission system (interconnection > 25 kV) where the aggregated generation output connected as a single source to the transmission system is less than 50 MW.	Normal telephone service with direct access number to the generation facility's operating authority location, and Alternate generation facility operating authority location contact number.	Direct access to generators during system disturbances required to maintain system security.
	Generation facilities connected to the transmission system (interconnection > 25 kV) where the aggregated generation output connected as a single source to the transmission system is greater than or equal to 50 MW.	Any two of the following services to the generation facility's operating authority location 1. Normal Telephone Service with Direct Access Number, and a telephone set equipped with mute capability and able to be dedicated to group conference calls. 2. Telephone service via private communications system to Transmission Facility Owners who provides the transmission interconnection. 3. MSAT Telephone or Dispatch Service. 4. Dedicated 2 Wire Telephone Service to the ISO.	Direct access with high reliability to generators during system disturbances required to maintain system security.
	Generation units that provide black start service.	MSAT dispatch service to the generation unit location. Any two of the following services to the generation facility's operating authority location: 1. Normal telephone service with direct access number and a telephone set that is equipped with mute control and can be dedicated to group conference calls 2. Telephone service via private communications system to the transmission wire service provider of the transmission interconnection.	Under black start conditions, normal telephone service may be unavailable, requiring an alternate service directly to the generator location.

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Participant Type	Applicable To	Standard Requirement	Reason for Standard
		<p>3. MSAT telephone service</p> <p>4. Dedicated 2 Wire Telephone Service to the ISO.</p>	
Participants	All Participants who are required to receive energy market dispatches.	Automated dispatch and messaging system, and Normal telephone service with direct access number.	Voice communications required for reliable and safe operation of the power system.
Participants	All Participants who are required to receive ancillary service dispatches.	<p>Automated dispatch and messaging system, and</p> <p>Any two of the following services to the generation facility's operating authority location</p> <p>1. Normal Telephone Service with Direct Access Number and a telephone set equipped with mute capability and able to be dedicated to group conference calls</p> <p>2. MSAT Telephone or Dispatch Service</p> <p>3. Dedicated 2 Wire Telephone Service to the ISO.</p>	Direct access with high reliability to ancillary service providers during system disturbances required to maintain system security.
Transmission Facility Operators	All operators of transmission facilities except transmission operators who operate only radial transmission equipment.	<p>An MSAT dispatch service, and</p> <p>Dedicated 2 Wire Telephone Service to the ISO, and</p> <p>Normal telephone service with a direct access number and a telephone that is equipped with mute capability and that can be dedicated to group conference calls.</p>	Direct access to transmission facility owners is a primary requirement for system security and power system operation. Multiple independent systems are required to ensure communications are available during power system disturbances that affect communication systems.
	Transmission operators who operate only radial transmission equipment.	<p>Normal telephone service with direct access number to the facility's operating authority location, and</p> <p>Alternate facility operating authority location contact number.</p>	Direct access to transmission facility operators during system disturbances required to maintain system security.
Wire Service Providers	All Wire Service Providers.	Normal telephone service with direct access number.	Voice communications required for reliable and safe operation of the power system.

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Participant Type	Applicable To	Standard Requirement	Reason for Standard
Wire Service Providers involved in black start processes	All Wire Service Providers who can contribute incremental load additions for black start process requirements.	To be directed by the Black Start Committee.	Under black start conditions, normal telephone service may be unavailable, requiring an alternate service to the Wire Service Provider location
Interconnected Control Areas	All control areas connected to the AIES.	Normal telephone service with direct access number and an MSAT dispatch service are required. Note: Standards for interconnected control areas are subject to WECC/PNSC/RTO requirements.	Direct access to interconnected system owners is a primary requirement for system security and power system operation. Multiple independent systems are required to ensure communications is available during all forms of disturbances.