

## SYSTEM OPERATIONS SUBCOMMITTEE (SOS)

### MISSION

The System Operations Subcommittee (SOS) is an operational support group for coordinated transmission and generation operations. Each member of the SOS in partnership with the PJM staff shall provide an operational procedural development function, operator training function, operations monitoring function, and an operation/planning coordination function to assure the safe, reliable and efficient operation of the PJM Interconnection. The SOS is responsible for implementation of the Emergency Procedures, System Restoration Procedures, and Communications Procedures.

The SOS is comprised of the SOS-T (Transmission Owners) and SOS-J (Joint Transmission Owners and Generation Owners).

### PARTICIPATION REQUIREMENTS

The SOS shall report to the Operating Committee (OC). The SOS is composed of two groups. One is a secure group that consists of only those PJM Member companies who are signatories to the Consolidated Transmission Owners Agreement (CTOA) or signatories to the Operating Agreement (OA), and are a NERC registered Transmission Owner within the PJM region (SOS-T), and the other jointly consists of those PJM Member companies who are signatories to the OA and are a NERC registered Generation Owner or Transmission Owner in the PJM region (SOS-J).

SOS-T members will meet separately to have reliability discussions that require shielding of market sensitive data from Market Participants. Participation in the SOS-T meetings is limited to real-time operations and operations support personnel and will be validated with the Member company's control room leadership. The SOS-T meetings are subject to FERC Order 2004, Standards of Conduct. SOS-T participants require CEII (Critical Energy Infrastructure Information) clearance for meeting attendance and related materials.

Otherwise, reliability discussions will include all parties involved in operations during the SOS-J meetings. Each PJM Members' Transmission Local Control Center and Generation Market Operation Center is expected to appoint a representative/point of contact to the SOS. Other PJM Members may send observers to the meetings.

### ADMINISTRATIVE

The SOS-J and SOS-T shall meet on a monthly basis.

A representative from the PJM staff will Chair the SOS. A secretary to the SOS shall be appointed from the PJM staff. All Subcommittees will adhere to Manual 34: PJM Stakeholder Process rules of procedure and code of conduct. SOS-T participants must refrain from forwarding meeting attendance information or sharing meeting materials beyond SOS-T authorized attendees. When issues require decision-making, the SOS will follow the guidelines established by the PJM Manual 34: PJM Stakeholder Process. The Chair of the SOS will share the results with the OC. The mission and responsibilities of SOS will be reviewed annually by SOS and revised as required, with material changes brought to the OC.

The SOS may work closely with other Forums and Subcommittees that have been established by the OC in carrying out its responsibilities. These groups are:

- Dispatcher Training Subcommittee
- Modeling Users Forum
- eDART Forum
- eDART XML Forum

## RESPONSIBILITIES

### SOS-J (Joint Transmission Owners and Generation Owners):

1. Ensure the implementation of all system reliability functions.
2. Participate and conduct operational conference calls as needed to help prepare and coordinate response to emergency conditions.
3. Recommend revisions to the PJM operating principles, practices, and procedures to assure the safe, reliable and efficient operation of PJM.
4. Partner closely with PJM on matters affecting system operations.
5. Review ongoing operations of communication infrastructure and work on issues which may have an impact on present and future system operations.
6. Partner closely with the work of the Planning Committee and its subgroups on those issues which have impact or provide needed input on system operations.
7. Review the delivery of established dispatcher training programs and the development of new dispatcher training programs.
8. Monitor annual performance goals for RTO operations. Recommend new performance standards to promote operational excellence.
9. Ensure the development and maintenance of system operating models for the Office of the Interconnection and PJM Members (as defined in the PJM OA).
10. Stay current with new concepts, technology, methods, and industry trends on developing operating issues.
11. Monitor the impact and implementation of NERC / RFC, and SERC compliance standards.
12. Generation Owners monitor the fuel inventories, report fuel inventories to PJM, and manage those inventories during actual or projected critical operating conditions.

### SOS-T (Transmission Owners):

1. Review interregional operating practices and procedures and coordinate with the PJM procedures and practices.
2. Review and evaluate any special operating plans and procedures including remedial action schemes that deviate from normal operating principles and practices and make appropriate recommendations to the OC.

3. Supervise the development and completion of Seasonal Reliability studies in order to better prepare operations for potential system conditions. These studies should consider maximum credible disturbances.
4. Implement the Event Investigation Process - lead/participate in ACA/RCA process as system events dictate in accordance with the Event Investigation Process documentation.
5. Communicate and coordinate key system changes such as Tie-Lines.
6. Evaluate EMS data and system management standards.

## CORE COMPETENCIES

The SOS members individually and collectively, should possess the competencies necessary to carry out its Mission and Responsibilities. It is not expected that a new member to the SOS would possess all these competencies at the time of appointment but that the member acquire these competencies over time.

Experience in management including: Personnel training and development, procedure and policy development, planning, budget, leadership, and evaluations. The SOS members should be empowered with authority by the Member company to commit sufficient resources to allow full participation in PJM activities along with the authority to commit company personnel to support all appropriate working groups and task forces. Collectively, the SOS members should have knowledge of:

Power System Operations including:

- Generation control and dispatch,
- Operations planning,
- Load forecasting,
- Interchange scheduling,
- Follow-up evaluation,
- Generation Owner unit scheduling.

NERC and Regional Operating Criteria:

- Working knowledge of the NERC and regional reliability council guides and how they coordinate with the PJM Manuals.

Operating Procedures:

- Thorough knowledge of the PJM procedures and their application.

Communication and Information Systems:

- Knowledge of data and voice circuit communication as they are used in the control room and as they affect system operations.

Fuels:

- Understanding of fuel requirements and limitations of generating equipment as it relates to dispatch of such equipment.

## EMS/GMS and Auxiliary Computer Systems:

- Thorough understanding of operational computers; how they receive / transmit data and how the real-time advanced application programs function.

## Relays:

- Understanding of routine protection schemes for the PJM transmission system.

## System Modeling:

- Understanding the EMS and load flow study program models of the electrical power system.

## System Performance:

- Knowledge of how to evaluate desired system response to actual system response. Understanding of Event Investigation Process (ACA/RCA).

## System Restoration:

- Knowledge of the general philosophy of system restoration and the philosophy and procedures of their company as well as that of the pool.

Each SOS member should have the authority to commit resources in order to support the requirements of the SOS.