

SYSTEM OPERATIONS SUBCOMMITTEE – TEAM CHARTER

MISSION

Each member of the System Operations Subcommittee – Transmission & Generation (SOS – T&G) 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.

RESPONSIBILITIES

1. (G/T) Ensure the implementation of all system reliability functions.
2. (G/T) Recommend revisions to the PJM operating principles, practices, and procedures to assure the safe, reliable and efficient operation of PJM. In particular, the SOS is responsible for implementation of the Emergency Procedures and System Restoration Procedures.
3. (G/T) Partner closely with PJM on matters affecting system operations.
4. (T) Review interregional operating practices and procedures and coordinate with the PJM procedures and practices.
5. (G/T) Partner closely with the work of the System Information Subcommittee, on those issues which may have an impact on present and future system operations.
6. (G/T) 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. (G/T) Oversee, review, and manage the delivery of established dispatcher training programs and the development of new dispatcher training programs. Approve the delivery cycles of these programs.
8. (G/T) Monitor annual performance goals for RTO operations. Recommend new performance standards to promote operational excellence.
9. (G/T) Ensure the development and maintenance of system operating models for the Office of the Interconnection and PJM LLC Agreement Members.
10. (G/T) Stay current with new concepts, technology, methods, and industry trends on developing operating issues.
11. (G) Monitor the fuel inventories of the PJM LLC Agreement members, report fuel inventories to PJM, and manage those inventories during actual or projected critical operating conditions.
12. (T) The SOS should review and evaluate any special operating plans and procedures including special purpose relay schemes that deviate from normal operating principals and practices and make appropriate recommendations to the OC.
13. (T) 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.

14. (T) Implement the Event Investigation Process - lead/participate in ACA/RCA process as system events dictate in accordance with the Event Investigation Process documentation.

15. (G/T) Monitor the impact and implementation of NERC / RFC, and SERC compliance standards.

ADMINISTRATIVE

The System Operations Subcommittee (SOS) shall report to the Operating Committee.

The Systems Operations Sub-Committee is composed of two groups. One group consists of only Transmission Owners (SOS Transmission) and the other consist of Generation Owners/Operators (SOS Generation). SOS Transmission will meet separately to have reliability discussions that require shielding of market sensitive data from market participants. Otherwise, reliability discussions will include all parties involved in operations during the joint meetings between the SOS Transmission and Generation.

Each PJM LLC members' Transmission Local Control Center and Generation Market Operation Center is expected to appoint a representative/point of contact to the SOS. Other PJM LLC Agreement Members may send observers to the meetings. Portions of the meetings will include only Transmission Operators and are subject to FERC Order 2004. The SOS is a technical support group for coordinated transmission and generation operations.

A representative from the PJM staff who is a non-voting member will chair the SOS. A secretary to the SOS shall be appointed from the PJM staff. When issues require voting, the SOS will follow the guidelines established by the PJM Governance Working Group in the PJM Committee handbook.. The Chair of the SOS will share the results of these two votes 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 Operating Committee.

Working groups/Task Forces have been established to assist the SOS carry out its responsibilities. The working groups are:

- Dispatcher Training
- Operating Analysis
- Data Management
- System Restoration
- Black Start Services Working Group
- Protective Relaying Operations Group (contact persons only)
- System Control and Performance (contact persons only)
- Fuel Situation (contact persons only)
- eDART User Group

CORE COMPETENCIES

The subcommittee 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 committee 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. Empowered with authority by the member company to commit sufficient resources to allow full participation in PJM activities with the authority to commit company personnel to support all appropriate working groups and task forces.

Collectively, the **System Operations Subcommittee** members should have knowledge of:

Power System Operations:

Thorough understanding of all aspects of system operations, both routine as well as abnormal operations, including:

(G/T) generation control and dispatch,

(G/T) operations planning,

(G/T) load forecasting,

(G/T) interchange scheduling,

(G) unit scheduling,

(G/T) accounting, and

(G/T) follow-up evaluation.

Proactive Philosophy to Rapidly Changing Industry

Communications, Oral/Written:

Effectively and efficiency can express the company and the subcommittee's position both orally and in writing.

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.

Contracts:

Knowledge of power transactions agreements.

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.

Training:

Understanding of adult education techniques and the development of effective training programs

Good committee skills in:

Negotiation

Teamwork

Collaboration

Presentation and Communication

Strategic Planning

Decision Making

Facilitation

Each member should have the authority to commit resources in order to support the requirements of the System Operations Subcommittee.

Annual Review Schedule: July

Last Review: January 2008