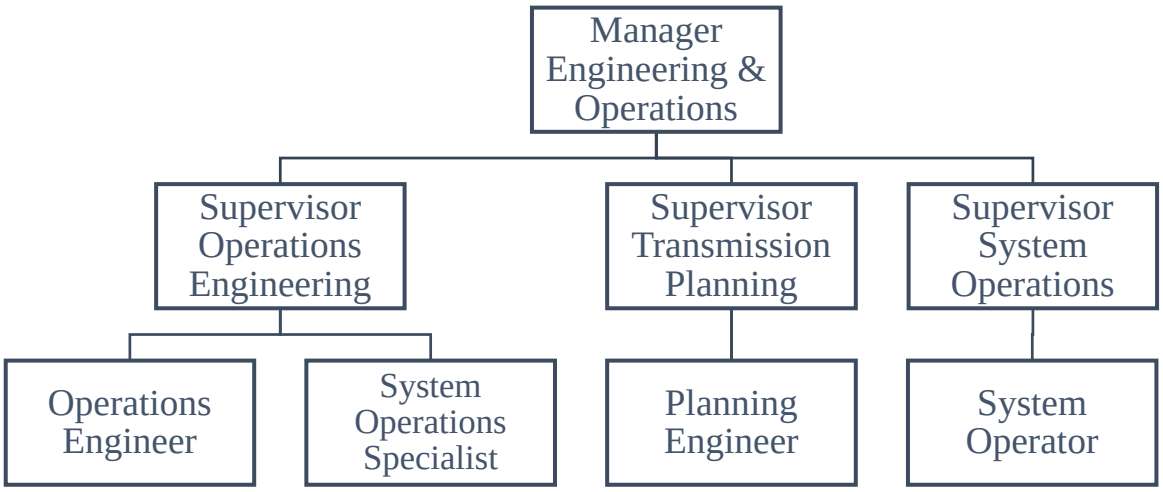
Transmission Function Employees Job Titles and Job Descriptions

Transparency Rule
Section VII (f) (1)

(1) AECI shall post on its Internet Web Site the job titles and job descriptions of its Transmission Function Employees.

Transmission Function Employees



Manager, Engineering and Operations

Purpose and Scope

The Manager, Engineering & Operations manages and coordinates the activities of the power system control center and engineering departments. The principal focus of the position is to ensure the safe and reliable operation of the electric system and that the transmission system has been appropriately planned and designed to meet the challenges of real-time operations. Supervision received is administrative, with assignments given in terms of general objectives and limits.

This position interfaces primarily with the Director of Engineering and Operations, System Operations' staff, Operations and Planning Engineering staff, staff of other AECI divisions, Reliability Coordinator (RC) staff, operations and engineering supervisors at member/owner G&Ts and position counterparties at other power companies as well as regulatory agencies.

Principal Activities

The principle activities of the Manager, Engineering & Operations is directing and coordinating the staff to see that the following are successfully completed.

1. Leadership is provided for safe and reliable operation of AECI's transmission system as an interconnected part of the bulk electric system.
2. Position AECI within the industry to comply with all applicable North American Electric Reliability Corporation (NERC) standards.
3. Ensure effective transmission solutions are developed through:
    - The preparation of long range transmission plans for member G&Ts
    - Generation Interconnection studies performed in compliance with AECI's Generation Interconnection Procedure
    - Coordinated regional and interregional studies with SPP, MISO, SERTP and others within the Eastern Interconnect as appropriate
    - Affected systems studies
    - Other studies as required and appropriate
4. Prepare studies, reports and other materials as required for AECI Board meetings and G&T Operations Committee.
5. Participation in national and regional committees, coordination and planning groups while representing AECI and member interests.
6. Staff stays abreast of industry trends and developments.
7. Recommendation and implementation of operational strategies for efficient operation of AECI's generating assets.
8. Recommendation and implementation strategies to allow AECI to continue operation as a Balancing Authority, Transmission Operator, Transmission Planning and Transmission Service Provider.

9. Evaluation of staffing levels and training and make recommendation for changes in complement so that staff meets AECI's established goals and objectives.
10. Review and oversee implementation of software and hardware that will allow AECI to meet stated goal and objectives.
11. Provide frequent feedback to each direct report regarding his/her performance. Assist direct reports in identifying and resolving problems that affect their job performance or professional development. Prepare and present each direct report's periodic performance reviews.
12. Assist other departments with planning and contractual arrangements that will be beneficial for the efficient operation of the electric system of AECI.
13. Coordination of scheduled and forced outages of generating units and bulk electric system elements with the RC and adjacent Transmission Operators.
14. Development and administration of the departmental operating budget. Providing input for the preparation of the departmental capital budget.
15. Participation in candidate interviews and provide recommendations to fill operating department staff vacancies.
16. Will fill in and fulfill the duties of the Director, Engineering & Operations as needed.

Supervisor, System Operations Engineering

Purpose and Scope

With limited supervision, the Supervisor, System Operations Engineering manages and coordinates the day-ahead activities of the power system control center. The principal focus of the position is to oversee development, testing, and maintain System Operation: tools, procedures, and reports, to support the achievement of requirements within Operations. The Operations Engineering Supervisor may serve as a project lead in any or all of these areas for a specified project, and coordinate efforts with Operations and Planning Engineers. The Operations Engineering Supervisor will work closely with System Operators to properly fulfill their assigned responsibilities; providing support in a timely and accurate fashion. This position interfaces primarily with his/her Manager, System Operations' staff, staff of other AECI divisions, Reliability Coordinator (RC) staff, operations and engineering supervisors at member/owner G&Ts and position counterparties at other power companies.

Principal Activities

1. Review Operating standards, requirements, tools, work-flow, and related specifications by working with Assigned Project Leads, System Operators, Standards Compliance Coordinators, and other Operations team members.
2. Assist in compliance with all applicable North American Electric Reliability Corporation (NERC) standards.
3. Assists in inter-regional coordination activities.
4. Oversees modeling coordination between Planning, RC, and EMS.
5. Apply and/or develop sound technical methodologies for effectively meeting assignments according to specifications.
6. Design, track, and test tools, procedures, and reports.
7. Update assignment status using standardized E&O Division tools.
8. Assist with data-preparation, implementation, upgrade, testing and support of either IS-developed or purchased Operator applications, including PAAC.
9. Originate new ideas or methods and pursue these initiatives that make appropriate business sense by presenting to manger, following-up on related assignments.
10. Ensure adequate initial training and continuing education for the Operations staff.
11. Responsible for development of Operating Guides.
12. Oversees event analysis, development of lessons learned, and ensure training is provided to fill any gaps identified from this process.
13. Ensure coordination of scheduled outages of generating units and Bulk Electric System elements with the G&T's, Plants, RC and adjacent Transmission Operators.
14. Provide frequent feedback to each direct report regarding his/her performance. Assist direct reports in identifying and resolving problems that affect their job performance or professional development. Prepare and present each direct report's periodic performance reviews.
15. Ensure the timely preparation and submission of applicable regulatory reports and internal operating reports.

16. Prepare and administer the departmental Transmission budget.
17. Participate in candidate interviews and provide recommendations to fill staff vacancies.
18. Participate as a member or alternate on Regional Reliability Organization (presently SERC, Inc.) committees and other working groups.

Supervisor, Transmission Planning

Purpose and Scope

The Supervisor, Transmission Planning manages and coordinates the activities of the Transmission Planning staff. The position has the responsibility for interpreting, organizing, executing, and coordinating assignments.

The principle focus is providing oversight to the Transmission Planning engineers in planning and developing a reliable electric transmission system. Supervision received is administrative, with assignments given in terms of general objectives and limits.

This position interfaces primarily with his/her Manager, Transmission Planning staff, staff of other AECI departments and divisions, SERC staff, operations and engineering supervisors at member/owner G&Ts and position counterparties at other power companies and regional planning groups.

Principal Activities

1. Assist in compliance with all applicable North American Electric Reliability Corporation (NERC) standards.
2. Evaluate, develop and document transmission planning processes.
3. Develop effective transmission solutions through:
    - The preparation of long range transmission plans for member G&Ts
    - Generation Interconnection studies performed in compliance with AECI's Generation Interconnection Procedure
    - Coordinated regional and interregional studies with SPP, MISO, SERTP and others within the Eastern Interconnect as appropriate
    - Affected systems studies
    - Other studies as required and appropriate
4. Provide solutions to undefined and unusual problems based on extensive experience.
5. Strengthen and improve member G&T relations.
6. Work cooperatively with other AECI departments to support AECI's objectives.
7. Serve as AECI's representative on the SERC Engineering Committee
8. Train and develop transmission planning engineers. Provide frequent feedback to each direct report regarding his/her performance. Assist direct reports in identifying and resolving problems that affect their job performance or professional development. Prepare and present each direct report's periodic performance reviews
9. Manage the system one-lines for Planning and Operations.
10. Prepare and administer Transmission Planning's budget.
11. Participate in candidate interviews and provide recommendations to fill staff vacancies.

Supervisor, System Operations

Purpose and Scope

With limited supervision, the Supervisor, System Operations manages and coordinates the daily activities of the power system control center. The principal focus of the position is to ensure the customers' electrical needs are always met and to ensure the safe and reliable operation of the electric system. This position interfaces primarily with his/her supervisor, System Operations' staff, staff of other AECI divisions, Reliability Coordinator (RC) staff, operations and engineering supervisors at member/owner G&Ts and position counterparties at other power companies.

Principal Activities

1. Lead the operation of the control center to ensure the electrical needs of the AECI customers are always met and to ensure the safe and reliable operation of the Bulk Electric System.
2. Schedule System Operations staff to ensure coverage of real-time responsibilities.
3. Oversees NERC and Industry alerts, collecting and transferring information as required.
4. Assist in compliance with all applicable North American Electric Reliability Corporation (NERC) standards and Reliability Coordinator (RC) directives.
5. Ensure adequate initial training and continuing education for the control center staff.
6. Ensure coordination of scheduled and forced outages of generating units and Bulk Electric System elements with the G&T's, Plants, RC and adjacent Transmission Operators.
7. Provide frequent feedback to each direct report regarding his/her performance. Assist direct reports in identifying and resolving problems that affect their job performance or professional development. Prepare and present each direct report's periodic performance reviews.
8. Ensure the timely preparation and submission of applicable regulatory reports, and internal operating reports.
9. Prepare and administer the departmental operating budget. Provide input for the preparation of the departmental capital budget.
10. Participate in candidate interviews and provide recommendations to fill control center staff vacancies.
11. Participate as a member or alternate on Regional Reliability Organization (presently SERC, Inc.) committees and other working groups.
12. Oversees EMS product testing to verify staff has the tools needed to perform job duties.
13. Active participation in the NATF.
14. Works with IS staff to priorities and oversee implementation of products and corrections to tools used by System Operators.
15. Update assignment status using standardized E&O Division tools.
16. Originate new ideas or methods and pursue these initiatives that make appropriate business sense by presenting to manger, following-up on related assignments.
17. Assist in the preparation and tracking of Departmental goals and objectives.

Planning Engineer - Transmission

Purpose and Scope

This professional level position is a fully competent engineer in transmission planning tasks.

Takes responsibility for AECI/G&T system planning including load/zone planning and baseline reliability planning to ensure reliable operations under various operating scenarios in compliance with regulatory planning standards and guidelines. Applies in-depth knowledge and experience in assessing the capabilities of the transmission system and its compliance with the planning criteria. Independently evaluates, selects and applies transmission planning techniques, procedures, and criteria, using judgment in making adaptations and modifications.

Mainly interfaces with G&T's and AECI staff but may also interface with load-serving entities, generation entities, regulatory agencies, regional reliability councils, and other transmission providers to obtain necessary inputs into the planning process.

Assignments have clear and specified objectives. Devises new approaches to problems. Independently performs assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval for projects. Reviews the work of lower level technical staff.

Principal Activities

1. Conducts load flow and short circuit transmission system analyses.
    a. Verifies correctness of the study models.
    b. Interprets results.
    c. Develops transmission solutions for the G&T's and AECI.
2. Develops load flow and short circuit models.
    a. Organizes and maintains transmission system data.
3. Writes technical reports and user manuals.
4. Communicates with G&T's. Has limited communication with outside companies.
5. Contributes to developing transmission planning processes.
6. Represents AECI as an alternate in external committees and working groups.
7. Reviews the work of Associate Engineers.

Operations Engineer

Purpose and Scope

Operations Engineer is the next progressive step from Associate Operations Engineer in the technical career track. Under minimal supervision, the Operations Engineer role is to develop, test, and maintain System Operation: tools, procedures, and reports, to support the achievement of requirements within Operations. The Operations Engineer may serve as a project lead in any or all of these areas for a specified project, and coordinate efforts with Operations and Planning Engineers who are both more senior and junior. The Operations Engineer will work closely with System Operators to properly fulfill their assigned responsibilities; providing support and training in a timely and accurate fashion. This position interfaces primarily with his/her supervisor, other Operations Engineers, System Operators and as necessary, other Engineers within AECI's G&Ts and Regulating Authorities.

Principal Activities

1. Review Operating standards, requirements, tools, work-flow, and related specifications by working with Assigned Project Leads, System Operators, Standards Compliance Coordinators, and other Operations team members.
2. Apply and/or develop sound technical methodologies for effectively meeting assignments according to specifications.
3. Design, track, and test Operator tools, Displays, procedures, and reports.
4. Update assignment status using standardized E&O Division tools.
5. Communicate with and demonstrate progress to Operations team members.
6. Document tools and procedures in place to assist with daily Operations.
7. Assist with data-preparation, implementation, upgrade, testing and support of either IS-developed or purchased Operator applications.
8. Originate new ideas or methods and pursue these initiatives that make appropriate business sense by presenting to supervisor, following-up on related assignments.

Additional Principal Activities Over Associate Operations Engineer

9. When assigned as the Project Lead, oversee the definition, development, and documentation Operational requirements, objectives, methodology, reports, tools and their specifications, and training on a project-by-project basis in collaboration other Operations personnel.
10. Derive time estimates for project components.
11. Perform high level design for a solution as well as detailed technical requirements toward acquisition and deployment of a complete solution.
12. Coordinate efforts with other Operations Personnel assigned to the project as well as Information Systems staff.

System Operations Specialist

Purpose and Scope

The position of System Operations Specialist has the responsibility to help AECI achieve its stated mission and vision by providing well trained, knowledgeable System Operators who will reliably operate the AECI generation and transmission system in compliance with all applicable NERC Standards. Currently, AECI is registered with NERC as a Balancing Authority (BA) and Transmission Operator (TOP). Also, AECI is a Transmission Service Provider (TSP) and it is in AECI's best interest to continue with all three functions. Therefore, the scope of the System Operations Specialist is rather large given the real time operating responsibility assigned to System Operations.

The System Operations Specialist must understand all aspects of AECI System Operations (switching, protection and control, power system behavior, system restoration, black starting, maintain operating reserves, equipment maintenance and operation, and operation of the Energy Management System used to monitor and control the network). This position interfaces primarily with his/her supervisor, System Operations staff, the Compliance Department, member G&Ts, and peers within the Electrical Power Industry.

Principal Activities

1. Ensure AECI is in compliance with PER Standards and various operating standards, as assigned.
2. Provide quality and timely training to AECI System Operators.
3. Provide well organized training schedules and coordination of subject matter experts.
4. Identify and make improvements to the training program.
5. Obtain/maintain NERC Reliability Coordination (RC) Certification by continuing education.
6. Serve as a backup operator, if required due to a system or other emergency.
7. Draft, review, or provide comments on operating procedures, as required.
8. Maintain a high knowledge of emerging standards and issues related to compliance and reliable operation.
9. Understand all aspects of operating the AECI transmission and generation system for the purpose of training others.
10. Apply and/or develop sound technical methodologies for effectively meeting assignments according to specifications.
11. Perform technical design and/or assessment of technical design for assigned components of Operations projects according to requirements and industry standards.
12. Design, track, and test Operator tools, displays, procedures, and reports.
13. Update project and task status using standardized E&O Division tools.
14. Communicate with and demonstrate progress to internal customers as well as other team members.

15. Document tools and procedures in place to assist with daily Operations.
16. Assist with data-preparation, implementation, upgrade, formulating test suites and support of either IS-developed or purchased Operator applications.
17. Originate new ideas or methods and pursue these initiatives that make appropriate business sense by presenting to manager, following-up on related assignments.
18. When assigned as the Project Lead, oversee the definition, development, and documentation Operational requirements, objectives, methodology, reports, tools and their specifications, and training on a project-by-project basis in collaboration other Operations personnel.
19. Derive time estimates for project components.
20. Perform high level design for a solution as well as detailed technical requirements toward acquisition and deployment of a complete solution.
21. Coordinate efforts with other Operations Personnel assigned to the project as well as Information Systems or Power Production staff.
22. Review the technical design of purchased or other third party applications
23. Verify the compatibility of any procedure or software solution (in-house or third party) with existing procedures or software solutions.
24. Review and analyze the effectiveness and efficiency of existing procedures and software systems; develop strategies for improving or leveraging these assets.
25. Collaborate effectively with other technical decision makers to solve complex problems spanning their respective area of expertise, and resolve professional disagreement with informed, rational solutions.
26. Oversee the system architecture of documents, procedures, and reports that the department adopts and maintains. In every project, ensure that the new procedure or software solution supports Compliance with Federal and/or their Assignee requirements, and integrates well with other procedures and software solutions.
27. Investigate new technologies in order to assess the benefit they provide our System Operations.

System Operator

Purpose and Scope

With minimal supervision, a System Operator at Associated Electric Cooperative Inc. (AECI) monitors and operates the AECI Bulk Electric System. A System Operator works closely with other personnel within, and outside of, AECI to ensure the electrical needs of the AECI customers are always met and to ensure the safe and reliable operation of the Bulk Electric System. This position interfaces primarily with his/her supervisor, AECI Power Marketers, Shift Supervisors and Control Room Operators at the AECI power plants, member/owner G&T dispatchers, AECI's Reliability Coordinator, and system operators at other power companies.

Definition

The AECI System Operator is defined as the Associate System Operator, the System Operator or the Senior System Operator who is assigned to the Real Time Desk (i.e. the D shift or the N shift). The AECI System Operator must possess valid North American Electric Reliability Corporation (NERC) System Operator Balancing/Interchange and Transmission or System Operator Reliability certification credentials.

Authority

During normal operating conditions, the AECI System Operator has the authority to take and direct timely and appropriate real-time actions without obtaining approval from higher-level personnel within AECI's own Operating Authority.

During emergency conditions (defined as instances where immediate action is needed to respond to a system emergency), the AECI System Operator is explicitly authorized by the CEO & General Manager of Associated Electric Cooperative, Inc. to take and direct timely and appropriate real-time actions, up to and including shedding of firm load, taking into account the curtailment order identified in the Open Access Transmission Tariff, to prevent or alleviate System Operating Limit (SOL) or Interconnection Reliability Operating Limit (IROL) violations. These actions are performed without obtaining approval from higher-level personnel within AECI's own Operating Authority.

If immediate action is not required during abnormal system conditions, the AECI System Operator shall consult with the Director of E&O, the Manager, System Operations, and/or the Supervisor, System Operations for assistance in determining the best course of action. The AECI System Operator may consult with Member/Owner G&Ts, Power Plant, Power Marketing and the Reliability Coordinator as appropriate.

Personnel Subject to Authority of AECI System Operator

The following personnel are subject to the authority of the AECI System Operator:

- All Control Room Operators for generating units within the AECI Balancing Authority area
- Member/Owner G&T dispatchers
- All AECI dispatchers in the control room not serving as the AECI System Operator
- AECI Power Marketers

Principal Activities

1. Support the G&Ts.
2. Dispatch AECI generating facilities cost effectively, while minimizing Area Control Error (ACE).
3. By observation of System Control and Data Acquisition (SCADA) displays and acknowledgment of alarms, monitor the power flows, voltages and status of equipment on the transmission system to ensure operation within accepted parameters.
4. Take and/or direct any and all necessary actions to ensure the safe and reliable operation of the Bulk Electric System, including observance of state estimator models and operations to a standard of N-1.
5. Comply with all applicable North American Electric Reliability Corporation (NERC) standards and Reliability Coordinator (RC) directives.
6. Operate the Automatic Generation Control (AGC) on Tie Line Frequency Bias, unless such operation is adverse to system or Interconnection reliability and investigate instances when AGC is automatically suspended due to problems with tie data.
7. Investigate and determine the cause for shifts in tie line power flows.
8. Following NERC guidelines, process tags for interchange schedules.
9. Process requests for transmission service while respecting all transfer capability limits.
10. Maintain Spinning Reserves as required by the Southwest Power Pool (SPP) Reserve Sharing Agreement and NERC Standards.
11. Respond to deviations of the Balancing Authority Ace Limits (BAAL), taking corrective action to support frequency on the Eastern Interconnect.
12. Create and issue switching orders and issue/release Clearance Orders and Hold Orders for AECI operated substations as needed.
13. Monitor the status of communications equipment and Headquarters building systems and notify appropriate personnel of abnormalities as needed.
14. Verify scheduled and actual energy interchange with adjacent Balancing Authorities.
15. Notify the Reliability Coordinator of Capacity or Energy Emergencies.
16. Initiate action and cooperate with the AECI Energy Management System (EMS) Team to repair and improve the EMS tool for use within System Operations.
17. Facilitate communication between personnel at AECI's generation facilities and the appropriate G&T as necessary to effect safe operations of the Bulk Electric System. Ensure continuity between shifts and facilitate good communications within System Operations by logging important information and providing reliable shift turnover