

Transmission & Distribution System Operations & Integrated Planning

(Job titles and job descriptions)

Real Time Operations

DIRECTOR, TRANSMISSION & DISTRIBUTION (T&D) SYSTEM OPERATIONS

Leads the development and implementation of plans, strategies, policies and processes for the operation and control of the provincial electric system and the implementation of the BC Hydro Open Access Transmission Tariff in real time.

SENIOR SYSTEM CONTROL MANAGER

Manages the overall control room's operation of the integrated electric system to ensure the security and reliability of service in the safest and most economical manner practical.

SYSTEM CONTROL MANAGER

Manages day to day operations of the control room's operation in support of the Senior System Control Manager.

SYSTEM OPERATOR

Responsible for the operation of transmission circuits, generating stations, substations or portions of substations as assigned by Operating Orders. A System Operator is a qualified electrical operator who is delegated the operation of an assigned portion of the power system. They shall be certified and accredited by relevant agencies or organizations as required. They may also be delegated other related duties which do not interfere with their operating responsibilities.

LOAD OPERATOR

Responsible for the operation of distribution circuits, generating stations, substations or portions of substations as assigned by Operating Orders. A Load Operator is a qualified electrical operator who is delegated the operation of an assigned portion of the power system. Their duties shall also include issuing instructions for safe, efficient and proper operation; issuing or authorizing safety protection guarantees; dealing with electrical disturbances and the restoration of service; communication with customers in matters of prearranged or accidental service interruptions. They may also be delegated other related duties which do not interfere with their operating responsibilities.

INTERCHANGE/PLANT OPERATOR

Administers the BC Hydro transmission services tariff as assigned and co-ordinates curtailments between BC Hydro and the affected balancing authority as directed by the transmission or generator coordinator. They shall also have charge of and be responsible for the operation of plants as assigned by Operating Orders. As a qualified electrical operator they may also be delegated other related duties which do not interfere with their primary responsibilities.

APPRENTICE INTERCHANGE PLANT OPERATOR

The Electrical Operator Apprenticeship program consists of a maximum of 24 months of classroom, on-the-job technical training and self-study leading to graduation into the role of Load Operator or Interchange/Plant Operator.

Operations Planning

MANAGER, OPERATIONS PLANNING

Leads the development and implementation of plans, strategies, policies, and processes for operational planning and outage coordination for the provincial electric system, and with neighbouring systems.

OPERATIONS PLANNING LEAD ENGINEER/ENGINEERS

Provides technical expertise in system analysis for the development of operating plans for the bulk electric system and regional/area operations. Focuses on short-term planning from one year to real time, and preparing operations plans, to determine transmission capacities available for wholesale transmission services, and enable Real Time Operations (RTO) to control the power system.

OUTAGE SCHEDULER

Assists the outage scheduling manager and operations planning engineers in providing operational planning support to real-time operating staff. They may also be delegated other related duties which do not interfere with their primary responsibilities.

Real Time Systems—Engineering Division

ENGINEER DIVISION MANAGER, REAL TIME SYSTEMS

Manages and provides technical direction to the Real Time Systems Group which is responsible for managing, administering and supporting real time systems and underlying infrastructure including NERC¹ CIP² compliance program for Transmission and Distribution System Operations.

SPECIALIST ENGINEER

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on resolving technically challenging issues and problems.

PRINCIPAL ENGINEER

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on resolving technically challenging issues and problems spanning in a large and complex area of engineering expertise.

POWER SYSTEMS APPLICATIONS ENGINEERING TEAM LEAD

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on setting priorities for the team.

NETWORK APPLICATIONS SENIOR ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on real time applications such as state estimation, contingency analysis, voltage stability and transient stability.

GENERATION ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on generation related applications such as Automatic Generation Control.

SIMULATION ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on dispatcher training simulator applications and training scenarios.

SCADA³ ENGINEERING TEAM LEAD

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on setting priorities for the team.

SCADA TEAM ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on applications for supervisory control and data acquisition.

EMS SYSTEMS ENGINEERING, ENGINEERING TEAM LEAD

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on setting priorities for the team.

EMS SYSTEMS ENGINEERING, TEAM ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on support of servers, firewalls and other equipment associated with Energy Management control system (EMS).

DMS SCADA/SYSTEMS ENGINEERING, ENGINEERING TEAM LEAD

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on setting priorities for the team that supports Distribution Management System (DMS) SCADA and infrastructure.

DMS SCADA/SYSTEMS ENGINEERING, TEAM ENGINEERS

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on support of SCADA and infrastructure related to Distribution Management System (DMS).

NERC CIP COMPLIANCE LEAD

Manages the NERC CIP compliance program for Transmission & Distribution System Operations. Focus on ensuring that all required CIP requirements are complied with and evidence of the compliance is collected.

EMS INFRASTRUCTURE WORK LEADER

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on supervising EMS Infrastructure Analysts work.

EMS INFRASTRUCTURE ANALYST

Provides expertise in managing, administering and supporting of real time control systems and underlying infrastructure. Focus on providing IT and NERC CIP compliance support to Systems Engineering team and NERC CIP compliance lead.

EMS USER INTERFACE SUPPORT ANALYST/SPECIALIST

Produces and tests the Energy Management System (EMS) displays used by Real Time Operations for the control and monitoring of the BC Hydro power system. Provides technical direction to several display builders.

Market Policy & Operations

MANAGER, MARKET POLICY AND OPERATIONS

Leads the development of plans, strategies, policies and practices related to the processing, scheduling, settlement and billing of all Open Access Transmission Tariff use of the BC Hydro system, including all associated energy schedules and ancillary services, in accordance with Interchange Scheduling and accounting policies and the Open Access Transmission Services Tariff.

TRANSMISSION COORDINATORS

Acts as Transmission Services agent for selling transmission services outlined in the Open Access Transmission Tariff; performs physical settlement of the energy flow between adjacent Balancing Authorities and reports to the WECC; provides customer and industry reports.

BUSINESS SYSTEM CONSULTANT

Provides data reporting for regulatory purposes. Assists the Manager, Market, Policy and Operations with sustainment of the business systems. Manages ad hoc projects as assigned by the Manager, Market Policy and Operations.

MARKETING & BUSINESS SUPPORT ANALYST

Performs settlement and billing function of Open Access Transmission Tariff transactions incurred by customers. Provides revenue reporting on transmission transactions and revenue forecasting.

TRANSMISSION CONTRACTS SPECIALIST

Facilitates the development and negotiation of Open Access Transmission Tariff Service Agreements and transmission agreements. Develops and maintains working relationships with a portfolio of wholesale transmission customers to maximize benefits to the customers and BC Hydro.

Asset Investment Management

TRANSMISSION CONTRACTS MANAGER

Manages and negotiates inter-utility transmission contracts and services. Direct the development of service agreements and transmission system studies complying with industry standards and requirements.

Grid Telecom

GRID TELCOM MANAGER

Responsible for the monitoring and coordinating fault resolution of the data and control paths traversing telecommunication assets at generating stations, substations or portions of substations as assigned by Operating Orders.

TELECOM INFRASTRUCTURE ENGINEERS

Provides expertise in managing, administering and supporting of real time telecom systems and underlying infrastructure. Their primary focus is on support of servers, firewalls and other equipment associated with real time telecom systems.

MANAGERS, TELECOM OPERATIONS CAPITAL PROJECTS PROCESSES SUPPORT & RESOURCE CENTER

Leads the development and implementation of plans, strategies, policies, and processes for telecom technology systems used for BC Hydro real-time operations of the province wide telecommunications system. Provides technical direction to Engineering, Field Communications, Protection & Control (CPC), and manages the Telecom Network Operations Infrastructure Engineers, Telecom Network Controllers, and CPC located at Edmonds whom are responsible for managing, administering and supporting real time telecom systems and underlying infrastructure. Also responsible for project delivery (Asset integration and data and control path changes), management of the Control Center Voice System, and the Telecom Support and Resource Center lab at Edmonds.

Reliability Coordination Operations

MANAGER, PROVINCIAL RELIABILITY COORDINATION OPERATIONS

Manages BC Hydro's provision of the Reliability Coordinator function for the province of BC in support of bulk electric system reliability for the registered entities of BC and the Western Interconnection, and in compliance with Mandatory Reliability Standards.

SENIOR ENGINEER/SPECIALIST ENGINEERS

This role is primarily focused on conducting operational planning analyses of the bulk electric system for the next-day time frame, sharing results with other entities and coordination of operating plans to mitigate any adverse system impacts. Additionally, this role provides support for the real-time function of the Reliability Coordinator.

RELIABILITY COORDINATION OPERATIONS SPECIALIST

This role is focused on conducting real-time assessments and monitoring of the bulk electric system on a 24x7 shift basis, sharing results with other entities and coordination of operations to mitigate any potential or actual adverse system impacts. They shall be certified and accredited by relevant agencies or organizations as required.

RELIABILITY COORDINATION COMPLIANCE ADVISOR

Performs day to day execution of all aspects to support compliance with Mandatory Reliability Standards for the Provincial Reliability Coordination Operations' department. Provides guidance, direction and education as a technical expert and maintains expertise and knowledge of the reliability standards program methodologies, policies, and practices published by BC Hydro and entities such as NERC and WECC.

¹ NERC—North American Electric Reliability Corporation

² CIP—Critical Infrastructure Protection

³ SCADA—Supervisory Control and Data Acquisition.