

PROJECT PROFILE / **BC HYDRO NERC CIP COMPLIANCE**

# A ROBUST PROGRAM SIGNIFICANTLY REDUCES COMPLIANCE ERRORS

Understanding and implementing North American Electric Reliability Corp. (NERC) Critical Infrastructure Protection (CIP) standards can be challenging for utilities. Compliance monitoring can help by investigating, reviewing and auditing to measure readiness and risks.



# PARTNERSHIP HELPS IMPROVE PROCESSES AND BUILD A STRONG TEAM

A collaborative effort aids in understanding compliance gaps and building an integrated team to tackle regulatory requirements

## PROJECT STATS

### CLIENT

BC Hydro

### LOCATION

British Columbia

### ANTICIPATED COMPLETION

April 2022

# 12

FUNCTIONAL REGISTRATIONS

# 100

NERC STANDARDS

# 600

INTERNAL CONTROLS PROCESSES

## MANAGING REGULATORY REQUIREMENTS AND OPERATIONS

BC Hydro is a Canadian utility company, distributing electricity to 1.8 million customers. It operates 32 hydroelectric and three natural gas-fueled power plants. We have been working with BC Hydro since 2016 supporting its NERC CIP compliance program, providing assistance on evidence submission to regulatory agencies around its processes and procedures. Upon completion of our initial scope and after looking at the utility's overall operations, we identified some key challenges in compliance operations and performed a preliminary assessment. This assessment highlighted improvement opportunities related to its compliance program, including areas of cybersecurity, physical security, and operations and planning that were affected by regulatory requirements. Specific focus

areas included but are not limited to workflow analysis, subject matter expert (SME) knowledge, process and procedures, and training pertaining to the compliance program.

## REGULATORY RISK MANAGEMENT AND COMPLIANCE SUPPORT

We partnered with BC Hydro to affirm its understanding of the risks posed by the applicable entities and oversee the effective implementation of a risk-based compliance monitoring and enforcement program. While NERC has provided general guidance on the various risk factors that are commonly understood for the North American grid, we assessed BC Hydro's current processes and understanding of specific risks identified by the Western Electricity Coordinating Council (WECC). This included the following:





- Discussion with BC Hydro system operations, planning, and compliance teams.
- Review of compliance narratives and evidence to verify sufficient quality and provide adequate interview training to enable BC Hydro to pass its audit.
- Assist with coordination in response to WECC data requests leading up to and during the 2017, 2019 and 2021 audits related to compliance evidence, as well as assisting with audit interviews, mitigation plans and liaising between BC Hydro SMEs and WECC auditors.
- Review of compliance narratives and evidence to verify sufficient quality for its 2018 and 2020 self-certification cycles.
- Review several years' annual British Columbia Utility Commission's Mandatory Reliability Standards (MRS) assessment report for sufficient

quality to verify new and revised MRS and NERC glossary of terms under assessment for potential adoption in British Columbia.

- Full staff augmentation assistance with root cause analysis, extent of condition evaluations, program improvement, milestone tracking and implementation efforts.
- Technology road map for all compliance-related technology systems (both information technology and operational technology), which focuses on asset management to include each NERC CIP asset's system of record, future integration, workflow and automation within the asset life cycle. This includes identifying future and intermediate states, assessing BC Hydro's existing tools, defining short-term opportunities for improvement as well as mid-term and

long-term approaches to systems implementation to support desired compliance outcomes and strategic initiatives.

- Implementation of governance compliance tool SigmaFlow to allow clear and consistent documentation of activities related to change management and patch management across all BC Hydro business units in relation to the British Columbia Utilities Commission's approved CIP reliability standards.

## RESULTS

BC Hydro has observed a programmatic reduction in compliance errors. Greater efficiency has been achieved across the organization. Now the utility has a fully integrated and involved executive management team. Upon project completion, BC Hydro's compliance program will have undergone a transformation with considerable improvements, significantly reducing the likelihood of noncompliance.



**BURNS  MCDONNELL**

*burnsmcd.com | Offices Worldwide*