

CANADA) IN THE MATTER OF
PROVINCE OF MANITOBA) the *National Energy Board Act* and
TO WIT:) the regulations made thereunder; and
) Order MO-036-2012; and
) Order AO-001-EP-196

I, ANTHONY ALAN CLARK, of the City of Winnipeg, in the Province of Manitoba,
DO SOLEMNLY DECLARE THAT:

1. I am the Division Manager of the Transmission Systems Operations Division of Manitoba Hydro.
 2. Manitoba Hydro is the holder of Certificates EC-111-16, EC-111-09 and EC-111-14 authorizing the construction and operation of the Riel international power line, the Letellier international power line, and the Richer international power line ("Certificates").
 3. Manitoba Hydro is the holder of Permit EP-196 authorizing the construction and operation of the Glenboro international power line ("Permit").
 4. Manitoba Hydro, as the holder of the Certificates and the Permit, provides the following report as required under Section 7 of Order MO-036-2012 and Section 7 of Order AO-001-EP-196 issued by the National Energy Board.
 5. The reliability standards adopted by the Province of Manitoba subsequent to the issuance of orders MO-036-2012 and AO-001-EP-196 pursuant to Manitoba Regulation 98 / 2014 that apply to the international power lines owned and operated by Manitoba Hydro are attached hereto in Appendix A. These reliability standards have been adopted by the Lieutenant Governor in Council as a provincial authority pursuant to The Manitoba Hydro Amendment and Public Utilities Board Amendment Act (Electricity Reliability) (S.M. 2009, c.17). Manitoba Hydro is obligated to comply with the listed standards by virtue of Section 5 of Reliability Standards Regulation (M.R. 25 / 2012 as amended by M.R. 98 / 2014).

AND I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath, and by virtue of the *Canada Evidence Act*.

DECLARED before me at the)
City of Winnipeg, in the)
Province of Manitoba, this 38th)
day of January, 2015.)

A Clark.

ANTHONY ALAN CLARK

Janell B.
A Notary Public in and for
the Province of Manitoba

Appendix A

Standard Reference Number and Name	Detailed Description
<u>BAL-005-0.2b Automatic Generation Control</u>	This standard establishes requirements for Balancing Authority Automatic Generation Control (AGC) necessary to calculate Area Control Error (ACE) and to routinely deploy the Regulating Reserve. The standard also ensures that all facilities and load electrically synchronized to the Interconnection are included within the metered boundary of a Balancing Area so that balancing of resources and demand can be achieved.
<u>CIP-001-2a Sabotage Reporting</u>	Disturbances or unusual occurrences, suspected or determined to be caused by sabotage, shall be reported to the appropriate systems, governmental agencies, and regulatory bodies.
<u>CIP-002-3 Cyber Security - Critical Cyber Asset Identification</u>	<p>NERC Standards CIP-002-3 through CIP-009-3 provide a cyber security framework for the identification and protection of Critical Cyber Assets to support reliable operation of the Bulk Electric System. These standards recognize the differing roles of each entity in the operation of the Bulk Electric System, the criticality and vulnerability of the assets needed to manage Bulk Electric System reliability, and the risks to which they are exposed.</p> <p>Business and operational demands for managing and maintaining a reliable Bulk Electric System increasingly rely on Cyber Assets supporting critical reliability functions and processes to communicate with each other, across functions and organizations, for services and data. This results in increased risks to these Cyber Assets.</p> <p>Standard CIP-002-3 requires the identification and documentation of the Critical Cyber Assets associated with the Critical Assets that support the reliable operation of the Bulk Electric System. These Critical Assets are to be identified through the application of a risk-based assessment.</p>
<u>CIP-003-3 Cyber Security - Security Management Controls</u>	Standard CIP-003-3 requires that Responsible Entities have minimum security management controls in place to protect Critical Cyber Assets. Standard CIP-003-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.

<u>CIP-004-3a Cyber Security - Personnel & Training</u>	Standard CIP-004-3 requires that personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets, including contractors and service vendors, have an appropriate level of personnel risk assessment, training, and security awareness. Standard CIP-004-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>CIP-005-3a Cyber Security - Electronic Security Perimeter(s)</u>	Standard CIP-005-3 requires the identification and protection of the Electronic Security Perimeter(s) inside which all Critical Cyber Assets reside, as well as all access points on the perimeter. Standard CIP-005-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>CIP-006-3c Cyber Security - Physical Security of Critical Cyber Assets</u>	Standard CIP-006-3 is intended to ensure the implementation of a physical security program for the protection of Critical Cyber Assets. Standard CIP-006-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>CIP-007-3 Cyber Security — Systems Security Management</u>	Standard CIP-007-3 requires Responsible Entities to define methods, processes, and procedures for securing those systems determined to be Critical Cyber Assets, as well as the other (non-critical) Cyber Assets within the Electronic Security Perimeter(s). Standard CIP-007-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>CIP-008-3 Cyber Security — Incident Reporting and Response Planning</u>	Standard CIP-008-3 ensures the identification, classification, response, and reporting of Cyber Security Incidents related to Critical Cyber Assets. Standard CIP-008-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>CIP-009-3 Cyber Security — Recovery Plans for Critical Cyber Assets</u>	Standard CIP-009-3 ensures that recovery plan(s) are put in place for Critical Cyber Assets and that these plans follow established business continuity and disaster recovery techniques and practices. Standard CIP-009-3 should be read as part of a group of standards numbered Standards CIP-002-3 through CIP-009-3.
<u>COM-001-1 Telecommunications</u>	Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.

<u>COM-002-2 Communication and Coordination</u>	To ensure Balancing Authorities, Transmission Operators, and Generator Operators have adequate communications and that these communications capabilities are staffed and available for addressing a real-time emergency condition. To ensure communications by operating personnel are effective.
<u>EOP-001-0.1b Emergency Operations Planning</u>	Each Transmission Operator and Balancing Authority needs to develop, maintain, and implement a set of plans to mitigate operating emergencies. These plans need to be coordinated with other Transmission Operators and Balancing Authorities, and the Reliability Coordinator.
<u>EOP-003-1 Load Shedding Plans</u>	A Balancing Authority and Transmission Operator operating with insufficient generation or transmission capacity must have the capability and authority to shed load rather than risk an uncontrolled failure of the Interconnection.
<u>EOP-004-1 Disturbance Reporting</u>	Disturbances or unusual occurrences that jeopardize the operation of the Bulk Electric System, or result in system equipment damage or customer interruptions, need to be studied and understood to minimize the likelihood of similar events in the future.
<u>EOP-005-1 System Restoration Plans</u>	To ensure plans, procedures, and resources are available to restore the electric system to a normal condition in the event of a partial or total shut down of the system.
<u>EOP-008-0 Plans for Loss of Control Center Functionality</u>	Each reliability entity must have a plan to continue reliability operations in the event its control center becomes inoperable.
<u>FAC-001-0 Facility Connection Requirements</u>	To avoid adverse impacts on reliability, Transmission Owners must establish facility connection and performance requirements.
<u>FAC-002-1 Coordination of Plans for New Generation, Transmission, and End-User Facilities</u>	To avoid adverse impacts on reliability, Generator Owners and Transmission Owners and electricity end-users must meet facility connection and performance requirements.
<u>FAC-003-1 Transmission Vegetation Management Program</u>	To improve the reliability of the electric transmission systems by preventing outages from vegetation located on transmission rights-of-way (ROW) and minimizing outages from vegetation located adjacent to ROW, maintaining clearances between transmission lines and vegetation on and along transmission ROW, and reporting vegetation -related outages of the transmission systems to the respective Regional Reliability Organizations (RRO) and the North American Electric Reliability Council (NERC).

<u>FAC-008-3 Facility Ratings</u>	To ensure that Facility Ratings used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on technically sound principles. A Facility Rating is essential for the determination of System Operating Limits.
<u>FAC-014-2 Establish and Communicate System Operating Limits</u>	To ensure that System Operating Limits (SOLs) used in the reliable planning and operation of the Bulk Electric System (BES) are determined based on an established methodology or methodologies.
<u>INT-004-2 Dynamic Interchange Transaction Modifications</u>	To ensure Dynamic Transfers are adequately tagged to be able to determine their reliability impacts.
<u>INT-006-3 Response to Interchange Authority</u>	To ensure that each Arranged Interchange is checked for reliability before it is implemented.
<u>IRO-001-1.1 Reliability Coordination - Responsibilities and Authorities</u>	Reliability Coordinators must have the authority, plans, and agreements in place to immediately direct reliability entities within their Reliability Coordinator Areas to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state. If a Reliability Coordinator delegates tasks to others, the Reliability Coordinator retains its responsibilities for complying with NERC and regional standards. Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another.
<u>IRO-004-2 Reliability Coordination - Operations Planning</u>	Each Reliability Coordinator must conduct next-day reliability analyses for its Reliability Coordinator Area to ensure the Bulk Electric System can be operated reliably in anticipated normal and Contingency conditions. System studies must be conducted to highlight potential interface and other operating limits, including overloaded transmission lines and transformers, voltage and stability limits, etc. Plans must be developed to alleviate System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) violations.
<u>IRO-005-3.1a Reliability Coordination - Current Day Operations</u>	The Reliability Coordinator must be continuously aware of conditions within its Reliability Coordinator Area and include this information in its reliability assessments. The Reliability Coordinator must monitor Bulk Electric System parameters that may have significant impacts upon the Reliability Coordinator Area and neighboring Reliability Coordinator Areas.

<u>IRO-010-1a – Reliability Coordinator Data Specification and Collection</u>	To prevent instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the interconnection by ensuring the Reliability Coordinator has the data it needs to monitor and assess the operation of its Reliability Coordinator Area.
<u>MOD-001-1a Available Transmission System Capability</u>	To ensure that calculations are performed by Transmission Service Providers to maintain awareness of available transmission system capability and future flows on their own systems as well as those of their neighbors
<u>MOD-004-1 Capacity Benefit Margin</u>	To promote the consistent and reliable calculation, verification, preservation, and use of Capacity Benefit Margin (CBM) to support analysis and system operations.
<u>MOD-008-1 Transmission Reliability Margin Calculation Methodology</u>	To promote the consistent and reliable calculation, verification, preservation, and use of Transmission Reliability Margin (TRM) to support analysis and system operations.
<u>MOD-010-0 Steady-State Data for Modeling and Simulation of the Interconnected Transmission System</u>	To establish consistent data requirements, reporting procedures, and system models to be used in the analysis of the reliability of the Interconnected Transmission Systems.
<u>MOD-012-0 Dynamics Data for Modeling and Simulation of the Interconnected Transmission System</u>	To establish consistent data requirements, reporting procedures, and system models to be used in the analysis of the reliability of the interconnected transmission systems.
<u>MOD-018-0 Treatment of Nonmember Demand Data and How Uncertainties are Addressed in the Forecasts of Demand and Net Energy for Load</u>	To ensure that Assessments and validation of past events and databases can be performed, reporting of actual demand data is needed. Forecast demand data is needed to perform future system assessments to identify the need for system reinforcement for continued reliability. In addition, to assist in proper real-time operating, load information related to controllable Demand-Side Management programs is needed.
<u>MOD-019-0.1 Reporting of Interruptible Demands and Direct Control Load Management</u>	To ensure that assessments and validation of past events and databases can be performed, reporting of actual demand data is needed. Forecast demand data is needed to perform future system assessments to identify the need for system reinforcement for continued reliability. In addition, to assist in proper real-time operating, load information related to controllable Demand-Side Management programs is needed.

<u>MOD-020-0 Providing Interruptible Demands and Direct Control Load Management Data to System Operators and Reliability Coordinators</u>	To ensure that assessments and validation of past events and databases can be performed, reporting of actual demand data is needed. Forecast demand data is needed to perform future system assessments to identify the need for system reinforcement for continued reliability. In addition to assist in proper real-time operating, load information related to controllable Demand-Side Management programs is needed.
<u>MOD-021-1 Documentation of the Accounting Methodology for the Effects of Demand-Side Management in Demand and Energy Forecasts.</u>	To ensure that assessments and validation of past events and databases can be performed, reporting of actual Demand data is needed. Forecast demand data is needed to perform future system assessments to identify the need for system reinforcement for continued reliability. In addition, to assist in proper real-time operating, load information related to Demand-Side Management (DSM) programs is needed.
<u>MOD-028-1 Area Interchange Methodology</u>	To increase consistency and reliability in the development and documentation of Transfer Capability calculations for short-term use performed by entities using the Area Interchange Methodology to support analysis and system operations.
<u>MOD-029-1a Rated System Path Methodology</u>	To increase consistency and reliability in the development and documentation of transfer capability calculations for short-term use performed by entities using the Rated System Path Methodology to support analysis and system operations.
<u>MOD-030-02 Flowgate Methodology</u>	To increase consistency and reliability in the development and documentation of transfer capability calculations for short-term use performed by entities using the Flowgate Methodology to support analysis and system operations.
<u>PER-001-0.2 Operating Personnel Responsibility and Authority</u>	Transmission Operator and Balancing Authority operating personnel must have the responsibility and authority to implement real-time actions to ensure the stable and reliable operation of the Bulk Electric System.
<u>PER-002-0 Operating Personnel Training</u>	Each Transmission Operator and Balancing Authority must provide their personnel with a coordinated training program that will ensure reliable system operation.

<u>PER-003-1 Operating Personnel Credentials</u>	To ensure that System Operators performing the reliability-related tasks of the Reliability Coordinator, Balancing Authority and Transmission Operator are certified through the NERC System Operator Certification Program when filling a Real-time operating position responsible for control of the Bulk Electric System.
<u>PER-005-1 System Personnel Training</u>	To ensure that System Operators performing real-time, reliability-related tasks on the North American Bulk Electric System (BES) are competent to perform those reliability-related tasks. The competency of System Operators is critical to the reliability of the North American Bulk Electric System.
<u>PRC-001-1 System Protection Coordination</u>	To ensure system protection is coordinated among operating entities.
<u>PRC-004-2a Analysis and Mitigation of Transmission and Generation Protection System Misoperations</u>	Ensure all transmission and generation Protection System Misoperations affecting the reliability of the Bulk Electric System (BES) are analyzed and mitigated.
<u>PRC-005-1b Transmission and Generation Protection System Maintenance and Testing</u>	To ensure all transmission and generation Protection Systems affecting the reliability of the Bulk Electric System (BES) are maintained and tested.
<u>PRC-007-0 Assuring Consistency of Entity Underfrequency Load Shedding Programs with Regional Reliability Organization's Underfrequency Load Shedding Program Requirements</u>	Provide last resort System preservation measures by implementing an Under Frequency Load Shedding (UFLS) program.
<u>PRC-008-0 Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program</u>	Provide last resort system preservation measures by implementing an Under Frequency Load Shedding (UFLS) program.
<u>PRC-009-0 Analysis and Documentation of Underfrequency Load Shedding Performance Following an Underfrequency Event</u>	Provide last resort System preservation measures by implementing an Under Frequency Load Shedding (UFLS) program.
<u>PRC-010-0 Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program</u>	Provide System preservation measures in an attempt to prevent system voltage collapse or voltage instability by implementing an Undervoltage Load Shedding (UVLS) program.
<u>PRC-011-0 Undervoltage Load Shedding System Maintenance and Testing</u>	Provide system preservation measures in an attempt to prevent system voltage collapse or voltage instability by implementing an Undervoltage Load Shedding (UVLS) program.

<u>PRC-015-0 Special Protection System Data and Documentation</u>	To ensure that all Special Protection Systems (SPS) are properly designed, meet performance requirements, and are coordinated with other protection systems. To ensure that maintenance and testing programs are developed and misoperations are analyzed and corrected.
<u>PRC-016-0.1 Special Protection System Misoperations</u>	To ensure that all Special Protection Systems (SPS) are properly designed, meet performance requirements, and are coordinated with other protection systems. To ensure that maintenance and testing programs are developed and misoperations are analyzed and corrected.
<u>PRC-017-0 Special Protection System Maintenance and Testing</u>	To ensure that all Special Protection Systems (SPS) are properly designed, meet performance requirements, and are coordinated with other protection systems. To ensure that maintenance and testing programs are developed and misoperations are analyzed and corrected.
<u>PRC-018-1 Disturbance Monitoring Equipment Installation and Data Reporting</u>	Ensure that Disturbance Monitoring Equipment (DME) is installed and that Disturbance data is reported in accordance with regional requirements to facilitate analyses of events.
<u>PRC-021-1 Under-Voltage Load Shedding Program Data</u>	Ensure data is provided to support the Regional database maintained for Under-Voltage Load Shedding (UVLS) programs that were implemented to mitigate the risk of voltage collapse or voltage instability in the Bulk Electric System (BES).
<u>PRC-022-1 Under-Voltage Load Shedding Program Performance</u>	Ensure that Under Voltage Load Shedding (UVLS) programs perform as intended to mitigate the risk of voltage collapse or voltage instability in the Bulk Electric System (BES).
<u>PRC-023-1 Transmission Relay Loadability</u>	Protective relay settings shall not limit transmission loadability; not interfere with system operators' ability to take remedial action to protect system reliability and; be set to reliably detect all fault conditions and protect the electrical network from these faults.
<u>TOP-001-1a Reliability Responsibilities and Authorities</u>	To ensure reliability entities have clear decision-making authority and capabilities to take appropriate actions or direct the actions of others to return the transmission system to normal conditions during an emergency.
<u>TOP-002-2.1b Normal Operations Planning</u>	Current operations plans and procedures are essential to being prepared for reliable operations, including response for unplanned events.
<u>TOP-003-1 Planned Outage Coordination</u>	Scheduled generator and transmission outages that may affect the reliability of interconnected operations must be planned and coordinated among Balancing Authorities, Transmission Operators, and Reliability Coordinators.

<u>TOP-004-2 Transmission Operations</u>	To ensure that the transmission system is operated so that instability, uncontrolled separation, or cascading outages will not occur as a result of the most severe single Contingency and specified multiple Contingencies.
<u>TOP-005-2a Operational Reliability Information</u>	To ensure reliability entities have the operating data needed to monitor system conditions within their areas.
<u>TOP-006-2 Monitoring System Conditions</u>	To ensure critical reliability parameters are monitored in real-time.
<u>TOP-007-0 Reporting System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations</u>	This standard ensures SOL and IROL violations are being reported to the Reliability Coordinator so that the Reliability Coordinator may evaluate actions being taken and direct additional corrective actions as needed.
<u>TOP-008-1 Response to Transmission Limit Violations</u>	To ensure Transmission Operators take actions to mitigate SOL and IROL violations.
<u>TPL-001-0.1 System Performance Under Normal (No Contingency) Conditions (Category A)</u>	System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements with sufficient lead time, and continue to be modified or upgraded as necessary to meet present and future system needs.
<u>TPL-002-0b System Performance Following Loss of a Single Bulk Electric System Element (Category B)</u>	System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements with sufficient lead time, and continue to be modified or upgraded as necessary to meet present and future system needs.
<u>TPL-003-0a System Performance Following Loss of Two or More Bulk Electric System Elements (Category C)</u>	System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements, with sufficient lead time and continue to be modified or upgraded as necessary to meet present and future System needs.
<u>TPL-004-0 System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D)</u>	System simulations and associated assessments are needed periodically to ensure that reliable systems are developed that meet specified performance requirements, with sufficient lead time and continue to be modified or upgraded as necessary to meet present and future System needs.
<u>VAR-001-2 Voltage and Reactive Control</u>	To ensure that voltage levels, reactive flows, and reactive resources are monitored, controlled, and maintained within limits in real time to protect equipment and the reliable operation of the Interconnection.