

**Fred James**

Chief Regulatory Officer

Phone: 604-623-4046

Fax: 604-623-4407

[bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com)

Via Canada Energy Regulator Website

January 22, 2021

Jean-Denis Charlebois  
Secretary of the Board  
Canada Energy Regulator  
Electricity Reliability  
Suite 210, 517 Tenth Avenue SW  
Calgary, Alberta T2R 0A8

Dear Mr. Charlebois:

**RE: Canada Energy Regulator (CER)  
British Columbia Hydro and Power Authority (BC Hydro)  
Compliance with National Energy Board (now CER) Order MO-036-2012,  
Order for Electricity Reliability Standards  
File OF-Fac-ElecGen-Rel-IPL 05**

---

BC Hydro is writing in compliance with CER Order MO-036-2012 (**Order**) to provide its declaration that it is maintaining the record required under subsection 6(1) of the Order and to provide a copy of the record.

BC Hydro holds authorizations, in the form of International Power Line (**IPL**) Certificates, for CER regulated IPLs that BC Hydro owns and operates for exporting electricity to the United States (**U.S.**). These authorizations are identified in the Order Appendix as Certificate Nos. EC-III-12, EC-III-04 and EC-III-10 for IPLs designated as 5L51, 5L52 and 2L112 respectively.

BC Hydro declares that it is maintaining a record in the form of Attachment 1 that lists:

- (a) The identity of the provincial authority or standards development authority whose reliability standards the holder of the certificate is complying with for the purposes of sections 3 and 5 of the Order;
- (b) The names and reference numbers of the reliability standards that are applicable to the IPLs listed above for which BC Hydro is the certificate holder; and
- (c) The reasons why BC Hydro is complying with those reliability standards.

BC Hydro proposes that reliability standards applicable to IPLs are those that meet the following criteria (**Criteria**):

1. They are mandatory within a provincial authority framework; and
2. They are applicable to Transmission Owner (**TO**), Transmission Operator (**TOP**), Transmission Planner (**TP**) and Transmission Service Provider (**TSP**) reliability standard functional registrations within that provincial authority framework.

The British Columbia Utilities Commission (**BCUC**) has exclusive authority within British Columbia (**B.C.**), pursuant to section 125.2 of the B.C. *Utilities Commission Act*, to adopt and enforce reliability standards that are developed by the North American Electric Reliability Corporation (**NERC**), Western Electricity Coordinating Council (**WECC**), or other prescribed standard making body. If the BCUC determines that a reliability standard is required to maintain or achieve consistency between B.C. and other jurisdictions that have adopted the reliability standard, these same standards must be adopted in B.C. In order to reject a standard, the BCUC must determine that the standard is not in the public interest in B.C. Further, the BCUC cannot amend any reliability standard developed by the above standard making bodies nor can it, without the approval of the Provincial Government, set a standard or rule pertaining to a matter addressed by a reliability standard that has been assessed. The BCUC generally conducts this standards assessment annually. As a result of this assessment and approval process, there is normally a delay from the date a standard is approved in the U.S. to the date on which it is adopted in B.C.

On March 6, 2013 and subsequently each year by January 30, BC Hydro provided to the CER its record of the names and reference numbers of the reliability standards that are effective in B.C. as of January 30 and applicable to the IPLs. Attachment 1 outlines the changes to the applicable reliability standards since the January 30 list was last filed. The reliability standards listed in Attachment 1 are approved by the BCUC and effective in B.C. as of January 30, 2021.

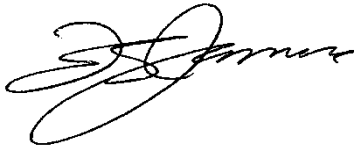
BC Hydro is complying with the reliability standards listed in Attachment 1 for the following reasons:

1. The identified reliability standard has been determined by the BCUC to be required to maintain or achieve consistency between B.C. and other jurisdictions that have adopted the reliability standard and has been adopted by the BCUC as a mandatory reliability standard in B.C. under the British Columbia Mandatory Reliability Standard Program (**B.C. MRS Program**);
2. The identified reliability standard applies to one or more of the TO, TOP, TP and TSP functional registrations under the B.C. MRS Program and therefore is applicable to the IPLs for which BC Hydro is the certificate holder; and

BC Hydro is registered for each of the TO, TOP, TP and TSP functions under the B.C. MRS Program and is therefore required to comply with each of the reliability standards for the IPLs for which BC Hydro is the certificate holder.

For further information, please contact Lynne Foster at 604-623-3918 or by email at [bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com).

Yours sincerely,



Fred James  
Chief Regulatory Officer

al/ma

Enclosure (1)

Copy to: **BCUC**  
Attention: Marija Tresoglavic  
[commission.secretary@bcuc.com](mailto:commission.secretary@bcuc.com)

**Teck Cominco Metals Ltd.**  
Attention: Peter Rozee  
[peter.rozee@teckcominco.com](mailto:peter.rozee@teckcominco.com)

---

**BC Hydro Compliance with CER Order MO-036-2012  
for Electricity Reliability Standards**

---

**Attachment 1**

**BC Hydro's IPLs (International Power Lines)  
Standards List Adopted as of January 30, 2021**

# Introduction

## CER Order No. MO-036-2012 – Directive 6 (1)

- |      |   |  |
|------|---|--|
| 6(1) | The holder of a certificate shall maintain a record, in the form of a spreadsheet, that contains:   | CER Certificate Holder: BC Hydro Certificates No: EC-III-12, EC-III-04 and EC-III-10.  |
| (a)  | The identity of the provincial authority or standards development authority whose reliability standards the holder of the certificate is complying with for the purposes of sections 3 and 5; | BCUC has authority under the B.C. <i>Utilities Commission Act</i> to adopt and enforce reliability standards developed by NERC and WECC.   |
| (b)  | The names and any reference numbers of the reliability standards applicable to the IPL; and   | The reliability standard reference numbers that are applicable to the IPL regulated by the certificates referenced above are as listed in Table 1 below.   |
| (c)  | The reasons why the holder is complying with those reliability standards.   | The certificate holder is complying with the standards listed in Table 1 because the identified version of the reliability standard is mandatory in B.C. and applies to one or more of the following reliability standard functional registrations: The Certificate holder is registered as TO, TOP, TP and TSP with the BCUC. |

# BC Hydro's IPLs Standards List

**Table 1: Names and Reference Numbers of Reliability Standards Applicable to BC Hydro IPLs (as of January 30, 2021)**

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>CIP</b>	<b>Critical Infrastructure Protection</b>					
CIP-002-5.1a	Cyber Security – BES Cyber System Categorization	R-33-18	X	X		
<del>CIP-003-7<sup>1</sup></del>	<del>Cyber Security – Security Management Controls</del>	<del>R-21-19</del>	<del>X</del>	<del>X</del>		
CIP-003-8 <sup>2</sup>	Cyber Security – Security Management Controls	R-19-20	X	X		
CIP-004-6	Cyber Security – Personnel & Training	R-39-17	X	X		
CIP-005-5	Cyber Security – Electronic Security Perimeter(s)	R-38-15	X	X		
CIP-006-6	Cyber Security – Physical Security of BES Cyber Systems	R-39-17	X	X		
CIP-007-6	Cyber Security – System Security Management	R-39-17	X	X		
CIP-008-5	Cyber Security – Incident Reporting and Response Planning	R-38-15	X	X		
CIP-009-6	Cyber Security – Recovery Plans for BES Cyber Systems	R-39-17	X	X		
CIP-010-2	Cyber Security – Configuration Change Management and Vulnerability Assessments	R-39-17	X	X		
CIP-011-2	Cyber Security – Information Protection	R-39-17	X	X		
CIP-014-2	Physical Security	R-32-16	X	X		
<b>COM</b>	<b>Communications</b>					
COM-001-3	Communications	R-39-17		X		
COM-002-4	Operating Personnel Communications Protocols	R-32-16		X		

<sup>1</sup> CIP-003-7 is superseded by CIP-003-8.

<sup>2</sup> Preceded by CIP-003-7. CIP-003-8 effective as of October 1, 2020 with the exception of R1.2.2, R1.2.3 (effective October 1, 2023) and R1.2.5, R1.2.6 (effective October 1, 2021).

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>EOP</b>	<b>Emergency Preparedness and Operations</b>					
EOP-003-1	Load Shedding Plans	G-67-09		X		
<del>EOP-004-3<sup>3</sup></del>	<del>Event Reporting</del>	<del>R-39-17</del>	<del>X</del>	<del>X</del>		
EOP-004-4 <sup>4</sup>	Event Reporting	R-21-19	X	X		
<del>EOP-005-2<sup>5</sup></del>	<del>System Restoration and Blackstart Resources</del>	<del>R-32-14</del>	<del>X</del>	<del>X</del>		
EOP-005-3 <sup>6</sup>	System Restoration from Blackstart Resources	R-21-19	X	X		
<del>EOP-008-1<sup>7</sup></del>	<del>Loss of Control Center Functionality</del>	<del>R-32-14</del>		<del>X</del>		
EOP-008-2 <sup>8</sup>	Loss of Control Center Functionality	R-21-19		X		
EOP-010-1 <sup>9</sup>	Geomagnetic Disturbance Operations	R-38-15		X		
EOP-011-1 <sup>10</sup>	Emergency Operations	R-39-17		X		
<b>FAC</b>	<b>Facilities Design, Connections, and Maintenance</b>					
FAC-001-3	Facility Interconnection Requirements	R-33-18	X			
FAC-002-2	Facility Interconnection Studies	R-38-15	X		X	
FAC-003-4	Transmission Vegetation Management	R-39-17	X			
FAC-008-3 <sup>11</sup>	Facility Ratings	R-32-14	X			
FAC-014-2 <sup>12</sup>	Establish and Communicate System Operating Limits	G-167-0		X	X	
<del>FAC-501-WECC-1<sup>13</sup></del>	<del>Transmission Maintenance</del>	<del>R-1-13</del>	<del>X</del>			
FAC-501-WECC-2 <sup>14</sup>	Transmission Maintenance	R-21-19	X			
<b>INT</b>	<b>Interchange Scheduling and Coordination</b>					
INT-006-4	Evaluation of Interchange Transactions	R-38-15				X

<sup>3</sup> EOP-004-3 is superseded by EOP-004-4.

<sup>4</sup> Preceded by EOP-004-3. EOP-004-4 is effective October 1, 2020.

<sup>5</sup> EOP-005-2 is superseded by EOP-005-3.

<sup>6</sup> Preceded by EOP-005-2. EOP-005-3 is effective October 1, 2020.

<sup>7</sup> EOP-008-1 is superseded by EOP-008-2.

<sup>8</sup> Preceded by EOP-008-1. EOP-008-2 is effective October 1, 2020.

<sup>9</sup> Only R3 is applicable to the TOP function. R1 and R2 are not applicable to TOP or other transmission functions.

<sup>10</sup> Only R1 and R4 are applicable to the TOP function. R2, R3, R5 and R6 are not applicable to the TOP or other transmission functions.

<sup>11</sup> R4 and R5 retired on January 21, 2014.

<sup>12</sup> Only R2, R4 and certain sub-requirements of R5 are applicable to the TOP and TP functions. R1, R3, R5.1, R5.3 and R6 are not applicable to transmission functions.

<sup>13</sup> FAC-501-WECC-1 is superseded by FAC-501-WECC-2.

<sup>14</sup> Preceded by FAC-501-WECC-1. FAC-501-WECC-2 is effective October 1, 2019.

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>IRO</b>	<b>Interconnection Reliability Operations and Coordination</b>					
IRO-001-4	Reliability Coordination – Responsibilities	R-39-17		X		
IRO-005-3.1a <sup>15</sup>	Reliability Coordination — Current Day Operations	R-32-14		X		X
<del>IRO-010-1a<sup>16</sup></del>	<del>Reliability Coordinator Data</del>	<del>R-1-13</del>	<del>X</del>	<del>X</del>		
IRO-010-2 <sup>17</sup>	Reliability Coordinator Data Specification and Collection	R-39-17	X	X		
IRO-017-1 <sup>18</sup>	Outage Coordination	R-39-17		X	X	
<b>MOD</b>	<b>Modeling, Data, and Analysis</b>					
MOD-001-1a	Available Transmission System Capability	G-175-11		X		X
MOD-004-1	Capacity Benefit Margin	G-175-11			X	X
MOD-008-1	Transmission Reliability Margin Calculation Methodology	G-175-11		X		
MOD-010-0	Steady-State Data for Modeling and Simulation of the Interconnected Transmission System	G-67-09	X		X	
MOD-012-0	Dynamics Data for Modeling and Simulation of the Interconnected Transmission System	G-67-09	X		X	
MOD-020-0	Providing Interruptible Demands and Direct Control Load Management Data to System Operators and Reliability Coordinators	G-67-09			X	
<del>MOD-026-1<sup>19</sup></del>	<del>Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions</del>	<del>R-38-15</del>			<del>X</del>	
<del>MOD-027-1<sup>20</sup></del>	<del>Verification of Models and Data for Turbine/Governor and Load Control or Active Power/Frequency Control Function</del>	<del>R-38-15</del>			<del>X</del>	
MOD-028-2	Area Interchange Methodology	R-32-14		X		X
MOD-029-2a	Rated System Path Methodology	R-39-17		X		X
MOD-030-3	Flowgate Methodology	R-39-17		X		X

<sup>15</sup> R1- R8 and R12 retired on September 30, 2017. R9 retired March 31, 2019.

<sup>16</sup> IRO-010-1a is superseded by IRO-010-2.

<sup>17</sup> Preceded by IRO-010-1a. IRO-010-2 is effective April 1, 2019.

<sup>18</sup> Preceded by IRO-005-3.1a, TOP-002-2.1b, TOP-003-1, TOP-004-2. IRO-017-1 is effective October 1, 2020.

<sup>19</sup> Removed from list as not applicable to BC Hydro IPLs.

<sup>20</sup> Removed from list as not applicable to BC Hydro IPLs.



Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
MOD-031-2	Demand and Energy Data	R-39-17			X	
<b>PER</b>	<b>Personnel Performance, Training, and Qualifications</b>					
PER-001-0.2	Operating Personnel Responsibility and Authority	R-41-13		X		
<del>PER-003-1<sup>21</sup></del>	<del>Operating Personnel Credentials</del>	<del>R-41-13</del>		<del>X</del>		
PER-003-2 <sup>22</sup>	Operating Personnel Credentials	R-21-19		X		
PER-005-2	Operations Personnel Training	R-38-15	X	X		
<b>PRC</b>	<b>Protection and Control</b>					
PRC-001-1.1 (ii)	System Protection Coordination	R-32-16		X		
PRC-002-2 <sup>23</sup>	Disturbance Monitoring and Reporting Requirements	R-32-16	X			
PRC-004-5(i)	Protection System Misoperation Identification and Correction	R-32-16	X			
PRC-004-WECC-2	Protection System and Remedial Action Scheme Misoperation	R-39-17	X	X		
PRC-005-6	Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance	R-39-17	X			
PRC-007-0	Assuring Consistency of Entity Underfrequency Load Shedding Programs with Regional Reliability Organization's Underfrequency Load Shedding Program Requirements	G-67-09	X	X		
PRC-008-0	Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program	G-67-09	X			
PRC-009-0	Analysis and Documentation of Underfrequency Load Shedding Performance Following an Underfrequency Event	G-67-09	X	X		
PRC-010-0 <sup>24</sup>	Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program	G-67-09	X	X		

<sup>21</sup> PER-003-1 is superseded by PER-003-2.

<sup>22</sup> Supersedes PER-003-1 and PER-004-2. PER-003-2 is effective April 1, 2020.

<sup>23</sup> The effective dates are as follows: R1 and R5 are effective on April 1, 2017; R12 is effective on July 1, 2017; and R2-R4 & R6-R11: 50 per cent completion on April 1, 2021 and 100 per cent completion on April 1, 2023. R5 is not applicable to BC Hydro IPLs.

<sup>24</sup> R2 retired on January 21, 2014.

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
PRC-011-0	Undervoltage Load Shedding System Maintenance and Testing	G-67-09	X			
PRC-015-1	Remedial Action Scheme Data and Documentation	R-39-17	X			
PRC-016-1	Remedial Action Scheme Misoperations	R-39-17	X			
PRC-017-1	Remedial Action Scheme Maintenance and Testing	R-39-17	X			
PRC-018-1	Disturbance Monitoring Equipment Installation and Data Reporting	G-67-09	X			
PRC-019-2 <sup>25</sup>	Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	R-32-16	X			
PRC-021-1	Under-Voltage Load Shedding Program Data	G-67-09	X			
PRC-022-1 <sup>26</sup>	Under-Voltage Load Shedding Program Performance	G-67-09		X		
PRC-023-4 <sup>27</sup>	Transmission Relay Loadability	R-39-17	X			
<b>TOP</b>	<b>Transmission Operations</b>					
TOP-001-1a	Reliability Responsibilities and Authorities	R-1-13		X		
TOP-002-2.1b <sup>28</sup>	Normal Operations Planning	R-41-13		X		X
TOP-003-1 <sup>29</sup>	Planned Outage Coordination	R-1-13		X		
TOP-003-3	Operational Reliability Data	R-39-17		X		
TOP-004-2 <sup>30</sup>	Transmission Operations	G-167-10		X		
<del>TOP-005-2a</del> <sup>31</sup>	<del>Operational Reliability Information</del>	<del>R-1-13</del>		<del>X</del>		
TOP-006-2 <sup>32</sup>	Monitoring System Conditions	R-1-13		X		
TOP-007-0 <sup>33</sup>	Reporting System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations	G-67-09		X		
TOP-008-1	Response to Transmission Limit Violations	G-67-09		X		

<sup>25</sup> PRC-019-2 effective dates are as follows: R1-R2: 40 per cent completion on October 1, 2017, 60 per cent completion on October 1, 2018, 80 per cent completion on October 1, 2019 and original 100 per cent completion on October 1, 2020. However, six-month extension given due to COVID-19 (October 1, 2020 effective date delayed to April 1, 2021).

<sup>26</sup> R2 retired on January 21, 2014.

<sup>27</sup> PRC-023-4 R1-R5 is effective as of October 1, 2017 with respect to Circuits per sections 4.2.1.1 and 4.2.1.4. R1-R5 with respect to Circuits per sections 4.2.1.2, 4.2.1.3, 4.2.1.5 and 4.2.1.6 and R6 are not adopted.

<sup>28</sup> R3, R4 retired October 1, 2020, R14-R19 retired March 31, 2019.

<sup>29</sup> R1 retired on March 31, 2019 and R2, R4 retired on September 30, 2020.

<sup>30</sup> R5 retired on July 26, 2017.

<sup>31</sup> TOP-005-2a retired on March 31, 2019. Superseded by TOP-003-3 and IRO-010-2.

<sup>32</sup> R3, R4, R6 retired on March 31, 2019.

<sup>33</sup> R4 retired on September 30, 2017.

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>TPL</b>	<b>Transmission Planning</b>					
<del>TPL-001-0.1<sup>34</sup></del>	<del>System Performance Under Normal (No Contingency) Conditions (Category A)</del>	<del>G-167-10</del>			X	
TPL-001-4 <sup>35</sup>	Transmission System Planning Performance requirements	R-27-18A			X	
<del>TPL-002-0b<sup>36</sup></del>	<del>System Performance Following Loss of a Single Bulk Electric System Element (Category B)</del>	<del>R-1-13</del>			X	
<del>TPL-003-0b<sup>37</sup></del>	<del>System Performance Following Loss of Two or More Bulk Electric System Elements (Category C)</del>	<del>R-32-14</del>			X	
<del>TPL-004-0a<sup>38</sup></del>	<del>System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D)</del>	<del>R-32-14</del>			X	
<b>VAR</b>	<b>Voltage and Reactive</b>					
VAR-001-5	Voltage and Reactive Control	R-21-19		X		

<sup>34</sup> TPL-001-0.1 is superseded by TPL-001-4.

<sup>35</sup> Preceded TPL-001-0.1, TPL-002-0b, TPL-003-0b and TPL-004-0a. TPL-001-4 is effective July 1, 2020. R7 is held in abeyance.

<sup>36</sup> TPL-002-0b is superseded by TPL-001-4.

<sup>37</sup> TPL-003-0b is superseded by TPL-001-4.

<sup>38</sup> TPL-004-0a is superseded by TPL-001-4.