

**Chris Sandve**

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Via Canada Energy Regulator Website

January 27, 2022

Ramona Sladic  
Secretary of the Board  
Canada Energy Regulator  
Electricity Reliability  
Suite 210, 517 Tenth Avenue SW  
Calgary, Alberta T2R 0A8

Dear Ramona Sladic:

**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**

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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. 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 has concluded 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, 2022.

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
3. 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.

January 27, 2022  
Ramona Sladic  
Secretary of the Board  
Electricity Reliability  
Canada Energy Regulator (CER)  
Compliance with National Energy Board (now CER) Order MO-036-2012,  
Order for Electricity Reliability Standards  
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**Page 3 of 3**

For further information, please contact Chris Sandve at 604-974-4641 or by email at [bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com).

Yours sincerely,



Chris Sandve  
Chief Regulatory Officer

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Enclosure (1)

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

**Teck Cominco Metals Ltd.**  
Attention: Peter Rozee  
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**BC Hydro Compliance with CER Order MO-036-2012  
for Electricity Reliability Standards**

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**Attachment 1**

**BC Hydro's IPLs (International Power Lines)  
Standards List Adopted as of January 30, 2022  
Revision 1 – May 18, 2022**

# 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.	BC Hydro 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: BC Hydro 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, 2022)**

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 <sup>1</sup>	Cyber Security – BES Cyber System Categorization	R-33-18	X	X		
CIP-003-8 <sup>1</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-003-8 effective as of October 1, 2020 with the exception of R1.2.2, R1.2.3 (effective October 1, 2023).

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		
EOP-004-4	Event Reporting	R-21-19	X	X		
EOP-005-3 <sup>2</sup>	System Restoration from Blackstart Resources	R-21-19	X	X		
EOP-008-2 <sup>3</sup>	Loss of Control Center Functionality	R-21-19		X		
EOP-010-1 <sup>4</sup>	Geomagnetic Disturbance Operations	R-38-15		X		
EOP-011-1 <sup>5</sup>	Emergency Operations	R-39-17		X		
<b>FAC</b>	<b>Facilities Design, Connections, and Maintenance</b>					
FAC-001-3 <sup>6</sup>	Facility Interconnection Requirements	R-33-18	X			
FAC-002-2 <sup>7</sup>	<del>Facility Interconnection Studies</del>	<del>R-38-15</del>	<del>X</del>		<del>X</del>	
FAC-002-3 <sup>8</sup>	Facility Interconnection Studies	R-21-21	X		X	
FAC-003-4	Transmission Vegetation Management	R-39-17	X			
FAC-008-3 <sup>9</sup>	Facility Ratings	R-32-14	X			
FAC-014-2 <sup>10</sup>	Establish and Communicate System Operating Limits	G-167-0		X	X	
FAC-501-WECC-2	Transmission Maintenance	R-21-19	X			
<b>INT</b>	<b>Interchange Scheduling and Coordination</b>					
INT-006-4 <sup>11</sup>	Evaluation of Interchange Transactions	R-38-15				X

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>IRO</b>	<b>Interconnection Reliability Operations and Coordination</b>					

<sup>2</sup> R12-R16 are not applicable to TO, TOP or other transmission functions.  
<sup>3</sup> R3 is not applicable to TOP or other transmission functions.  
<sup>4</sup> R1 and R2 are not applicable to TOP or other transmission functions.  
<sup>5</sup> R2, R3, R5 and R6 are not applicable to the TOP or other transmission functions.  
<sup>6</sup> R2 and R4 are not applicable to the TO or other transmission functions.  
<sup>7</sup> FAC-002-2 is superceded by FAC-002-3.  
<sup>8</sup> Preceded by FAC-002-2. FAC-002-3 is effective January 1, 2022.  
<sup>9</sup> R4 and R5 retired on January 21, 2014.  
<sup>10</sup> R1, R3, R5.1, R5.3 and R6 are not applicable to transmission functions.  
<sup>11</sup> R1, R3-R5 are not applicable to TSP or other transmission functions.

IRO-001-4 <sup>12</sup>	Reliability Coordination – Responsibilities	R-39-17		X		
IRO-005-3.1a <sup>13</sup>	Reliability Coordination — Current Day Operations	R-32-14		X		X
<del>IRO-010-2<sup>14</sup></del>	<del>Reliability Coordinator Data Specification and Collection</del>	<del>R-39-17</del>	X	X		
IRO-010-3 <sup>15</sup>	Reliability Coordinator Data Specification and Collection	R-21-21	X	X		
IRO-017-1 <sup>16</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 <sup>17</sup>	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	
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
<del>MOD-031-2<sup>18</sup></del>	<del>Demand and Energy Data</del>	<del>R-39-17</del>			X	
MOD-031-3 <sup>19</sup>	Demand and Energy Data	R-21-21			X	
Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>PER</b>	<b>Personnel Performance, Training, and Qualifications</b>					

<sup>12</sup> R1 is not applicable to TOP or other transmission functions.

<sup>13</sup> R1- R5, R8 and R12 retired on September 30, 2017. R6 and R7 retired September 30, 2020. R9 retired March 31, 2019. R10 retired March 31, 2021. R11 only remains effective.

<sup>14</sup> IRO-010-2 is superseded by IRO-010-3

<sup>15</sup> Preceded by IRO-010-2. IRO-010-3 is effective January 1, 2022. R1 and R2 are not applicable to TO or TOP or other transmission functions.

<sup>16</sup> R1 is not applicable to TOP or TP or other transmission functions.

<sup>17</sup> R3, R4 and R10 are not applicable to TP or TSP or other transmission functions.

<sup>18</sup> MOD-031-2 is superseded by MOD-031-3.

<sup>19</sup> Preceded by MOD-031-2. MOD-031-3 is effective January 1, 2022. R1 and R3 are not applicable to TP or other transmission functions.



PER-001-0.2 <sup>20</sup>	Operating Personnel Responsibility and Authority	R-41-13		X		
PER-003-2 <sup>21</sup>	Operating Personnel Credentials	R-21-19		X		
PER-005-2 <sup>22</sup>	Operations Personnel Training	R-38-15	X	X		
<b>PRC</b>	<b>Protection and Control</b>					
PRC-001-1.1 (ii) <sup>23</sup>	System Protection Coordination	R-32-16		X		
PRC-002-2 <sup>24</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 <sup>25</sup>	Protection System and Remedial Action Scheme Misoperation	R-39-17	X	X		
PRC-005-1.1b <sup>26</sup>	Transmission and Generation Protection System Maintenance and Testing	R-32-14	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 <sup>27</sup>	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>28</sup>	Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program	G-67-09	X	X		

<sup>20</sup> PER-001-0.2 is superceded by TOP-001-4.

<sup>21</sup> R1 and R3 are not applicable to TOP or other transmission functions.

<sup>22</sup> R6 is not applicable to TO or TOP or other transmission functions.

<sup>23</sup> PRC-001-1.1 (ii) is superceded by PER-006-1 (not IPL applicable), PRC-027-1 and other reliability standards.

<sup>24</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 percent completion on April 1, 2021 and 100 percent completion on April 1, 2023. R5 is not applicable to BC Hydro IPLs.

<sup>25</sup> PRC-004-WECC-2 retired September 30, 2021 with no superceding standard.

<sup>26</sup> PRC-005-1.1b will stay effective through the phased in implementation of PRC-005-6. PRC-005-1.1b added back to list as removed in error.

<sup>27</sup> PRC-008-0 will stay effective through the phased in implementation of PRC-005-6.

<sup>28</sup> R2 retired on January 21, 2014.

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
PRC-011-0 <sup>29</sup>	Undervoltage Load Shedding System Maintenance and Testing	G-67-09	X			
PRC-012-2 <sup>30</sup>	Remedial Actions Schemes	R-33-18	X			
<del>PRC-015-1<sup>31</sup></del>	<del>Remedial Action Scheme Data and Documentation</del>	<del>R-39-17</del>	<del>X</del>			
<del>PRC-016-1<sup>32</sup></del>	<del>Remedial Action Scheme Misoperations</del>	<del>R-39-17</del>	<del>X</del>			
PRC-017-1 <sup>33</sup>	Remedial Action Scheme Maintenance and Testing	R-39-17	X			
PRC-018-1 <sup>34</sup>	Disturbance Monitoring Equipment Installation and Data Reporting	G-67-09	X			
PRC-019-2	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>35</sup>	Under-Voltage Load Shedding Program Performance	G-67-09		X		
PRC-023-2 <sup>36</sup>	Transmission Relay Loadability	R-41-13	X			
PRC-023-4 <sup>37</sup>	Transmission Relay Loadability	R-39-17	X			
PRC-027-1 <sup>38</sup>	Coordination of Protection Systems for Performance During Faults	R-21-19	X			
<b>TOP</b>	<b>Transmission Operations</b>					
TOP-001-1a <sup>39</sup>	Reliability Responsibilities and Authorities	R-1-13		X		
TOP-001-4 <sup>40</sup>	Transmission Operations	R-33-18		X		

<sup>29</sup> PRC-011-0 will stay effective through the phased in implementation of PRC-005-6.

<sup>30</sup> Preceded by PRC-015-1 and PRC-016-1. PRC-012-2 is effective October 1, 2021 with the exception of Attachment 1, Section II Parts 6d) and 6e) as referenced from Requirement R1, Attachment 2 Section I Parts 7d) and 7e) as referenced from Requirement R2, and all of Requirement R4 which are held in abeyance. R2 and R9 are not applicable to TO or other transmission function.

<sup>31</sup> PRC-015-1 is superceded by PRC-012-2.

<sup>32</sup> PRC-016-1 is superceded by PRC-012-2.

<sup>33</sup> PRC-017-1 will stay effective through the phased in implementation of PRC-005-6.

<sup>34</sup> PRC-018-1 will stay effective through the phased in implementation of PRC-002-2.

<sup>35</sup> R2 retired on January 21, 2014.

<sup>36</sup> Only R1 Criterion 6 is effective. PRC-023-2 added back to list as removed in error.

<sup>37</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>38</sup> Preceded by PRC-001-1.1 (ii). PRC-027-1 is effective October 1, 2021.

<sup>39</sup> R1-7 retired March 31, 2021. R8 remains effective.

<sup>40</sup> Preceded by IRO-005-3.1a, PER-001-0.2, TOP-001-1a, TOP-002-21.b, TOP-003-1, TOP-004-2, TOP-006-2, TOP-007-0, TOP-008-1. TOP-001-4 is effective April 1, 2021. R2, R3, R4, R11, R17, R22, R23, R24 are not applicable to TOP or other transmission functions.

<del>TOP-002-2.1b</del> <sup>41</sup>	<del>Normal Operations Planning</del>	<del>R-41-13</del>		X		X
TOP-002-4 <sup>42</sup>	Operations Planning	R-39-17		X		
<del>TOP-003-1</del> <sup>43</sup>	<del>Planned Outage Coordination</del>	<del>R-1-13</del>		X		
<del>TOP-003-3</del> <sup>44</sup>	<del>Operational Reliability Data</del>	<del>R-39-17</del>		X		
TOP-003-4 <sup>45</sup>	Operational Reliability Data	R-21-21		X		
<del>TOP-004-2</del> <sup>46</sup>	<del>Transmission Operations</del>	<del>G-167-10</del>		X		
<del>TOP-006-2</del> <sup>47</sup>	<del>Monitoring System Conditions</del>	<del>R-1-13</del>		X		
TOP-007-0 <sup>48</sup>	Reporting System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations	G-67-09		X		
TOP-008-1 <sup>49</sup>	Response to Transmission Limit Violations	G-67-09		X		
TOP-010-1(i) <sup>50</sup>	Real-time Reliability Monitoring and Analysis Capabilities	R-33-18		X		

<sup>41</sup> TOP-002-2.1b is superseded by TOP-002-4.

<sup>42</sup> Preceded by TOP-002-2.1b, TOP-004-2, TOP-008-1. TOP-002-4 is effective April 1, 2021. R4, R5 and R7 are not applicable to TOP or other transmission functions.

<sup>43</sup> TOP-003-1 is superseded by IRO-017-1, TOP-003-3 and TOP-001-4.

<sup>44</sup> TOP-003-3 is superseded by TOP-003-4.

<sup>45</sup> Preceded by TOP-003-3 and TOP-003-1. TOP-003-4 is effective January 1, 2022. R2 and R4 are not applicable to TOP or other transmission functions.

<sup>46</sup> TOP-004-2 is superseded by TOP-001-4 and TOP-002-4.

<sup>47</sup> TOP-006-2 is superseded by IRO-010-2, TOP-001-4, TOP-003-3.

<sup>48</sup> R4 retired on September 30, 2017. R1 and R2 retired on March 31, 2021.

<sup>49</sup> R2-R4 retired on March 31, 2021.

<sup>50</sup> TOP-010-1(i) is effective April 1, 2021. R2 is not applicable to TOP or other transmission functions.

Reference Number	Reliability Standard Name	BCUC Order Adopting	Applies to			
			TO	TOP	TP	TSP
<b>TPL</b>	<b>Transmission Planning</b>					
TPL-001-4 <sup>51</sup>	Transmission System Planning Performance requirements	R-27-18A			X	
<b>VAR</b>	<b>Voltage and Reactive</b>					
VAR-001-5 <sup>52</sup>	Voltage and Reactive Control	R-21-19		X		

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<sup>51</sup> R7 is held in abeyance.

<sup>52</sup> R E.A.15 and R E.A.17 are not applicable to TOP or other transmission functions.