

Fred James

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June 17, 2020

Ms. Marija Tresoglavic
Acting Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Ms. Tresoglavic:

**RE: British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Mandatory Reliability Standards (MRS)
North American Electric Reliability Corporation (NERC)
COVID-19 Compliance Response**

BC Hydro writes to the BCUC to provide its assessment of the proposed delayed effective dates for the reliability standards identified in NERC's letter to the BCUC dated April 24, 2020 (**NERC Letter**) provided as **Attachment 1** to this letter.

BC Hydro provides this assessment of the proposed delayed effective dates for the reliability standards identified in NERC's Letter for the BCUC's consideration (**Assessment**).

Background

In March and April, NERC, the Regional Entities, and the BCUC took a series of measures to help ensure the grid reliability amid the impacts posed by COVID-19. These measures were taken in recognition of the critical importance of the reliability of the North American energy sector and the steps that registered entities are taking to maintain the health and safety of their workforce and communities.

On March 19, 2020, the BCUC issued Letter L-11-20, provided as **Attachment 2** to this letter, announcing that the BCUC would use its regulatory discretion to advise all registered entities that the impact of COVID-19 would be considered in complying with MRS.

On April 6, 2020, NERC filed a motion with the United States (**U.S.**) Federal Energy Regulatory Commission to defer the implementation, by three to six months, of those MRS scheduled to become effective in the U.S. in whole or in part during the second half of 2020 (**Motion**). FERC granted that Motion on April 17, 2020.

On April 24, 2020 NERC provided the BCUC with its Motion on an informational basis (Attachment 1). In addition, NERC stated that to the extent that there are other MRS scheduled to go into effect in the second half of 2020 in British Columbia (**B.C.**), NERC requests that the BCUC also consider a three-to-six-month delay, or other delay it deems appropriate, for such standards.

In connection with the NERC Letter, BC Hydro sent a request for feedback to registered entities in the B.C. MRS Program requesting them to comment on deferring the effective dates of the reliability standards identified in NERC's Letter.

Assessment Summary

In consideration of the entity feedback received and provided in Table 2, BC Hydro's recommendation is to defer the effective dates by six months for the following six reliability standards: MOD-025-2; PRC-019-2; PRC-024-2; TOP-001-4; TOP-002-4; and TOP-010-1(i).

Draft Order

The Draft Order attached to the Assessment as **Attachment 3**, includes the following draft appendices:

- Appendix A – Provides a table that lists the reliability standards with recommended deferred effective dates; and
- Appendix B – Provides a list of all the reliability standards that would be in force in B.C., including those assessed in the Assessment, and those reliability standards held in abeyance. The table also provides the BCUC Order under which each of the reliability standards was adopted and their effective dates.

Consultation

On May 25, 2020, BC Hydro sent a request for feedback to registered entities in the B.C. MRS Program. BC Hydro asked that registered entities identify any of the reliability standards listed in NERC's Letter that they will not be able to become compliant with because of COVID-19. BC Hydro also asked registered entities to indicate the required timeframe for extending the implementation if required and to provide specific details as to how COVID-19 will affect their ability to become compliant and why a deferral is required. The feedback from BC Hydro and the registered entities that responded is provided as **Attachment 4** to this letter.

BC Hydro received feedback from the B.C. MRS registered entities listed below in [Table 1](#).

**Table 1 B.C. MRS Program Registered Entity
Feedback Respondents**

Registered Entities	Registered Entities (Continued)
WESCUP Co Gen Facility (NorthRiver)	Innergex Renewable (CWEI)
Coast Mountain Hydro Limited	Jimmie Creek Limited Partnership (JCLP)
FortisBC Inc.	Upper Lillooet River Power LP (ULRP)
Toba Montrose General Partnership (TMGP)	Dokie General Partnership (DGP)

Recommendation of Standards Effective Dates

BC Hydro assessed the requirement to defer the effective dates or phased-in implementation dates for the reliability standards listed in NERC's Letter and makes a recommendation to the BCUC based on BC Hydro's internal assessment and comments made by registered entities who responded to this feedback request.

Registered entity feedback identified site restrictions/limitations, internally enforced access restrictions, and the restrictions on travel and accommodations due to COVID-19 as the reasons that delaying the effective date is required.

BC Hydro's final assessment, based on responses from B.C. registered entities, including BC Hydro, is summarized below in [Table 2](#).

Table 2 Assessment Summary

Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required	Reasons	Recommendation
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01- October -20	None requested		No Extension Required
EOP-004-4	01-October-20	None requested		No Extension Required
EOP-005-3	01-October-20	None requested		No Extension Required
EOP-006-3	01-October-20	None requested		No Extension Required
EOP-008-2	01-October-20	None requested		No Extension Required
IRO-017-1	01-October-20	None requested		No Extension Required
MOD-025-2	100% Compliance by October 1, 2020	TMGP - 6 months (on site restrictions for contractors) CWEI - 6 months (on site restrictions for contractors) JCLP - 6 months (on site restrictions for contractors) ULRP - 6 months (on site restrictions for contractors) DGP – 6 months (on site restrictions for contractors)	TMGP, CWEI, JCLP, ULRP: We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation. DGP: We cannot currently bring contractors to site due to internally enforced access restrictions. Any contractor will also need to travel and stay locally.	6 month extension

Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required	Reasons	Recommendation
PRC-019-2	100% Compliance by October 1, 2020	CWEI - 6 months (on site restrictions for contractors) JCLP - 6 months (on site restrictions for contractors) ULRP - 6 months (on site restrictions for contractors)	CWEI, JCLP, ULRP: We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.	6 month extension
PRC-024-2	100% Compliance by October 1, 2020	CWEI - 6 months (on site restrictions for contractors) JCLP - 6 months (on site restrictions for contractors) ULRP - 6 months (on site restrictions for contractors)	CWEI, JCLP, ULRP: We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.	6 month extension
TOP-001-4	01-October-20	BC Hydro - 6 months (on site restrictions for control centres)	BC Hydro: On site restrictions/limitations for the control centres may impact tool and process development as well as in person training	6 month extension
TOP-002-4	01-October-20	BC Hydro - 6 months (on site restrictions for control centres)	BC Hydro: On site restrictions/limitations for the control centres may impact tool and process development as well as in person training	6 month extension

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Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required	Reasons	Recommendation
TOP-010-1(i)	01-October-20	BC Hydro - 6 months (on site restrictions for control centres)	BC Hydro: On site restrictions/limitations for the control centres may impact tool and process development as well as in person training	6 month extension
TPL-001-4 R2-R6, R8	01-July-20	None requested		No Extension Required
VAR-501-WECC-3.1	01-October-20	None requested		No Extension Required

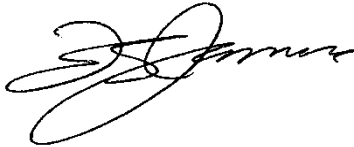
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Conclusion

BC Hydro's recommendation is that the effective date of six of the 14 reliability standards identified in NERC's Letter should be delayed by six months. BC Hydro has concluded that deferring the effective dates for the reliability standards MOD-025-2; PRC-019-2; PRC-024-2; TOP-001-4; TOP-002-4; and TOP-010-1(i) is necessary as a result of COVID-19 restrictions and is consistent with treatment afforded in other jurisdictions.

For further information, please contact the undersigned.

Yours sincerely,



Fred James
Chief Regulatory Officer

st/ma

Enclosure

MRS NERC COVID-19 Compliance Response

Attachment 1

NERC Letter from April 24, 2020

NERCNORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

April 24, 2020

VIA ELECTRONIC FILING

Mr. Patrick Wruck, Commission Secretary
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, B.C.
V6Z 2N3

Re: *North American Electric Reliability Corporation COVID-19 Compliance Response*

Dear Mr. Wruck:

In recent weeks, the North American Electric Reliability Corporation (NERC), the Regional Entities, and the British Columbia Utilities Commission (BCUC) have taken a series of measures to help ensure grid reliability amid the impacts posed by the coronavirus (COVID-19) outbreak, a public health emergency that is unprecedented in modern times. These measures have been taken in recognition of the critical importance of the reliability of the North American energy sector and the steps that registered entities are taking to maintain the health and safety of their workforce and communities.

On March 19, 2020, the BCUC issued Letter L-11-20.¹ This letter announced that the BCUC would use regulatory discretion to advise all Registered Entities that the impact of the COVID-19 outbreak would be considered in complying with Mandatory Reliability Standards. NERC has issued a similar notice for entities in the United States.² Additionally, NERC has determined that it will consider the coronavirus outbreak an extenuating circumstance under its *Sanction Guidelines* for all instances of noncompliance where the impacts of the outbreak, such as impacts on workforce availability or the supply chain, were a cause or contributing factor to the noncompliance.

On April 6, 2020, NERC filed a motion with the United States Federal Energy Regulatory Commission (FERC) to defer the implementation, by three to six months, of those Reliability Standards scheduled to become

¹ British Columbia Utilities Commission, *COVID-19 – Direction from the British Columbia Utilities Commission to Ensure Bulk Electric System Reliability Amid Potential COVID-19 Virus Impacts and Related Compliance with Mandatory Reliability Standards*, Letter L-11-20 (Mar. 19, 2020).

² See Joint U.S. Federal Energy Regulatory Commission and NERC Press Release, *FERC, NERC Provide Industry Guidance to Ensure Grid Reliability Amid Potential Coronavirus Impacts* (Mar. 18, 2020), <https://www.ferc.gov/media/news-releases/2020/2020-1/03-18-20.pdf>.

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effective in the United States in whole or in part during the second half of 2020.³ FERC granted that motion on April 17, 2020.

In its April 6 Motion to the FERC, NERC stated that in order to establish compliance with these Reliability Standards by their scheduled effective or phased-in implementation dates, registered entities would need to expend significant effort and resources in the coming months toward establishing and implementing the necessary processes and procedures, conducting the necessary coordination, and establishing documentation of compliance. In some cases, supply chain, travel, or workforce disruptions may have temporarily impacted an entity's ability to perform the work or conduct any needed training. By providing for additional time and flexibility to establish compliance with new obligations, entities could continue to focus their immediate efforts and resources on maintaining the safety of their workforces and communities and ensuring the reliability of the grid during this public health emergency.

NERC provides notice of this April 6 Motion on an informational basis to the British Columbia Utilities Commission. NERC and WECC are willing to assist in the event the British Columbia Utilities Commission would like to consider a three-to-six month delay, or other delay it deems appropriate, for any of the Reliability Standards coming into effect in whole or in part in the second half of 2020 in British Columbia.

According to NERC's records, these Reliability Standards include:

Reliability Standard	Effective Date or Phased-in Implementation Date
CIP-010-2 R3.2, R3.2.1, and R3.2.2	October 1, 2020
EOP-004-4	October 1, 2020
EOP-005-3	October 1, 2020
EOP-006-3	October 1, 2020
EOP-008-2	October 1, 2020
IRO-017-1	October 1, 2020

³ See NERC, Motion to Defer Implementation of Reliability Standards and Request for Shortened Response Period and Expedited Action, filed in U.S. FERC Docket Nos. RM15-4-000, RM16-22-000, RM17-13-000, and RD18-4-000 (Apr. 6, 2020), available at <https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Motion%20to%20Defer%20Implementation%20of%20Reliability%20Standards.pdf>. In the filing, NERC requested deferring the implementation of the following standards: (1) Supply Chain Standards, Reliability Standards CIP-005-6, CIP-010-3, and CIP-013-1; (2) Reliability Standards PER-006-1 – Specific Training for Personnel and PRC-027-1 – Coordination of Protection Systems for Performance During Faults, along with the revised definitions of Real-time Assessment and Operational Planning Analysis; (3) Reliability Standard PRC-002-2 – Disturbance Monitoring and Reporting Requirements, which became effective in the United States on July 1, 2016, but for which entities are scheduled to establish 50% compliance with Requirements R2-R4 and R6-R11 by July 1, 2020 in accordance with the phased-in implementation plan; and (4) Reliability Standard PRC-025-2 – Generator Relay Loadability, which became effective in the United States on July 1, 2018, but for which entities are scheduled to establish compliance with certain Options in Attachment 1, Table 1 Relay Loadability Evaluation Criteria by July 1, 2020 in accordance with the phased-in implementation plan.

MOD-025-2	100% Compliance by October 1, 2020
PRC-019-2	100% Compliance by October 1, 2020
PRC-024-2	100% Compliance by October 1, 2020
TOP-001-4	October 1, 2020
TOP-002-4	October 1, 2020
TOP-010-1(i)	October 1, 2020
TPL-001-4 R2-R6, R8	July 1, 2020
VAR-501-WECC-3.1	October 1, 2020

To the extent that there are other Reliability Standards scheduled to go into effect the second half of 2020 in British Columbia, NERC requests that the British Columbia Utilities Commission also consider a three-to-six month delay, or other delay it deems appropriate, for such standards.⁴

NERC requests, to the extent necessary, a waiver of any applicable filing requirements with respect to this filing. Please contact Lauren Perotti, NERC Senior Counsel (lauren.perotti@nerc.net) or Marisa Hecht, NERC Counsel, (marisa.hecht@nerc.net) if you have any questions.

Respectfully submitted,

/s/ Lauren Perotti

Lauren Perotti
 Senior Counsel for the North American
 Electric Reliability Corporation

cc: Mr. Steven F. Goodwill, Senior Vice President of Reliability and Security Oversight, General Counsel, and Secretary
 Mr. Ruben Arredondo, Senior Legal Counsel
 Ms. Julie Blair, International Relations Manager
 Ms. Heather Laws, Director of Enforcement
 Western Electricity Coordinating Council

⁴ On this date, NERC has also submitted to each of the other relevant Canadian provincial authorities a letter identifying Reliability Standards coming into effect in their respective province in the second half of 2020 and offering assistance in considering a three-to-six month delay, or other delay it deems appropriate.

MRS NERC COVID-19 Compliance Response

Attachment 2

BCUC Letter L-11-20



bcuc
British Columbia
Utilities Commission

Patrick Wruck
Commission Secretary

Commission.Secretary@bcuc.com
bcuc.com

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
P: 604.660.4700
TF: 1.800.663.1385
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March 19, 2020

Sent via email

Letter L-11-20

To: All Entities Registered with the British Columbia Mandatory Reliability Standards Program

Re: COVID-19 – Direction from the British Columbia Utilities Commission to Ensure Bulk Electric System Reliability Amid Potential COVID-19 Virus Impacts and Related Compliance with Mandatory Reliability Standards

The global pandemic COVID-19 is moving quickly and its impact on British Columbians is growing. Accordingly, in response to the current COVID-19 pandemic, and the state of emergency declared in British Columbia, the British Columbia Utilities Commission (BCUC) provides the following guidance to ensure that owners, operators and users of the Bulk Electric System (BES) can focus their resources on keeping people safe and the lights on during this unprecedented public health emergency.

The BCUC is using regulatory discretion that aligns with measures announced by the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) (attached), to advise all Registered Entities that they will consider the impact of the COVID-19 outbreak in complying with Mandatory Reliability Standards as follows:

- The effects of COVID-19 will be considered an acceptable basis for non-compliance with obtaining and maintaining personnel certification, as required in Reliability Standard PER-003-1 and PER-003-2 (effective April 1, 2020), for the period of March 1, 2020 to December 31, 2020. Registered Entities should notify their Regional Entities and Reliability Coordinators when using system operator personnel that are not NERC-certified.
- The effects of COVID-19 will be considered an acceptable reason, on a case-by-case basis, for delayed periodic data submittals and/or non-compliance with Reliability Standard requirements involving periodic actions that would have been taken between March 1, 2020 and July 31, 2020. Registered entities should notify their Regional Entities of any periodic actions that will be missed during this period.
- Regional Entities will postpone on-site audits, certifications and other on-site activities at least until July 31, 2020. Registered Entities should communicate any resource impacts associated with remote activities to their Regional Entities.

The BCUC recognizes the uncertainties regarding the response to and recovery from the COVID-19 outbreak and will continue to evaluate the situation to determine whether to extend these dates. Our shared goal is to ensure all Registered Entities balance the concerns for the health and welfare of their workforce while staying focused on the mission of maintaining grid reliability and supplying power to consumers across British Columbia.

While this relief is provided, each Entity is expected to make its best effort to comply with Mandatory Reliability Standards applicable to its registered functions and to ensure the reliability of the BES is maintained. Further, given the ever-present risks related to Critical Infrastructure Protection (CIP), Entities are reminded that compliance with CIP standards must remain a high priority of all Entities and that efforts to maintain cyber

protections are critical. Compliance relief will take into account the nature of these efforts on a case-by-case basis.

Sincerely,

Original signed by:

Patrick Wruck
Commission Secretary

Attachment

CAS/ad

cc: Western Electricity Coordinating Council
jblair@wecc.org
bcuc@wecc.org
enforcement@wecc.org

MRS NERC COVID-19 Compliance Response

Attachment 3

Draft Order



ORDER NUMBER

R-xx-xx

IN THE MATTER OF

the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

British Columbia Hydro and Power Authority (BC Hydro)
Filing for North American Electric Reliability Corporation (NERC)
COVID- 19 Compliance Response

BEFORE:

Commissioner
Commissioner
Commissioner

on Date

ORDER

WHEREAS:

- A. On March 19, 2020, the British Columbia Utilities Commission (BCUC) issued Letter L-11-20 announcing that the BCUC would use its regulatory discretion to advise all registered entities that the impact of COVID-19 would be considered in complying with Mandatory Reliability Standards (MRS);
- B. On April 6, 2020, NERC filed a motion with the United States (U.S.) Federal Energy Regulatory Commission to defer the implementation, by three to six months, of those MRS scheduled to become effective in the U.S. in whole or in part during the second half of 2020 (Motion). FERC granted that Motion on April 17, 2020;
- C. On April 24, 2020 NERC provided the BCUC with its Motion on an informational basis. In addition, NERC stated that to the extent that there are other MRS scheduled to go into effect in the second half of 2020 in British Columbia (B.C.), NERC requests that the BCUC also consider a three- to six- month delay, or other delay it deems appropriate, for such standards (NERC Letter);
- D. In connection with the NERC Letter, BC Hydro sent a request for feedback to registered entities in the B.C. MRS Program requesting them to comment on deferring the effective dates of the reliability standards identified in NERC's Letter;
- E. On June 17, 2020, the British Columbia Hydro and Power Authority (BC Hydro) filed with the BCUC its assessment of the proposed delayed effective dates for the reliability standards identified in NERC's letter (Assessment). In its assessment, BC Hydro recommend delaying the effective dates for six of the 14 reliability standards identified in NERC's Letter for the BCUC's consideration;

F. The BCUC has reviewed and considered BC Hydro's Assessment and the comments received from entities and considers that delaying the effective dates of the six reliability standards is warranted.

NOW THEREFORE pursuant to section 125.2 (10) of the *Utilities Commission Act*, the BCUC orders as follows:

1. The effective dates for the six reliability standards be revised as shown in Table 1 of Appendix A to this order.
2. All reliability standards listed in Appendix B to this order are in effect in B.C. as of the dates shown. The effective dates for the reliability standards listed in Appendix B supersede the effective dates that were included in any similar list appended to any previous order. Appendix B to this order also includes those reliability standards with retirement/effective dates held in abeyance to be assessed at a later date.
3. Individual requirements within reliability standards that incorporate, by reference, reliability standards that have not been adopted by the BCUC, are of no force and effect in B.C. and individual requirements or sub-requirements within reliability standards, which the BCUC has adopted but for which the BCUC has not determined an effective date, are of no force and effect in B.C.
4. The reliability standards adopted in B.C. will be posted on the WECC website with a link from the BCUC website.

DATED at the City of Vancouver, in the Province of British Columbia, this (XX) day of (Month Year).

BY ORDER

(X. X. last name)
Commissioner

Attachment Options

Table 1 British Columbia Utilities Commission Reliability Standards with Effective Dates as Adopted

	Standard	Standard Name	Effective Date	Type	BCUC Approved Standard(s) Being Superseded¹
1.	MOD-025-2	Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	6 Months after the effective date. New effective date 100% compliance by April 1, 2021.	New	N/A: New Standard
2.	PRC-19-2	Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	6 Months after the effective date. New effective date 100% compliance by April 1, 2021.	Revised	PRC-019-1
3.	PRC-024-2	Generator Frequency and Voltage Protective Relay Settings	6 Months after the effective date. New effective date 100% compliance by April 1, 2021.	Revised	PRC-024-1
4.	TOP-001-4	Transmission Operations	6 Months after the effective date. New effective date April 1, 2021.	Revised	TOP-001-3
5.	TOP-002-4	Transmission Operations	6 Months after the effective date. New effective date April 1, 2021.	Revised	Refer to "IRO and TOP Reliability Standards Supersession Mapping" Attachment B to approved Order No. R-39-17.
6.	TOP-010-1(i)	Real-time Reliability Monitoring and Analysis Capabilities	6 Months after the effective date. New effective date April 1, 2021.	Revised	TOP-010-1

¹ BCUC approved reliability standard or reliability standard held in abeyance by the BCUC to be superseded by the replacement or revised reliability standard assessed.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
BAL-001-2	Real Power Balancing Control Performance	R-14-16	July 1, 2016
BAL-002-2 ¹	Disturbance Control Standard – Contingency Reserve for Recovery from a Balancing Contingency Event	R-39-17	January 1, 2018
BAL-002-3	Disturbance Control Standard – Contingency Reserve for Recovery from a Balancing Contingency Event	R-21-19	April 1, 2020
BAL-002-WECC-2a	Contingency Reserve	R-39-17	July 26, 2017
BAL-003-1.1	Frequency Response and Frequency Bias Setting	R-32-16A	October 1, 2016
BAL-004-WECC-2 ¹	Automatic Time Error Correction	R-32-14	October 1, 2014
BAL-004-WECC-3	Automatic Time Error Correction	R-21-19	January 1, 2020
BAL-005-0.2b ¹	Automatic Generation Control	R-41-13	December 12, 2013 R2: Retired January 21, 2014 ²
BAL-005-1	Balancing Authority Control	R-33-18	October 1, 2019
CIP-002-5.1a	Cyber Security — BES Cyber System Categorization	R-33-18	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-003-7 ¹	Cyber Security — Security Management Controls	R-21-19	October 1, 2019 and as per B.C.-specific Implementation Plan
CIP-003-8	Cyber Security — Security Management Controls		Assessed under MRS Assessment Report No. 13
CIP-004-6	Cyber Security — Personnel & Training	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-005-5 ¹	Cyber Security – Electronic Security Perimeter(s)	R-38-15	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-005-6	Cyber Security – Electronic Security Perimeter(s)		Assessed under MRS Assessment Report No. 13
CIP-006-6	Cyber Security — Physical Security of BES Cyber Systems	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-007-6	Cyber Security — System Security Management	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-008-5 ¹	Cyber Security – Incident Reporting and Response Planning	R-38-15	October 1, 2018 and as per B.C.-specific Implementation Plan

¹ Reliability standard is superseded by the revised/replacement reliability standard listed immediately below it as of the effective date(s) of the revised/replacement reliability standard.

² On November 21, 2013, FERC Order 788 (referred to as Paragraph 81) approved the retiring of the reliability standard requirements.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
CIP-008-6	Cyber Security – Incident Reporting and Response Planning		Assessed under MRS Assessment Report No. 13
CIP-009-6	Cyber Security — Recovery Plans for BES Cyber Systems	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-010-2 ¹	Cyber Security – Configuration Change Management and Vulnerability Assessments	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-010-3	Cyber Security – Configuration Change Management and Vulnerability Assessments		Assessed under MRS Assessment Report No. 13
CIP-011-2	Cyber Security – Information Protection	R-39-17	October 1, 2018 and as per B.C.-specific Implementation Plan
CIP-013-1	Cyber Security - Supply Chain Risk Management		Assessed under MRS Assessment Report No. 13
CIP-014-2	Physical Security	R-32-16A	October 1, 2017 and as per B.C.-specific Implementation Plan
COM-001-3	Communications	R-39-17	R1, R2: October 1, 2017 R3-R13: October 1, 2018
COM-002-4	Operating Personnel Communications Protocols	R-32-16A	April 1, 2017
EOP-003-1 ³	Load Shedding Plans	G-67-09	November 1, 2010
EOP-003-2 ⁴	Load Shedding Plans	n/a	Adoption held in abeyance at this time ⁵
EOP-004-3 ¹	Event Reporting	R-39-17	October 1, 2017
EOP-004-4	Event Reporting	R-21-19	October 1, 2020
EOP-005-2 ¹	System Restoration and Blackstart Resources	R-32-14	August 1, 2015 R3.1: Retired January 21, 2014 ²
EOP-005-3	System Restoration and Blackstart Resources	R-21-19	October 1, 2020
EOP-006-2 ¹	System Restoration Coordination	R-32-14	August 1, 2014
EOP-006-3	System Restoration Coordination	R-21-19	October 1, 2020
EOP-008-1 ¹	Loss of Control Center Functionality	R-32-14	August 1, 2015
EOP-008-2	Loss of Control Center Functionality	R-21-19	October 1, 2020

³ Reliability standard would be superseded by EOP-003-2 if adopted in B.C. Adoption of EOP-003-2 pending reassessment.

⁴ Reliability standard is superseded by EOP-011-1 as of the EOP-011-1 effective date in conjunction with PRC-010-2 Requirement 1 if adopted in B.C. Adoption of PRC-010-2 pending reassessment.

⁵ Unable to assess based on undefined Planning Coordinator/Planning Authority footprints and entities responsible. The BCUC Reasons for Decision for Order No. R-41-13 (page 20), indicated that a separate process would be established to consider this matter as it pertains to B.C.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
EOP-010-1 ⁶	Geomagnetic Disturbance Operations	R-38-15	R1, R3: October 1, 2016 R2: At retirement of IRO-005-3.1a R3
EOP-011-1	Emergency Operations	R-39-17	October 1, 2018
FAC-001-2 ¹	Facility Interconnection Requirements	R-38-15	October 1, 2016
FAC-001-3	Facility Interconnection Requirements	R-33-18	October 1, 2019
FAC-002-2	Facility Interconnection Studies	R-38-15	October 1, 2015
FAC-003-4	Transmission Vegetation Management	R-39-17	October 1, 2017
FAC-008-3	Facility Ratings	R-32-14	August 1, 2015 R4 and R5: Retired January 21, 2014 ²
FAC-010-3	System Operating Limits Methodology for the Planning Horizon	R-39-17	R1–R4: October 1, 2017 R5: Retired
FAC-011-3	System Operating Limits Methodology for the Operations Horizon	R-39-17	October 1, 2017
FAC-013-1 ⁷	Establish and Communicate Transfer Capability	G-67-09	November 1, 2010
FAC-013-2	Assessment of Transfer Capability for the Near-Term Transmission Planning Horizon	n/a	Adoption held in abeyance at this time ⁵
FAC-014-2	Establish and Communicate System Operating Limits	G-167-10	January 1, 2011
FAC-501-WECC-1 ¹	Transmission Maintenance	R-1-13	April 15, 2013
FAC-501-WECC-2	Transmission Maintenance	R-21-19	October 1, 2019
INT-004-3.1	Dynamic Transfers	R-38-15	R1, R2: October 1, 2015 R3: January 1, 2016
INT-006-4	Evaluation of Interchange Transactions	R-38-15	October 1, 2015
INT-009-2.1	Implementation of Interchange	R-38-15	October 1, 2015
INT-010-2.1	Interchange Initiation and Modification for Reliability	R-38-15	October 1, 2015

⁶ Requirement 2 of the reliability standard will be effective upon the retirement of IRO-005-3.1a Requirement 3 which follows the effective date of IRO-002-4 (October 1, 2017; per BCUC Order No. R-39-17).

⁷ Reliability standard would be superseded by the FAC-013-2 if adopted in B.C. Adoption of FAC-013-2 pending reassessment.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
INT-011-1.1	Intra-Balancing Authority Transaction Identification	R-38-15	October 1, 2015
IRO-001-4	Reliability Coordination – Responsibilities	R-39-17	October 1, 2017
IRO-002-2 ⁸	Reliability Coordination – Facilities	R-1-13	April 15, 2013
IRO-002-5 ¹	Reliability Coordination – Monitoring and Analysis	R-33-18	January 1, 2019
IRO-002-6	Reliability Coordination – Monitoring and Analysis		Assessed under MRS Assessment Report No. 13
IRO-005-3.1a ^{8,9}	Reliability Coordination - Current Day Operations	R-32-14	August 1, 2014
IRO-006-5	Reliability Coordination – Transmission Loading Relief	R-1-13	April 15, 2013
IRO-006-WECC-2 ¹	Qualified Transfer Path Unscheduled Flow (USF) Relief	R-38-15	October 1, 2015
IRO-006-WECC-3	Qualified Transfer Path Unscheduled Flow (USF) Relief		Assessed under MRS Assessment Report No. 13
IRO-008-2	Reliability Coordinator Operational Analyses and Real-time Assessments	R-39-17	October 1, 2017
IRO-009-2	Reliability Coordinator Actions to Operate Within IROs	R-39-17	October 1, 2017
IRO-010-2	Reliability Coordinator Data Specification and Collection	R-39-17	April 1, 2019
IRO-014-3	Coordination Among Reliability Coordinators	R-39-17	October 1, 2017
IRO-015-1 ⁸	Notification and Information Exchange	G-67-09	November 1, 2010
IRO-017-1	Outage Coordination	R-39-17	October 1, 2020
IRO-018-1 ¹	Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities	R-39-17	April 1, 2018
IRO-018-1(i)	Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities	R-33-18	April 1, 2020
MOD-001-1a	Available Transmission System Capability	G-175-11	November 30, 2011

⁸ Refer to “IRO and TOP Reliability Standards Supersession Mapping” section below.

⁹ Requirement 3 of the reliability standard is superseded by EOP-010-1 Requirement 2 as of the IRO-002-4 effective date (October 1, 2017; per BCUC Order No. R-39-17).

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
MOD-004-1	Capacity Benefit Margin	G-175-11	November 30, 2011
MOD-008-1	Transmission Reliability Margin Calculation Methodology	G-175-11	November 30, 2011
MOD-010-0 ¹⁰	Steady-State Data for Modeling and Simulation for the Interconnected Transmission System	G-67-09	November 1, 2010
MOD-012-0 ¹⁰	Dynamics Data for Modeling and Simulation of the Interconnected Transmission System	G-67-09	November 1, 2010
MOD-020-0	Providing Interruptible Demands and Direct Control Load management Data to System Operators and Reliability Coordinators	G-67-09	November 1, 2010
MOD-025-2	Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	R-38-15	40% by October 1, 2017 60% by October 1, 2018 80% by October 1, 2019 100% by October 1, 2020
MOD-026-1	Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions	R-38-15	R1: October 1, 2016 R2: 30% by October 1, 2019 50% by October 1, 2021 100% by October 1, 2025 R3-R6: October 1, 2015
MOD-027-1	Verification of Models and Data for Turbine/Governor and Load Control or Active Power/Frequency Control Functions	R-38-15	R1: October 1, 2016 R2: 30% by October 1, 2019 50% by October 1, 2021 100% by October 1, 2025 R3-R5: October 1, 2015
MOD-028-2	Area Interchange Methodology	R-32-14	August 1, 2014
MOD-029-2a	Rated System Path Methodology	R-39-17	October 1, 2017
MOD-030-3	Flowgate Methodology	R-39-17	October 1, 2017
MOD-031-2	Demand and Energy Data	R-39-17	April 1, 2018
MOD-032-1	Data for Power System Modeling and Analysis	R-38-15	Effective date held in abeyance ⁵
MOD-033-1	Steady-State and Dynamic System Model Validation	R-38-15	Effective date held in abeyance ⁵
NUC-001-3	Nuclear Plant Interface Coordination	R-38-15	January 1, 2016

¹⁰ Reliability standard will be superseded by MOD-032-1 and MOD-033-1 if adopted in B.C. Adoption of MOD-032-1 and MOD-033-1 pending reassessment.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
PER-001-0.2 ⁸	Operating Personnel Responsibility and Authority	R-41-13	December 12, 2013
PER-002-0	Operating Personnel Training	G-67-09	November 1, 2010
PER-003-1 ¹¹	Operating Personnel Credentials	R-41-13	January 1, 2015
PER-003-2	Operating Personnel Credentials	R-21-19	April 1, 2020
PER-004-2 ¹¹	Reliability Coordination – Staffing	R-1-13	January 15, 2013
PER-005-2	Operations Personnel Training	R-38-15	R1-R4, R6: October 1, 2016 R5: October 1, 2017
PER-006-1 ¹²	Specific Training for Personnel	R-21-19	October 1, 2021
PRC-001-1.1(ii) ¹³	System Protection Coordination	R-32-16A	October 1, 2016
PRC-002-2	Disturbance Monitoring and Reporting Requirements	R-32-16A	R1, R5: April 1, 2017 R2-R4, R6-R11: staged as per B.C.-specific Implementation Plan R12: July 1, 2017
PRC-004-5(i)	Protection System Misoperation Identification and Correction	R-32-16A	October 1, 2017
PRC-004-WECC-2	Protection System and Remedial Action Scheme Misoperation	R-39-17	Assessed under MRS Assessment Report No. 13 October 1, 2017 Retired:
PRC-005-1.1b ^{1, 16}	Transmission and Generation Protection System Maintenance and Testing	R-32-14	January 1, 2015
PRC-005-2 ¹	Protection System Maintenance	R-38-15	R1, R2, R5: October 1, 2017 R3, R4: staged as per B.C.-specific Implementation Plan
PRC-005-2(i) ¹	Protection System Maintenance	R-32-16A	R1, R2, R5: October 1, 2017 R3, R4: staged as per B.C.-specific Implementation Plan
PRC-005-6	Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance	R-39-17	R1, R2, R5: October 1, 2019 R3, R4: See Implementation Plan
PRC-006-3 ¹⁴	Automatic Underfrequency Load Shedding	n/a	Adoption held in abeyance at this time ⁵

¹¹ Reliability standard will be superseded by PER-003-2 if adopted in B.C. as of the PER-003-2 effective date.

¹² Reliability standard will supersede PRC-001-1.1(ii) R1 as of the effective date of PER-006-1.

¹³ PRC-001-1.1(ii) Requirement 1 will be superseded by PER-006-1 as of the effective date of PER-006-1; PRC-001-1(ii) Requirements 3 and 4 will be superseded by PRC-027-1 as of the effective date of PRC-027-1; and, the rest of PRC-001-1.1(ii) will be superseded by other reliability standards as of October 1, 2020.

¹⁴ Reliability standard supersedes PRC-006-1 and PRC-006-2 which have both been held in abeyance due to the undefined Planning Coordinator/Planning Authority footprints and entities responsible.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
PRC-007-0 ¹⁵	Assuring consistency of entity Underfrequency Load Shedding Program Requirements	G-67-09	November 1, 2010
PRC-008-0 ¹⁶	Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program	G-67-09	November 1, 2010
PRC-009-0 ¹⁵	Analysis and Documentation of Underfrequency Load Shedding Performance Following an Underfrequency Event	G-67-09	November 1, 2010
PRC-010-0 ¹	Technical Assessment of the Design and Effectiveness of Undervoltage Load Shedding Program	G-67-09	November 1, 2010 R2: Retired January 21, 2014 ²
PRC-010-2	Under Voltage Load Shedding	n/a	Adoption held in abeyance at this time ⁵
PRC-011-0 ¹⁶	Undervoltage Load Shedding system Maintenance and Testing	G-67-09	November 1, 2010
PRC-012-2	Remedial Action Schemes	R-33-18	October 1, 2021 R1: Attachment 1, Section II Parts 6(d) and 6(e) to be determined. Unable to be assessed at this time. ⁵ R2: Attachment 2, Section I Parts 7(d) and 7(e) to be determined. Unable to be assessed at this time. ⁵ R4: To be determined. Unable to be assessed at this time. ⁵
PRC-015-1 ¹⁷	Remedial Action Scheme Data and Documentation	R-39-17	October 1, 2017
PRC-016-1 ¹⁷	Remedial Action Scheme Misoperations	R-39-17	October 1, 2017
PRC-017-1 ¹⁶	Remedial Action Scheme Maintenance and Testing	R-39-17	October 1, 2017
PRC-018-1 ¹⁸	Disturbance Monitoring Equipment Installation and Data Reporting	G-67-09	November 1, 2010

¹⁵ Reliability standard will be superseded by PRC-006-3 if adopted in B.C. Adoption of PRC-006-3 pending reassessment.

¹⁶ Reliability standard is superseded by PRC-005-6 as per the PRC-005-6 B.C.-specific Implementation Plan.

¹⁷ Reliability standard is superseded by PRC-012-2 as of the PRC-012-2 effective date.

¹⁸ Reliability standard is superseded by PRC-002-2 as of the PRC-002-2 effective date.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
PRC-019-2	Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	R-32-16A	40% by October 1, 2017 60% by October 1, 2018 80% by October 1, 2019 100% by October 1, 2020
PRC-021-1 ¹⁹	Under Voltage Load Shedding Program Data	G-67-09	November 1, 2010
PRC-022-1 ¹⁹	Under Voltage Load Shedding Program Performance	G-67-09	November 1, 2010 R2: Retired January 21, 2014 ²
PRC-023-2 ^{1, 20}	Transmission Relay Loadability	R-41-13	R1-R5: For circuits identified by sections 4.2.1.1 and 4.2.1.4: January 1, 2016 For circuits identified by sections 4.2.1.2, 4.2.1.3, 4.2.1.5, and 4.2.1.6: To be determined ⁵ R6: To be determined ⁵
PRC-023-4	Transmission Relay Loadability	R-39-17	R1-R5 Circuits 4.2.1.1, 4.2.1.4: October 1, 2017 with the exception Criterion 6 of R1 which will not become effective until PRC-025-1 R1 is completely effective in B.C. Until then, PRC-023-2 R1, Criterion 6 will remain in effect. R1-R5 Circuits 4.2.1.2, 4.2.1.3, 4.2.1.5, 4.2.1.6 and R6: To be determined
PRC-024-2	Generator Frequency and Voltage Protective Relay Settings	R-32-16A	40% by October 1, 2017 60% by October 1, 2018 80% by October 1, 2019 100% by October 1, 2020
PRC-025-1 ¹	Generator Relay Loadability	R-38-15	40% by October 1, 2017 60% by October 1, 2018 80% by October 1, 2019 100% by October 1, 2020
PRC-025-2	Generator Relay Loadability	R-21-19	October 1, 2019
PRC-026-1	Relay Performance During Stable Power Swings	n/a	Adoption held in abeyance at this time ⁵
PRC-027-1 ²¹	Coordination of Protection Systems for Performance During Faults	R-21-19	October 1, 2021

¹⁹ Reliability standard is superseded by PRC-010-2 if adopted in B.C. Adoption of PRC-010-2 pending reassessment.

²⁰ PRC-023-2 Requirement 1, Criterion 6 only is superseded by PRC-025-1 as of PRC-025-1's 100 per cent Effective Date.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
TOP-001-1a ⁸	Reliability Responsibilities and Authorities	R-1-13	January 15, 2013
TOP-001-4	Transmission Operations	R-33-18	October 1, 2020
TOP-002-2.1b ⁸	Normal Operations Planning	R-41-13	December 12, 2013
TOP-002-4	Operations Planning	R-39-17	October 1, 2020
TOP-003-1 ⁸	Planned Outage Coordination	R-1-13	April 15, 2013
TOP-003-3	Operational Reliability Data	R-39-17	April 1, 2019
TOP-004-2 ⁸	Transmission Operations	G-167-10	January 1, 2011
TOP-005-2a ⁸	Operational Reliability Information	R-1-13	April 15, 2013
TOP-006-2 ⁸	Monitoring System Conditions	R-1-13	April 15, 2013
TOP-007-0 ⁸	Reporting System Operating Unit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations	G-67-09	November 1, 2010
TOP-008-1 ⁸	Response to Transmission Limit Violations	G-67-09	November 1, 2010
TOP-010-1(i)	Real-time Reliability Monitoring and Analysis Capabilities	R-33-18	October 1, 2020
TPL-001-0.1 ²²	System Performance Under Normal (No Contingency) Conditions (Category A)	G-167-10	January 1, 2011
TPL-001-4	Transmission System Planning Performance Requirements	R-27-18A	R1: July 1, 2019 R2-R6, R8: July 1, 2020 R7: To be determined ⁵
TPL-002-0b ²²	System Performance Following Loss of a Single Bulk Electric System Element (Category B)	R-1-13	January 15, 2013
TPL-003-0b ²²	System Performance Following Loss of Two or More Bulk Electric System Elements (Category C)	R-32-14	August 1, 2014
TPL-004-0a ²²	System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D)	R-32-14	August 1, 2014

²¹ Reliability standard will supersede PRC-001-1.1(ii) Requirements 3 and 4 as of the effective date of PRC-027-1.

²² Reliability standard is superseded by TPL-001-4 Requirements 2 to 6, and 8 as of their effective dates.

B.C. Reliability Standards

Standard	Name	BCUC Order Adopting	Effective Date
TPL-007-1 ¹	Transmission System Planned Performance for Geomagnetic Disturbance Events	n/a	Adoption held in abeyance at this time ⁵
TPL-007-3	Transmission System Planned Performance for Geomagnetic Disturbance Events		Assessed under MRS Assessment Report No. 13
VAR-001-4.2 ¹	Voltage and Reactive Control	R-33-18	October 1, 2018
VAR-001-5	Voltage and Reactive Control	R-21-19	October 1, 2019
VAR-002-4.1	Generator Operation for Maintaining Network Voltage Schedules	R-33-18	October 1, 2018
VAR-501-WECC-2 ¹	Power System Stabilizer (PSS)	R-32-16A	October 1, 2016
VAR-501-WECC-3.1	Power System Stabilizer (PSS)	R-33-18	October 1, 2020 R3: For units placed into service after the effective date: January 1, 2021 For units placed into service prior the effective date: January 1, 2024

IRO and TOP Reliability Standards Supersession Mapping

This following mapping shows the supersession of Requirements for the following IRO, TOP, and PER reliability standards by the revised/replacement IRO and TOP reliability standards adopted or yet to be adopted in B.C. as of the effective date in the “B.C. Reliability Standards” section above:

IRO-002-2 — Reliability Coordination - Facilities

IRO-005-3.1a — Reliability Coordination - Current Day Operations

IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators

PER-001-0.2 — Operating Personnel Responsibility and Authority

TOP-001-1a — Reliability Responsibilities and Authorities

TOP-002-2.1b — Normal Operations Planning

TOP-003-1 — Planned Outage Coordination

TOP-004-2 — Transmission Operations

TOP-005-2a — Operational Reliability Information

TOP-006-2 — Monitoring System Conditions

TOP-007-0 — Reporting System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations

TOP-008-1 — Response to Transmission Limit Violations

IRO and TOP Reliability Standards Supersession Mapping

Standard IRO-002-2 — Reliability Coordination – Facilities	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirements R1, R3-R5, R7, and R8	IRO-002-4
Requirement R2	IRO-010-2
Requirement R6	IRO-008-2

Standard IRO-005-3.1a — Reliability Coordination - Current Day Operations	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirements R1-R3	IRO-002-4
Requirement R4	IRO-008-2
Requirements R5 and R8	IRO-001-4 IRO-002-4
Requirements R6 and R7	IRO-008-2 IRO-017-1
Requirement R8	IRO-001-4 IRO-002-4
Requirement R9	IRO-002-4 IRO-010-2
Requirement R10	IRO-009-1 TOP-001-4

IRO and TOP Reliability Standards Supersession Mapping

Standard IRO-005-3.1a — Reliability Coordination - Current Day Operations	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R11	MOD-001-2, Requirement R2 (pending FERC adoption in the U.S. and subsequent assessment and adoption in B.C.)
Requirement R12	IRO-008-2
Standard IRO-015-1 — Notifications and Information Exchange Between Reliability Coordinators	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirements R1 and R2	IRO-014-3
Requirement R3	IRO-010-2

Standard PER-001-0.2 — Operating Personnel Responsibility and Authority	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
All Requirements	TOP-001-4

Standard TOP-001-1a — Reliability Responsibilities and Authorities	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirements R1, R2, R4, R5, R6	TOP-001-4
Requirement R3	IRO-001-4 TOP-001-4

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-001-1a — Reliability Responsibilities and Authorities	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R7	TOP-001-4 TOP-003-3 IRO-010-2
Requirement R8	EOP-003-2, Requirement 1 (adoption held in abeyance in B.C. due to PA/PC dependencies) IRO-009-2

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-002-2.1b — Normal Operations Planning	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	TOP-001-4 TOP-002-4
Requirements R2, R5-R9, R12	TOP-002-4
Requirement R3	IRO-017-1 TOP-003-3
Requirement R4	IRO-017-1 IRO-008-2
Requirement R10	IRO-017-1 TOP-001-4 TOP-002-4 TOP-003-3
Requirement R11	TOP-001-4 TOP-002-4
Requirement R13	TOP-001-4 TOP-003-3
Requirements R14, R15, and R19	TOP-003-3
Requirements R16, R17, and R18	IRO-010-2

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-003-1 — Planned Outage Coordination	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	IRO-010-2 TOP-003-3
Requirement R2	IRO-017-1 TOP-003-3
Requirement R3	TOP-001-4
Requirement R4	IRO-008-2 IRO-017-1

Standard TOP-004-2 — Transmission Operations	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	TOP-001-4
Requirement R2	TOP-001-4 TOP-002-4
Requirements R3 and R4	TOP-001-4
Requirement R5	Retired
Requirement R6	IRO-017-1 TOP-001-4

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-005-2a — Operational Reliability Information	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	IRO-010-2 TOP-003-3
Requirement R2	TOP-003-3
Requirement R3	Retired

Standard TOP-006-2 — Monitoring System Conditions	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	IRO-010-2 TOP-001-4 TOP-003-3
Requirement R2	IRO-002-4 TOP-001-4
Requirement R3	IRO-010-2 TOP-003-3
Requirement R4	TOP-003-3
Requirement R5	IRO-002-5 TOP-001-4

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-006-2 — Monitoring System Conditions	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R6	TOP-003-3
Requirement R7	IRO-002-5 TOP-001-4

Standard TOP-007-0 — Reporting System Operating Limit (SOL) and Interconnection Reliability Operating Limit (IROL) Violations	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirement R1	IRO-008-2 TOP-001-4
Requirement R2	IRO-009-2 TOP-001-4
Requirement R3	EOP-003-2, Requirement 1 (adoption held in abeyance in B.C. due to PA/PC dependencies) IRO-009-2
Requirement R4	IRO-008-2

IRO and TOP Reliability Standards Supersession Mapping

Standard TOP-008-1 — Response to Transmission Limit Violations	
Requirement Being Superseded	Superseding BCUC Approved Standard(s)
Requirements R1	EOP-003-2, Requirement 1 (adoption held in abeyance in B.C. due to PA/PC dependencies) TOP-001-4
Requirements R2 and R3	TOP-001-4
Requirement R4	TOP-001-4 TOP-002-4 TOP-003-3

MRS NERC COVID-19 Compliance Response

Attachment 4

BC Hydro Internal Assessment and Responses from Registered Entities

Registered Entity Name: **BC Hydro**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	No Extension Required	
EOP-004-4	01-Oct-20	No Extension Required	
EOP-005-3	01-Oct-20	No Extension Required	
EOP-006-3	01-Oct-20	No Extension Required	
EOP-008-2	01-Oct-20	No Extension Required	
IRO-017-1	01-Oct-20	No Extension Required	
MOD-025-2	100% Compliance by October 1, 2020	No Extension Required	
PRC-019-2	100% Compliance by October 1, 2020	No Extension Required	
PRC-024-2	100% Compliance by October 1, 2020	No Extension Required	
TOP-001-4	01-Oct-20	6 month Extension	On site restrictions/limitations for the control centres may impact tool and process development as well as in person training
TOP-002-4	01-Oct-20	6 month Extension	On site restrictions/limitations for the control centres may impact tool and process development as well as in person training
TOP-010-1(i)	01-Oct-20	6 month Extension	On site restrictions/limitations for the control centres may impact tool and process development as well as in person training
TPL-001-4 R2-R6, R8	01-Jul-20	No Extension Required	
VAR-501-WECC-3.1	01-Oct-20	No Extension Required	

Registered Entity Name: **NorthRiver Midstream Inc.**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	No impacts anticipated	N/A
EOP-004-4	01-Oct-20	No impacts anticipated	N/A
EOP-005-3	01-Oct-20	No impacts anticipated - no Blackstart Resources at this facility	N/A
EOP-006-3	01-Oct-20	No impacts anticipated	N/A
EOP-008-2	01-Oct-20	No impacts anticipated	N/A
IRO-017-1	01-Oct-20	No impacts anticipated	N/A
MOD-025-2	100% Compliance by October 1, 2020	No impacts anticipated	N/A
PRC-019-2	100% Compliance by October 1, 2020	No impacts anticipated	N/A
PRC-024-2	100% Compliance by October 1, 2020	No impacts anticipated	N/A
TOP-001-4	01-Oct-20	No impacts anticipated	N/A
TOP-002-4	01-Oct-20	No impacts anticipated	N/A
TOP-010-1(i)	01-Oct-20	No impacts anticipated	N/A
TPL-001-4 R2-R6, R8	01-Jul-20	No impacts anticipated	N/A
VAR-501-WECC-3.1	01-Oct-20	No impacts anticipated	N/A

Registered Entity Name: **Coast Mountain Hydro Limited**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	<i>Standard Not Applicable</i>	
EOP-004-4	01-Oct-20	No Extension Required	
EOP-005-3	01-Oct-20	Standard Not Applicable	
EOP-006-3	01-Oct-20	Standard Not Applicable	
EOP-008-2	01-Oct-20	Standard Not Applicable	
IRO-017-1	01-Oct-20	Standard Not Applicable	
MOD-025-2	100% Compliance by October 1, 2020	No Extension Required	
PRC-019-2	100% Compliance by October 1, 2020	No Extension Required	
PRC-024-2	100% Compliance by October 1, 2020	No Extension Required	
TOP-001-4	01-Oct-20	No Extension Required	
TOP-002-4	01-Oct-20	No Extension Required	
TOP-010-1(i)	01-Oct-20	No Extension Required	
TPL-001-4 R2-R6, R8	01-Jul-20	Standard Not Applicable	
VAR-501-WECC-3.1	01-Oct-20	No Extension Required	

Registered Entity Name: **FortisBC Inc.**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	No extension required.	
EOP-004-4	01-Oct-20	No extension required.	
EOP-005-3	01-Oct-20	No extension required.	
EOP-006-3	01-Oct-20	FortisBC is not registered as a Reliability Coordinator, therefore, this standard is not applicable to FortisBC.	
EOP-008-2	01-Oct-20	No extension required.	
IRO-017-1	01-Oct-20	No extension required.	
MOD-025-2	100% Compliance by October 1, 2020	No extension required.	
PRC-019-2	100% Compliance by October 1, 2020	No extension required.	
PRC-024-2	100% Compliance by October 1, 2020	No extension required.	
TOP-001-4	01-Oct-20	No extension required.	
TOP-002-4	01-Oct-20	No extension required.	
TOP-010-1(i)	01-Oct-20	No extension required.	
TPL-001-4 R2-R6, R8	01-Jul-20	No extension required.	
VAR-501-WECC-3.1	01-Oct-20	No extension required.	

Registered Entity Name: **(TMGP) Toba Montrose General Partnership**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	N/A - low impact entity	
EOP-004-4	01-Oct-20	No extension required	
EOP-005-3	01-Oct-20	N/A - no blackstart resources	
EOP-006-3	01-Oct-20	N/A - function registered GO and GOP	
EOP-008-2	01-Oct-20	N/A - function registered GO and GOP	
IRO-017-1	01-Oct-20	N/A - function registered GO and GOP	
MOD-025-2 Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	100% Compliance by October 1, 2020	No extension required	
PRC-024-2 Generator Frequency and Voltage Protective Relay Settings	100% Compliance by October 1, 2020	No extension required	
TOP-001-4 Transmission Operations	01-Oct-20	No extension required	
TOP-002-4	01-Oct-20	N/A - function registered GO and GOP	
TOP-010-1(i)	01-Oct-20	N/A - function registered GO and GOP	
TPL-001-4 R2-R6, R8	01-Jul-20	N/A - function registered GO and GOP	
VAR-501-WECC-3.1 Power System Stabilizer (PSS)	01-Oct-20	No extension required	

Registered Entity Name: **(CWEI) Innergex Renewable Energy Inc.**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	N/A - low impact entity	
EOP-004-4	01-Oct-20	No extension required	
EOP-005-3	01-Oct-20	N/A - no blackstart resources	
EOP-006-3	01-Oct-20	N/A - function registered GO and GOP	
EOP-008-2	01-Oct-20	N/A - function registered GO and GOP	
IRO-017-1	01-Oct-20	N/A - function registered GO and GOP	
MOD-025-2 Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-024-2 Generator Frequency and Voltage Protective Relay Settings	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
TOP-001-4 Transmission Operations	01-Oct-20	No extension required	
TOP-002-4	01-Oct-20	N/A - function registered GO and GOP	
TOP-010-1(i)	01-Oct-20	N/A - function registered GO and GOP	
TPL-001-4 R2-R6, R8	01-Jul-20	N/A - function registered GO and GOP	
VAR-501-WECC-3.1 Power System Stabilizer (PSS)	01-Oct-20	No extension required	

Registered Entity Name: *(JCLP) Jimmie Creek Limited Partnership*

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	N/A - low impact entity	
EOP-004-4	01-Oct-20	No extension required	
EOP-005-3	01-Oct-20	N/A - no blackstart resources	
EOP-006-3	01-Oct-20	N/A - function registered GO and GOP	
EOP-008-2	01-Oct-20	N/A - function registered GO and GOP	
IRO-017-1	01-Oct-20	N/A - function registered GO and GOP	
MOD-025-2 Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-024-2 Generator Frequency and Voltage Protective Relay Settings	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
TOP-001-4 Transmission Operations	01-Oct-20	No extension required	
TOP-002-4	01-Oct-20	N/A - function registered GO and GOP	
TOP-010-1(i)	01-Oct-20	N/A - function registered GO and GOP	
TPL-001-4 R2-R6, R8	01-Jul-20	N/A - function registered GO and GOP	
VAR-501-WECC-3.1 Power System Stabilizer (PSS)	01-Oct-20	No extension required	

Registered Entity Name: **(ULRP) Upper Lillooet River Power LP**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	N/A - low impact entity	
EOP-004-4	01-Oct-20	No extension required	
EOP-005-3	01-Oct-20	N/A - no blackstart resources	
EOP-006-3	01-Oct-20	N/A - function registered GO and GOP	
EOP-008-2	01-Oct-20	N/A - function registered GO and GOP	
IRO-017-1	01-Oct-20	N/A - function registered GO and GOP	
MOD-025-2 Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
PRC-024-2 Generator Frequency and Voltage Protective Relay Settings	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions and camp access limitation.
TOP-001-4 Transmission Operations	01-Oct-20	No extension required	
TOP-002-4	01-Oct-20	N/A - function registered GO and GOP	
TOP-010-1(i)	01-Oct-20	N/A - function registered GO and GOP	
TPL-001-4 R2-R6, R8	01-Jul-20	N/A - function registered GO and GOP	
VAR-501-WECC-3.1 Power System Stabilizer (PSS)	01-Oct-20	No extension required	

Registered Entity Name: **(DGP) Dokie General Partnership**

Reliability Standard	Effective Date or Phased-in Implementation Date	Implementation Extension Required (additional time required three to six months)	Details how COVID-19 will affect your ability to become compliant
CIP-010-2 R3.2, R3.2.1, and R3.2.2	01-Oct-20	N/A - low impact entity	
EOP-004-4	01-Oct-20	No extension required	
EOP-005-3	01-Oct-20	N/A - no blackstart resources	
EOP-006-3	01-Oct-20	N/A - function registered GO and GOP	
EOP-008-2	01-Oct-20	N/A - function registered GO and GOP	
IRO-017-1	01-Oct-20	N/A - function registered GO and GOP	
MOD-025-2 Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability	100% Compliance by October 1, 2020	6 months	We cannot currently bring contractors to site due to internally enforced access restrictions. Any contractor will also need to travel and stay locally.
PRC-019-2 Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	100% Compliance by October 1, 2020	No extension required	
PRC-024-2 Generator Frequency and Voltage Protective Relay Settings	100% Compliance by October 1, 2020	No extension required	
TOP-001-4 Transmission Operations	01-Oct-20	No extension required	
TOP-002-4	01-Oct-20	N/A - function registered GO and GOP	
TOP-010-1(i)	01-Oct-20	N/A - function registered GO and GOP	
TPL-001-4 R2-R6, R8	01-Jul-20	N/A - function registered GO and GOP	
VAR-501-WECC-3.1 Power System Stabilizer (PSS)	01-Oct-20	No extension required	