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January 30, 2019

Mr. Patrick Wruck
Commission Secretary and Manager
Regulatory Support
British Columbia Utilities Commission
Suite 410, 900 Howe Street
Vancouver, BC V6Z 2N3

Dear Mr. Wruck:

RE: Project No. 1598978
British Columbia Utilities Commission (BCUC or Commission)
British Columbia Hydro and Power Authority (BC Hydro)
Application for Reliability Coordinator (RC) Registration with the
Mandatory Reliability Standards (MRS) Program
Responses to BCUC Panel Information Request No. 1

BC Hydro writes in compliance with Exhibit A-10 to provide, as Exhibit B-7, its responses to BCUC Panel Information Request (IR) No. 1.

As stated in the cover letter to BC Hydro's responses to BCUC and Interveners IR No. 1 (Exhibit B-6)


“the critical path decisions to ensure a WECC review in May and thus an RC is in place by September 2, 2019 are i) determination by the BCUC whether it would like WECC to perform a full certification review of BC Hydro, or whether an assurance review will be sufficient, and ii) whether any other details of the WECC's review need to be determined.”

While previously BC Hydro felt an assurance review was the most appropriate form of review for WECC to make a recommendation as to whether BC Hydro should be registered for the RC function; to avoid potential delays that could jeopardize this timeline, BC Hydro confirms it is amenable to a full certification review and will speak more to this at the Procedural Conference on January 30, 2019.

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Application for Reliability Coordinator (RC) Registration with the
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For further information, please contact Geoff Higgins at 604-623-4121 or by email at bchydroregulatorygroup@bchydro.com.

Yours sincerely,



Fred James
Chief Regulatory Officer

st/ma

Enclosure (1)

British Columbia Utilities Commission Panel Information Request No. 1.1.1 Dated: January 29, 2019 British Columbia Hydro & Power Authority Response issued January 30, 2019	Page 1 of 1
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1.0 A. RELIABILITY COORDINATOR FUNCTION SOLUTION

**Reference: Certification Process
 Exhibit B-6, BCUC IR 7.1.1
 RC functional registration**

In its response to British Columbia Utilities Commission (BCUC) information requests, British Columbia Hydro and Power Authority (BC Hydro) stated:

BC Hydro submits that an assurance review, as opposed to a full certification, would not require the evaluation of the CIP [Critical Infrastructure Protection] Reliability Standards as these apply equally to BA [Balancing Authority]/TOP [Transmission Operator]/RC [Reliability Coordinator] functions and have been frequently and recently evaluated for compliance. BC Hydro's transition¹ to CIP Version 5 from CIP Version 3 was recently evaluated in an October 2017 WECC [Western Electricity Coordinating Council] on-site audit. The 2017 on-site Audit team consisted of WECC staff and consultants. In addition, two BCUC staff observers and two observers from the office of the BC Auditor General were included.

The CIP Version 5 Reliability Standards became effective October 1, 2018, for which BC Hydro conducted an internal self-assessment of compliance of all CIP Version 5 Reliability Standards using the services of external MRS [Mandatory Reliability Standards] compliance audit consultants. BC Hydro will be subject to another CIP Version 5 self-assessment in 2019, followed by its next WECC on-site audit in 2020.

1.1.1 Please confirm that the WECC 2017 audit was a transition audit as opposed to a full compliance audit. Please explain the difference between the two.

RESPONSE:

Confirmed. The WECC 2017 audit with respect to the CIP Reliability Standards was a transition audit that evaluated BC Hydro's progression to the CIP Version 5 Reliability Standards from CIP Version 3 ahead of the October 1, 2018 effective date. The audit was performed based on a review of available policies, programs, and plans that BC Hydro had developed at the time of the audit in accordance with CIP Version 5 Reliability Standards.

A full compliance audit can only be conducted post the effective date of a given Reliability Standard.

¹ Emphasis added.

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1.0 A. RELIABILITY COORDINATOR FUNCTION SOLUTION

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1.1.2 Please confirm that the first WECC audit of BC Hydro's fully implemented CIP Version 5 Reliability Standards is not scheduled until at least 2020.

RESPONSE:

Confirmed.

¹ Emphasis added.

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The CIP Version 5 Reliability Standards became effective October 1, 2018, for which BC Hydro conducted an internal self-assessment of compliance of all CIP Version 5 Reliability Standards using the services of external MRS [Mandatory Reliability Standards] compliance audit consultants. BC Hydro will be subject to another CIP Version 5 self-assessment in 2019, followed by its next WECC on-site audit in 2020.

1.1.3 Please confirm that the WECC 2017 audit took place before the October 1, 2018 effective date of the CIP Version 5 Reliability Standards in British Columbia.

RESPONSE:

Confirmed. The WECC 2017 audit took place in October 2017.

¹ Emphasis added.

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2.0 A. RELIABILITY COORDINATOR FUNCTION SOLUTION

**Reference: Certification Process
Exhibit B-6, BCUC IR 7.1
RC functional registration**

In its response to BCUC information requests, BC Hydro stated:

Full certification is a process defined in section 500 of the NERC [North American Electric Reliability Corporation] Rules of Procedure¹ as an Organization Certification Program and described in section 4.2.3 of the Application. NERC has delegated the certification process for entities in the Western Interconnection to WECC. BC Hydro is not subject to the NERC Rules of Procedure and instead follows the B.C. MRS Rules of Procedure, which are silent on the circumstances in which a full certification may be required, or the process to be followed to achieve certification.

The purpose of the NERC Organization Certification Program is to ensure that the new entity (i.e., an applicant to be an RC, BA, or TOP that is not already performing the function for which it is applying to be certified as) has the tools, processes, training, and procedures to demonstrate their ability to meet the requirements/sub-requirements of all of the Reliability Standards applicable to the function(s) for which it is applying thereby demonstrating the ability to become certified and then operational.

For U.S. entities such as CAISO [California Independent System Operator] and SPP [Southwest Power Pool] who register with NERC and are subject to NERC's Rules of Procedure, WECC follows the NERC Rules of Procedure and those entities will be undergoing a full certification as they take on the RC function.

A full certification in the U.S. for the RC function uses the processes and templates prescribed by NERC and examines the applicant's ability to be compliant with all the Reliability Standards associated with an RC.

There is no requirement for a B.C. entity requesting registration as an RC, BA or TOP to follow a prescribed certification process. BC Hydro believes that some form of assessment is preferable to assure the BCUC that BC Hydro has the tools, processes, training, and procedures to meet the requirements of the Reliability Standards associated with RC function.

As described in BC Hydro's response to BCUC IR 1.7.1.1, the bulk of the differences in standards expected to be covered in a full certification as opposed to an assurance review are in the area of the Critical Infrastructure Protection

¹ https://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20180719.pdf.

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(CIP) Reliability Standards. BC Hydro believes it is not necessary to have WECC review these Reliability Standards when assessing BC Hydro's RC capabilities. The proposed BC Hydro RC function will be working within the same electronic security perimeter and protected by the same cyber security systems that protect the BA and TOP operating functions. Having the RC team submit to a review of compliance with the CIP Reliability Standards that protect these physical and cyber assets is duplicative. Any additional cyber assets added to the control room because of the RC function will automatically be covered by existing processes applicable to the CIP Reliability Standards as the requirements apply already to the BA and TOP functions. If BC Hydro were establishing a new control center or had no previous role as BA and TOP, a fulsome review of compliance with those Reliability Standards would be necessary.

- 1.2.1 If a potential RC registrant is already functioning as a BA or TOP, would it be subject to a full certification by WECC in accordance with the NERC Rules of Procedure? Please explain.

RESPONSE:

As discussed in BC Hydro's response to BCUC IR 1.7.1, only U.S. entities are subject to the NERC Rules of Procedure which require full certification when applying to register as a BA, TOP, or RC. U.S. entities such as CAISO that are already registered with NERC and functioning as BA and TOP are subject to full certification in order to complete their registration as RC.

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2.0 A. RELIABILITY COORDINATOR FUNCTION SOLUTION

**Reference: Certification Process
 Exhibit B-6, BCUC IR 7.1
 RC functional registration**

In its response to BCUC information requests, BC Hydro stated:

Full certification is a process defined in section 500 of the NERC [North American Electric Reliability Corporation] Rules of Procedure¹ as an Organization Certification Program and described in section 4.2.3 of the Application. NERC has delegated the certification process for entities in the Western Interconnection to WECC. BC Hydro is not subject to the NERC Rules of Procedure and instead follows the B.C. MRS Rules of Procedure, which are silent on the circumstances in which a full certification may be required, or the process to be followed to achieve certification.

The purpose of the NERC Organization Certification Program is to ensure that the new entity (i.e., an applicant to be an RC, BA, or TOP that is not already performing the function for which it is applying to be certified as) has the tools, processes, training, and procedures to demonstrate their ability to meet the requirements/sub-requirements of all of the Reliability Standards applicable to the function(s) for which it is applying thereby demonstrating the ability to become certified and then operational.

For U.S. entities such as CAISO [California Independent System Operator] and SPP [Southwest Power Pool] who register with NERC and are subject to NERC's Rules of Procedure, WECC follows the NERC Rules of Procedure and those entities will be undergoing a full certification as they take on the RC function.

A full certification in the U.S. for the RC function uses the processes and templates prescribed by NERC and examines the applicant's ability to be compliant with all the Reliability Standards associated with an RC.

There is no requirement for a B.C. entity requesting registration as an RC, BA or TOP to follow a prescribed certification process. BC Hydro believes that some form of assessment is preferable to assure the BCUC that BC Hydro has the tools, processes, training, and procedures to meet the requirements of the Reliability Standards associated with RC function.

As described in BC Hydro's response to BCUC IR 1.7.1.1, the bulk of the differences in standards expected to be covered in a full certification as opposed to an assurance review are in the area of the Critical Infrastructure Protection

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(CIP) Reliability Standards. BC Hydro believes it is not necessary to have WECC review these Reliability Standards when assessing BC Hydro's RC capabilities. The proposed BC Hydro RC function will be working within the same electronic security perimeter and protected by the same cyber security systems that protect the BA and TOP operating functions. Having the RC team submit to a review of compliance with the CIP Reliability Standards that protect these physical and cyber assets is duplicative. Any additional cyber assets added to the control room because of the RC function will automatically be covered by existing processes applicable to the CIP Reliability Standards as the requirements apply already to the BA and TOP functions. If BC Hydro were establishing a new control center or had no previous role as BA and TOP, a fulsome review of compliance with those Reliability Standards would be necessary.

- 1.2.2 Please explain how performing an assurance review aligns with NERC standards, which require full certification for entities in a situation similar to BC Hydro's.

RESPONSE:

The Reliability Standards are silent on the requirement for review necessary to achieve registration for any of the NERC functions. The Reliability Standards apply to entities once those entities become registered.

If this IR is referring to the NERC Rules of Procedure, only U.S. entities are subject to the NERC Rules of Procedure which require full certification. There is no assurance review contemplated in the NERC Rules of Procedure. As discussed in BC Hydro's response to BCUC IR 1.7.1.2, BC Hydro expects that there is no difference in the level of review of the functions (i.e., adequate facilities, tools, personnel, procedures and training) between a full certification and an assurance review. The only difference is in the Reliability Standards included.

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As described in BC Hydro's response to BCUC IR 1.7.1.1, the bulk of the differences in standards expected to be covered in a full certification as opposed to an assurance review are in the area of the Critical Infrastructure Protection

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- 1.2.3 Please confirm whether BC Hydro's potential functional registration as an RC was incorporated by WECC into its risk-based audit plan during the development of the 2017 audit scope.

RESPONSE:

BC Hydro's potential functional registration as an RC was not incorporated by WECC into its risk-based audit plan during the development of the 2017 audit scope.

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2.0 A. RELIABILITY COORDINATOR FUNCTION SOLUTION

**Reference: Certification Process
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As described in BC Hydro's response to BCUC IR 1.7.1.1, the bulk of the differences in standards expected to be covered in a full certification as opposed to an assurance review are in the area of the Critical Infrastructure Protection

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- 1.2.4 Have the CIP risks of BC Hydro as a potential RC coordinating with other RCs been considered or assessed in any previous WECC audits of BC Hydro? Please explain why or why not. If those risks have not been considered or assessed as part of a previous WECC audit, when and how will such risks be considered or assessed in the assurance review proposed by BC Hydro?

RESPONSE:

Risks related to the CIP Reliability Standards pertaining to BC Hydro as the RC coordinating with other RCs have not been considered or assessed in previous WECC audits due to two reasons:

- **BC Hydro not being registered as a RC under the B.C. MRS Program; and**
- **The Reliability Standard CIP-012-1 – Communications between Control Centres, governing CIP risks pertaining to communications between Control Centres (i.e., between RCs) is not yet adopted by FERC in the U.S. (filed by NERC and pending approval), before which it cannot be assessed for potential adoption in B.C.**