

Information Documents are not authoritative. Information Documents are for information purposes only and are intended to provide guidance. In the event of any discrepancy between an Information Document and any Authoritative Document(s) ¹ in effect, the Authoritative Document(s) governs.

1 Purpose

This Information Document relates to the following Authoritative Documents:

- CIP-002-AB-5.1, *Cyber Security – BES Cyber System Categorization* (“CIP-002-AB-5.1”);
- CIP-003-AB-8, *Cyber Security – Security Management Controls* (“CIP-003-AB-8”);
- CIP-004-AB-5.1, *Cyber Security – Personnel & Training* (“CIP-004-AB-5.1”);
- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”);
- CIP-006-AB-5, *Cyber Security – Physical Security of BES Cyber Systems* (“CIP-006-AB-5”);
- CIP-007-AB-5, *Cyber Security – System Security Management* (“CIP-007-AB-5”);
- CIP-008-AB-5, *Cyber Security – Incident Reporting and Response Planning* (“CIP-008-AB-5”);
- CIP-009-AB-5, *Cyber Security – Recovery Plans for BES Cyber Systems* (“CIP-009-AB-5”);
- CIP-010-AB-4, *Cyber Security – Configuration Change Management and Vulnerability Assessments* (“CIP-010-AB-4”);
- CIP-011-AB-1, *Cyber Security – Information Protection* (“CIP-011-AB-1”);
- CIP-013-AB-2, *Cyber Security – Supply Chain Risk Management* (“CIP-013-AB-2”);
- CIP-014-AB-2, *Physical Security* (“CIP-014-AB-2”); and
- CIP-PLAN-AB-2, *Cyber Security – Implementation Plan for Version 5 CIP Security Standards* (“CIP-PLAN-AB-2”)

(collectively, the “CIP Standards”).

The purpose of this Information Document is to provide guidance on the CIP Standards. The main body of this Information Document contains information that is relevant to the CIP Standards listed above. Appendices 1 to 7 contain additional information that is relevant for specific CIP Standards.

2 Use of NERC Guidance Material for the CIP Standards

Each Responsible Entity is responsible for determining for its facilities what actions are necessary to meet the requirements in the CIP Standards.

The AESO encourages each Responsible Entity to reference the NERC CIP guidance material as it implements the CIP Standards. In addition, the AESO plans to use the NERC CIP guidance material as reference material in assessing compliance with the CIP Standards where it determines that the NERC CIP guidance material is applicable. If the AESO determines that there are aspects of the NERC CIP guidance material that are not applicable in Alberta, then the AESO will list that information in this Information Document.

See Appendix 1 – *Additional CIP Guidance Material* for key document references.

¹ “Authoritative Documents” is the general name given by the AESO to categories of documents made by the AESO under the authority of the *Electric Utilities Act* and regulations, and that contain binding legal requirements for either market participants or the AESO, or both. AESO Authoritative Documents include: the ISO rules, the Alberta reliability standards, and the ISO tariff.

3 Appendices

<i>Appendix 1</i>	<i>Additional CIP Guidance Material</i>
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Revision History

Posting Date	Description of Changes
2024-10-01	<p>Addition of CIP-013-AB-2 to Section 1. Updated versions of CIP-003, CIP-005, CIP-010, and CIP-PLAN in Section 1.</p> <p>Modified document structure to have the main body contain information related to all applicable CIP Standards of the document and Appendices 1 to 7 contain additional information that is relevant for specific CIP Standards. The information found in these Appendices 1 to 7 is as follows:</p> <ul style="list-style-type: none"> Moved Section 3 <i>Clarification Regarding Industrial Complexes</i> of this ID#2015-003RS to Appendix 2. Moved Section 5, <i>Identify, Assess, and Correct</i> of this ID#2015-003RS, to Appendix 3. Moved all content from ID#2019-053, <i>Reasons for Access Rules and Ports Opening</i>, to Appendix 4. Added Appendices 1, 5, 6, and 7 for specific information related to CIP-005-AB-7, CIP-010-AB-4, and CIP-013-AB-2. <p>In addition, moved Section 4, <i>Clarification Regarding Applicability</i> of this Information Document, which provided clarification regarding the CIP Standards applicability statements 4.1.3 and 4.1.4, to general ARS Information Document, [ID# TBD].</p> <p>Editorial updates made throughout the document to improve clarity.</p>
2022-04-01	Addition of CIP-014-AB-2 to Section 1.
2019-12-03	Initial release of ID#2019-053, <i>Reasons for Access Rules and Ports Opening</i> .
2019-01-15	Deleted last sentence in Section 5 and amended additional sentence to minimize ambiguity.
2017-05-16	Addition of subsection 5.
2017-05-04	Addition of subsections 3 and 4.
2015-09-21	Initial publication of this ID (ID#2015-003RS, <i>Guidance Information for CIP Standards</i>).

Appendix 1

Additional CIP Guidance Material

This Appendix 1 includes specific information that provides information to Responsible Entities with respect to additional CIP guidance material as it relates to the following **reliability standards**²:

- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”);
- CIP-010-AB-4, *Cyber Security – Configuration Change Management and Vulnerability Assessments* (“CIP-010-AB-4”); and
- CIP-013-AB-2, *Cyber Security – Supply Chain Risk Management* (“CIP-013-AB-2”).

NERC CIP guidance material can be found on the [NERC website](#), and the [NERC One-Stop Shop](#) is a useful spreadsheet collating links to past and current versions of standards and some of their related documents. Table 1 provides a list of key CIP Standard guidance material.

Additional resources and guidance may be found from these sites:

- WECC / Program Areas / Compliance / US: [WECC Compliance US](#) (wecc.org)
- NATF / Industry-initiatives / supply-chain-industry-coordination: [Supply Chain Industry Coordination \(natf.net\)](#)
- NERC [Supply Chain Risk Mitigation Program \(nerc.com\)](#)

Table 1: Key CIP Standard Guidance Material

Applicable Standard	Document Title	Source	Version / Date Published
CIP-005-7	<i>Cyber Security – Electronic Security Perimeter(s) Technical Rationale and Justification for Reliability Standard CIP-005-7, (“NERC CIP-005-7 Rationale Document”)</i>	NERC	Oct 2020
CIP-013-2	<i>Cyber Security – Supply Chain Risk Management Technical Rationale and Justification for Reliability Standard CIP-013-2, (“NERC CIP-013-2 Rationale Document”)</i>	NERC	Oct 2020
CIP-010-4	<i>Cyber Security – Configuration Change Management and Vulnerability Assessments Technical Rationale and Justification for Reliability Standard CIP-010-4</i>	NERC	Oct 2020
CIP-010-3	<i>NATF Software Integrity & Authenticity Implementation Guidance for CIP-010-3 R1 Requirement Part 1.6</i>	NERC	Version 1.0 Approved Nov 6, 2017
CIP-013-2	<i>Security Guideline: Cyber Security Risk Management Lifecycle</i>	NERC	Dec 6, 2022

² Words and phrases in bold (excluding document titles) have the meanings given to them in the AESO’s *Consolidated Authoritative Documents Glossary*, available at www.aeso.ca.

Applicable Standard	Document Title	Source	Version / Date Published
CIP-013-2	<i>Security Guideline: Vendor Risk Management Lifecycle</i>	NERC	March 22, 2023
CIP-013-2	<i>NATF CIP-013 Implementation Guidance: Supply Chain Risk Management Plans</i>	NERC	Version 1.0 Approved Jan 28, 2022
CIP-013-1	NATF CIP-013-1 Implementation Guidance	NERC	Version 2.0 Approved April 3, 2019
CIP-013-1	NATF CIP-013 Implementation Guidance: Using Independent Assessments of Vendors	NERC	Version 3.0 Approved Jan 28, 2022
CIP-013-1	Cyber Security Supply Chain Risk Management Plans Implementation Guidance for CIP-013-1	NERC	Draft April 2017
CIP-013-1 CIP-005-6 CIP-010-3	Frequently Asked Questions Supply Chain – Small Group Advisory Sessions	NERC	May 05, 2021
CIP-013-1	CIP CMEP FAQs	NERC	-

Appendix 2

Clarification Related to Industrial Complexes

Appendix 2 provides specific information in relation to the following **reliability standards**:

- CIP-002-AB-5.1, *Cyber Security – BES Cyber System Categorization* (“CIP-002-AB-5.1”);
- CIP-004-AB-5.1, *Cyber Security – Personnel & Training* (“CIP-004-AB-5.1”);
- CIP-006-AB-5, *Cyber Security – Physical Security of BES Cyber Systems* (“CIP-006-AB-5”);
- CIP-007-AB-5, *Cyber Security – System Security Management* (“CIP-007-AB-5”);
- CIP-008-AB-5, *Cyber Security – Incident Reporting and Response Planning* (“CIP-008-AB-5”);
- CIP-009-AB-5, *Cyber Security – Recovery Plans for BES Cyber Systems* (“CIP-009-AB-5”); and
- CIP-011-AB-1, *Cyber Security – Information Protection* (“CIP-011-AB-1”).

The purpose of this appendix is to provide specific information regarding facilities that are part of an industrial complex.

1 Generating Unit that is part of an Industrial Complex

Subsection 4.2.2.3.1. of the CIP Standards refers to a generating unit that is:

“directly connected to the **bulk electric system** and has a **maximum authorized real power** rating greater than 18 MW unless the **generating unit** is part of an industrial complex;”

For clarity, the wording “unless the **generating unit** is part of an industrial complex” is intended to indicate that, if the **generating unit** is part of an industrial complex, the only applicable subsection is 4.2.2.3.3. In other words, if the generating unit is part of an industrial complex, then the CIP Standards apply if the industrial complex has **supply transmission service** greater than 67.5 MW, unless the **generating unit** is a contracted **blackstart resource**, in which case subsection 4.2.2.3.4. is applicable to that **generating unit**.

2 Generating Unit that is within a Power Plant that is part of an Industrial Complex

Subsection 4.2.2.3.2.3. of the CIP Standards refers to a **generating unit** that:

“has a combined **maximum authorized real power** rating greater than 67.5 MW unless the power plant is part of an industrial complex;”

For clarity, the wording “unless the power plant is part of an industrial complex” is intended to indicate that, if the **generating unit** is within a power plant that is part of an industrial complex, the only applicable subsection is 4.2.2.3.3. In other words, if the **generating unit** is within a power plant that is part of an industrial complex, then the CIP Standards apply if the industrial complex has **supply transmission service greater** than 67.5 MW, unless the **generating unit** is a contracted **blackstart resource**, in which case subsection 4.2.2.3.4. is applicable to that **generating unit**.

3 Aggregated Generating Facility that is part of an Industrial Complex

Subsection 4.2.2.4.1. of the CIP Standards refers to an **aggregated generating facility** that is:

“directly connected to the **bulk electric system** and has a **maximum authorized real power** rating greater than 67.5 MW unless the **aggregated generating facility** is part of an industrial complex;”

For clarity, the wording “unless the **aggregated generating facility** is part of an industrial complex” is intended to indicate that, if the **aggregated generating facility** is part of an industrial complex, the only available subsection is 4.2.2.4.2. In other words, if the **aggregated generating facility** is part of an industrial complex, then the CIP Standards apply if the industrial complex has **supply transmission**

service greater than 67.5 MW, unless the **aggregated generating facility** is a contracted **blackstart resource**, in which case subsection 4.2.2.4.3. is applicable to that **aggregated generating facility**.

Appendix 3

Identify, Assess, and Correct

Appendix 3 provides specific information to Responsible Entities with respect to “identify, assess and correct” language as it relates to the following **reliability standards**:

- CIP-004-AB-5.1, *Cyber Security – Personnel & Training* (“CIP-004-AB-5.1”);
- CIP-006-AB-5, *Cyber Security – Physical Security of BES Cyber Systems* (“CIP-006-AB-5”);
- CIP-007-AB-5, *Cyber Security – System Security Management* (“CIP-007-AB-5”);
- CIP-009-AB-5, *Cyber Security – Recovery Plans for BES Cyber Systems* (“CIP-009-AB-5”); and
- CIP-011-AB-1, *Cyber Security – Information Protection* (“CIP-011-AB-1”).

The requirement in a CIP Standard to “identify, assess and correct” is referred to as the “self-correcting” part of the requirement, and the underlying requirement is referred to as the “technical requirement”.

The AESO recommends that Responsible Entities identify, assess and correct deficiencies in meeting the technical parts of these requirements as follows:

- (a) identify deficiencies by self-reporting contraventions to the Market Surveillance Administrator (“MSA”); and
- (b) assess and correct deficiencies that are the same as the first identified deficiency through a mitigation plan submitted to the MSA as described in the MSA Compliance Process.

The following evidence may be used to demonstrate that the self-correcting part of the requirement has been satisfied:

- (i) evidence that the Responsible Entity is able to identify deficiencies in meeting the technical part of the requirement;
- (ii) records of each identified deficiency in meeting the technical part of the requirement;
- (iii) records of the result of an assessment made of each identified deficiency in meeting the technical part of the requirement;
- (iv) records of the mitigating actions made to correct each identified deficiency in meeting the technical part of the requirements; and
- (v) evidence that each identified deficiency in meeting the technical part of the requirement was corrected.

Appendix 4

Reasons for Access Rules and Ports Openings

Appendix 4 provides specific information to Responsible Entities with respect to the AESO's interpretation of the reasons for access rules and ports opening, and the documented processes as it relates to the following **reliability standards**:

- CIP-003-AB-8, *Cyber Security – Security Management Controls* (“CIP-003-AB-8”);
- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”); and
- CIP-007-AB-5, *Cyber Security – System Security Management* (“CIP-007-AB-5”).

1 Clarification of documented processes

Requirement R1 of CIP-005-AB-7, Requirement R1 of CIP-007-AB-5, and Requirement R2 Attachment 1 Section 3 of CIP-003-AB-8 contain references made to documented processes that include how to determine the reason or need. Determination may be made using documented criteria; consultation with subject matter experts or vendors; vendor documentation; or any other appropriate means. The determined reason or need is expected to be documented clearly in relation to the business function.

2 Clarification of reasons for granting access for CIP-005-AB-7 R1.3 and CIP-003-AB-8 R2

For clarity, in Requirement R1.3 of CIP-005-AB-7, the reference made to “inbound and outbound access permissions” on an **electronic access point**, or Requirement R2 Attachment 1 Section 3 of CIP-003-AB-8 “inbound and outbound electronic access”, collectively consider:

- (i) the source device and/or service IP address, name or application;
- (ii) the destination device and/or service IP address, name, or application; and
- (iii) the reason for granting access in relation to the business function.

3 Clarification of reasons for ports opening for CIP-007-AB-5 R1.1

For clarity, in Requirement R1.1 of CIP-007-AB-5, the reference made to “logical network accessible ports”, collectively considers:

- (i) the impacted device name or application;
- (ii) the protocol (e.g., TCP, UDP);
- (iii) the port or port range (e.g., 80, 1024-1029);
- (iv) the service name(s) (e.g., SSH); and
- (v) the justification of need in relation to the business function.

Where vendor documentation specifies that a port or port range is used but does not provide its justification of need, and the vendor will not provide its justification of need, it is reasonable to justify the port or port range usage as required by the application. The vendor documentation or a vendor attestation is sufficient to support this documented need.

Appendix 5

Clarification on CIP-005-AB-7 Terms

Appendix 5 provides specific information to Responsible Entities with respect to terms used in the following **reliability standard**:

- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”)

The AESO agrees with the *NERC CIP-005-7 Rationale Document*, including the interpretation of the terms “connection”, “authenticate”, and “control”. The AESO’s *Consolidated Authoritative Document Glossary* includes the defined term “interactive remote access”.

In addition to the previous CIP-005-AB-5 Requirement R2 for **interactive remote access**, the new CIP-005-AB-7 “active vendor remote access (including **interactive remote access** and system-to-system remote access)” requires Responsible Entities to know about every vendor connection for the applicable systems (Requirement R2.4) and be able to disable those connections (Requirement R2.5). The applicable systems for Requirement R2.4 and Requirement R2.5 are High and Medium Impact **BES cyber systems** and their associated **protected cyber assets**. CIP-005-AB-7 Requirement R3 requires Responsible Entities to know about authenticated vendor initiated remote connections to **electronic access control or monitoring systems** and **physical access control systems** associated with High Impact **BES cyber systems** and Medium Impact **BES cyber systems** with **external routable connectivity** (Requirement 3.1) and be able to terminate those connections and control the vendors’ ability to reconnect (Requirement 3.2).

Appendix 6

Clarification on Supply Chain Security Risk Management Plans

Appendix 6 provides specific information with respect to terms used in the following **reliability standards**:

- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”);
- CIP-010-AB-4, *Cyber Security – Configuration Change Management and Vulnerability Assessments* (“CIP-010-AB-4”); and
- CIP-013-AB-2, *Cyber Security – Supply Chain Risk Management* (“CIP-013-AB-2”).

In CIP-013-AB-2, the AESO expects that Responsible Entities will include the topics identified in Requirement R1.2.1 through R1.2.6 in their supply chain risk management plan(s) so that procurement and contract negotiation processes address the applicable risks. Responsible Entities may consider additional cyber security criteria in their supply chain risk management plan(s).

CIP-013-AB-2 Requirement R1 supply chain risk management plan(s) and Requirement R2 implementation would be applicable to all procurements of relevant products or services on or after the effective date of the standard. The AESO recommends that the risk assessment be performed on the vendor, product, and/or service as dictated by the Responsible Entity’s supply chain risk management plan(s). The Responsible Entity’s supply chain risk management plan(s) determine(s) where and how the risk assessment is performed.

For clarity, only procurements for applicable **BES cyber systems** that occur on or after the effective date of CIP-013-AB-2 are in scope for the CIP-013-AB-2 procurement planning processes. The requirements for CIP-005-AB-7 and CIP-010-AB-4 are still subject to their effective dates, including existing applicable **BES cyber systems**.

Appendix 7

Clarification on Vendors

Appendix 7 provides specific information with respect to the term “vendor” used in the following **reliability standards**:

- CIP-005-AB-7, *Cyber Security – Electronic Security Perimeter(s)* (“CIP-005-AB-7”); and
- CIP-013-AB-2, *Cyber Security – Supply Chain Risk Management* (“CIP-013-AB-2”).

1 Clarification related to the term “vendor”

The AESO considers the term “vendor” to have the same meaning as described in both the NERC CIP-005-7 Rationale Document, Section *Requirement Part 3.1 and Part 3.2 Vendor Remote Access Management for EACMS and PACS*, and the NERC CIP-013-2 Rationale Document, Section *Rational for Requirement 1 and Requirement 2*:

“The term *vendor(s)* as used in the standard is limited to those persons, companies, or other organizations with whom the Responsible Entity, or its affiliates, contract with to supply BES Cyber Systems and related services. It does not include other NERC registered entities providing reliability services (e.g., Balancing Authority or Reliability Coordinator services pursuant to NERC Reliability Standards). A *vendor*, as used in the standard, may include: (i) developers or manufacturers of information systems, system components, or information system services; (ii) product resellers; or (iii) system integrators.”

The AESO agrees with the NERC description that vendor includes all types of system integrators. By this description, an embedded contractor from a system integrator would not be considered part of the Responsible Entity.

2 Inclusion of Vendor in Supply Chain Risk Management Plan(s)

The AESO expects the Responsible Entity to document the scope of their use of the term “vendor”, in their supply chain risk management plan(s) ensuring that it is broad enough to fulfill the intent of CIP-013-AB-2.

For Requirement R1 and Requirement R2 of CIP-013-AB-2 the AESO recommends that the Responsible Entity use its supply chain risk management plan(s) to identify and assess the risks associated for all procurements and installations of items such as third-party software or open-source software, where negotiated contracts with a vendor may not be possible. The results of this analysis would dictate what mitigations are appropriate to address the risks. Further, the Responsible Entity would be able to demonstrate that this due diligence was performed.

For Requirement R1 of CIP-013-AB-2, the AESO recommends that the Responsible Entity include in its supply chain risk management plan(s) the controls that will ensure awareness of possible vendor mergers, acquisitions, or transitions, as well as the steps they will take to identify, assess, and mitigate any risks of such situations. A “transition” refers to the transition of products or services from one vendor to another.