

## A. Introduction

1. **Title:** Cyber Security — Personnel & Training
2. **Number:** CIP-004-4
3. **Purpose:** Standard CIP-004-4 requires that personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets, including contractors and service vendors, have an appropriate level of personnel risk assessment, training, and security awareness. Standard CIP-004-4 should be read as part of a group of standards numbered Standards CIP-002-4 through CIP-009-4.
4. **Applicability:**
  - 4.1. Within the text of Standard CIP-004-4, “Responsible Entity” shall mean:
    - 4.1.1 Reliability Coordinator.
    - 4.1.2 Balancing Authority.
    - 4.1.3 Interchange Authority.
    - 4.1.4 Transmission Service Provider.
    - 4.1.5 Transmission Owner.
    - 4.1.6 Transmission Operator.
    - 4.1.7 Generator Owner.
    - 4.1.8 Generator Operator.
    - 4.1.9 Load Serving Entity.
    - 4.1.10 NERC.
    - 4.1.11 Regional Entity.
  - 4.2. The following are exempt from Standard CIP-004-4:
    - 4.2.1 Facilities regulated by the Canadian Nuclear Safety Commission.
    - 4.2.2 Cyber Assets associated with communication networks and data communication links between discrete Electronic Security Perimeters.
    - 4.2.3 In nuclear plants, the systems, structures, and components that are regulated by the Nuclear Regulatory Commission under a cyber security plan pursuant to 10 C.F. R. Section 73.54
    - 4.2.4 Responsible Entities that, in compliance with Standard CIP-002-4, identify that they have no Critical Cyber Assets.
5. **Effective Date:** The first day of the eighth calendar quarter after applicable regulatory approvals have been received (or the Reliability Standard otherwise becomes effective the first day of the ninth calendar quarter after BOT adoption in those jurisdictions where regulatory approval is not required).

## B. Requirements

- R1. Awareness — The Responsible Entity shall establish, document, implement, and maintain a security awareness program to ensure personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets receive on-going reinforcement in sound security practices. The program shall include security awareness reinforcement on at least a quarterly basis using mechanisms such as:
  - Direct communications (e.g., emails, memos, computer based training, etc.);

- Indirect communications (e.g., posters, intranet, brochures, etc.);
  - Management support and reinforcement (e.g., presentations, meetings, etc.).
- R2.** Training — The Responsible Entity shall establish, document, implement, and maintain an annual cyber security training program for personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets. The cyber security training program shall be reviewed annually, at a minimum, and shall be updated whenever necessary.
- R2.1.** This program will ensure that all personnel having such access to Critical Cyber Assets, including contractors and service vendors, are trained prior to their being granted such access except in specified circumstances such as an emergency.
- R2.2.** Training shall cover the policies, access controls, and procedures as developed for the Critical Cyber Assets covered by CIP-004-4, and include, at a minimum, the following required items appropriate to personnel roles and responsibilities:
- R2.2.1.** The proper use of Critical Cyber Assets;
  - R2.2.2.** Physical and electronic access controls to Critical Cyber Assets;
  - R2.2.3.** The proper handling of Critical Cyber Asset information; and,
  - R2.2.4.** Action plans and procedures to recover or re-establish Critical Cyber Assets and access thereto following a Cyber Security Incident.
- R2.3.** The Responsible Entity shall maintain documentation that training is conducted at least annually, including the date the training was completed and attendance records.
- R3.** Personnel Risk Assessment — The Responsible Entity shall have a documented personnel risk assessment program, in accordance with federal, state, provincial, and local laws, and subject to existing collective bargaining unit agreements, for personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets. A personnel risk assessment shall be conducted pursuant to that program prior to such personnel being granted such access except in specified circumstances such as an emergency.
- The personnel risk assessment program shall at a minimum include:
- R3.1.** The Responsible Entity shall ensure that each assessment conducted include, at least, identity verification (e.g., Social Security Number verification in the U.S.) and seven-year criminal check. The Responsible Entity may conduct more detailed reviews, as permitted by law and subject to existing collective bargaining unit agreements, depending upon the criticality of the position.
  - R3.2.** The Responsible Entity shall update each personnel risk assessment at least every seven years after the initial personnel risk assessment or for cause.
  - R3.3.** The Responsible Entity shall document the results of personnel risk assessments of its personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets, and that personnel risk assessments of contractor and service vendor personnel with such access are conducted pursuant to Standard CIP-004-4.
- R4.** Access — The Responsible Entity shall maintain list(s) of personnel with authorized cyber or authorized unescorted physical access to Critical Cyber Assets, including their specific electronic and physical access rights to Critical Cyber Assets.
- R4.1.** The Responsible Entity shall review the list(s) of its personnel who have such access to Critical Cyber Assets quarterly, and update the list(s) within seven calendar days of any change of personnel with such access to Critical Cyber Assets, or any change in the access rights of such personnel. The Responsible Entity shall ensure access list(s) for contractors and service vendors are properly maintained.

- R4.2.** The Responsible Entity shall revoke such access to Critical Cyber Assets within 24 hours for personnel terminated for cause and within seven calendar days for personnel who no longer require such access to Critical Cyber Assets.

### **C. Measures**

- M1.** The Responsible Entity shall make available documentation of its security awareness and reinforcement program as specified in Requirement R1.
- M2.** The Responsible Entity shall make available documentation of its cyber security training program, review, and records as specified in Requirement R2.
- M3.** The Responsible Entity shall make available documentation of the personnel risk assessment program and that personnel risk assessments have been applied to all personnel who have authorized cyber or authorized unescorted physical access to Critical Cyber Assets, as specified in Requirement R3.
- M4.** The Responsible Entity shall make available documentation of the list(s), list review and update, and access revocation as needed as specified in Requirement R4.

### **D. Compliance**

#### **1. Compliance Monitoring Process**

##### **1.1. Compliance Enforcement Authority**

##### **1.2. The RE shall serve as the CEA with the following exceptions:**

- 1.2.1** For entities that do not work for the Regional Entity, the Regional Entity shall serve as the Compliance Enforcement Authority.
- 1.2.2** For Reliability Coordinators and other functional entities that work for their Regional Entity, the ERO shall serve as the Compliance Enforcement Authority.
- 1.2.3** For Responsible Entities that are also Regional Entities, the ERO or a Regional Entity approved by the ERO and FERC or other applicable governmental authorities shall serve as the Compliance Enforcement Authority.
- 1.2.4** For the ERO, a third-party monitor without vested interest in the outcome for the ERO shall serve as the Compliance Enforcement Authority.

##### **1.3. Compliance Monitoring and Enforcement Processes**

Compliance Audits

Self-Certifications

Spot Checking

Compliance Violation Investigations

Self-Reporting

Complaints

##### **1.4. Data Retention**

- 1.4.1** The Responsible Entity shall keep personnel risk assessment documents in accordance with federal, state, provincial, and local laws.
- 1.4.2** The Responsible Entity shall keep all other documentation required by Standard CIP-004-4 from the previous full calendar year unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

- 1.4.3** The Compliance Enforcement Authority in conjunction with the Registered Entity shall keep the last audit records and all requested and submitted subsequent audit records.

### 1.5. Additional Compliance Information

## 2. Violation Severity Levels (To be developed later.)

### E. Regional Variances

None identified.

### Version History

Version	Date	Action	Change Tracking
1	01/16/06	D.2.2.4 — Insert the phrase “for cause” as intended. “One instance of personnel termination for cause...”	03/24/06
1	06/01/06	D.2.1.4 — Change “access control rights” to “access rights.”	06/05/06
2		<p>Modifications to clarify the requirements and to bring the compliance elements into conformance with the latest guidelines for developing compliance elements of standards.</p> <p>Removal of reasonable business judgment.</p> <p>Replaced the RRO with the RE as a responsible entity.</p> <p>Rewording of Effective Date.</p> <p>Reference to emergency situations.</p> <p>Modification to R1 for the Responsible Entity to establish, document, implement, and maintain the awareness program.</p> <p>Modification to R2 for the Responsible Entity to establish, document, implement, and maintain the training program; also stating the requirements for the cyber security training program.</p> <p>Modification to R3 Personnel Risk Assessment to clarify that it pertains to personnel having authorized cyber or authorized unescorted physical access to “Critical Cyber Assets”.</p> <p>Removal of 90 day window to complete training and 30 day window to complete personnel risk assessments.</p> <p>Changed compliance monitor to Compliance Enforcement Authority.</p>	
3		Update version number from -2 to -3	
3	12/16/09	Approved by NERC Board of Trustees	Update
4	Board approved 01/24/2011	Update version number from “3” to “4”	Update to conform to changes to CIP-002-4 (Project 2008-06)