

Reclamation Manual

Directives and Standards

TEMPORARY RELEASE

(Expires 03/30/2013)

Subject:	Electronic Security Perimeter (ESP) Identification Supporting North American Electric Reliability Corporation (NERC) Reliability Standard Compliance
Purpose:	To establish specific requirements and criteria to consistently identify and protect ESPs supporting the reliability of cyber systems supporting the bulk electric system (BES). The benefit of this Directive and Standard (D&S) is that it promotes improved compliance with the Critical Infrastructure Protection (CIP) Reliability Standards of NERC
Authority:	Reclamation Act of 1902 (June 17, 1902; ch. 1093; 32 Stat. 388); Town Sites and Power Development Act of 1906 (April 16, 1906; Pub. L. 59-103; 34 Stat. 116); Federal Water Power Act of 1920 (June 10, 1920; Pub. L. 66-280; 41 Stat. 1063); Reclamation Project Act of 1939 (August 4, 1939; Pub. L. 76-260; 53 Stat. 1187); Department of Energy Organization Act of 1977 (August 4, 1977; Pub. L. 95-91; 91 Stat. 565); Energy Policy Act of 1992 (October 24, 1992; Pub. L. 102-486; 106 Stat. 2776); Energy Policy Act of 2005 (August 8, 2005; Pub. L. 109-58; 119 Stat. 594); acts relating to individual dams or projects; and Federal Energy Regulatory Commission approved NERC Reliability Standards (18 CFR Part 40).
Approving Official:	Director, Information Resources Office (IRO)
Contact:	IRO, 84-21000

1. **Introduction.** The NERC CIP Reliability Standards establish logical protection requirements designed to identify and defend access points to Critical Cyber Assets (CCA) supporting the control and monitoring of BES assets. The protection requirements are applicable to an identified ESP boundary that supports cyber systems and cyber assets identified as residing on a network located within the ESP. This D&S establishes requirements and criteria to support the establishment, identification, and protection of the Bureau of Reclamation's ESPs.
2. **Applicability.** This D&S applies to all directors, area managers, facility managers, and all staff responsible for the establishment, identification, and protection of Reclamation's ESPs.
3. **Definitions.**
 - A. **Access Controls.** Technical, operational, or management security controls, put in place at access points to reduce the risk that unauthorized access (either logical or physical) can be gained to cyber assets protected by the access controls.

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- B. **Access Point.** An electronic data communications mechanism (physical port or communication line), exposed at the boundary of an ESP, which provides logical access to cyber assets within the ESP.
- C. **BES.** The electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.
- D. **Critical Asset (CA).** A facility, system, or equipment which, if destroyed, degraded, or otherwise rendered unavailable, would affect the reliability or operability of the BES.
- E. **CCA.** A cyber asset, including programmable electronic devices, communication networks, hardware, software, and data that is essential to the reliable operation of one or more CAs.
- F. **Directorate.** The organizational component of a Director. This includes the Director, Technical Resources; regional directors; Director, Security, Safety, and Law Enforcement (SSLE); Director, Policy and Administration; and Director, IRO.
- G. **Directors.** Reclamation Senior Executives responsible for specific programs or facilities. This includes: the Director, Technical Resources; regional directors; Director, SSLE; Director, Policy and Administration; and Director, IRO.
- H. **ESP.** An ESP is the logical border surrounding a cyber network to which CCAs are connected and to which access is controlled. All cyber assets and components internal to the ESP boundary, as well as, all cyber assets and components which reside on the ESP boundary are subject to the requirements of this D&S, its companion D&S, and overarching policy.
- I. **Physical Security Perimeter (PSP).** A PSP is a physical, completely enclosed (“six wall”) border surrounding computer rooms, telecommunications rooms, operations centers, and other locations in which CCAs are housed and to which access is to be controlled. Breaks in the boundary are allowed for physical ingress/egress points.
- J. **Reliability Standards.** Any of a number of NERC or Western Electricity Coordinating Council (WECC) Standards, the specific requirements of which are applicable to Reclamation and which define tasks, procedures, or conditions for maintaining the reliability of the BES. For purposes of this D&S, the specific Reliability Standards of concern include Standards CIP-002 through CIP-009, inclusive. Although CIP-001 is identifiable as a CIP Reliability Standard, it does not specifically address the security of

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CCAs and is identified as outside the scope of this D&S. As used throughout this D&S, Standards CIP-002 through CIP-009 will be referred to collectively as the NERC CIP Reliability Standards.

4. **Responsibilities.**

- A. **Director, IRO.** The Director, IRO is Reclamation's single senior manager with overall responsibility for leading and managing the implementation and adherence to the NERC CIP Reliability Standards. The Director, IRO is also responsible for ensuring that Appendix A of Reclamation Manual D&S, *Electronic Security Perimeter (ESP) Identification and Access Control Process*, is maintained.
- B. **Director, SSLE.** The Director, SSLE is responsible for all criminal investigations performed at Reclamation facilities.
- C. **Directors.** Each Director is responsible for the execution and documentation of all applicable NERC and WECC compliance activities, including the support and coordination of information technology related compliance requirements with the IRO. This includes the necessary collection of information as needed to support the identification of ESPs established around CCAs over which the directorate has oversight. All such activities shall be focused on achieving, maintaining, and supporting demonstrable evidence of compliance with the Reliability Standards.
- D. **Technical Resources, Senior Advisor, Hydropower.** The Senior Advisor, Hydropower administers the Electric Reliability Compliance Program. Working with all responsible directors, the Senior Advisor, Hydropower, certifies compliance as applicable to NERC and WECC and advises the Deputy Commissioner, Operations on the status of Electric Reliability Compliance Program issues.
- E. **Reliability Compliance Representative.** As required in Reclamation Manual Policy, *North American Electric Reliability Corporation (NERC) Electric Reliability Standard Compliance (FAC P13)*, each Directorate is represented by a reliability compliance representative who is responsible for coordinating Directorate compliance-related matters with the Power Resources Office and other Directorates. Unless otherwise indicated and documented by the directorate, the reliability compliance representative, or his delegate, is responsible for coordinating directorate compliance planning, information submittals, and records as necessary to support NERC CIP compliance reporting.

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- F. **Area and Facility Managers.** Area and facility managers responsible for identified Reclamation CCA are accountable for the establishment, identification, and protection of ESPs established around their CCA. Area and facility managers are further responsible for documenting the ESPs within the area or facility office to become and maintain compliance with this D&S.
5. **Procedures.**
- A. **Identification of ESPs.** Local identification of ESPs shall be based on the CCA inventory, as addressed in Reclamation D&S, *Critical Cyber Asset (CCA) Identification supporting North American Electric Reliability Corporation (NERC) Reliability Standard Compliance* (IRM TRMR-34). Area and facility managers shall identify ESP's in accordance with the requirements in Appendix A of this D&S, *Electronic Security Perimeter (ESP) Identification and Access Control Process*. Appendix A will be maintained by Reclamation's IRO.
- B. **ESP Inventory Management.** The area and facility managers shall document changes to Reclamation's ESP inventories, boundaries, and electronic access controls within 90 days of the change.
- C. **Protection of ESPs.**
- (1) **Physical Protection.** All ESPs shall be completely contained within a PSP.
 - (2) **Electronic Access Controls.** Electronic access controls shall be implemented to protect all ESPs at each electronic access point. This includes any access point connected to externally originating communication link(s) terminating on any cyber asset within the ESP or any access point connected to outgoing communication link(s) originating from any cyber asset within the ESP (communication links and equipment are not considered part of the ESP). Access controls shall be incorporated and configured as addressed in the Reclamation Manual D&S regarding asset access management supporting NERC Reliability Standard compliance.
- D. **Retention of ESP Records.** All data and documents related to the identification, boundaries, and protection of ESPs shall be retained for a period of not less than 1 calendar year after their effective date.
6. **Related Reclamation Manual Releases.** Related and supporting D&S, as well as the overarching Policy, are available in the Information Resources Management (IRM) section of the Reclamation Manual.