

**UNITED STATES OF AMERICA**  
**BEFORE THE**  
**FEDERAL ENERGY REGULATORY COMMISSION**

North American Electric Reliability Corporation ) Docket Nos. RD23-2-001

Joint Federal-State Task Force on Electric Transmission ) Docket No. AD21-15-000

**COMMENTS OF THE AMERICAN PUBLIC POWER ASSOCIATION, EDISON  
ELECTRIC INSTITUTE, THE LARGE PUBLIC POWER COUNCIL, THE NATIONAL  
RURAL ELECTRIC COOPERATIVE ASSOCIATION, AND THE TRANSMISSION  
ACCESS POLICY STUDY GROUP**

The American Public Power Association (“APPA”), Edison Electric Institute (“EEI”), Large Public Power Council (“LPPC”), the National Rural Electric Cooperative Association (“NRECA”), and Transmission Access Policy Study Group (“TAPS”) (together, the “Trade Associations”) hereby comment in response to the April 18, 2023 Notice of the Federal Energy Regulatory Commission (“Commission” or “FERC”) of North American Electric Reliability Corporation (“NERC”) Physical Security Reliability Standards Study and Inviting Post-Meeting Comments. The Trade Associations support the report filed by NERC on April 14, 2023 (“NERC Report”), in response to the Commission’s order of December 15, 2022.<sup>1</sup> The recommendations in the NERC Report appropriately reflect a risk-based approach to physical security of the Bulk-Power System (“BPS”), while offering reasonable suggestions for further action or analysis on certain specific issues, including a Commission technical conference, and clarification of the risk assessment requirement in Reliability Standard CIP-014.

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<sup>1</sup> *North American Electric Reliability Corp.*, 181 FERC ¶ 61,230 (2022).

## **I. INTERESTS OF THE TRADE ASSOCIATIONS<sup>2</sup>**

APPA is the national service organization representing the interests of not-for-profit, state, municipal, and other locally owned electric utilities throughout the United States. More than 2,000 public power utilities provide over 15 percent of all kilowatt-hour sales to ultimate customers and to businesses in every state except Hawaii. Collectively, public power utilities serve over 49 million people.

EEI is the association that represents all investor-owned electric companies in the United States. Its members provide electricity for more than 235 million Americans and operate in all fifty states and the District of Columbia. As a whole, the electric power industry supports more than seven million jobs in communities across the United States. EEI's member companies own and operate generation, transmission, and distribution facilities in all areas of the country, both inside and outside of regional transmission organizations and independent system operators ("RTOs/ISOs").

LPPC represents 27 of the largest state and municipally owned utilities in the nation. LPPC's members are located throughout the nation, both within and outside the boundaries of RTOs and ISOs. The members comprise the larger, asset-owning utilities in the public power community, owning approximately 90 percent of the transmission assets owned by non-federal public power entities. LPPC members are also members of APPA.

NRECA is the national trade association representing nearly 900 local electric cooperatives and other rural electric utilities. America's electric cooperatives are built by and owned by the people that they serve and comprise a unique sector of the electric industry.

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<sup>2</sup> The communications contacts for each Association are located in the Appendix.

Electric cooperatives operate at cost and without a profit incentive. From growing regions to remote farming communities, electric cooperatives power 1 in 8 Americans and serve as engines of economic development for 42 million Americans across 56 percent of the nation's landmass

TAPS is an association of transmission-dependent utilities ("TDUs") in thirty-five states promoting open and non-discriminatory transmission access. TAPS members have long recognized the importance of grid reliability. As TDUs, TAPS members are users of the BPS and are highly reliant on the reliability of facilities owned and operated by others for the transmission service required to meet TAPS members' loads. In addition, many TAPS members participate in the development of and are subject to compliance with NERC reliability standards.

## **II. BACKGROUND AND SUMMARY OF COMMENTS**

With Trade Association members having been the target of recent attacks, all members are acutely aware of the physical threats posed to the grid. Effective protective measures are indeed necessary, and the Trade Associations' members are taking those measures. The Trade Associations note, however, the particular challenge of developing and implementing a reliability standard that addresses the highly varied physical and electrical characteristics of the facilities that comprise the BPS. As currently conceived, CIP-014 appropriately reflects this reality.

CIP-014 applies only to a well-defined set of transmission facilities and associated control centers that are likely to be critical to BPS reliability.<sup>3</sup> Owners of these transmission facilities are required to:

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<sup>3</sup> Specifically, CIP-014-3 identifies four categories of applicable transmission facilities: (1) facilities operated at 500 kV or higher; (2) facilities operated between 200 kV and 499 kV that meet specified substation configurations, (3) facilities identified as critical to the derivation of Interconnection Reliability Operating Limits, and (4) facilities identified as essential to meeting Nuclear Plant Interface Requirements. CIP-014-3, Section 4 (Applicability),

(R1) undertake individualized risk assessments identifying assets that if rendered inoperable or damaged could result in instability, uncontrolled separation, or Cascading within the interconnection, the characteristics of grid dysfunction to which reliability standards are appropriately targeted under Federal Power Act ("FPA") section 215;<sup>4</sup>

(R2) secure verification by unaffiliated third parties of the registered entities' risk assessments;

(R3) notify a Transmission Operator that has operational control of any identified Transmission station, Transmission substation, or a primary control center and the date of completion;

(R4) conduct evaluation of potential threats and vulnerabilities of a physical attack;

(R5) develop and implement documented physical security plan(s) that covers respective Transmission station(s), Transmission substation(s), and primary control center(s); and

(R6) secure unaffiliated third parties to review evaluation performed under Requirement R4 and the security plan(s) developed under Requirement R5.

A core organizing principle for this standard is the risk-based approach it takes to the reliability challenge that physical threats pose. This approach to the assessment of risk provides appropriate flexibility to address the highly varied circumstances of each entity and thus calibrate appropriate additional measures designed to successfully respond to the particular threats anticipated due to the unique characteristics of that entity.

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Reliability Standard CIP-014-3 is available at <https://www.nerc.com/pa/Stand/Reliability%20Standards/CIP-014-3.pdf>.

<sup>4</sup> The term "reliable operation" of the grid is defined under FPA section 215(a)(4) to mean operation so that "instability, uncontrolled separation, or cascading failures of such system will not occur..."

The Trade Associations agree with NERC's conclusion that the current CIP-014 framework remains appropriate. Reasonably, CIP-014 does not cover *all* facilities nor seek to mitigate *all* threats and vulnerabilities to facilities in the BPS. Instead, the risk-based approach responds to reasonably assessed risks to the BPS, while weighing the cost of what otherwise might be an infinite number of measures that responsible entities might take to mitigate physical security risks. The Trade Associations specifically agree with NERC's conclusion that CIP-014's applicability criteria are adequate to identify the subset of "critical" transmission facilities that should be assessed, and with NERC's recommendation that the CIP-014 applicability criteria not be changed at this time.<sup>5</sup>

The Trade Associations further support NERC's recommendation to establish a technical conference to examine: (a) the type of substation configurations that should be studied to determine whether any additional substations should be included in CIP-014's applicability criteria in the future,<sup>6</sup> and (b) whether a particular combination of reliability, resiliency, and security measures could be effective in mitigating the impact of physical security attacks.<sup>7</sup> On the question whether a minimum level of physical security protection is needed, the Trade Associations agree with NERC that a uniform, bright-line minimum level of security protections would be counterproductive. The Trade Associations also recognize that a technical conference enabling stakeholders to engage in discussions on this matter and to exchange ideas on how to address evolving threats and security risks would be quite valuable.

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<sup>5</sup> NERC Report at 4.

<sup>6</sup> *Id.*

<sup>7</sup> *Id.* at 5.

Finally, the Trade Associations understand the thinking behind NERC’s intent to initiate a standard authorization request (“SAR”) to examine risk assessment methodologies under CIP-014, the cases employed in assessing risk and to clarify required documentation and the treatment of adjacent substations of differing ownership within line of sight of each other.

### **III. COMMENTS**

#### **1. The Trade Associations Support NERC’s Conclusion that the CIP-014 Framework Remains Valid.**

The Trade Associations support NERC’s conclusion that the core, risk-based, organizing principle of CIP-014, enabling registered entities to calibrate protective measures to the level and nature of risks posed to critical facilities, continues to make sense.<sup>8</sup> NERC determines appropriately that the standard enables registered entities to determine protective measures that are appropriately addressed to the varied nature of the facilities to be protected and the electrical and physical topography of each utility’s system.

Consistent with CIP-014’s core purpose, and the Federal Power Act’s definition of reliable operations, Requirements R3 through R6 of CIP-014 are limited to “critical” facilities, i.e., those facilities that “if rendered inoperable or damaged as a result of a physical attack could result in instability, uncontrolled separation, or Cascading within an interconnection.”<sup>9</sup> NERC appropriately reaffirms that objective. The Trade Associations further agree with NERC’s view that “the objective of CIP-014 appropriately focuses limited industry resources on risks to the reliable operation of the BPS associated with physical security incidents at the most critical facilities.”<sup>10</sup>

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<sup>8</sup> *Id.* at 4.

<sup>9</sup> Reliability Standard CIP-014-3 (Physical Security), Section A.3, Purpose.

<sup>10</sup> NERC Report at 4.

Determining whether a particular facility is “critical” requires an individualized risk assessment, and the CIP-014 framework requires registered entities to perform those assessments only on applicable facilities.<sup>11</sup> The Commission had asked NERC to study the adequacy of those applicability criteria.<sup>12</sup> Using all available data, NERC found that the existing applicability criteria are “broad enough to capture the subset of applicable facilities that TOs should identify as ‘critical’ pursuant to the Requirement R1 risks assessment.”<sup>13</sup> NERC further found no evidence indicating that “an expansion of the Applicability criteria would identify additional substations that would qualify as ‘critical’ substations under the CIP-014 Requirement R1 risk assessment.”<sup>14</sup> The Trade Associations agree with those findings.

Once facilities are recognized as “critical,” pursuant to an individualized risk assessment, CIP-014 allows for flexibility in assessing potential threats and vulnerabilities, and appropriate security protections, given that threats will vary by facility.<sup>15</sup> NERC correctly reaffirms the value of that flexibility, finding that “physical protections are uniquely designed and implemented to accomplish specific objectives and are not uniform or interchangeable.”<sup>16</sup> The standard reflects a risk-based approach, which reconciles the industry’s need to cost-effectively protect against these threats with the fact that, as NERC itself has recognized, “[r]ealistically,

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<sup>11</sup> *Id.* Requirement R1.

<sup>12</sup> December 2022 Order, P 1.

<sup>13</sup> NERC Report at 12.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at 27.

<sup>16</sup> *Id.* at 25; *see also id.* at 5 (establishing a uniform, bright line set of minimum physical security protections “is unlikely to be an effective approach to mitigating physical security risks and their potential impacts on the reliable operation of the BPS.”)

preventing all physical attacks is not feasible when weighed against meaningful risk reduction.”<sup>17</sup>

## **2. The Trade Associations Support NERC’s Recommendation to Convene a Technical Conference.**

The Trade Associations understand that the focus of NERC’s recommended technical conference will be on (1) identifying the type of substation configurations that should be studied to determine whether any additional substations should be included in the applicability criteria, and (2) evaluating the appropriate combination of reliability, resiliency, and security measures that would be effective in helping to mitigate the impact of physical security attacks.

With regard to the applicability criteria, the Trade Associations reiterate their agreement with NERC’s view that the CIP-014 applicability criteria are “meeting their objective” and are “broad enough to capture the subset of applicable facilities that TOs should identify as ‘critical’ pursuant to the risks assessment mandated by Requirement R1.”<sup>18</sup> The Trade Associations also agree that it is reasonable in light of evolving threats to the BPS to gather and analyze supplementary data for the purpose of determining whether additional substation configurations would warrant assessment under CIP-014 to determine their criticality.<sup>19</sup> The Trade Associations understand that NERC’s intent is to evaluate substation configuration within the context of CIP-014’s Applicability Criteria 4.1.1.2 for facilities operating between 200 kV and 499 kV. The Trade Associations welcome the opportunity at the technical conference to provide information as to what types of configurations may require further review.

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<sup>17</sup> *Id.* at 27.

<sup>18</sup> *Id.* at 4.

<sup>19</sup> *Id.*

As to effective mitigation measures, the Trade Associations again agree with NERC that a uniform, bright line set of physical security measures is unlikely to offer an effective approach given the widely varying, site-specific characteristics of critical facilities. Specifically, the Trade Associations appreciate NERC's premise that "[t]here has also been some confusion regarding some of the discussion points within the public narrative as CIP-014 is inferred to be the measure to prevent all physical attacks and mitigate their associated impacts."<sup>20</sup> NERC correctly recognizes its mission is to assure an "adequate level of reliability" addressing "instability, uncontrolled separation, or Cascading"<sup>21</sup> rather than attempting to mitigate for *all* potential outages; thus not all measures are appropriately within the scope of the reliability standard. As NERC states:

establishing a uniform, bright line set of minimum physical security protections for all (or even an additional subset of) BPS substations and associated primary controls centers, is unlikely to be an effective approach to mitigating physical security risks and their potential impacts on the reliable operation of the BPS. While a uniform set of minimum level of protections could potentially prevent some forms of physical security threats, NERC finds that such a pursuit lacks the application of a risk-based approach to expending industry resources, fails to provide for a methodical approach necessary to address site-specific threats or objectives (as expected using a design basis threat process), and does not consider the need for other reliability, resiliency, and security measures to mitigate the impact of a physical attack.<sup>22</sup>

Nonetheless, the Trade Associations agree that a robust discussion and exchange of ideas in a technical conference regarding what measures may be applied to mitigating physical security risks would be a valuable exercise. The Trade Associations further agree that the list of issues NERC has suggested offers the basis for a productive discussion in which Trade Association

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<sup>20</sup> *Id.* at 25.

<sup>21</sup> FPA sections 215(c)(1) and (a)(4).

<sup>22</sup> NERC Report at 5.

members will be prepared to engage.<sup>23</sup> Additionally, a discussion on how to build redundancy and minimize the number of critical stations would be useful.

### **3. The Trade Associations Understand Why NERC Will Initiate a SAR to Examine the Risk Assessment for CIP-014 and Believe Additional Clarity May Be Useful**

NERC plans to initiate a SAR to re-examine risk assessments under CIP-014 and, if warranted, propose changes to the standard. The Trade Associations do not dispute NERC's conclusion that there have been inconsistent approaches to risk assessment among Responsible Entities, and the Trade Associations support NERC's view that additional specificity in the requirement may provide benefits.

The Trade Associations' members report that the lack of specificity in the standard has engendered unnecessary conflict between Registered Entities and ERO Enterprise CMEP staff with respect to acceptable approaches to risk evaluation under Requirements R1 and R2 of the Standard. With that in mind, the Trade Associations support NERC's plan. As with other elements of CIP-014 that NERC endorses, the Trade Associations encourage NERC to draft the SAR in such a way that it maintains, to the maximum extent possible, an approach that recognizes the very different risk profiles of Responsible Entities around the grid, thus protecting the BPS most effectively.

## **IV. CONCLUSION**

For reasons articulated above, the Trade Associations support the recommendations in the NERC Report.

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<sup>23</sup> At p. 31, NERC details issues to be included in the conference, including: (1) the objective of any minimum level of protections, risks to be mitigated and industry resources necessary to meet such minimum requirements; (2) the case for expanding the use of planning studies to include coordinated attacks, applicable study criteria, and a corrective action plans; (3) the case for enhancing Operational Planning Assessments to include loss of assets from coordinated attacks; (4) the case for enhancing TP and TO requirements to ensure spare equipment pool strategies are adaptive and in-synch with the need for wide area coverage; and (5) whether RCs should develop and train to readiness scenarios reflecting a physical security incident.

Respectfully submitted,

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