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| NPRR Number | [**1199**](https://www.ercot.com/mktrules/issues/NPRR1199) | NPRR Title | Implementation of Lone Star Infrastructure Protection Act (LSIPA) Requirements |
| Date Submitted | | November 7, 2023 | |

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| Submitter’s Information | |
| Name | Doug Pietrucha |
| E-mail Address | [dpietrucha@texasadvancedenergy.org](mailto:dpietrucha@texasadvancedenergy.org) |
| Company | Texas Advanced Energy Business Alliance (TAEBA) |
| Phone Number | 202-380-1950 ext. 303 |
| Cell Number |  |
| Market Segment | Not Applicable |

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| Comments |

The Texas Advanced Energy Business Alliance (TAEBA) thanks ERCOT staff for the opportunity to file these comments on behalf of our members, many of whom are ERCOT Market Participants. We are submitting these comments to join other organizations in expressing our concern over aspects of implementing the “Implementation of Lone Star Infrastructure Protection Act” (LSIPA), particularly around how the definition of “Critical Electric Grid Equipment” will be applied to generator equipment. We agree Calpine Corporation[[1]](#footnote-1), Plus Power[[2]](#footnote-2), and others that “Critical Electric Grid Equipment”, without a specific and finite list of equipment types developed alongside it, could cause generators to be out of compliance unwittingly for failing to estimate the reach with which ERCOT plans to apply this language for reporting purposes. TAEBA makes the following recommendations:

* ERCOT should produce exhaustive list of grid equipment defined as “Critical Electric Grid Equipment” that uses component names that are broadly understood by market participants.
* Absent an exhaustive list of components that meet the definition, TAEBA agrees with other commenters that adopting a national standard in this case will alleviate ERCOT staff from the burden of creating a bespoke list of equipment and help to eliminate confusion on which components require reporting through Form R. While Calpine’s proposal that ERCOT “mirror the North American Electric Reliability Corporation’s Critical Infrastructure Protection Standards (‘NERC CIP Standards’)”, [[3]](#footnote-3) could be workable, TAEBA is not endorsing one specific national standard at this time.
* Absent the adoption of a set of nationally recognized standards, ERCOT should restrict the application of “Critical Electric Grid Equipment” to mean equipment that directly interconnects generation to the grid, and not generating equipment or generation management equipment.
* A list of vendors whose equipment, when used, would trigger the need for filing Form R in compliance with LISPA requirements.

TAEBA understands ERCOT staff were handed a broadly applicable requirement, and there is an inherent propensity to leave the requirement definition more open to leave room to apply compliance differently in the future based on need. However, staff should also consider the implications of implementing a loose market rule that can lead to reduced participant confidence. TAEBA agrees with other commenters that such a loose reporting requirement could cool investment in the ERCOT region. Failing to provide market participants with confidence in their ability to be and remain compliant, lest they incur fines, will have effects on generator investment down the line. For example, the top two solar PV inverter manufacturers in the world had 50% of the market share in 2022, and both are likely to be subject to this rule.[[4]](#footnote-4) In fact, the top five PV inverter manufacturers by market share all have strong ties to China. If ERCOT were to suddenly decide that inverters for PV panels count as critical grid infrastructure, there are many developers who would suddenly have to update their LSIPA reporting at a massive scale. This is an issue that not only presents a challenge for existing market participants, but also affects the confidence of new build owners as well. The same compliance scenario with inverters mentioned above could play out with generation developers that are currently in the interconnection process, forcing costly decisions around equipment choices, potentially leading to facility redesigns.

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| Revised Cover Page Language |

None

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| Revised Protocol Language |

**1.3.2.1 Items Considered ERCOT Critical Energy Infrastructure Information**

(1) ECEII includes but is not limited to the following, so long as such information has not been disclosed to the public through lawful means:

(a) Detailed ERCOT System Infrastructure locational information, such as Global Positioning System (GPS) coordinates;

(b) Information that reveals that a specified contingency or fault results in instability, cascading or uncontrolled separation;

(c) Studies and results of simulations that identify cyber and physical security vulnerabilities of ERCOT System Infrastructure;

(d) Black Start Service (BSS) test results, individual Black Start Resource start-up procedures, cranking paths, and ERCOT and individual TSP Black Start plans;

(e) Information contained in Section 1.B. and Exhibit 1 to the Standard Form Black Start Agreement (Section 22, Attachment D, Standard Form Black Start Agreement), except for the Hourly Standby Price, Notice, and Certification sections. This includes, without limitation, the following information that could identify a Generation Resource as a Black Start Resource:

(i) Resource name;

(ii) Resource ID;

(iii) County where the Resource is located;

(iv) Interconnected substation;

(v) Resource MW capability; and

(vi) Tested next start units;

(f) Emergency operations plans, including ERCOT’s emergency operations plan and any emergency operations plan submitted to ERCOT pursuant to any PUCT rule or North American Electric Reliability Corporation (NERC) Reliability Standard;

(g) Detailed ERCOT Transmission Grid maps, other than maps showing only small portions of the ERCOT Transmission Grid such as those included in Regional Planning Group (RPG) Project ERCOT Independent Review reports;

(h) Detailed diagrams or information about connectivity between ERCOT’s and other Entities’ computer and telecommunications systems, such as internet protocol (IP) addresses, media access control (MAC) addresses, network protocols, and ports used; and

(i) Information contained in Section 23, Form R, Reporting and Attestation Regarding Procurement of Critical Electric Grid Equipment and Critical Electric Grid Services from an LSIPA Designated Company, submitted to ERCOT that:

(i) Identifies Critical Electric Grid Equipment and Critical Electric Grid Services procured from an LSIPA Designated Company;

(ii) Describes how such procurement of Critical Electric Grid Equipment or Critical Electric Grid Services relates to the operation of the grid;

(iii) Provides an attestation as to whether such procurement of Critical Electric Grid Equipment or Critical Electric Grid Services will result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company; or

(iv) Identifies any measures taken to ensure that the procurement of Critical Electric Grid Equipment or Critical Electric Grid Services will not result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company; and

(j) Any information that is clearly designated as ECEII in writing by the Disclosing Party at the time the information is provided to Receiving Party, subject to the procedures set forth in paragraph (3) of Section 1.3.2.2, Submission of ERCOT Critical Energy Infrastructure Information to ERCOT.

## 2.1 DEFINITIONS

**Critical Electric Grid Equipment**

Equipment that, if destroyed, degraded, misused, or otherwise rendered unavailable would, within 24 hours or less of its mis-operation, non-operation, or required operation, adversely impact the reliable operation of ERCOT System Infrastructure. Redundancy of affected facilities, systems, and equipment shall not be considered when determining adverse impact. Critical Electric Grid Equipment also includes equipment used to access the ERCOT Wide Area Network (WAN) or Market Information System (MIS). Use of equipment in a transmission level connected facility from the following list manufactured by a LSIPA identified company (see below) is required to be reported to ERCOT using Section 23, Form R, Reporting and Attestation Regarding Procurement of Critical Electric Grid Equipment and Critical Electric Grid Services from a Lone Star Infrastructure Protection Act (LSIPA) Designated Company or LSIPA Designated Country:

[Insert Exclusive Equipment List Here]

**Critical Electric Grid Services**

Services provided by a vendor relating to the operation, control, monitoring, maintenance, or use of Critical Electric Grid Equipment.

**ERCOT System Infrastructure**

The Transmission Facilities, distribution facilities, Resources, Settlement Only Generators (SOGs), and Emergency Response Service (ERS) Resources that comprise the ERCOT System and the physical and virtual cyber assets used to control the ERCOT System.

**Lone Star Infrastructure Protection Act (LSIPA) Designated Company**

An Entity that meets any of the company ownership (including Affiliates) or headquarters criteria listed in Texas Business and Commerce Code, Sections 113.002(a)(2)(A)-(b)(2)(B) or 2274.0102(a)(2)(A)-(b)(2)(B), added by Act of June 18, 2021, 87th Leg., R.S., Ch. 975 (S.B. 2116). These manufacturers qualify as LSIPA Designated Companies:

[Insert Exclusive Vendor List Here]

**Lone Star Infrastructure Protection Act (LSIPA) Designated Country**

China, Iran, North Korea, Russia, or a country designated by the Governor as a threat to critical infrastructure pursuant to Texas Business and Commerce Code, Sections 113.003 or 2274.0103, added by Act of June 18, 2021, 87th Leg., R.S., Ch. 975 (S.B. 2116).

## 2.2 ACRONYMS AND ABBREVIATIONS

**LSIPA** Lone Star Infrastructure Protection Act

16.1.3 Market Participant Citizenship, Ownership, or Headquarters

(1) An Entity is not eligible to register or maintain its registration with ERCOT as a Market Participant if the Entity:

(a) Is a person who is a citizen of a Lone Star Infrastructure Protection Act (LSIPA) Designated Country; or

(b) Is an LSIPA Designated Company.

(2) If an Entity meets any of the above listed criteria solely due to the citizenship, ownership, or headquarters of a wholly owned subsidiary, majority-owned subsidiary, or Affiliate, the Entity may be eligible to register as a Market Participant if it certifies that the subsidiary or Affiliate at issue will not have direct or remote access to or control of ERCOT’s Wide Area Network (WAN), Market Information System (MIS), or any data from such ERCOT systems.

(3) Any Entity that seeks to register as a Market Participant shall submit an attestation as reflected in Section 23, Form Q, Attestation Regarding Market Participant Citizenship, Ownership, or Headquarters, certifying that the Entity complies with the above criteria.

(4) If there are changes to a Market Participant’s citizenship, ownership, or headquarters such that the Market Participant meets any of the prohibited company citizenship, ownership (including Affiliations), or headquarters criteria of an LSIPA Designated Company, then the Market Participant shall execute and submit a new attestation to ERCOT within ten Business Days of the change becoming effective.

(5) ERCOT may immediately suspend or terminate a Market Participant’s registration or access to any of ERCOT’s systems if ERCOT has a reasonable suspicion that the Entity meets any of the criteria described by paragraph (1) above.

***16.1.4* Market Participant Reporting of Critical Electric Grid Equipment and Services-Related Procurement**

(1) As a condition of registering and maintaining registration with ERCOT as a Market Participant, an Entity shall report to ERCOT the purchase, lease, or receipt (referred to in this Section as a “procurement”) of any Critical Electric Grid Equipment or Critical Electric Grid Services from a Lone Star Infrastructure Protection Act (LSIPA) Designated Company or an LSIPA Designated Country. This includes, but is not limited to, a procurement of Critical Electric Grid Equipment or Critical Electric Grid Services that were manufactured, produced, created, or otherwise provided by an LSIPA Designated Company and subsequently sold to the Entity by a non-LSIPA Designated Company. For each reported procurement, the Entity shall attest that the procurement will not result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company or an LSIPA Designated Country, excluding access specifically allowed by the Entity for product warranty and support purposes.

(2) Market Participants and Entities applying for registration with ERCOT shall submit a report and attestation, on the form reflected in Section 23, Form R, identifying any procurement described in paragraph (1) above that occurred during the following time periods:

(a) For a Market Participant, procurement(s) that were made on or after June 8, 2021; and

(b) For an Entity applying for registration with ERCOT, procurement(s) that were made within the two years preceding the date it signed the Standard Form Agreement.

(3) Market Participants shall submit a report and attestation, on the form reflected in Section 23, Form R, identifying any procurement(s) described in paragraph (1) above that occur after the date(s) of the procurements reported pursuant to paragraph (2) above and have not already been reported pursuant to this Section.

(4) Reports and attestations submitted pursuant to paragraph (3) above shall be submitted within 90 days of the date of the earliest procurement identified in the report.

**ERCOT Nodal Protocols**

**Section 23**

**Form Q: Attestation Regarding Market Participant Citizenship, Ownership, or Headquarters**

**TBD**

**Attestation Regarding Market Participant Citizenship, Ownership, or Headquarters**

**Legal Name of Market Participant (Applicant):**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Legal Address of Applicant:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Applicant DUNS Number:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Check the one box that applies [do not check both boxes]:

1. With respect to the above referenced Applicant, I hereby attest that:

NONE of the following statements in paragraphs (A) - (D) are TRUE.



ONE OR MORE of the following statements in paragraphs (A) - (D) are TRUE.



(A) The Applicant, or a wholly-owned subsidiary, majority-owned subsidiary, parent company, or Affiliate of the Applicant, is owned by:

(i) Individuals who are citizens of a Lone Star Infrastructure Protection Act (LSIPA) Designated Country; or

(ii) A company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of an LSIPA Designated Country; or

(B) The majority of stock or other ownership interest of the Applicant, or a wholly-owned subsidiary, majority-owned subsidiary, parent company, or Affiliate of the Applicant is held or controlled by:

(i) Individuals who are citizens of an LSIPA Designated Country; or

(ii) A company or other entity, including a governmental entity, that is owned or controlled by citizens of or is directly controlled by the government of an LSIPA Designated Country; or

(C) The Applicant, or a wholly-owned subsidiary, majority-owned subsidiary, parent company, or Affiliate of the Applicant is headquartered in an LSIPA Designated Country; or

(D) The Applicant is a person and is a citizen of an LSIPA Designated Country.

**If you checked the box for “ONE OR MORE of the following statements in paragraphs (A) - (D) are TRUE” solely because a wholly-owned subsidiary, majority-owned subsidiary, or Affiliate meets any of the citizenship or headquarters criteria listed above, then please answer question 2 below.**

2. With respect to the subsidiary or Affiliate at issue, check the one box that applies [do not check both boxes]:

The subsidiary or Affiliate will NOT have direct or remote access to or control of ERCOT’s Wide Area Network (WAN), Market Information System (MIS), or any data from such ERCOT systems.



The subsidiary or Affiliate will have direct or remote access to or control of ERCOT’s WAN, MIS, or any data from such ERCOT systems.



By signing below, I certify that I am authorized to bind the Applicant listed above, that I am authorized to execute and submit this attestation on behalf of Applicant, and that the statements contained herein are true and correct.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

**ERCOT Nodal Protocols**

**Section 23**

**Form R: Reporting and Attestation Regarding Procurement of Critical Electric Grid Equipment and Critical Electric Grid Services from a Lone Star Infrastructure Protection Act (LSIPA) Designated Company or LSIPA Designated Country**

**TBD**

**Reporting and Attestation Regarding Procurement of Critical Electric Grid Equipment and Critical Electric Grid Services from a Lone Star Infrastructure Protection Act (LSIPA) Designated Company** **or LSIPA Designated Country**

This form should be submitted to [LSIPA@ercot.com](mailto:LSIPA@ercot.com) in accordance with the deadlines provided in Section 16.1.4, Market Participant Reporting of Critical Electric Grid Equipment and Services-Related Procurement.

**Legal Name of Applicant or Market Participant:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Legal Address of Applicant or Market Participant:**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Applicant or Market Participant DUNS Number:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Check the one box that applies [do not check both boxes]:

1. With respect to the above referenced Applicant or Market Participant, I hereby attest that the following statement is either true or not true, as indicated below:

The Market Participant or Applicant has procured Critical Electric Grid Equipment or Critical Electric Grid Services from an LSIPA Designated Company or LSIPA Designated Country within one of the time periods described in paragraph (2) or (3) of Section 16.1.4.

The above statement is TRUE.



The above statement is NOT TRUE.



**If you checked the box for “TRUE” in question 1, then please complete sections 2 and 3 below.**

2. **List each procurement of Critical Electric Grid Equipment or Critical Electric Grid Services from an LSIPA Designated Company or LSIPA Designated Country that occurred in the time periods described in paragraph (2) or (3) of Section 16.1.4 and has not already been reported to ERCOT under Section 16.1.4.** **For each procurement, please provide:**

**a. A description of the Critical Electric Grid Equipment or Critical Electric Grid Service procured:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**b. The name of the LSIPA Designated Company from which the procurement was made and the LSIPA Designated Country with which it is associated (or, if applicable, the name of the LSIPA Designated Country from which the procurement was made):**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**c. The date on which the procurement was made:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**d. A general description of how each piece of equipment or service relates to the operation of ERCOT System Infrastructure:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**e. A description of the measures taken to ensure that the procurement will NOT result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company or an LSIPA Designated Country, excluding access allowed by the Applicant or Market Participant for product warranty and support purposes:**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

3. With respect to the procurement at issue:

I attest that the following procurement(s) described in my response to question 2 above will NOT result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company or LSIPA Designated Country, excluding access specifically allowed for product warranty and support purposes:



**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

I attest that the following procurement(s) described in my response to question 2 above WILL result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company or LSIPA Designated Country:



**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

4. If the Applicant or Market Participant attests that a procurement from an LSIPA Designated Company or an LSIPA Designated Country WILL result in access to or control of Critical Electric Grid Equipment by an LSIPA Designated Company or LSIPA Designated Country, then please describe the access to or control of Critical Electric Grid Equipment that was created by the procurement. Please also list any actions the Applicant or Market Participant has taken to mitigate the risks associated with such access or control:

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

By signing below, I certify that I am authorized to bind the Applicant or Market Participant listed above, that I am authorized to execute and submit this attestation on behalf of such Applicant or Market Participant, and that the statements contained herein are true and correct.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Title

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

1. 1199NPRR-05 Calpine Comments 101723, p 2. [↑](#footnote-ref-1)
2. 1199NPRR-07 Plus Power Comments 102323, p 1. [↑](#footnote-ref-2)
3. 1199NPRR-05 Calpine Comments 101723, p 3. [↑](#footnote-ref-3)
4. Wood Mackenzie “Top 10 solar PV inverter vendors account for 86% of global market share”. https://www.woodmac.com/press-releases/top-10-solar-pv-inverter-vendors-account-for-86-of-global-market-share/ [↑](#footnote-ref-4)