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

**Standards for Business Practices of  
Interstate Natural Gas Pipelines**

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)

**Docket No. RM96-1-044**

**COMMENTS OF THE  
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION ON  
THE 2025 NOTICE OF PROPOSED RULEMAKING**

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**TABLE OF CONTENTS**

**I. NERC’S ROLE AS THE ELECTRIC RELIABILITY ORGANIZATION ..... 2**

**II. COMMENTS..... 3**

**a. NERC’s Joint Inquiries, Assessments, and Stakeholder Coordination Under a Natural Gas Work Plan..... 5**

**b. NERC Reliability Standards Bolster BPS Reliability Related to Cold Weather Preparedness and Operational Planning. .... 9**

**c. NERC Supports NAESB’s Updates for Enhanced Coordination..... 10**

**III. CONCLUSION ..... 12**

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The North American Electric Reliability Corporation (“NERC”) submits these comments on the Notice of Proposed Rulemaking (“NOPR”) issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”) in this proceeding on October 16, 2025.<sup>1</sup> NERC respectfully requests that the Commission accept these comments in support of the NOPR’s proposed incorporation by reference of North American Energy Standards Board’s (“NAESB”) Standards for Business Practices of Interstate Natural Gas Pipelines (“standards for business practices” or “standards”). NERC also takes this opportunity to highlight NERC’s Electricity-Natural Gas Work Plan<sup>2</sup> and continuing activities related to the natural gas - electric coordination that emphasize the value of enhanced communication as reflected in the revised NAESB standards.

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<sup>1</sup> *Standards for Business Practices of Interstate Natural Gas Pipelines*, Docket No. RM96-1-044 (Oct. 16, 2025) [hereinafter NOPR].

<sup>2</sup> Attachment A NERC, *Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts* (Presentation to NERC Board (Agenda Item 2b), August 13, 2025), <https://www.nerc.com/globalassets/who-we-are/board-of-trustees/technical-session-agenda-package---august-13-2025.pdf#page=31>; NERC, *Electric/Gas Efforts Updated Work Plan Efforts* (Presentation to NERC Board (Agenda Item 2b), August 13, 2025), <https://www.nerc.com/globalassets/who-we-are/board-of-trustees/technical-session-agenda-package---august-13-2025.pdf#page=31>.

## I. NERC'S ROLE AS THE ELECTRIC RELIABILITY ORGANIZATION

NERC is the Commission-certified Electric Reliability Organization (“ERO”)<sup>3</sup> with jurisdiction over all users, owners, and operators of the Bulk-Power System (“BPS”).<sup>4</sup> NERC’s mission is to ensure effective and efficient reduction of risks to the reliability and security of the grid. Under section 215 of the Federal Power Act (“FPA”),<sup>5</sup> NERC is responsible for developing and enforcing mandatory Reliability Standards applicable to BPS entities and conducting assessments of the reliability and adequacy of the BPS.<sup>6</sup> NERC accomplishes its mission with the support of the six Regional Entities.<sup>7</sup> The Regional Entities help NERC support reliability across various interconnections with differing needs and characteristics.<sup>8</sup>

NERC promotes and supports reliability of the BPS through seasonal and long-term reliability assessments, data collection, event and analysis reports, industry alerts and advisories (including fuel adequacy or forecasted conditions), Reliability and Security Guidelines, and

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<sup>3</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, 114 FERC ¶ 61,104 (2006) [hereinafter Order No. 672], *order on reh’g*, Order No. 672-A, 114 FERC ¶ 61,328 (2006). NERC was certified by the Commission as the ERO, pursuant to § 215(c) of the Federal Power Act (“FPA”), by Commission order issued July 20, 2006. *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 (2006), *order on reh’g & compliance*, 117 FERC ¶ 61,126 (2006), *aff’d sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009) [hereinafter Certification Order].

<sup>4</sup> 16 U.S.C. § 824o [hereinafter section 215].

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

<sup>6</sup> *Id.* § 824o (d)-(e), § 824o(g).

<sup>7</sup> The six Regional Entities are: Midwest Reliability Organization, Northwest Power Coordinating Council, Inc., ReliabilityFirst Corporation, SERC Reliability Corporation, Texas Reliability Entity, Inc., and Western Electricity Coordinating Council.

<sup>8</sup> NERC’s relationship with the Regional Entities is governed by Regional Delegation Agreements or “RDAs” filed with the Commission every five years. 18 C.F.R. § 39.8. A delegation agreement shall not be effective until it is approved by the Commission. *See also, N. Am. Elec. Reliability Corp.*, 133 FERC ¶ 61,061 (2010), *order denying reh’g*, 134 FERC ¶ 61,179 (2011), *order on compliance filing*, 137 FERC ¶ 61,028 (2011). *N. Am. Elec. Reliability Corp.*, 153 FERC ¶ 61,135 (2015) (approving pro forma and individual RDAs, subject to compliance filing) and *N. Am. Elec. Reliability Corp.*, Docket No. RR15-12-001 (Mar. 23, 2016) (delegated letter order) (accepting final pro forma and individual RDAs) (collectively “2015 RDA Order”); *and Order Conditionally Approving Revised Pro Forma Delegation Agreement and Revised Delegation Agreements with Regional Entities*, 173 FERC ¶ 61,277 (2020).

Reliability Standards, as well as facilitating coordination and information sharing between the electric and natural gas industries.

The BPS is defined as:

*(A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and  
(B) electric energy from generation facilities needed to maintain transmission system reliability.*<sup>9</sup>

The BPS does not include facilities used in the local distribution of electric energy.<sup>10</sup> The BPS also does not include natural gas infrastructure, other than those assets which may be part of BPS facilities. Nonetheless, the electric industry depends on natural gas as the largest single source of energy for U.S. electricity generation, which makes BPS reliability vulnerable to disruptions in natural gas supply, transportation, and delivery.<sup>11</sup>

NERC's efforts with gas and electric industry regulators and their respective stakeholders have resulted in increased coordination, including the NAESB Gas Electric Harmonization Forum and the resulting report ("Harmonization Forum Report") that recommended measures to improve gas-electric communication and reliability of natural gas facilities during cold weather events.<sup>12</sup>

## II. COMMENTS

For over two decades,<sup>13</sup> NERC has highlighted BPS considerations associated with the electric grid's dependence on natural gas. The electric and natural gas industries and their

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<sup>9</sup> *Id.* § 824o(a)(1).

<sup>10</sup> *Id.*

<sup>11</sup> See NERC, *Electricity-Natural Gas Strategy* at 1 (Aug. 2025), highlighting that "[t]he electric industry's increased dependence on natural gas to fuel electricity generation amplifies its vulnerability to disruptions in natural gas supply, transportation, and delivery" and highlighting that natural gas-fired generation is "the largest single source of energy for U.S. electricity generation" (citing data from U.S. Energy Information Administration, Electricity Data Browser), [https://www.nerc.com/globalassets/initiatives/electric-gas-interdependence/electricity\\_natural\\_gas\\_strategy.pdf](https://www.nerc.com/globalassets/initiatives/electric-gas-interdependence/electricity_natural_gas_strategy.pdf).

<sup>12</sup> NAESB, *Gas Electric Harmonization Forum Report* at 11-13 (July 2023), [https://www.naesb.org/pdf4/geh\\_final\\_report\\_072823.pdf](https://www.naesb.org/pdf4/geh_final_report_072823.pdf).

<sup>13</sup> See NERC, *Gas/Electricity Interdependencies and Recommendations* (approved by NERC Board of Trustees on June 15, 2004), [https://www.naesb.org/misc/nerc\\_gas\\_electricity\\_interdependencies\\_2004.pdf](https://www.naesb.org/misc/nerc_gas_electricity_interdependencies_2004.pdf); see

regulators must understand the interdependencies between the two industries to reduce related reliability risks to the BPS and natural gas infrastructures. Through the comments herein, NERC provides insights into its activities facilitating gas-electric coordination and supports the Commission's incorporation by reference of the NAESB standards under the above-captioned proceeding.

The electricity sector is the largest consumer of natural gas, which has led to increased interdependence between the electric and gas industries, requiring enhanced coordination.<sup>14</sup> Natural gas-fired generation is the largest single source of energy for electricity generation in the U.S. and is continuing an upward trend, doubling over the past two decades.<sup>15</sup> The natural gas industry also relies on electricity for its winterization efforts.<sup>16</sup> As a result, disruption in natural gas supply during the winter can have dramatic impacts on the reliability of the BPS, and reliability issues affecting the electric grid can also have dramatic impacts on natural gas supply.<sup>17</sup> Electric peak loads occur in the summer during the same time frame that gas storage demands are being

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NERC, *2011 Special Reliability Assessment: A Primer of the Natural Gas and Electric Power Interdependency in the United States* at 102 (Dec. 2011), (discussing conclusions about interdependencies and reliability considerations between the gas pipeline and electric generation operations and planning activities) and recommendations from the 2004 report by NERC's GEITF), [https://www.nerc.com/globalassets/programs/rapa/ra/gas\\_electric\\_interdependencies\\_phase\\_i.pdf](https://www.nerc.com/globalassets/programs/rapa/ra/gas_electric_interdependencies_phase_i.pdf); See NERC, *Short-Term Special Assessment: Operational Risk with High Penetration of Natural Gas-Fired Generation* (May 2016), [https://www.nerc.com/globalassets/programs/rapa/ra/nerc-short-term-special-assessment-gas-electric\\_final.pdf](https://www.nerc.com/globalassets/programs/rapa/ra/nerc-short-term-special-assessment-gas-electric_final.pdf).

<sup>14</sup> NERC Electricity-Natural Gas Strategy at 1 (citing Sean Smillie, M. Granger Morgan & Jay Apt, *How vulnerable are US natural gas pipelines to electric outages?* (2023), <https://www.sciencedirect.com/science/article/pii/S1040619023000180>).

<sup>15</sup> NERC Electricity-Natural Gas Strategy at 1.

<sup>16</sup> See Jim Robb & Mark Lauby *Gas-Electric Systems Evolve Beyond Interdependency*, *Fortnightly Magazine* (Jan. 2024), (stating that “the natural gas energy system has become dependent on a reliable delivery of electrical power to support winterization efforts for wellheads and processing facilities, along with compressor stations and natural gas system control” and “[d]isruption of electric supply results in reduced production and supply of natural gas, and thereby the reliable operation of the natural gas system – as evidenced during Winter Storm Uri.”), <https://www.fortnightly.com/fortnightly/2024/01/gas-electric-systems-evolve-beyond-interdependency?authkey=ff58f1be72aeceb9ac1e2ced045751d0d6176aa3c1c7bddb01db3b8fcd5f973>.

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

managed and when pipelines undergo maintenance, which can also lead to fuel adequacy issues for natural-gas-fired generation.<sup>18</sup>

As discussed in the comments immediately below, NERC has been assessing the increasing potential impacts of natural gas reliance on the BPS and has been working with stakeholders across the electric and natural gas industries to elevate coordination, cooperation, and collaboration. These efforts have accelerated over the past three years due to the changing resource mix.

**a. NERC's Joint Inquiries, Assessments, and Stakeholder Coordination Under a Natural Gas Work Plan.**

Since the 2011 southwest cold weather event that coincided with the Commission and NERC's examination of natural gas-electric coordination in Docket No. AD11-9, there have been five widespread extreme cold weather events in North America that highlighted electricity-gas interdependence and its impact on BPS reliability. Winter Storm Elliott in 2022 reinforced that the electric grid and natural gas pipeline network are becoming increasingly interconnected. During Winter Storm Elliott, natural gas supply chain issues affected electric generators fueled by natural gas. NERC's reliability assessments have also emphasized risks to the BPS from the increasing dependence on natural gas systems. In accordance with section 215, NERC has conducted webinars and workshops and issued alerts and guidelines to help reduce these risks. NERC has also developed Reliability Standards to reduce related risks, such as fuel adequacy, cold weather preparedness, and operational planning.

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<sup>18</sup> NERC, *2025 Summer Reliability Assessment* at 8 (May 2025), [https://www.nerc.com/globalassets/programs/rapa/ra/nerc\\_sra\\_2025.pdf](https://www.nerc.com/globalassets/programs/rapa/ra/nerc_sra_2025.pdf); see NERC, *2025 State of Reliability Report* at 31 (June 2025) (stating that "U.S. natural gas consumption also set new winter and summer monthly records in January and July [2024]" and that "the new record consumption was driven entirely by natural gas consumed for electricity generation"), [https://www.nerc.com/globalassets/programs/rapa/pa/nerc\\_sor\\_2025\\_technical\\_assessment.pdf](https://www.nerc.com/globalassets/programs/rapa/pa/nerc_sor_2025_technical_assessment.pdf).

This work all fits within the rubric of NERC's Electricity-Natural Gas Work Plan (Attachment A) reviewed with the NERC Board of Trustees ("Board") in August 2025.<sup>19</sup> The Work Plan reflects the multi-pronged approach NERC has applied to identify, assess, prioritize, and treat risks associated with natural gas – electric issues. NERC developed this ERO Work Plan to clarify its approach to identify, assess, and treat the risks of natural gas-electric dependence through research and coordination with the Commission, the Regional Entities, and the electric and gas industries. NERC also developed its Electricity-Natural Gas Strategy, posted on NERC's Electricity-Gas Initiative site.<sup>20</sup>

The Electricity-Natural Gas Work Plan identifies key reliability risks of interconnected gas and electric systems as: (1) natural gas supply and transportation risks; (2) electric and gas market harmonization; (3) resource adequacy and capacity to support large variability in load and resources; and (4) the vulnerabilities in generator winterization.<sup>21</sup> The following reflects the key risks, mitigation opportunities, and highlights of the ERO Electricity-Natural Gas Work Plan:

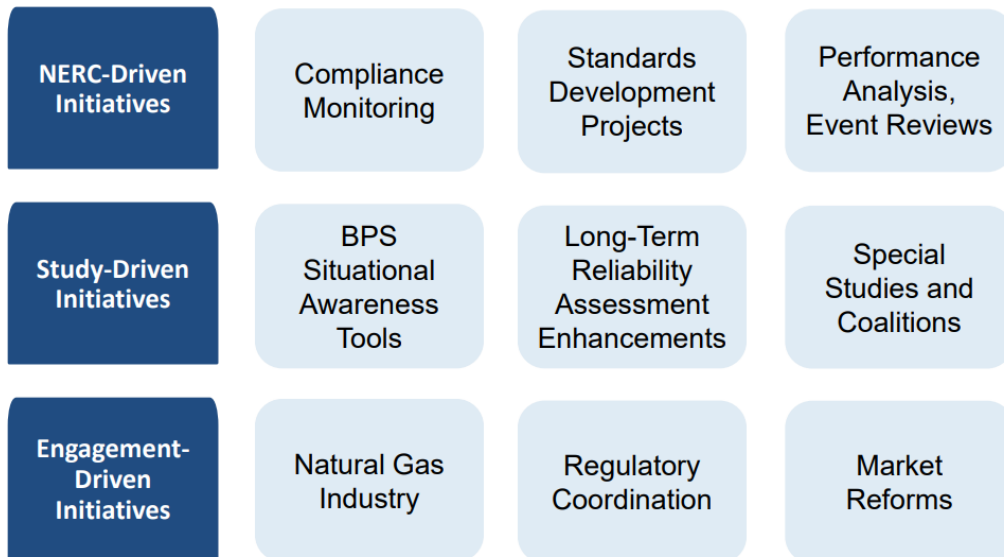
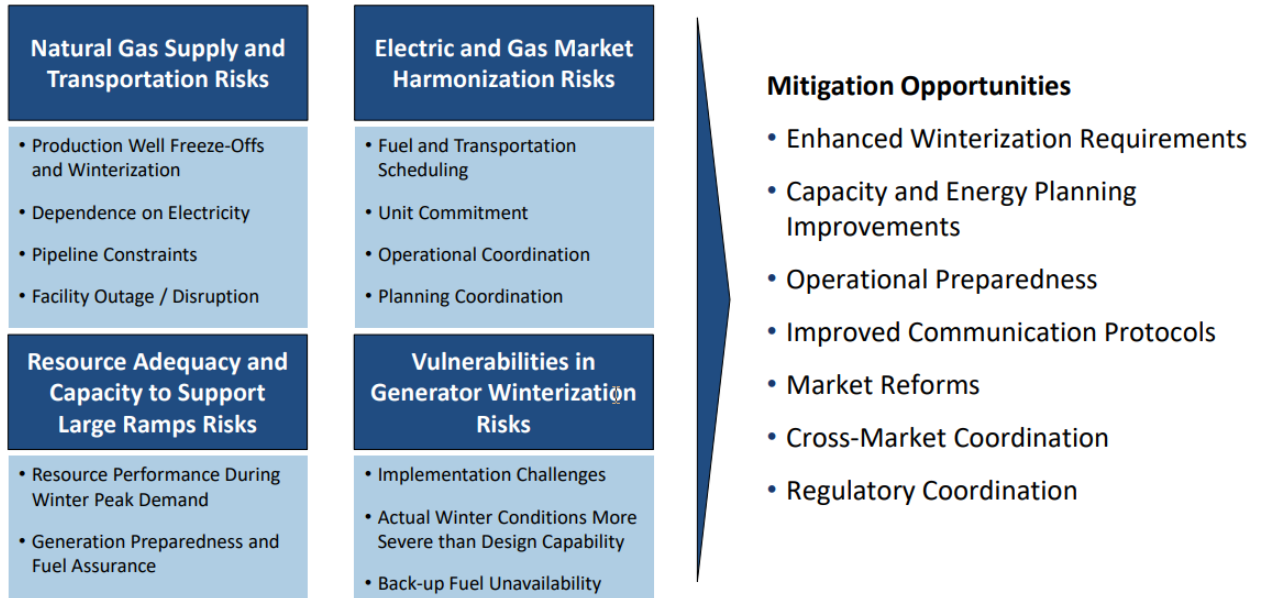
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<sup>19</sup> Attachment A, *Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts; NERC Electric/Gas Efforts Updated Work Plan Efforts*.

<sup>20</sup> NERC, *Electricity-Gas Interdependence Initiative*, <https://www.nerc.com/initiatives/electricgas-interdependence>.

<sup>21</sup> Attachment A, NERC, *Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts; NERC Electric/Gas Efforts Updated Work Plan Efforts*.





The key priorities of the Work Plan are to:

1. Complete Reliability Standards project(s) requiring energy reliability assessments for long-term planning;
2. Identify potential enhancements to NERC Reliability Standards regarding operational reserves, unit commitment, and scheduling needs;
3. Develop guidelines for natural gas pipeline and production wellhead winterization;

4. Make improvements to NERC Long-Term Reliability Assessments capturing natural gas fuel availability risk;
5. Assess the adequacy of natural gas infrastructure to meet future electricity demand and generation needs through tailored regional studies;
6. Improve operational data sharing and coordination protocols between gas and electric system operators.<sup>22</sup>

As part of its work plan and strategy, and in addition to the Standards discussed in Section II.b. below, NERC has enhanced its Long-Term Reliability Assessments to address natural gas impacts on BPS reliability.<sup>23</sup> NERC is also reviewing updates to its tool for Situational Awareness for FERC, NERC, and the Regional Entities (“SAFNR”). The SAFNR modifications (among other updates) will include enhancements to better integrate gas system data. Regional Entities have also increased efforts to improve winterization preparedness, including: (1) conducting site visits; (2) hosting related technical sessions; (3) and providing resources to industry on cold weather preparedness.

NERC’s Electricity-Natural Gas Work Plan is focused on collaboration with electric and gas industry and regulators,<sup>24</sup> while also highlighting other opportunities for mitigation, including improved communication protocols, cross-market coordination, and regulatory reform such as the NAESB standards in this proceeding.<sup>25</sup> These efforts by NERC and the Regional Entities have led

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<sup>22</sup> *Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts* (Presentation to NERC Board (Agenda Item 2b), August 13, 2025).

<sup>23</sup> See NERC, *2024 Long-Term Reliability Assessment* at 8, 10 (Dec. 2024, corrected July 11, 2025) (including discussion of reliability implications of natural gas pipeline capacity and recommendations for “addressing the operating and planning needs of the interconnected natural gas-electric energy system”), [https://www.nerc.com/globalassets/our-work/assessments/2024-ltra\\_corrected\\_july\\_2025.pdf](https://www.nerc.com/globalassets/our-work/assessments/2024-ltra_corrected_july_2025.pdf).

<sup>24</sup> See *Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts* (discussing mitigation opportunities that include enhanced winterization requirements, capacity and energy planning improvements, operational preparedness, improved communication protocols, market reforms, cross-market coordination and regulatory coordination); see also NERC, *Electricity-Natural Gas Strategy* at 4 (stating that the strategy is “centered on activities pursued in coordination with NERC Registered Entities and Members”).

<sup>25</sup> See *Id.*; see also NERC, *Electricity-Natural Gas Strategy* at 3 (Aug. 2025) at 3 (identifying improved communication protocols between gas and electric system operators as a key mitigation opportunity to address

to increased coordination between the electric and gas industries, including the NAESB Gas Electric Harmonization Forum and the resulting Harmonization Forum Report.<sup>26</sup> Voluntary actions taken by the natural gas industry in response to NAESB's Harmonization Forum Report include the National Association of Regulatory Utility Commissioners' ("NARUC") launch of its Gas-Electric Alignment for Reliability ("GEAR") task force and Natural Gas Readiness Forum, which NERC supports for focusing on enhancing gas-electric coordination.<sup>27</sup>

**b. NERC Reliability Standards Bolster BPS Reliability Related to Cold Weather Preparedness and Operational Planning.**

NERC's Electricity – Natural Gas Work Plan includes Reliability Standards development. Under its Reliability and Security Technical Committee ("RSTC"), for example, NERC established the Energy Reliability Assessment Task Force, which later transitioned to the Energy Reliability Assessment Working Group ("ERAWG"), to facilitate ongoing assessment of energy-related risks and address risks associated with unassured energy supplies (including natural gas fuel issues). As part of this work, the RSTC endorsed two Standard Authorization Requests ("SARs") to support energy assurance.<sup>28</sup> These led to revisions to NERC Reliability Standard

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reliability risks attributed to the interdependence between the natural gas system and the BPS infrastructure); *see also* NERC and Regional Entities, *Reliability Insights: The Interconnected Gas and Electric Systems Report* (March 2025), <https://www.nerc.com/newsroom/reliability-insights-nerc-reliability-assessments-evolve-with-emerging-risks>.

<sup>26</sup> NAESB, *Gas Electric Harmonization Forum Report* (July 2023), [https://www.naesb.org/pdf4/geh\\_final\\_report\\_072823.pdf](https://www.naesb.org/pdf4/geh_final_report_072823.pdf).

<sup>27</sup> *See* NARUC, *Task Force on GEAR Report and Recommendations* at 7-8 (Nov. 2025) (recommendations include supporting the creation of a Natural Gas Readiness Forum to promote communication and situational awareness, developing storage to support the electric grid, and encouraging state regulators to educate themselves about load shed practices by communicating with electric utilities and reviewing information from NERC and the Regional Entities) <https://pubs.naruc.org/pub/2527936B-BEB6-767B-50BE-01BEEEB3091F>.

<sup>28</sup> *See Considerations for Performing an Energy Reliability Assessment*, ERATF White Paper at viii (Mar. 2023) (referencing the "Energy Assessments with Energy-Constrained Resources in the Planning Time Horizon" and "Energy Assessments with Energy-Constrained Resources in the Operations and Operations Planning Time Horizons" SARs), [https://www.nerc.com/globalassets/our-work/reports/white-papers/clean\\_eratf\\_vol\\_1\\_whitepaper\\_17may2023.pdf](https://www.nerc.com/globalassets/our-work/reports/white-papers/clean_eratf_vol_1_whitepaper_17may2023.pdf); *See* NERC Project 2024-02 (to address the Long-term Transmission Planning Horizon beyond the Operations Horizon of less than one year to the longer-term planning of one to five years and longer as transition to more intermittent resources), <https://www.nerc.com/standards/reliability-standards-under-development/2024-02-planning-energy-assurance>.

projects that help address fuel assurance and dovetail with other Reliability Standard enhancements that support greater resilience in light of the changing resource mix and its interdependencies with the natural gas sector.

NERC also updated Reliability Standards EOP-011-4 and TOP-002-5<sup>29</sup> to address natural gas fuel issues that were identified in the 2021 Winter Storm Uri Report. Other Reliability Standards NERC developed to address risks with electric dependence on natural gas include:

- TPL-008-1 (to establish Transmission system planning performance requirements to develop a BPS that will operate reliably during extreme heat and extreme cold temperature events);<sup>30</sup>
- BAL-007-1 (to assess, report, and plan to address forecasted Energy Emergencies in the near-term horizon);<sup>31</sup> and
- EOP-012-3 (to address the effects of operating in extreme cold weather by ensuring each Generator Owner has developed and implemented plan(s) to mitigate the reliability impacts of extreme cold weather on its applicable generating units).<sup>32</sup>

**c. NERC Supports NAESB's Updates for Enhanced Coordination.**

NERC supports the NAESB standards in this proceeding as modifications that would address the Winter Storm Elliott Report recommendation to enhance situational awareness by increasing accessibility and visibility of information about fuel availability and impacted areas and

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<sup>29</sup> NERC filed these updates with the Commission on October 30, 2023 and the Commission approved them on February 15, 2024.

<sup>30</sup> NERC filed TPL-008-1 on December 17, 2024 and the Commission approved it on February 20, 2025. NERC developed TPL-008-1 at the direction of the Commission in its *Transmission Sys. Plan. Performance Requirements for Extreme Weather*, Order No. 896, 183 FERC ¶ 61,191 (2023) to address the Commission's concerns related to transmission system planning for extreme heat and cold weather events that impact reliability of the BPS.

<sup>31</sup> NERC filed BAL-007-1 on January 6, 2025 and the Commission approved it on February 2, 2026.

<sup>32</sup> EOP-012-3 is a revision of EOP-012-2 directed by the Commission in its June 2024 Order (*N. Am. Elec. Reliability Corp.*, 187 FERC ¶ 61,204 (2024)) accepting EOP-012-2 and directing further revisions to address the February 2021 Cold Weather FERC, NERC, and Regional Entity Joint Inquiry recommendations documented in the inquiry report the Commission issued in November 2021, <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and>. NERC filed EOP-012-3 on April 10, 2025 and the Commission approved it on September 18, 2025. NERC requested clarification of the Commission's EOP-012-3 approval order on October 17, 2025 and the Commission issued a clarification order on December 5, 2025.

pipeline facilities that could affect power plants and impact electric systems. These modifications are also consistent with key priority Item 6 of NERC's Electricity – Natural Gas Work Plan, as discussed in Section II.a. above. As reflected in the Work Plan, NERC continues focusing on ways to improve operational data sharing and coordination between gas and electric system operators.

Due to the interdependencies of the electric and natural gas systems as well as extreme weather impacts, NERC has continuously called for more coordination and collaboration between the gas and electric industries.<sup>33</sup> One recommendation in the Winter Storm Elliott Report, for example, was that NAESB convene entities involved in natural gas infrastructure, electric grid coordination, and local distribution “to identify improvements in communication during extreme cold weather events to enhance situational awareness.”<sup>34</sup> These efforts have increased coordination between the industries, including the NAESB Gas Electric Harmonization Forum. This NAESB forum discussed measures to improve gas-electric information-sharing for improved system

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<sup>33</sup> See *Id.*; see FERC, NERC, and Regional Entity Staff Report, *The February 2021 Cold Weather Outages in Texas and the South Central United States* (Nov. 2021), <https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and>, FERC, NERC, and Regional Entity Staff, *Winter Storm Elliott Report: Inquiry into Bulk-Power System Operations During December 2022* (Oct. 2023) <https://www.ferc.gov/media/winter-storm-elliott-report-inquiry-bulk-power-system-operations-during-december-2022> [hereinafter Winter Storm Elliott Report], and FERC, NERC and Regional Entities Joint Staff Report, *January 2025 Arctic Events Report, A System Performance Review* (Apr. 2025) [https://www.ferc.gov/sites/default/files/2025-04/25\\_Arctic%20Storms%20Performance%20Review\\_0416.pdf](https://www.ferc.gov/sites/default/files/2025-04/25_Arctic%20Storms%20Performance%20Review_0416.pdf); see NERC, *2024 Long-Term Reliability Assessment (Dec. 2024, corrected July 11, 2025)*, [https://www.nerc.com/globalassets/our-work/assessments/2024-ltra\\_corrected\\_july\\_2025.pdf](https://www.nerc.com/globalassets/our-work/assessments/2024-ltra_corrected_july_2025.pdf) and NERC, *2024-2025 Winter Reliability Assessment* (Nov. 2024); see NERC, *Reliability Insights: The Interconnected Gas and Electric Systems* (Mar. 2025) <https://www.nerc.com/contentassets/bdec1ecc826b43ab81be708c8746c469/march-2025---nerc-reliability-insights.pdf>; see also *supra* note 13 (where NERC calls for a more formal coordination); see also NERC, *Short-Term Special Assessment: Operational Risk with High Penetration of Natural Gas-Fired Generation* (May 2016) [https://www.nerc.com/globalassets/programs/rapa/ra/nerc-short-term-special-assessment-gas-electric\\_final.pdf](https://www.nerc.com/globalassets/programs/rapa/ra/nerc-short-term-special-assessment-gas-electric_final.pdf).

<sup>34</sup> Winter Storm Elliott Report at 143; see NOPR at P 6 (citing Winter Storm Elliott Report); see NERC, *2025 RISC ERO Reliability Risk Priorities Report* at 44-46 (stating that while there has been formal collaboration with organizations like NAESB and the National Association of Regulatory Utility Commissioners (“NARUC”) and among participants of both the natural gas and electricity markets “the need for additional progress has been well documented in connection with extreme weather events, such as winter storms Uri and Elliott.”), [https://www.nerc.com/globalassets/our-work/reports/ero-reliability-risk-priorities-report/2025\\_risc\\_ero\\_priorities\\_report.pdf](https://www.nerc.com/globalassets/our-work/reports/ero-reliability-risk-priorities-report/2025_risc_ero_priorities_report.pdf).

performance during extreme cold weather emergencies,<sup>35</sup> eventually resulting in the modifications to NAESB's business practice standards that the Commission's NOPR proposes to incorporate by reference.

The Commission's proposal would incorporate into its regulations NAESB standards that will strengthen reliability of the BPS through improvements in gas-electric communication and coordination by: (1) providing for a specific location on NAESB's Informational Postings Web for gas-electric coordination information for power plants directly connected to the gas pipeline and (2) supporting inclusion of geographic information of impacted areas, locations, and pipeline facilities in critical notices issued by natural gas transportation service providers.<sup>36</sup> Fundamentally, these enhancements are critical for reliable operations of both gas and electric systems, providing a common platform for operational data exchange and unified situational awareness.

### III. CONCLUSION

WHEREFORE, for the reasons stated above, NERC respectfully requests that the Commission accept the comments herein and amend its regulations to incorporate by reference NAESB's modified Standards for Business Practices of Interstate Natural Gas Pipelines.

Respectfully submitted,

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<sup>35</sup> NAESB, *Harmonization Forum Report* at 11-13 (July 2023), [https://www.naesb.org/pdf4/geh\\_final\\_report\\_072823.pdf](https://www.naesb.org/pdf4/geh_final_report_072823.pdf).

<sup>36</sup> See NOPR at PP 11-16 (describing modifications to NAESB's business practice standards).

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Date: January 20, 2026

**CERTIFICATE OF SERVICE**

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding. Dated at Washington, D.C. this 20<sup>th</sup> day of January, 2026.

/s/ Amy Engstrom  
Amy Engstrom  
*Counsel for the North American Electric  
Reliability Corporation*



**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

**Attachment A**

NERC Electricity-Natural Gas Work Plan  
(Presentation to NERC Board on August 13, 2025)

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Prioritizing Gas-Electric Interdependency Risks and Mitigation Efforts

NERC's Work Plan and Activities

John Moura, Director, Reliability Assessment and Performance Analysis

NERC Quarterly Technical Session

August 13, 2025

## Natural Gas Supply and Transportation Risks

- Production Well Freeze-Offs and Winterization
- Dependence on Electricity
- Pipeline Constraints
- Facility Outage / Disruption

## Resource Adequacy and Capacity to Support Large Ramps Risks

- Resource Performance During Winter Peak Demand
- Generation Preparedness and Fuel Assurance

## Electric and Gas Market Harmonization Risks

- Fuel and Transportation Scheduling
- Unit Commitment
- Operational Coordination
- Planning Coordination

## Vulnerabilities in Generator Winterization Risks

- Implementation Challenges
- Actual Winter Conditions More Severe than Design Capability
- Back-up Fuel Unavailability

## Mitigation Opportunities

- Enhanced Winterization Requirements
- Capacity and Energy Planning Improvements
- Operational Preparedness
- Improved Communication Protocols
- Market Reforms
- Cross-Market Coordination
- Regulatory Coordination

# Work Plan Highlights

Mitigations  
we can lead

**NERC-Driven  
Initiatives**

Compliance  
Monitoring

Standards  
Development  
Projects

Performance  
Analysis,  
Event Reviews

Objective  
insights from  
assessments

**Study-Driven  
Initiatives**

BPS  
Situational  
Awareness  
Tools

Long-Term  
Reliability  
Assessment  
Enhancements

Special  
Studies and  
Coalitions

Supporting  
our partners

**Engagement-  
Driven  
Initiatives**

Natural Gas  
Industry

Regulatory  
Coordination

Market  
Reforms

- **New Initiative:** Conduct studies/forums that assess the adequacy of gas infrastructure to meet future electric demand (e.g., data centers). Tailor risk assessments and mitigation strategies to reflect regional gas infrastructure constraints.
- **New Initiative:** Examine balancing authority generation commitment and scheduling, as these practices significantly affect gas-electric coordination. This includes examining Operating Reserve-related requirements under a variety of conditions. Support the advancement of a standard authorization request.
- **New Initiative:** Support the development of a framework for real-time data sharing and coordination protocols between gas and electric system operators (i.e., event analysis, guidelines, etc.).
- **Reprioritize:** Elevate “Improved Communication Protocols” to a top-tier initiative.
- **Update:** Provide detailed guidance on EOP-012-3 exceptions and compliance expectations.
- **Update:** Reframe “Regulatory Reform” to focus on coordination and information sharing rather than structural changes.

## High Priority Workplan Items

- Complete Reliability Standards project requiring energy reliability assessments for the long-term planning
- Identify potential enhancements to NERC Reliability Standards regarding operational reserves, unit commitment, and scheduling needs
- Guidelines for natural gas pipeline and production wellhead winterization
- Improvements to NERC Long-Term Reliability Assessments capturing natural gas fuel availability risk
- Assess the adequacy of natural gas infrastructure to meet future electricity demand and generation needs through tailored regional studies
- Improve operational data sharing and coordination protocols between gas and electric system operators



# Questions and Answers

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# NERC Electric/Gas Efforts Updated Work Plan

August 2025



# Key Reliability Risks / Mitigation Opportunities

*From Reliability Insights*

## 1. Natural Gas Supply and Transportation Risks

- Production Well Freeze-Offs and Winterization
- Dependence on Electricity
- Pipeline Constraints
- Facility Outage / Disruption

## 3. Resource Adequacy and Capacity to Support Large Ramps Risks

- Resource Performance During Winter Peak Demand
- Generation Preparedness and Fuel Assurance

## 2. Electric and Gas Market Harmonization Risks

- Fuel and Transportation Scheduling
- Unit Commitment
- Operational Coordination
- Planning Coordination

## 4. Vulnerabilities in Generator Winterization Risks

- Implementation Challenges
- Actual Winter Conditions More Severe than Design Capability
- Back-up Fuel Unavailability

## Mitigation Opportunities

- Enhanced Winterization
- Capacity and Energy Planning Enhancements
- Operational Coordination and Preparedness
- Improved Communication Protocols
- Market Reforms
- Cross-Market and Regulatory Coordination

# Major Initiatives Overview

## NERC-Driven Initiatives

Mitigations  
we can lead

## Study-Driven Initiatives

Objective  
insights from  
assessments

## Engagement-Driven Initiatives

Supporting  
our partners

## NERC-Driven Initiatives

### Enhanced Winterization

Initiative	Description	Lead	Timeline
<b>Compliance with mandatory generator winterization requirements</b>	<ul style="list-style-type: none"> <li>Engage proactively with industry ahead of standard effective dates through Small Group Advisory Sessions to provide implementation guidance. Special emphasis on EOP-012-3 exceptions and compliance expectations</li> <li>Continued focus through the CMEP Implementation Plan (CMEP IP) with a variety of tools being used (e.g., Audits, Spot Checks, Self-Certifications)</li> </ul>	CMEP	Ongoing
<b>Gas generator performance during extreme cold events</b>	Annually evaluate performance through assessment of GADS and EIA data and published in State of Reliability report, winter performance reviews, and other post-event analysis	Event Analysis	Q2 – 2025, As needed
<b>Voluntary pipeline and production wellhead winterization guidelines</b>	Develop a best practices document that summarizes winterization guidelines in the gas upstream and midstream sectors and highlights recommendations on sustaining the practices	Engineering	Ongoing

### Capacity and Energy Planning Enhancements

Initiative	Description	Lead	Timeline
<b>Next state of energy assurance standards</b>	<ul style="list-style-type: none"> <li>Advance project 2023-08 that ensures various forms of historical and forecast demand, energy data, and information for reliability studies and assessments</li> <li>Advance project 2024-02 that requires energy reliability assessments for the Long-Term Planning horizon including availability of fuel</li> </ul>	Standards	Ongoing

## NERC-Driven Initiatives

### Operational Coordination and Preparedness

Initiative	Description	Lead	Timeline
<b>New gas situational awareness tools</b>	Implement new tools that support monitoring of critical gas assets impacting BPS operations	BPSA	Q4 – 2025
<b>Monitoring through DNG-ISAC coordination</b>	Support the Downline Natural Gas Information Sharing and Analysis Center through contract	E-ISAC	Ongoing
<b>Identify potential enhancements to Reliability Standards</b>	Examine how Balancing Authorities commit and schedule generation, identify gaps and support advancement of standard authorization requests (SAR); and Consider enhancements to Reliability Standards that focus on Balancing Authorities role in providing Operating Reserves and plans to have access to fuel to support reserves	Standards	Q1 - 2026

### Improved Communication Protocols

Initiative	Description	Lead	Timeline
<b>Real-Time data sharing and coordination protocols</b>	Support the development of a framework for real-time data sharing and coordination protocols between gas and electric system operators (i.e., event analysis, guidelines)	TBD	TBD
<b>AGA/NARUC's Natural Gas Readiness Forum</b>	Support NARUC/AGA's Readiness Forum who fosters operational education, situational awareness and peer-to-peer connections across the entire natural gas industry, electric sector, and federal and state government and end-users	RAPA, BPSA	Ongoing

## Study-Driven Initiatives

### Capacity and Energy Planning Enhancements

Initiative	Description	Lead	Timeline
<b>Enhanced energy analysis supporting reliability assessments</b>	Investigate and select an industry modeling tool to enhance gas availability characteristics (e.g., ServM) to incorporate natural gas risk analysis into NERC assessments	RAPA	Pilot Complete 2025
<b>Gas infrastructure adequacy studies</b>	<ul style="list-style-type: none"> <li>Conduct and/or support studies that assess the adequacy of gas infrastructure to meet future electric demand and its operating characteristics (i.e., impact of renewable and gas-fired plants on gas pipeline pressures (up/down ramps) during system operations and contingencies.</li> <li>Tailor studies to reflect regional gas infrastructure dynamics and constraints</li> </ul>	RAPA	Ongoing
<b>Additional analysis on key gas system contingencies</b>	Leverage analytical tools from NPCC study on gas contingencies in New England and New York and expand analysis to all other regions in North America	RAPA	Ongoing

## Engagement-Driven Initiatives

### Market Reforms, Cross-Market and Regulatory Coordination

Initiative	Description	Lead	Timeline
<b>Natural Gas Reliability Jurisdictional Construct</b>	Confirming scope of NERC authority, as well as other regulatory agencies such as FERC	Legal	2025
<b>Gas Industry Engagement &amp; Collaboration</b>	Continue to discuss NERC's risk mitigation strategies with key gas trades (AGA, INGAA, NGSA, AXPC, Marcellus Shale Coalition) through different engagement strategies	External Engagement	Ongoing
<b>FERC Engagement &amp; Collaboration</b>	Continue to explore implementation of lessons learned and explore opportunities for joint efforts/engagements	External Engagement	Ongoing
<b>Canadian Gas-Electric Efforts</b>	Support voluntary industry efforts to increase gas/electric coordination in Canada	External Engagement	Ongoing

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