



Key Reliability Risks and Mitigation Opportunities

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





NERC 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





High Priority Workplan Items

Complete Reliability
Standards project requiring
energy reliability
assessments for
long-term planning

Identify potential enhancements to NERC Reliability Standards regarding operational reserves, unit commitments, and scheduling needs

Guidelines for natural gas pipeline and production wellhead winterization

Improvements to NERC's annual Long-Term Reliability Assessment (LTRA) 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





Recent and Upcoming Texas RE Outreach

<u>June 8</u> – AGA and NARUC-sponsored gas-electric mini-forum prior to Southeastern Association of Regulatory Utility Commissioners (SEARUC) meeting

October 1 – Texas RE Winter Weatherization Workshop featured gas-electric coordination panel with RRC, Argonne Labs, NERC, and FERC

<u>November 5</u> – <u>Texas RE Fall Standards, Security, and Reliability Workshop</u> includes an update on gas-electric coordination by NAESB's Jonathan Booe

Upcoming NERC, FERC, and Regional Entity report on blackstart unit availability, including recommendations to improve gas-electric coordination, and a follow-up item from Winter Storm Elliott for the Eastern and Western Interconnections



