

# Natural Gas Systems: Reliable & Resilient



## Physical characteristics of the natural gas system make it uniquely reliable and flexible

- ✓ Production is widely dispersed, with more than a half million wells across 30 states, minimizing impact of weather events on offshore facilities.
- ✓ Extensive, interconnected underground pipeline network enables multiple pathways for rerouting deliveries.
- ✓ Storage facilities are widespread and provide supply cushion and flexibility.
- ✓ Natural gas utilities develop comprehensive plans and manage assets, operations and contractual portfolios that include firm supply, transportation and storage contracts to provide their customers and communities with the safe, reliable delivery of natural gas.

## Industry employs a portfolio of tools to improve prevention, detection and mitigation of cyberthreats

- ✓ Participation in several Information Sharing and Analysis Centers (ISACs): Downstream Natural Gas ISAC; Oil & Natural Gas ISAC and Electricity ISAC, enabling shared analysis of changing threats.
- ✓ Regular situational simulation training exercises that present real-world challenges.
- ✓ Division of functions across an enterprise network and an operations network (control systems, SCADA, pipeline monitoring), which are isolated from each other.
- ✓ Partnership with federal government on cybersecurity frameworks and initiatives.

Physical characteristics and operational practices are key to reliability, with customers providing the third essential ingredient by their choice of contract terms for gas commodity supply and pipeline transportation service, ranging from “firm” service to “interruptible” service

- ✓ “Firm” contracts –highest level of delivery; customer pays a monthly charge reserving capacity on the pipeline to transport or store a specified amount of gas every day.
- ✓ “Interruptible” contracts – customer can use spare capacity on the pipeline if capacity is available and not utilized by a firm shipper. Can be interrupted for higher priority services. Similar to flying “stand-by,” it provides flexibility and lower rates to the customer, but carries risk of interruption.
- ✓ Other contract options include “no-notice” service, which gives capacity on the pipeline throughout the 24-hour gas day, along with a range of other service options offered by marketers and asset managers.

The natural gas industry is committed to continuing its high level of reliability.

Service disruptions are rare and there is low risk of uncontrollable, cascading effects in the natural gas system, as supply and transportation disruptions can typically be addressed through substitution, re-routing and use of storage services.

The Natural Gas Council represents companies from natural gas production to end-use. Leadership of the Council rotates annually among the American Gas Association, American Petroleum Institute, Interstate Natural Gas Association of America, the Independent Petroleum Association of America and the Natural Gas Supply Association. The Independent Petroleum Association of America leads the Council for 2017.