

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Special Assessment Single Point of Disruption on Natural Gas Infrastructure

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SPP  
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**RELIABILITY | ACCOUNTABILITY**



- Generation impacted by fuel supply interruption:
  - Pipeline segment outages
  - Disruption of LNG transport operations
  - Natural gas storage disruptions – 600+ facilities
- Aliso Canyon outage affecting generation capacity
- Argonne National Laboratory analysis on critical or significant Underground Natural Gas Storage, pipeline and Liquefied Natural Gas

## I

- Identify key natural gas infrastructure facilities
- Determine the amount of generation capacity impacted

## II

- Evaluate the resource adequacy impacts
- Consider contribution of dual-fuel generation

## III

- Conduct an assessment leveraging available power system studies

## IV

- Provide actionable recommendations

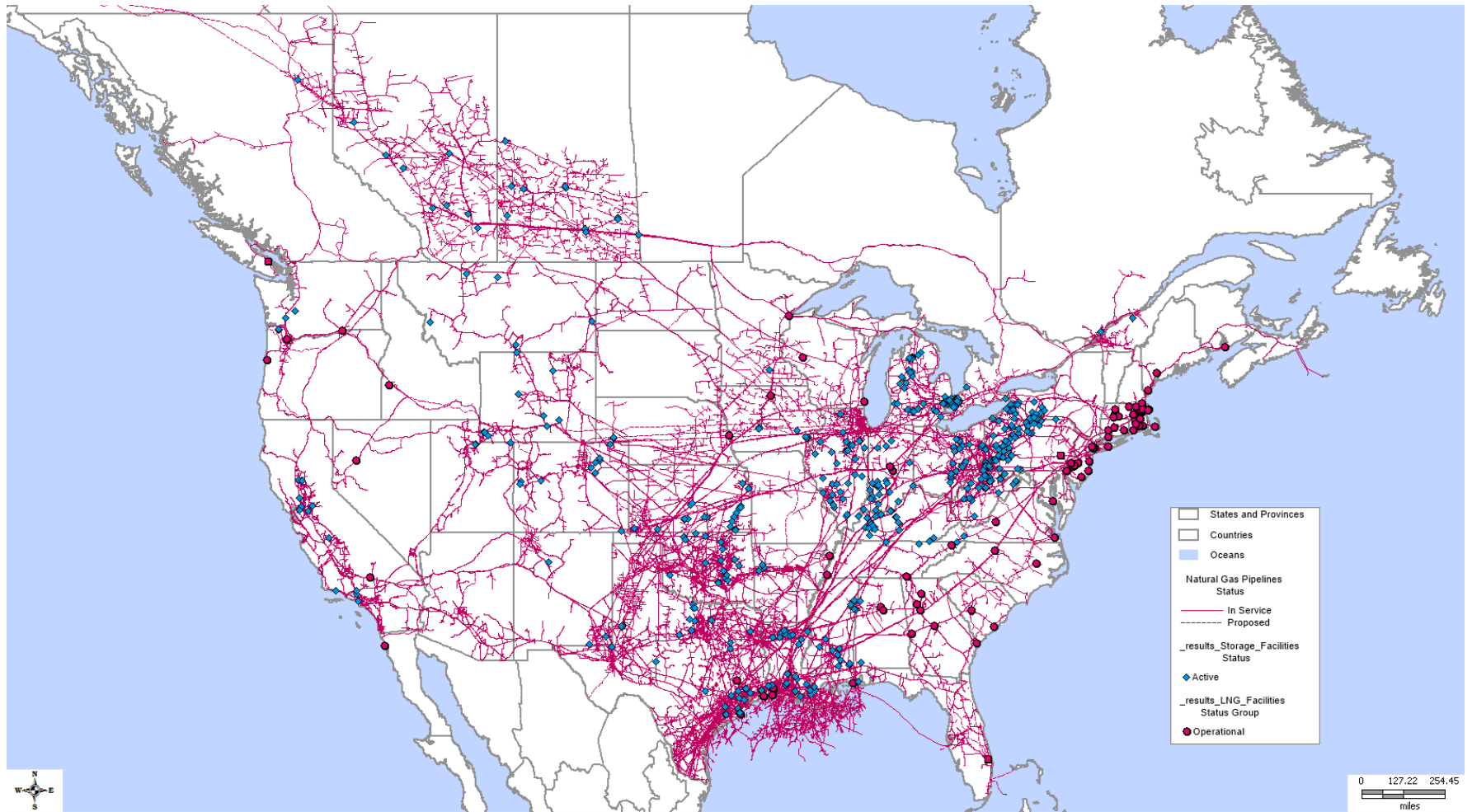
- Approximately 30 members participating on the Advisory Group
- Various sectors represented:
  - National Laboratories
  - US and Canadian Natural Gas Associations
  - Regional and FERC Staff
  - Power pools, and utilities
  - Independent System Operators and Regional Transmission Organizations

1. Underground Natural Gas Facilities
2. Pipeline Disruption
  - Major Pipeline
  - Cluster of Units
3. Compressor Source of Fuel
4. LNG Facilities

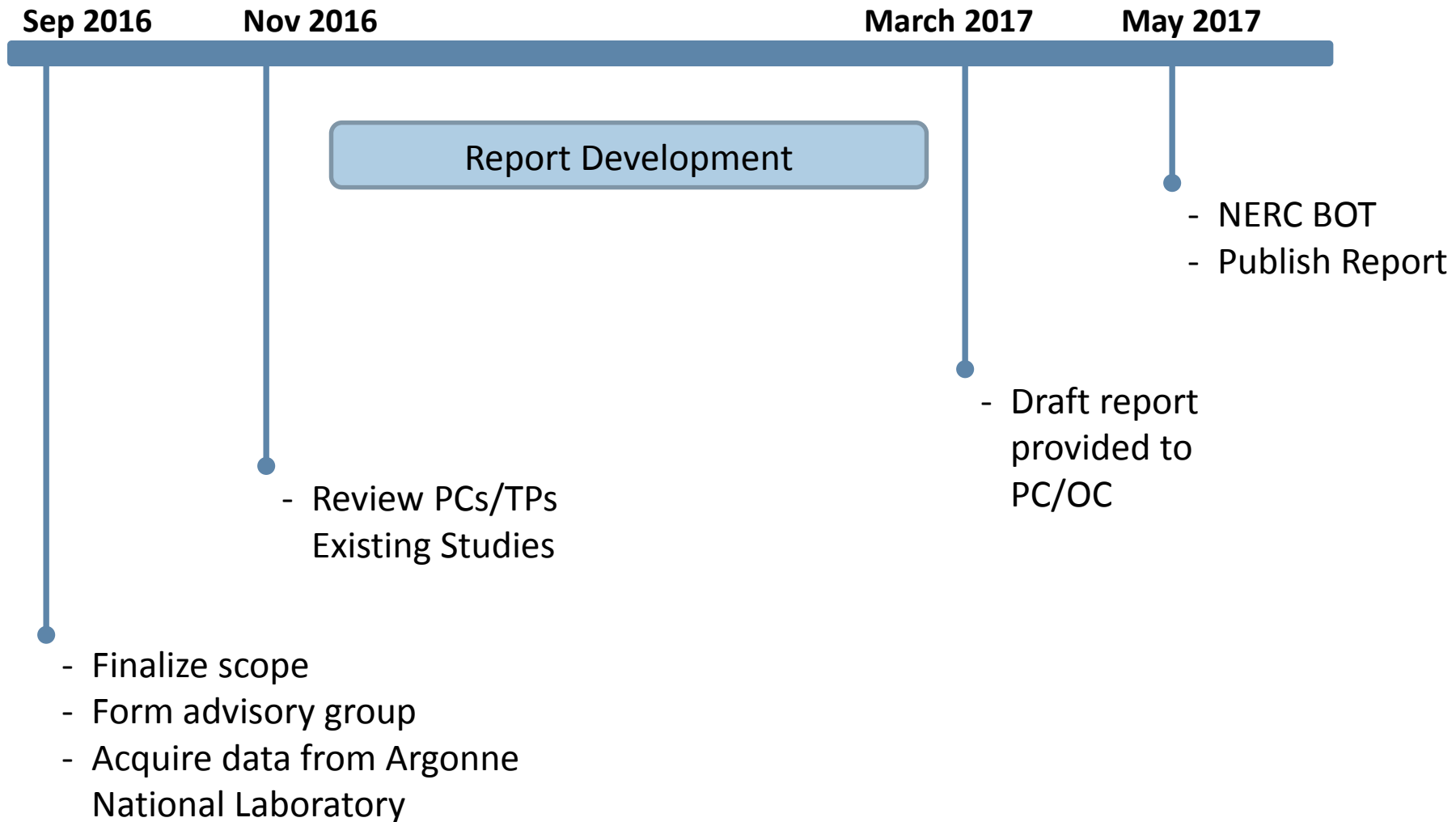
- Resource Adequacy
- Power System Analysis (Deliverability and Capacity Transfer)
- Existing Assessments
  - Larger PCs/BAs
  - Cross boundary PC/BA affected
  - ERO-RAPA and NERC to form a question set

- Comprehensive assessment of natural gas facilities and their impacts on electric sector
- Provide actionable recommendations

# Pipelines, Storage, and LNG Facilities





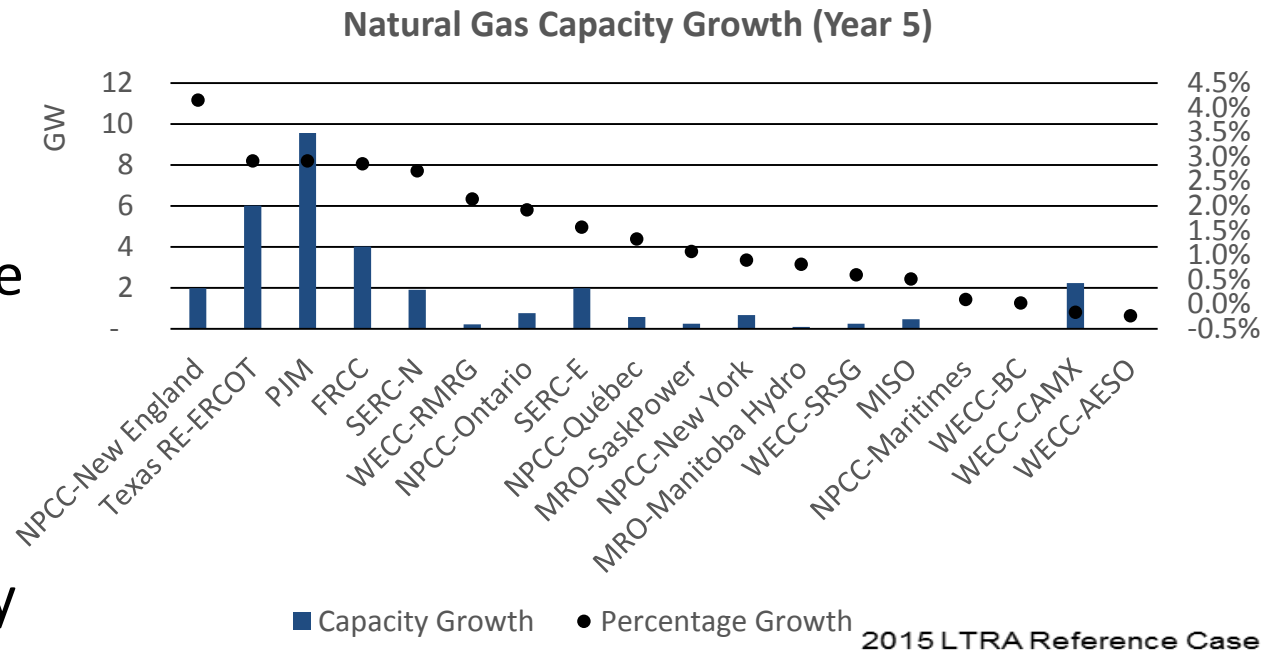




# Questions and Answers

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- The US used about 25 Tcf in 2014
- Over 550 active Natural Gas Storage (NGS) facilities
- 15 NGS facilities with over 2 million Mcf/d deliverability
- 10-15 NGS facilities identified for closer evaluation by NERC and Argonne National Labs (i.e., potential Aliso Canyon-like impacts)
- Over 30 GW of natural gas capacity growth within 5 years



# Underground Natural Gas Storage Facilities

