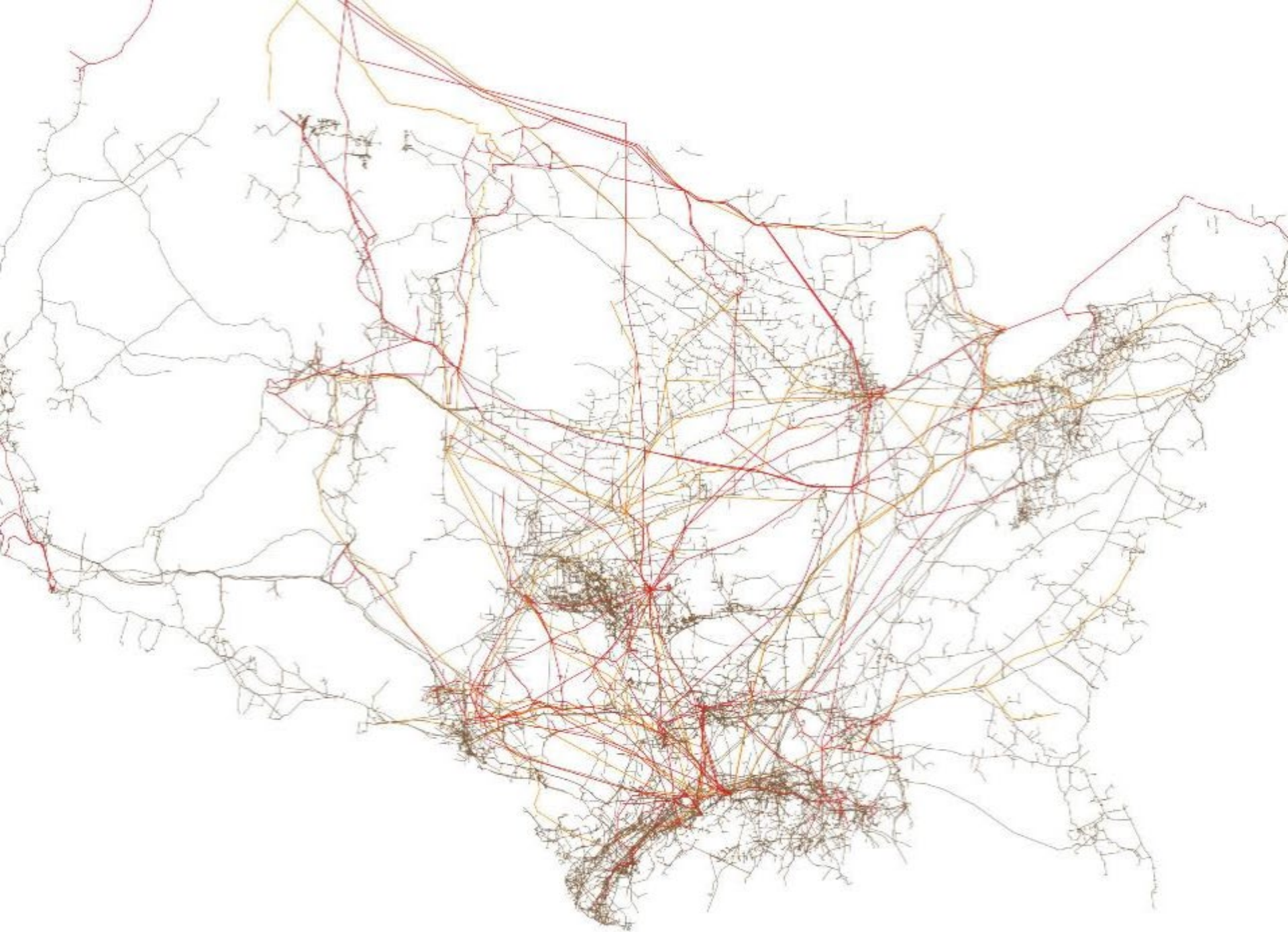




# Pipeline Permitting 101

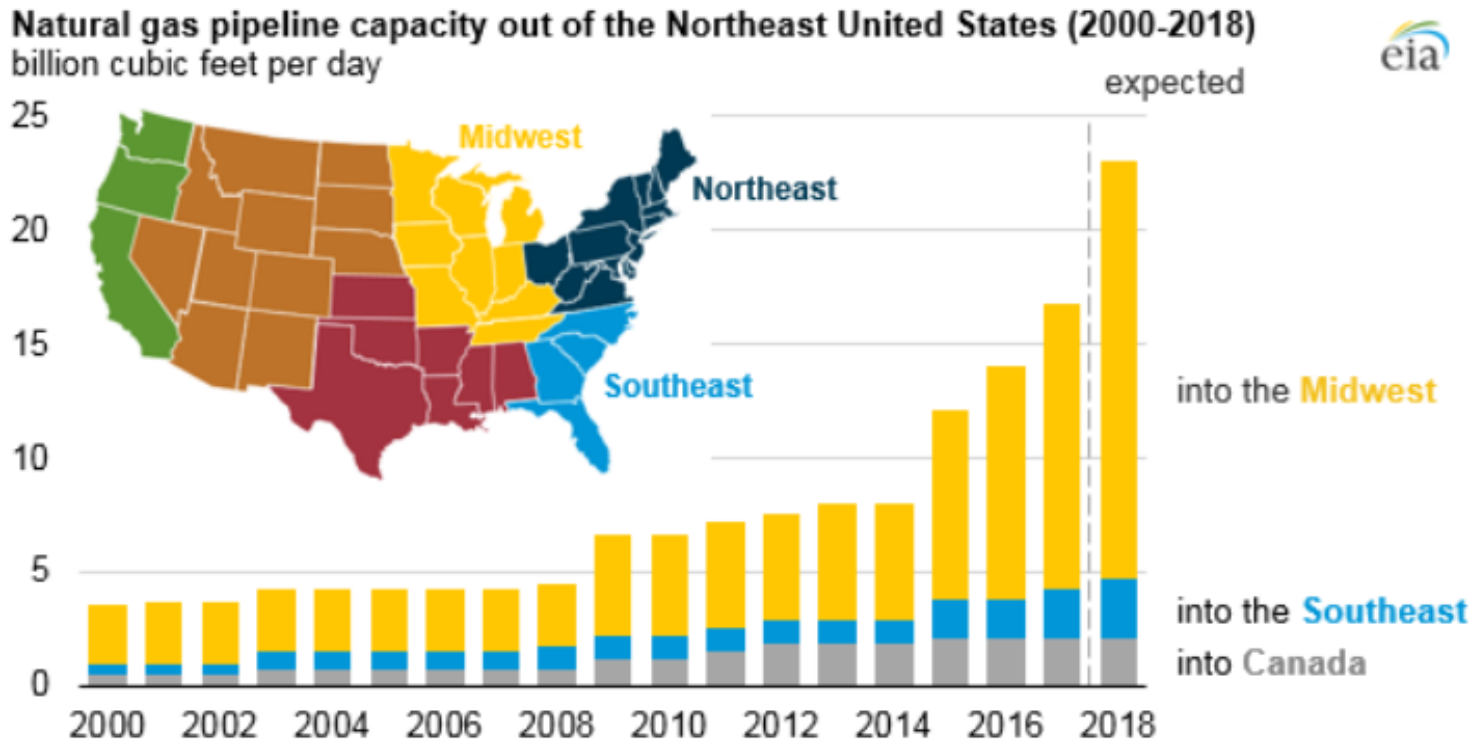
Expansion of Energy Transmission Infrastructure  
and the Need for Effective Permitting Strategies

Association of State Wetland Managers  
ASWM Pipeline Permitting Webinar Series  
November 7, 2018



## Why Is This Important?

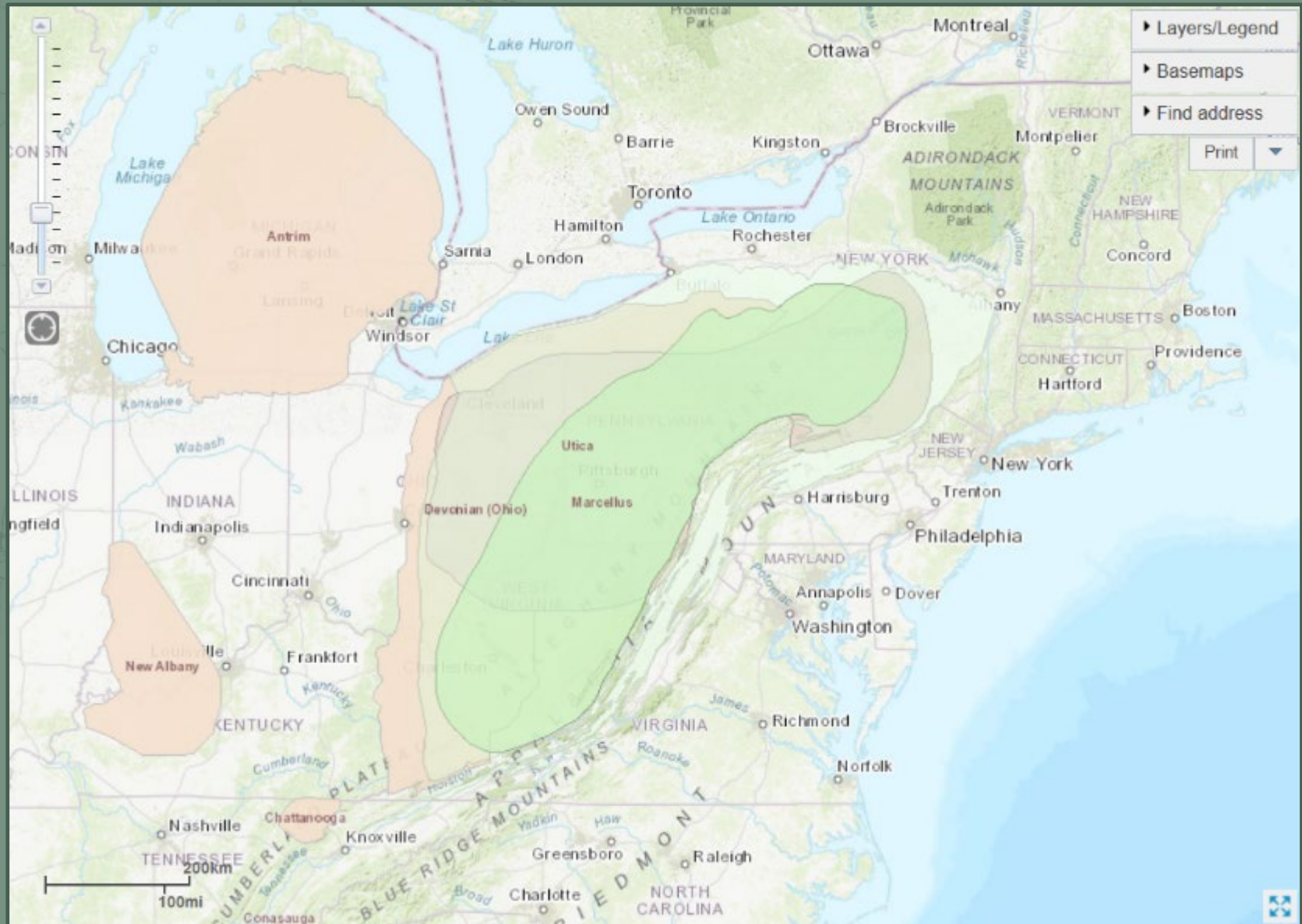
# Northeast region slated for record natural gas pipeline capacity buildout in 2018



Source: U.S. Energy Information Administration, *Natural Gas Pipeline Projects* tracker

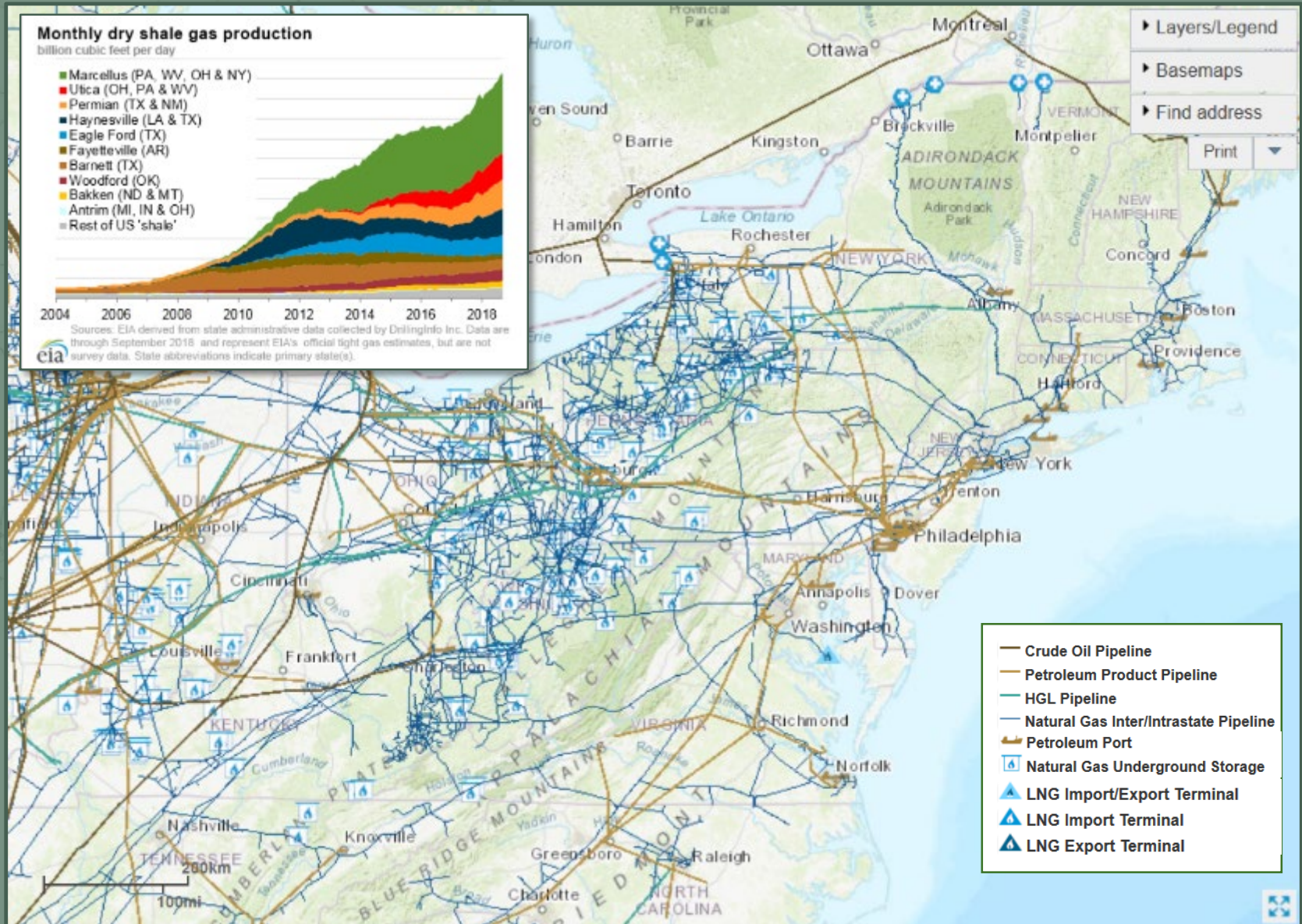
EIA expects construction of new natural gas pipeline capacity in the United States to continue in 2018, in particular in the northeastern United States. By the end of 2018, if all projects come online by their scheduled service dates, more than 23 billion cubic feet per day (Bcf/d) of takeaway capacity will be online out of the Northeast, up from an estimated 16.7 Bcf/d at the end of 2017 and more than three times the takeaway capacity at the end of 2014.

# Major Tight Oil and Shale Gas Plays in the Northeastern United States



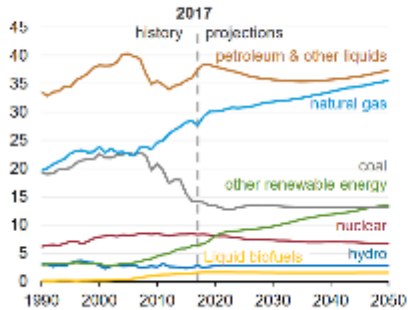
Data: US Energy Information Administration (EIA) 2018

# Transmission Infrastructure Capacity Controls Shale Gas Production

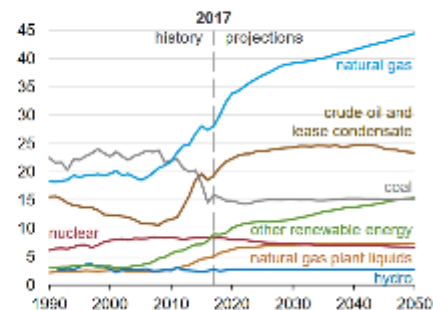


Data: US Energy Information Administration (EIA) 2017, 2018

**Energy Consumption (Reference case)**  
quadrillion British thermal units



**Energy Production (Reference case)**  
quadrillion British thermal units



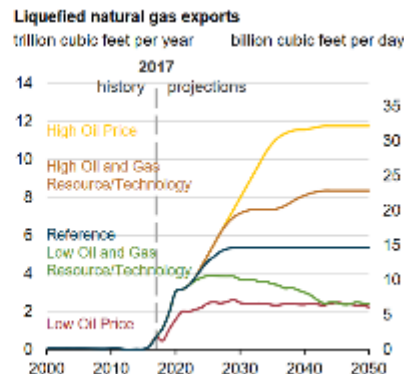
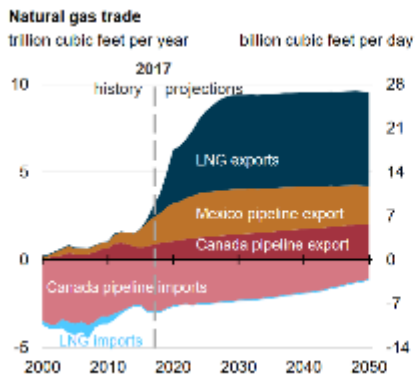
## Future Projections: 2018 - 2050

Over the past 10 years, tight oil and shale gas production in the United States has increased dramatically, accounting for 54% of crude oil production and 55% of dry natural gas production in 2017, compared with 17% for each in 2008.



## Regions to Watch

Most new gas development, and hence construction of new transmission pipelines, is expected to occur in the Marcellus, Utica, and Permian Basins.



## Market Forces: 2018 - 2050

Although domestic consumption is projected to remain relatively flat, natural gas production is expected to increase rapidly through 2050 (assuming technological advances). By 2022 the United States is expected to become a net energy exporter.

# Summary

- Construction of new natural gas pipelines is projected to continue at an unprecedented rate, especially in the EIA Northeast Region where the development of record capacity is expected.
- The EIA Northeast Region, especially the Marcellus Shale play, can be viewed as a national “test case” for lessons in the permitting of linear energy projects, and how clean water policy is intrinsically tied to energy policy.
- Many state regulatory agencies have been unprepared—in staffing, funding, policy development, and regulatory foresight—for this growth.

# Summary

- Where crossings of wetlands and waters are concerned, pipeline projects are permitted by the U.S. Army Corps of Engineers most typically under non-notifying (no Pre-Construction Notice) Nationwide Permit (NWP) 12 – Linear Energy Projects
- States will not have another opportunity to review and certify NWP 12 under Clean Water Act Section 401 until 2022. There is little room for error considering this 5-year cycle.
- At least one state is now considering rescinding and revising, or modifying, their Water Quality Certification of NWP 12. This strategy is in many ways without tested precedent.