

2015 IEEFA Conference

Panel: Natural Gas Exports and Their Implications

A Focus on the Potential Economic Impacts

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Background: LNG Export Permitting Process

Section 3 of the Natural Gas Act assigns responsibilities for permitting to the Federal Energy Regulatory Commission (FERC) and the Department of Energy.

FERC



- The siting, construction, expansion, or operation of an LNG export terminal, onshore or in state waters, requires approval from FERC.
- LNG export terminal approvals are federal actions subject to environmental review under the National Environmental Policy Act. FERC serves as the lead agency responsible for preparing those documents, and DOE serves as a “cooperating agency.”

LNG Export Permitting Process, cont'd

Parties seeking to enter into natural gas transactions with foreign buyers must file for an export authorization from DOE.

DOE



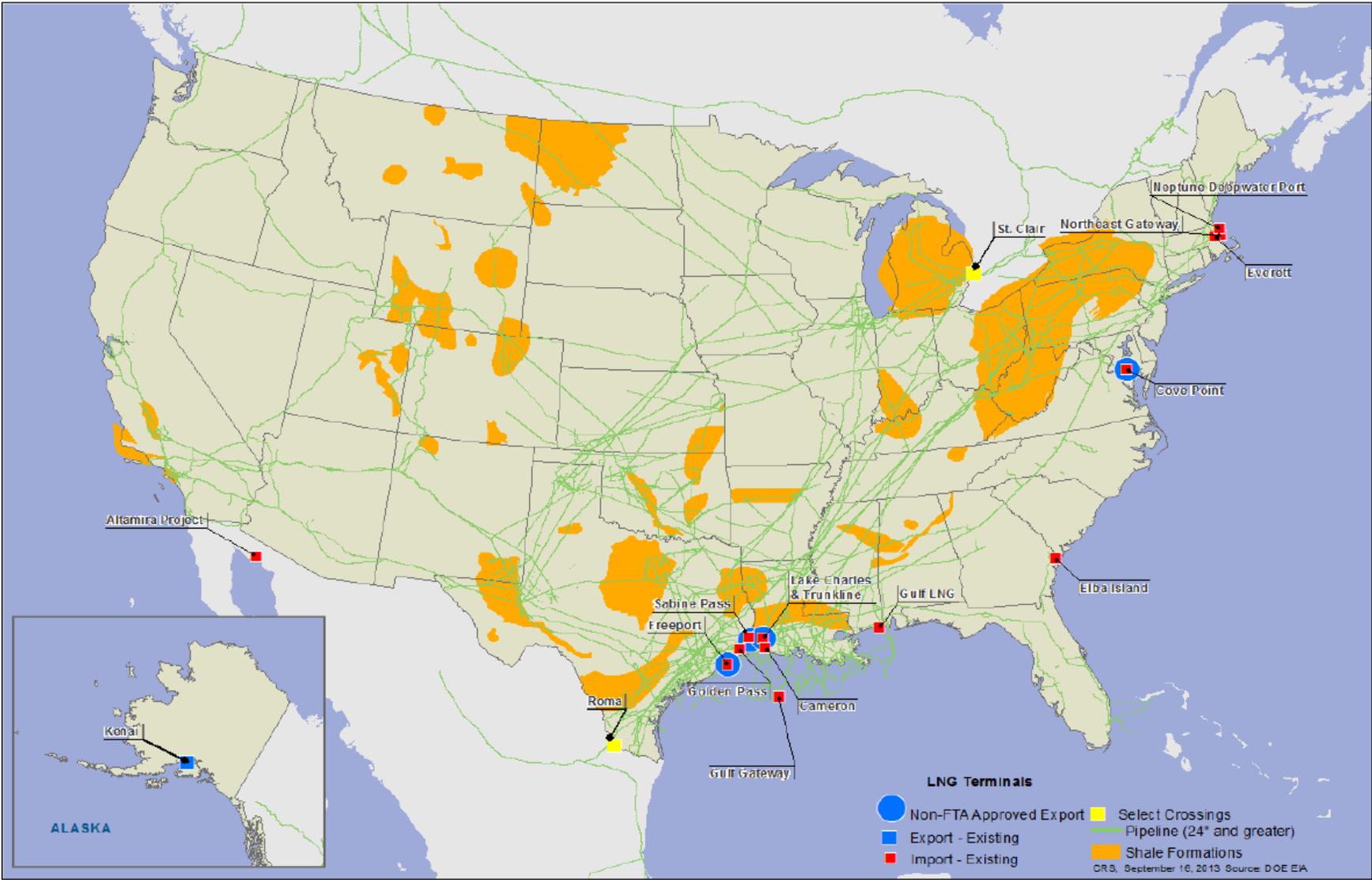
- **Free Trade:** If the United States has a free trade agreement (FTA) in effect with the nation to which the LNG would be exported, that application will be automatically deemed consistent with the **public interest**.
- **Non-Free Trade:** Exports to non-FTA countries are presumed to be in the **public interest**, unless, after opportunity for a hearing, DOE finds that the authorization would not be consistent with the public interest.

As a practical matter, applicants request authorization for export to both FTA and non-FTA countries at the same time.

LNG Export Applications Considered by DOE

- DOE has received more than 40 applications for permits to export domestically produced natural gas as LNG.
- Almost all the projects have received DOE approval to export to free trade countries. But the non-FTA countries are the ultimate goal.
- DOE has issued final authorizations to **four** facilities to export up to 5.74 billion cubic feet per day, or Bcf/d, of LNG to both FTA and non-FTA countries.
- If all remaining applications are approved, then companies would be authorized to export up to 38 Bcf/d to non-FTA countries. The United States consumed an average of 73.6 Bcf/d of natural gas in 2014.

Location of Existing LNG Import Facilities and Proposed Export Facilities Receiving Non-FTA Approval



Source: Compiled by CRS from EIA sources.

Congressional Intervention to Expedite DOE Approvals



- [LNG Permitting Certainty and Transparency Act \(H.R. 351/S. 33\)](#): Requires DOE to issue a final decision on any export application no later than 30/45 days after the conclusion of the review to site, construct, expand, or operate the LNG facilities required by the National Environmental Policy Act.
- [The American Job Creation and Strategic Alliances LNG Act \(H.R. 287\)](#): Extends free trade treatment to World Trade Organization member nations with respect to LNG export permitting by DOE.

The “Public Interest” Determination

- The Natural Gas Act does not detail what factors DOE must evaluate to make a public interest determination.
- As part of its process to examine whether LNG exports to non-FTA countries are “not consistent with the public interest,” DOE commissioned several studies:
 - Two domestic price impact studies completed by EIA and released in January 2012 and October 2014;
 - An economic impact study completed by NERA Economic Consulting and released in December 2012;
 - A report on the life-cycle greenhouse gas impact of exporting LNG, completed by the National Energy Technology Laboratory and released in May 2014.



U.S. Energy Information
Administration

EIA Study of Potential Natural Gas Price Impacts of Exporting LNG

DOE asked EIA to assess how increased exports of LNG could affect domestic energy markets, focusing on consumption, production, and prices. The scenarios posit total LNG exports of 12 billion standard cubic feet per day (Bcf/d), 16 Bcf/d, and 20 Bcf/d.

Key findings:

“Increased LNG exports lead to increased natural gas prices.” Projected average natural gas prices are 4% (12-Bcf/d scenario) to 11% (20-Bcf/d scenario) more than their base projection over the 2015-2040 period.

U.S. natural gas markets balance in two ways:

- Increased natural gas production;
- Reduced natural gas consumption in response to higher prices.

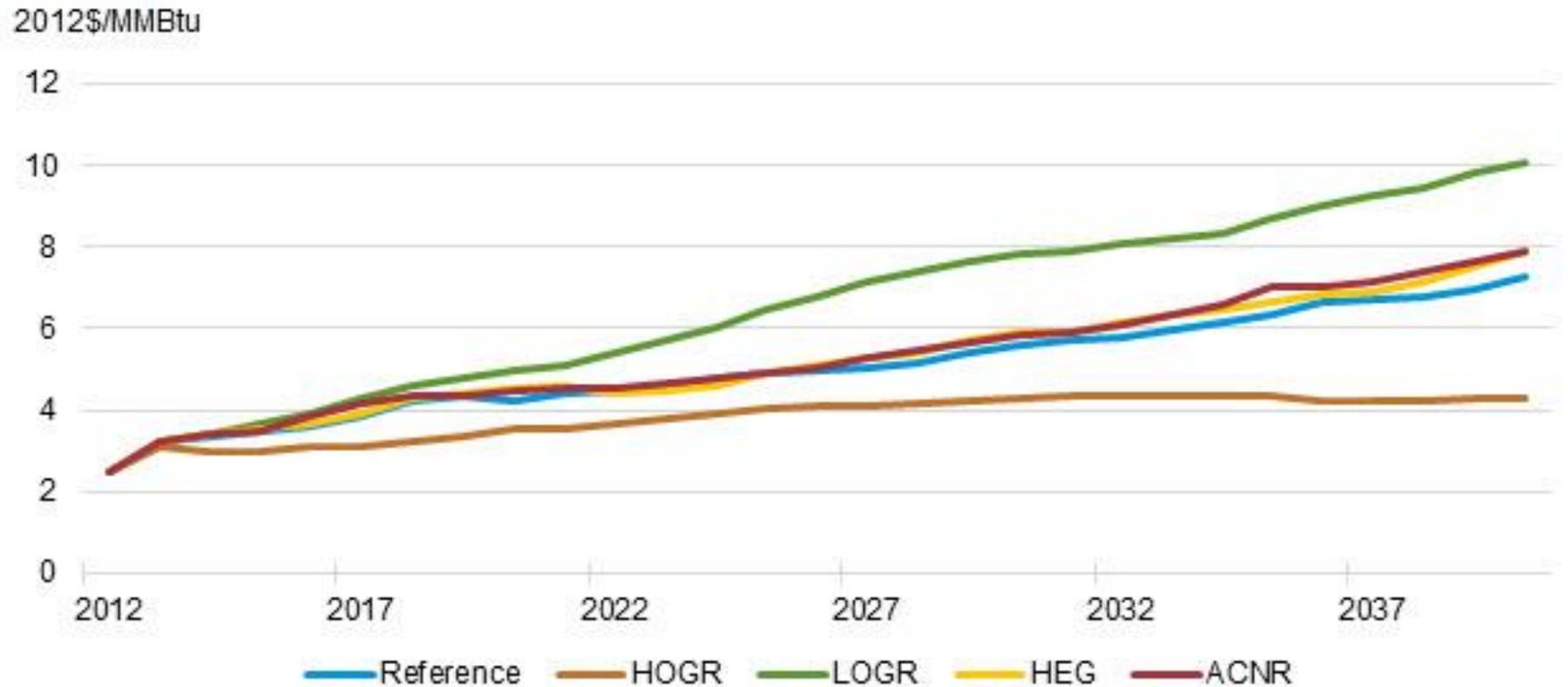


EIA Study of Potential Natural Gas Price Impacts of Exporting LNG, cont'd

Lower-than-predicted supply causes significant price increases.

Higher-than-predicted supply mitigates price impacts.

Figure 3. Average Lower 48 states natural gas supply price in the five AEO2014 baseline cases used in this study



Concerns Raised by U.S. Manufacturers

The **Industrial Energy Consumers of America**—representing energy-intensive manufacturing companies with \$1.0 trillion in annual sales, more than 2,900 facilities, and more than 1.4 million employees—has stated its strong opposition to LNG exports.

- “Without a definition of public interest, how does the DOE determine when the export volume from the next LNG export application, and the resulting increase in natural gas and electricity prices, or a slowdown in manufacturing job creation and investment, justifies a disapproval of the LNG export application?”
- NERA study: Higher natural gas prices “can be expected to have negative effects on output and employment, particularly in sectors that make intensive use of natural gas.”



**Natural gas producers,
landowners with mineral rights**



**Wage income, return on
capital investment**

CAP Analysis of EIA LNG Price Report

Key Finding: Residential, commercial, and industrial consumers could spend at least \$7 billion/year more on their natural gas bills by 2020, up to \$14 billion/year more by 2040.

Potential increase in residential, commercial, and industrial natural gas consumption costs with high levels of LNG exports, 2020 and 2040

Millions of 2012 dollars

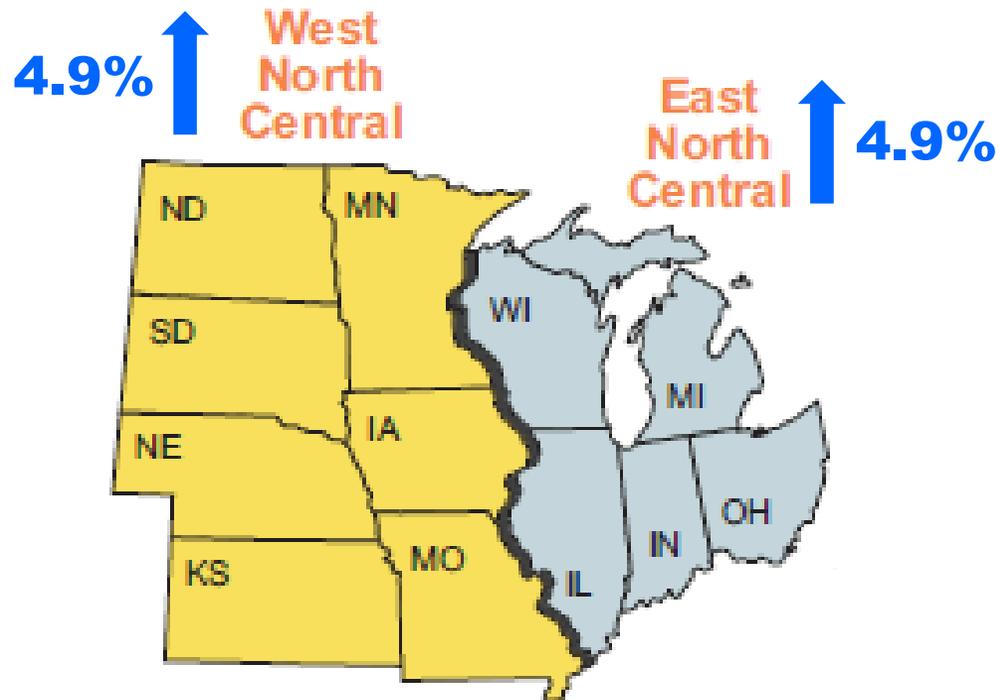
	Natural gas costs, business as usual	Cost increase, 16 bcf/d scenario	Percent increase	Cost increase, 20 bcf/d scenario	Percent increase
2020	\$131,572	\$7,554	5.7%	\$7,018	5.3%
2040	\$191,337	\$9,864	5.2%	\$14,144	7.4%



CAP Analysis of EIA LNG Price Report, continued

Residential Consumers: Those who use natural gas in private dwellings for heating, air-conditioning, cooking, water heating, and other household uses.

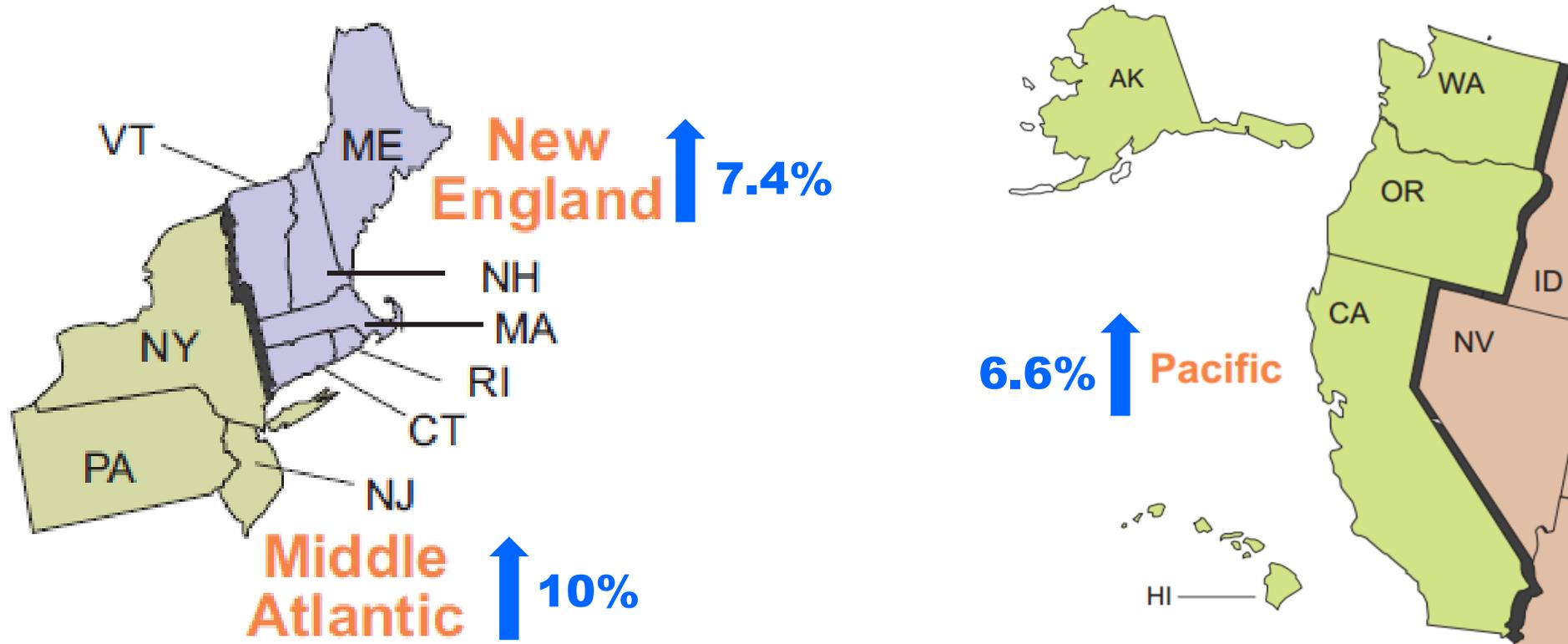
Key Finding, 16 Bcf/d Export Scenario: Residential consumers would pay **4.3%** more per year on their natural gas bills by 2020 than current projections suggest.





CAP Analysis of EIA LNG Price Report, continued

Key Finding, 20 Bcf/d Export Scenario: Residential consumers would pay **6.2%** more per year on their natural gas bills by 2040 than current projections suggest.

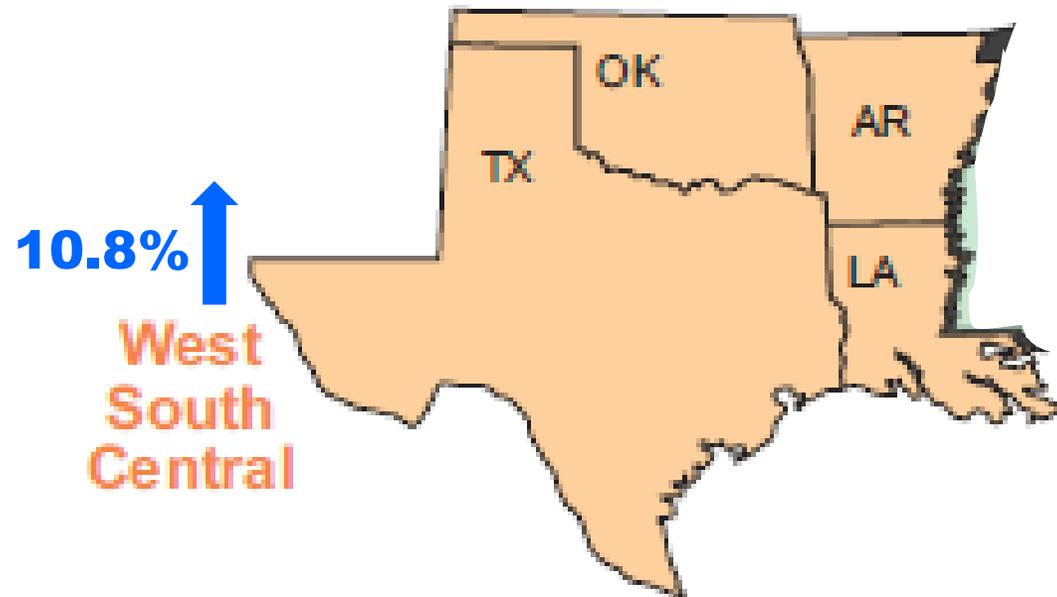
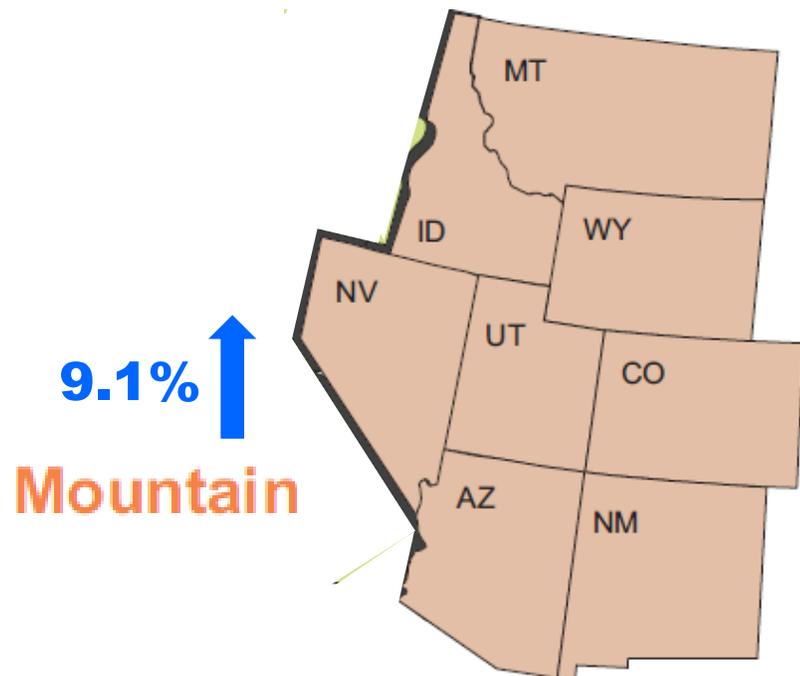


CAP Analysis of EIA LNG Price Report, continued

Industrial Consumers

Manufacturing facilities that use natural gas for heat, power, or chemical feedstock.

Key Finding, 16 Bcf/d Export Scenario: Industrial consumers would pay **8.2%** more per year on their natural gas bills by 2020 than current projections suggest.

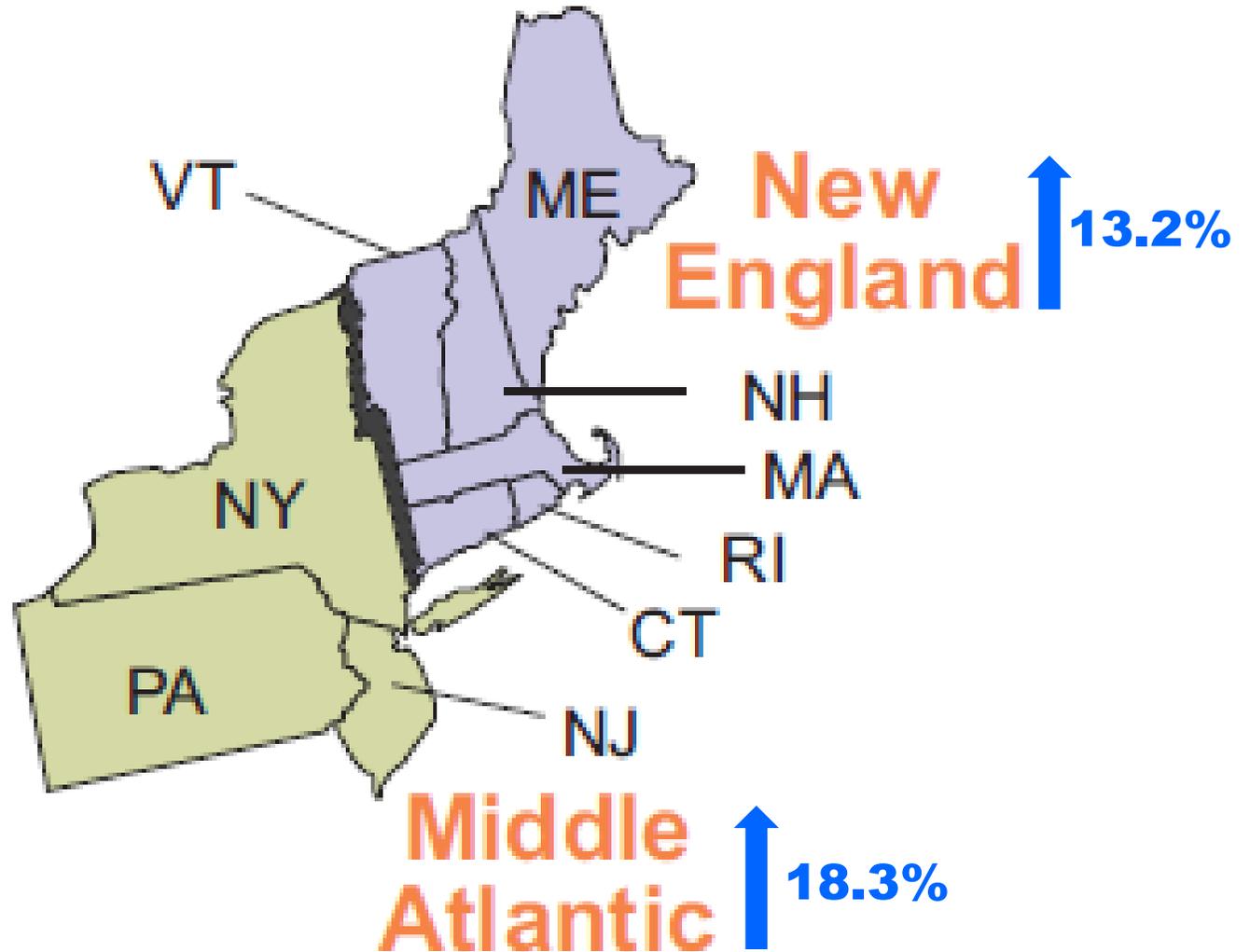




CAP Analysis of EIA LNG Price Report, continued

Industrial Consumers, 20 Bcf/d Export Scenario

Key Finding: Industrial consumers would pay **8.9%** more per year on their natural gas bills by 2040 than current projections suggest.



Questions?

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