Natural Gas Market Outlook

WA Citizens Committee on Pipeline Safety

March 13, 2014

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NWGA Members:

Avista Corporation

Cascade Natural Gas Co.

FortisBC Energy

Intermountain Gas Co.

NW Natural

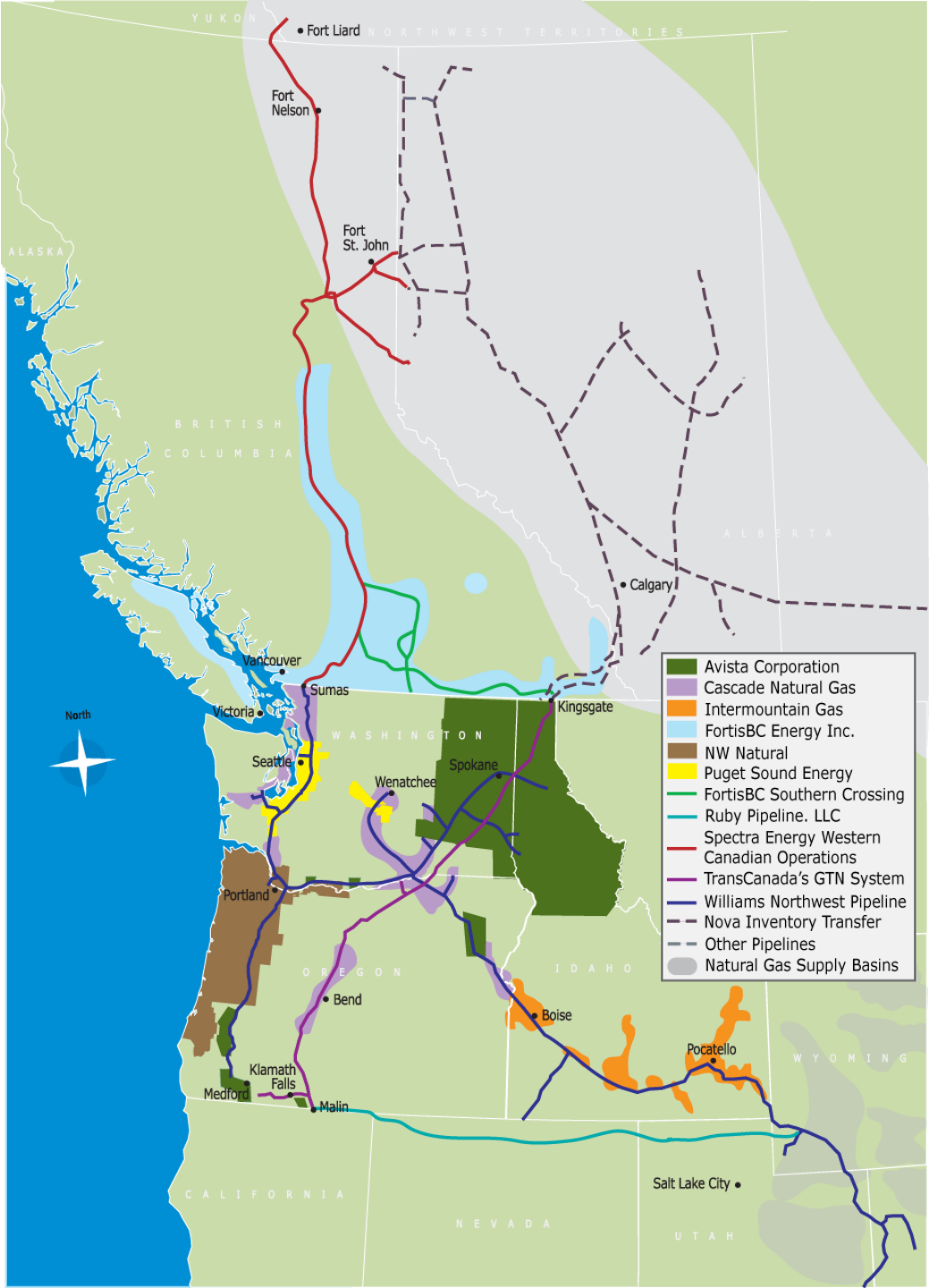
Puget Sound Energy

Kinder Morgan Ruby Pipeline

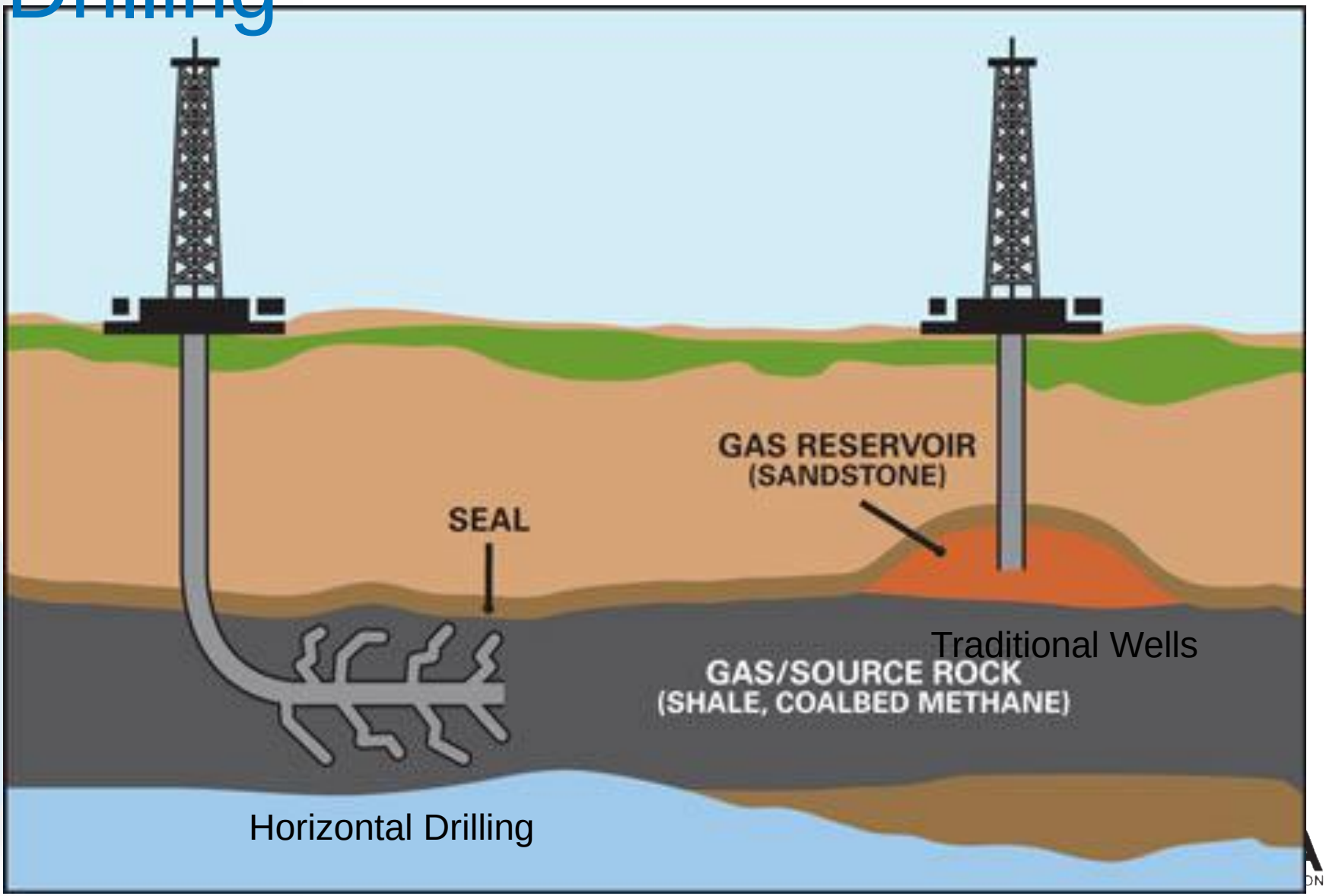
Spectra Energy Transmission

TransCanada GTN System

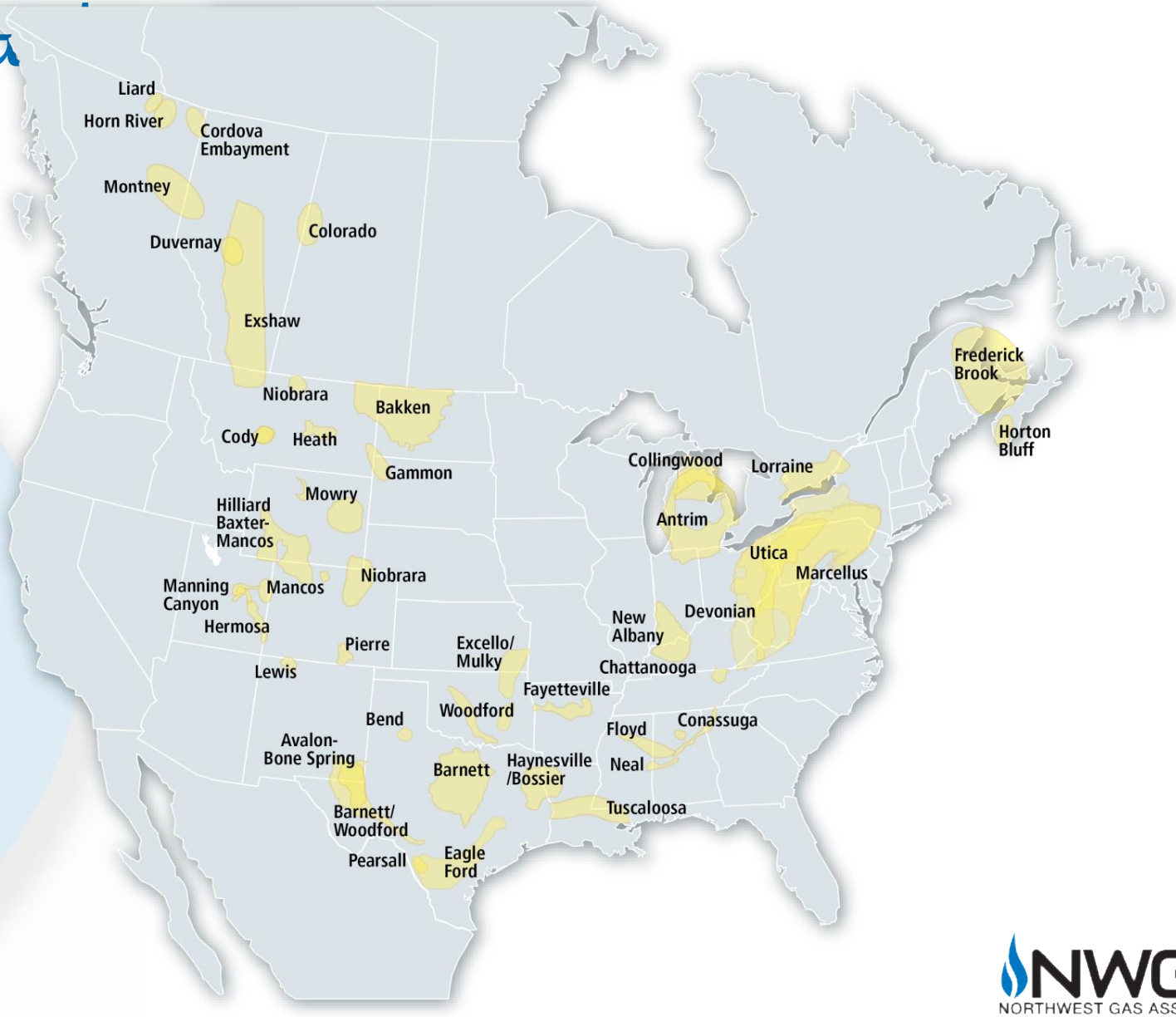
Williams NW Pipeline



Conventional vs. Horizontal Drilling



Gas From Shale Has Profound Impa



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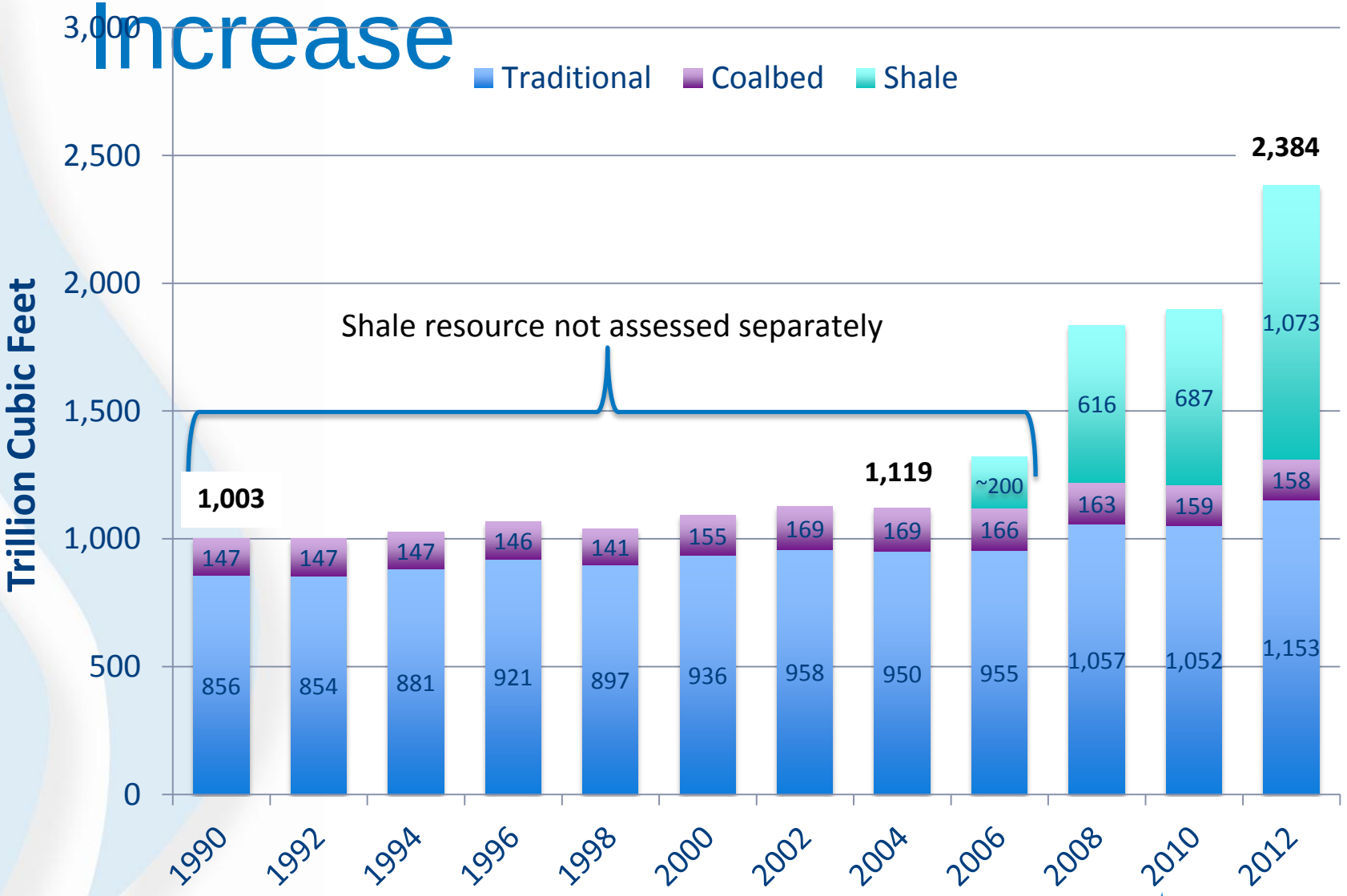
Source: Energy Information Administration (EIA), dated May 9, 2011

Total Resource Estimates Increase



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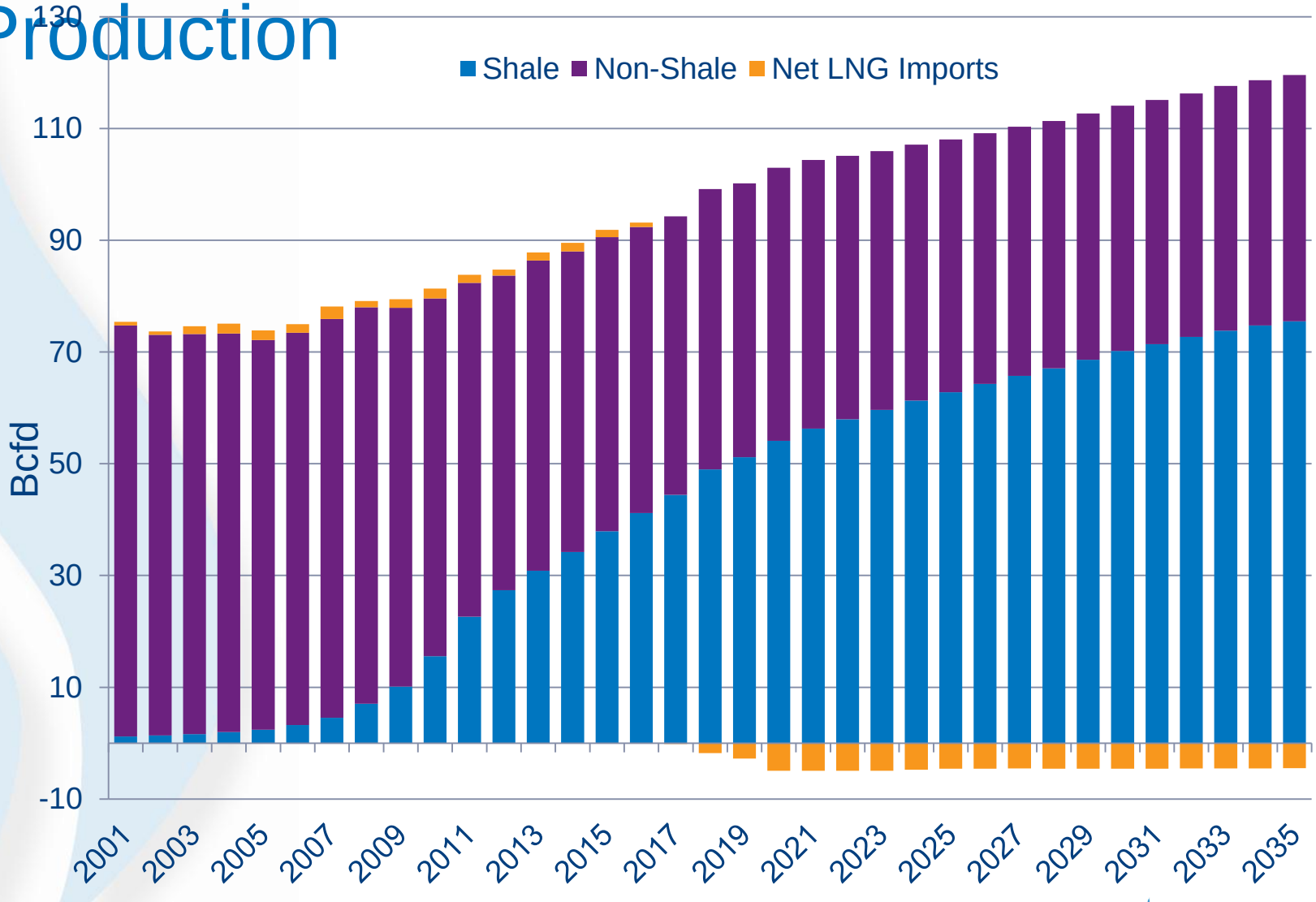
Shale Dominates North American Production



Source: Navigant Consulting, *Fall 2012 Gas Market Outlook*

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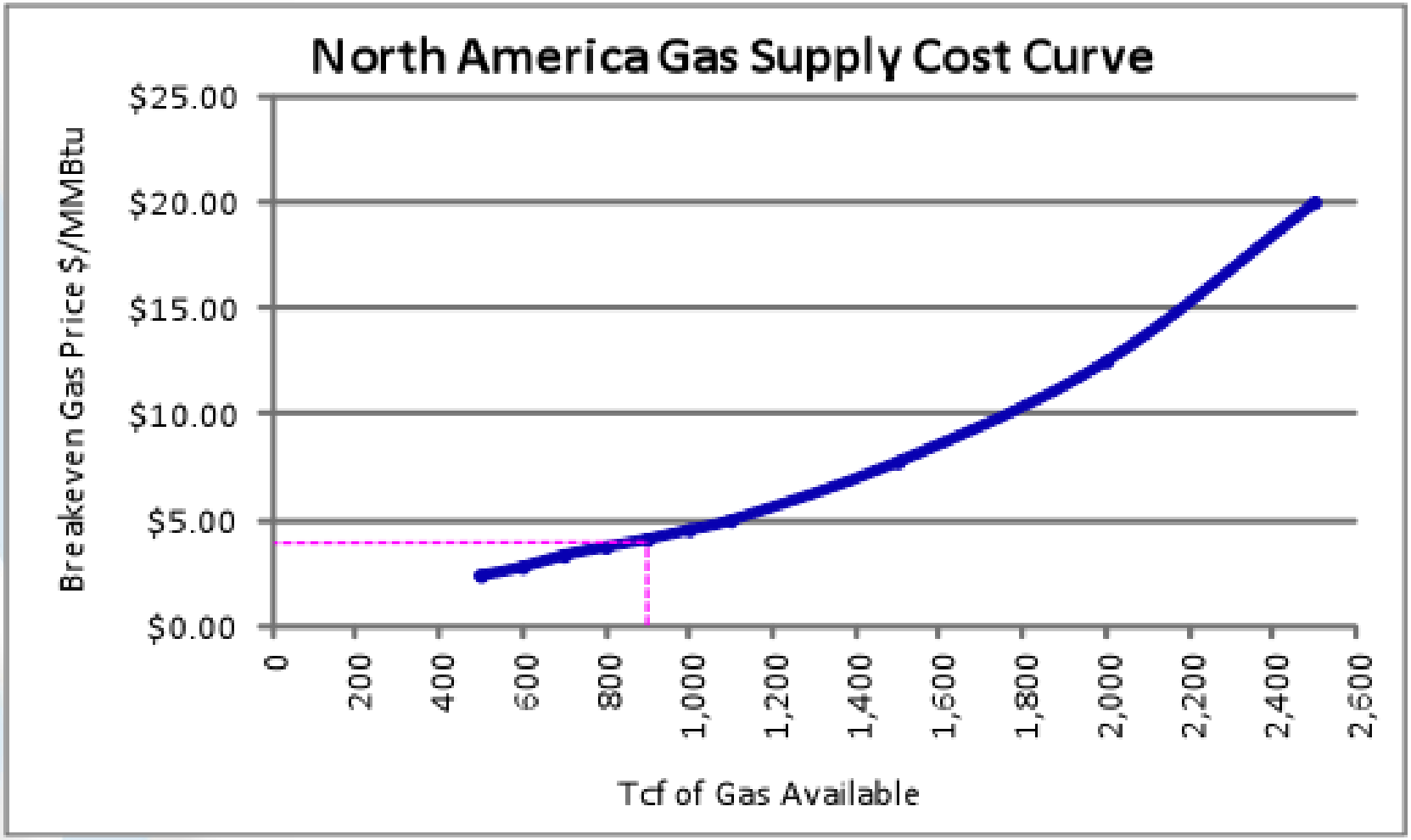
Price Not Quantity is the Issue



Source: 2011 MIT Study on the Future of Natural Gas, Figure 2.10

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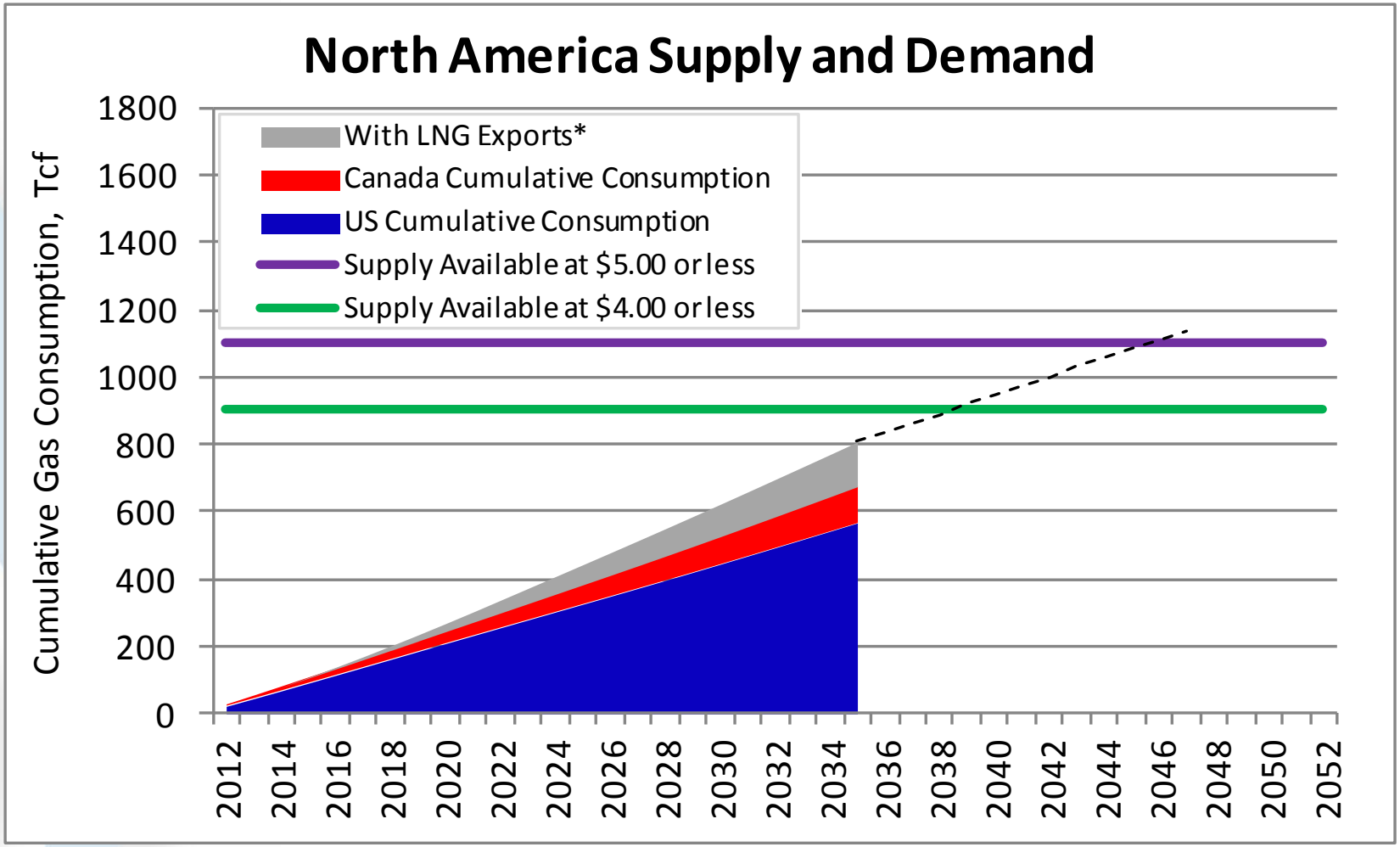
How Much Is 900 Tcf?



Source: US Energy Information Administration, Canada National Energy Board

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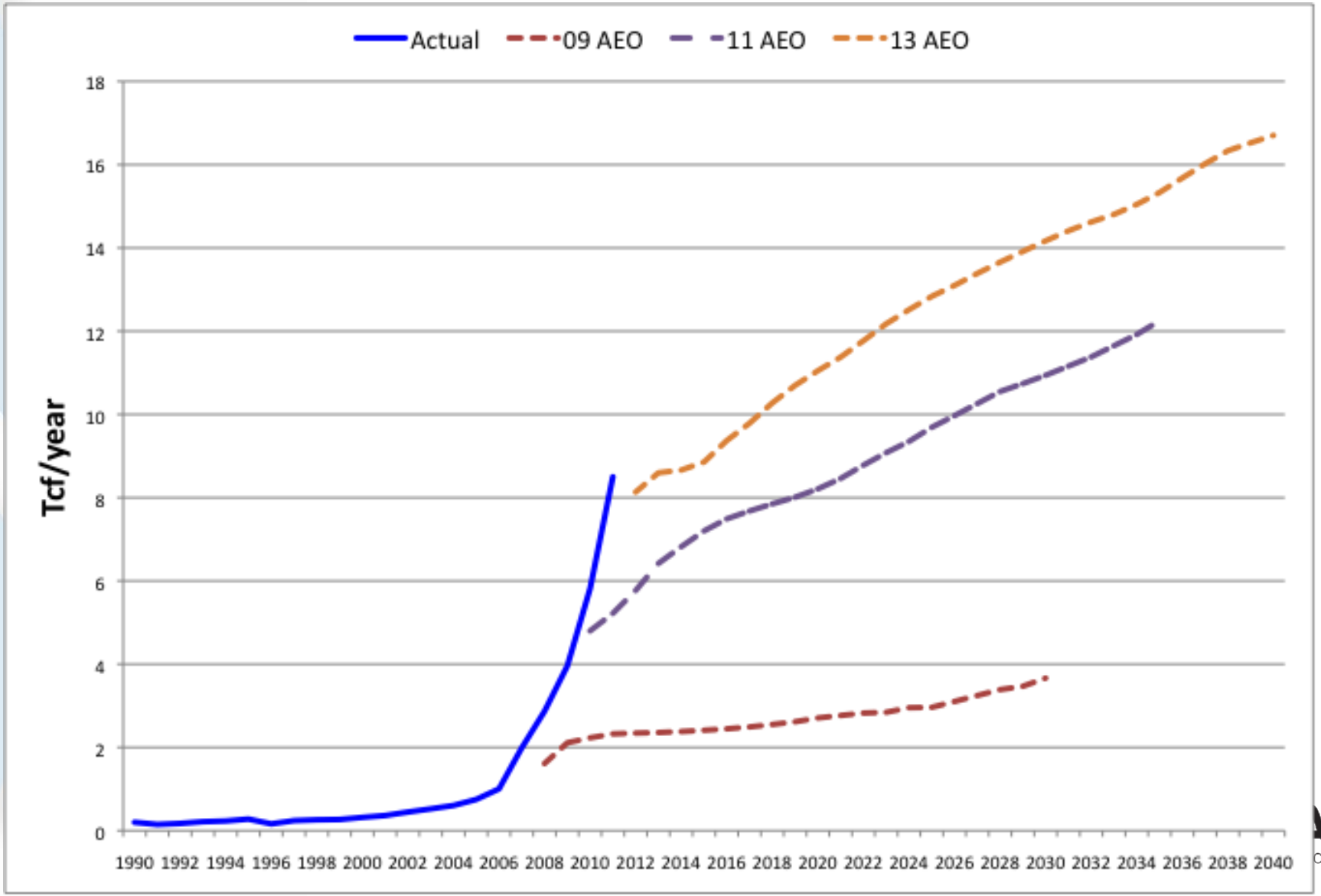
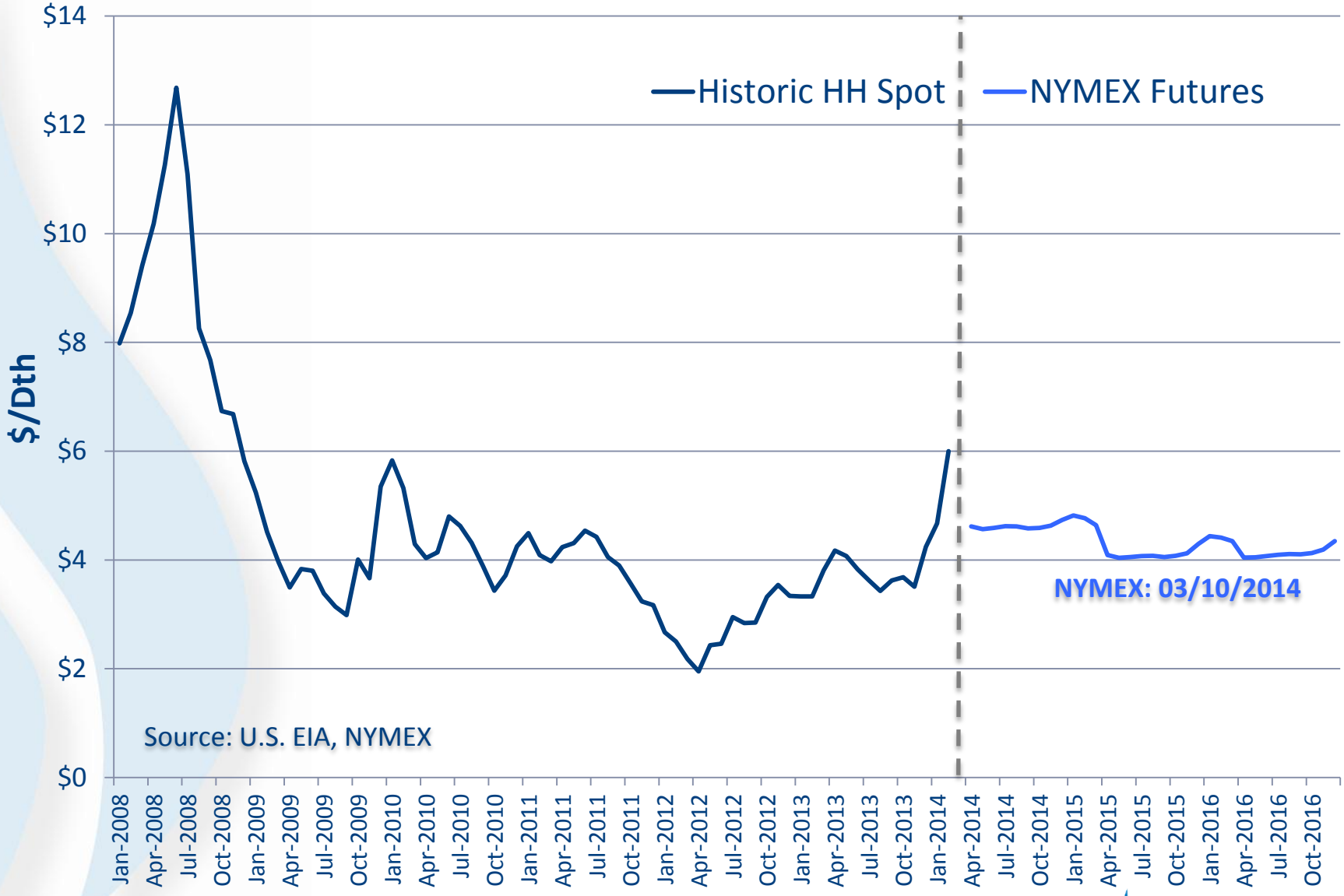
“The Learning Curve” (source: EIA Annual Energy



Price Effect



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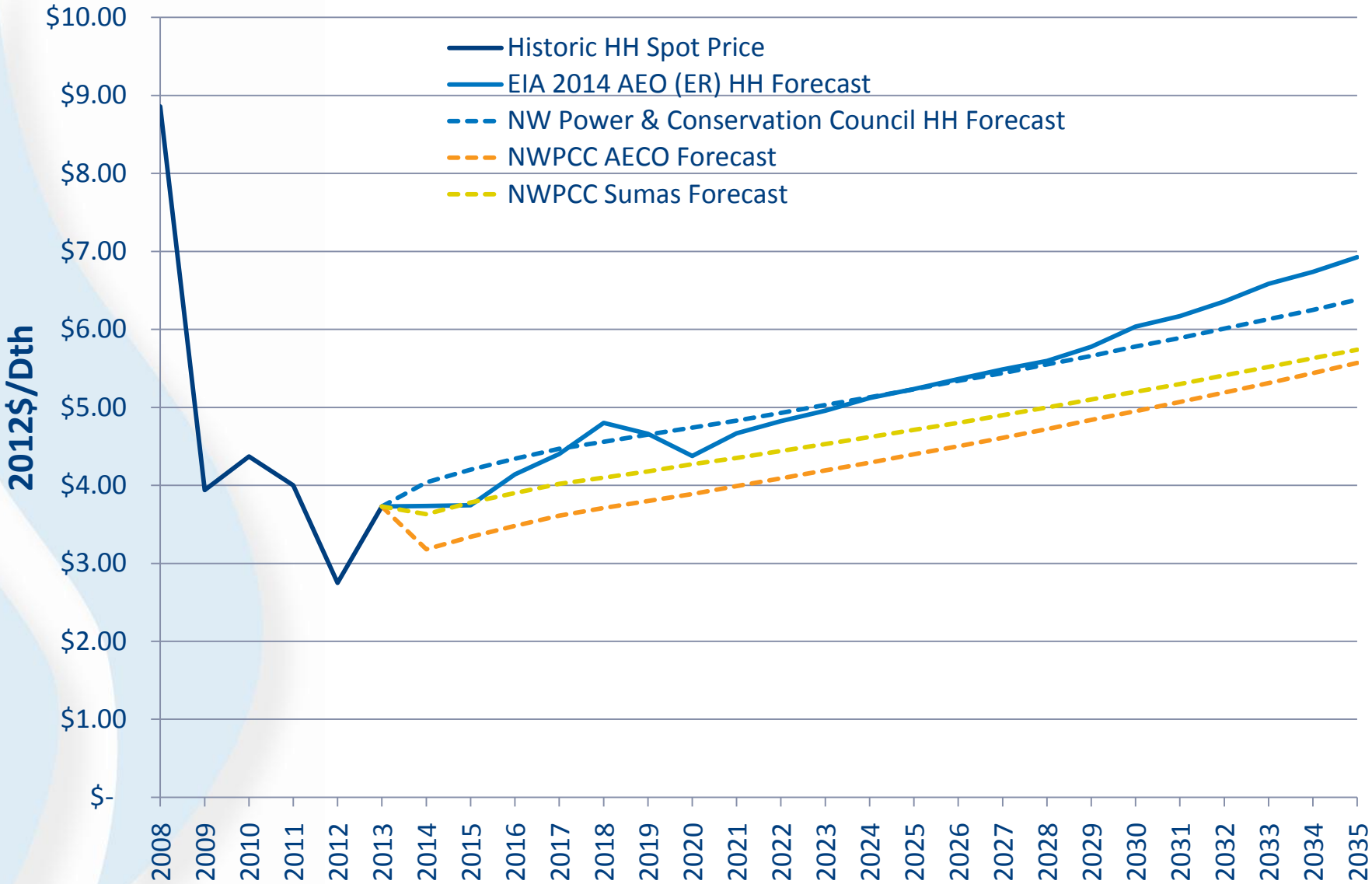
Price Forecasts



Source: EIA 2014 Annual Energy Outlook Early Release – December 2013

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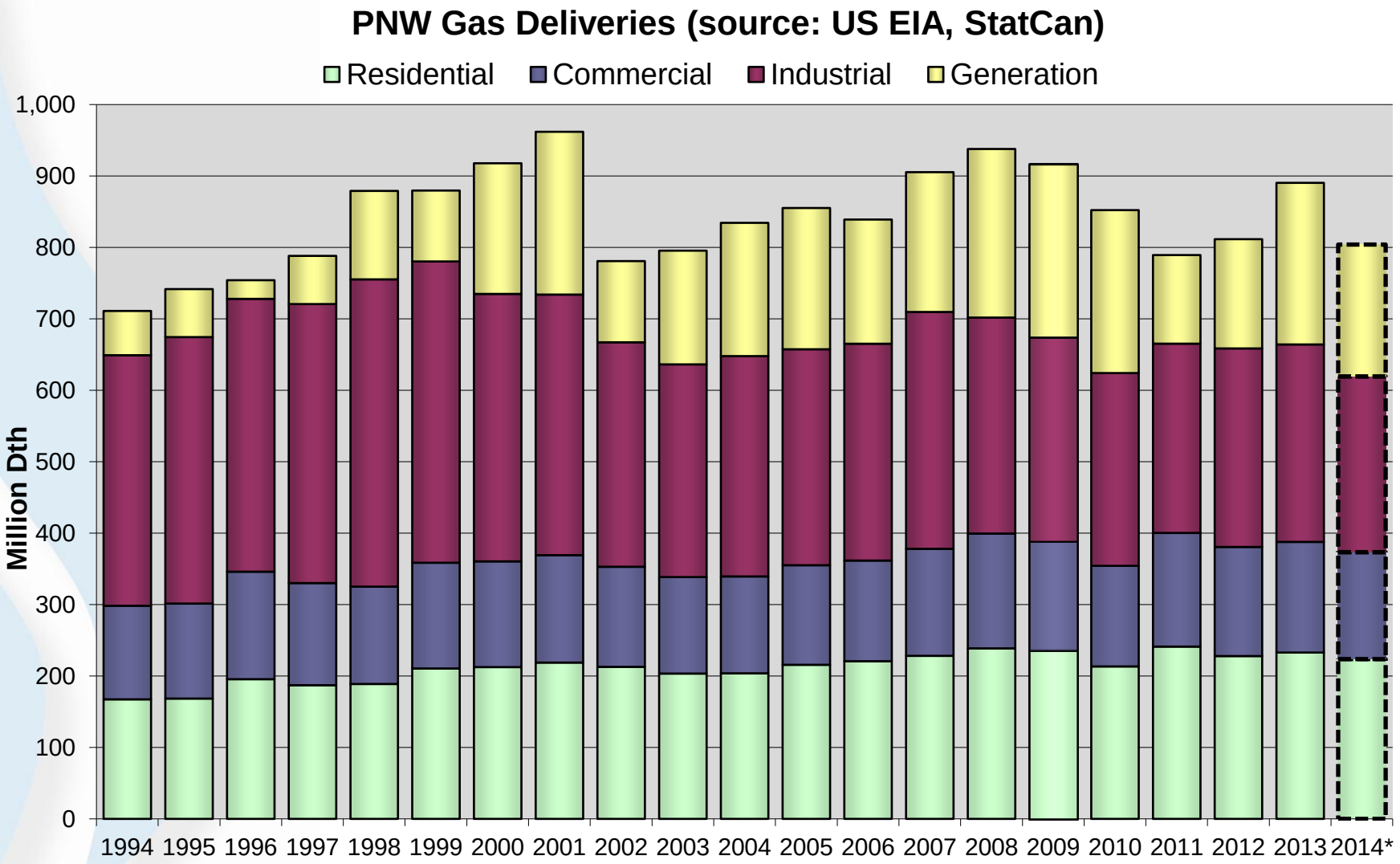
Recent Gas Demand



* 2014 Outlook Year 1 Forecast

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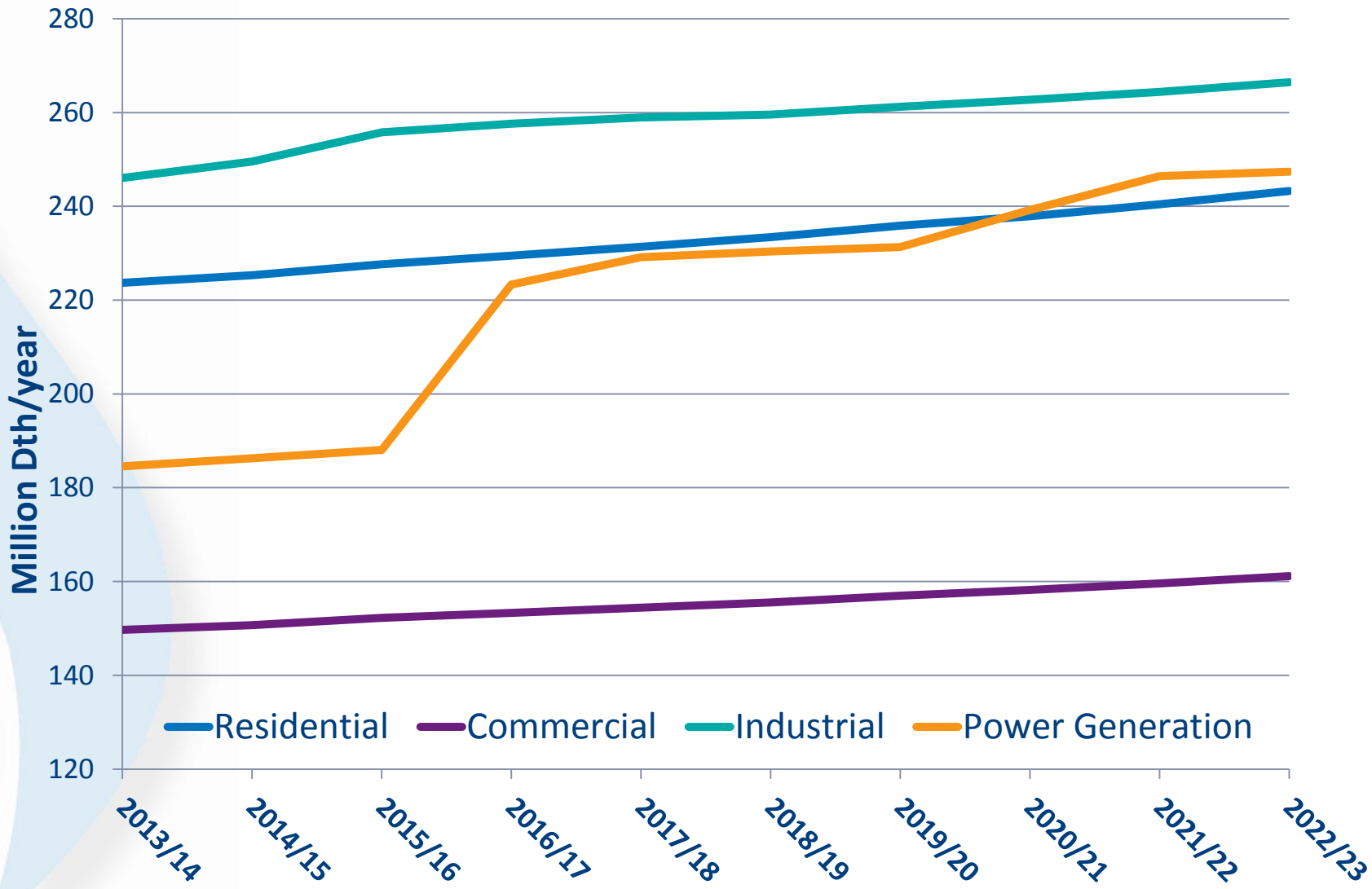
2014 Outlook Forecast



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Replace Existing Resources

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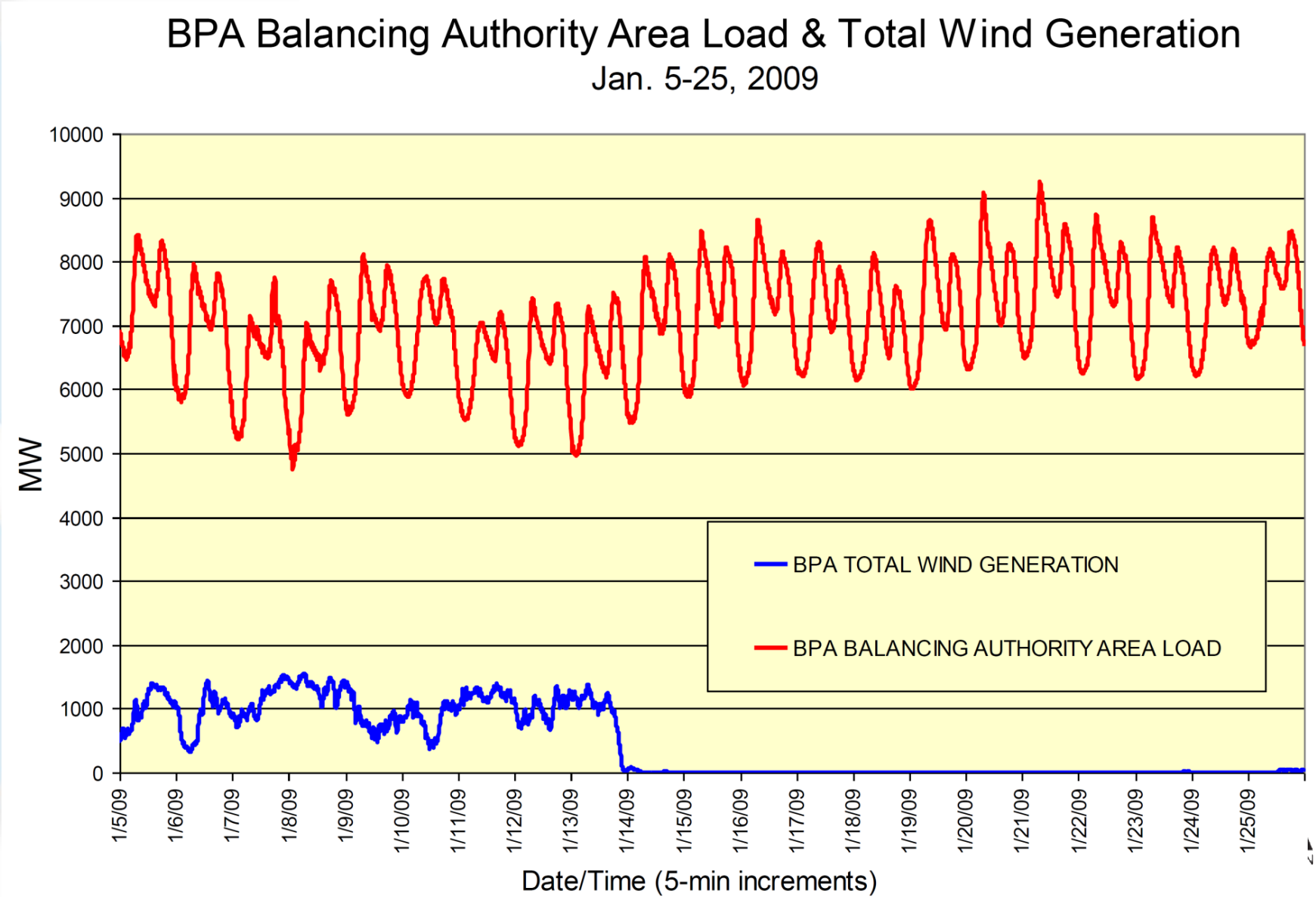
Support Renewable Resources

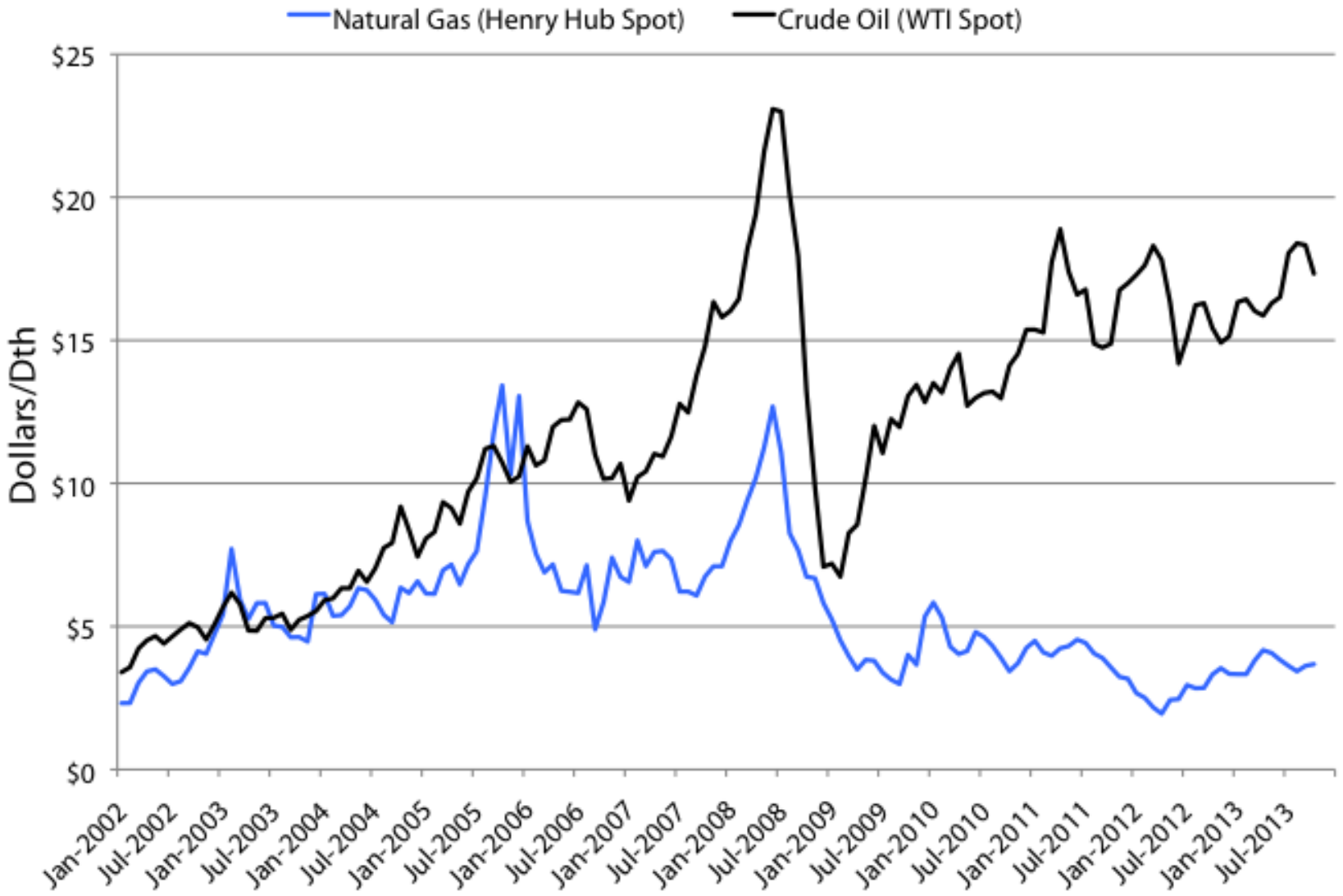


Natural Gas Use Is Versatile

Plastics
Panty hose
Paints
Photographic film
Beer
Safety glass laminate
Adhesives
Solvents
Carpeting
Insulation
Refrigerants
Windshield washer fluid
Particle board
Pigments and dyes

Frozen french fries
Pool liners
Food Packaging
Metals and recycling
Glass and recycling
Bricks
Lumber
Paper
Cardboard
Fertilizer
Antifreeze
Medicines
Aircraft parts
Chewing gum

US Natural Gas and Crude Oil Prices



Source: EIA Monthly Spot Prices through October, 2013

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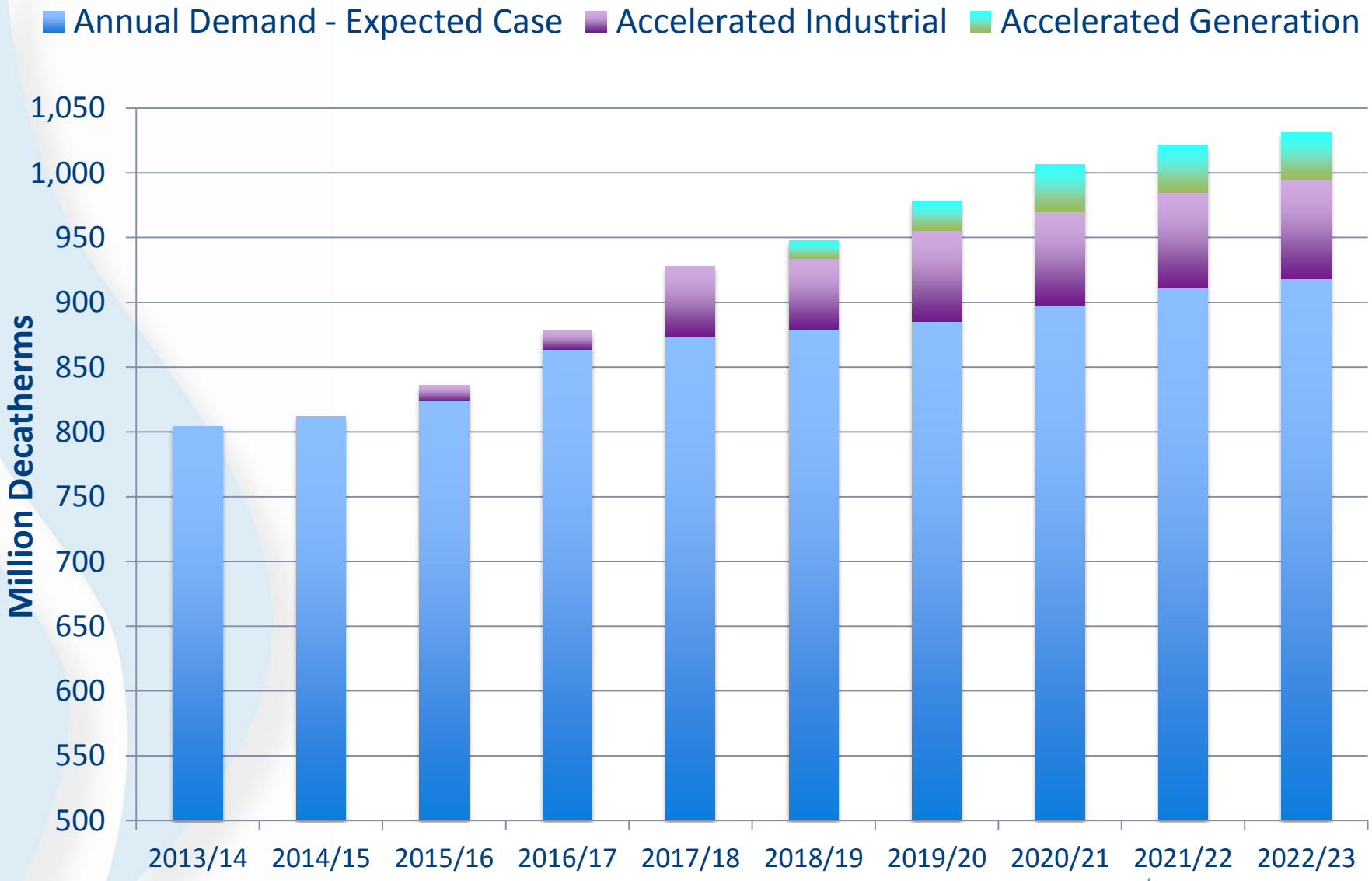
Natural Gas Transportation

Accelerated Demand Scenarios



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Capacity Projects

Pipelines

- Southern Crossing Expansion
- Palomar
- Sunstone
- Blue Bridge (N-MAX)
- Ruby
- Pacific Connector
- Pacific Trail
- Oregon LNG
- Washington Expansion

LNG Terminals

- Kitimat LNG
- Bradwood Landing
- Oregon LNG
- Jordan Cove LNG

Storage Facilities

- Mist
- Jackson Prairie

Questions?

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