EIA / 1994 -2014; Net Natural Gas Imports; Projected vs. Actual

Projected vs. Actual
(percent difference)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
AEO 1994	-8.6	-2.5	-1.0	-1.6	-1.0	-4.8	-15.5	-17.2	-18.1	-15.1	-8.1	-7.2	-8.4	1.1	-5.7	20.2	39.6	47.9			
AEO 1995		-0.1	-5.5	0.6	1.2	-4.1	-15.5	-18.0	-19.5	-16.6	-9.6	-12.8	-17.0	-12.5	-15.7	10.9	31.0	38.3			
AEO 1996			-4.7	-1.2	0.5	-3.8	-14.4	-15.8	-16.2	-12.6	-5.9	-9.2	-13.6	-8.4	-14.7	8.9	25.8	32.9	81.4	142.3	189.1
AEO 1997				1.3	4.3	5.6	0.2	-2.2	-2.9	0.9	9.7	6.9	2.1	8.0	-0.1	26.8	44.5	50.5	102.2	166.0	213.5
AEO 1998					4.0	6.6	3.2	8.6	7.4	11.3	20.6	16.8	11.3	17.3	8.5	37.9	57.6	64.3	121.1	190.9	243.7
AEO 1999						-2.4	-7.5	-6.9	-5.3	-1.7	6.4	5.4	1.9	11.1	5.7	36.3	57.0	67.2	126.7	197.7	251.6
AEO 2000							-0.1	3.0	6.7	14.4	25.5	21.6	16.0	22.5	14.0	45.1	66.0	73.4	132.9	205.3	258.5
AEO 2001								-0.6	4.4	10.8	24.6	27.3	23.9	34.3	25.2	60.8	85.4	94.3	162.6	246.4	308.8
AEO 2002									2.2	7.0	23.7	26.7	24.6	32.3	23.6	56.2	79.3	87.8	153.3	233.2	291.4
AEO 2003										-9.3	1.6	7.9	6.8	15.1	10.3	46.0	72.4	83.8	148.7	229.6	287.9
AEO 2004											7.5	5.8	7.1	23.5	17.0	58.3	88.1	111.1	193.2	288.3	361.1
AEO 2005												-3.7	-6.7	5.2	-1.0	36.7	56.8	89.7	163.0	261.9	361.6
AEO 2006													-6.0	5.3	5.6	35.4	55.3	66.9	128.7	219.8	273.7
AEO 2007														-5.0	-9.4	28.3	58.2	74.7	146.4	229.3	310.6
AEO 2008															0.5	27.3	47.3	47.7	104.0	164.9	192.1
AEO 2009																0.3	2.1	-10.2	1.5	16.0	36.2
AEO 2010																	3.0	8.3	41.4	72.6	79.7
AEO 2011																		5.3	40.2	74.0	107.1
AEO 2012																			-3.3	7.8	21.1
AEO 2013																				13.1	29.0
AEO 2014																					2.2
Average Absolute Percent Difference	8.6	1.3	3.7	1.2	2.2	4.5	8.1	9.0	9.2	10.0	13.0	12.6	11.2	14.4	10.5	33.5	51.1	58.6	108.9	164.4	201.0

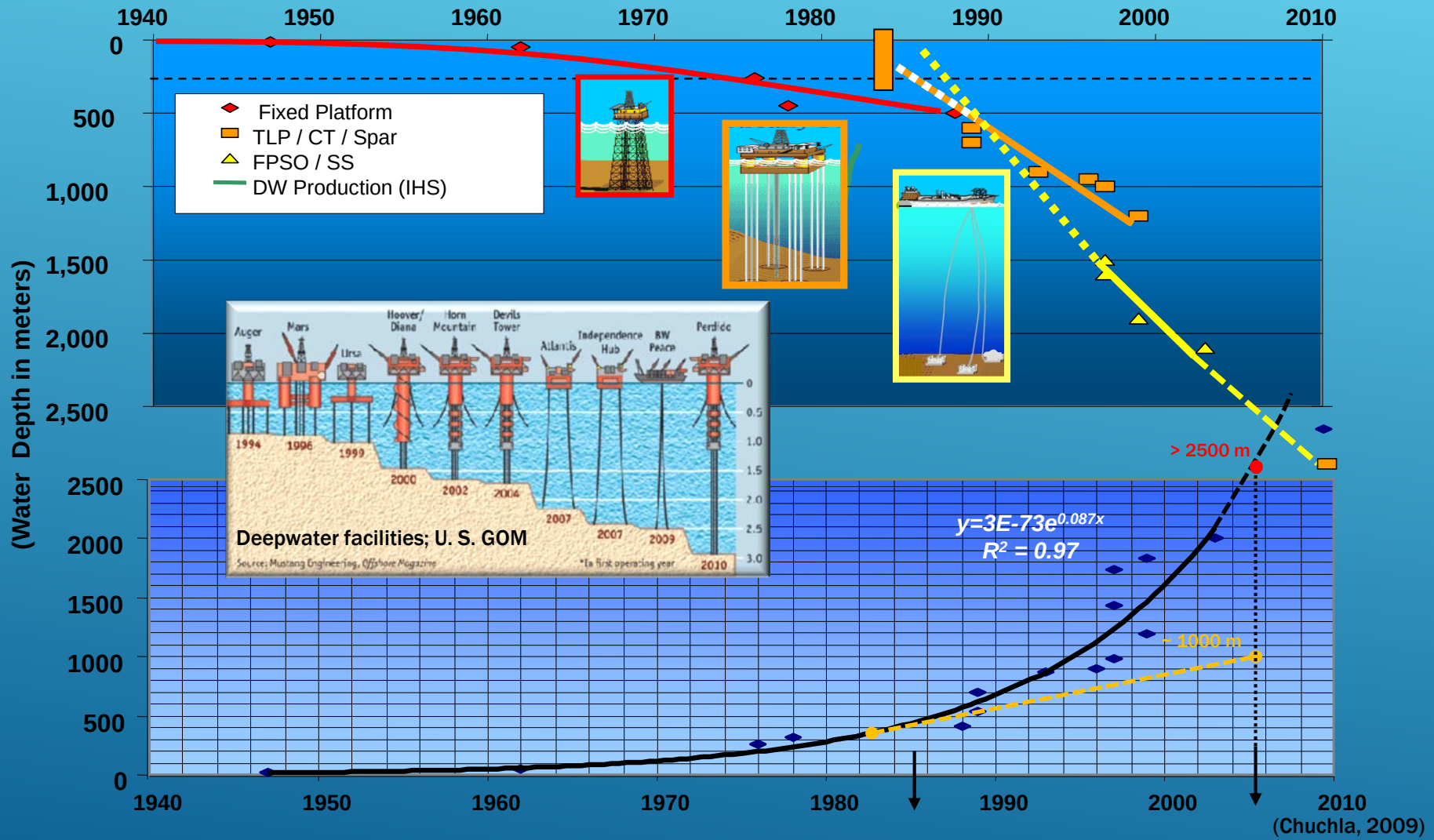
Sources: Projections: *Annual Energy Outlook*, Reference Case Projections, Various Editions.

Historical Data: U.S. Energy Information Administration, September 2014 Monthly Energy Review, DOE/EIA-0035(2013/08) (Washington, DC, September 25, 2014), Table 4.1.

overestimated

underestimated

DEEPWATER DEVELOPMENT CAPABILITY



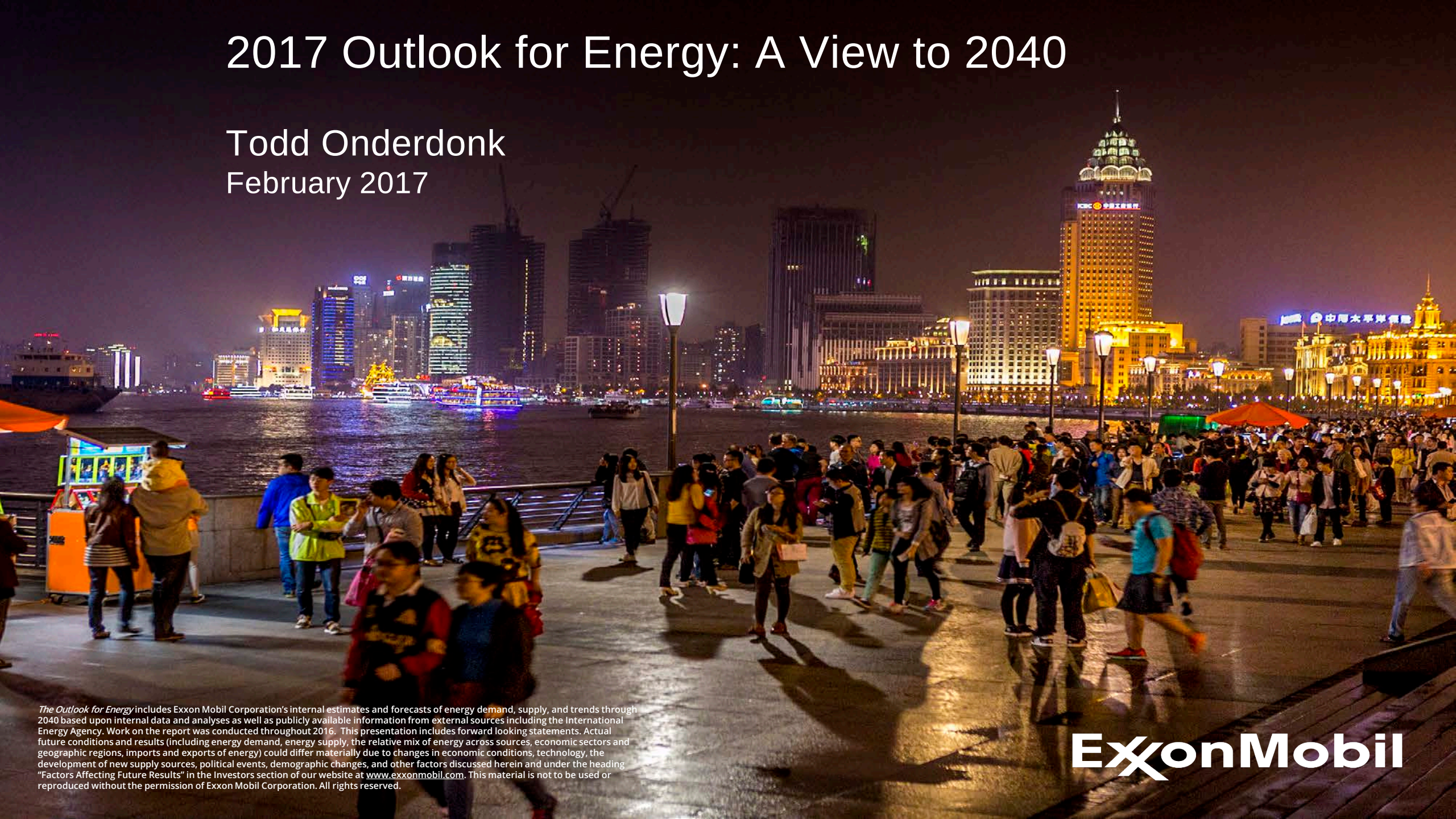
(Chuchla, 2009)

E E R
integrating resource solutions

2017 Outlook for Energy: A View to 2040

Todd Onderdonk

February 2017



The Outlook for Energy includes Exxon Mobil Corporation's internal estimates and forecasts of energy demand, supply, and trends through 2040 based upon internal data and analyses as well as publicly available information from external sources including the International Energy Agency. Work on the report was conducted throughout 2016. This presentation includes forward looking statements. Actual future conditions and results (including energy demand, energy supply, the relative mix of energy across sources, economic sectors and geographic regions, imports and exports of energy) could differ materially due to changes in economic conditions, technology, the development of new supply sources, political events, demographic changes, and other factors discussed herein and under the heading "Factors Affecting Future Results" in the Investors section of our website at www.exxonmobil.com.

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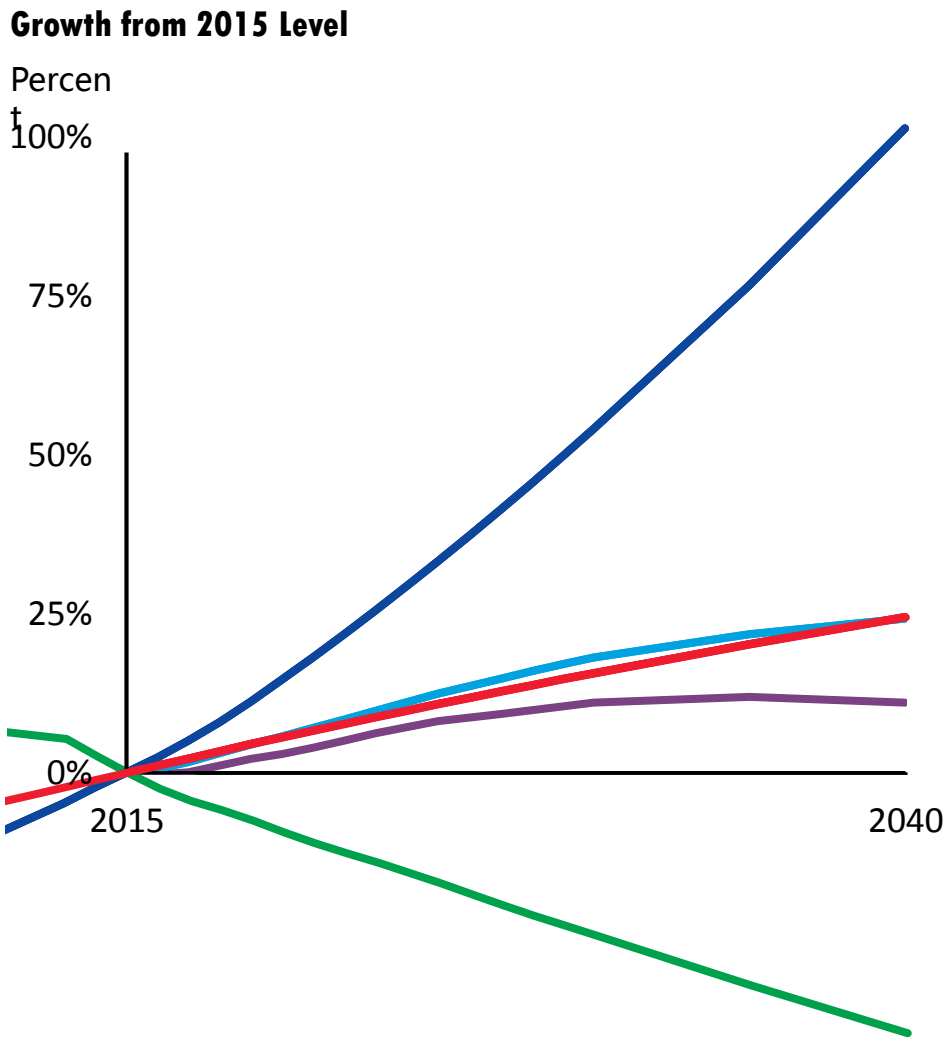
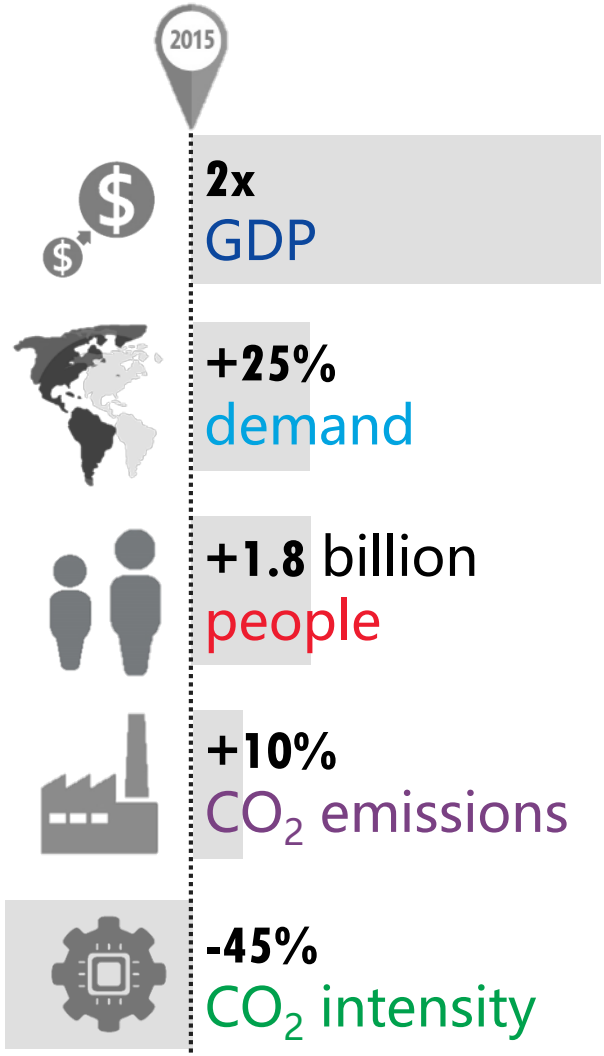
Global Trends Continue to Evolve





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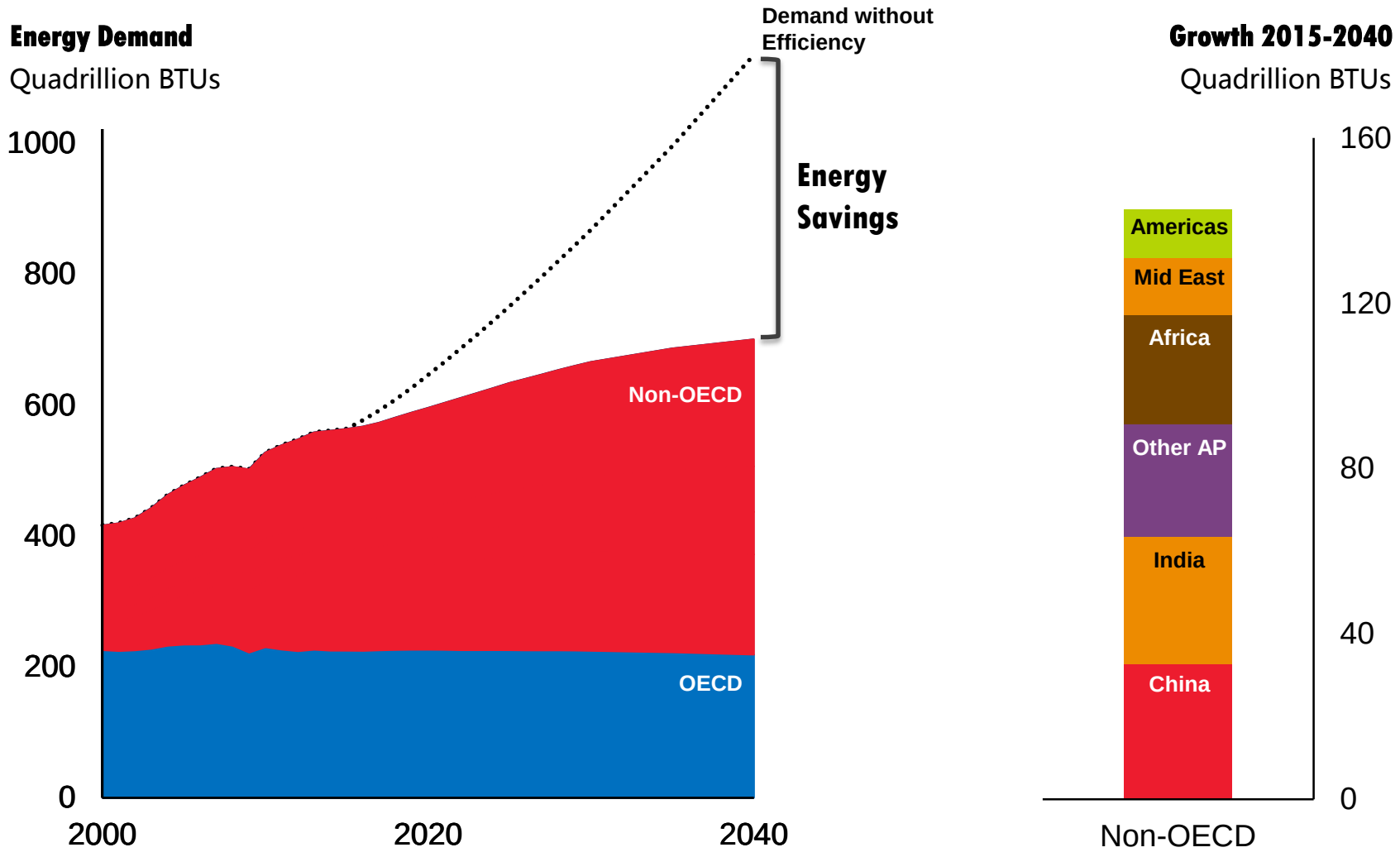
Demand Growth From Developing Nations



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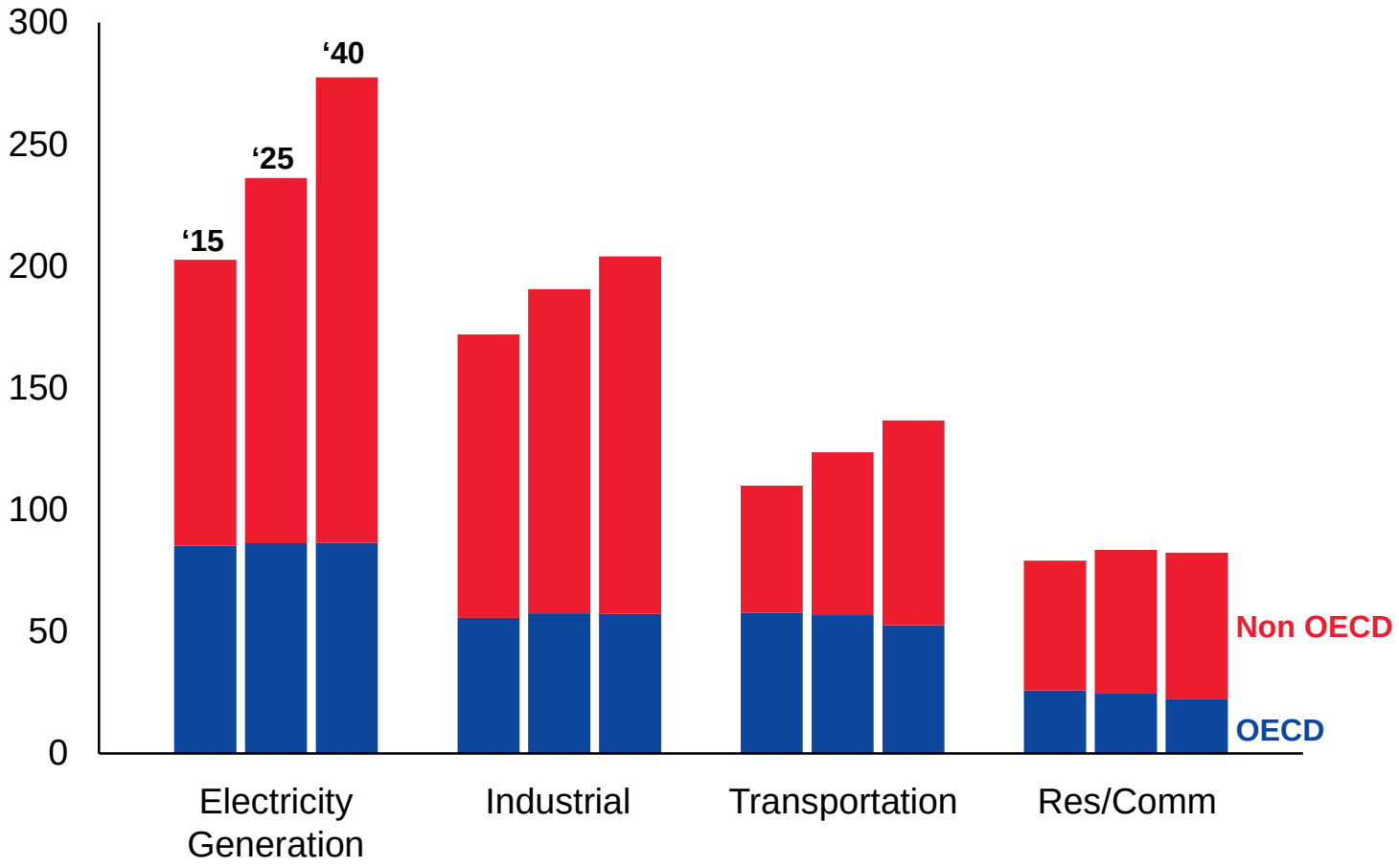
Electricity Generation Leads Growth

Primary Energy Demand by Sector

Quadrillion BTUs



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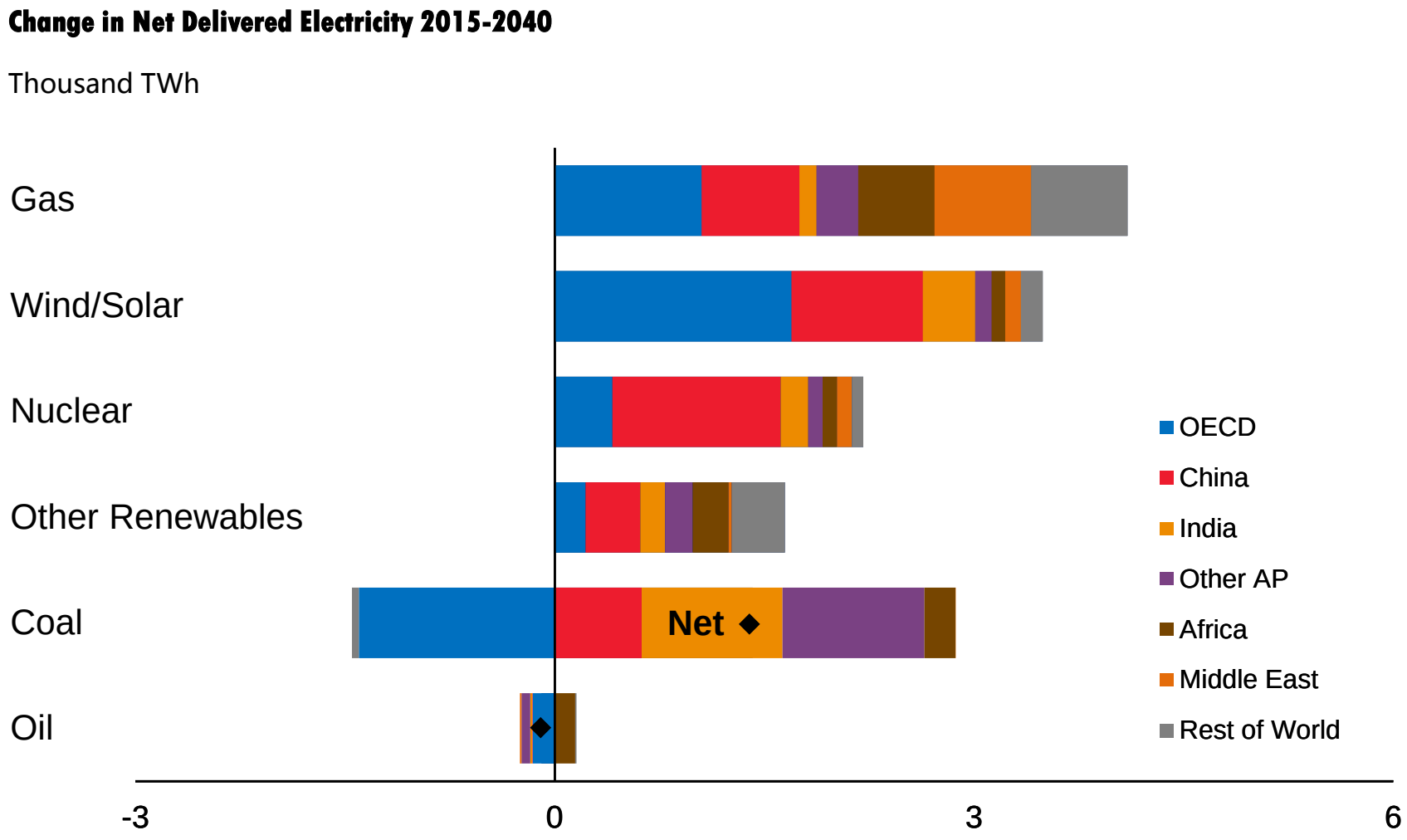
Electricity Sources Shift Regionally



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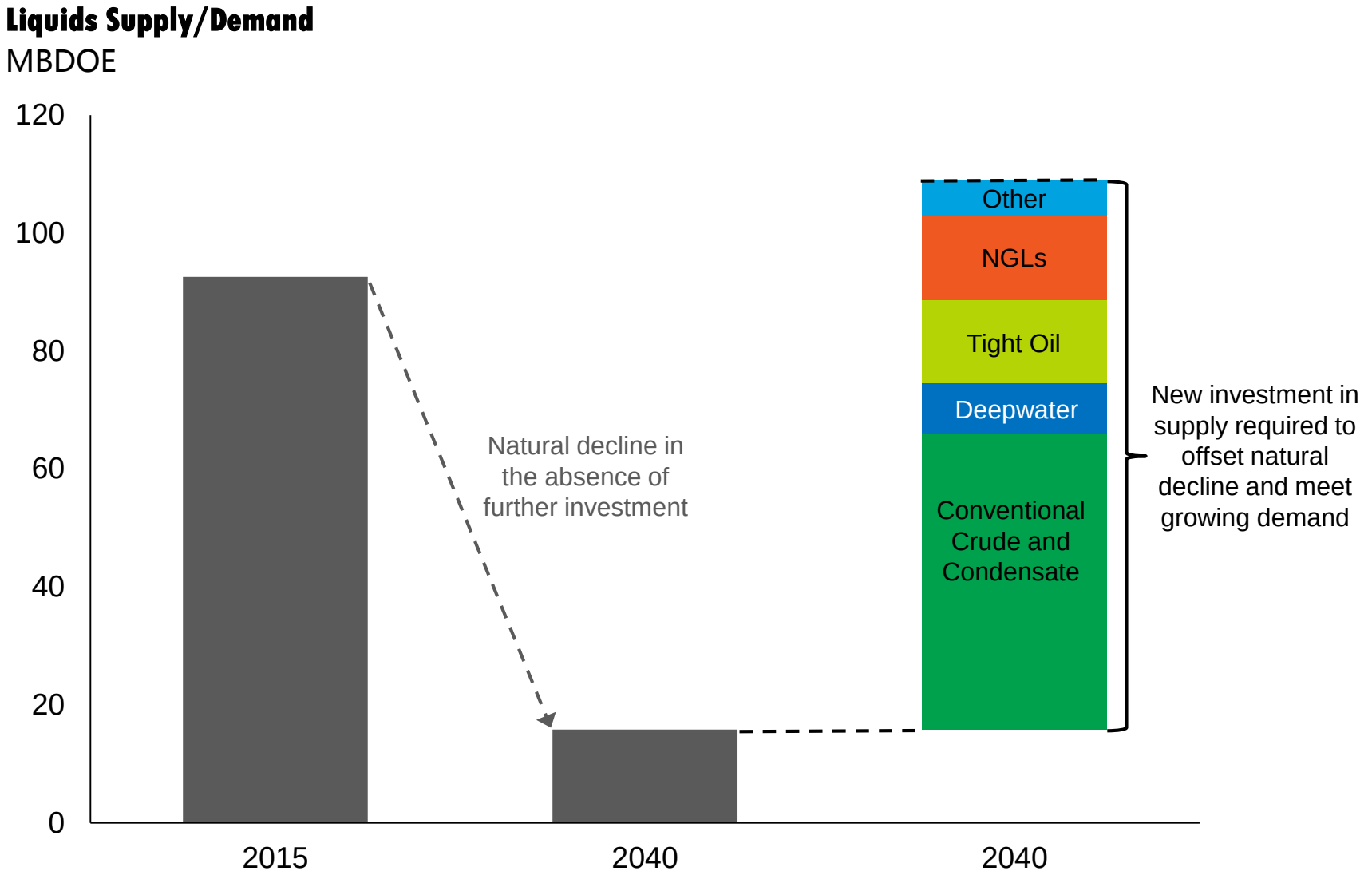
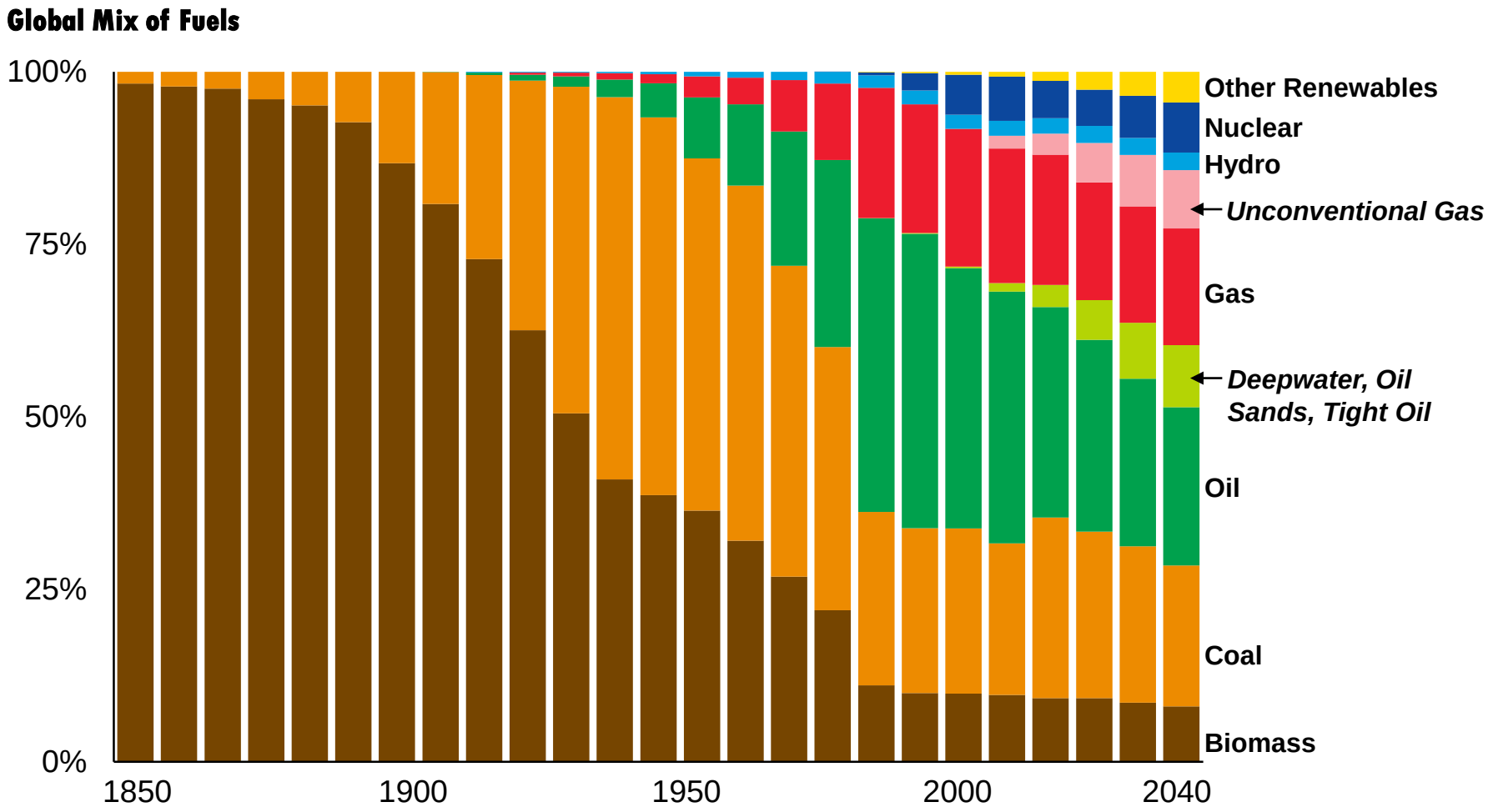
All Scenarios Require Ongoing Development



*Based on IEA sources; excludes biofuels

Technology Contributes to the Fuel Mix



Source: Smil, Energy Transitions (1800-1960)

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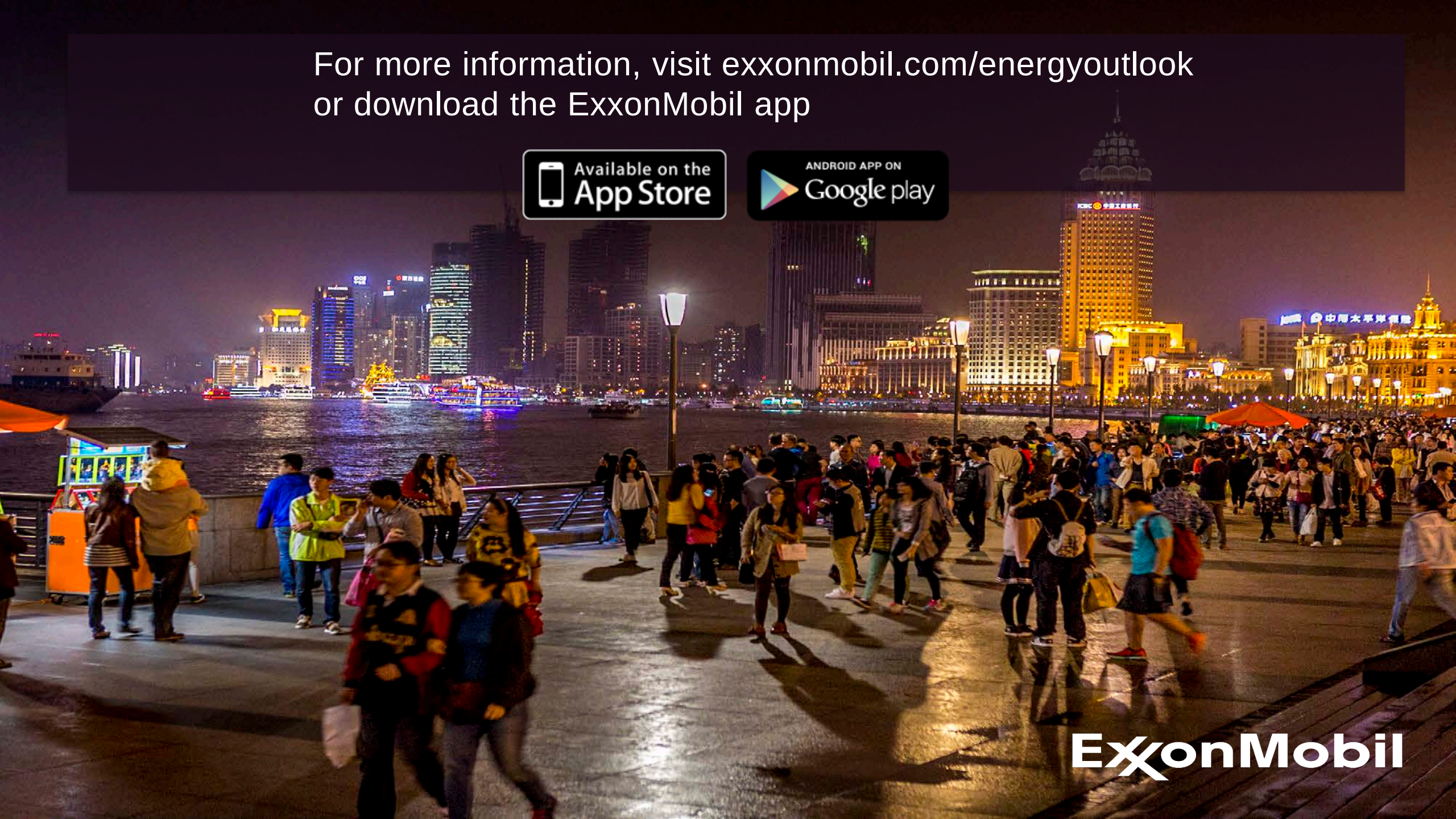
For more information, visit exxonmobil.com/energyoutlook
or download the ExxonMobil app



ConocoPhillips

The U.S. Unconventional Oil & Gas Renaissance

Marianne Kah, Chief Economist

University of Texas Energy Week

February 7, 2016

ConocoPhillips

Cautionary Statement

The following presentation includes forward-looking statements. All statements included in this presentation other than statements of historical fact, including, without limitation, statements regarding production forecasts, anticipated production mix, estimates of operating costs, assumptions regarding future commodity prices, planned drilling activity, potential changes in leverage, estimates of future capital expenditures, estimates of recoverable resources, projected rates of return and efficiency gains, estimates of future cost of supply, as well as projected cash flow, inventory levels and capital efficiency, business strategy and other plans and objectives for future operations, are forward-looking statements.

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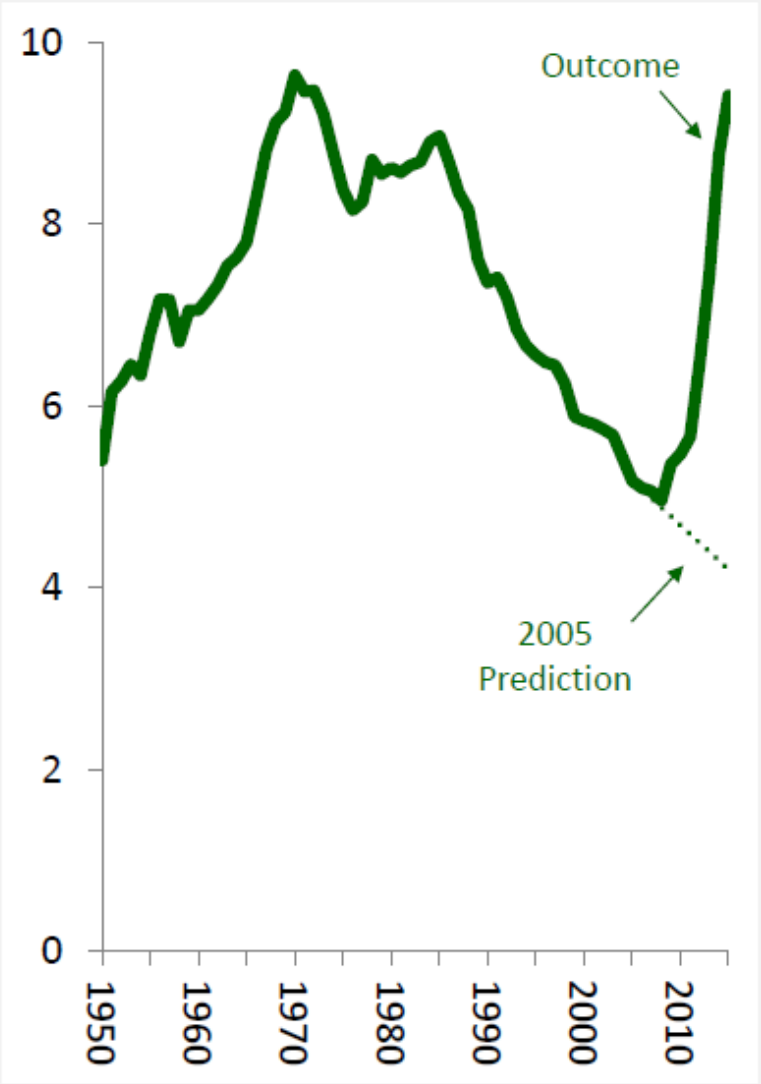
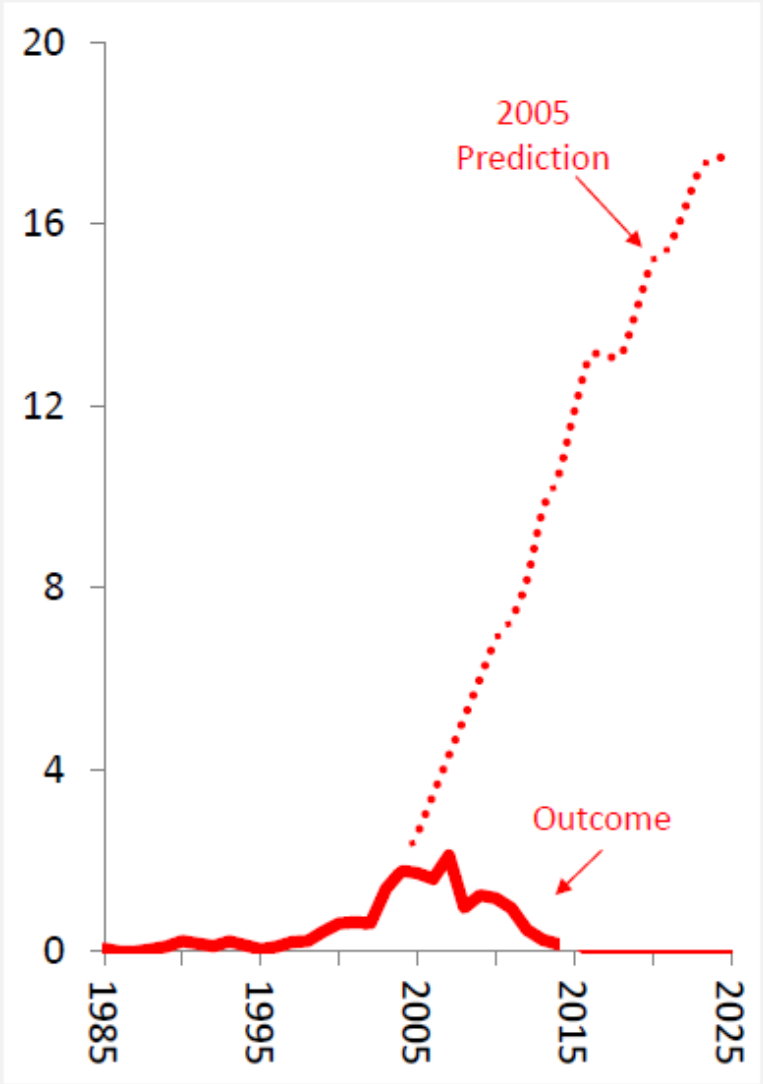
The Unconventional Revolution Vastly Improved America's Energy Future

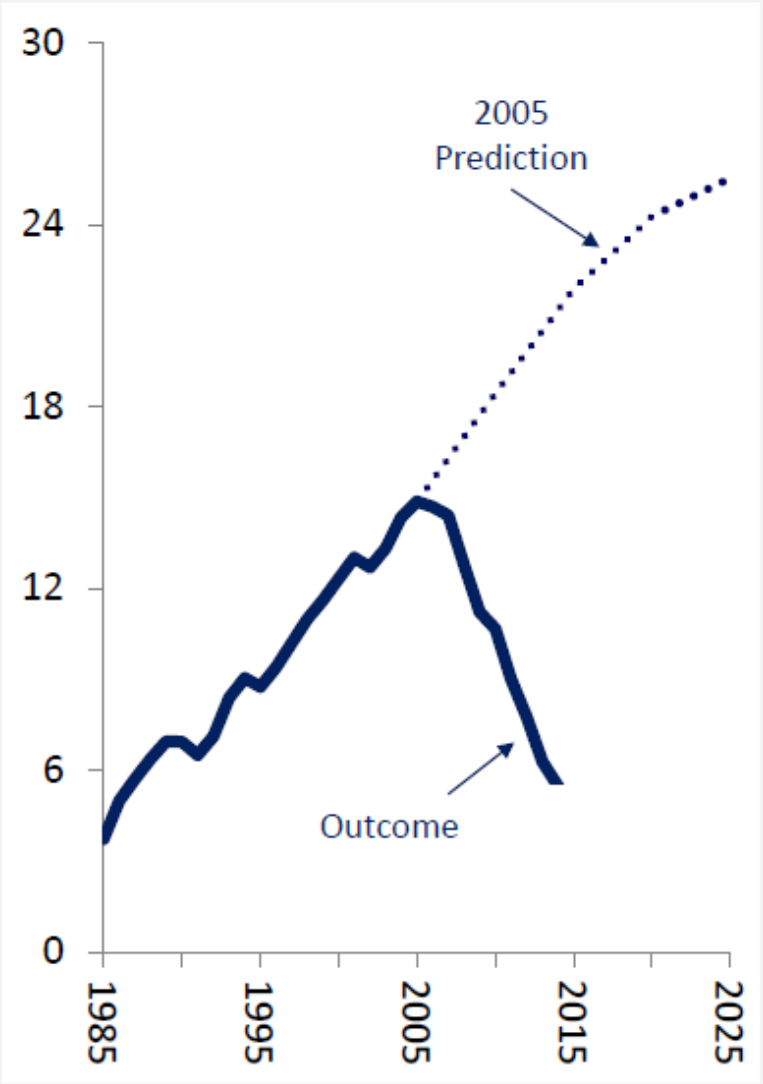
U.S. Oil Production
(millions of barrels per day)



Liquefied Natural Gas Imports
(bcf per day)

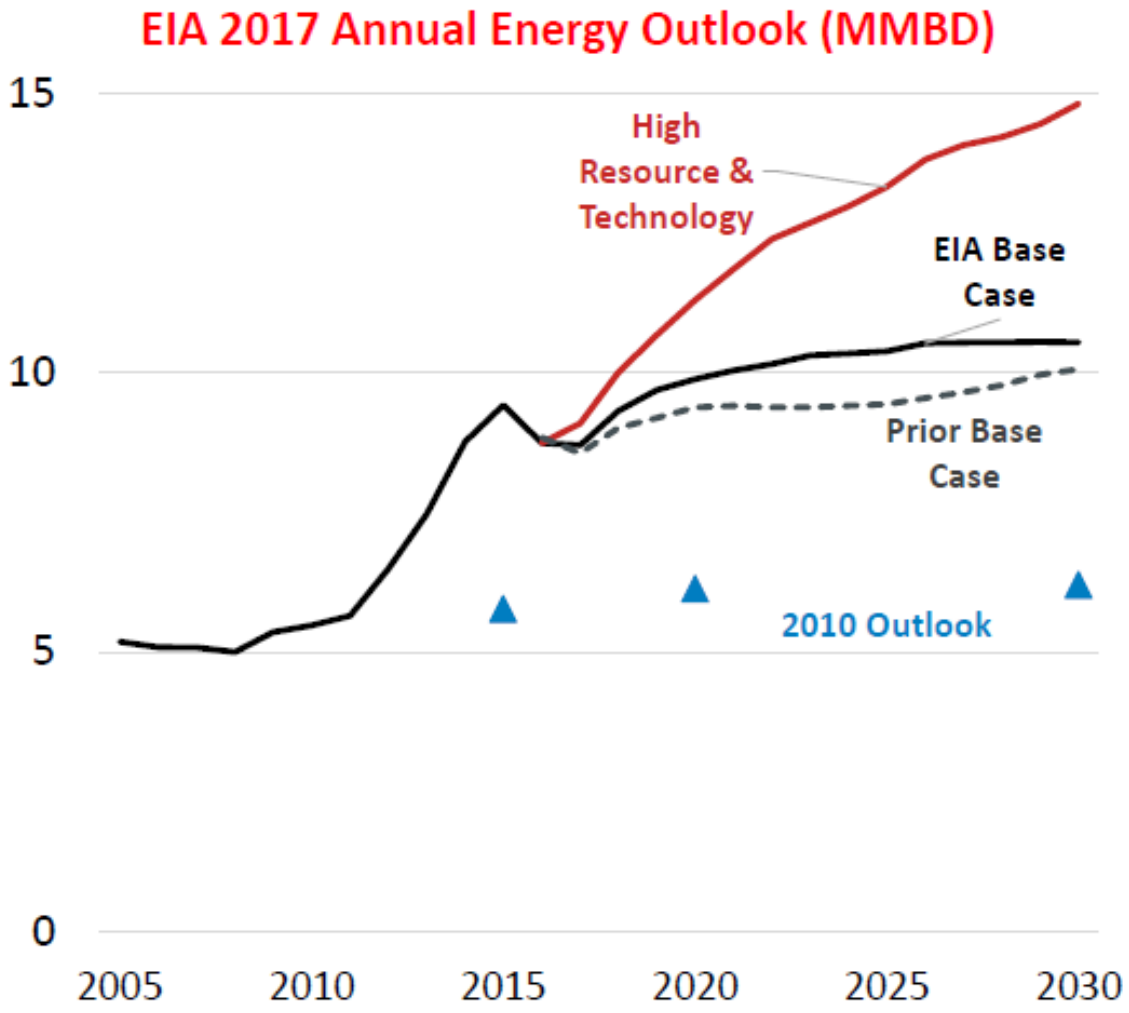


U.S. Net Energy Imports
(millions of BOE per day)



Source: U.S. Energy Information Administration (EIA); LNG and Net Energy Imports predictions from EIA AEO 2005 Report

U.S. Crude Oil Production Expected to Grow



Key Issues in Projecting Future Tight Oil Supply:

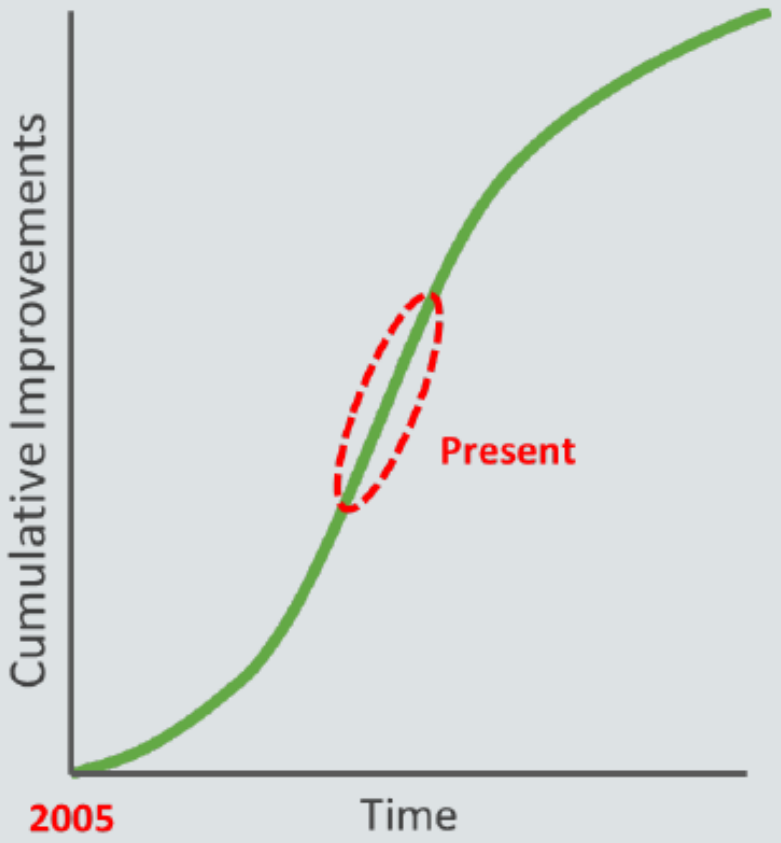
- Pace and magnitude of additional technology & efficiency improvements
- Industry re-investment rates
- Cost escalation as activity accelerates
- Infrastructure needs
- Environmental compliance

EIA projects significant upside to U.S. oil production with efficiency and technological improvements

Source: U.S. Department of Energy, EIA Annual Energy Outlook 2017

Continued Technology Advancements in Unconventional Reservoirs

Pace of Advancements



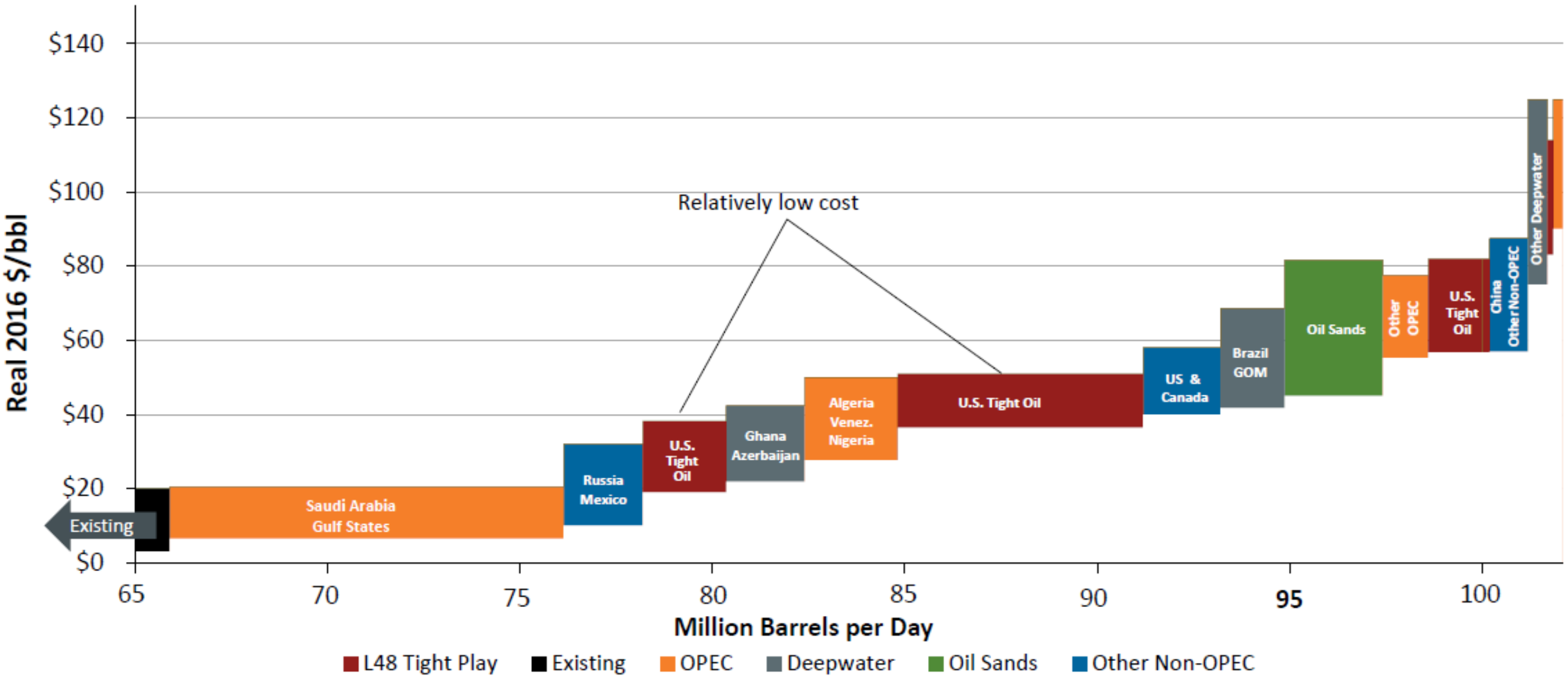
Factors Enabling Rapid Technology Advances:

- Understanding of reservoirs and technologies still immature
- Low-cost, rapid experimentation
- Many E&P and Service companies pursuing unconventionals

Going-Forward Industry Technology Focus Areas:

- Creating "perfect" fracture systems
- Reducing completion costs (per boe)
- Reduced drilling and facilities cost (per boe)
- Use of data analytics to achieve productivity improvements
- Water management; methane emission reductions

Incremental Global Oil Supply for 2020

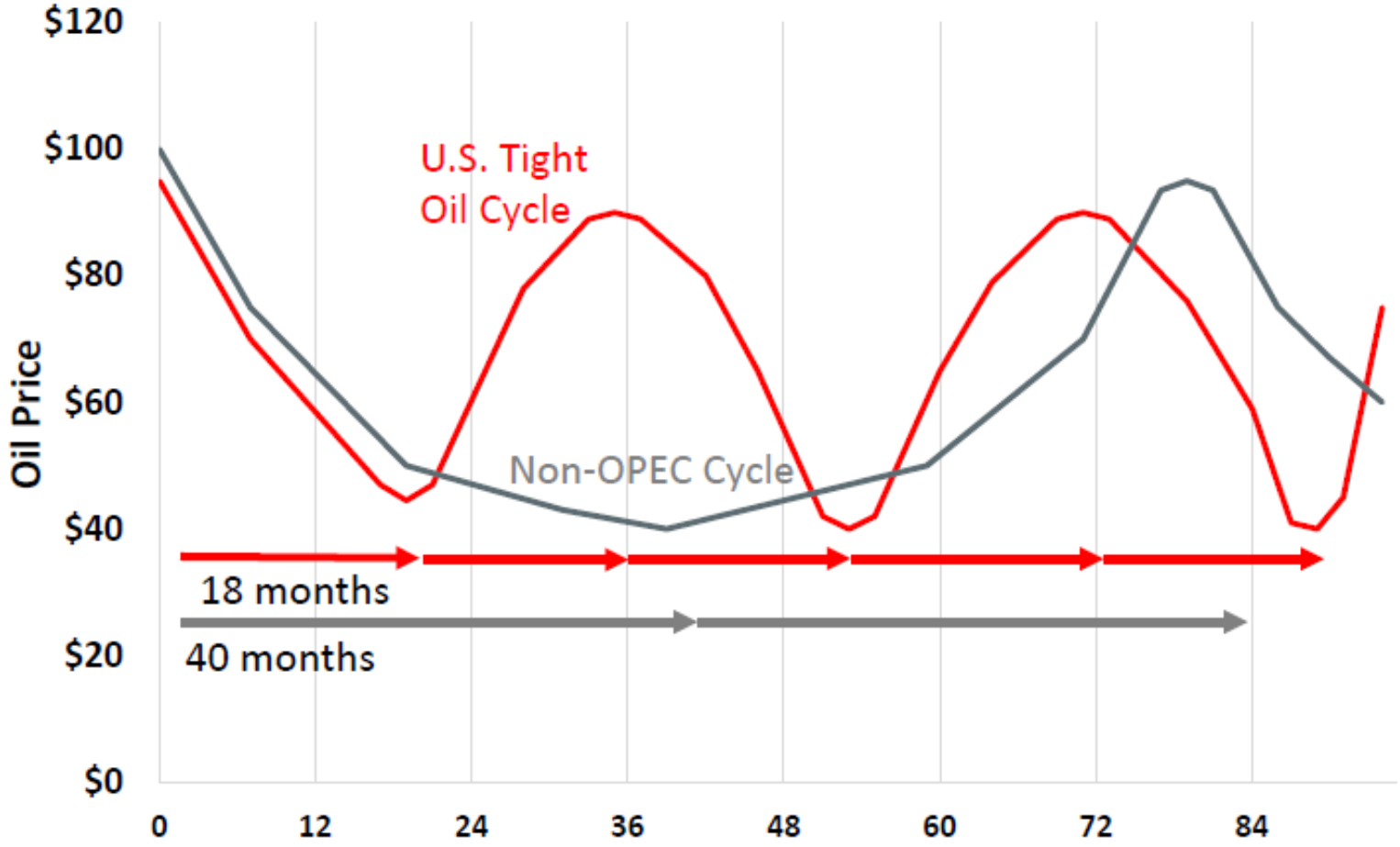


Large portions of U.S. tight oil are in the middle to lower end of the global oil supply curve

Source: ConocoPhillips Chief Economists Office, Rystad Ucube; gross production growth before declines, boxes are indicative of the types of assets from each category not a fully inclusive list

Investment-Based Oil Price Cycles

Price Collapse →	Rigs Lag →	Production Lag →	Price Recovery →	= Peak to Trough
U.S. Cycle	5 months	5 months	8 months	18 months
Non-OPEC Cycle	8 months	25 months	9 months	40 months



- Shorter response time for U.S. tight oil than other non-OPEC supplies
- Not fast enough to be "swing" supplier

Source: ConocoPhillips, based on historical observation.

Key to Success with Low and Uncertain Price Environment

- Re-emphasis on financial returns vs. production growth
- Diverse, flexible portfolio with opportunities that have low supply costs and short cycle times
- Maintain good legacy assets with low decline and low risk for base of production and cash flow
- Maintain a strong balance sheet
- Improve efficiency and lower costs

Summary

- The oil and gas markets have changed in ways we couldn't have expected a decade ago
- U.S. tight oil supply helps balance the market because it can be brought on quickly and offers relatively attractive economics
- U.S. tight oil can't be the "swing" supply because it takes too long to respond
- Implies higher future oil price volatility, as price signals will be needed to ramp tight oil drilling up or down
- Company strategies are having to adapt

Energy Research

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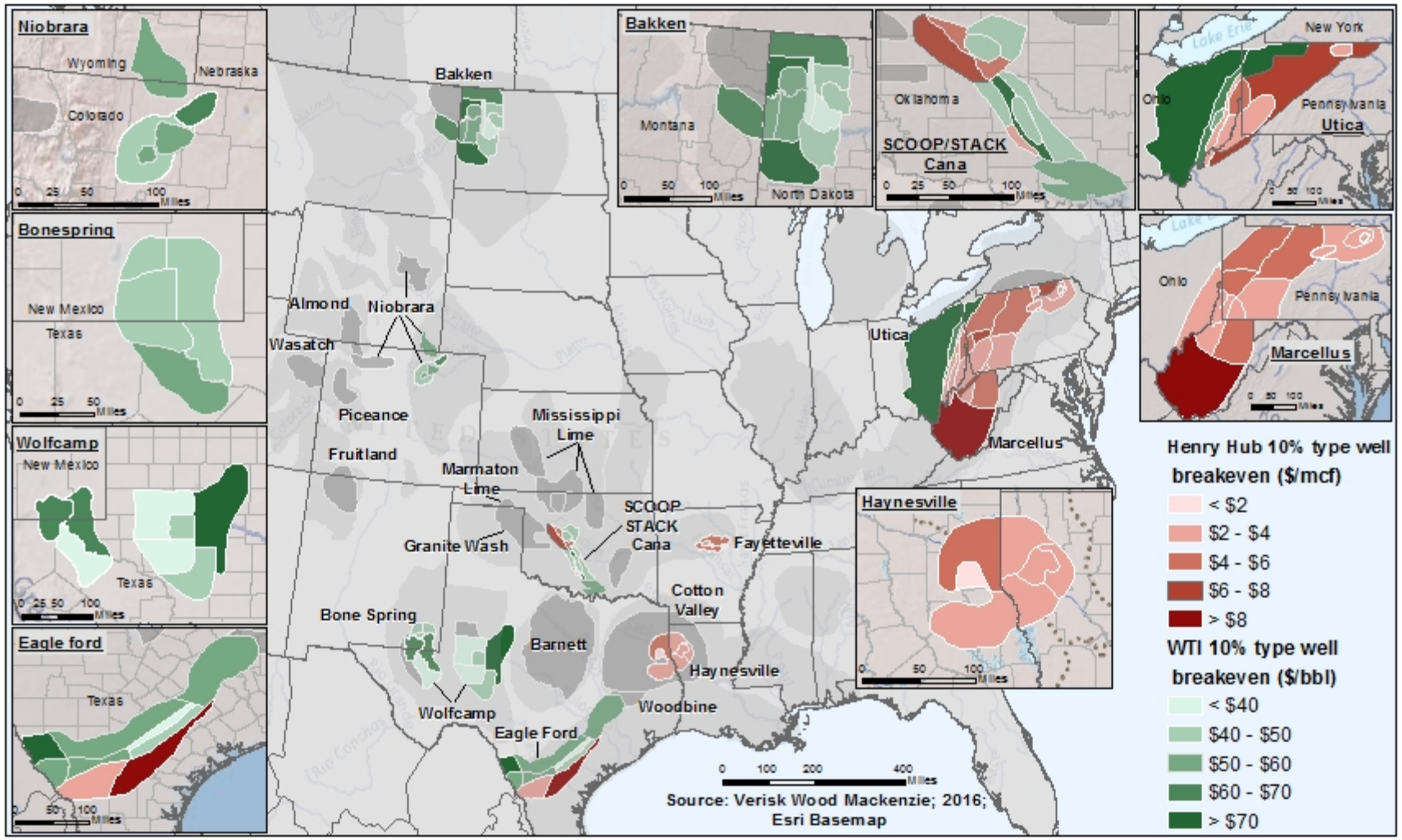
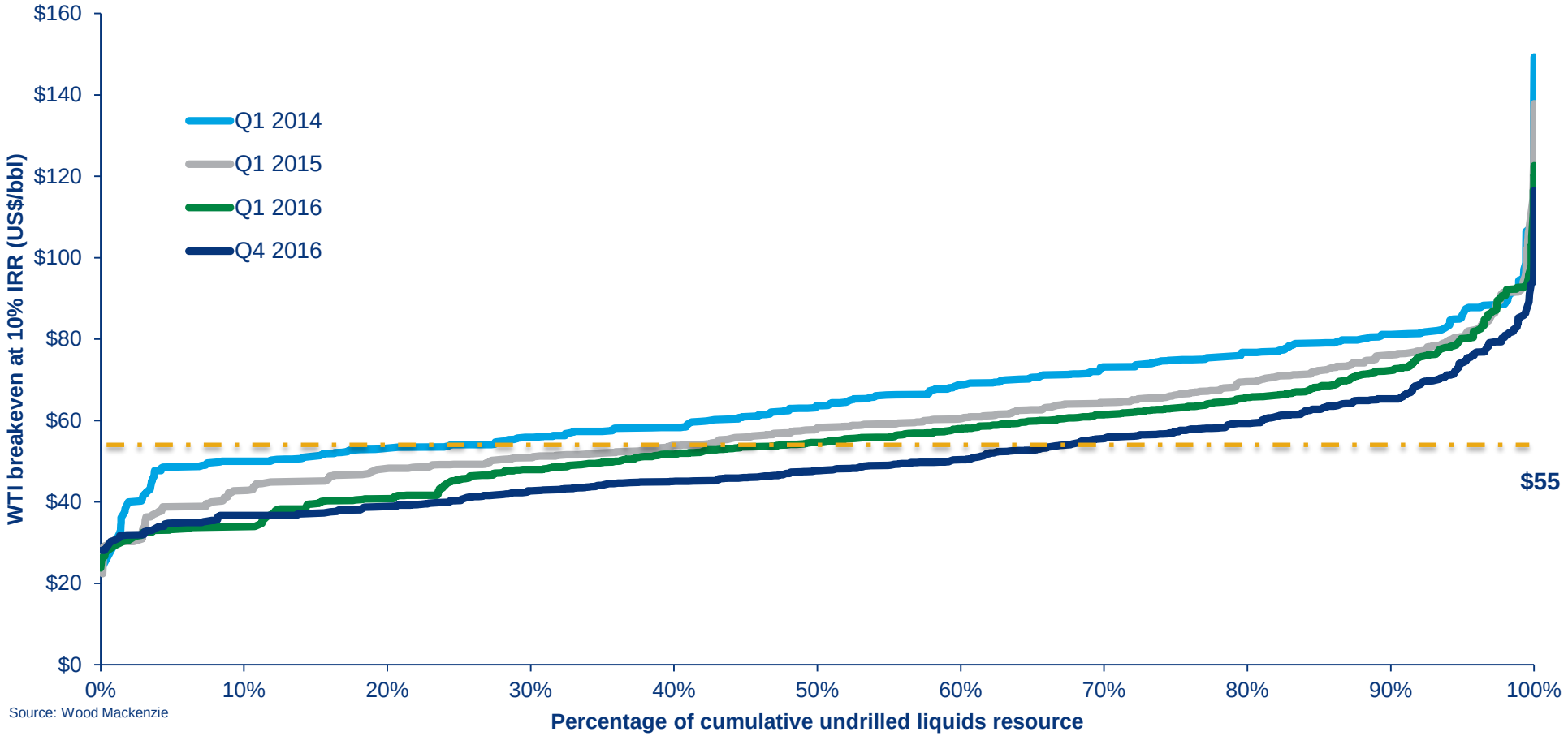
Lower 48 breakeven map for Key Plays



US Lower 48: Liquids cost curve over time

Changes in Lower 48 liquids breakevens since 2014

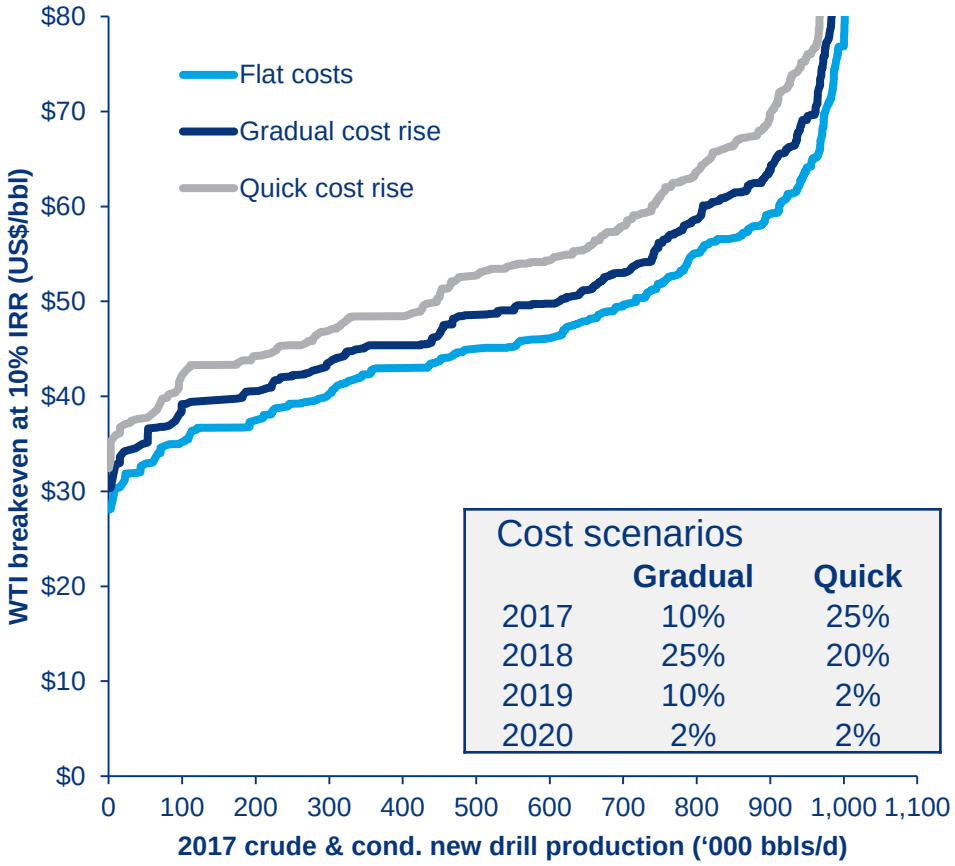
Liquids breakevens have fallen through the downturn, with the average 2016 breakeven $15/bbl lower than in 2014.



Source: Wood Mackenzie

Cost inflation limits short-term economic resource

2017 new drill production at risk

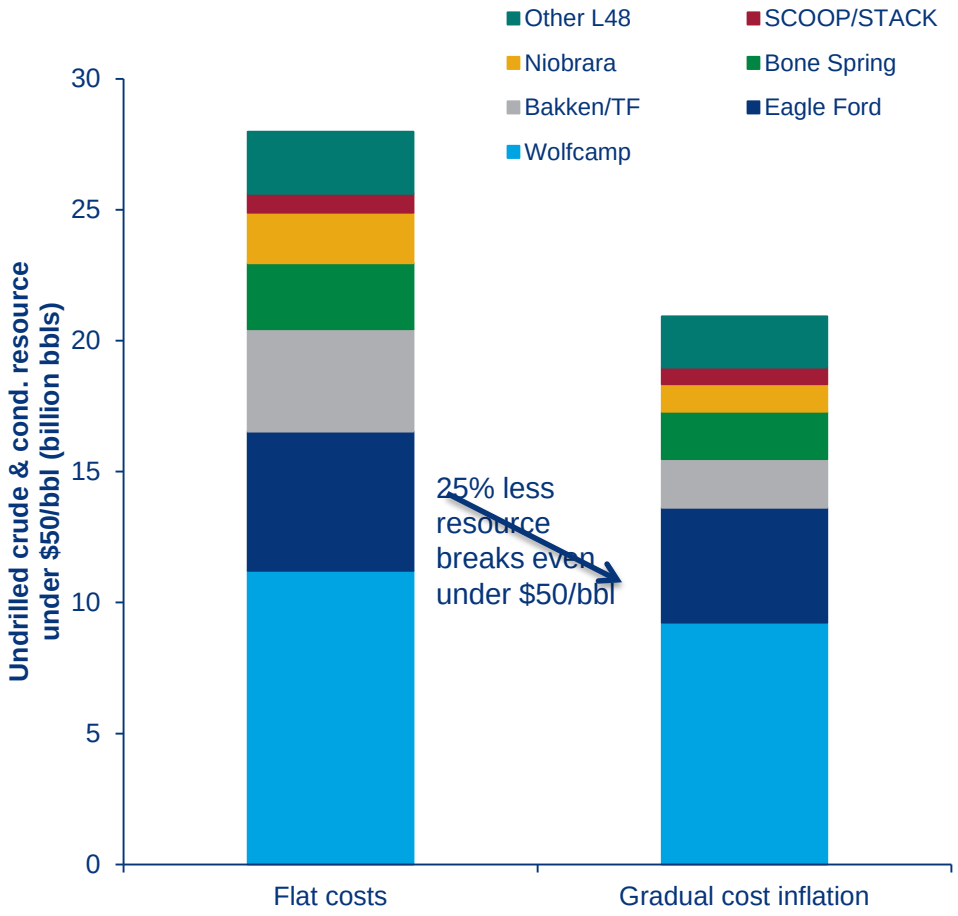


Cost scenarios

	Gradual	Quick
2017	10%	25%
2018	25%	20%
2019	10%	2%
2020	2%	2%

Source: Wood Mackenzie

Inflation impact on low-cost oil reserves



Source: Wood Mackenzie

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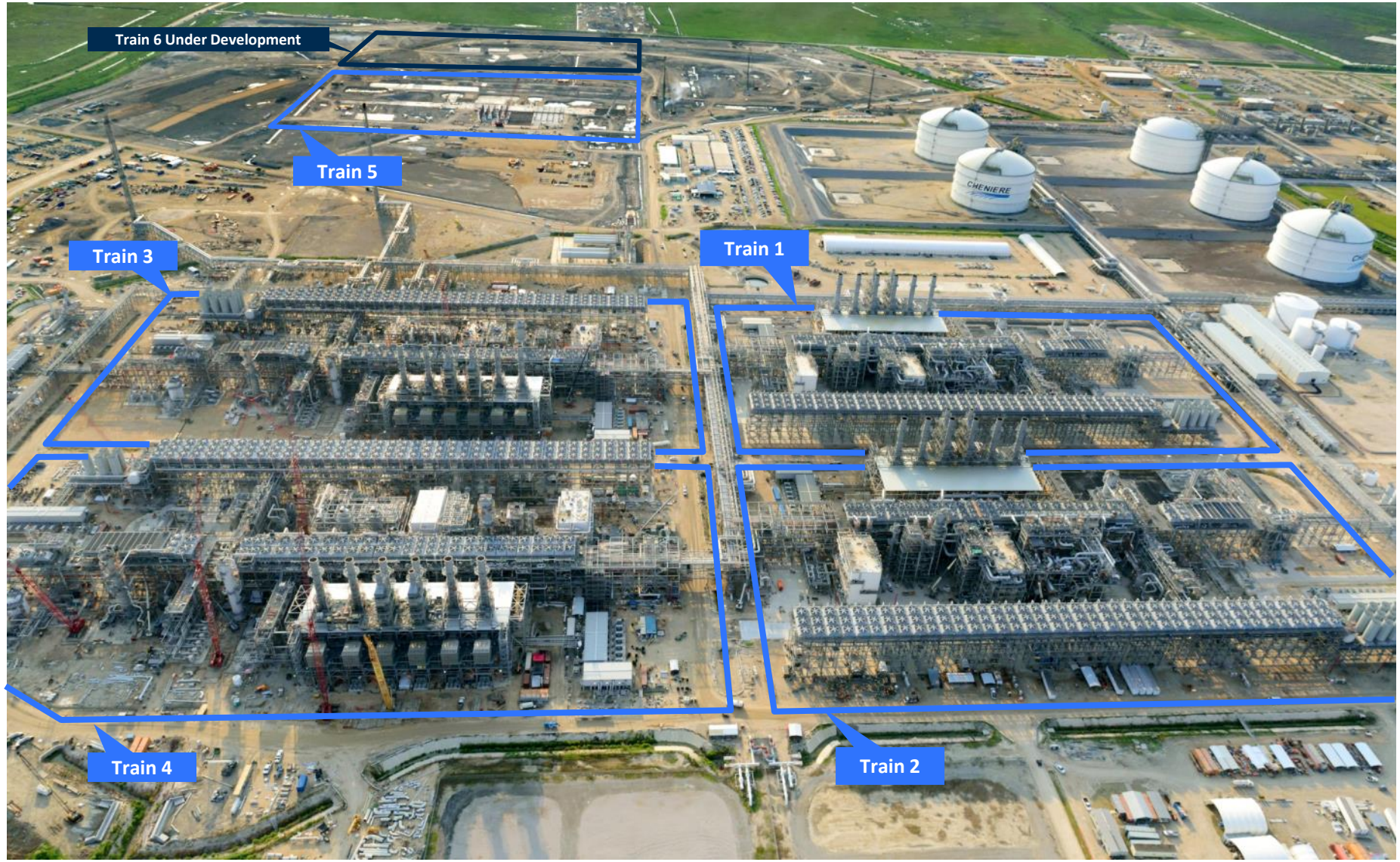
UT Energy Week Panel Discussion: Changing Supply and Demand

February 2017

Sabine Pass Liquefaction Construction



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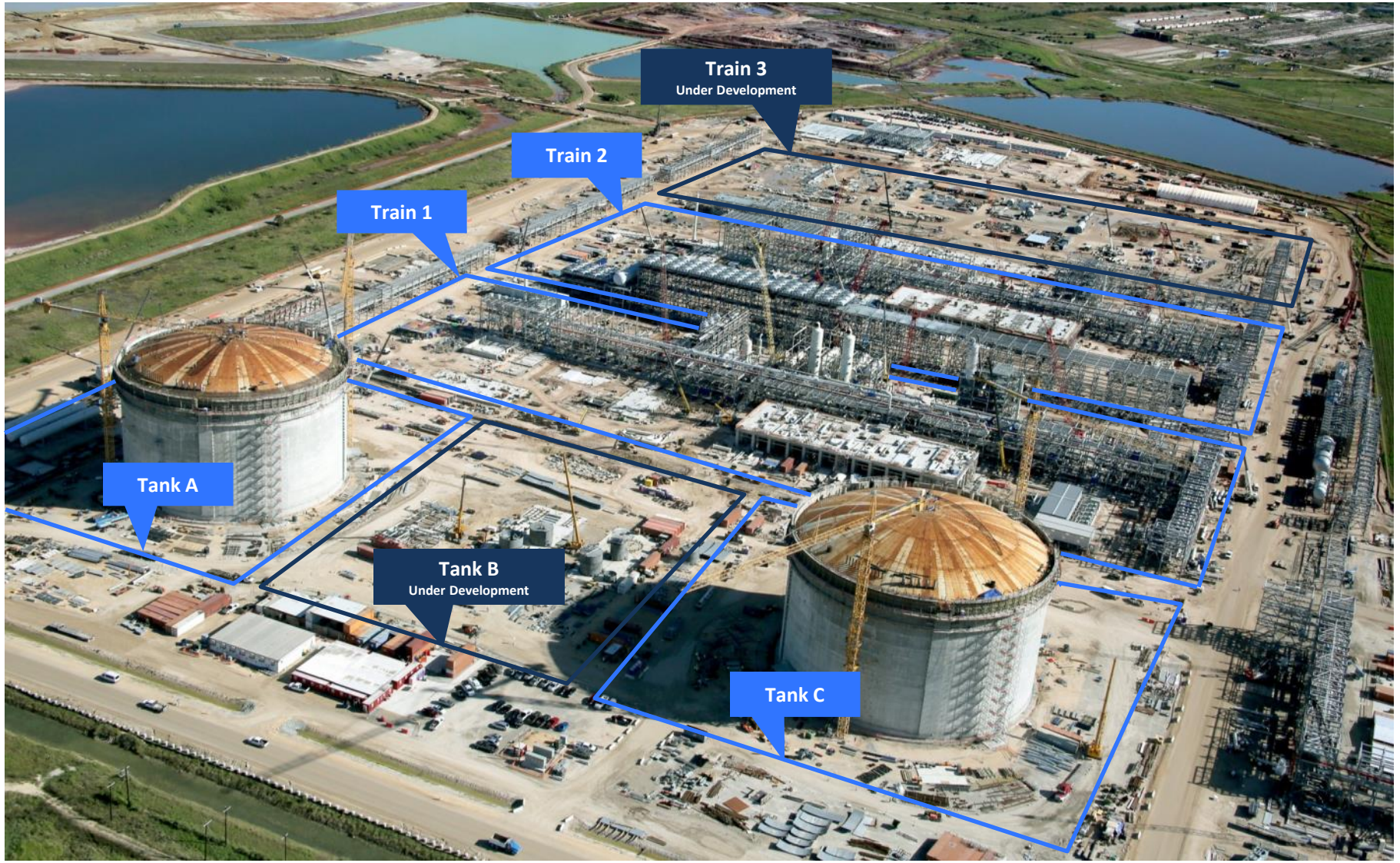
Corpus Christi Liquefaction Construction



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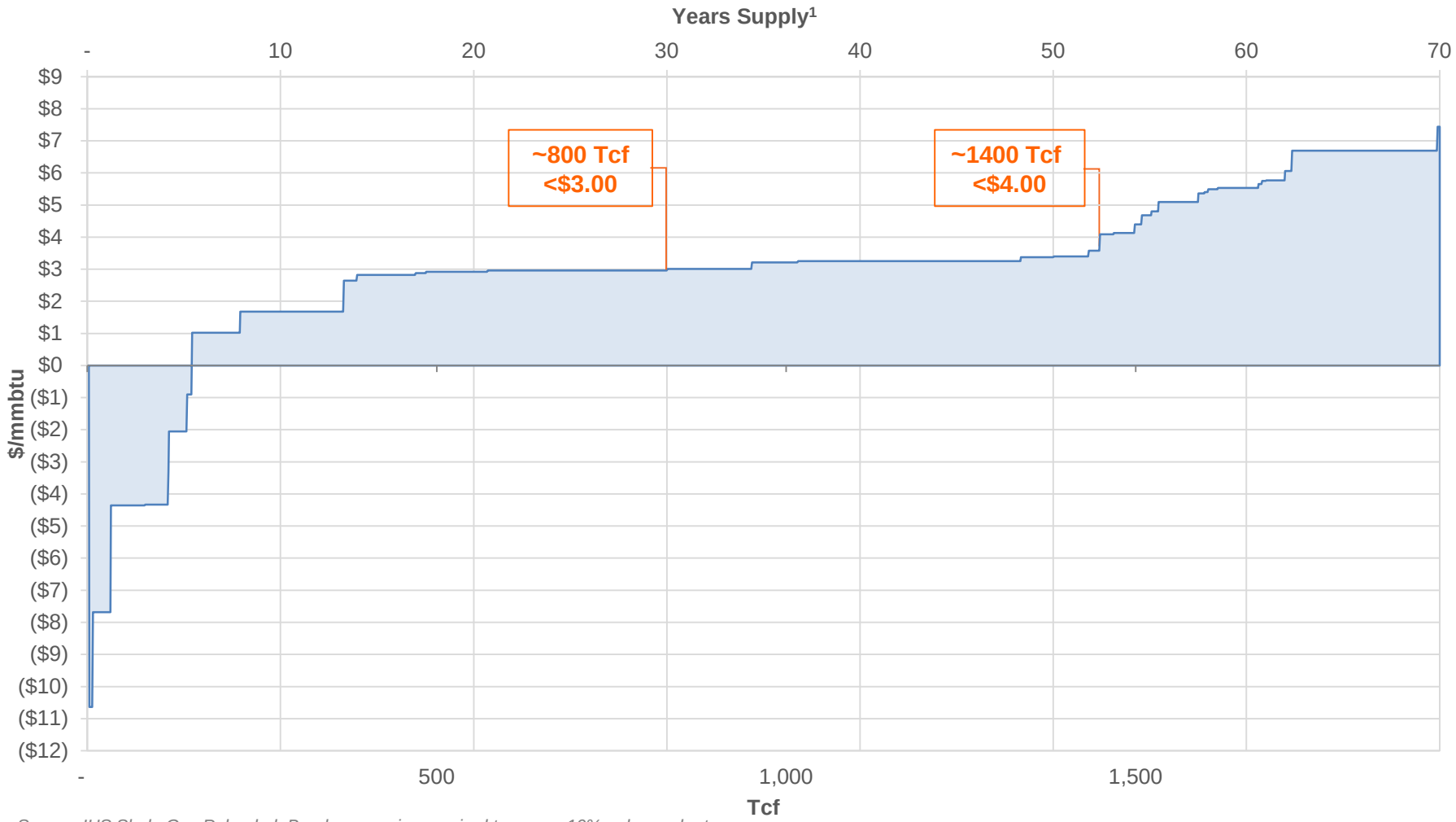
Sabine Pass Vessel Loading

Abundant Shale Gas Reserves Cap Sustainable Price Increases

800 Tcf producible below $3.00 Henry Hub (30 years)

1,400 Tcf producible below $4.00 Henry Hub (51 years)



Source: IHS Shale Gas Reloaded, Break-even price required to earn a 10% unlevered return

1. Assuming 2015 U.S. Consumption of 27.3 Tcf

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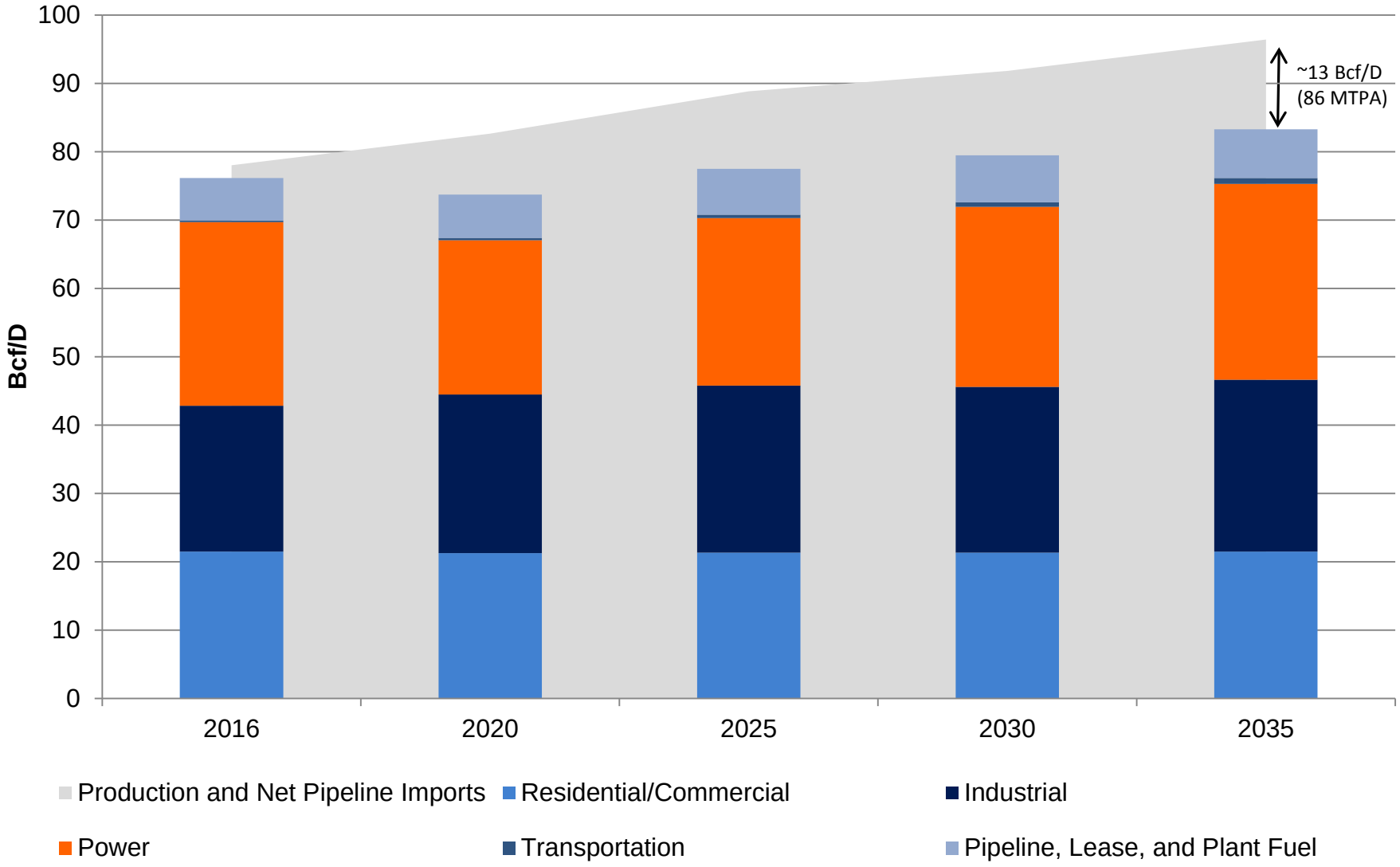
Supply/Demand Gap: Why the US Needs LNG



Source: EIA AEO 2017

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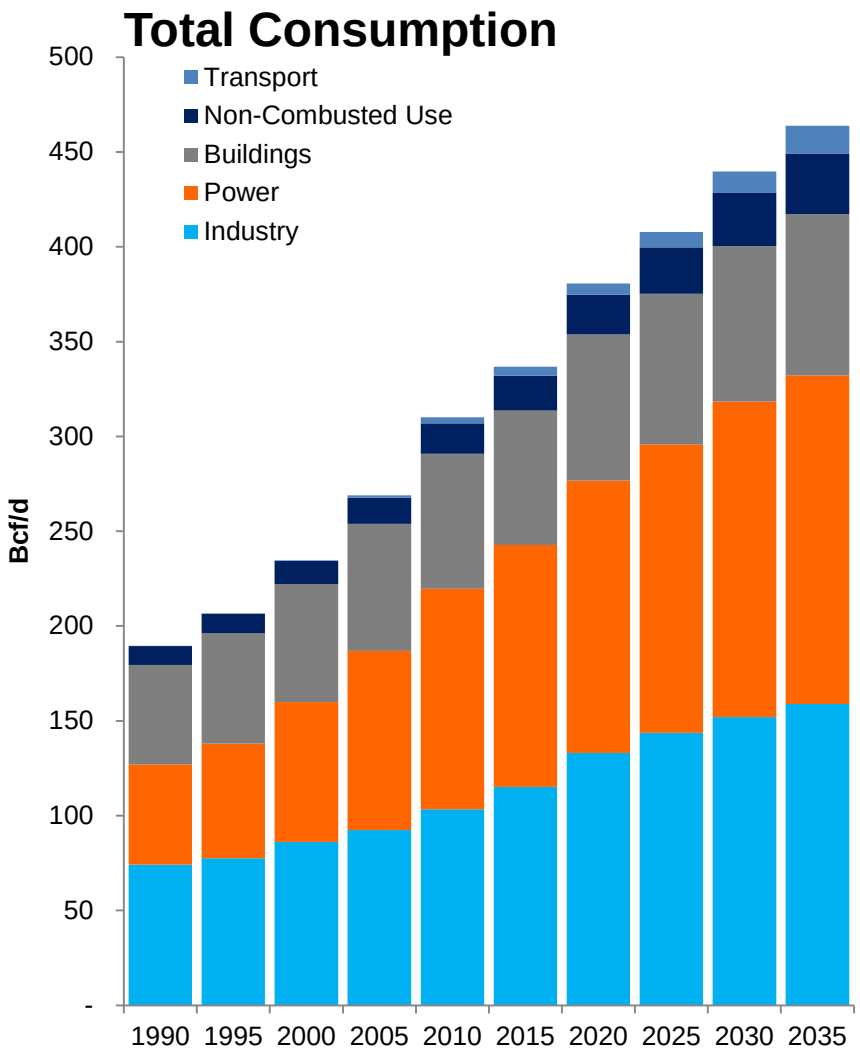
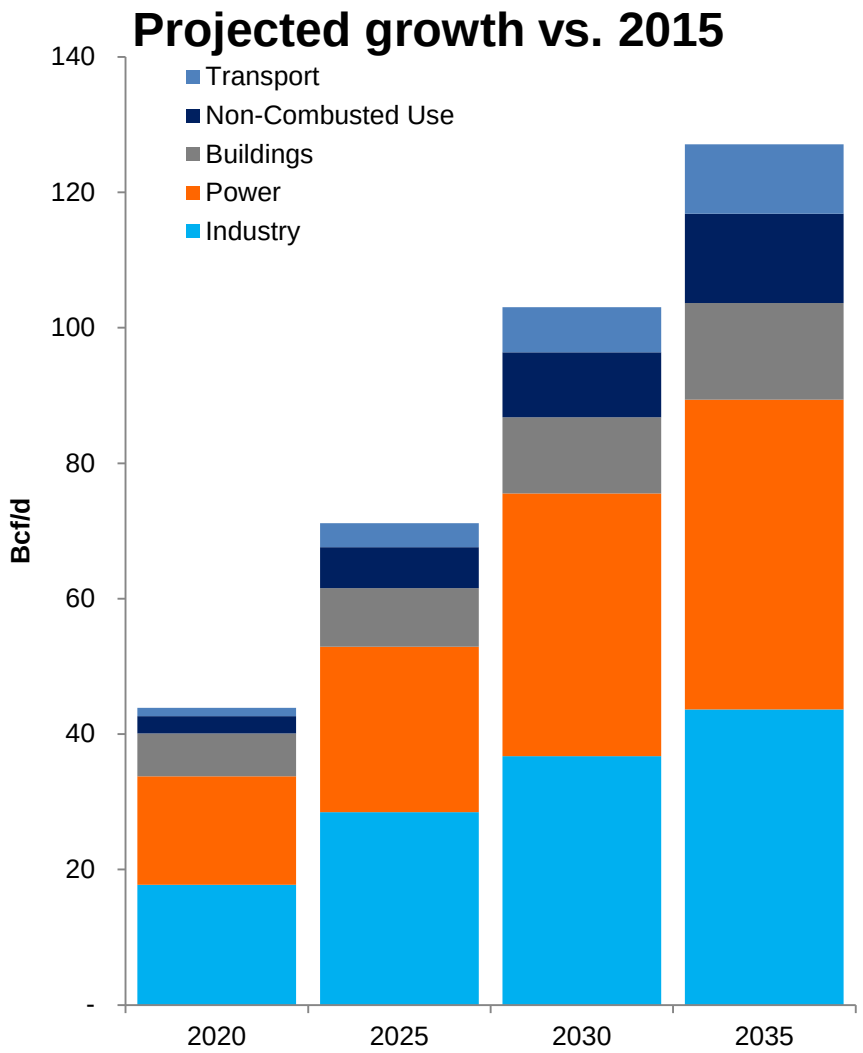
Global demand growth will be driven by power/industrial sectors
Expected to drive 70% of total growth

Gas consumption by sector *(BP Energy Outlook 2017)*





Source: BP Energy Outlook 2017

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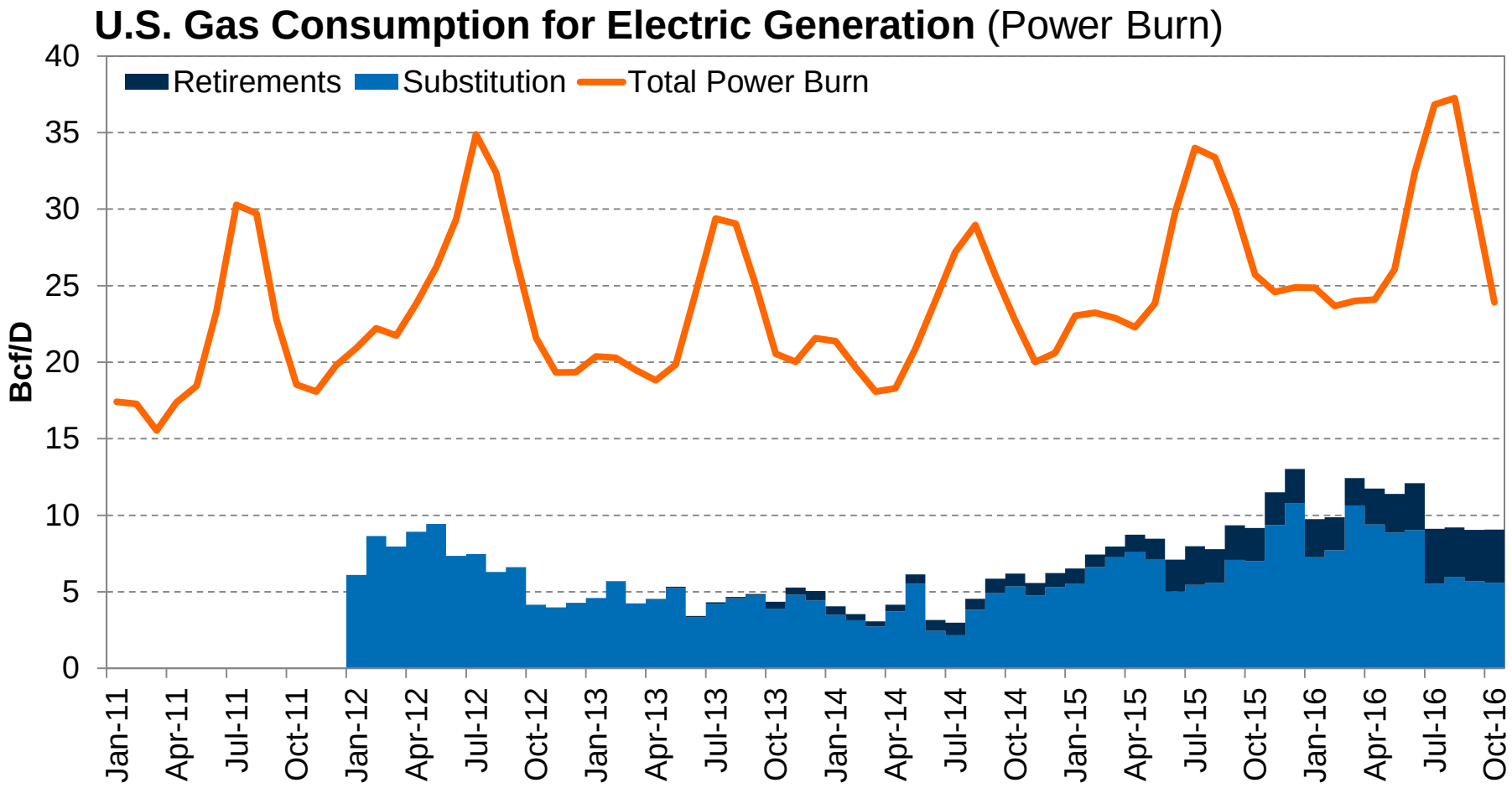
U.S. coal-to-gas switching
a blueprint for the rest of the industrialized world



- Fuel substitution – primarily coal to gas – helped balance the natural gas market as the price declined relative to coal. More recently, policy driven substitution increased gas consumption as coal plants retire

Sources: EIA, EPA, Cheniere Gas Supply

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Thank you

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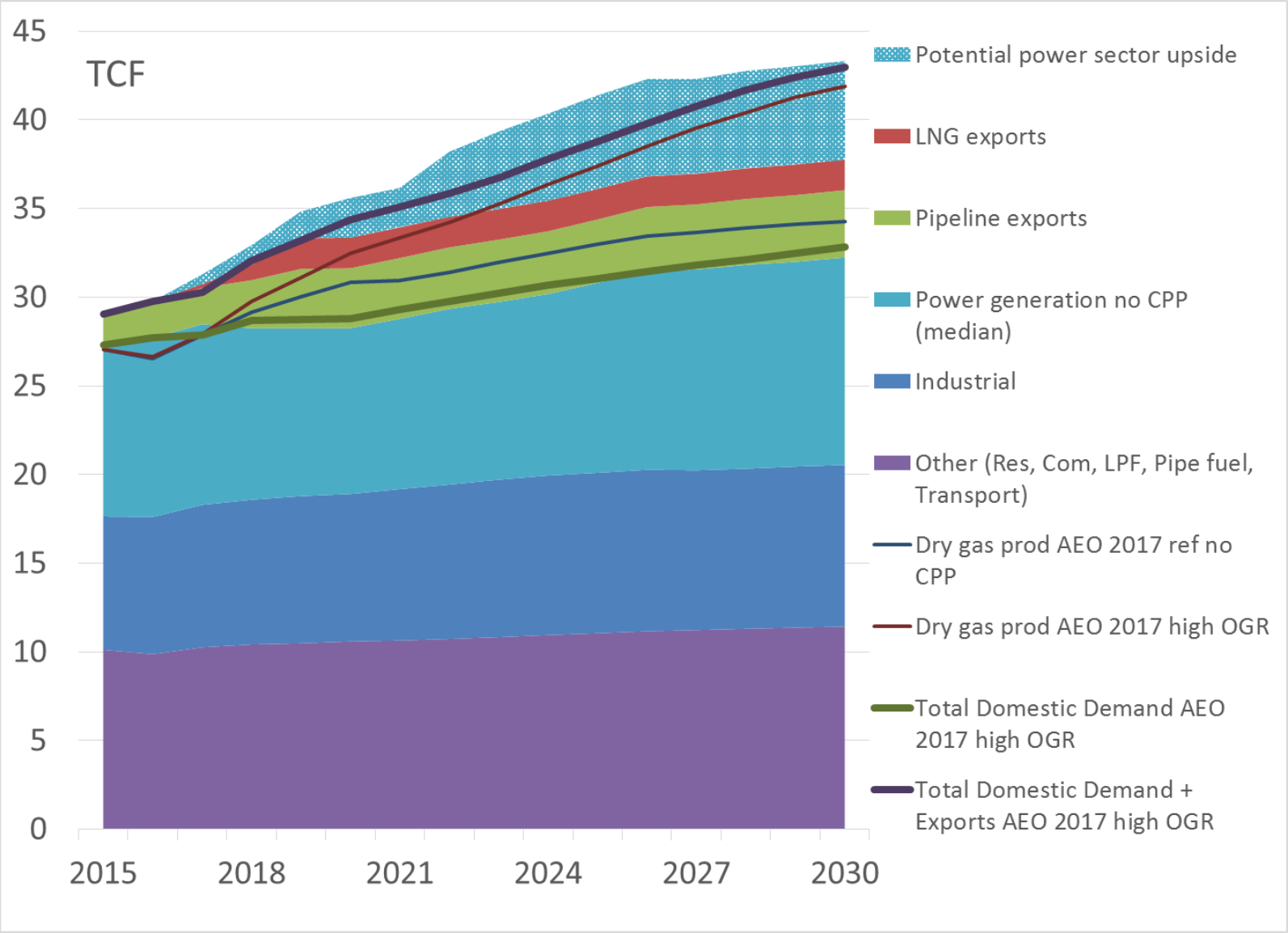
U.S. Natural Gas Outlooks

UT Energy Week

February 7, 2017

A Strong "Demand Stack" Scenario v EIA AEO 2017



- Two largest uncertainties: Power generation and LNG exports
- Potential drivers:
  - Price of natural gas
  - Renewables generation
    - Declining costs
    - Support programs
  - Coal retirements
    - Env'l regulations
  - Nuclear retirements
    - Aging fleet, rising costs
  - CO_2 prices
  - Load growth
    - EE, DER, DR

CEE analysis; EIA AEO 2017

CEE Electric Power Research Forum - Scenarios

- We model* numerous scenarios based on different combinations of the following key assumptions

(1) Renewable resource capacities
(2) Natural gas price
(3) Load growth rate
(4) Premature nuclear capacity retirement
(5) CO_2 prices

*** We use AURORAxmp for economic dispatch and long-term resource expansion modeling**

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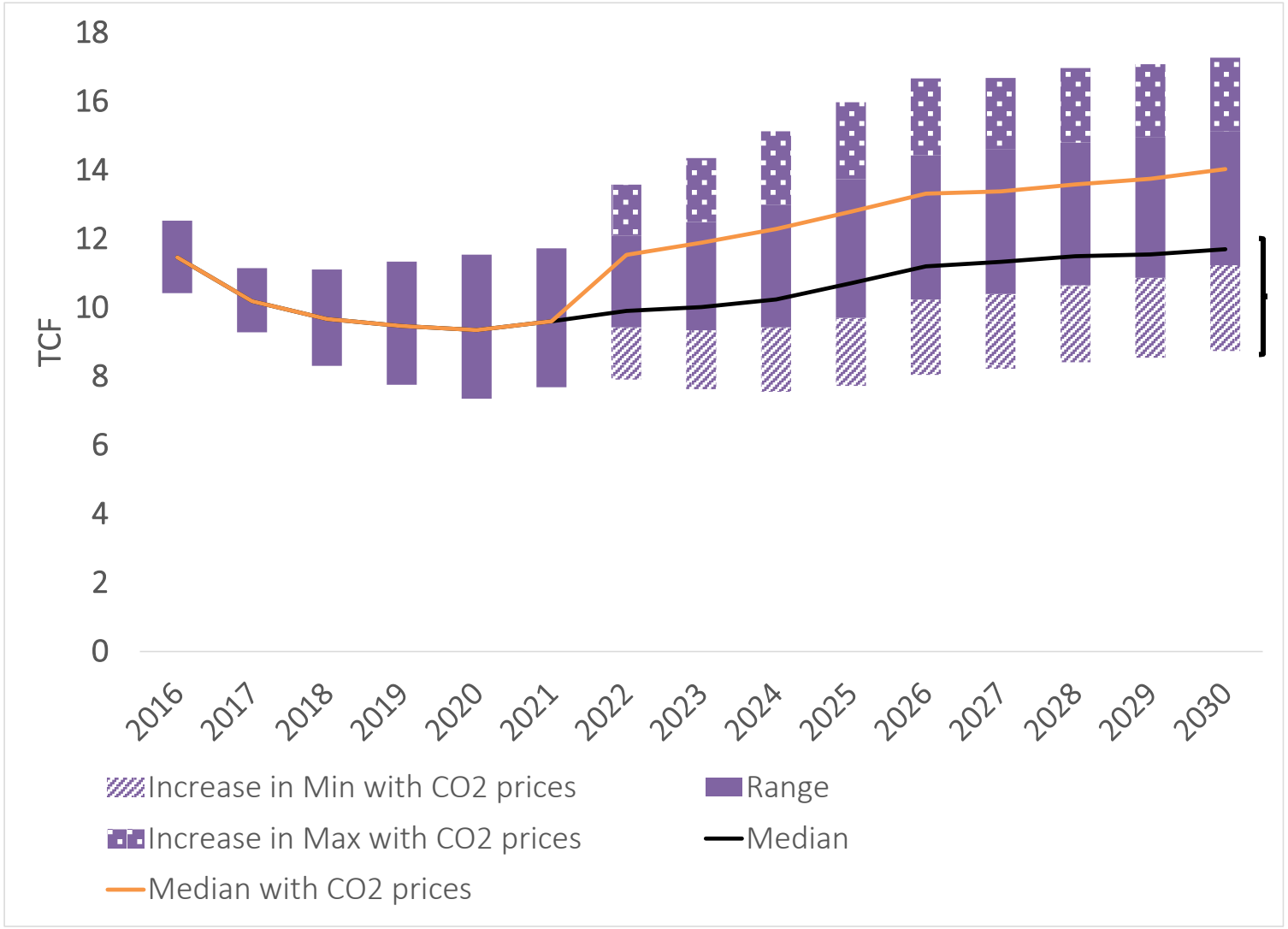
http://www.beg.utexas.edu/energyecon/epr/

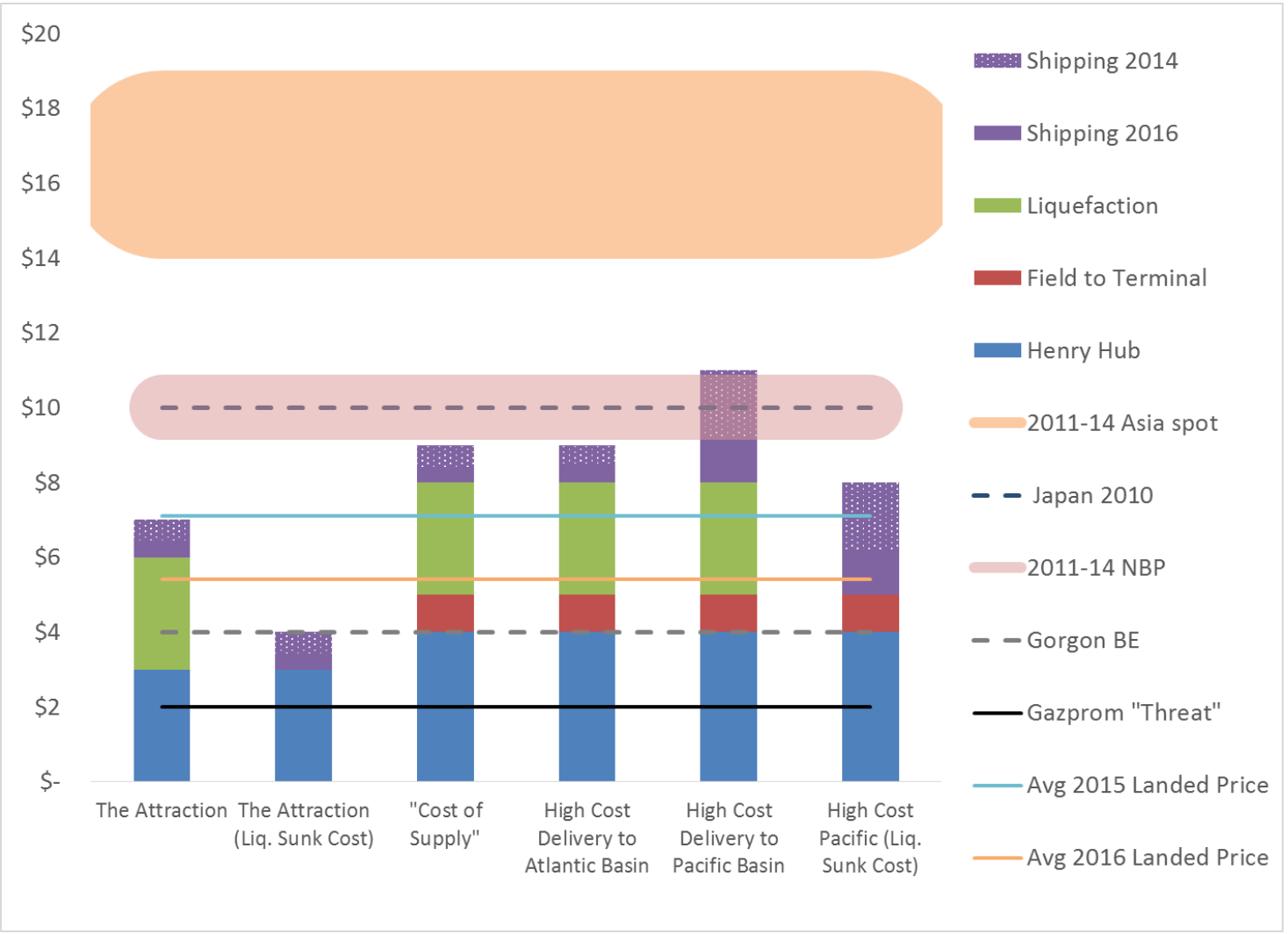
NG burn for power generation should continue to grow, but there is a 8.5-TCF (23-BCFD) range among scenarios



8.8 – 11.8 TCF (AEO 2017 range), excluding 6 TCF under low OGR

For details, see Tsai & Gülen, Natural Gas Use in Electricity Generation in the United States: Outlooks to 2030, Electricity Journal, forthcoming in March.

Challenges Facing U.S. LNG Exports



- "Low" demand growth (China, India, and others):
  - Coal, nuclear, renewables have priority - energy security
  - Not enough gas infrastructure (especially storage)
  - Low gas market readiness
  - Economic slow-down
- "Surging" global LNG supply ➔ excess supply until the early 2020s
  - Unsubscribed U.S. liquefaction capacity
  - Parts of contracted volumes not tied to specific destinations

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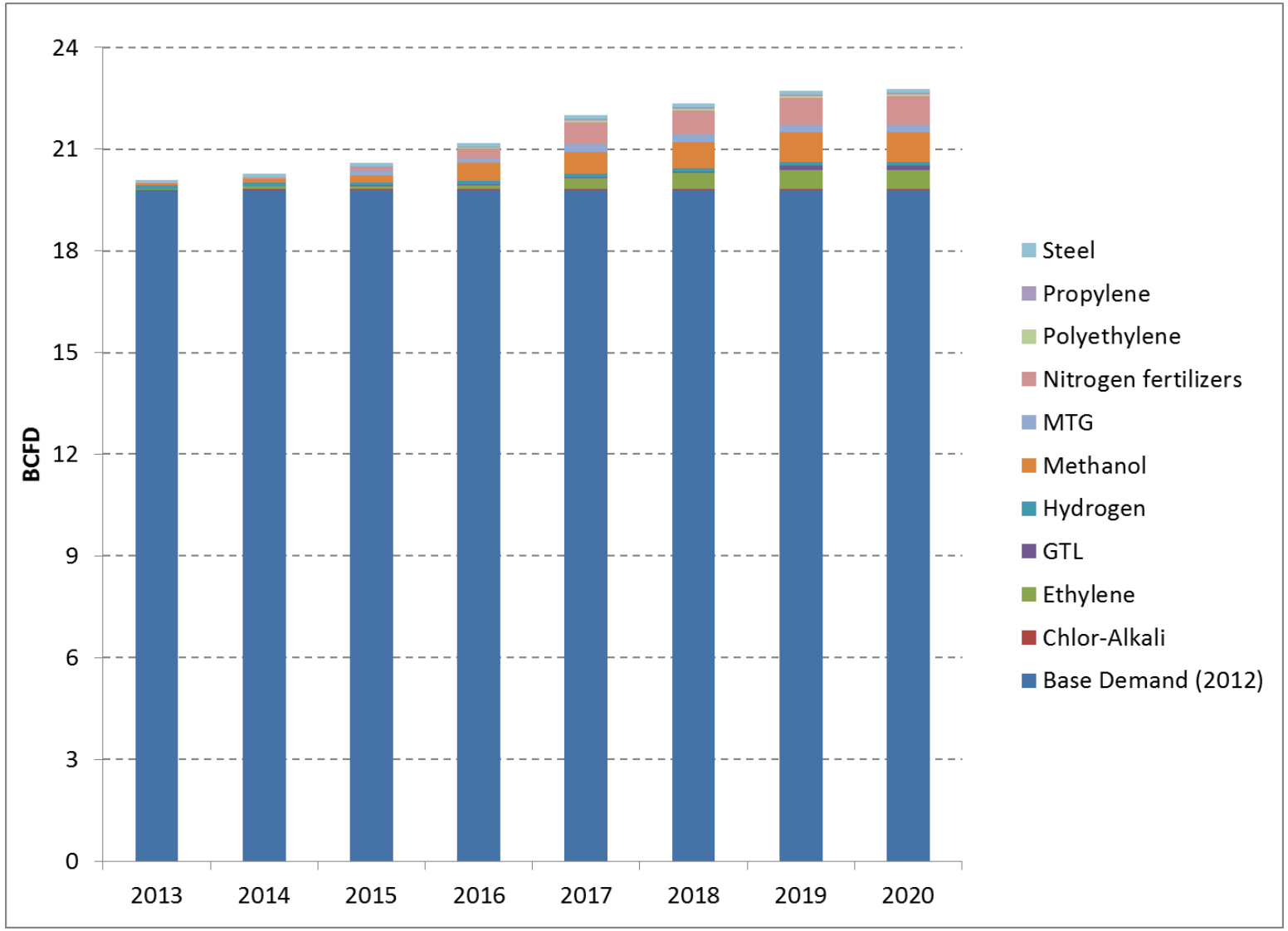
http://www.beg.utexas.edu/energyecon/template/IAEE%20Energy%20Forum_062116.pdf
http://www.beg.utexas.edu/energyecon/thinkcorner/CEE_Advisor_Research_Note-Andy_Flower_LNG_Supply_Outlook-Aug16.pdf

CEE Industrial Projects Database - About 100 Projects; Incremental NG demand of ~3 BCFD



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