U.S. Natural Gas and Oil: It is not scarce anymore

Presentation to:
CAMRO Conference
Pinehurst Country Club

By:
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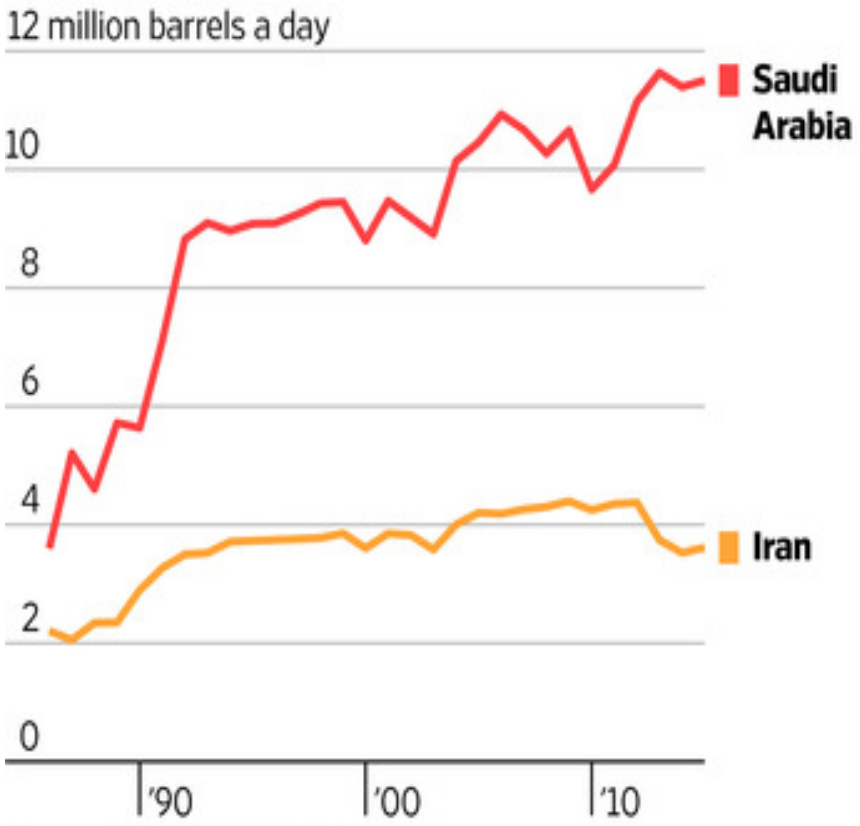
Mercator Energy

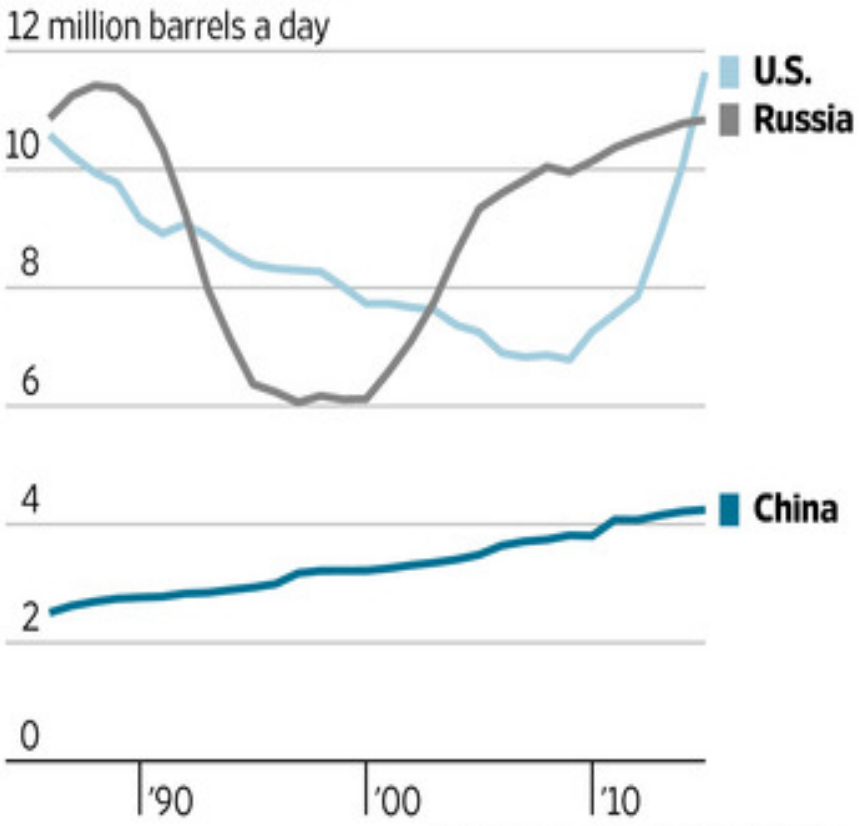
Friday, June 23, 2017

Shifting Sands

Saudi Arabia produces far more oil than Iran, which is hoping to boost output following years of international sanctions...



...but the kingdom also faces new competition as countries such as Russia, China and the U.S. have boosted domestic production.

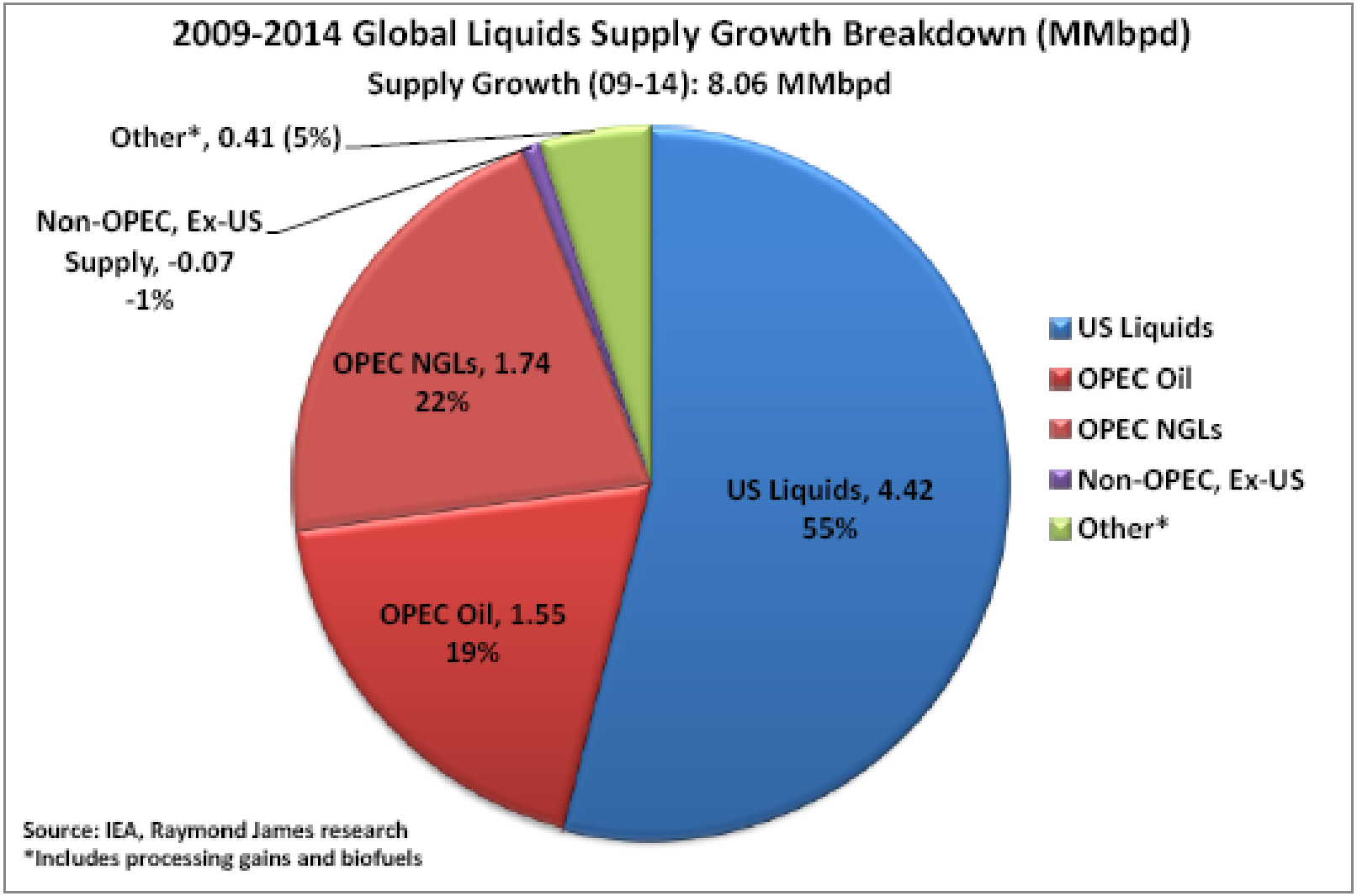


Sources: BP Statistical Review

THE WALL STREET JOURNAL.

Source: *Saudi Arabia Dismisses Its Powerful Oil Minister Ali al-Naimi,* Summer Said, Ahmed Al Orman and Bill Spindle, The Wall Street Journal, May 7, 2016

The House of Saud's Motivation



Source: *Raymond James U.S. Research Energy Report,* January 12, 2015

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OPEC's Strategy?

"In 2016, when OPEC ***completes this objective of cleaning up the American marginal market***, the oil price will start growing again," said Fedun, who's made a fortune of more than $4 billion in the oil business, according to data compiled by Bloomberg. ***"The shale boom is on a par with the dot-com boom. The strong players will remain, the weak ones will vanish."***

- Leonid Fedun, VP and Board Member at OAO Lukoil (LKOD)

Source: *OPEC Policy Ensures U.S. Shale Crash, Russian Tycoon Says,* Asst Natl Dir Melony B. DeFord, Tea Party Command Center, November 28, 2014

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Prince Alwaleed bin Talal

Saudi Prince: $100-a-barrel oil ‘never’ again

Saudi Crown Prince Abdullah bin Abdul Aziz

Saudi Foreign Minister Prince Saud al-Faisal (C)

Saudi billionaire Prince Alwaleed bin Talal

Source: *The Fabulous Life of Prince Alwaleed Bin Talal Alsaud,* Forbes and Maria Bartiromo for USA Today, January 11, 2015

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Oil at $65 Until Mid-2015: Kuwait Official

"The reason, according to Iranian Oil Minister, Bijan Namdar Zanganeh, ***was to keep prices low enough and long enough to threaten the U.S. shale oil industry and restore OPEC's market share in America.*** Shale extraction requires expensive methods such as fracking and horizontal drilling, and many observers say it isn't profitable if the price of oil drops below $65 per barrel."

Source: Real Money, The Street Ratings, By: Oilprice.com, December 11, 2014

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A Game of Chicken?

Nation	Oil price per barrel required to break even or balance budget
US producers	**$38-$77**
Qatar	$58
Kuwait	$59
UAE	$90
Saudi Arabia	**$92**
Angola	$94
Russia	**$101**
Iraq	$116
Venezuela	$117
Algeria	$119
Ecuador	$122
Nigeria	$124
Iran	**$136**

According to data compiled by Bloomberg, ***"prices have dropped below the level needed by at least 9 OPEC member states to balance their budgets."***

Source: Reuters, *The Saudi Arabian Oil Conspiracy and What it Might Mean for Your Portfolio,* The Motley Fool, Adam Galas, January 18, 2015

Survival of fittest as oil tumbles below $65, Bloomberg News, December 1, 2014

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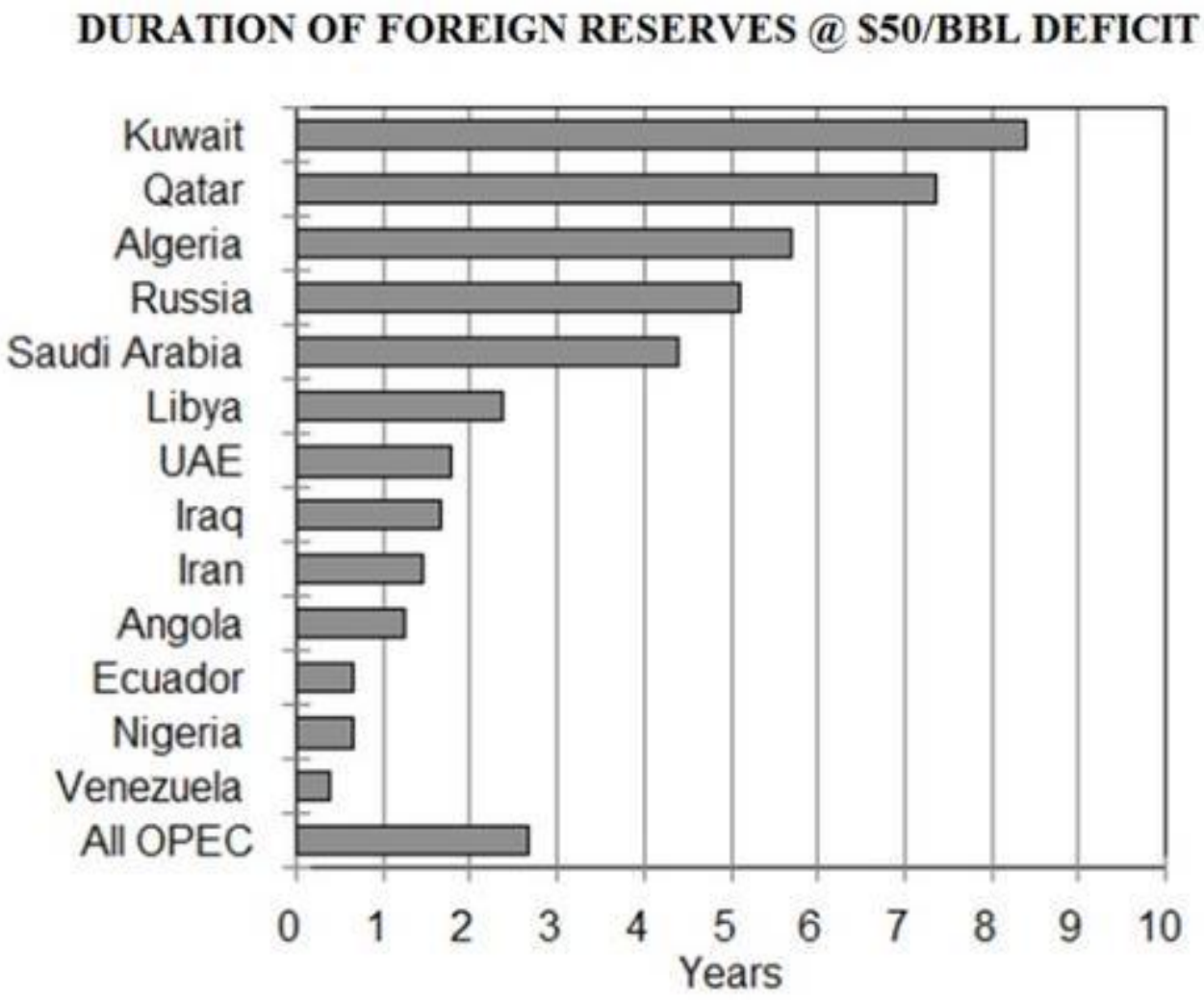
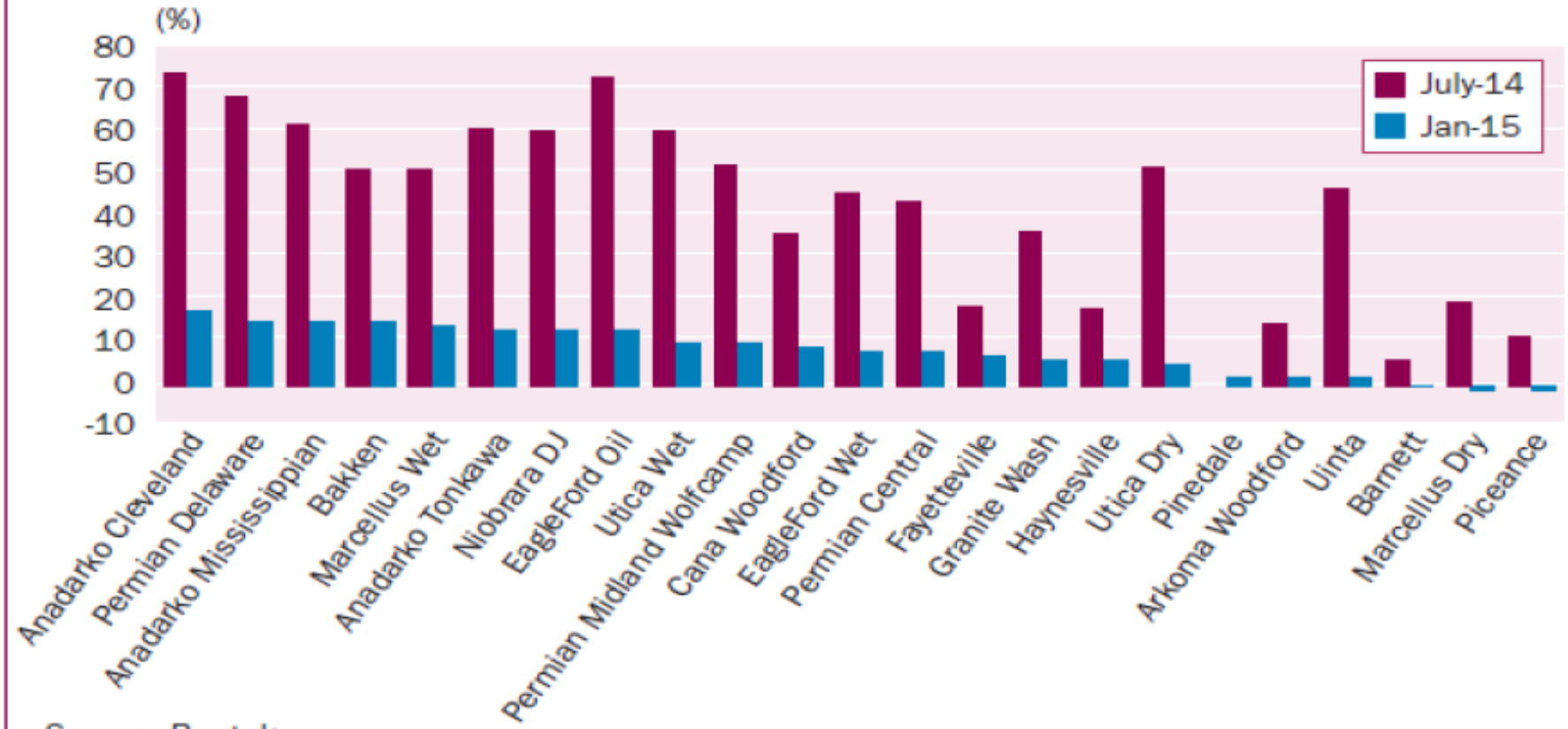
Survival of the Fittest?



Saudis have staying power; $750 billion in foreign country reserves

Source: Oilprice.com, *The Saudi Arabian Oil Conspiracy and What it Might Mean for Your Portfolio,* The Motley Fool, Adam Galas, January 18, 2015

Internal Rates of Return per Well by Basin/Play (January 2015 versus July 2014)



Source: Bentek

Source: *Shale economics challenged as prices plummet,* Arjun Sreekumar, Platts Gas Daily Volume 32 / Issue 7 / Monday, January 12, 2015

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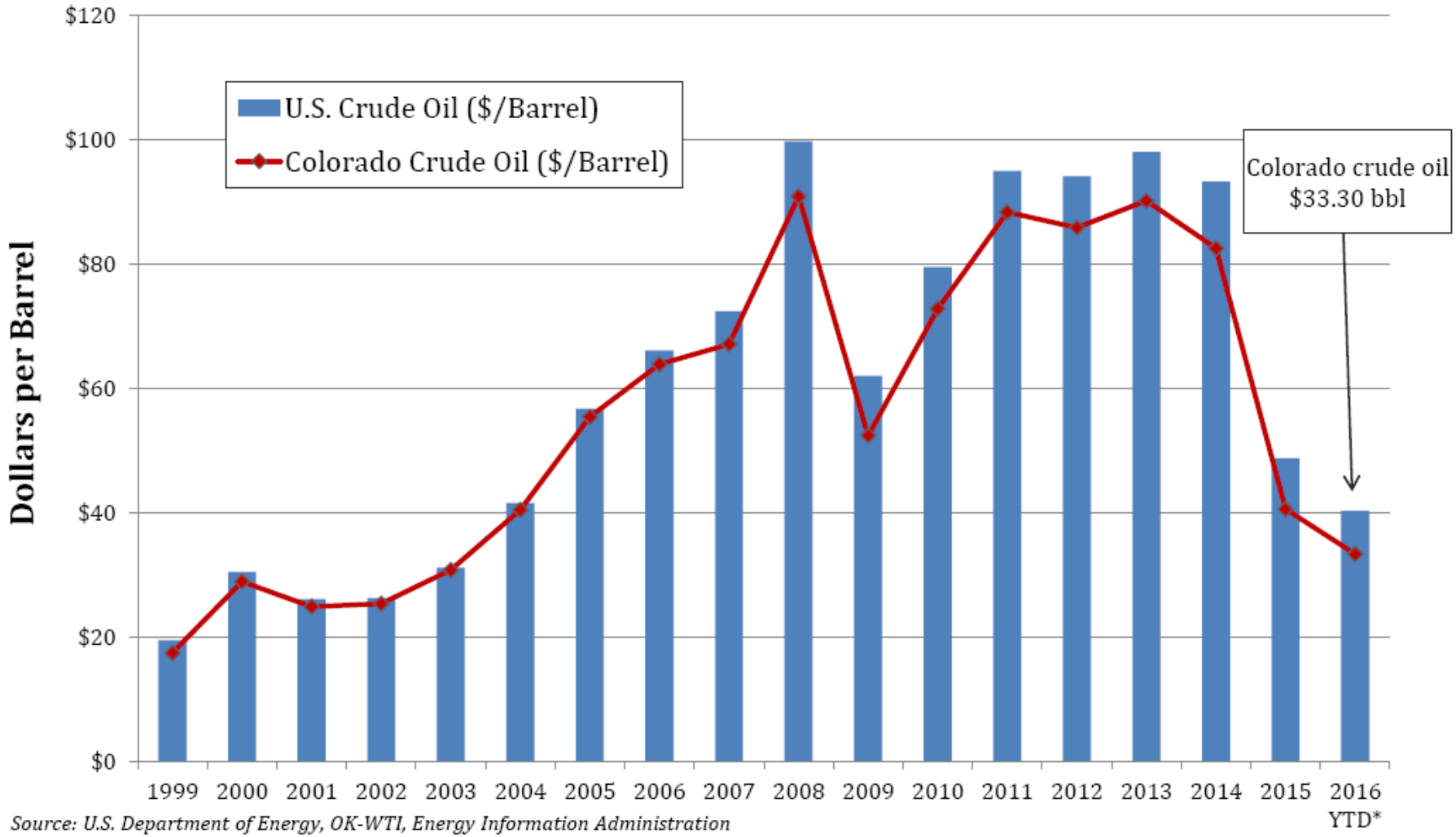
Annual Average Crude Oil Prices, 1999-2016

Prices for Colorado-produced oil trend below the national average to account for fuel transportation costs to markets outside the state



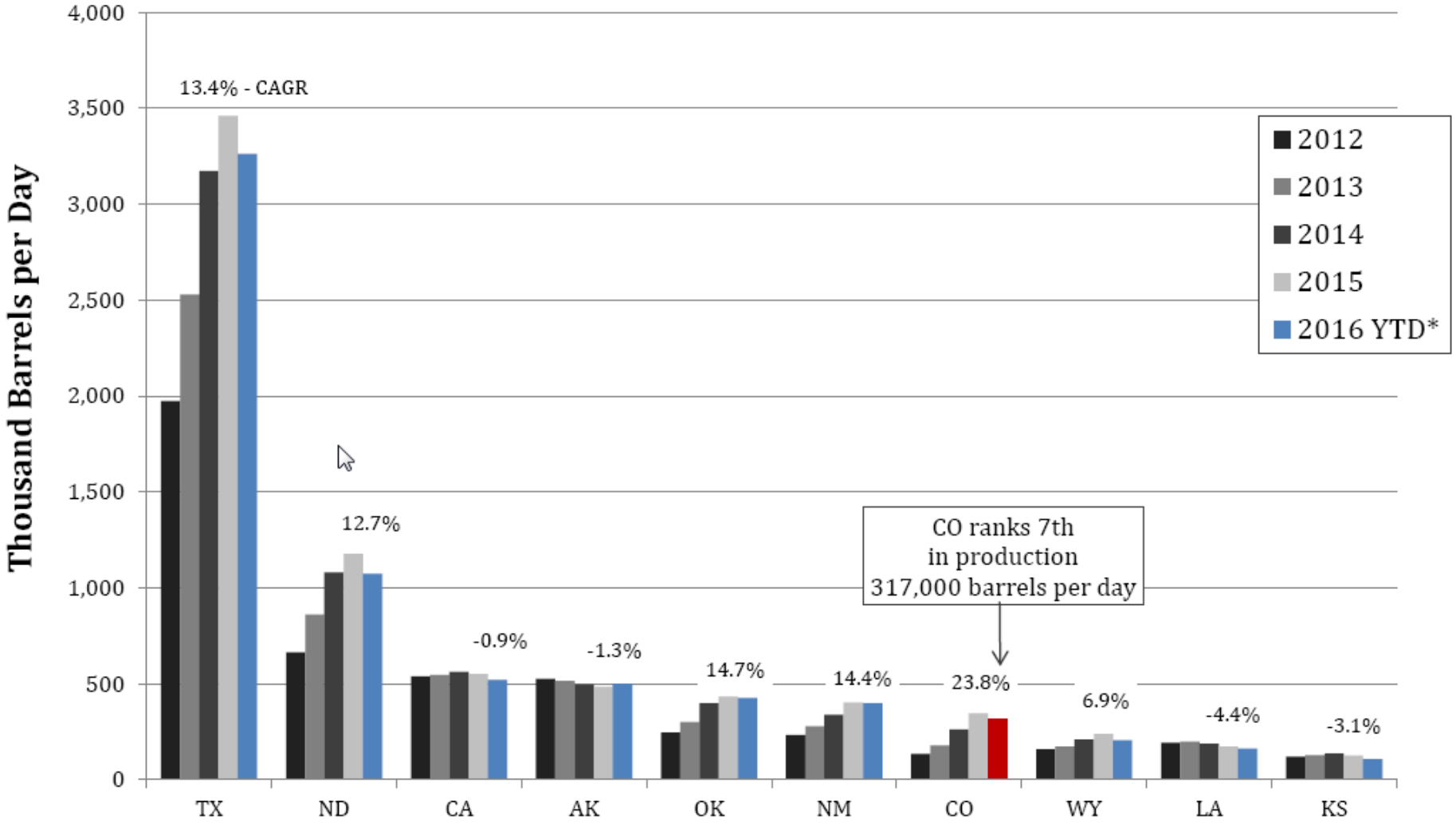
Source: U.S. Department of Energy, OK-WTI, Energy Information Administration
Note: Crude oil includes lease condensate recovered as liquid from natural gas wells. Colorado price represents the first-purchase price.
**2016 year-to-date data represents US average daily spot price from January to July and Colorado monthly average price over the same time.*

Fig. 1

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Crude Oil Production by State, 2012-2016

U.S. 2012 to 2016 compound annual growth rate (CAGR) was 8.6% compared with 23.8% in Colorado



Source: U.S. Department of Energy, Energy Information Administration

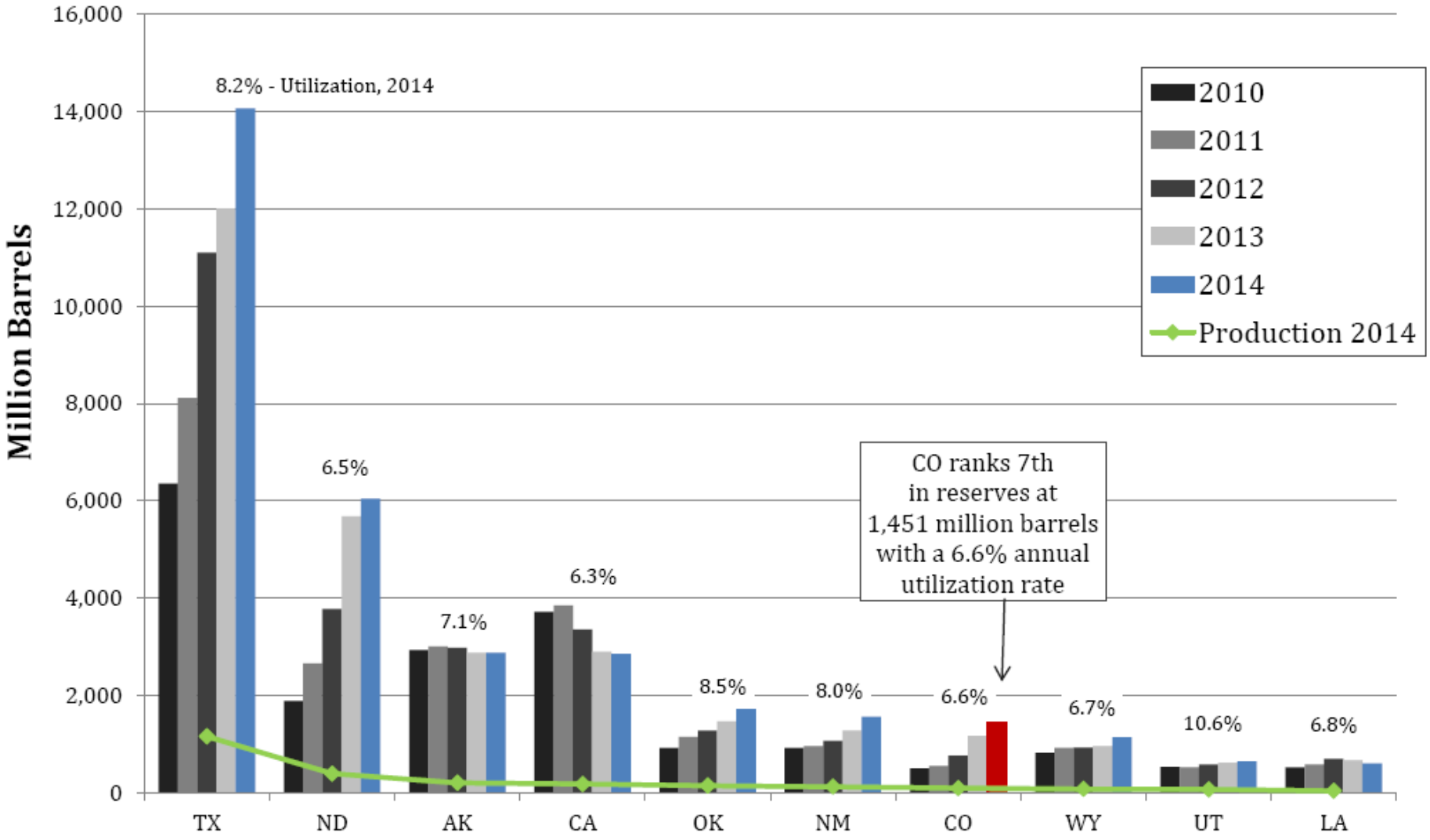
*Note: Crude oil includes lease condensate recovered as liquid from natural gas wells; the compound annual growth rate (CAGR) reflects the 2012 to 2016 period; *2016 year-to-date represents January to June.*

Fig. 2

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Crude Oil Reserves & Utilization Rate, 2010-2014

Technology improvements contribute to growing reserves



Source: U.S. Department of Energy, Energy Information Administration
Note: Utilization rate is the amount of reserves developed/produced annually; crude oil reserves include lease condensate

Fig. 3

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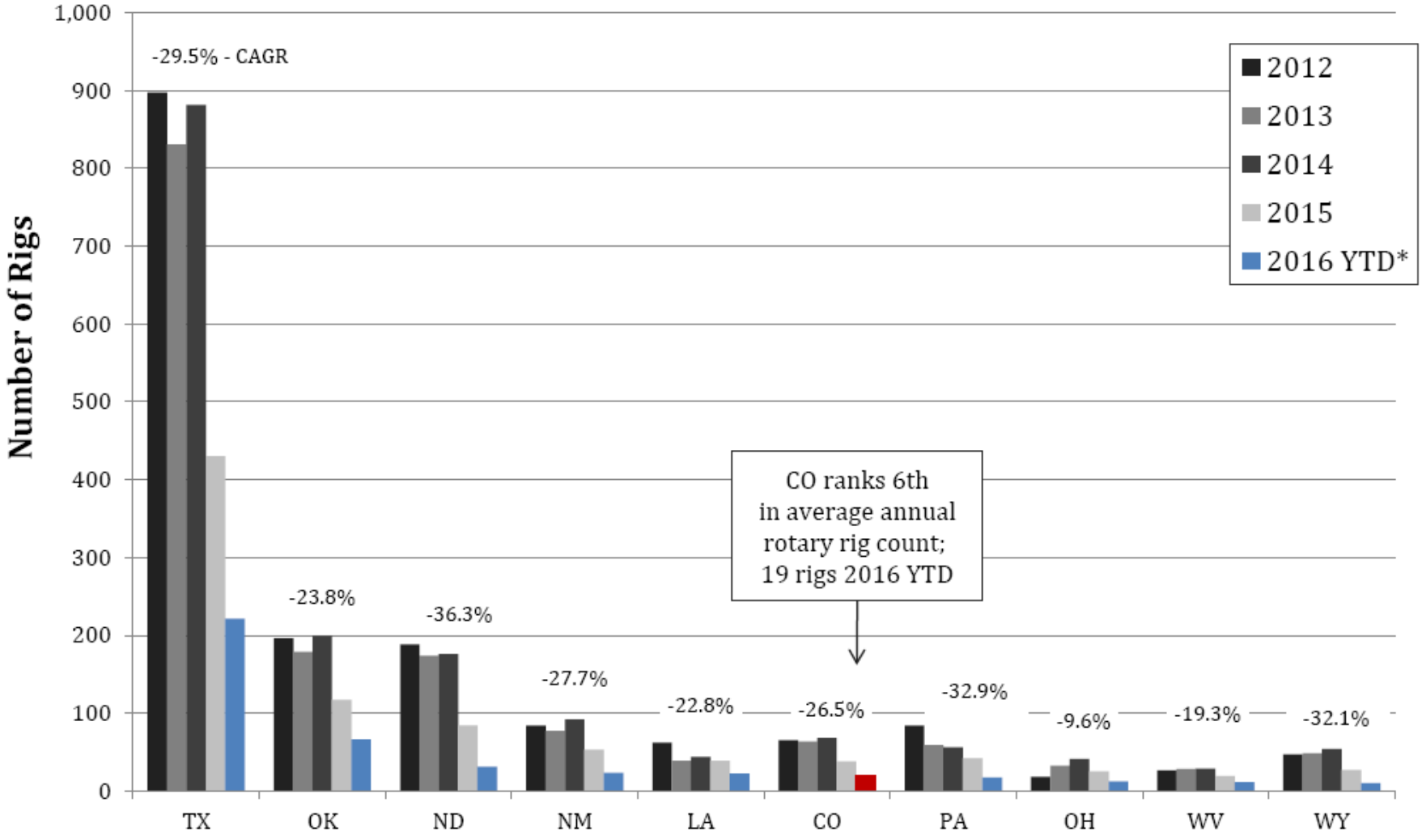
Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Annual Average Rotary Rig Count, 2012-2016

DJ-Niobrara formation driving Colorado rotary rig count activity; 1,456 new wells were drilled in 2015; as of August 2016 there were 53,724 active wells in Colorado



Source: Baker Hughes; Colorado Oil and Gas Conservation Commission

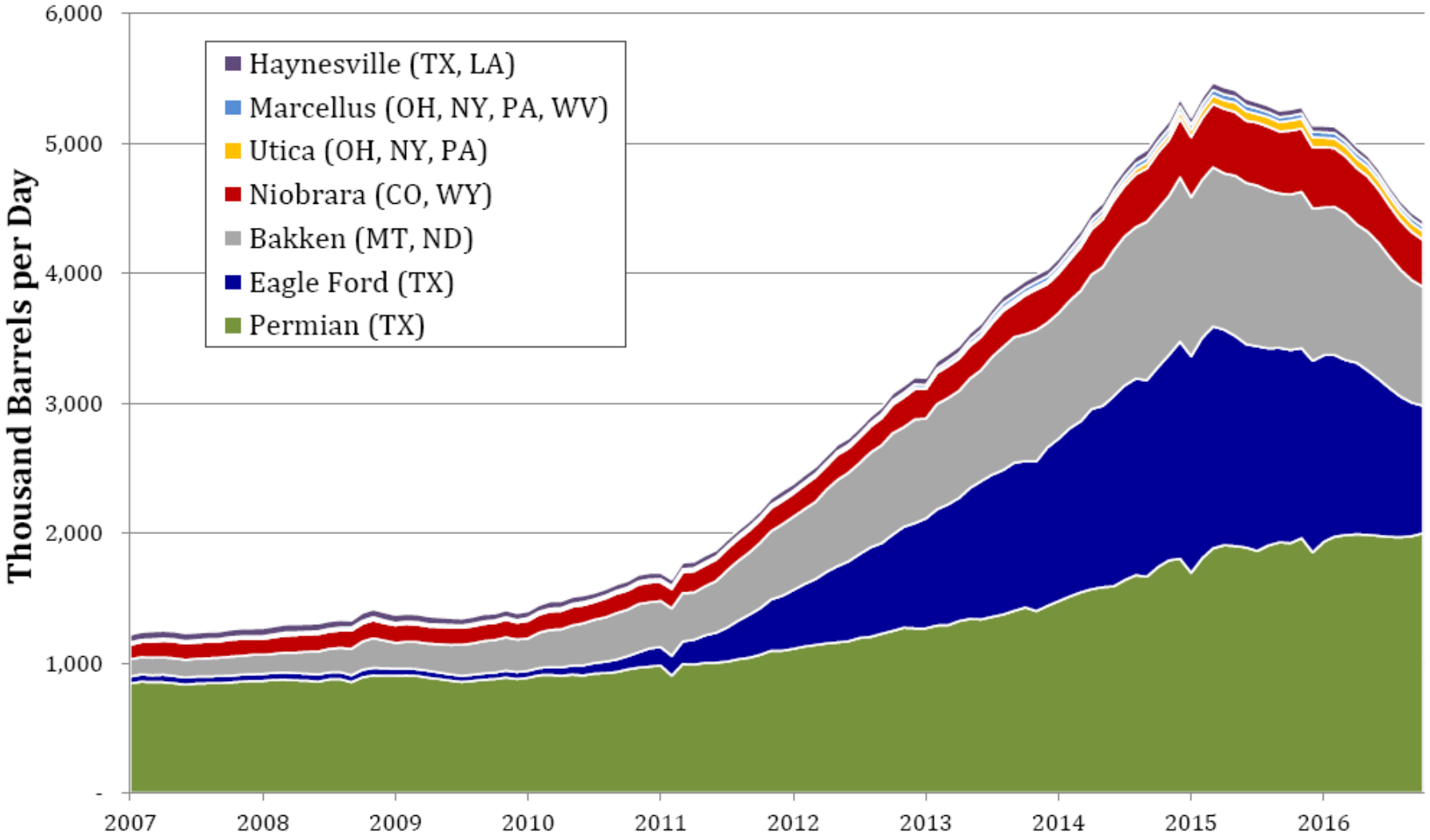
**2016 year-to-date represents January to September average; the compound annual growth rate (CAGR) reflects the 2012 to 2016 period.*

Fig. 4

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

U.S. Shale Oil Production by Major Resource Play

Approximately 361,000 barrels per day in the Niobrara formation



Source: U.S. Department of Energy, Energy Information Administration, Drilling Productivity Report
Note: Does not include legacy production; 2016 data through October

Fig. 6

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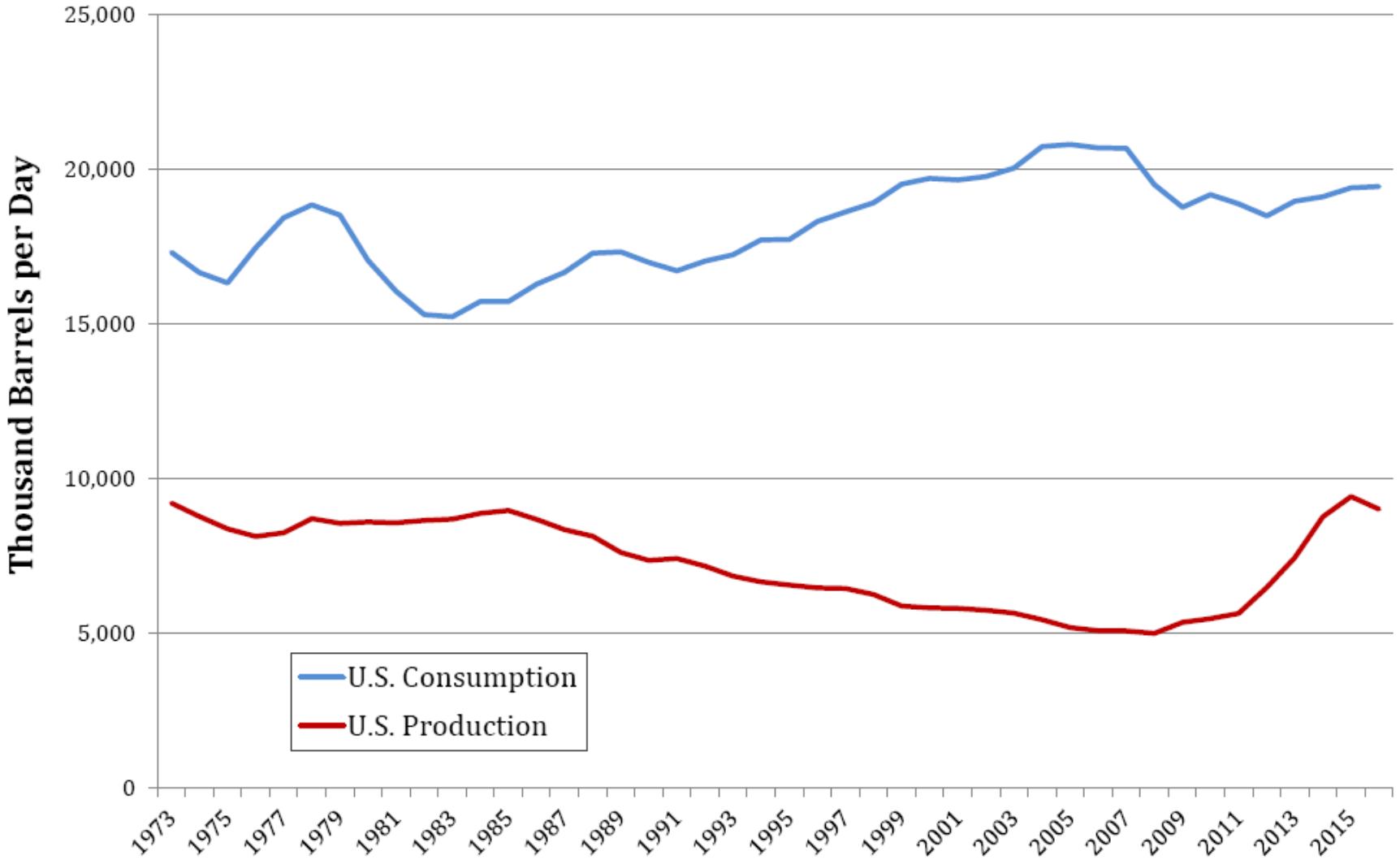
Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

U.S. Crude Oil Production & Consumption, 1973-2016*

YTD 2016, U.S. refiners processed 19.4 million barrels per day compared to domestic U.S. production of 9 million barrels per day



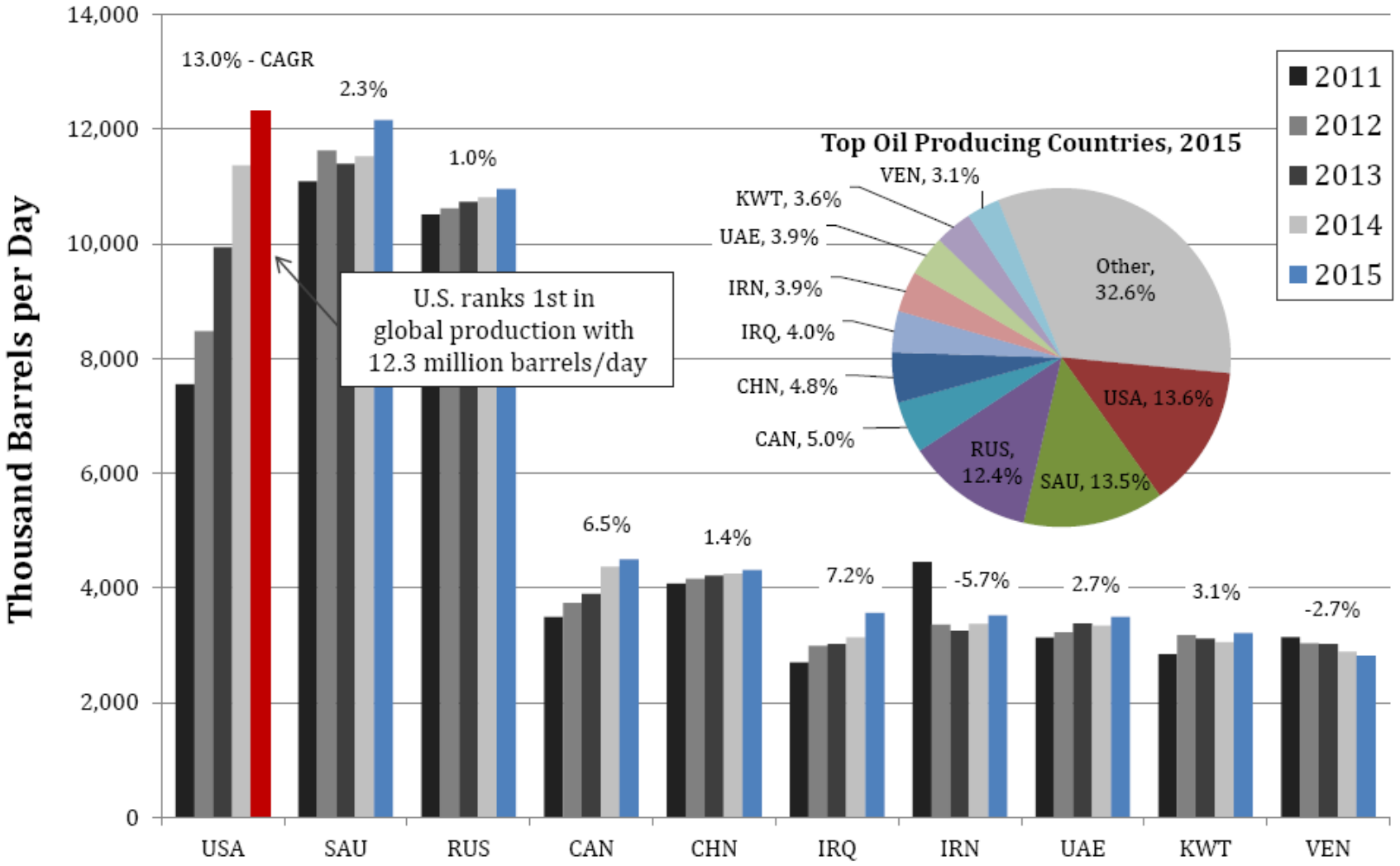
Source: U.S. Department of Energy, Energy Information Administration
**2016 year-to-date represents January to June average*

Fig. 7

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Global Oil Production Leaders, 2011-2015

U.S. ranks 1st in global production with 12.3 million barrels/day



Source: International Energy Agency

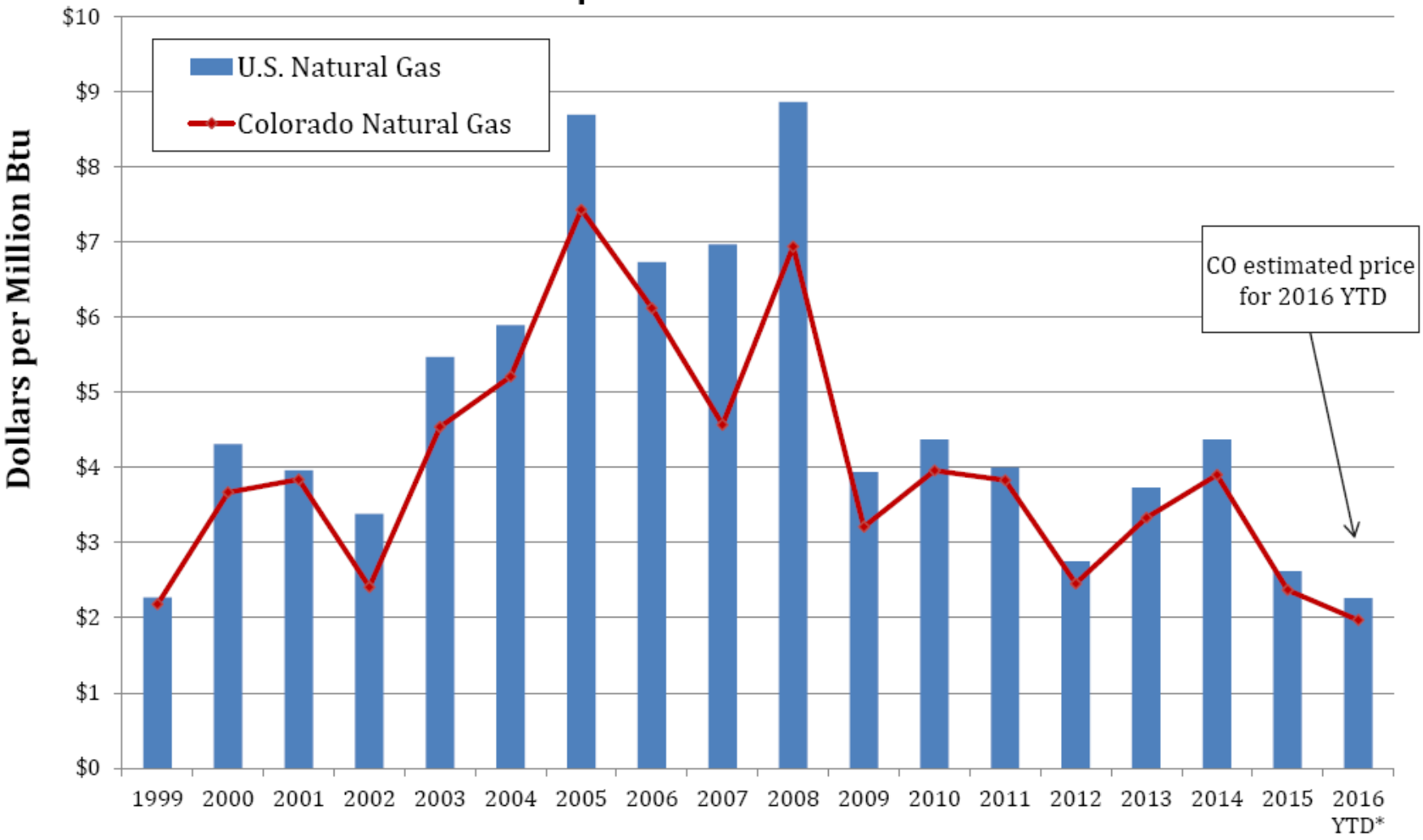
Note: Includes crude oil, natural gas liquids, feedstocks, additives, and other hydrocarbons; 2015 data represents estimates; the compound annual growth rate (CAGR) reflects the 2011 to 2015 period.

Fig. 9

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Average Annual Natural Gas Prices, 1999-2016

Colorado wellhead prices trend below the benchmark trading price to account for fuel transportation costs to markets outside the state



Source: U.S. Department of Energy, Energy Information Administration

Note: Henry Hub is a common trading benchmark price. Does not include 2014 polar vortex price spike for Colorado.

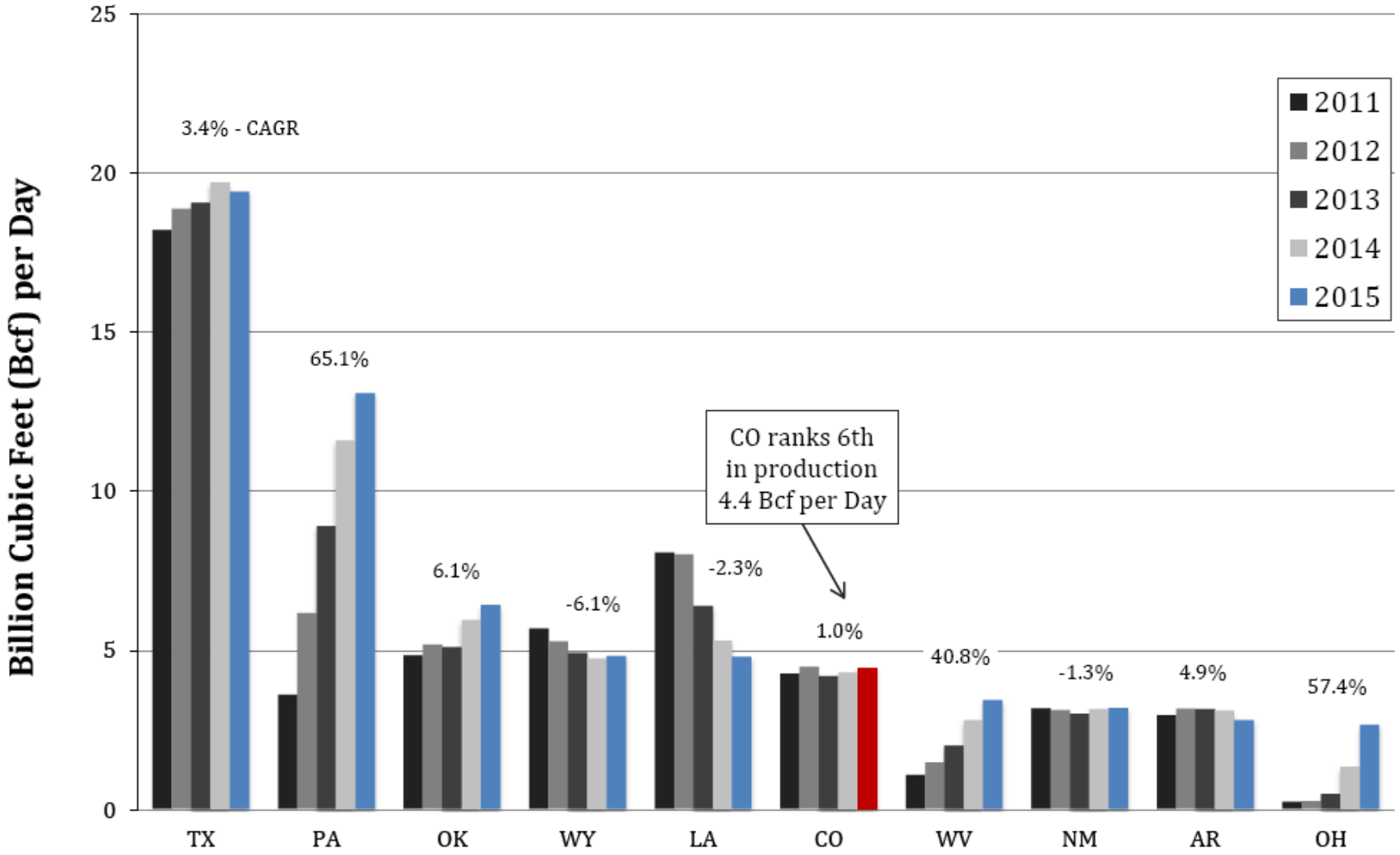
**2016 year-to-date data represents U.S. average daily spot price from January to August. 2012 to 2016 Colorado price estimated.*

Fig. 12

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Natural Gas Production by State, 2011-2015

Colorado's production has remained stable since 2011;
U.S. production has increased at a CAGR of 4.3% since 2011



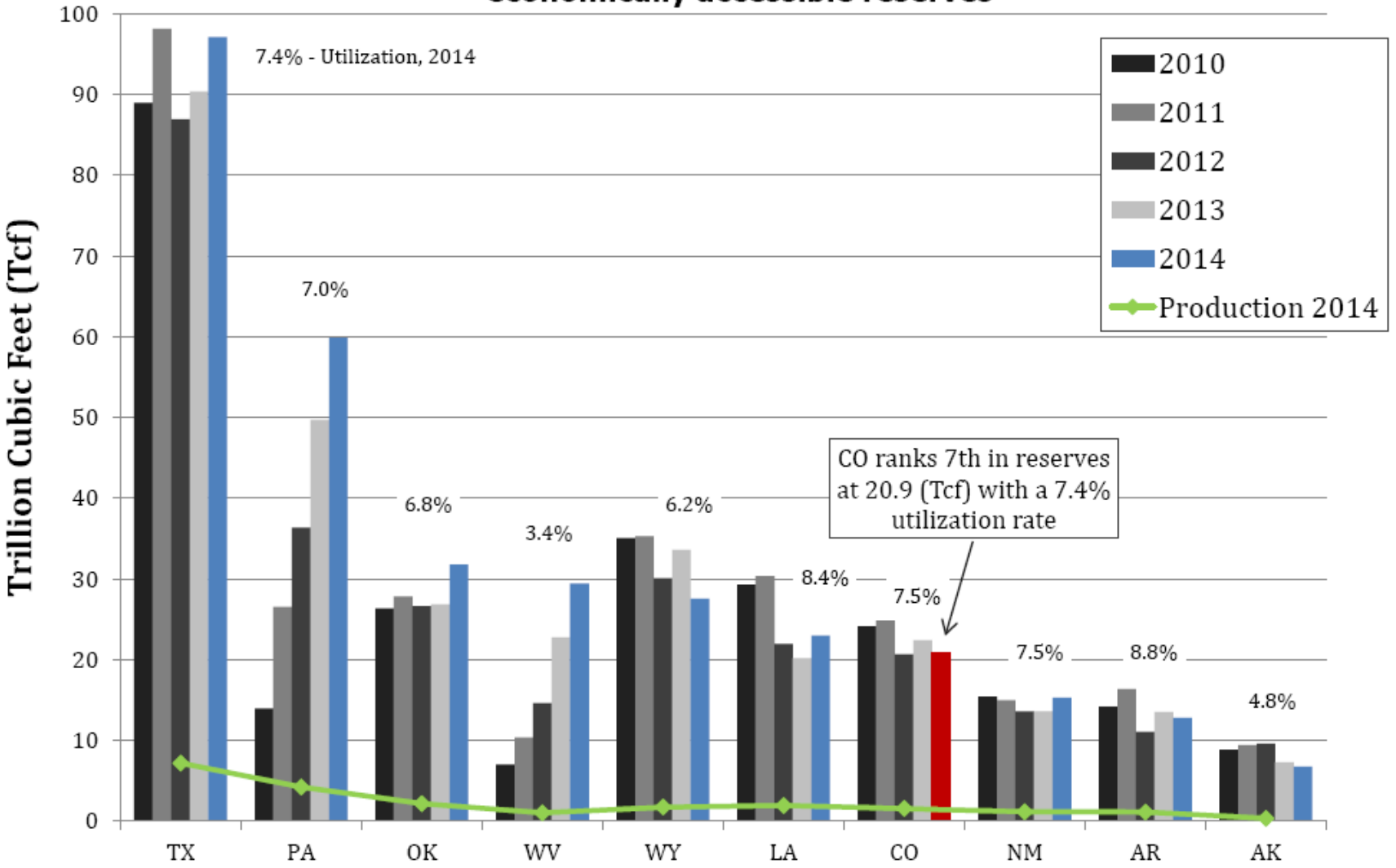
Source: U.S. Department of Energy, Energy Information Administration
Note: The compound annual growth rate (CAGR) reflects the 2011 to 2015 period.

Fig. 13

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Natural Gas Reserves & Utilization Rate

Low natural gas prices have reduced the size of economically accessible reserves



Source: U.S. Department of Energy, Energy Information Administration

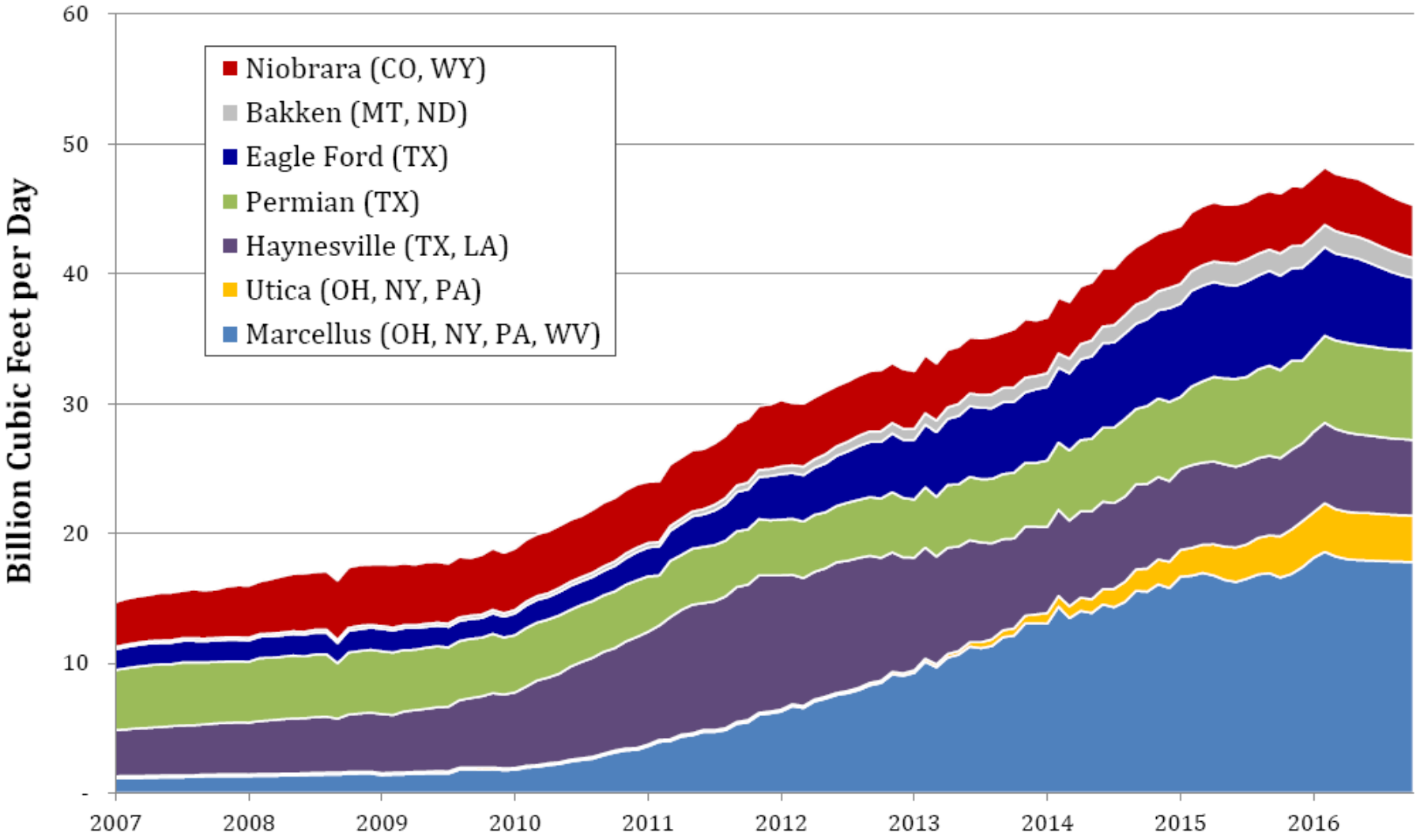
Note: Top-10 states including Colorado; utilization rate is the amount of reserves developed/produced annually; reserves are defined as resources that can be recovered with reasonable certainty under existing economic and operating conditions

Fig. 14

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

U.S. Shale Gas Production by Major Resource Play

4.1 bcf per day in the Niobrara formation as of October 2016



Source: U.S. Department of Energy, Energy Information Administration, Drilling Productivity Report
Note: Excludes legacy production; 2016 data through October

Fig. 16

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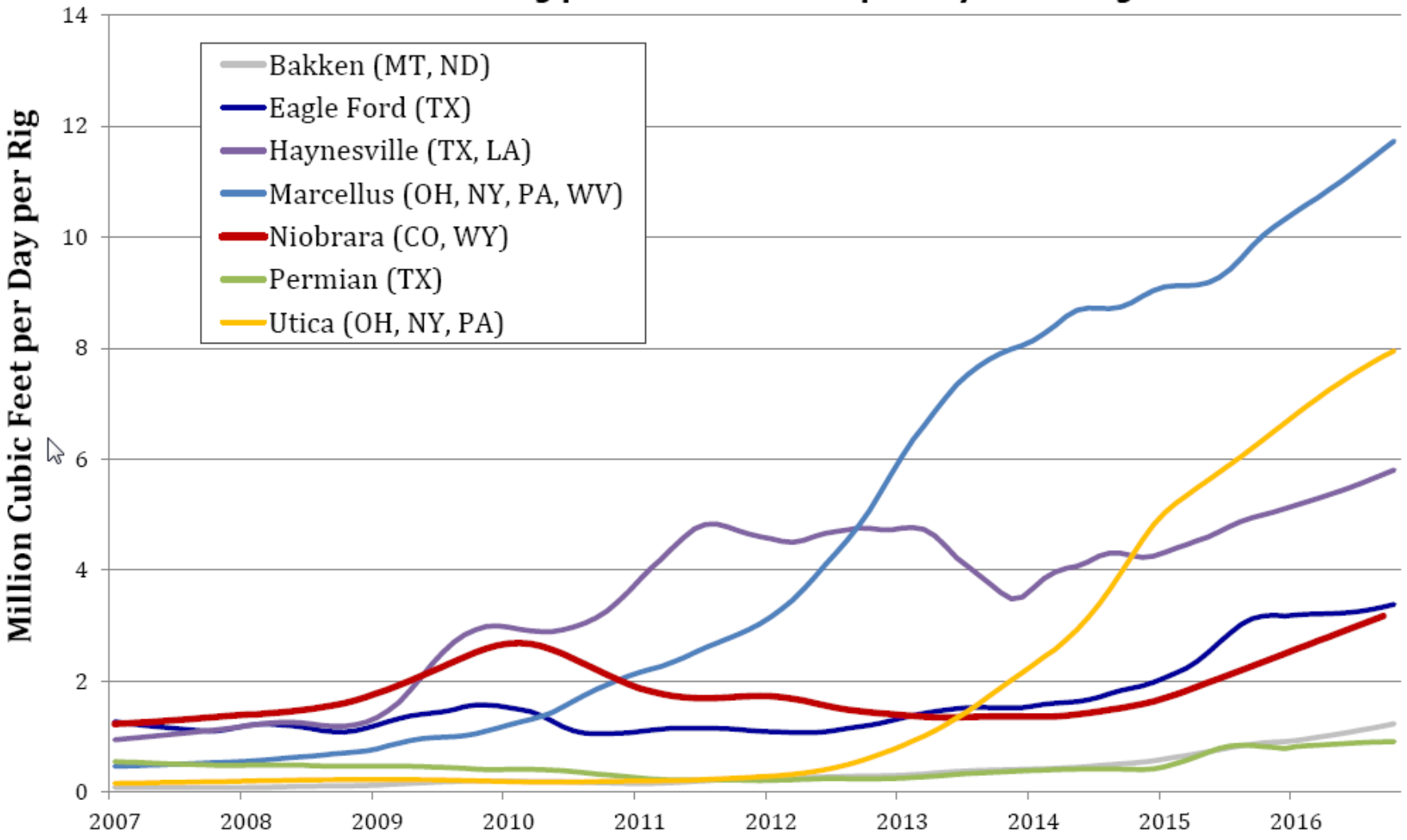
Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

U.S. Shale Gas Drilling Efficiency by Major Resource Play

Each Niobrara rig produces 3.2 mmcf per day on average



Source: U.S. Department of Energy, Energy Information Administration
Note: Excludes legacy production; 2016 data through October

Fig. 17

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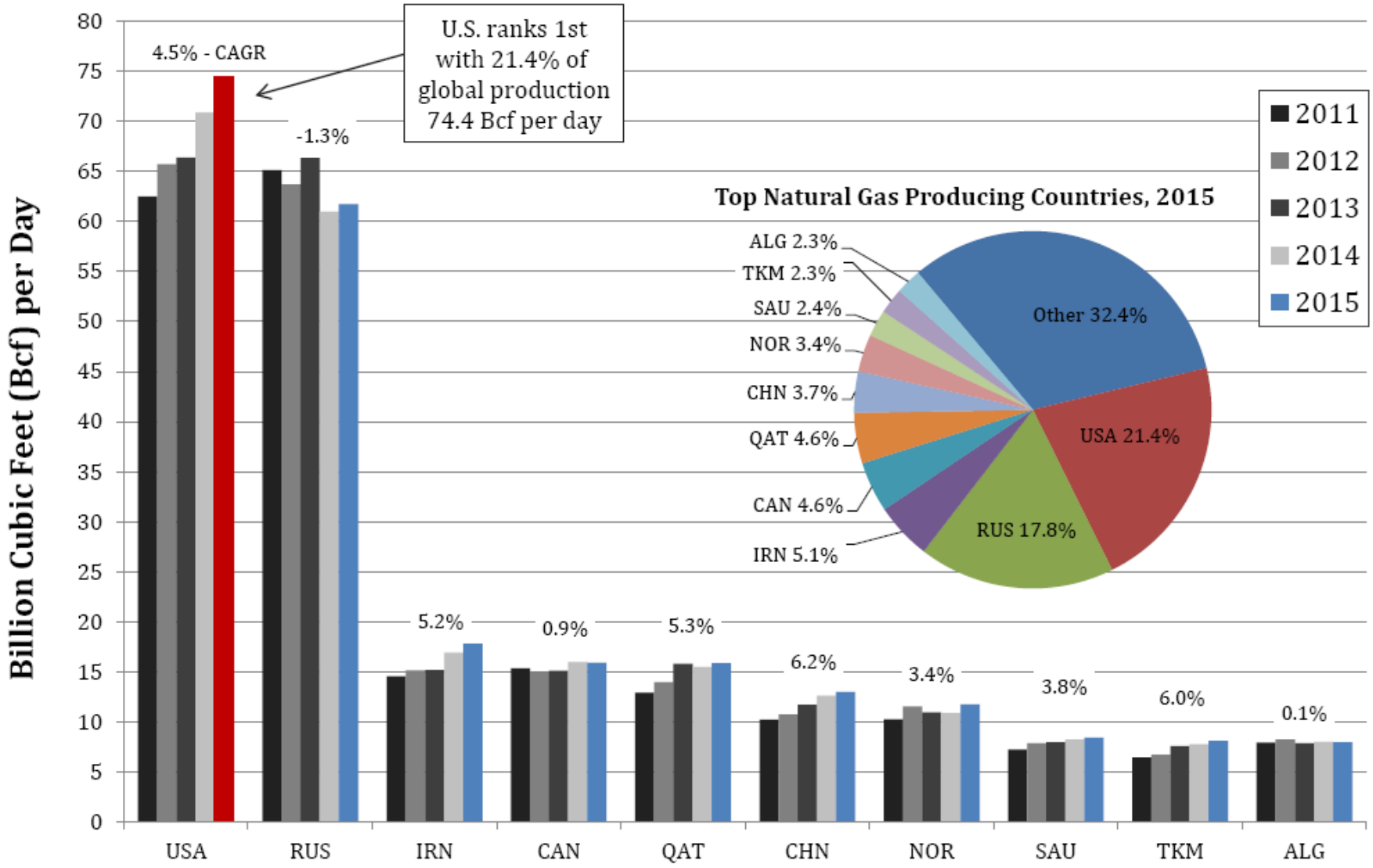
Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Global Natural Gas Production Leaders, 2011-2015

U.S. is 1st and growing; top-10 producers account for 68% of global production

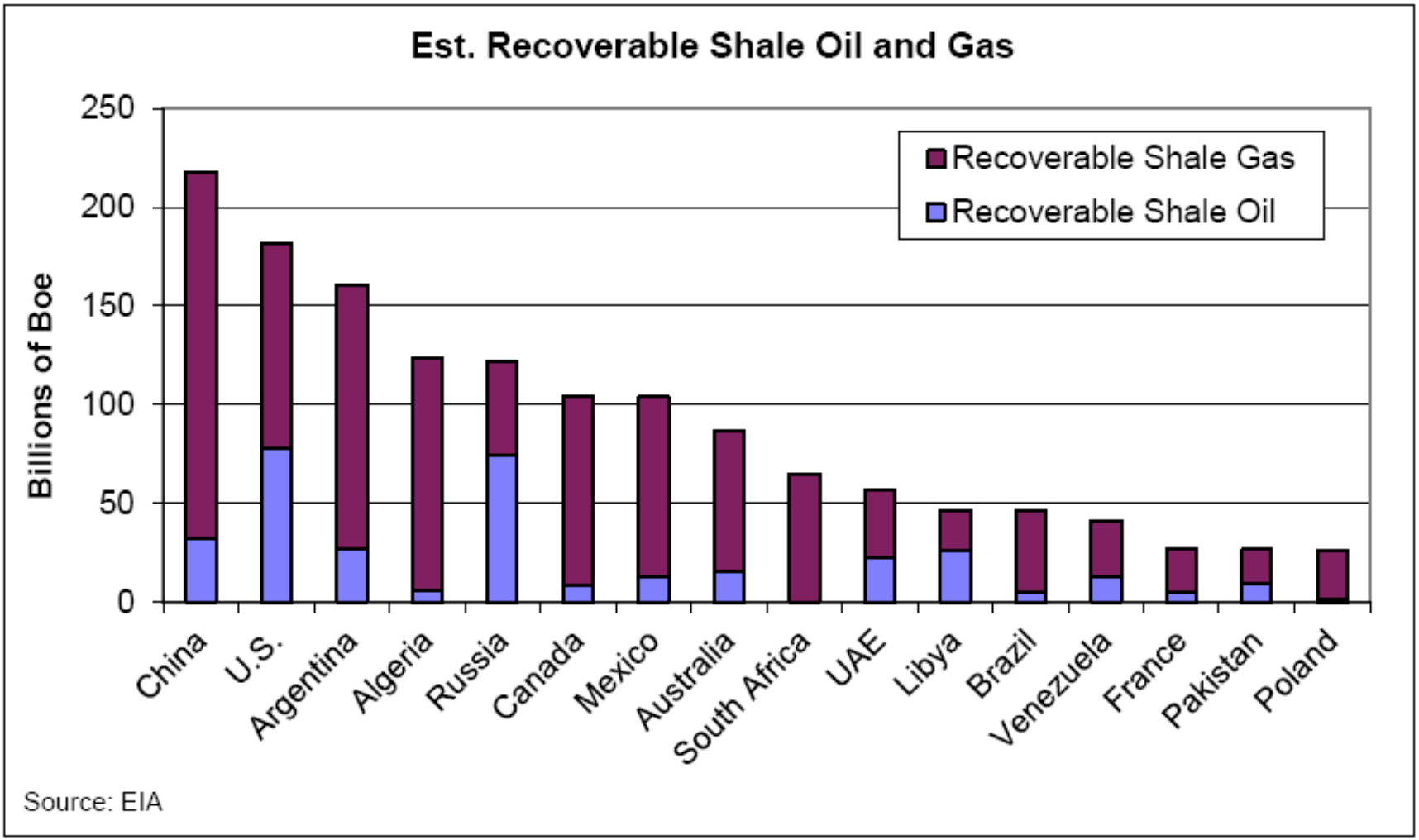


Source: International Energy Agency

Note: 2015 data represents estimates; the compound annual growth rate (CAGR) reflects the 2011 to 2015 period.

Fig. 20

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition



Source: *Energy Stat: 80% of Resource, 2% of Production: Will Shale Outside U.S./Canada Ever Move the Needle?,* Raymond James U.S. Energy Research, January 30, 2017

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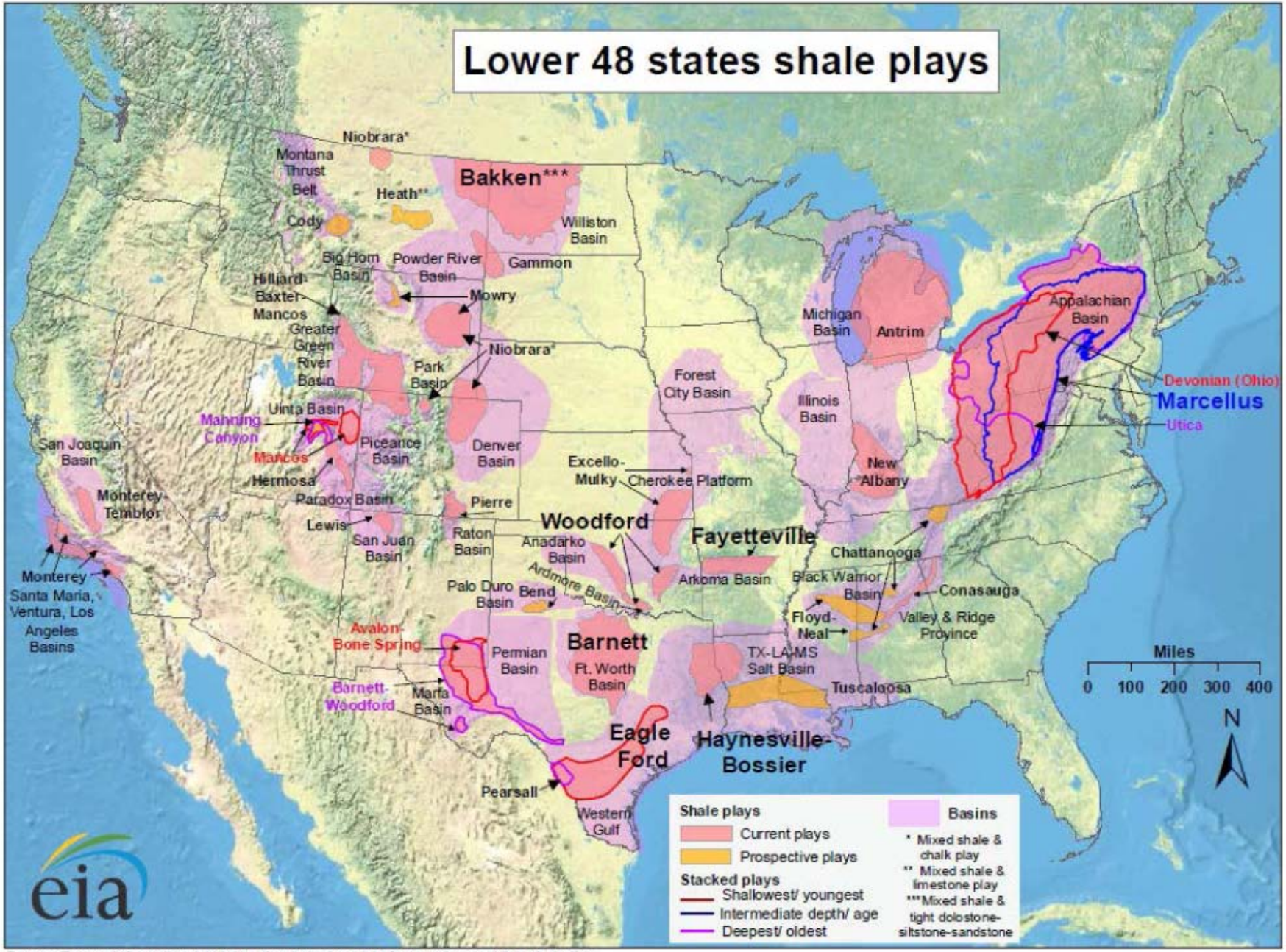
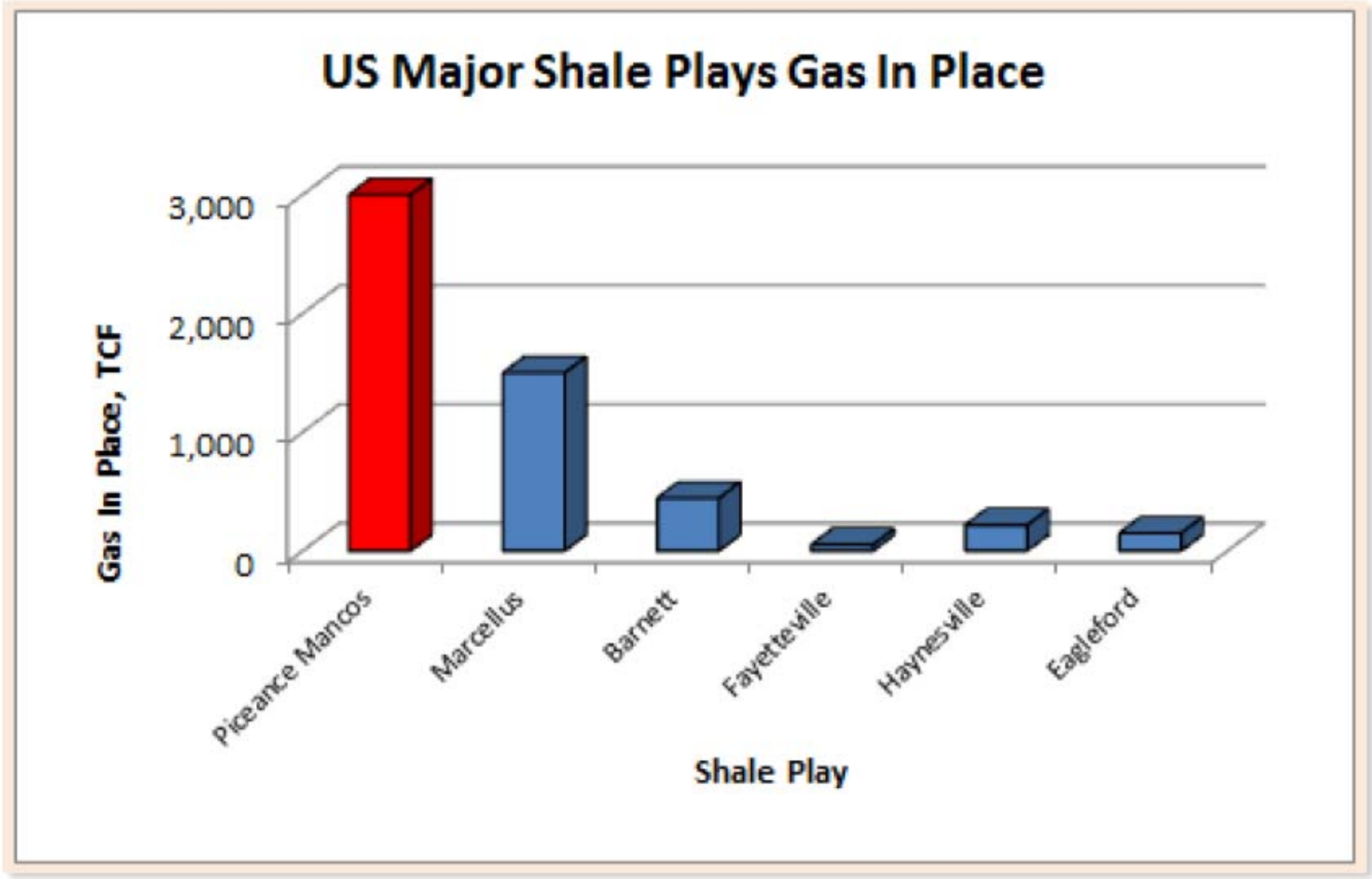


Source: Energy Information Administration based on data from various published studies.
Updated: May 9, 2011

Fig. 15

Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition



Source: *The Mancos Shale is an Emerging Giant,* Presentation to Garfield County Energy Advisory Board Meeting, December 1, 2016

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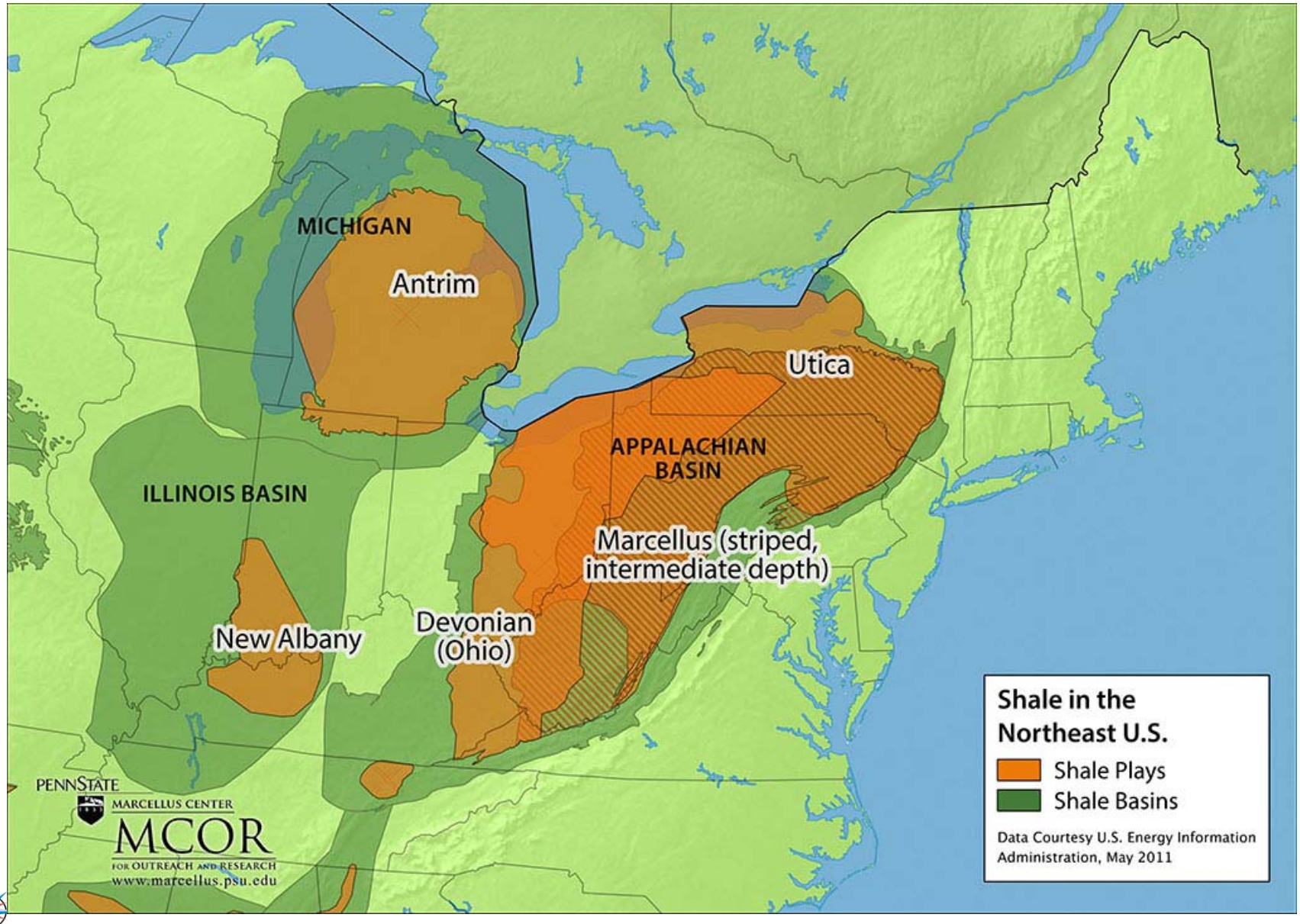
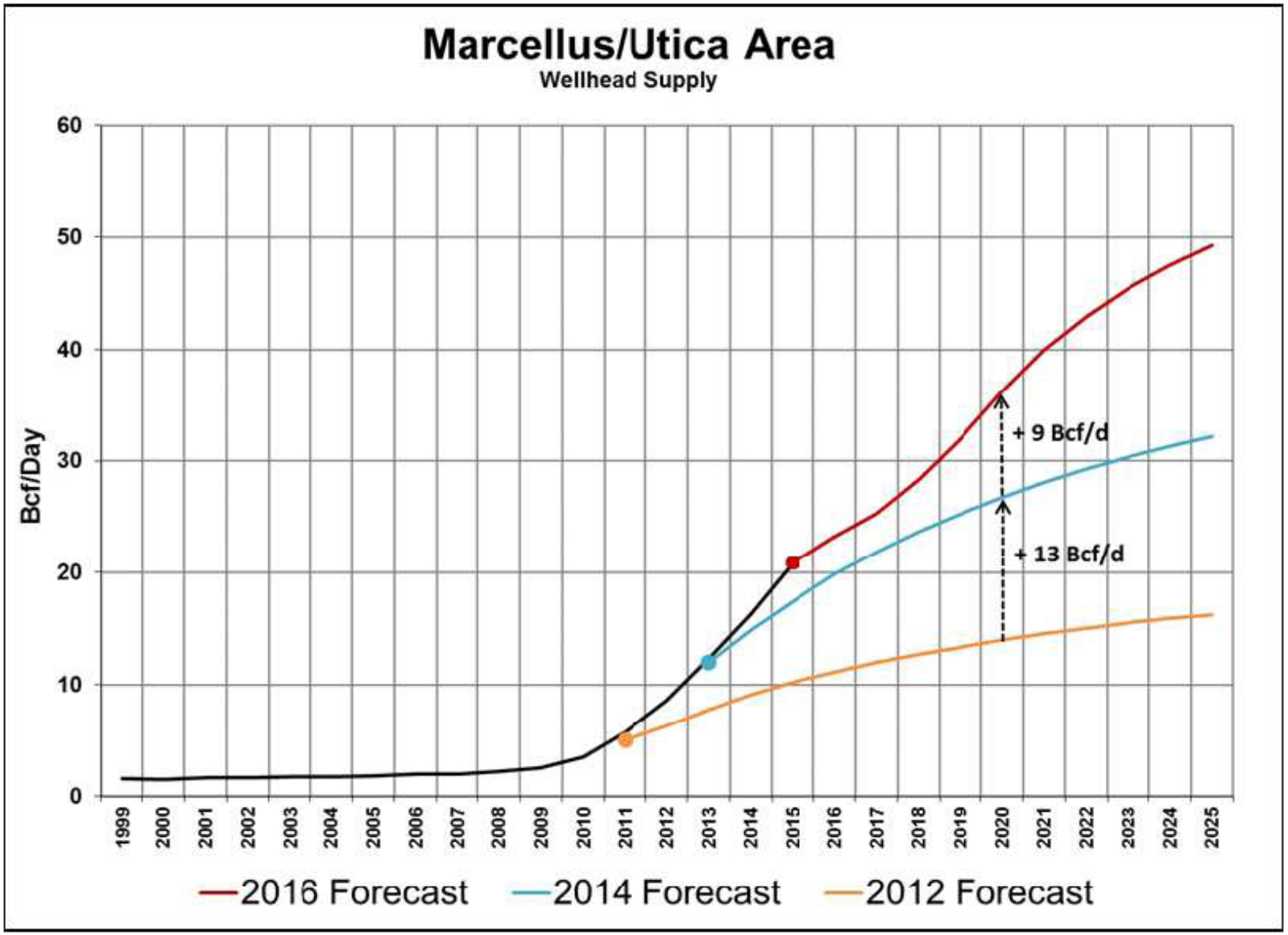
Map of Shale in Northeast U.S.



Source: PennState Marcellus Center for Outreach and Research (MCOR)

Northeast Supply Forecast



Source: *U.S. Natural Gas Outlook,* George Wayne, KinderMorgan, December 2016

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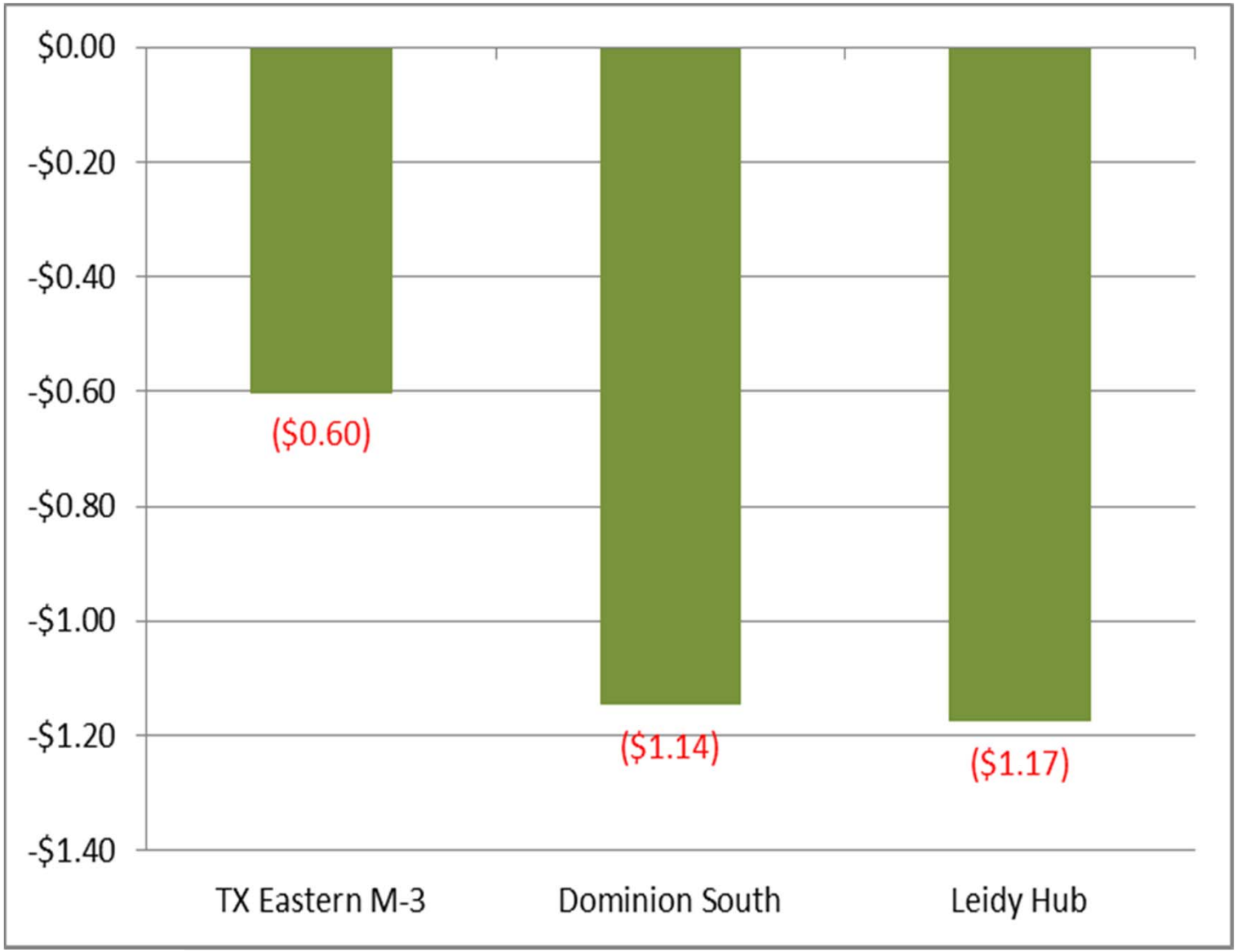
Marcellus Basis Differential – The Haves and Have Nots

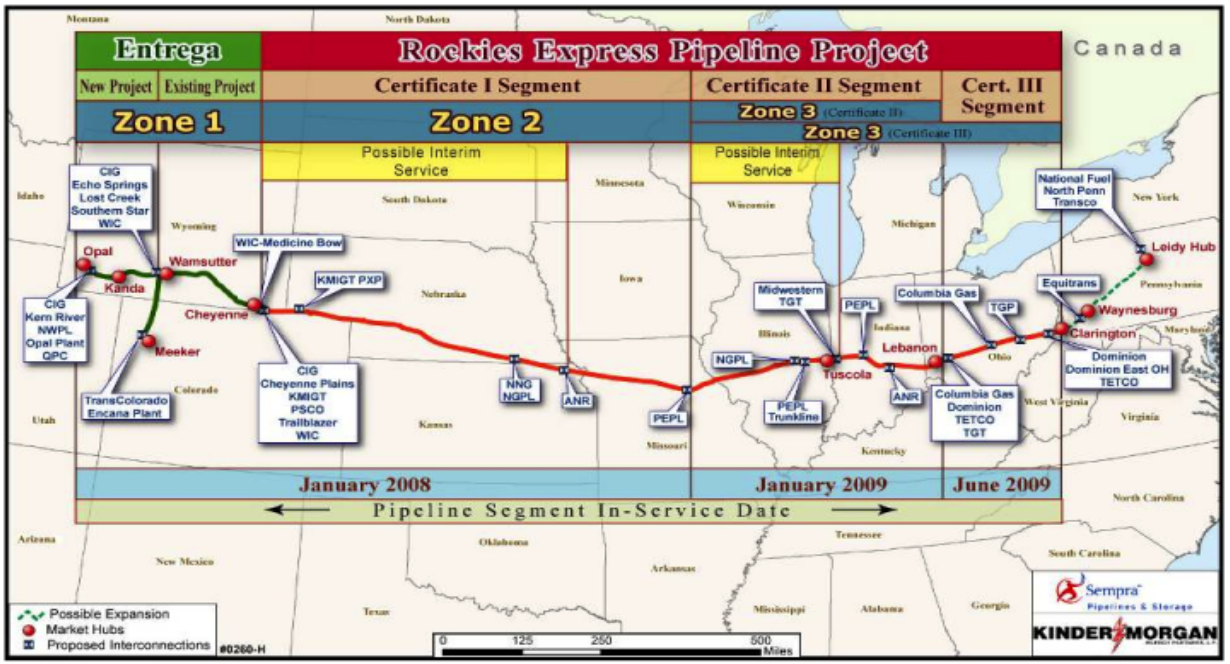


Source: Inside FERC's Gas Marketing Report, S&P Global Platts Publication 2015-2016 information as compared to NYMEX average of last 3 days

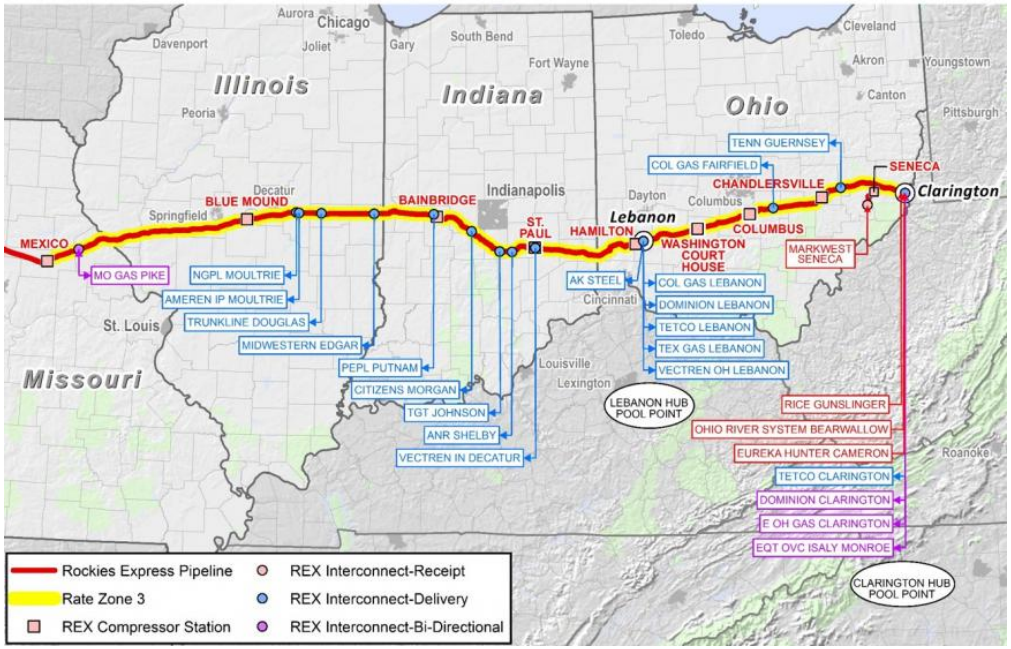
Rockies Express Pipeline

Rockies Reality

- Marcellus and Utica natural gas production will not compete with Rockies gas in California (the last premium U.S. natural gas market)
- It would cost an additional $1.25 per MMBtu to move gas from Mexico, Missouri on Rockies Express to Cheyenne, Wyoming
- There are at least 3 higher priced options for Marcellus/Utica producers



Rockies Express Pipeline – Zone 3



Source: *It's Been A Long Time Comin' – New REX Zone 3 Capacity And Northeast Gas Markets, Part 2,* Sheetal Nasta, RBN Energy, LLC, January 30, 2017

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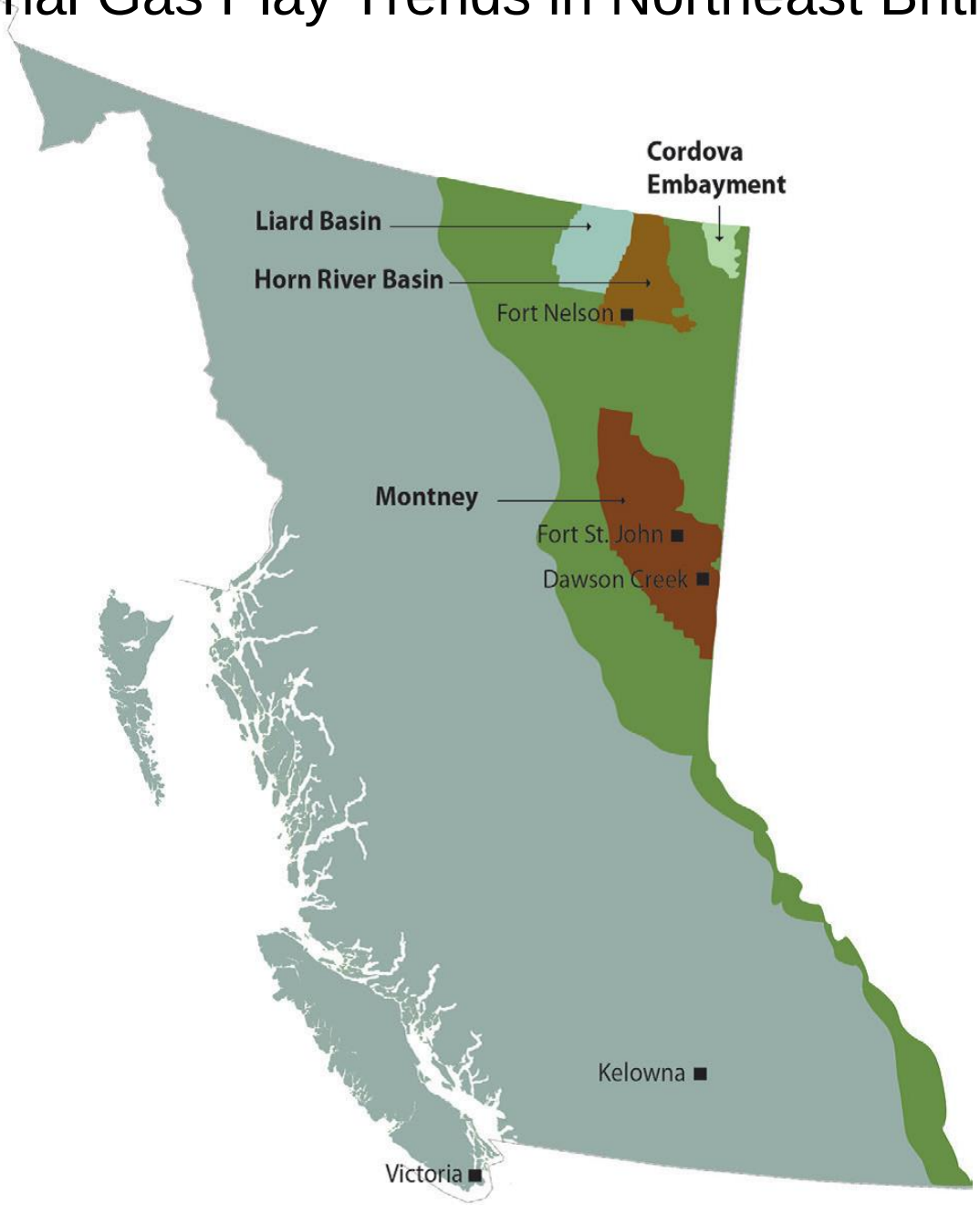
Unconventional Gas Play Trends in Northeast British Columbia



Source: *British Columbia's Shale and Tight Resources,* Natural Gas Canada, BC Oil and Gas Commission

List of Proposed BC LNG Export Projects

Aurora LNG	LNG Canada	Steelhead LNG: Sarita LNG
Canada Stewart Energy Project	NewTimes Energy Ltd.	Triton LNG
Cedar LNG	Nisga's LNG	Watson Island LNG
Discover LNG	Orca LNG	WCC LNG Ltd.
Grassy Point LNG	Pacific NorthWest LNG	WesPac
Kitimat LNG	Prince Rupert LNG	Woodfibre LNG
Kitsault Energy Project	Steelhead LNG: Malahat LNG	

Source: *Factsheet: LNG project proposals in British Columbia,* BC Gov News

BC LNG Export Projects and Their Upstream Supply Pipelines

LNG Project	Pipeline	Pipeline specs
Prince Rupert LNG ($16 billion)	Westcoast Connector Gas Transmission Project ($7.5 billion)	2 – 534-mile, 48" diameter pipelines 4.2 BCF per day
Pacific Northwest ($11.4 billion)	Prince Rupert Gas Transmission ($5 billion) and	559-mile pipeline 2.0 BCF per day
	North Montney Mainline ($1.7 billion)	186-mile pipeline 2.4 BCF per day
Kitimat LNG	Pacific Trail Pipeline ($1.5 billion)	298-mile, 42" pipeline
LNG Canada ($40 billion)	Coastal Gas Link ($4 billion)	416-mile, 48" pipeline 1.7 BCF per day

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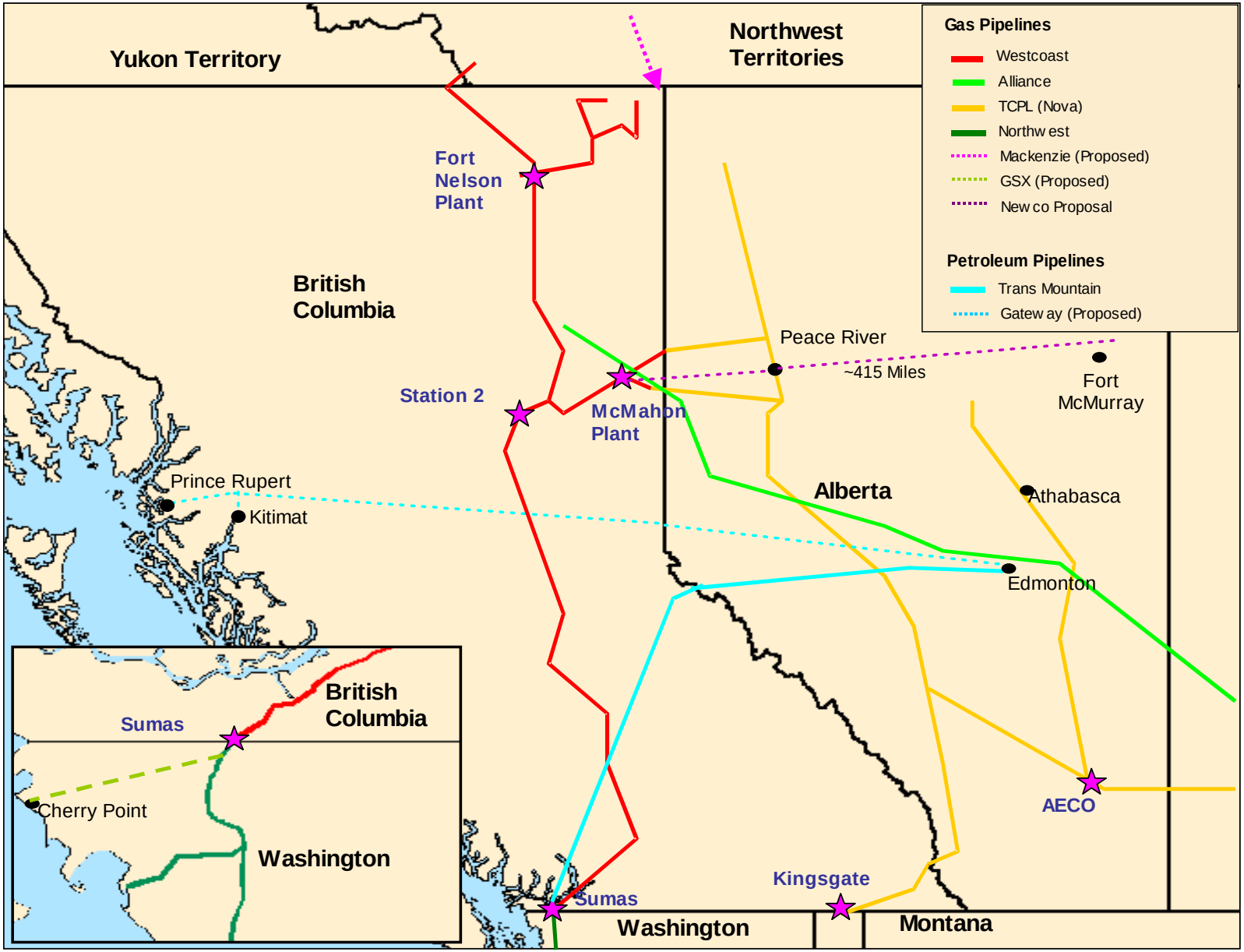
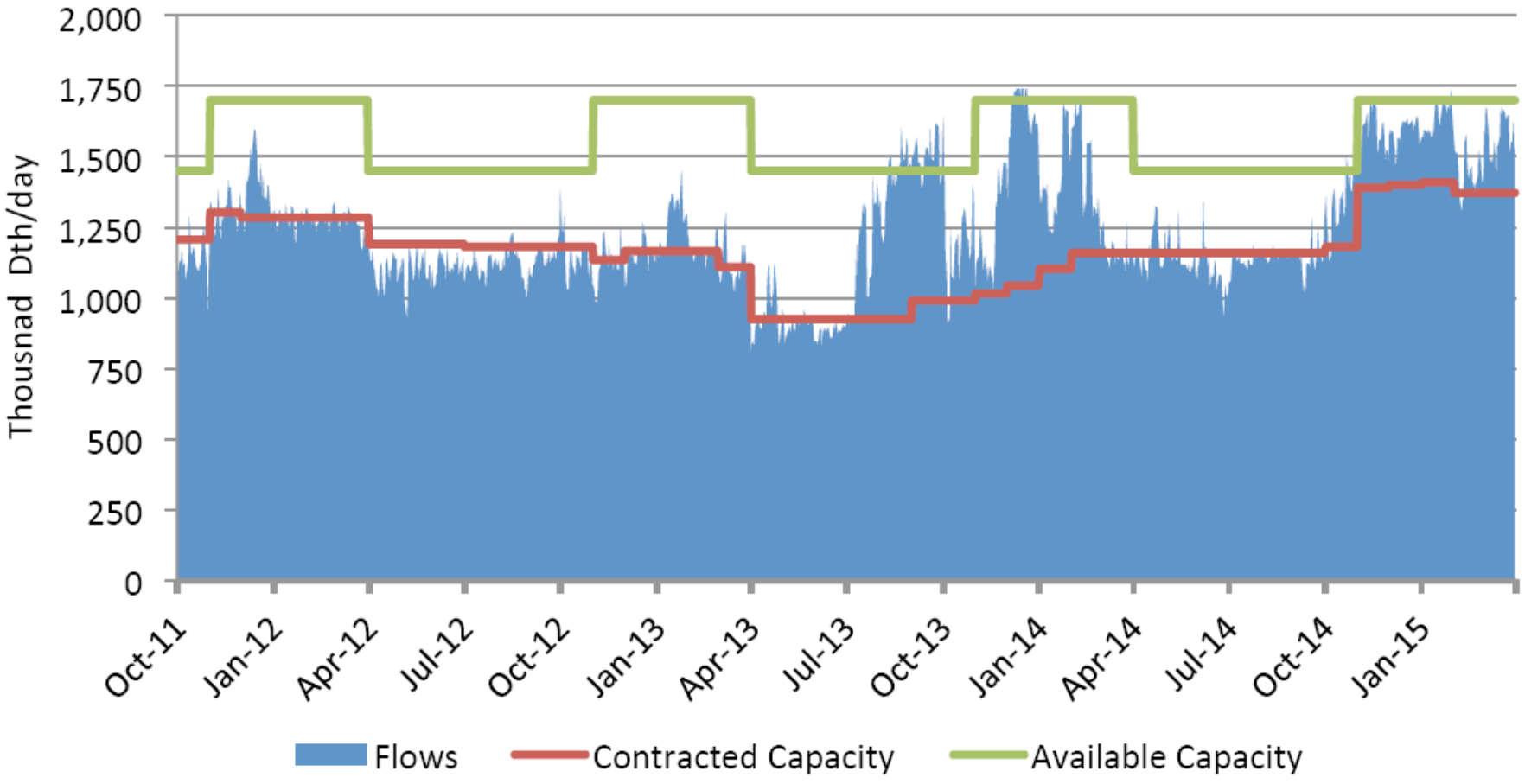
Western Canada Pipeline Schematic



Source: *The Northwest Gas Landscape – Looking Forward*, The Power & Natural Gas Planning Taskforce, July 2015

Pipeline Flows (Spectra) from Station 2 to Sumas



Source: *The Northwest Gas Landscape – Looking Forward*, The Power & Natural Gas Planning Taskforce, July 2015

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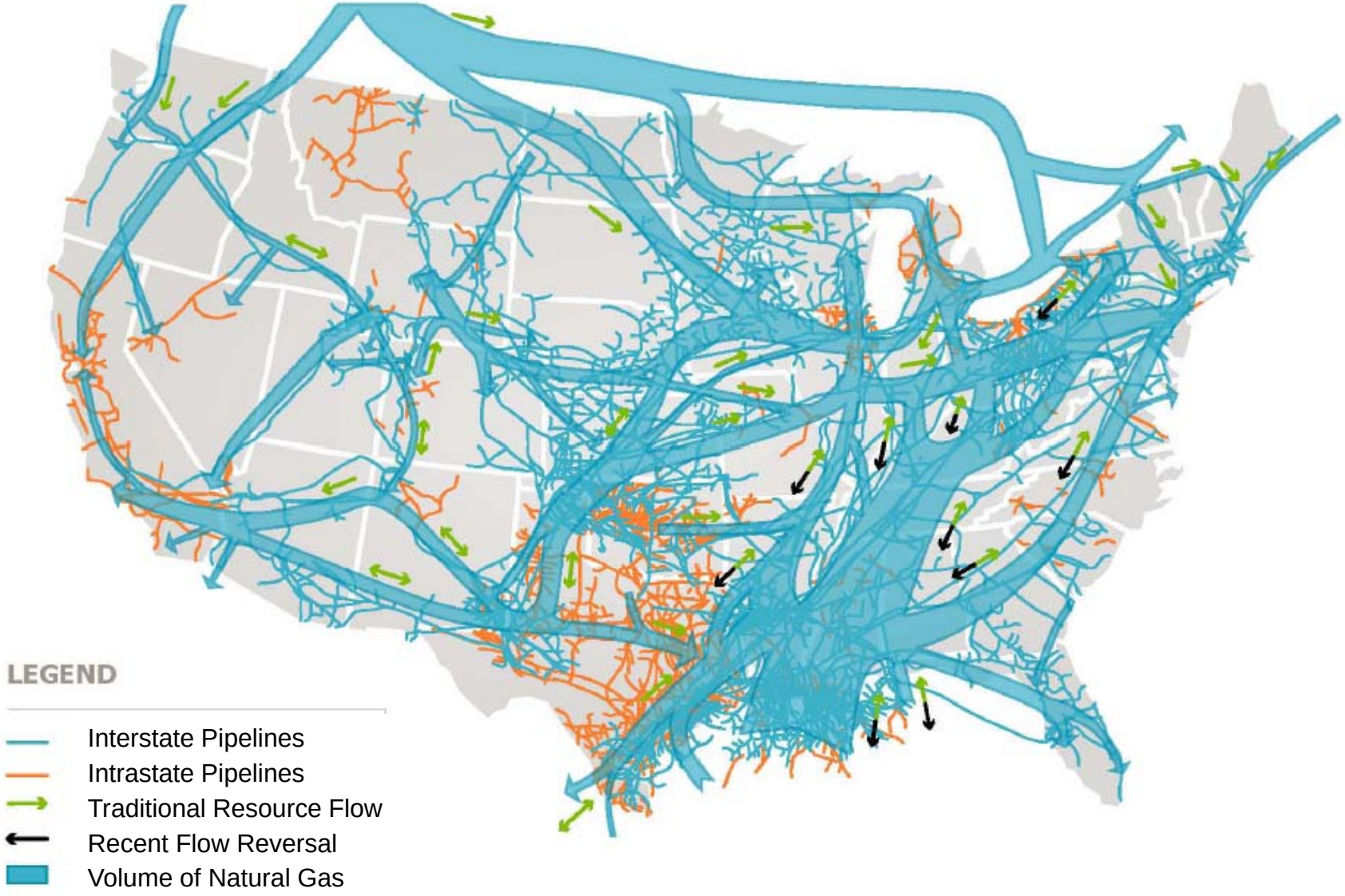
Map of Natural Gas Pipeline Infrastructure



Source: *Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System*

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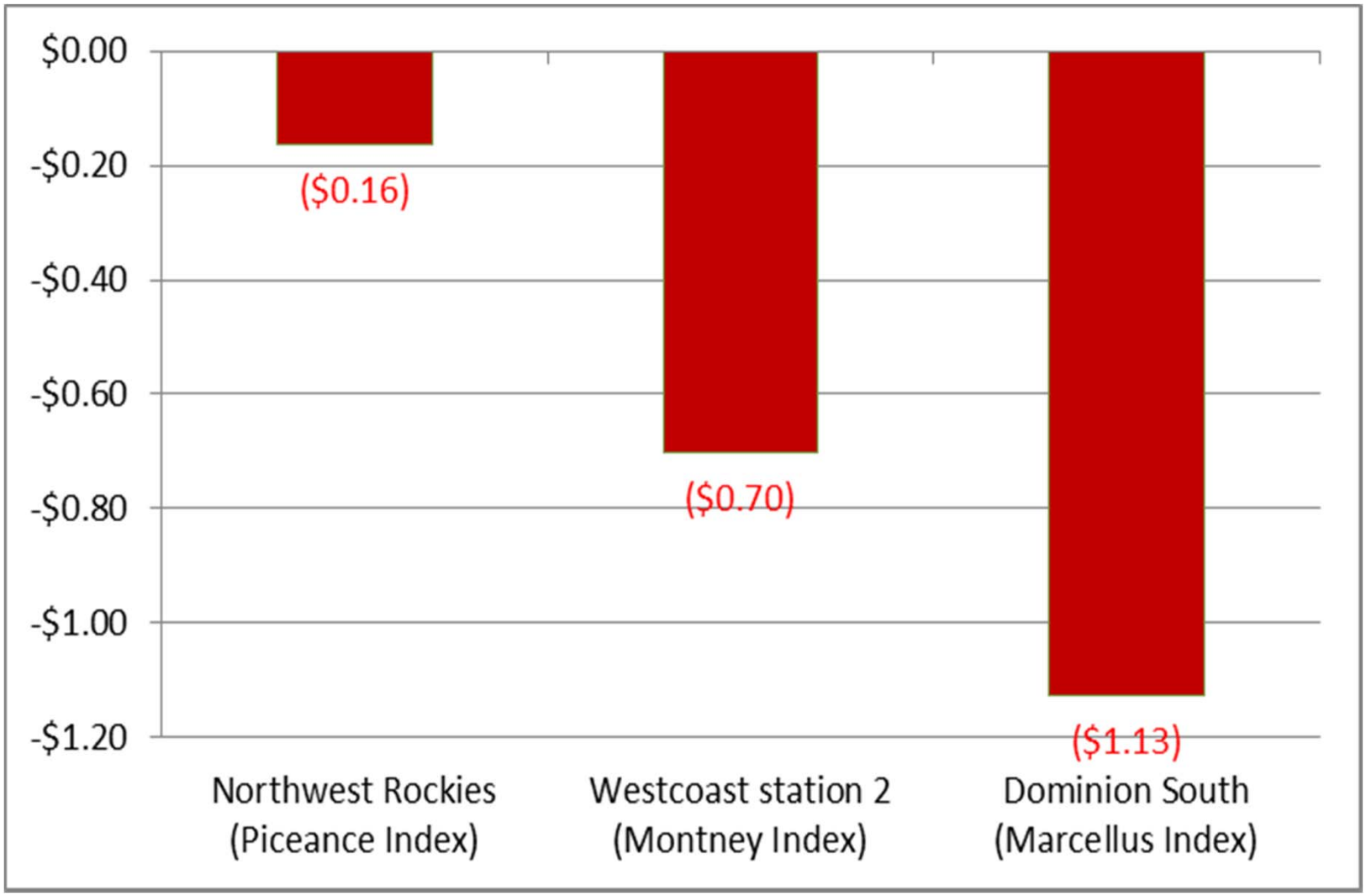
Source: *Resource Rich Colorado, Colorado's National And Global Position in the Energy Economy, Eighth Edition December 2016,* Colorado Energy Coalition

Piceance Basin Price Superiority



Source: Inside FERC's Gas Marketing Report, S&P Global Platts Publication 2014-2016 information as compared to NYMEX average of last 3 days

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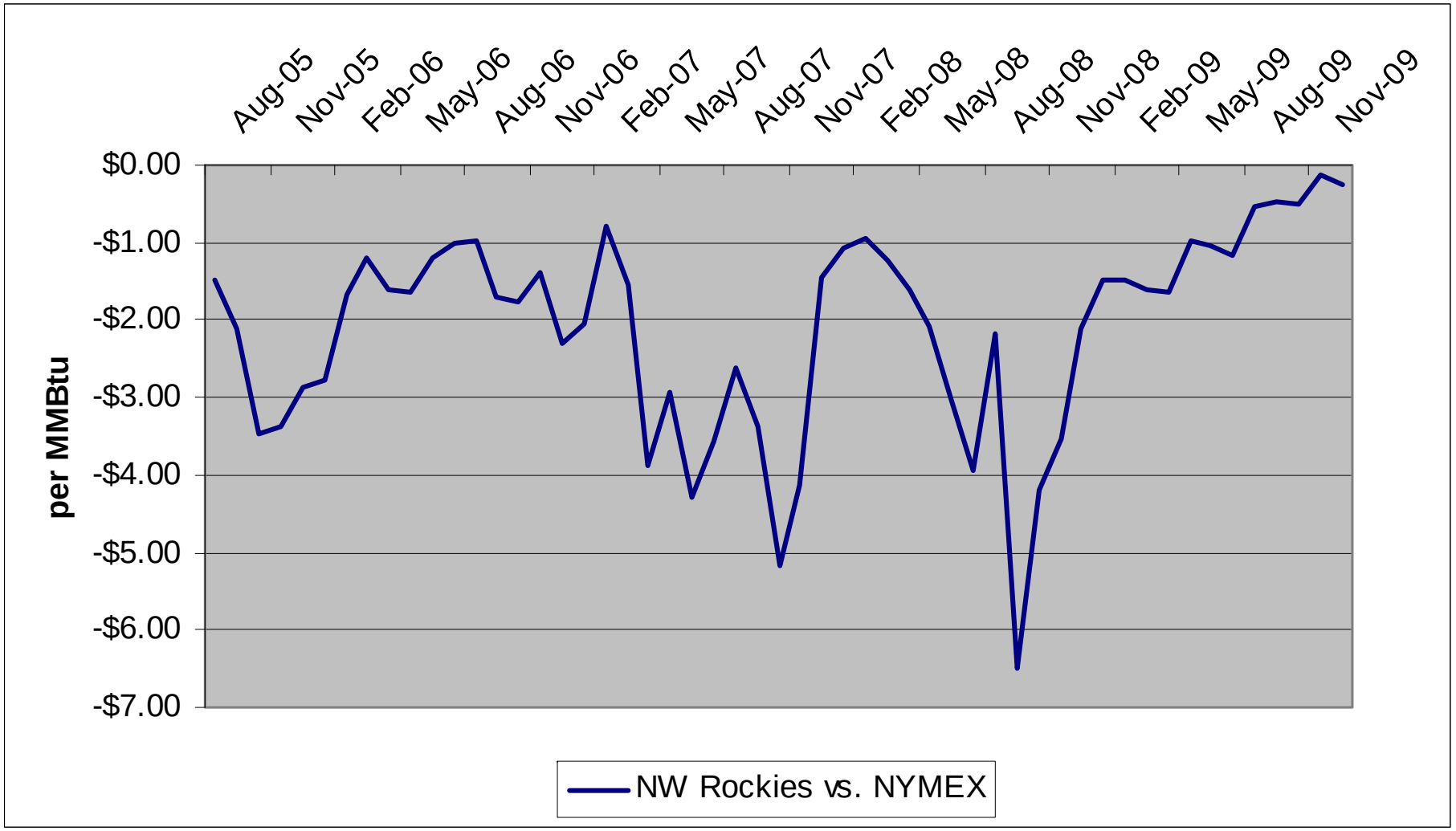
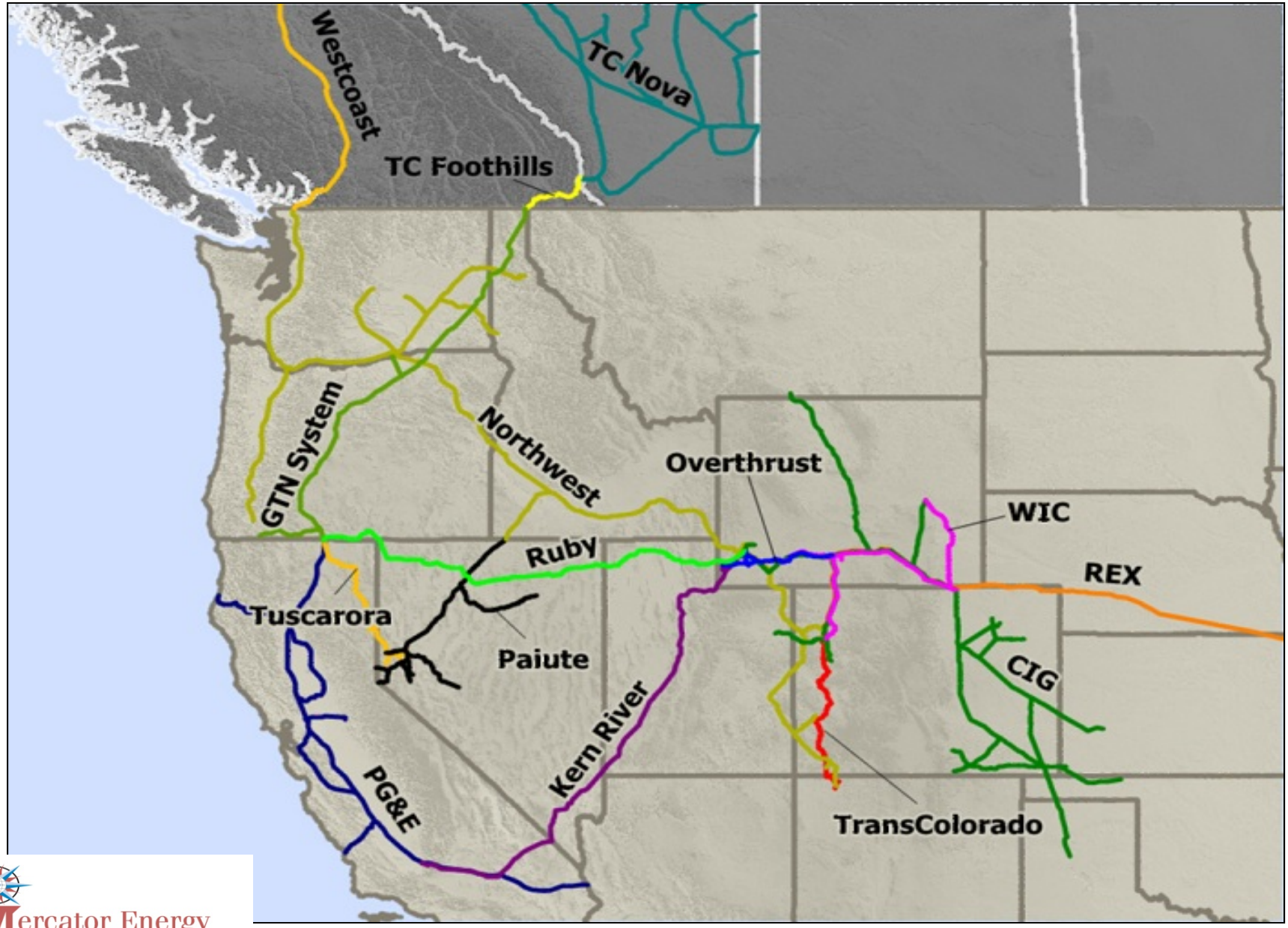
Basis Differential Between Northwest-Rockies and NYMEX 2005-2009



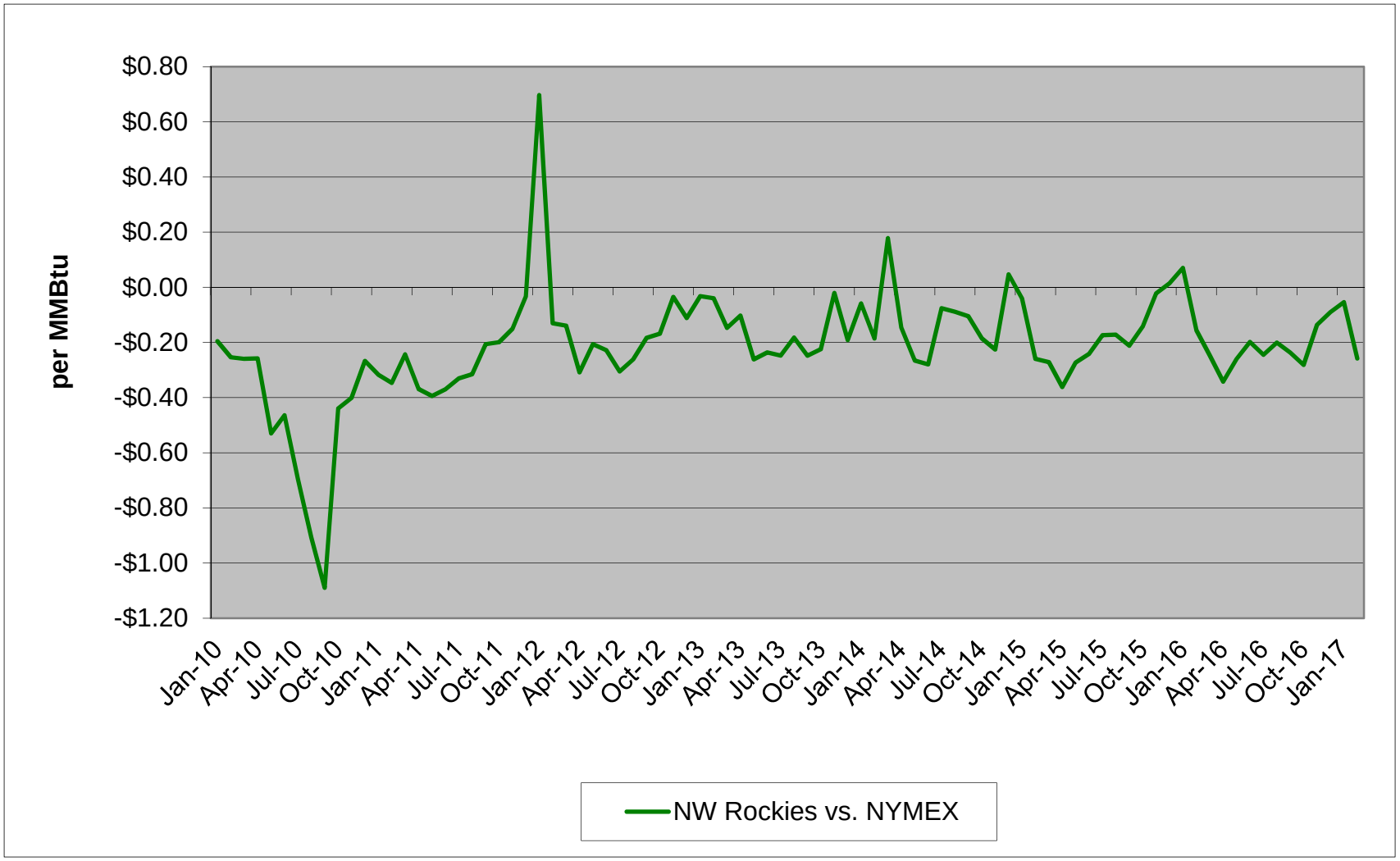
Source: Inside FERC's Gas Marketing Report, S&P Global Platts Publication

Rockies Pipeline Infrastructure



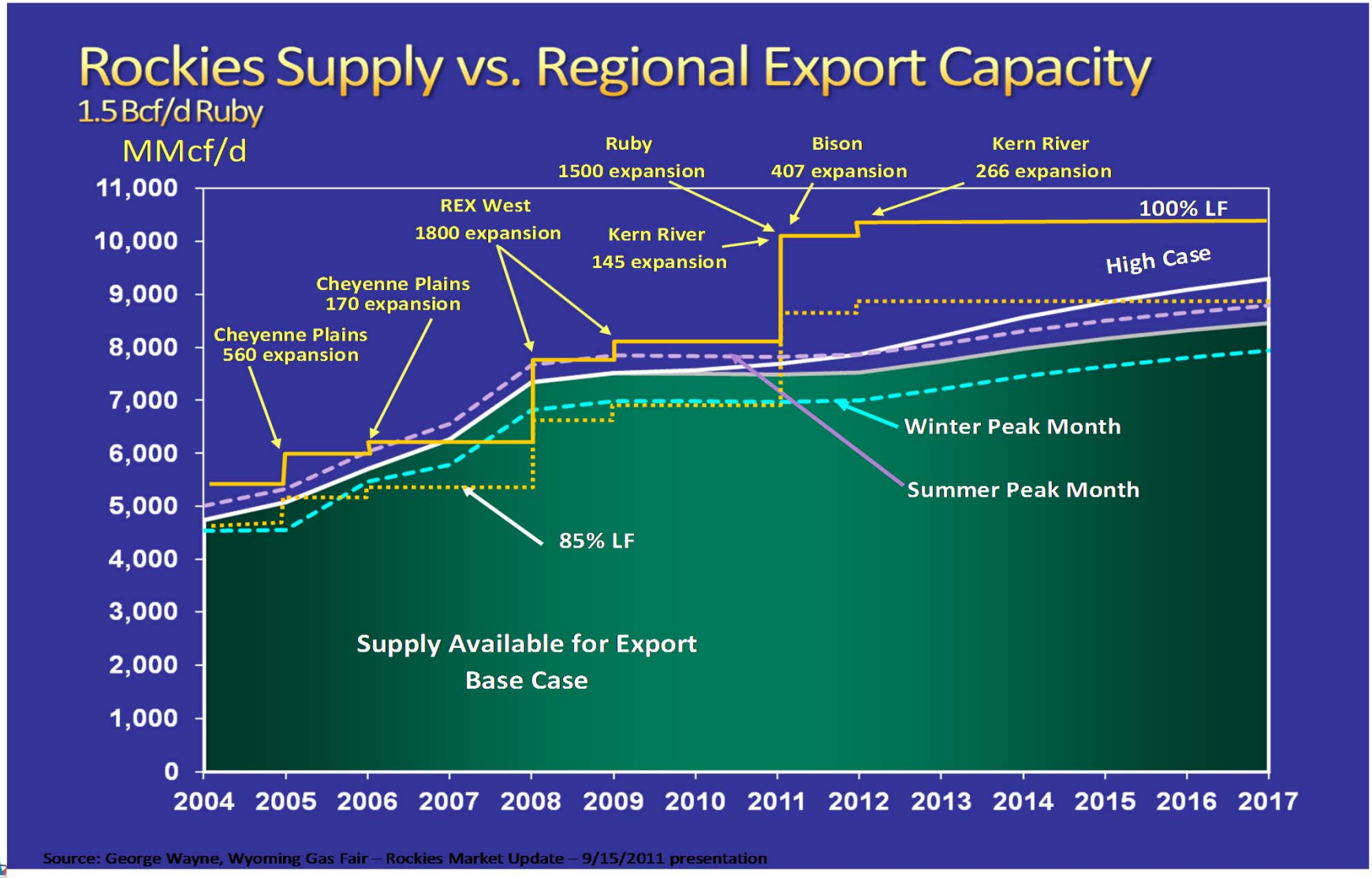
Source: Bentek Rockies Observer

Basis Differential Between Northwest-Rockies and NYMEX 2010-Current



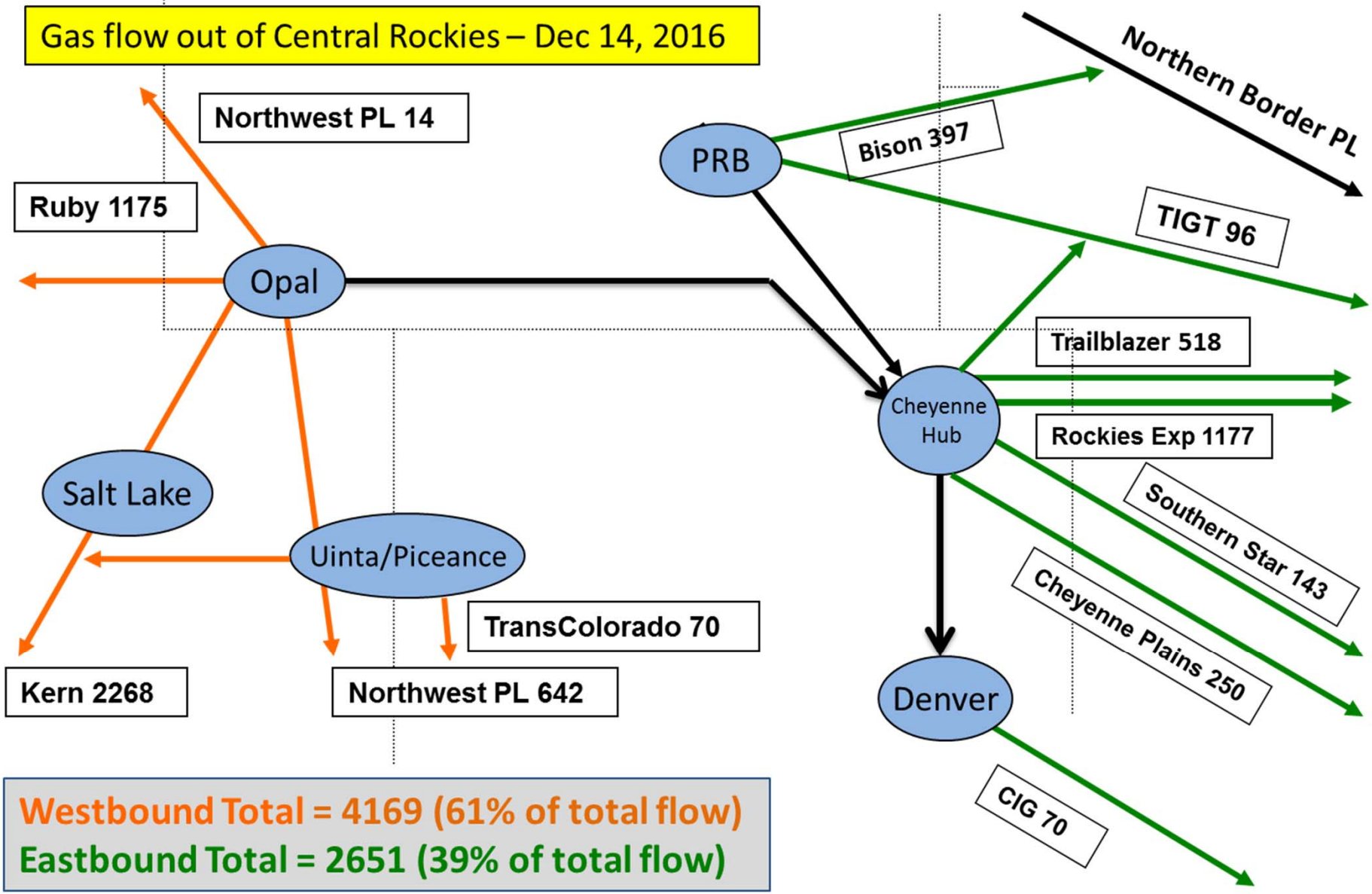
Source: Inside FERC's Gas Marketing Report, S&P Global Platts Publication

Rockies Supply vs. Regional Export Capacity



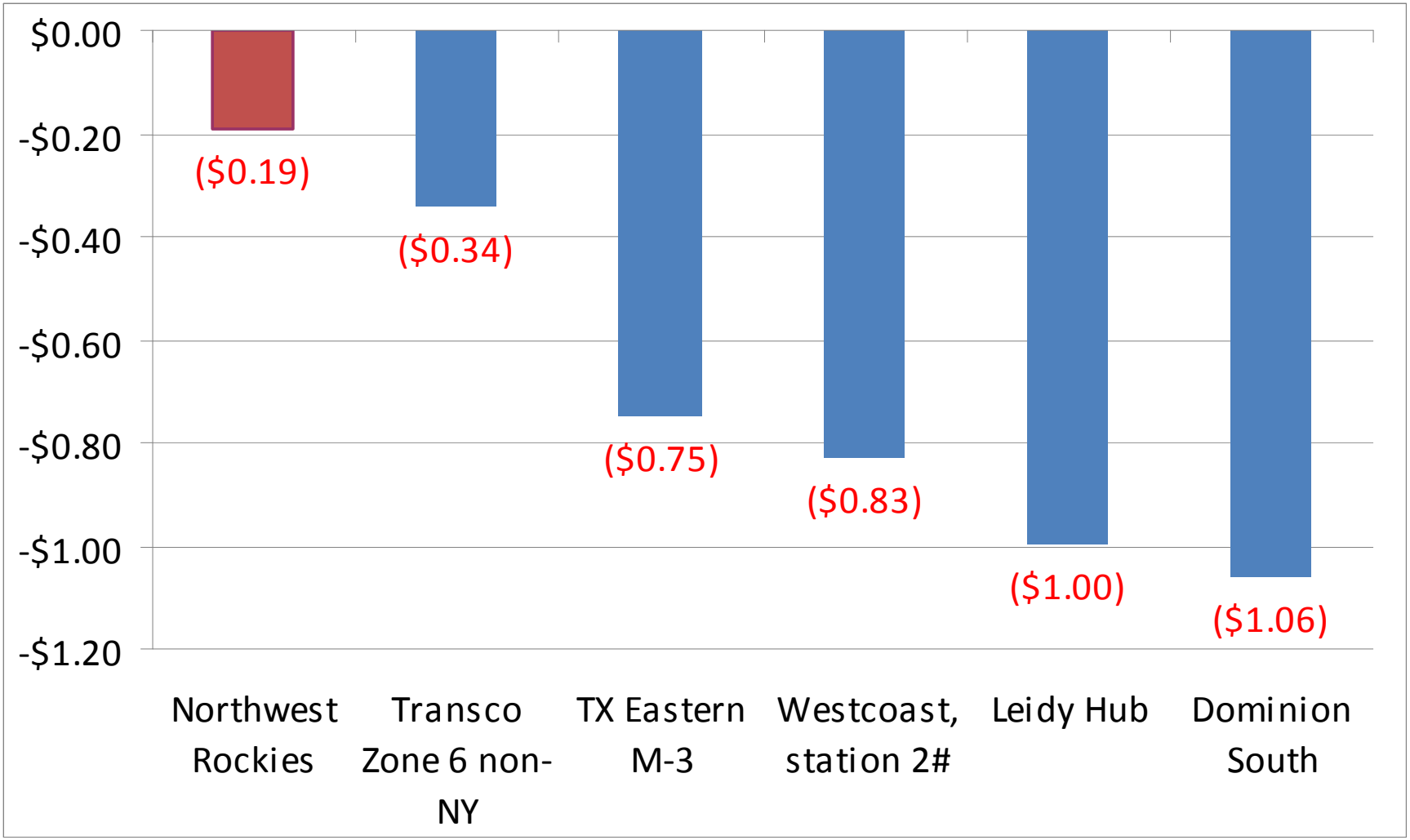
Source: George Wayne, Colorado Interstate Gas

Rockies Pipeline Infrastructure



Source: Brian Jeffries, Wyoming Pipeline Authority (WPA)

Average Basis Differential for 2016



Source: Inside FERC's Gas Marketing Report, S&P Global Platts Publication

Piceance Basin Design versus Average Utilization

(All numbers in MMBtu per day)

	Design Capacity	Utilization*	Available
CIG (North)	203,000	33,000	170,000
CIG (West)	276,000	30,000	246,000
Northwest Pipeline**	877,000	64,000	813,000
Questar Pipeline (Net)	480,000	91,000	389,000
TransColorado	375,000	80,000	295,000
WIC Piceance Lateral	580,000	290,000	290,000
REX / Entrega (Segment 1)	1,437,000	625,000	812,000
Total Pipeline Export Capacity	4,228,000	1,213,000	3,015,000

** There are currently six Piceance Basin delivery points into Northwest Pipeline

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Growth in Piceance Basin Pipeline Takeaway Design Capacity

	Winter 2005	Winter 2016
CIG (North)	90,000	203,000
CIG (West)	276,000	276,000
Northwest Pipeline	440,000	877,000
Questar Pipeline (Net)	25,000	480,000
TransColorado	350,000	375,000
WIC Piceance Lateral	30,000	580,000
REX / Entrega (Segment 1)		1,437,000
Total Pipeline Export Capacity	1,211,000	4,228,000

* All numbers in MMBtu/day

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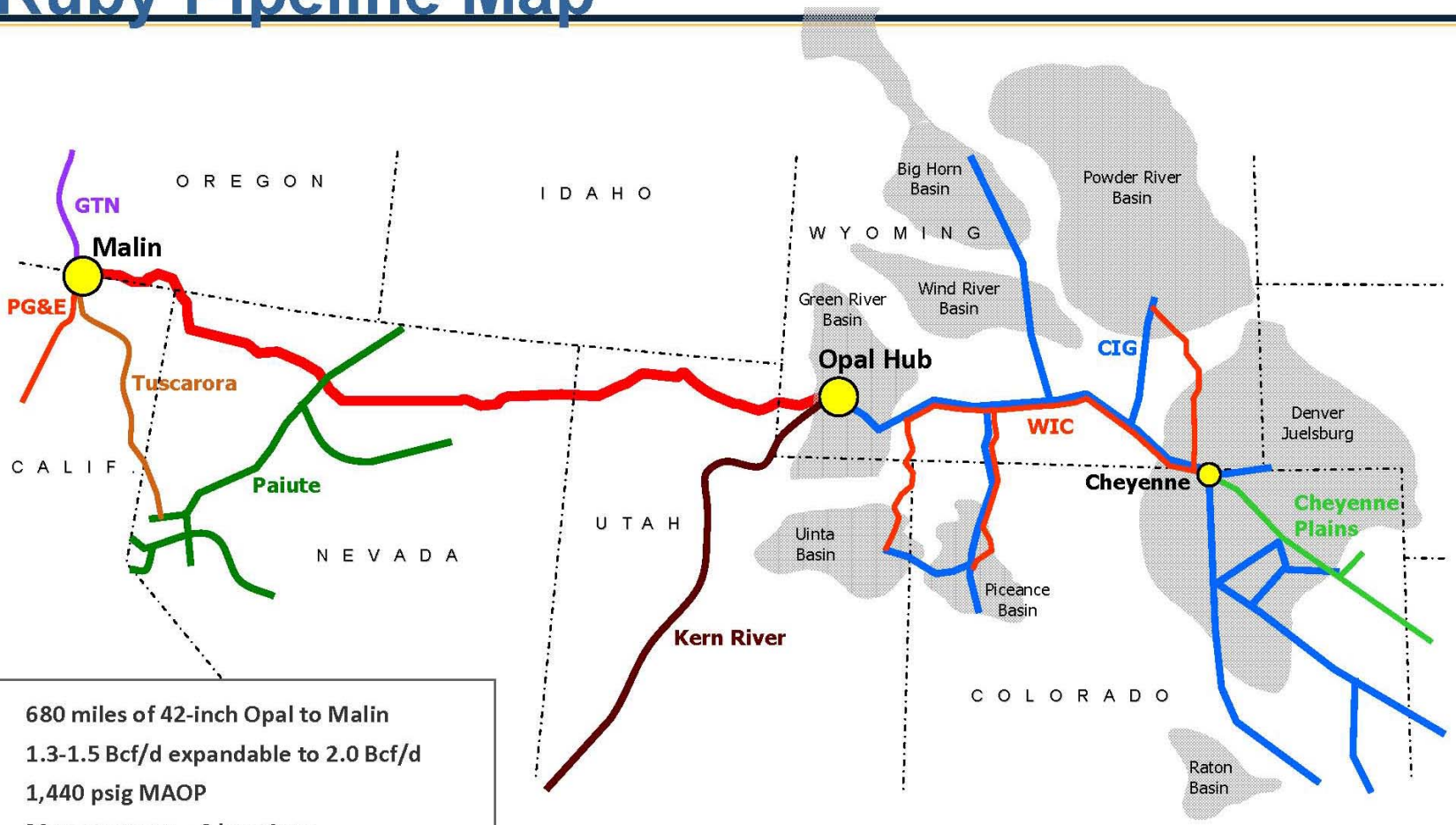
Ruby Pipeline Map



- 680 miles of 42-inch Opal to Malin
- 1.3-1.5 Bcf/d expandable to 2.0 Bcf/d
- 1,440 psig MAOP
- Measurement – 8 locations
- 64%+/- Public Land
- 2 National Forests – Cache and Fremont

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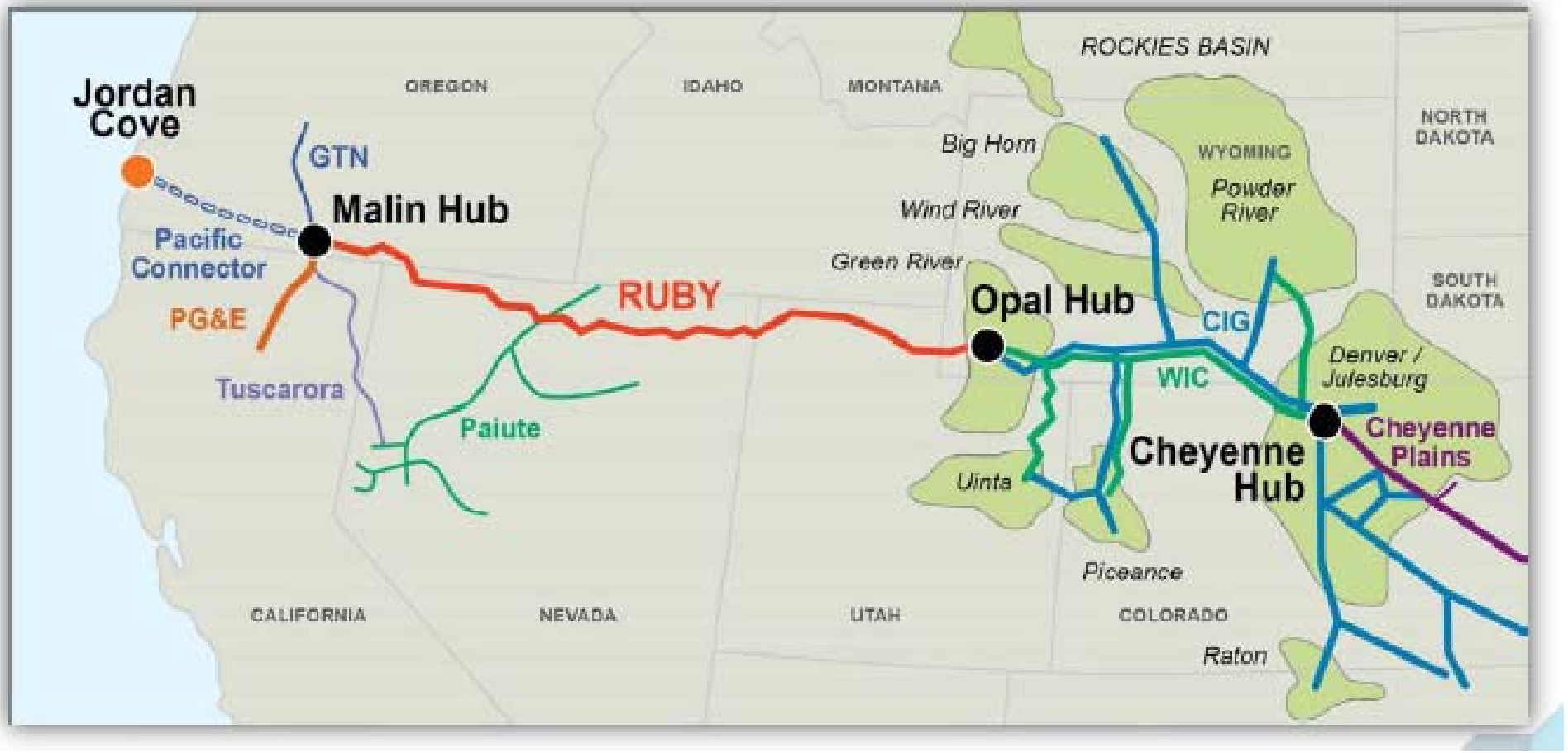
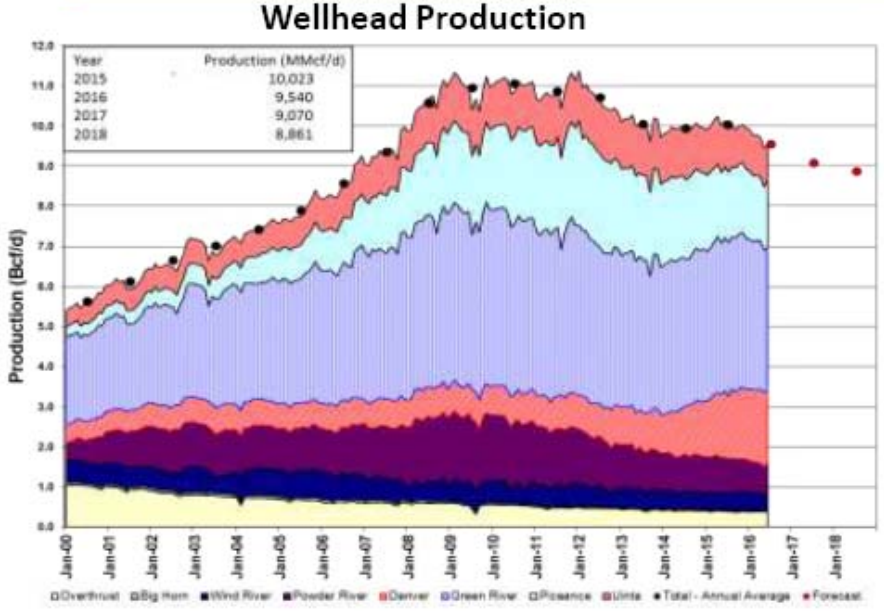
Piceance to Pacific



Source: Veresen Corporate Presentation, November 2014

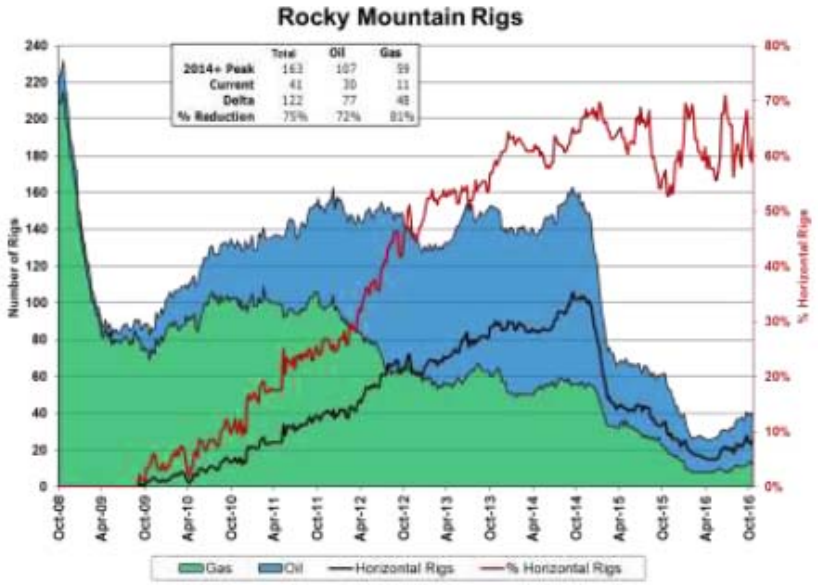
Rockies Production Trends



- Wellhead production has declined 0.4 Bcf/d over last year
- Relative to 2015, declines through 2018, followed by growth as gas prices recover. Only basin with material growth over the next decade is the Denver basin.
- Horizontal drilling = 65% of all rigs
- Positive November ballot initiatives

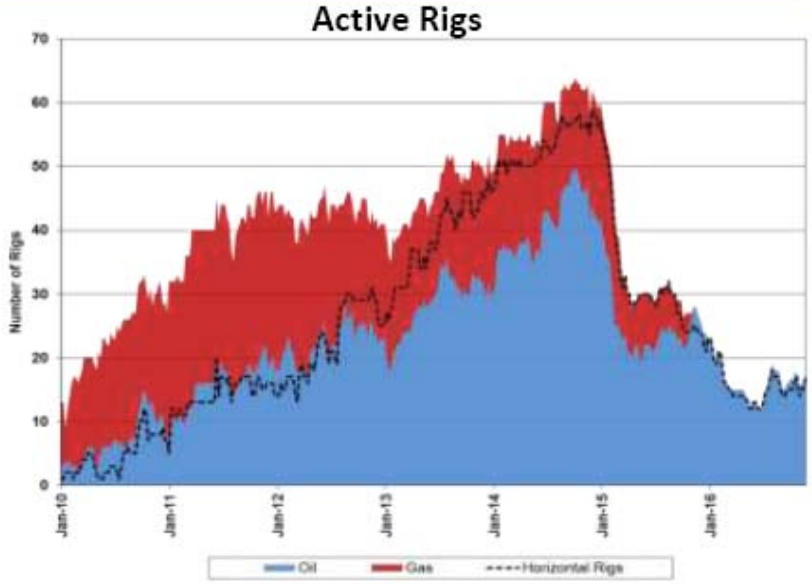
Basin	Current Dry Production MMcf/d	YOY Prod Growth MMcf/d	Current Rigs Gas/Oil
Green River	3,028	(207)	10/1
Piceance	1,455	(192)	4/0
Uinta	711	(102)	0/3
Denver/Julesburg	1,618	225	0/18
Powder River	379	(95)	0/6
Other	102	(24)	0/0
Total	7,293	(395)	14/28

Active Rigs



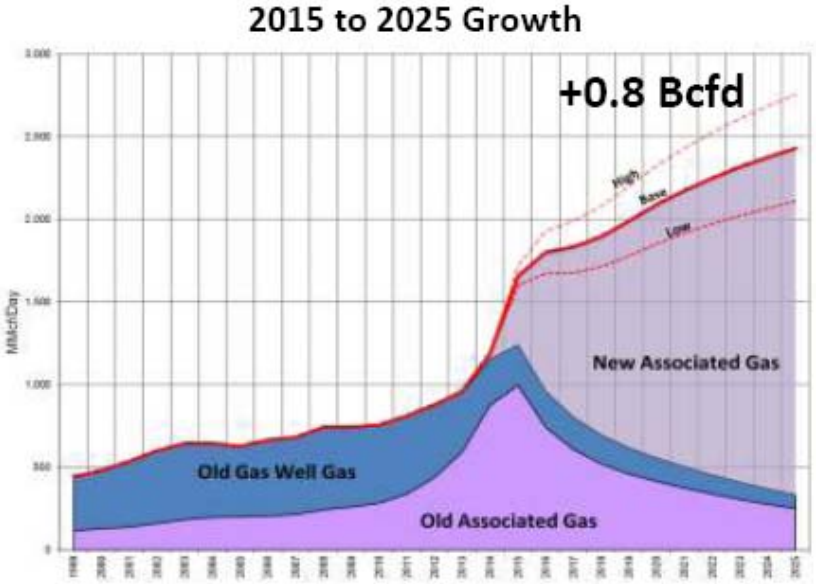
Source: *U.S. Natural Gas Outlook,* George Wayne, KinderMorgan, December 2016

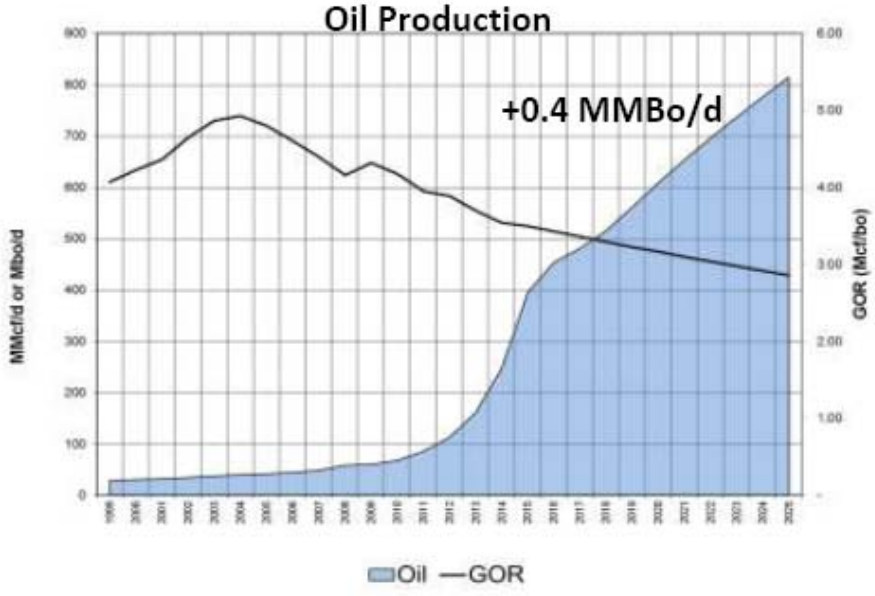
DJ Basin Update



It is anticipated that rigs will return to the Denver Basin as commodity prices stabilize. Anadarko and Noble will more than double their rig activity levels in 2017 compared to 2016.

CIG/High Plains is well positioned to transport most of the growing DJ production output over the long-term, providing delivery into Cheyenne Hub or to Front Range demand.





Source: *U.S. Natural Gas Outlook,* George Wayne, KinderMorgan, December 2016

Comparative Rockies Rig Count

	2014 Average	Quarter 1, 2015	Quarter 2, 2015	Quarter 2, 2016	Quarter 2, 2017
DJ Niobrara	54	44	34	12	25
Piceance Basin	12	10	9	3	8
Uinta Basin	28	14	8	3	8
Powder River Basin	34	23	12	1	11
Greater Green River Basin	17	13	12	6	12
Williston Basin	186	135	95	25	47

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Source: Tudor Pickering Holt & Co. Weekly Rig Roundup, February 23, 2015, April 6, 2015 and June 19, 2017

Wyoming and Colorado Crude Oil Pricing Comparison

	August 1, 2014 (price per barrel)	April 8, 2015 (price per barrel)	June 21, 2017 (price per barrel)
WY Asphalt Sour	$68.50	$26.50	$28.75
WY General Sour	$69.50	$27.50	$29.75
WY Heavy Sour	$74.34	$32.38	$29.35
WY Medium Sour	$75.59	$33.28	$30.35
WY Southwest	$85.88	$40.42	$34.28
WY Sweet (Other)	$82.88	$38.57	$34.83
CO Eastern Sweet	$82.38	$38.07	$34.73

Source: *Shell Energy Connect*, Shell Trading (US) Company posted prices

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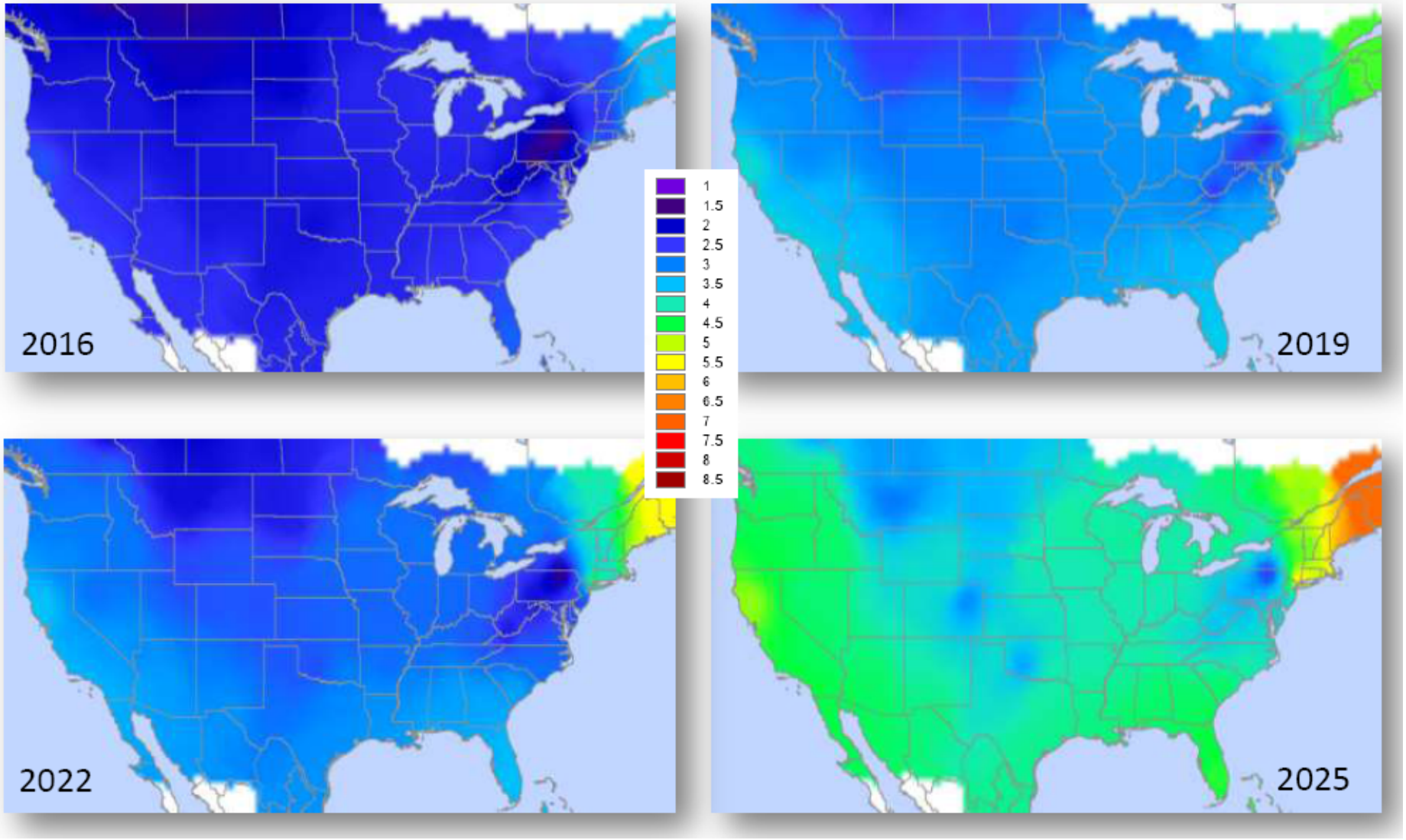
Natural Gas Price Outlook



Source: *U.S. Natural Gas Outlook,* George Wayne, KinderMorgan, December 2016

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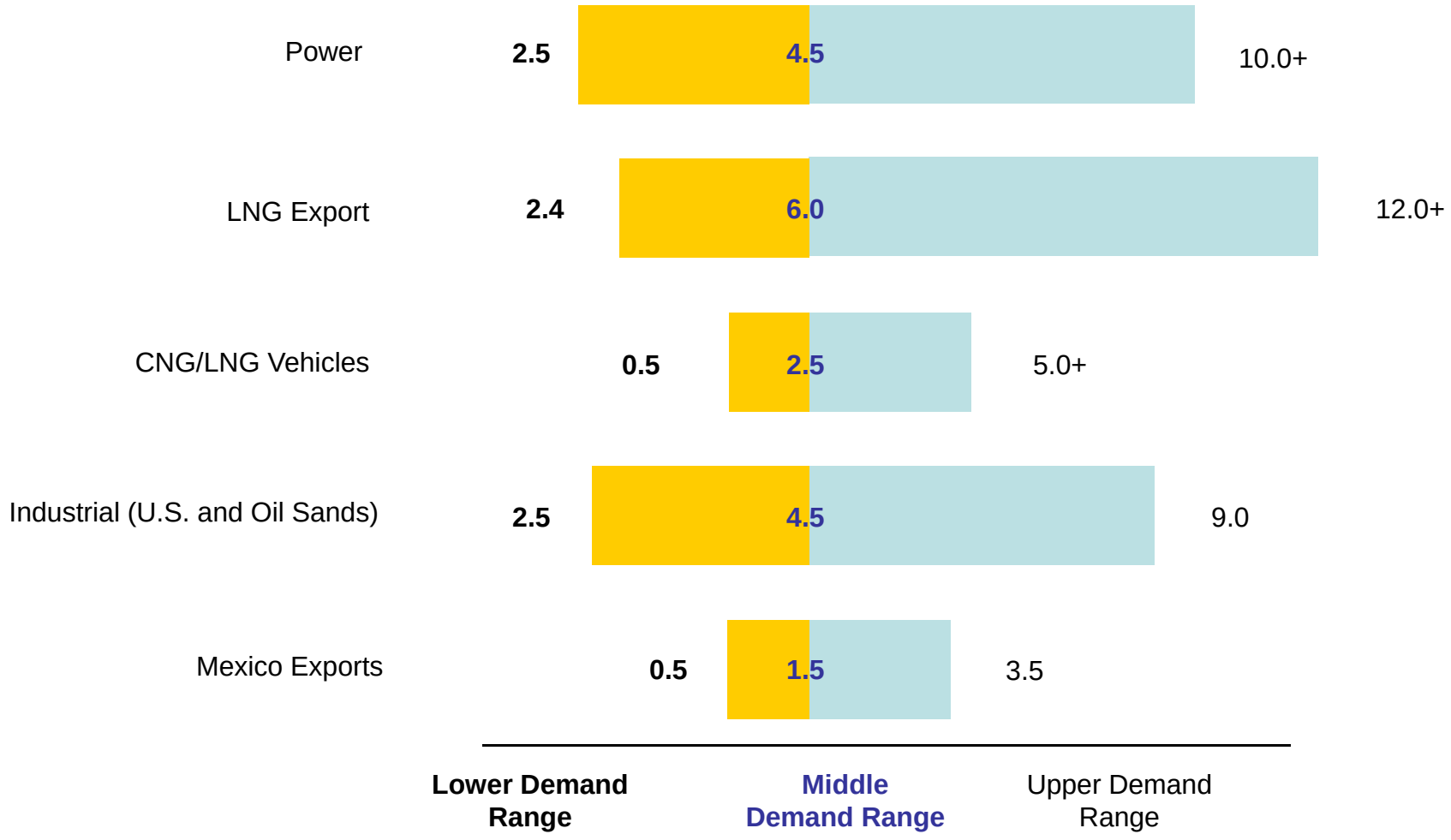
North American Natural Gas

Demand Ranges by Selected Sector

Significant demand growth is possible in the LNG, transportation/HHP and power sectors through 2020 in Bcf per day.



Source: Encana Corporate Presentation, August 2013; Industrial Energy Consumers of America; Bentek Energy; Raymond James; Michael Smith, Chairman & CEO Freeport LNG, Industry Sources

World LNG Estimated October 2014 Landed Prices
($U.S./MMBtu)

Source: Waterborne Energy, Inc. Data in $US/MMBtu. Landed prices are based on a netback calculation.
Note: Includes information and Data supplied by IHS Global Inc. and its affiliates ("IHS"); Copyright (publication year) all rights reserved.
Prices are the monthly average of the weekly landed prices for the listed month.

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World LNG Estimated January 2015 Landed Prices
($U.S./MMBtu)

Source: Waterborne Energy, Inc. Data in $US/MMBtu. Landed prices are based on a netback calculation.

Prices are the monthly average of the weekly landed prices for the listed month.

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World LNG Estimated April 2017 Landed Prices
($U.S./MMBtu)

Source: Waterborne Energy, Inc. Data in $US/MMBtu. Landed prices are based on a netback calculation. Updated: May 2017
Note: Includes information and Data supplied by IHS Global Inc. and its affiliates ("IHS"); Copyright (publication year) all rights reserved.
Prices are the monthly average of the weekly landed prices for the listed month.

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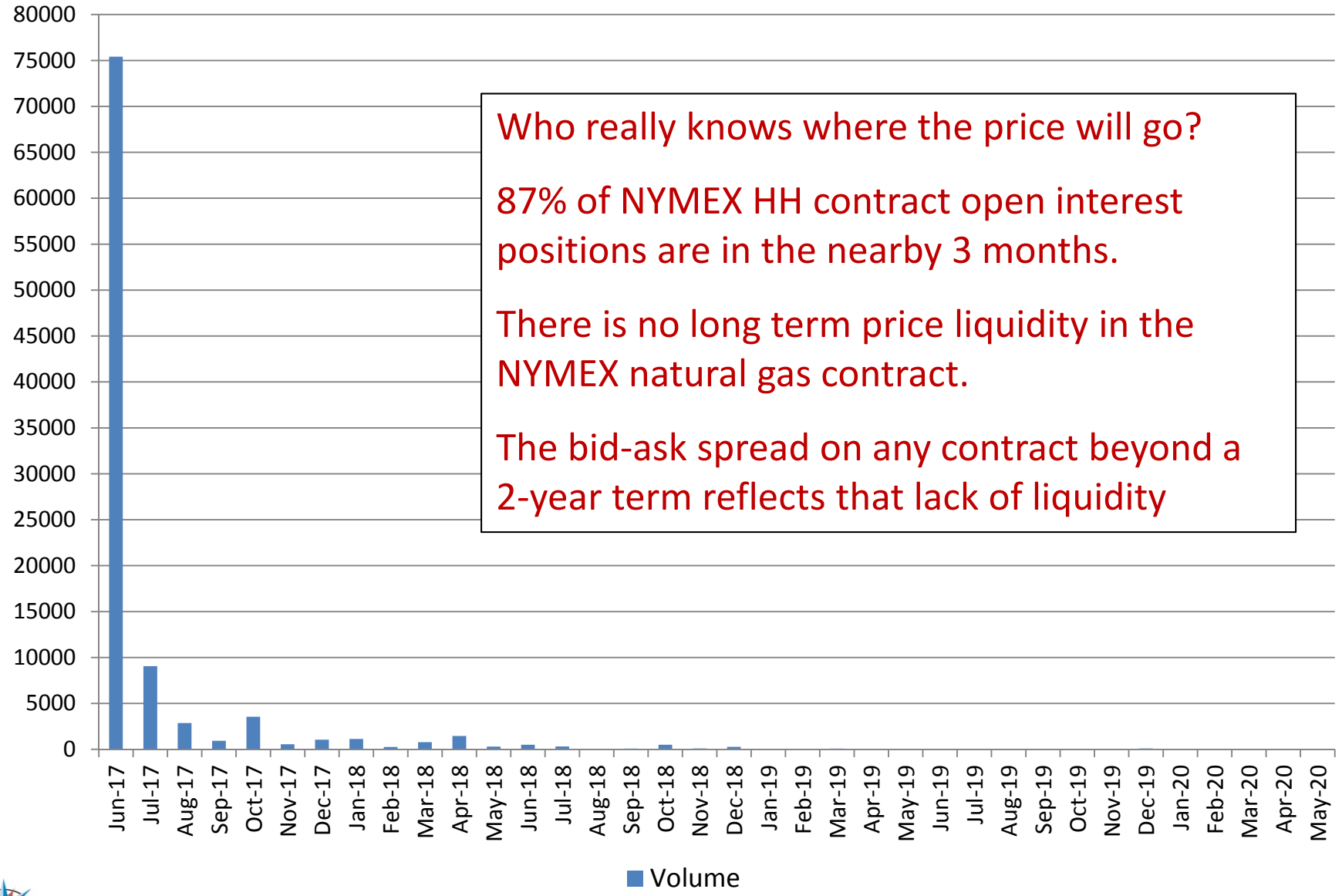
NYMEX Henry Hub Gas Futures Contract Open Interest Position



Who really knows where the price will go?

87% of NYMEX HH contract open interest positions are in the nearby 3 months.

There is no long term price liquidity in the NYMEX natural gas contract.

The bid-ask spread on any contract beyond a 2-year term reflects that lack of liquidity

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Source: *NYMEX Henry Hub Gas Futures Contract, May 1,* S&P Platts Gas Daily, May 2, 2017

U.S. Dry Natural Gas Production

- Current U.S. dry natural gas production: approximately 70 BCF/d (2 BCF/d lower YOY)
- Need 72-73 BCF/d to balance current supply and demand
- Lower crude prices equate to less associated gas production
- Dry gas production increase must occur but may need a price signal of "$4.00-4.50 per MMBtu to clear the market"[1]

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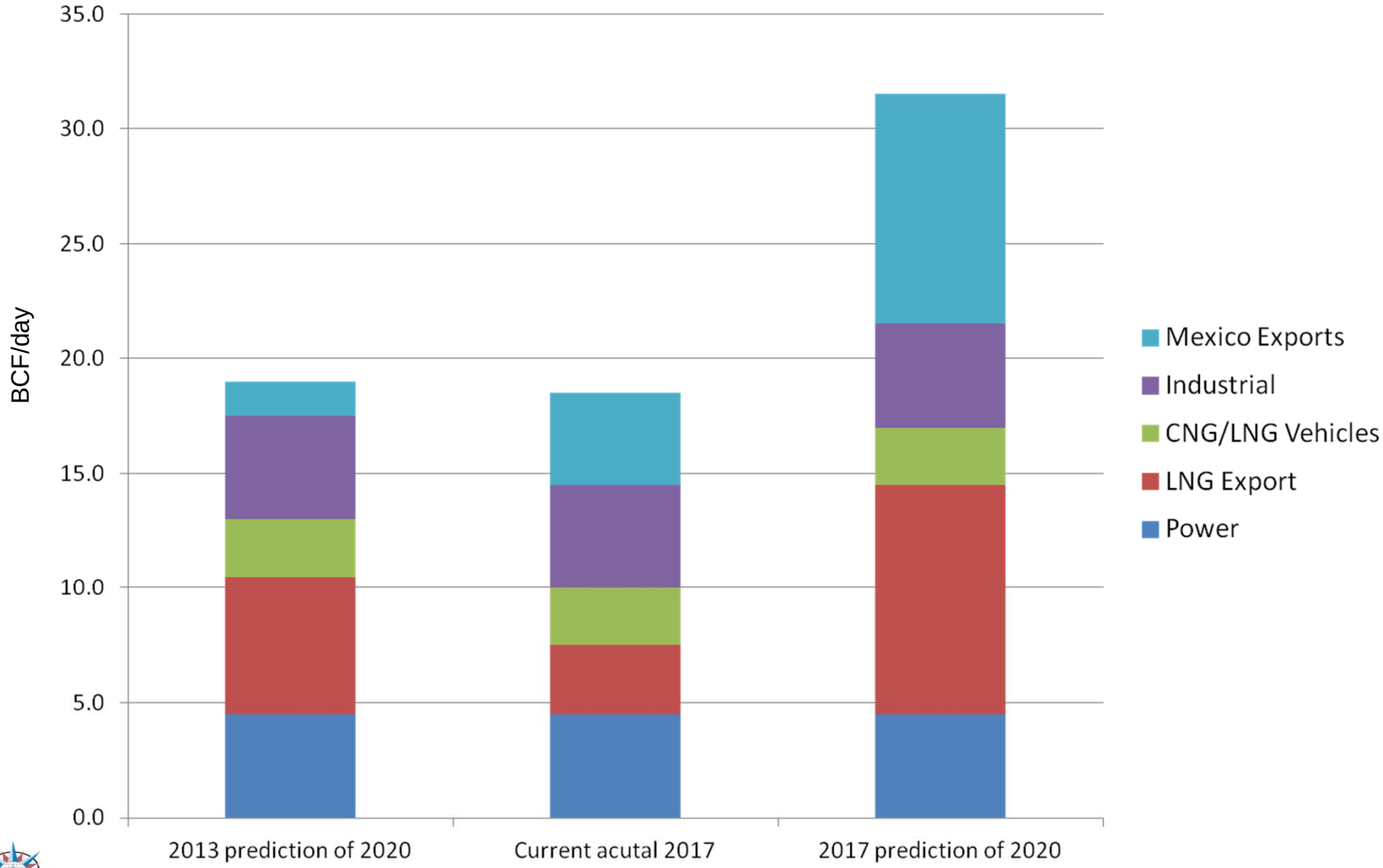
Sources: *Market Bulletin: The Week Ahead, May 1, 2017,* Drilling Info
Analyst Sees $3.50-$4.00 Natural Gas, American Oil & Gas Reporter, April 2017
[1] According to Porter Bennett, President and CEO of Ponderosa Advisors

North American Natural Gas

Demand Ranges by Selected Sector



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Two Significant Growth Areas for Demand

- U.S. LNG Exports
- Pipeline exports to Mexico

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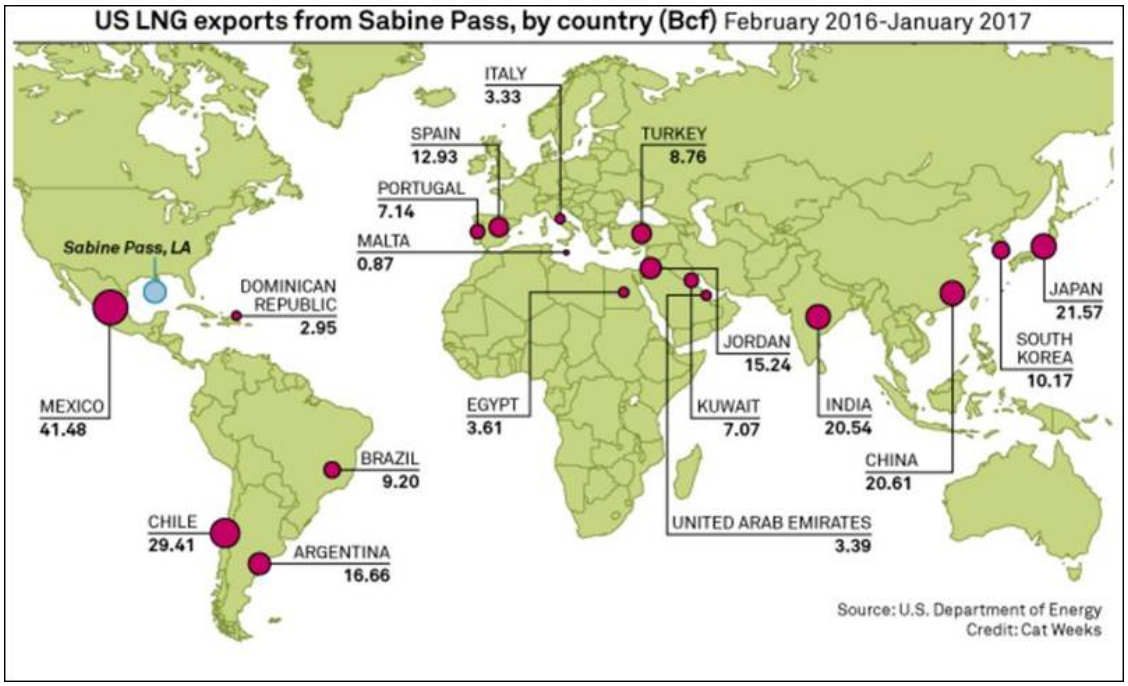
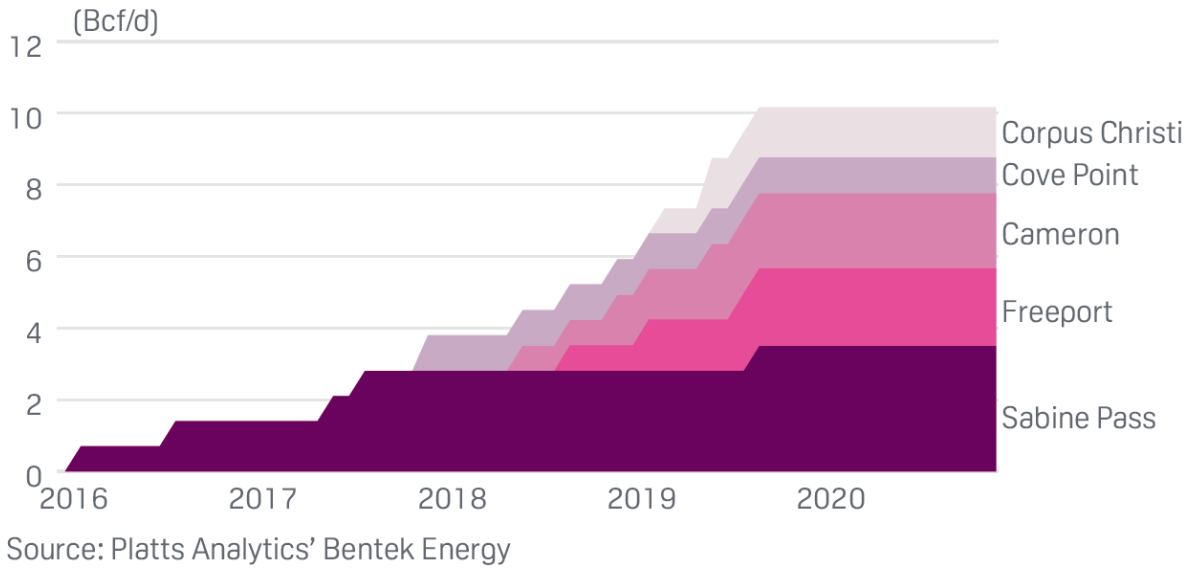
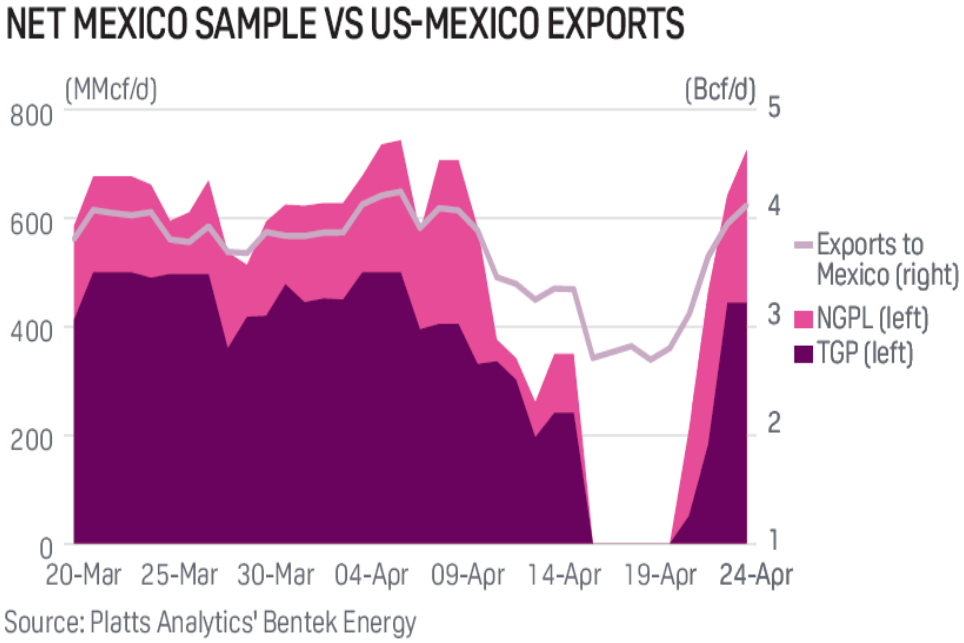


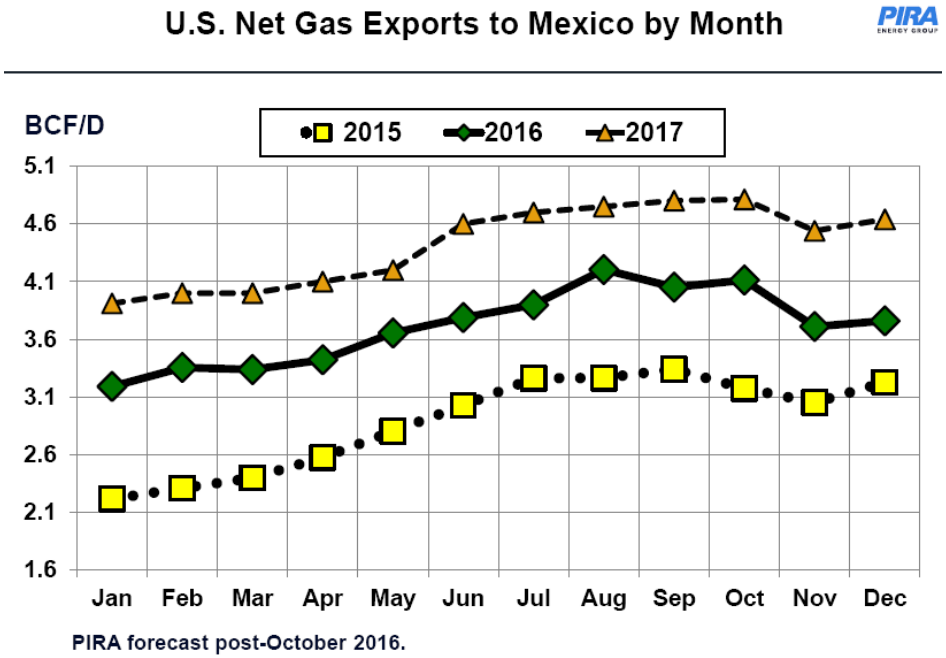
Cheniere Energy exports 100th LNG cargo



Source: *LNG buyers pushing US exporters to be flexible*, Harry Weber, Grant Gunter, Gas Daily, S&P Global Platts Publication, February 10, 2017

South to the Border





Sources: *US-Mexico exports hit pre-maintenance levels,* J. Robinson and Thad Walker, S&P Global Platts Gas Daily, April 25, 2017
North American Gas Forecast Monthly, PIRA, January 30, 2017

Harsh Reality

- If crude oil prices stay range bound at $45-$55, is that a high enough price to create incremental associated gas volumes? No.
- Where will we come up with an additional 14 BCF/day of incremental gas production by 2020?
- Higher dry natural gas prices may be the only significant incentive for additional natural gas volumes

Predictions from 2 Years Ago

Winners

- China/Asia
- Consumer growth; consumer spending
- U.S. nitrogen fertilizer industry
- Steel producers
- Refiners
- Chemical producers
- Aluminum smelters
- Natural gas fired electric generators

Losers

- U.S. Energy Security
- State and local governments in oil & gas producing states
- Oil & gas E&P's
- Oil & gas employment
- Oil & gas service companies
- U.S. LNG exporters who have not made an FID
- MLP's
- Retirement funds
- Renewable energy sector – cheap energy will destroy the "Green Revolution"
- Russia, Iran, Venezuela

Conclusions – 2 Years Ago

- Crude and NGL prices won't recover for at least 2 years
- U.S. crude, NGL & natural gas production won't decline as quickly as OPEC expects
- U.S. producers will allocate capital to their highest IRR projects
- Low NGL prices create a problem for MLP's
- U.S. "short cycle" drilling (dependent on near term quarter cash flow) will result in U.S. drillers feeling most of the pain
- The "recovery time" will exceed any hedge terms

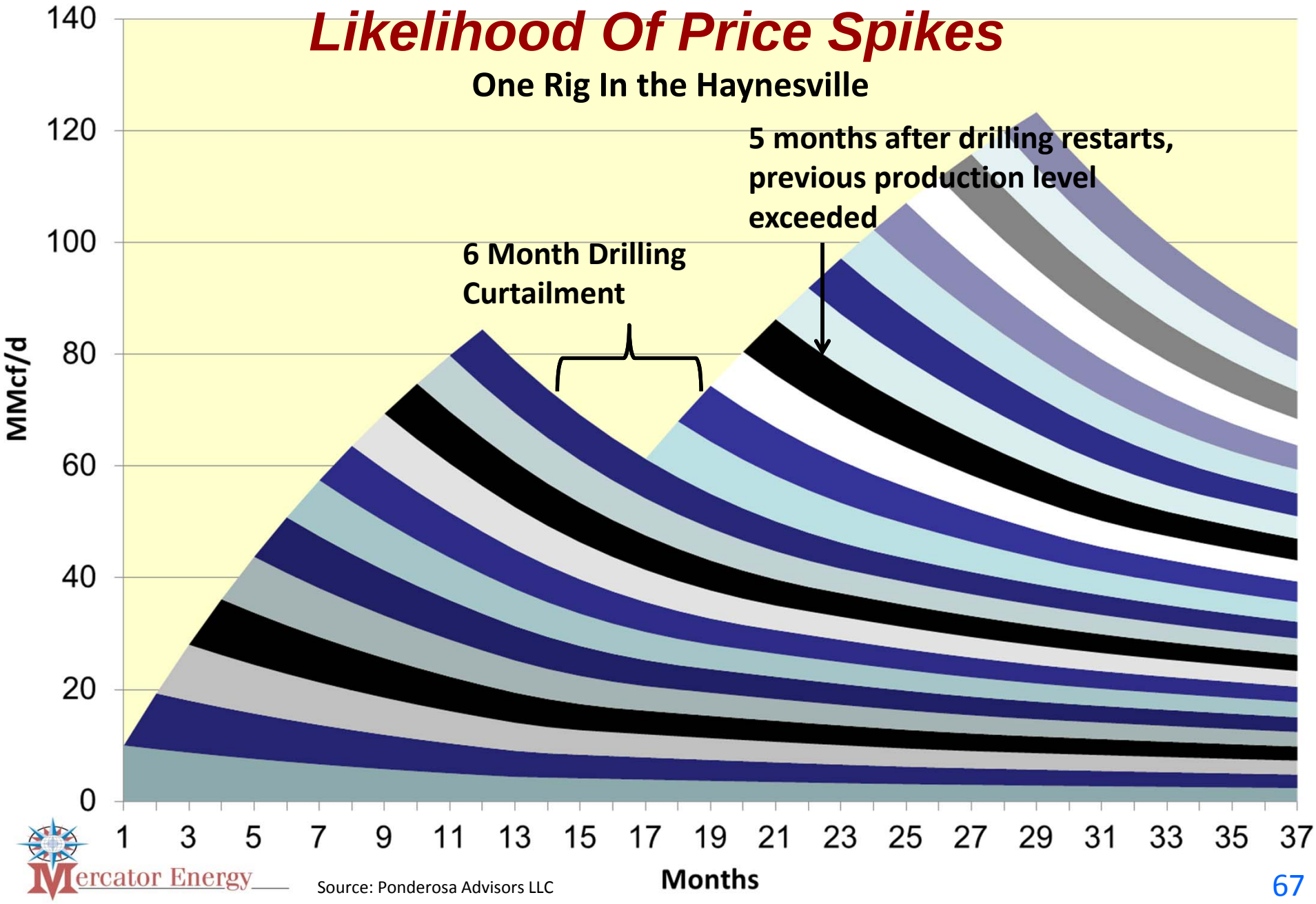
Conclusions – 2 Years Ago

- The supply response will eventually materialize but it will take longer than expected
- The DJ basin is disadvantaged in terms of geography (high transport costs to market) and crude-quality (light, lower value crude) … and will experience a significant slowdown in drilling.
  - State & Local revenues will be impacted
  - The lower crude price is more significant to tax revenue in the 1-3 year timeframe than a slowdown in drilling

Conclusions – Current

- With regard to energy, most of our lives have been spent considering all forms of energy as a scarce resource
- Thanks to the Shale Revolution, that will not be the case in the future
- That reality will have many, many geopolitical consequences

The "Ferrari" Affect Substantially Reduces The Likelihood Of Price Spikes



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Source: Ponderosa Advisors LLC

Citations for Report

All of the information utilized for this report is a compilation of information pulled from the following data sources:

Energy Information Administration (EIA)
Bentek Energy, Jack Weixel
Ponderosa Advisors LLC
Office of Energy Projects
Bloomberg
U.S. Department of Energy
Raymond James and Associates, Inc.
Wikipedia
The Power and Natural Gas Planning Taskforce
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Rueters
Oilprice.com
RBN Energy
Chevron
Encana Corporation
Waterborne Energy, Inc.
Colorado Oil and Gas Conservation Commission
Wyoming Pipeline Authority, Brian Jeffries
National Energy Board
PennState Marcellus Center for Outreach and Research
BC Oil & Gas Commission
Kinder Morgan, George Wayne
Shell Energy Connect
Tudor Pickering Holt & Co.
Tea Party Command Center
USA Today
Veresen

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