



State of the Upstream Industry

Where the Action Is

International Petroleum Environmental Conference

San Antonio, Texas

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Overview

- State of the Industry
- Where The Action Is
 - Long-term – EIA*
 - Short-term - Permits
 - Current - Rigs
- Sustainability
- Data Management
- Conclusions

*U.S. Energy Information Administration



State of the American Energy Industry

- “We have unleashed a revolution in American Energy – the United States is now the number one producer of oil and natural gas in the world. And now, for the first time in 65 years, we are a net exporter of energy”
 - President Donald Trump – State of the Union 2019

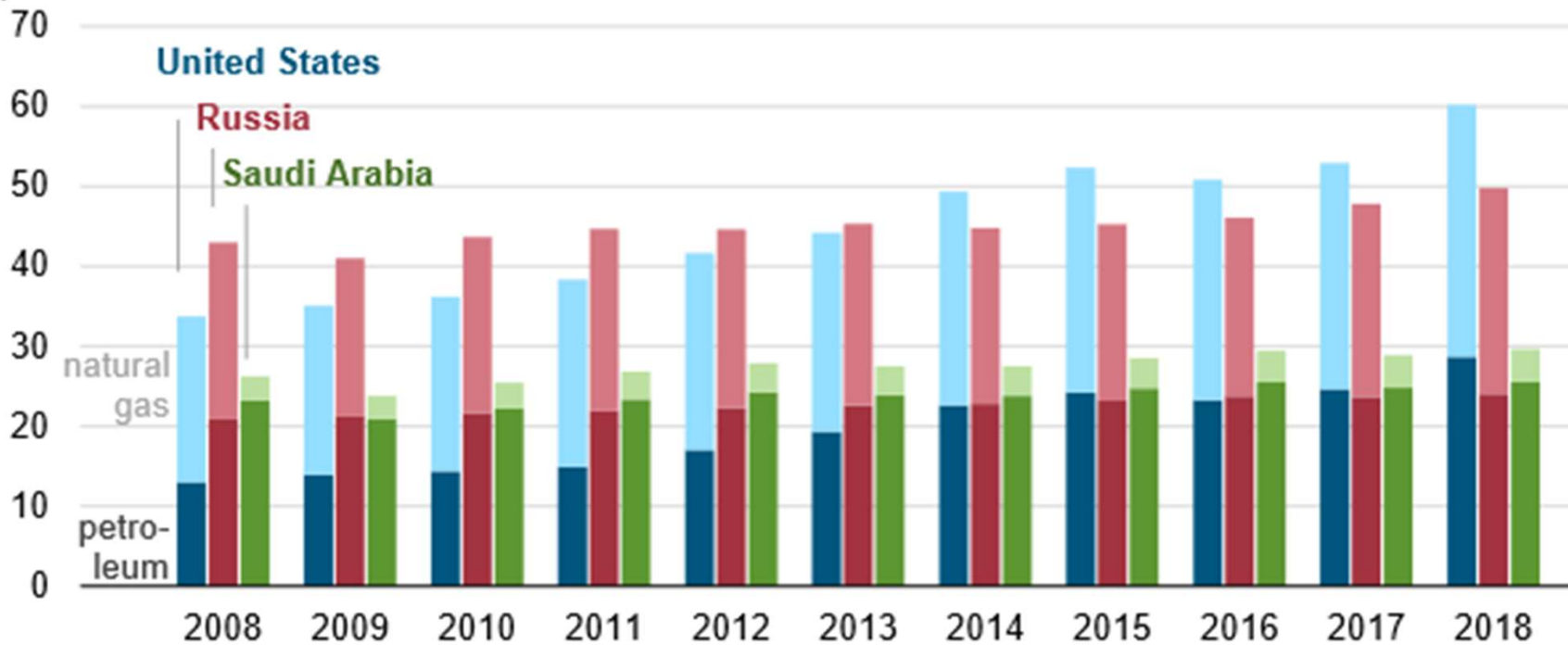


<https://www.whitehouse.gov/>

Where the Action Is

The US is the Number One Producer

Estimated petroleum and natural gas production in selected countries
quadrillion British thermal units

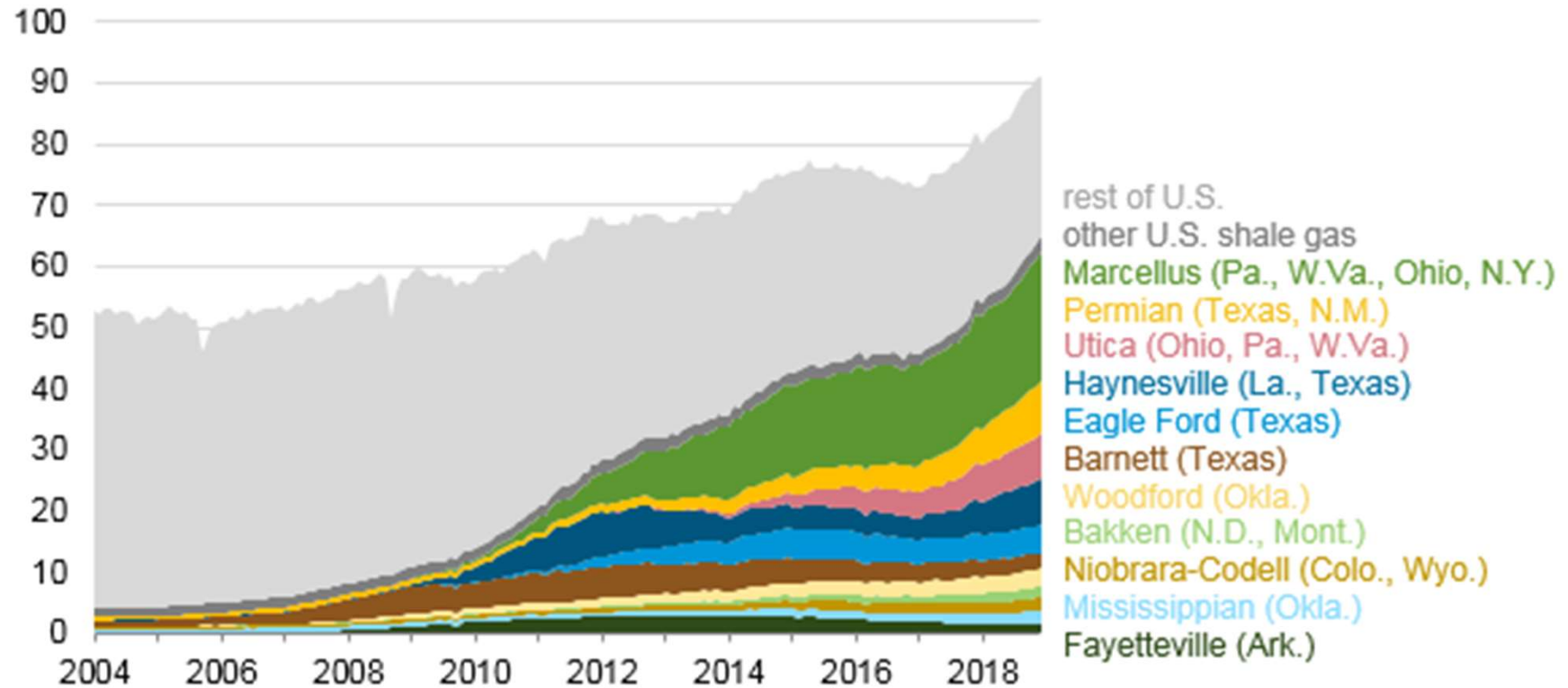


<https://www.eia.gov/todayinenergy/detail.php?id=40973>

Gas Production History

Monthly U.S. dry natural gas production (2004-2018)

billion cubic feet per day



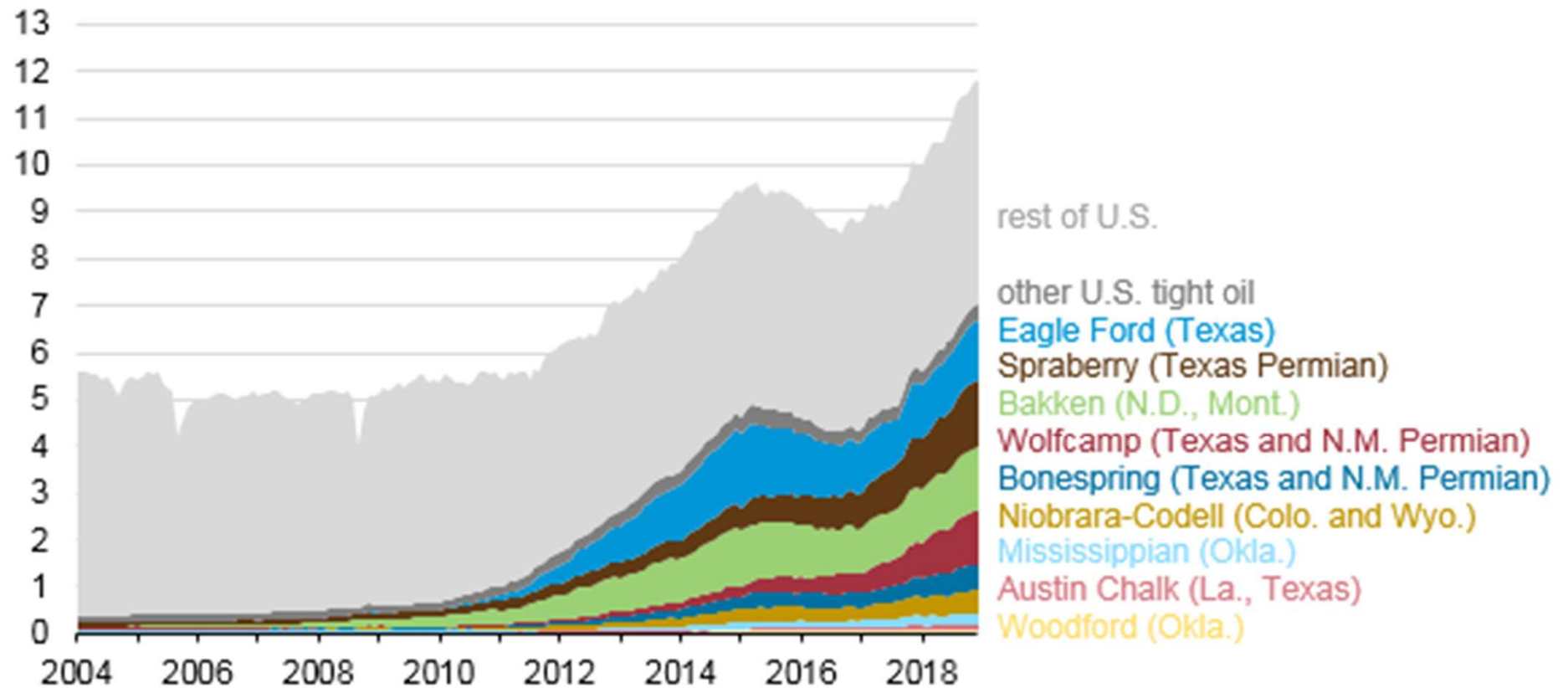
U.S. Energy Information Administration

Where the Action is

Oil Production History



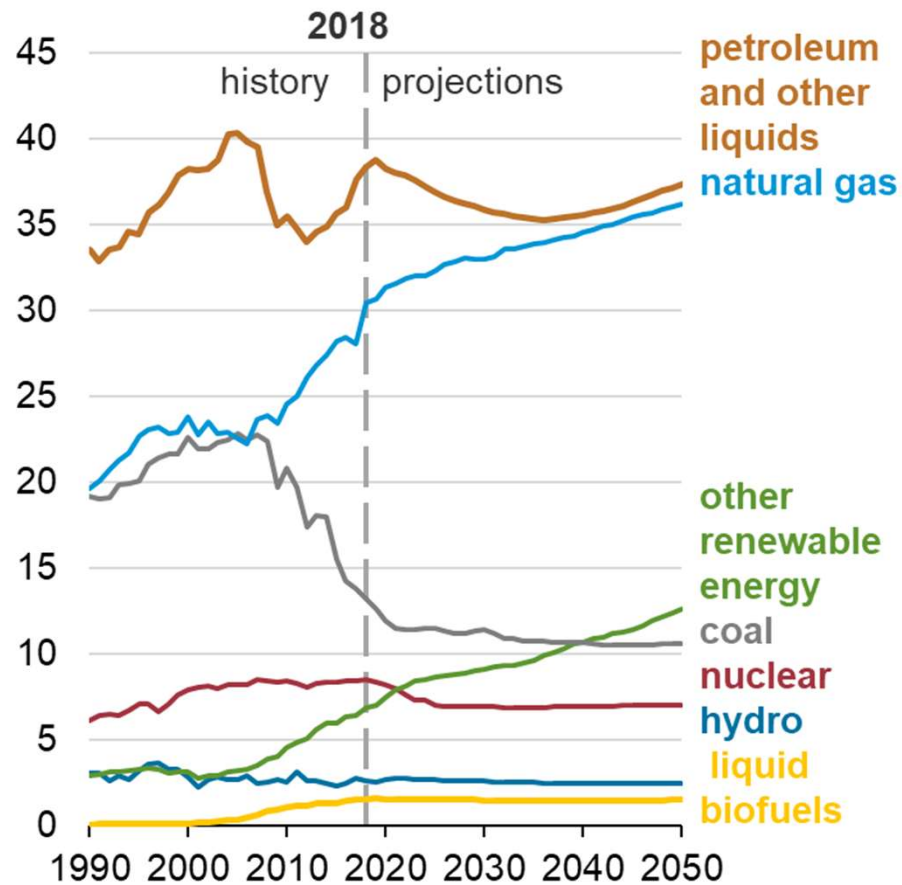
Monthly U.S. crude oil production (2004-2018)
million barrels per day



U.S. Energy Information Administration

U.S. Energy Demand by Fuel

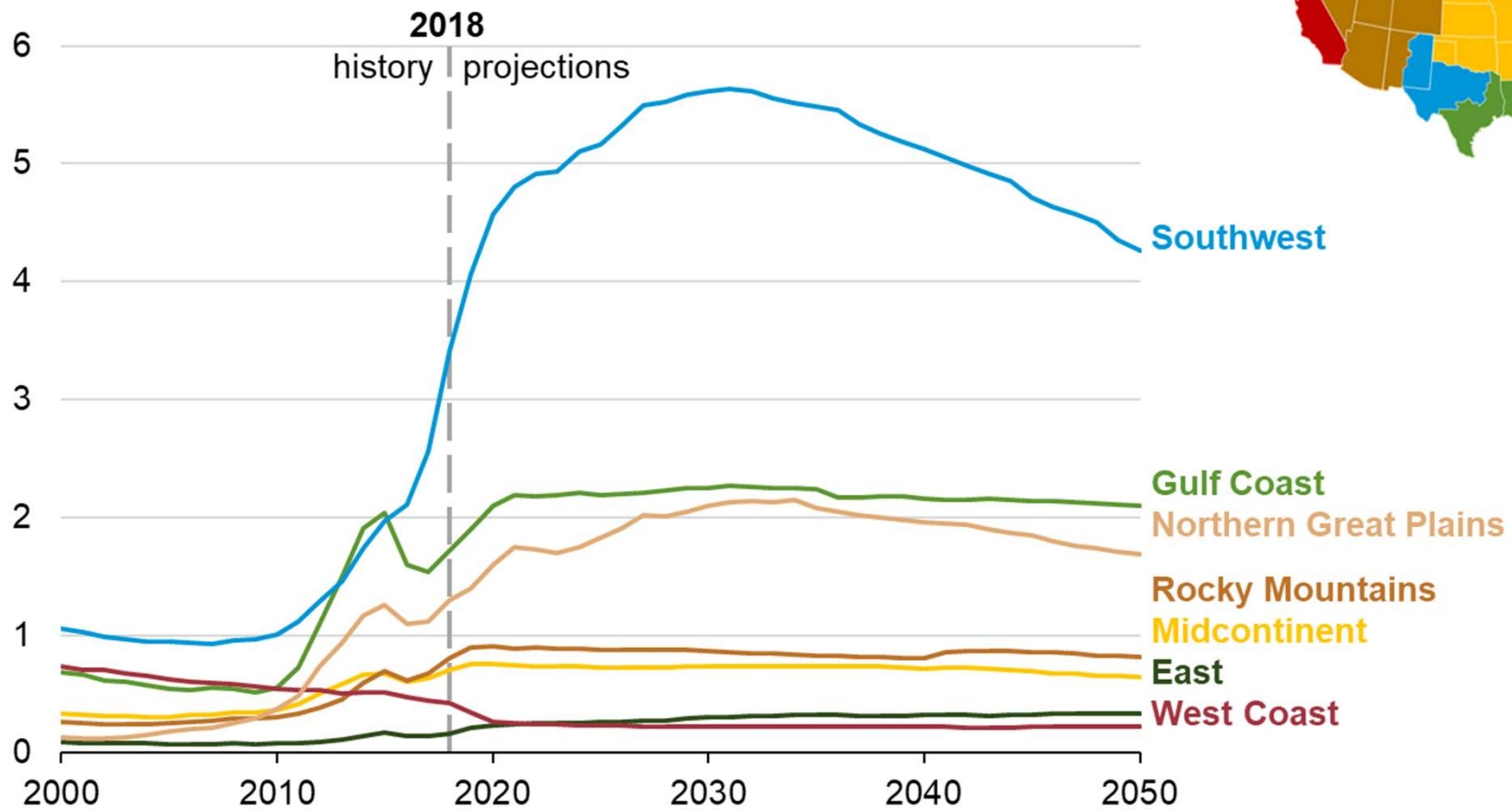
Energy consumption by fuel (Reference case)
quadrillion British thermal units



Annual Energy Outlook 2019. U.S. Energy Information Administration

Oil Production – Future Projections

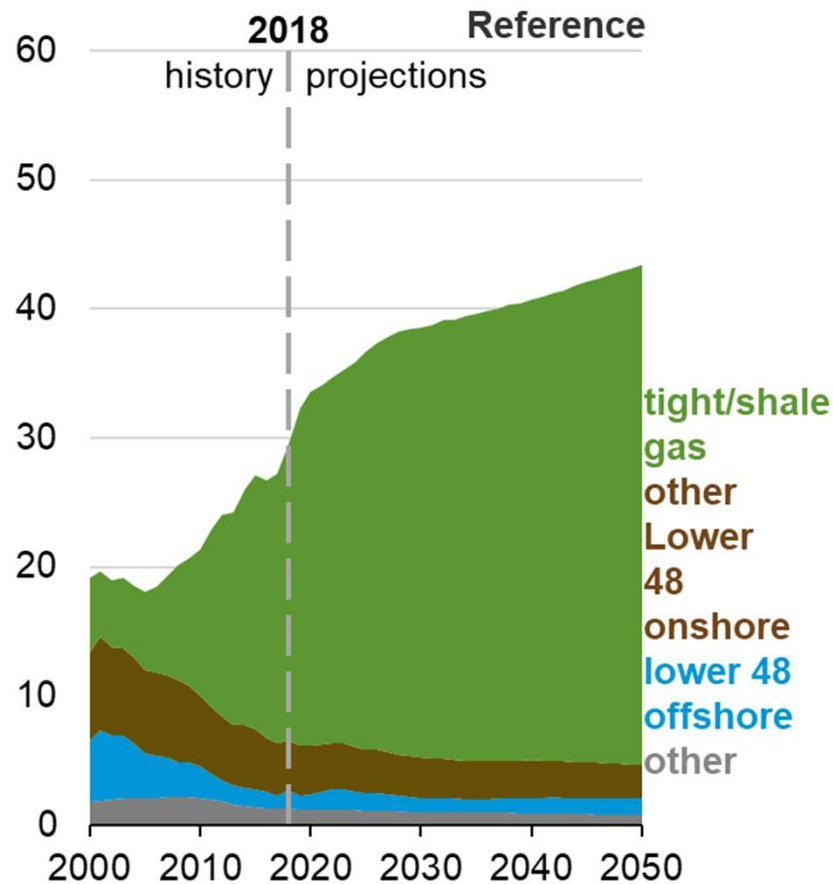
Lower 48 onshore crude oil production by region (Reference case)
million barrels per day



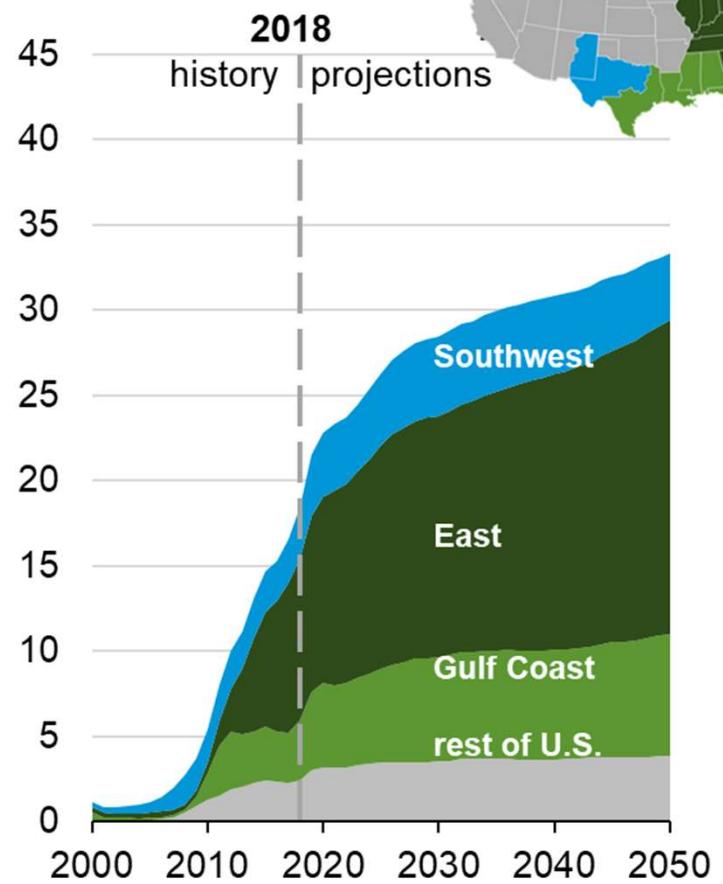
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Gas Production – Future Projections

Dry natural gas production by type
trillion cubic feet



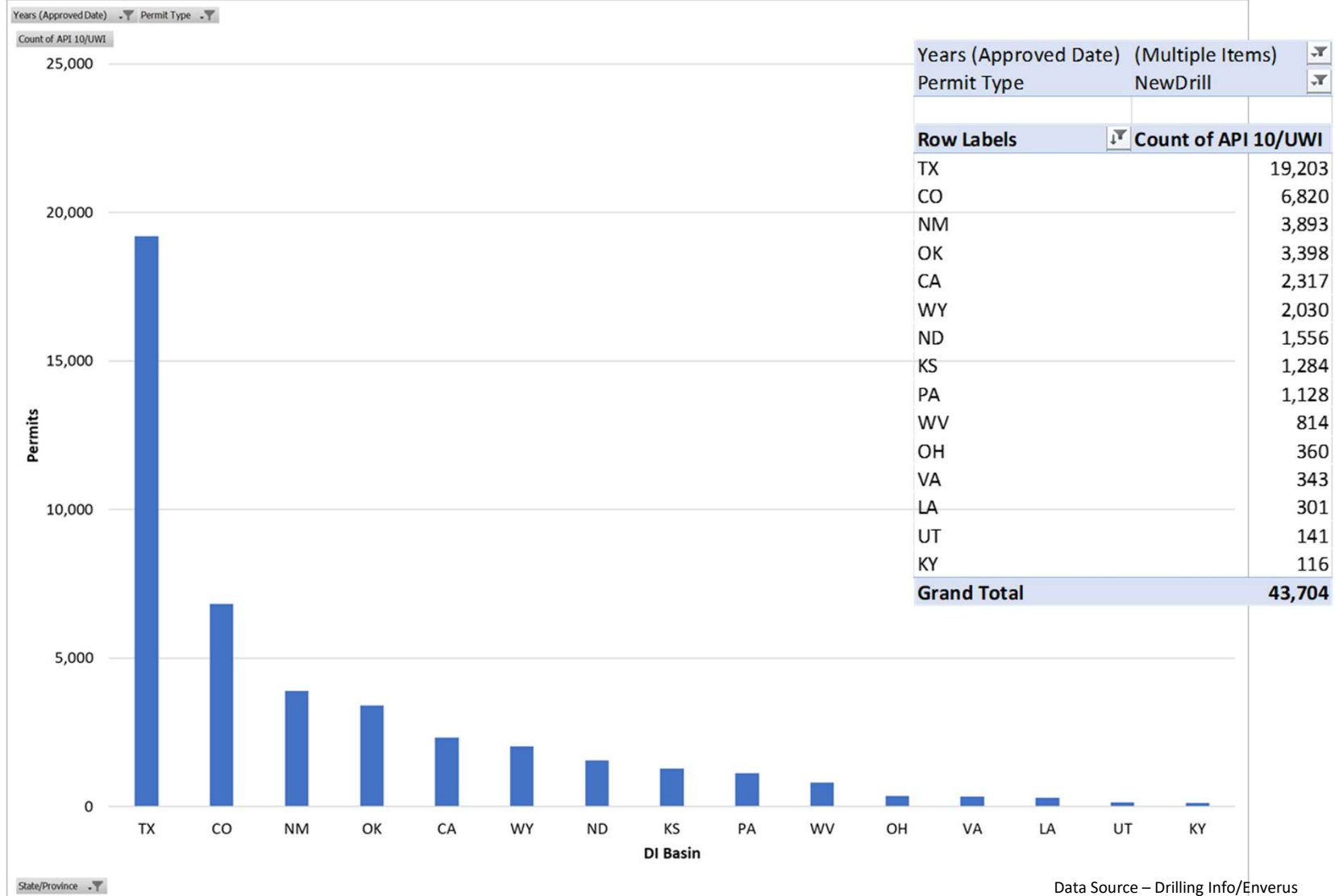
Dry shale gas production by region
trillion cubic feet



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Where the Action Is

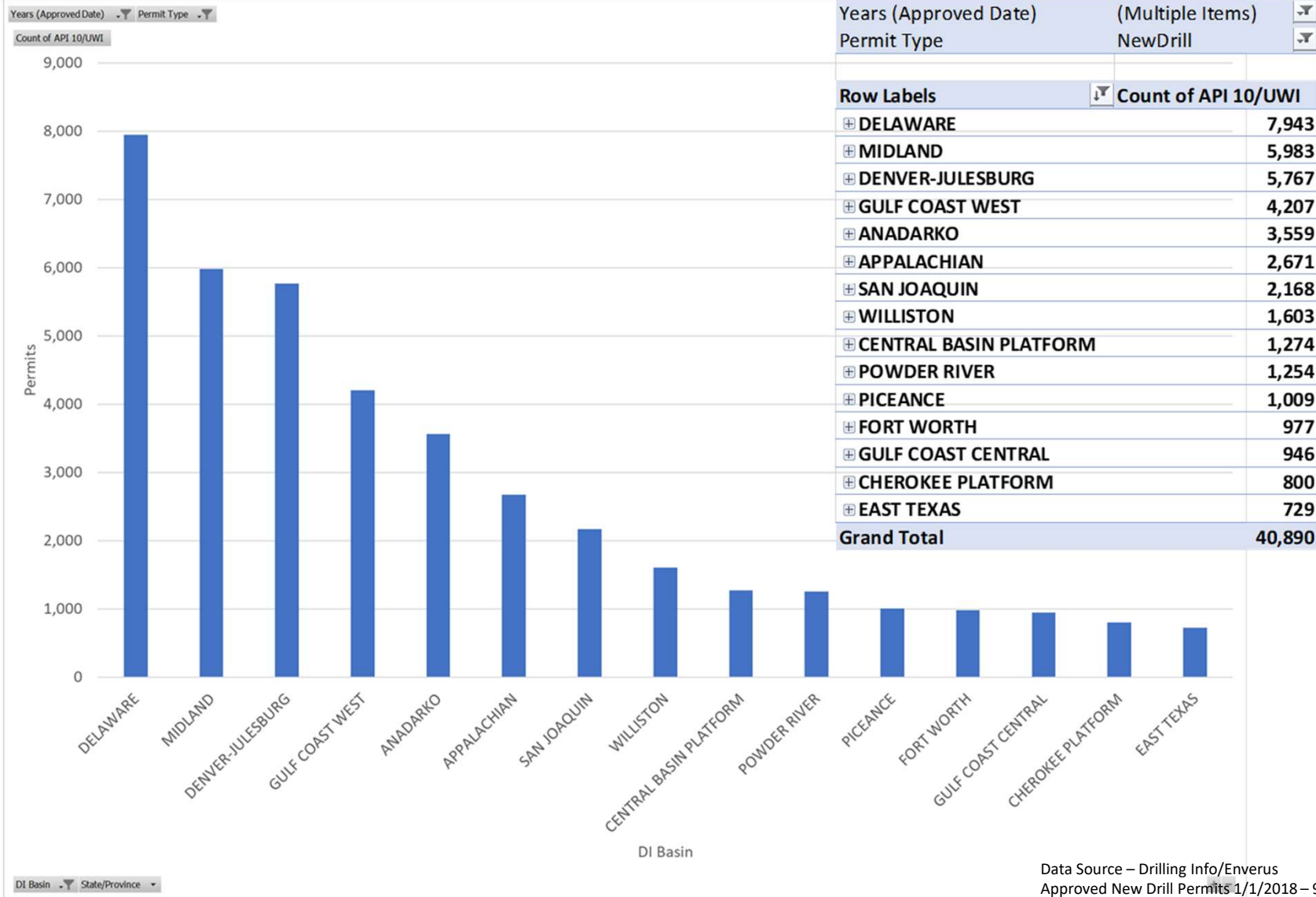
Permits - Top 15 States



Data Source – Drilling Info/Enverus
Approved New Drill Permits 1/1/2018 – 9/9/2019

Where the Action Is

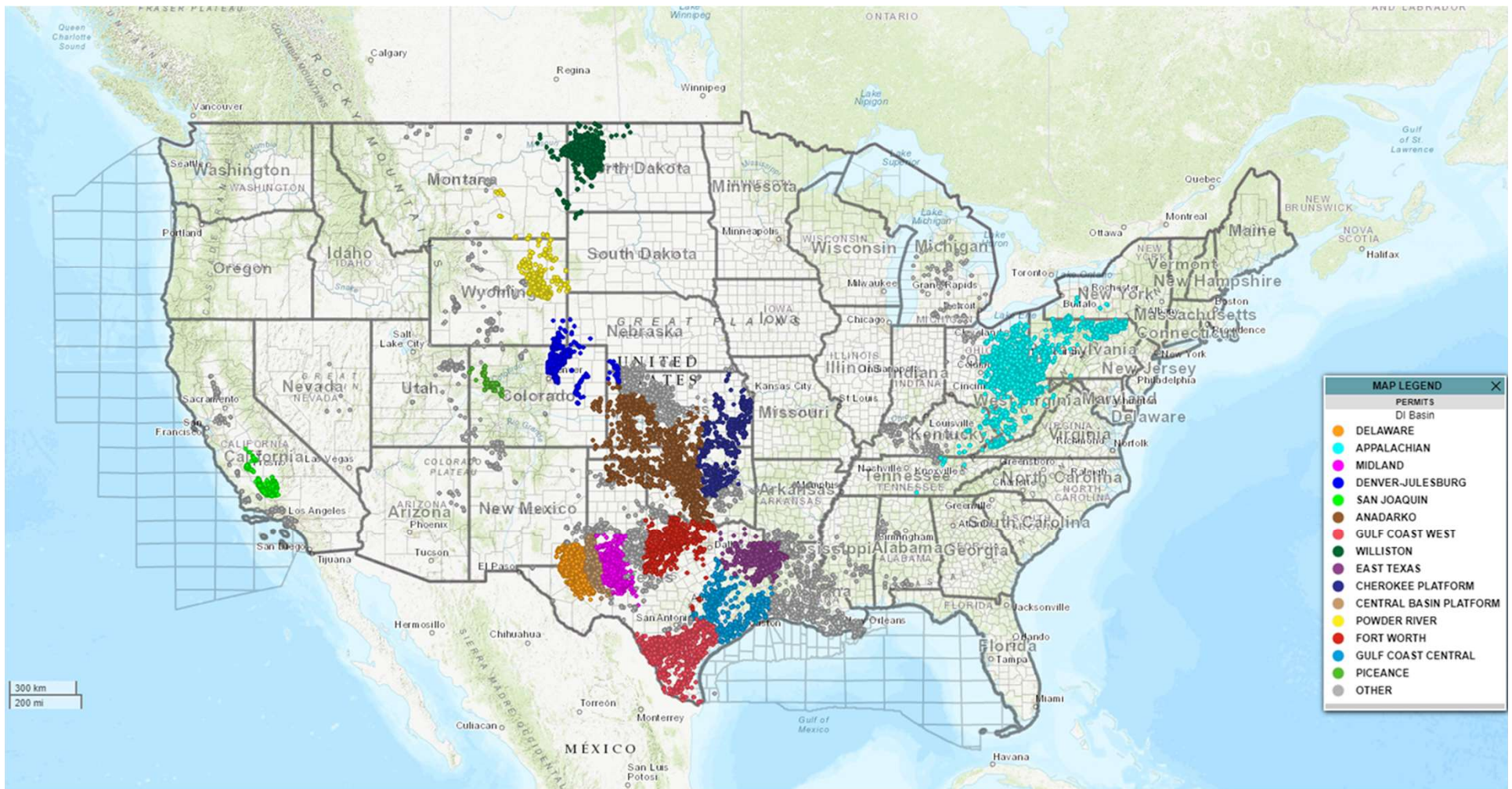
Permits - Top 15 Basins



Data Source – Drilling Info/Enverus
Approved New Drill Permits 1/1/2018 – 9/9/2019

Where the Action Is

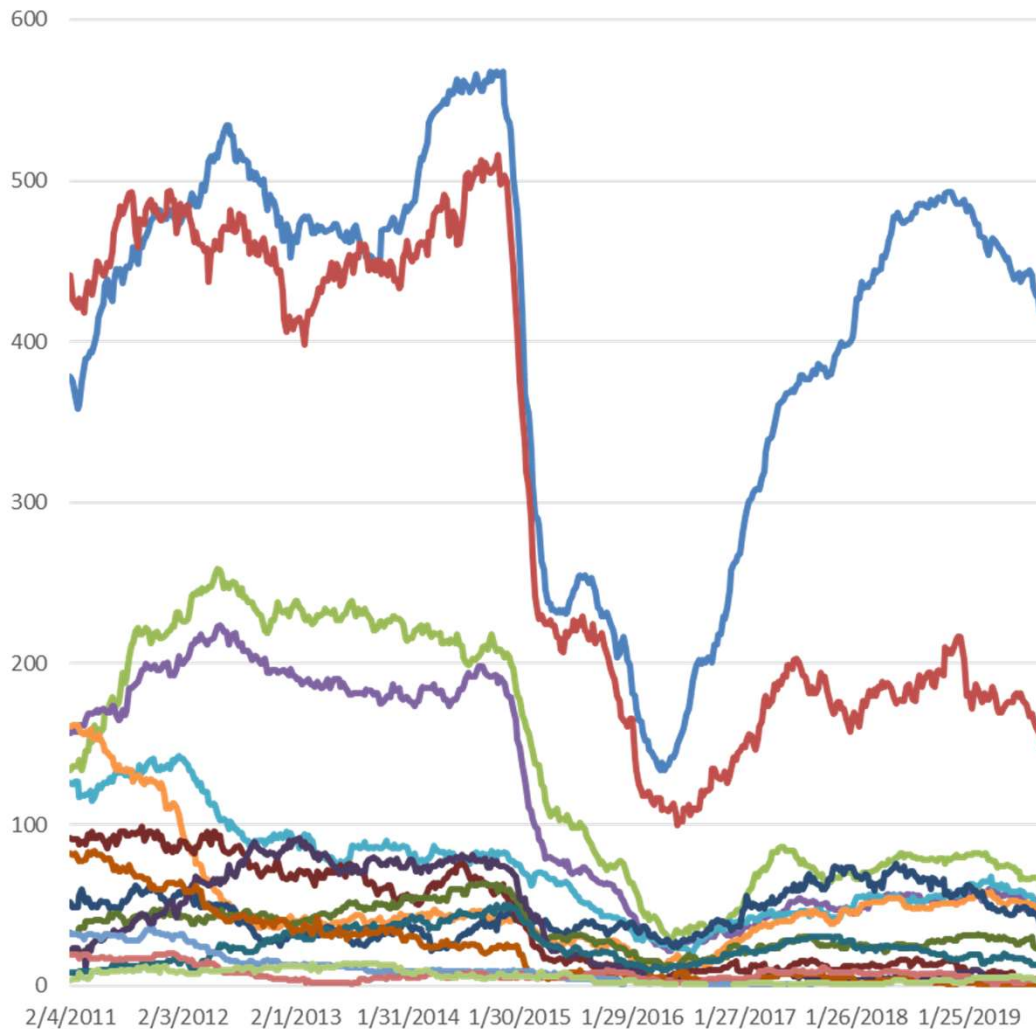
Permits by Basin



Data source – Drilling Info/Enverus

Where the Action Is

Rig Count – History by Play

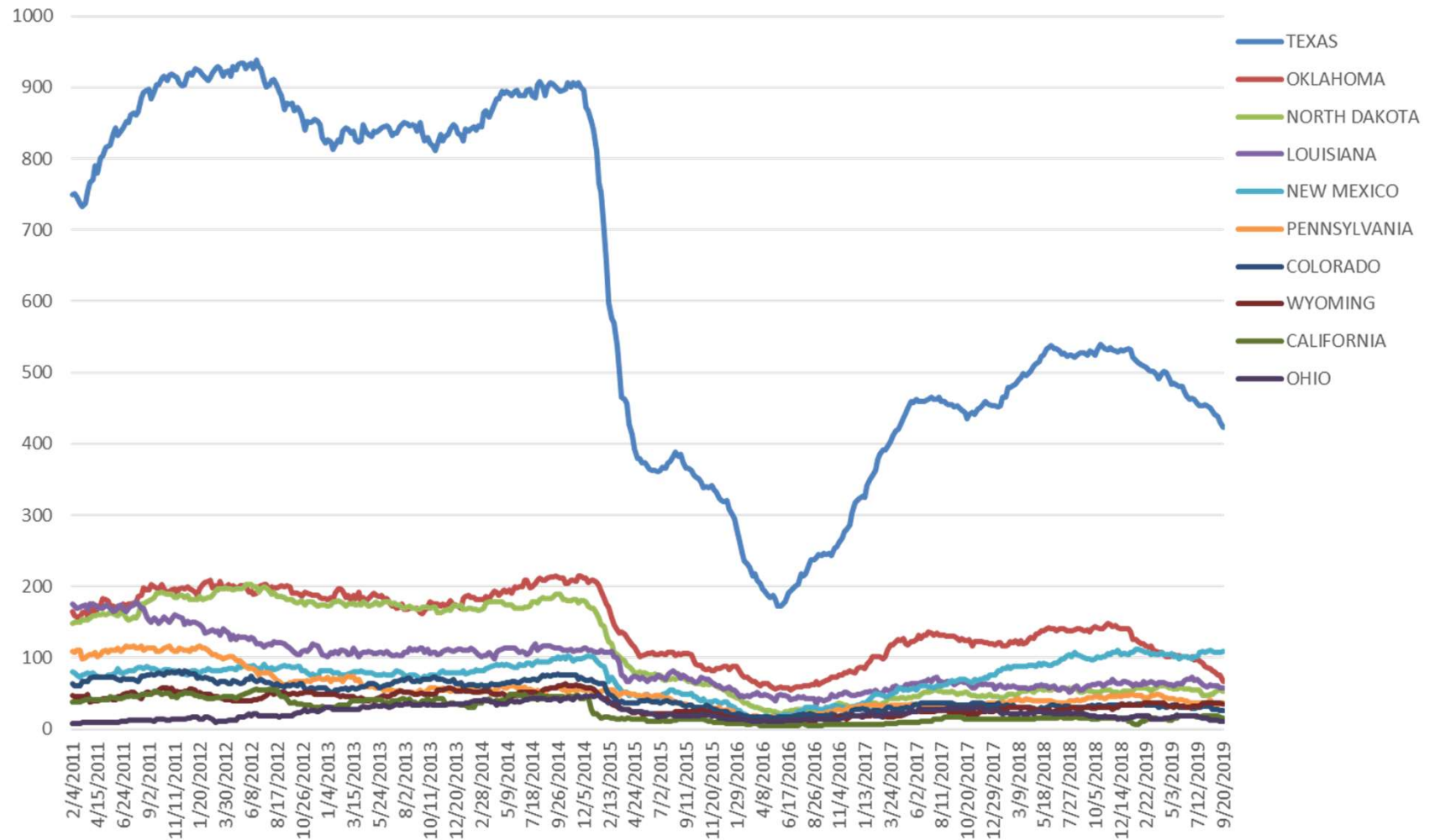


- Permian
- Other
- Eagle Ford
- Williston
- Marcellus
- Haynesville
- Cana Woodford
- Granite Wash
- DJ-Niobrara
- Mississippian
- Utica

UNITED STATES	
Country	PublishDate
9/20/2019	
Row Labels	Sum of RigCount
Permian	417
Other	150
Eagle Ford	63
Williston	53
Marcellus	50
Haynesville	50
Cana Woodford	36
DJ-Niobrara	23
Utica	12
Barnett	4
Arkoma	
Woodford	3
Granite Wash	3
Mississippian	2
Ardmore	
Woodford	2
Grand Total	868

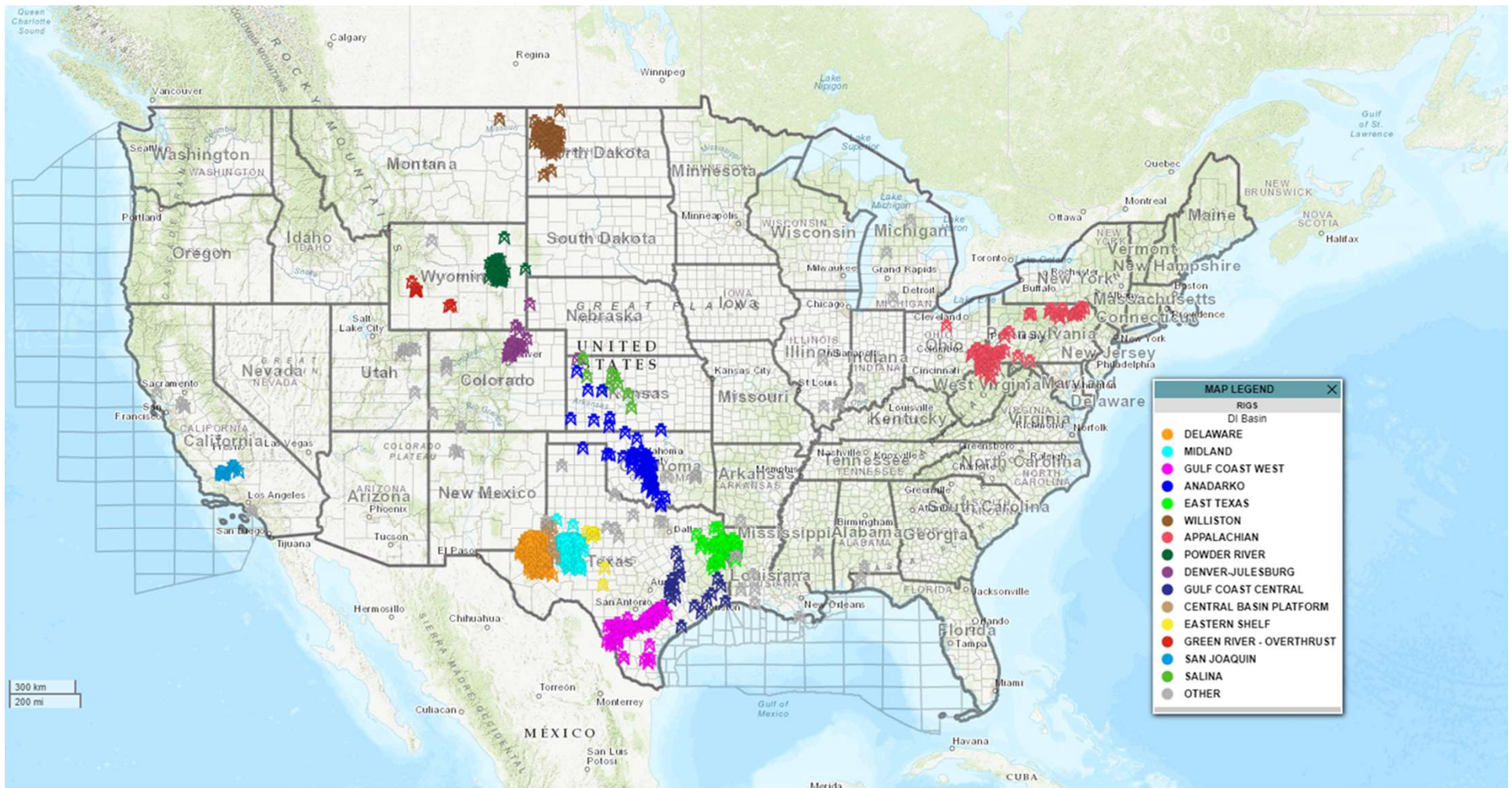
<https://bakerhughesrigcount.gcs-web.com/na-rig-count>

Rig Count – History by State



<https://bakerhughesrigcount.gcs-web.com/na-rig-count>

Where the Action Is Rig Locations



Data Source - Drilling Info/Enverus

- Strong and growing emphasis
- Economic Sustainability
 - Returns to investors
 - Company growth into the future
- Social Sustainability
 - Positive impacts to people
 - Community development
 - Engagement and collaboration
- Environmental Sustainability
 - Reduce pollution
 - Avoid other negative impacts



- Capital efficiency
- Operating efficiency
- Transactions
 - Mergers
 - Acquisitions
 - Divestitures
- Infrastructure
 - Scale
 - Optimization



Where the Action Is

Social Sustainability



- Community Engagement
- Philanthropy
- Volunteerism
- Talent Management
- Inclusion and Diversity



Where the Action Is

Environmental Sustainability



- Air
 - Reduction of fugitive emissions
 - Reduction of flaring
 - Clean power
- Land
 - Waste minimization
 - Seismicity
 - Remediation
 - Habitat management
- Water
 - Alternative sources
 - Midstream model
 - Produced water management
 - Recycling



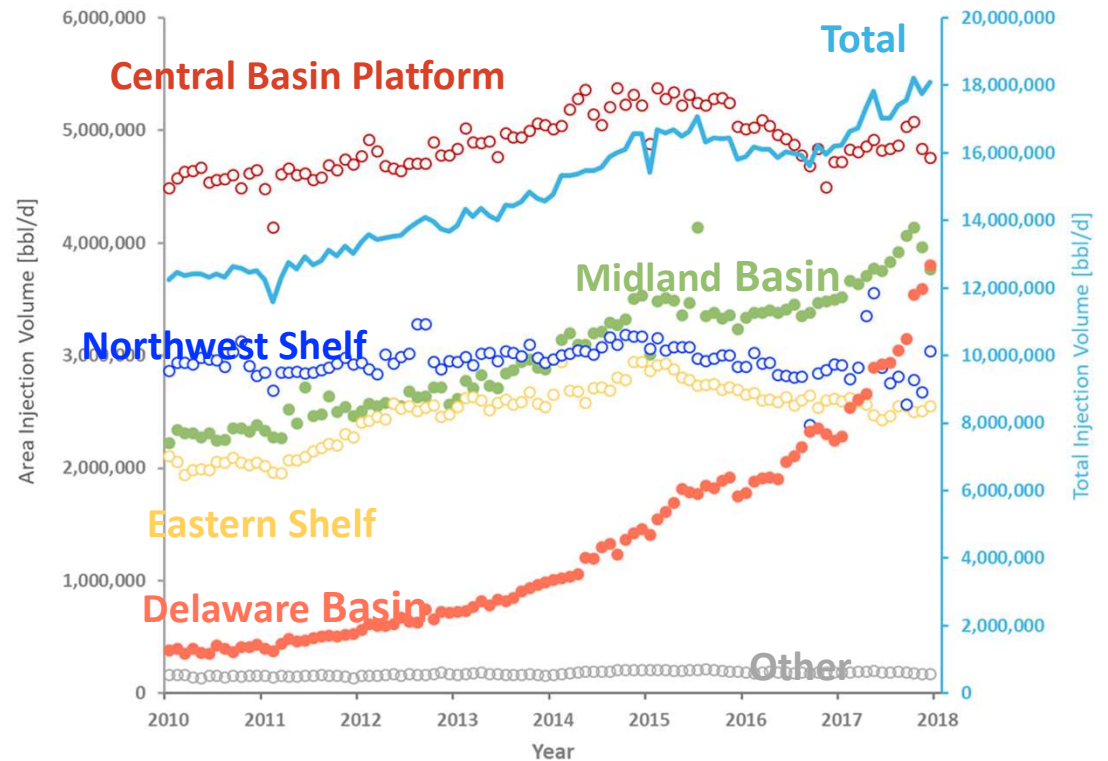
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- All aspects of business including sustainability
 - Measure performance
 - Track progress
 - Report, Analyze, and Collaborate
 - Improve
- Cyber Security



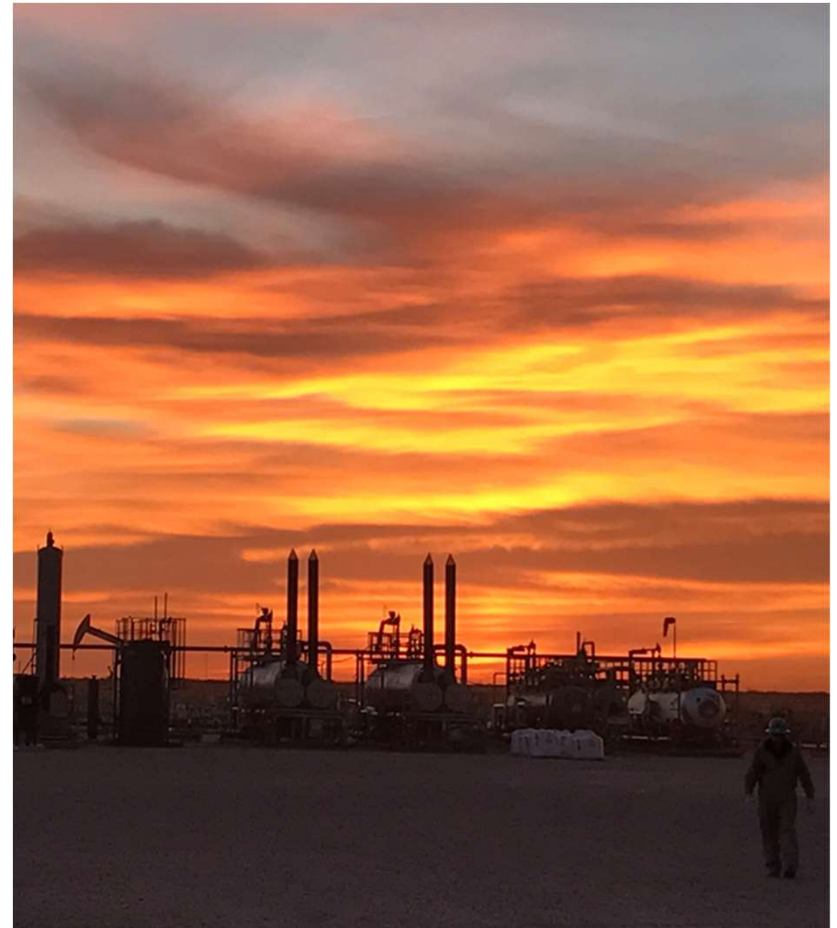
Permian Basin Water Disposal



Data Source: B3 Insight

Conclusions

- The state of the industry is strong as demonstrated by its production history
- Pricing has fluctuated dramatically and industry is adapting
- Change brings opportunities – there is reason for optimism as the industry pivots to guarantee long-term sustainable domestic energy into the future

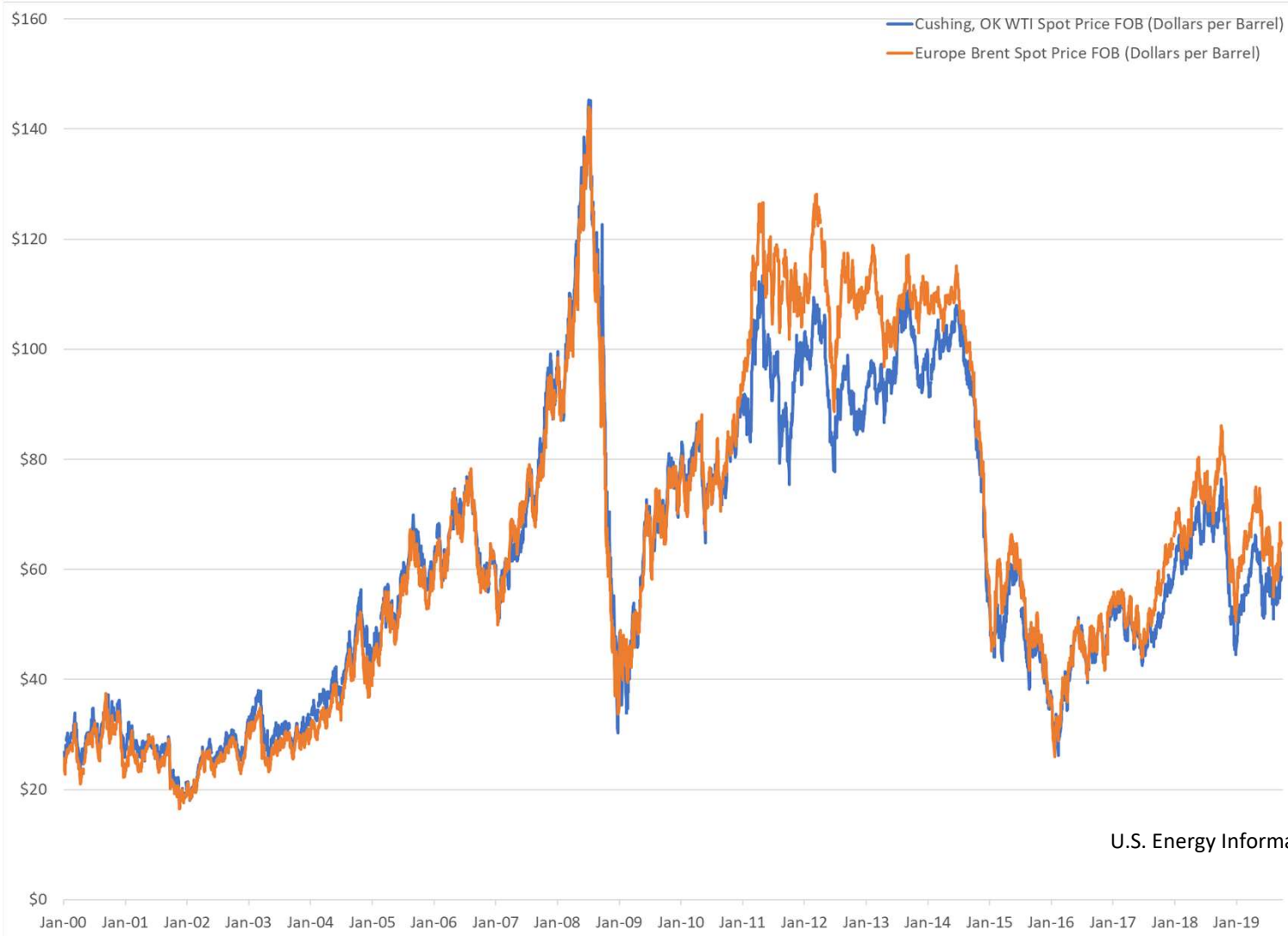




Thank You



Oil Price History



Gas Price History

