

Market Perspectives on Oil and Natural Gas

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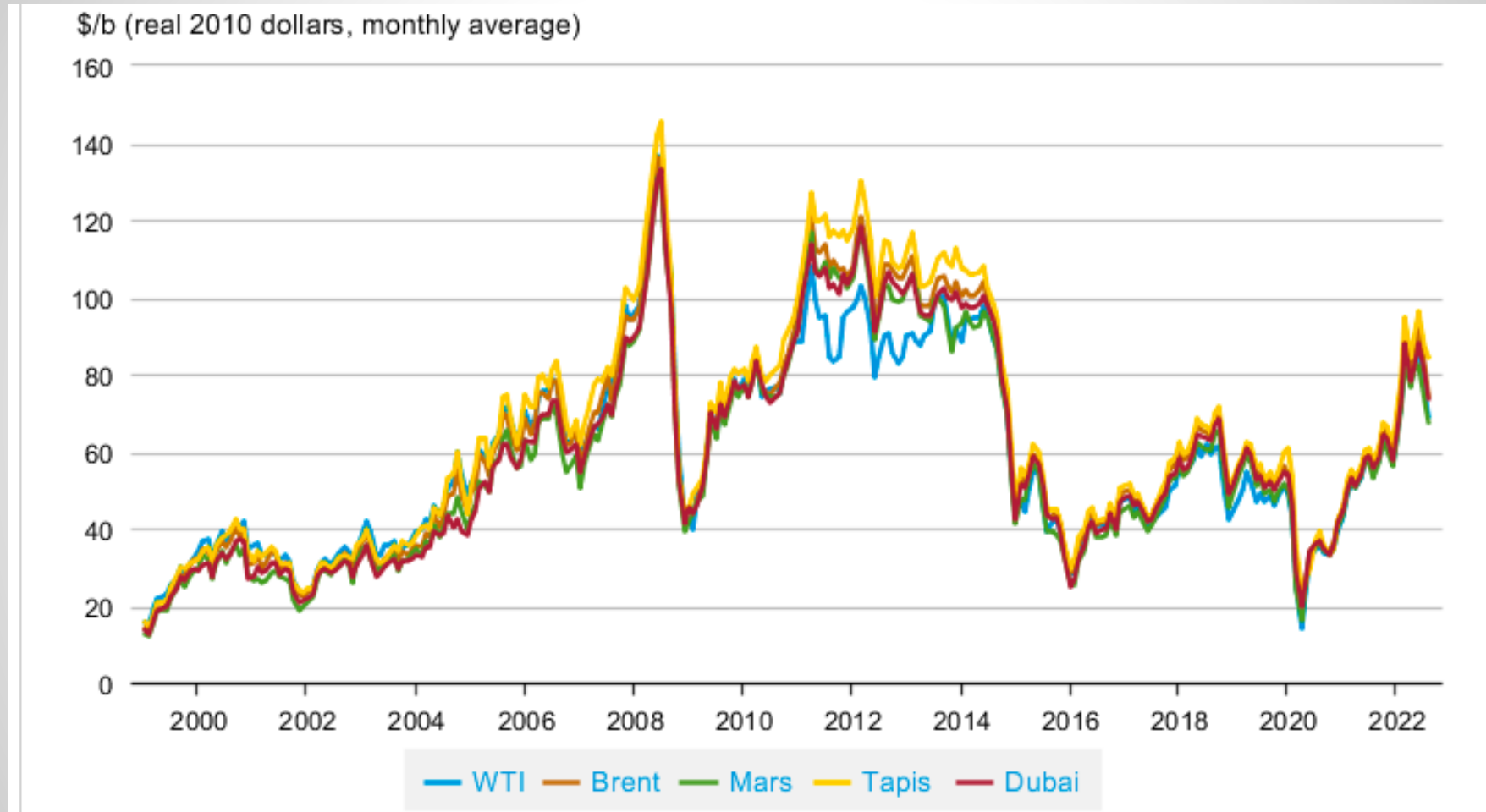
Presentation to the NM Legislature Interim Committee on Economic and Policy
September 15, 2022

The New Mexico Oil and Natural Gas Industries are:

- Impacted by market conditions
 - Oil – world market
 - Natural gas – geographical constrained

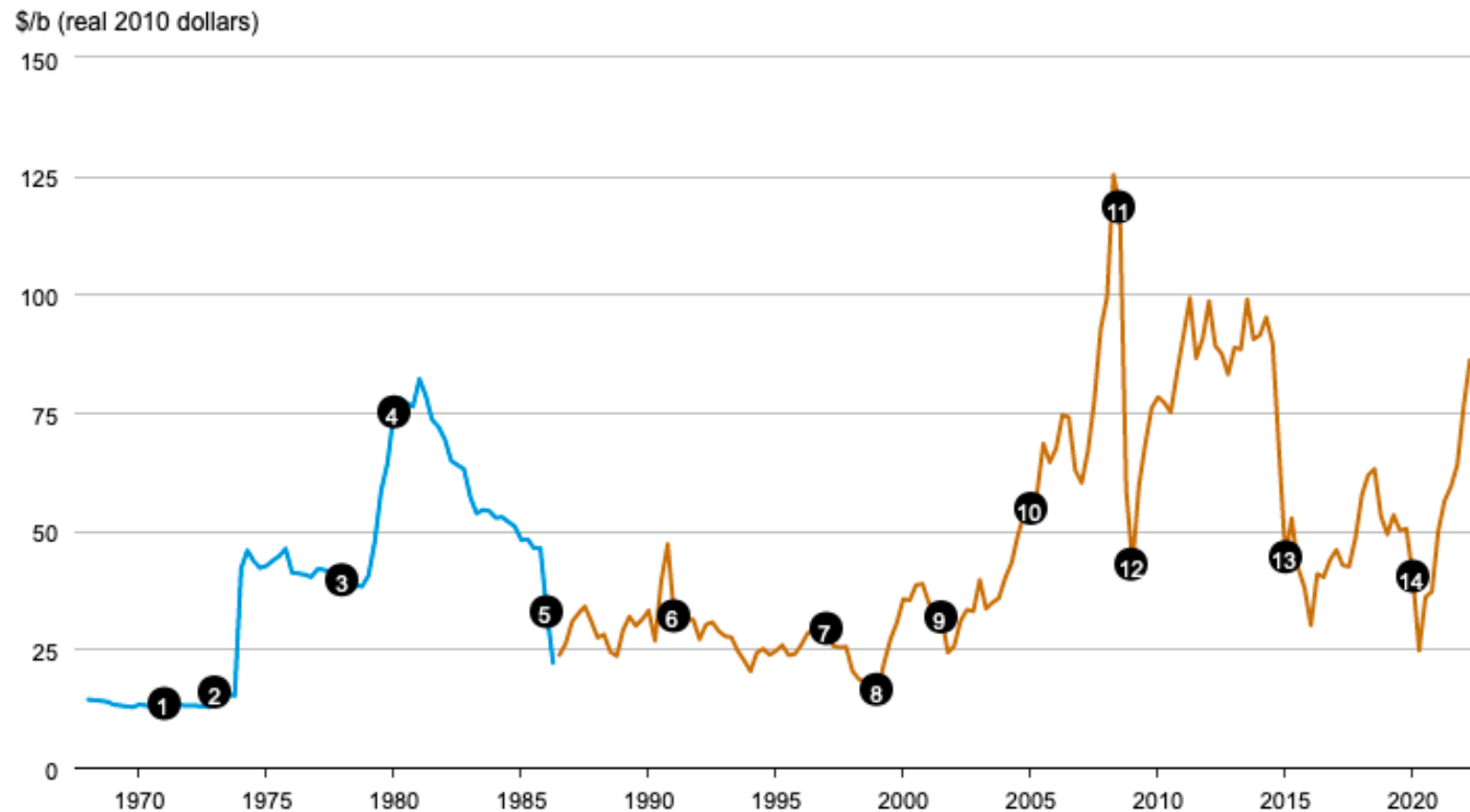


Crude Oil Prices



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Oil Prices and World Events



- 1: US spare capacity exhausted
- 2: Arab Oil Embargo
- 3: Iranian Revolution
- 4: Iran-Iraq War
- 5: Saudis abandon swing producer role
- 6: Iraq invades Kuwait
- 7: Asian financial crisis
- 8: OPEC cuts production targets 1.7 mmbpd
- 9: 9-11 attacks
- 10: Low spare capacity
- 11: Global financial collapse
- 12: OPEC cuts production targets 4.2 mmbpd
- 13: OPEC production quota unchanged
- 14: Global pandemic reduces oil demand



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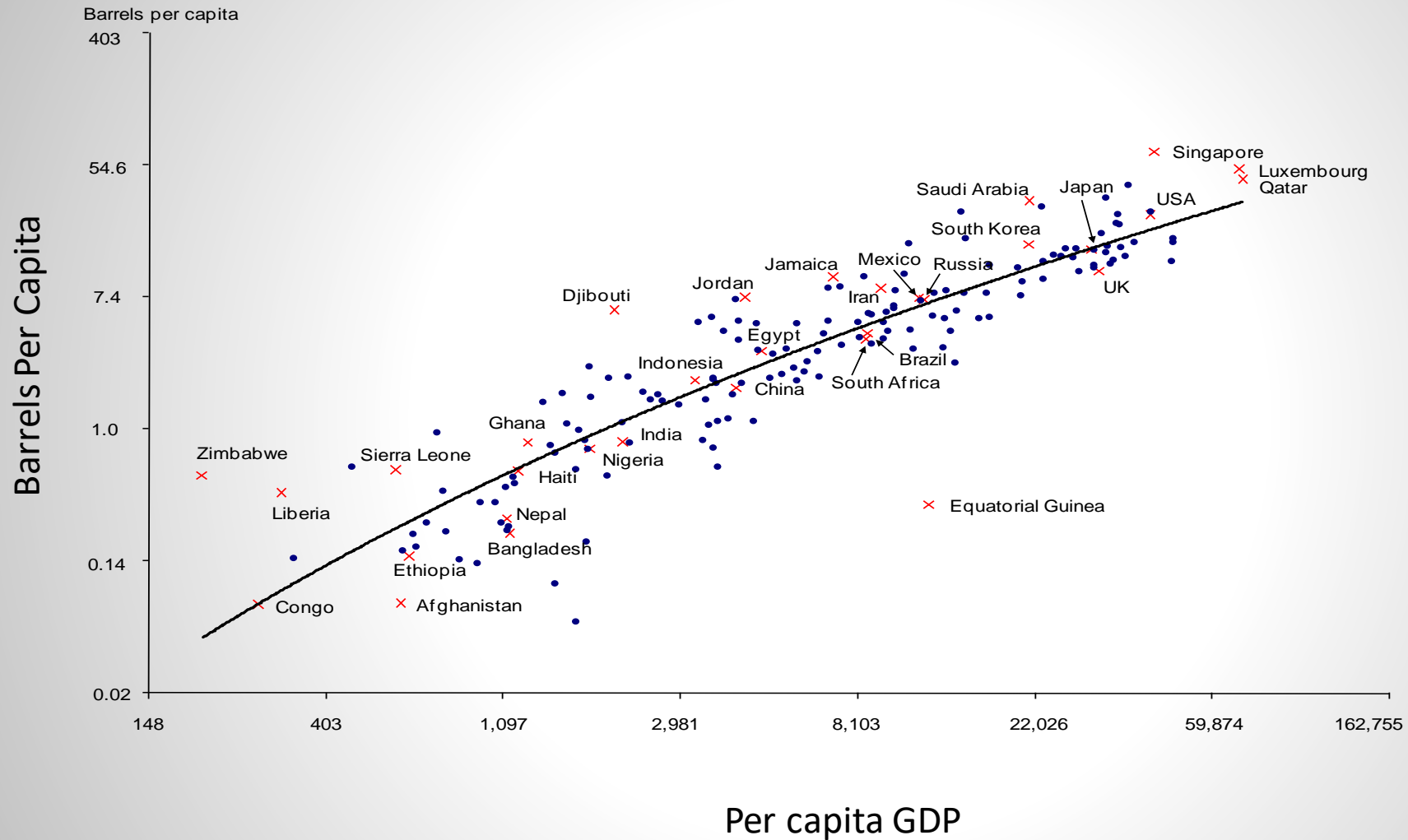
Oil Market Fundamentals

- Supply
 - OPEC
 - Non-OPEC
 - Storage (balance)

- Demand
 - OECD
 - Non-OECD
 - Futures Market (hedging and speculation)

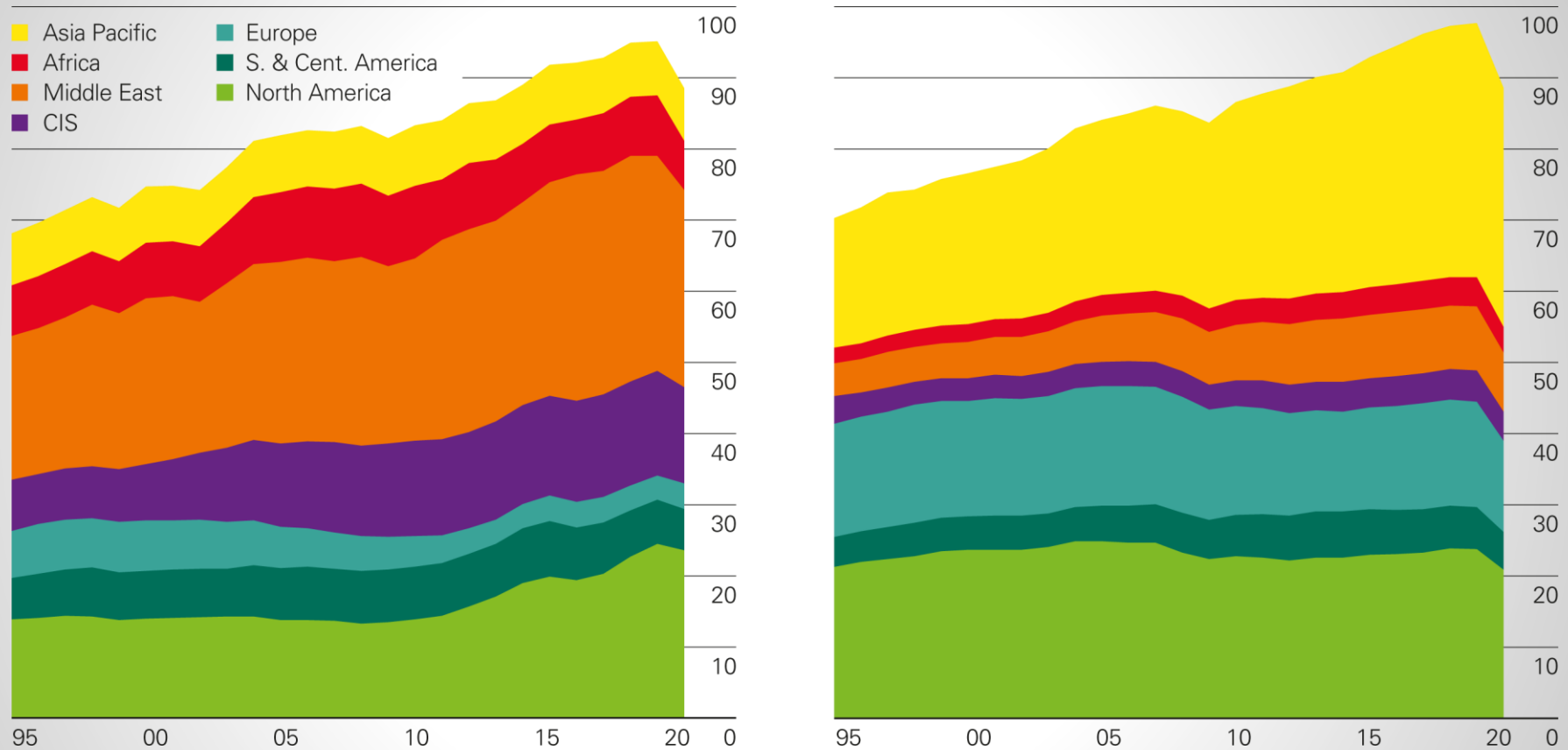


Oil Demand and Per Capita GDP



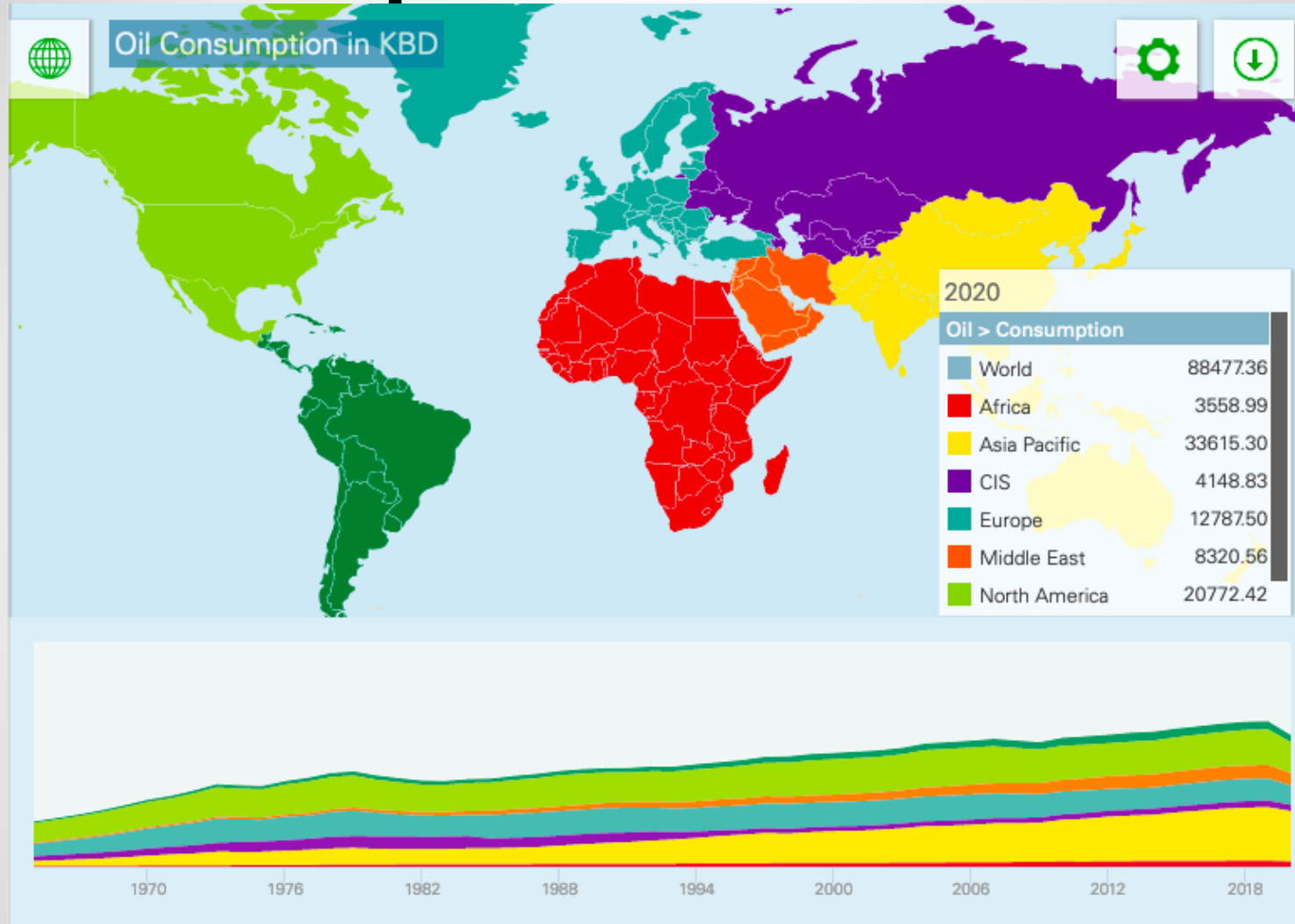
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Oil Production and Consumption (1995-2020)



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Crude Oil Consumption

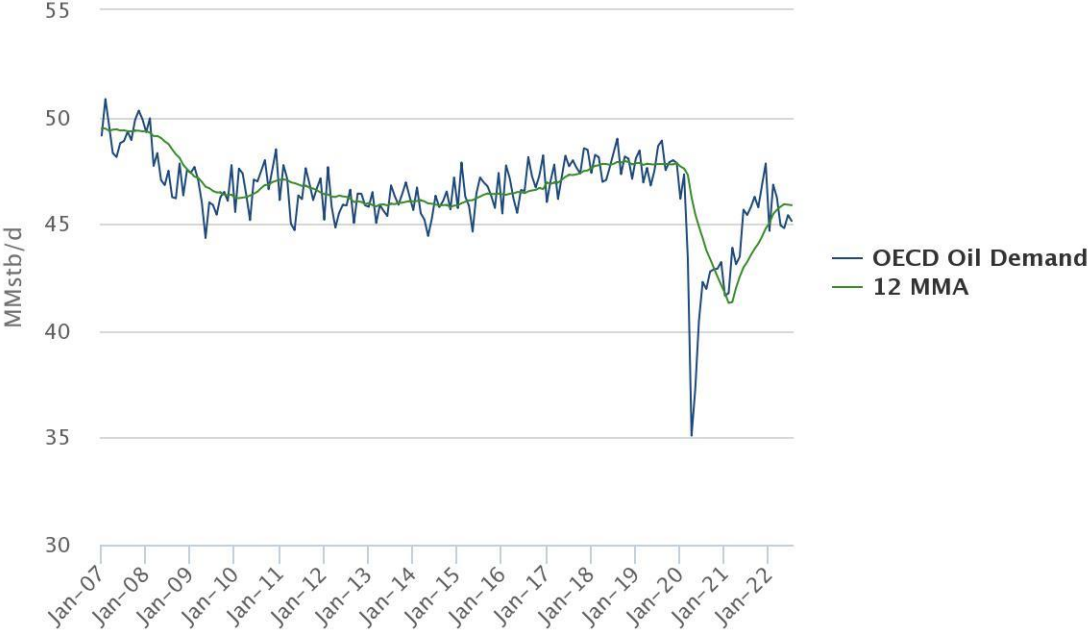


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OECD and non-OECD Oil Demand

OECD Oil Demand

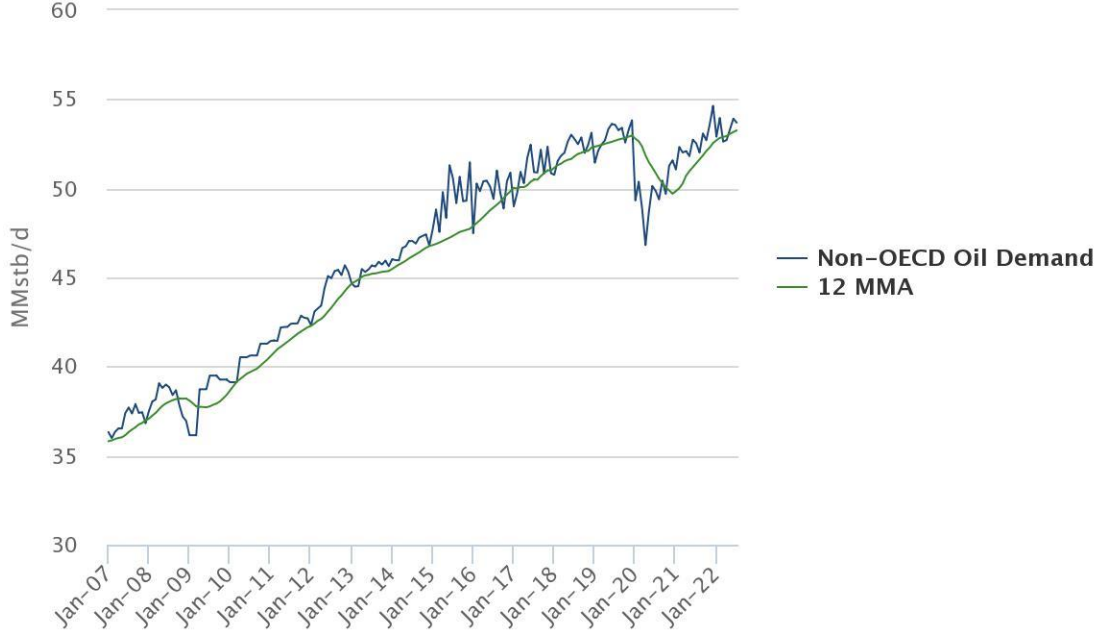
Source: US Energy Information Administration, ERCE Estimates



Highcharts.com

Non-OECD Oil Demand

Source: US Energy Information Administration, ERCE Estimates



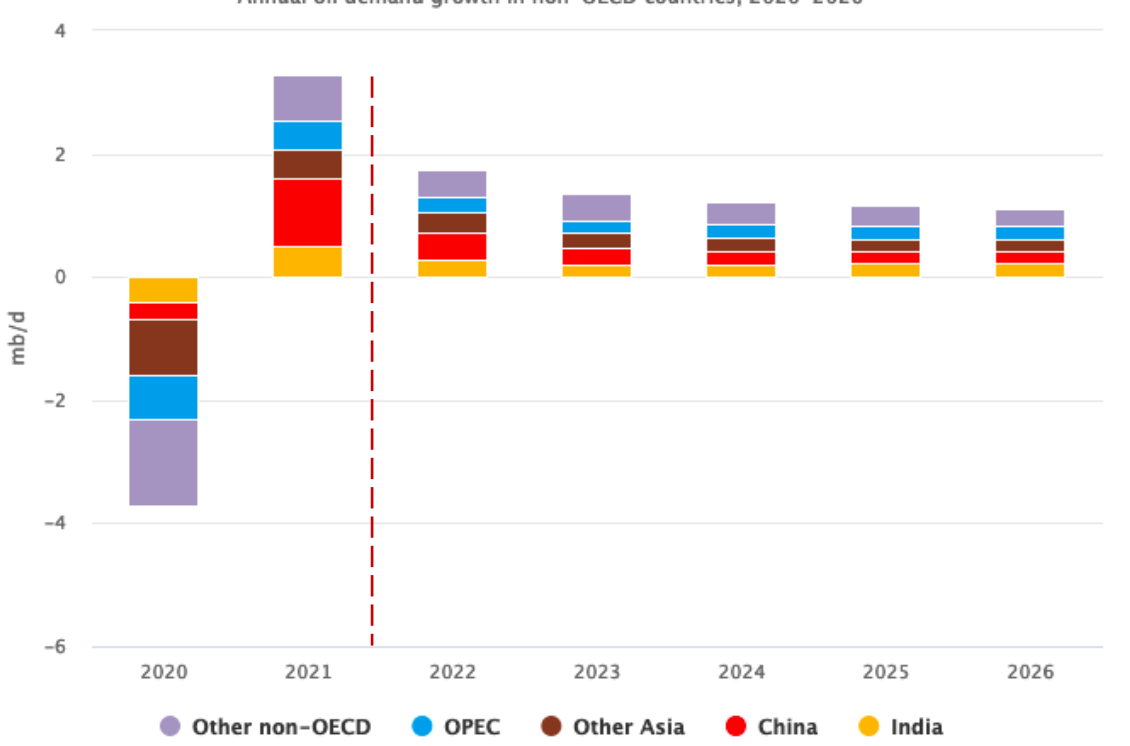
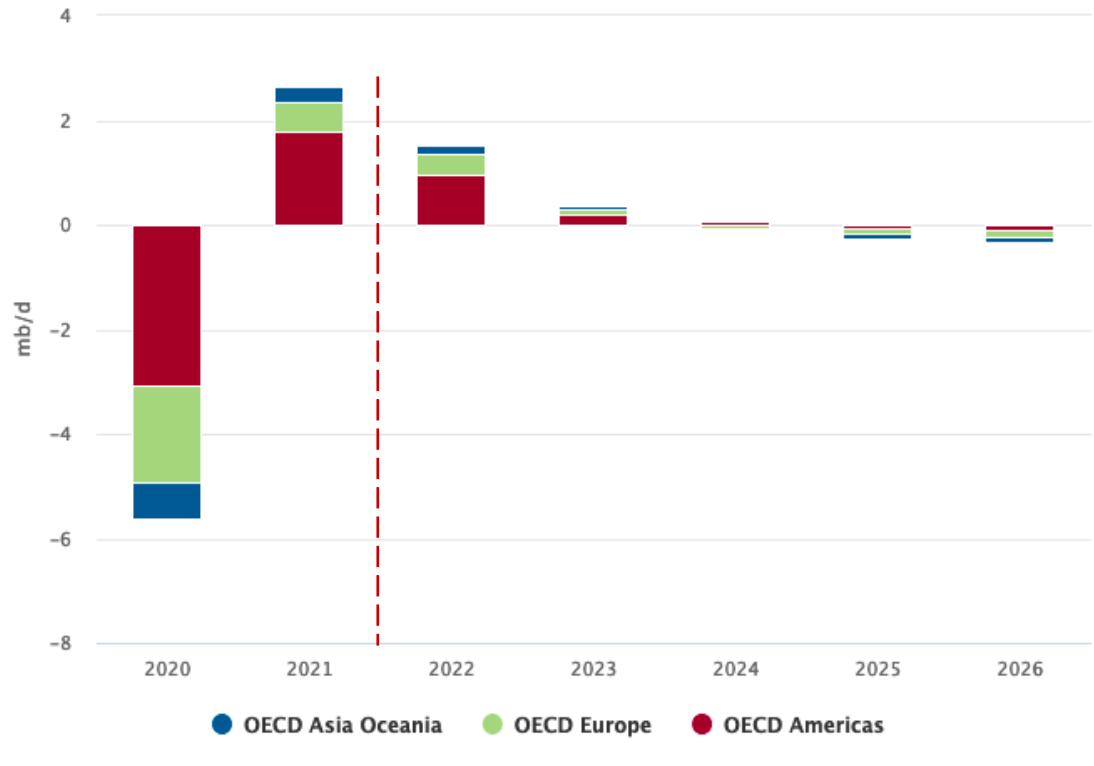
Highcharts.com



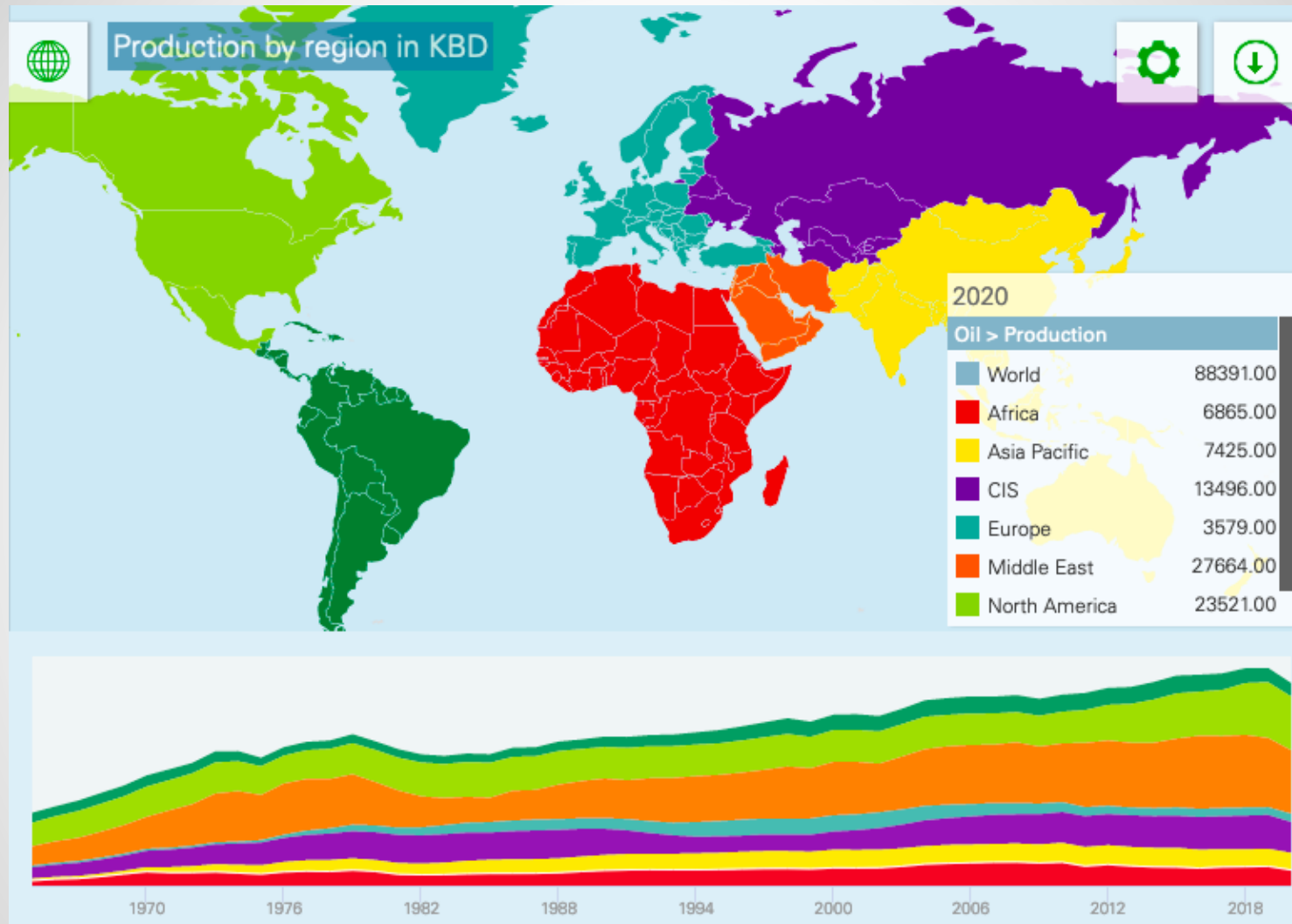
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From: <https://www.erce.energy/graph/global-oil-demand-and-supply/> (last accessed 9/2022)

Forecast Demand



Crude Oil Production



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OPEC

- Organization of Petroleum Exporting Countries (OPEC)

- 13 members:

Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, UAE, Venezuela

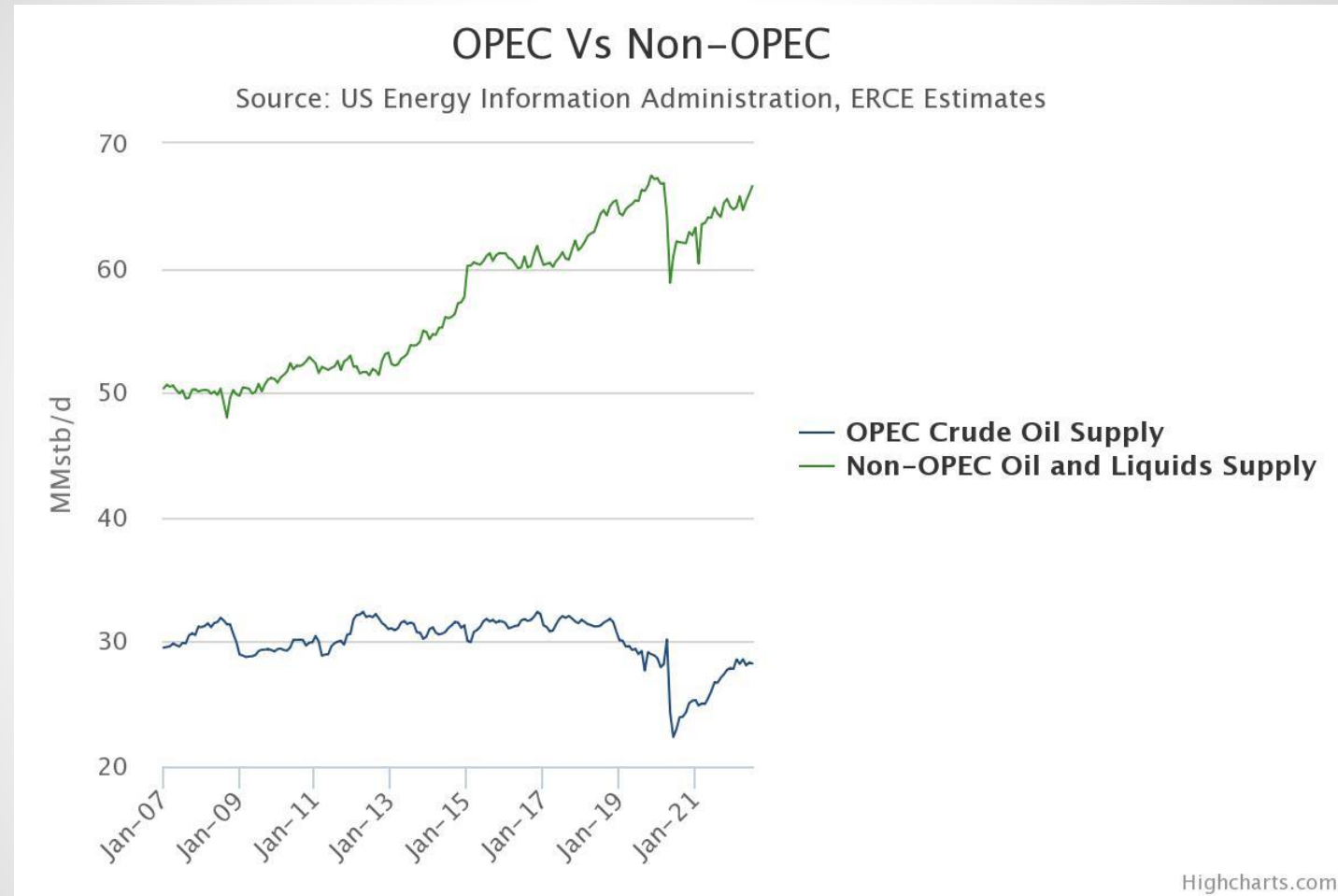
- Saudi Arabia acts as leader

- Acts as cartel to influence world oil market

- OPEC+



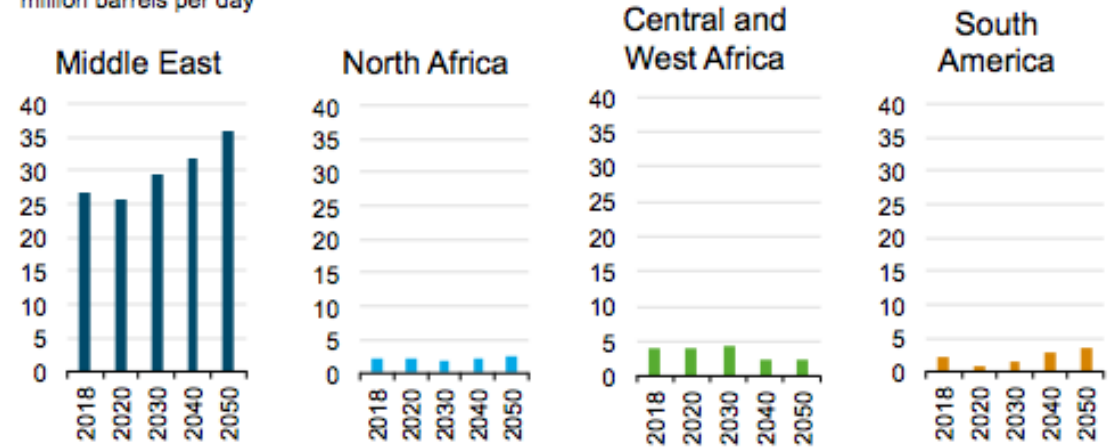
Oil Production



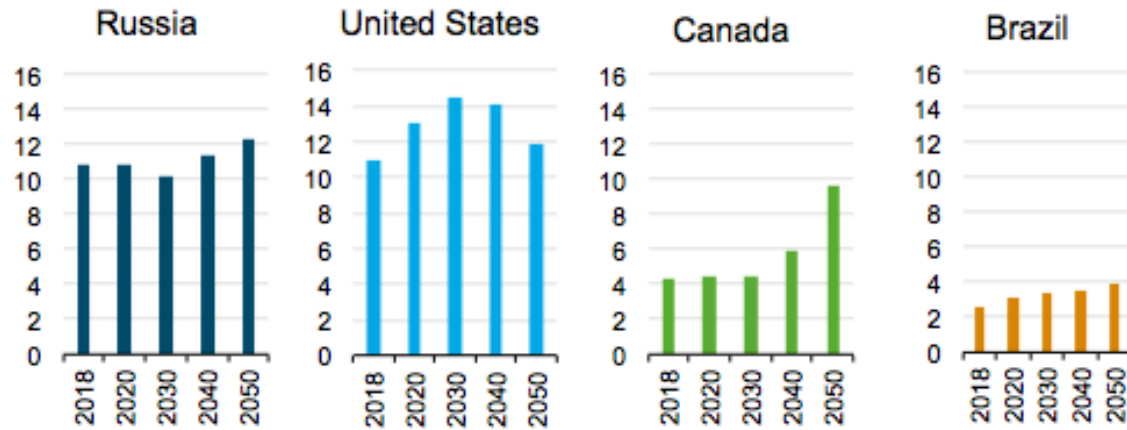
World Oil Production Forecast

OPEC Forecast Production

OPEC crude and lease condensate production by select regions
million barrels per day



Non-OPEC crude and lease condensate production by select regions
million barrels per day



Non-OPEC Forecast Production

Long Run Implications

- Non-OECD countries driving demand
- OPEC and OPEC+ largest reserves
- OPEC and OPEC+ largest producing block
- US tight oil impacts supply



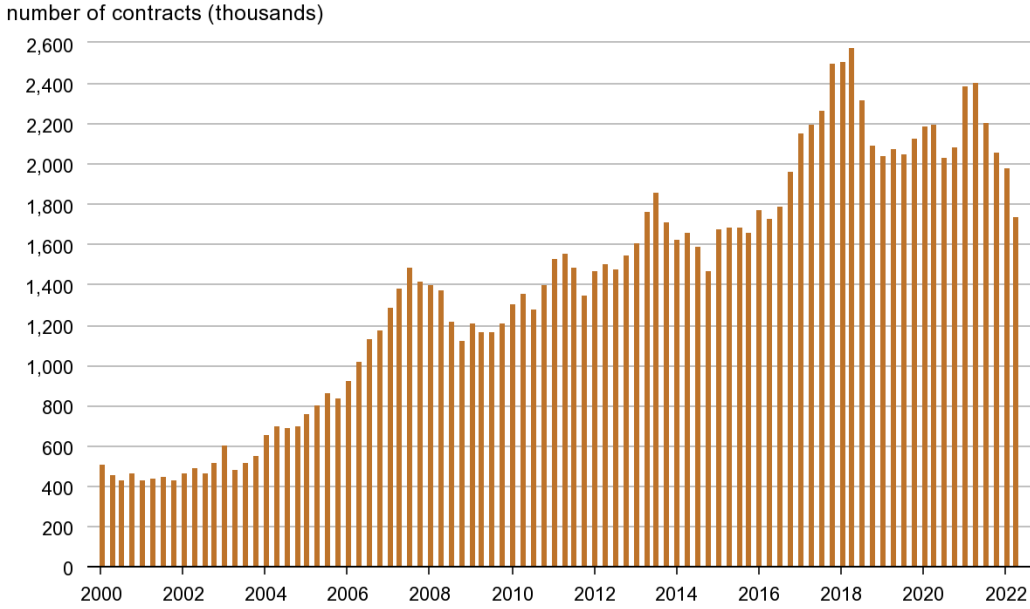
Other Factors

- Futures Market
- External Shocks
- Climate Policy

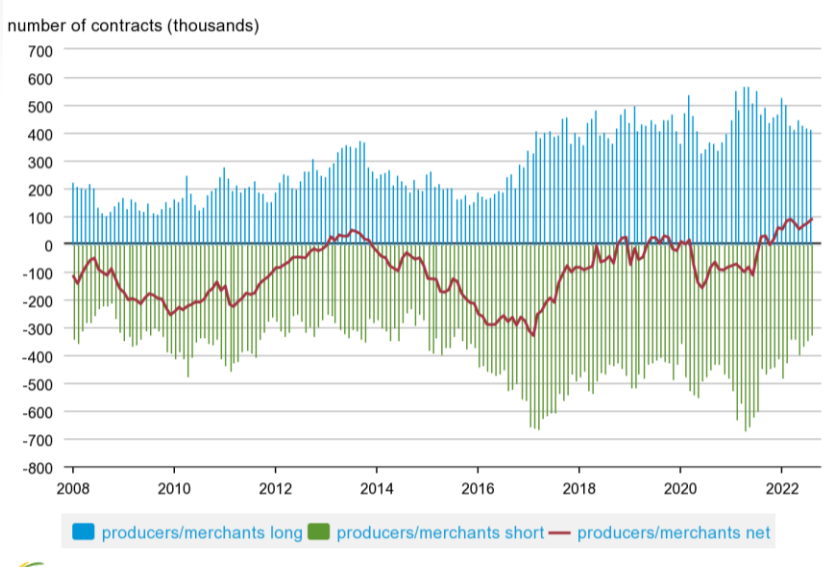


Futures Market

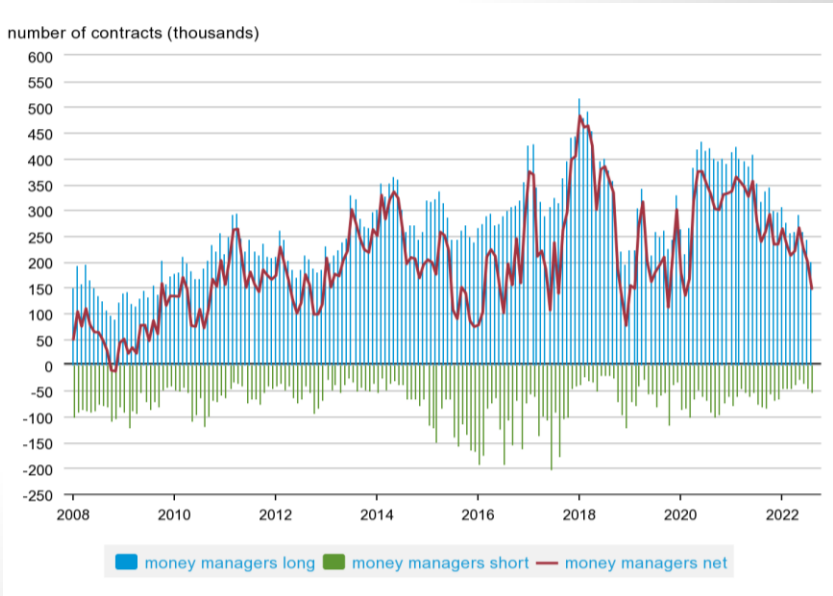
Average Open Contracts



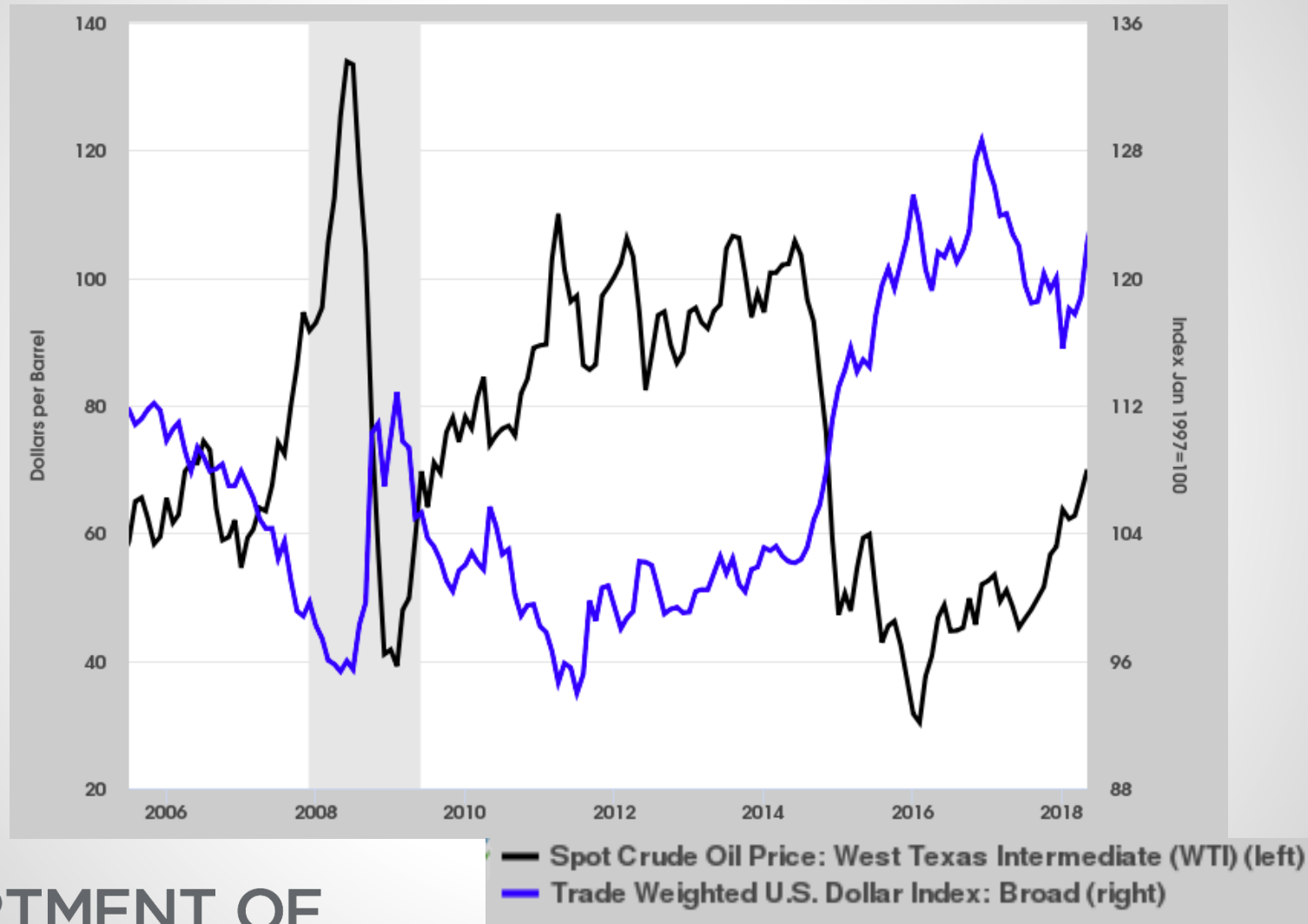
Commercial Positions



Non-commercial Positions



The Dollar and Oil Price



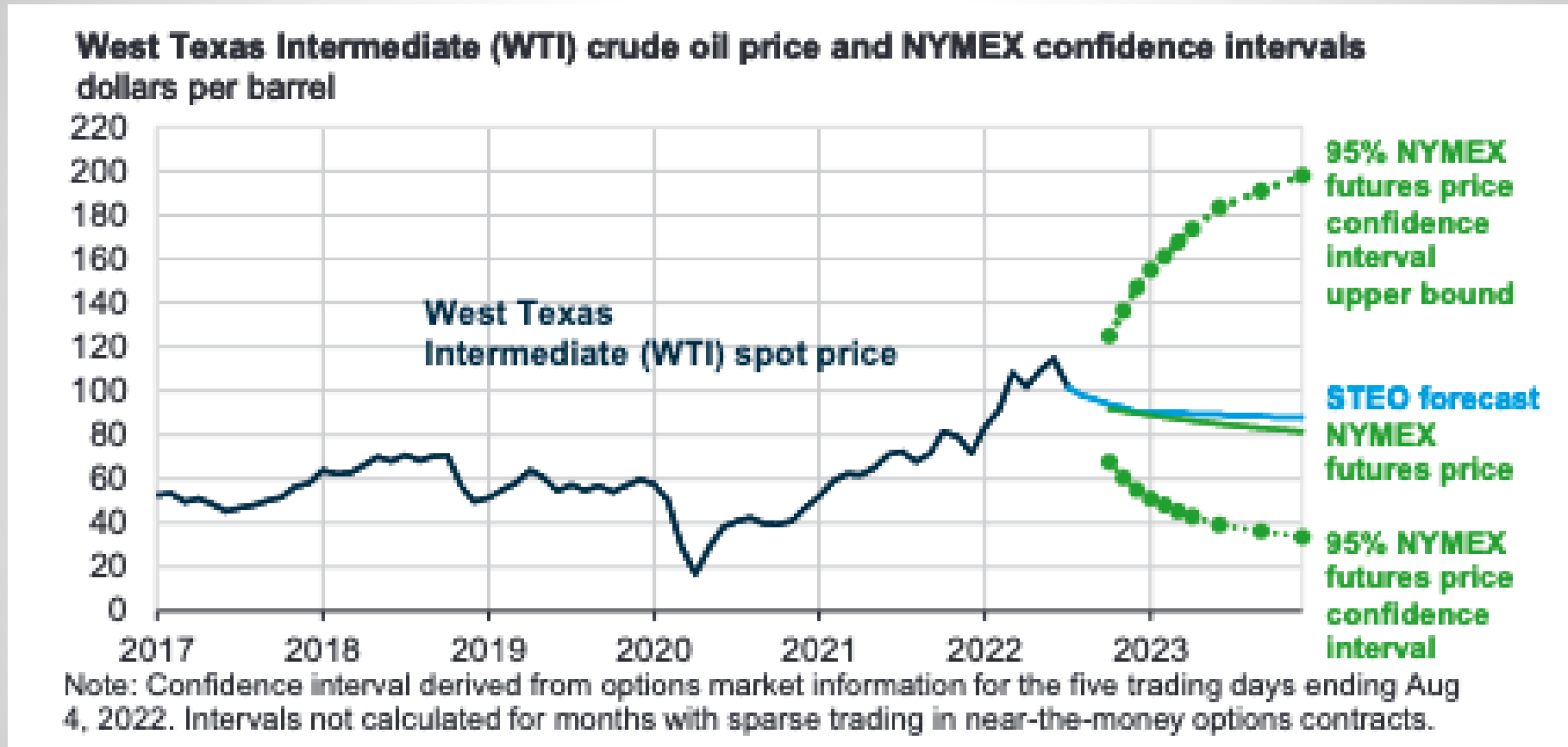
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Other Factors to Consider

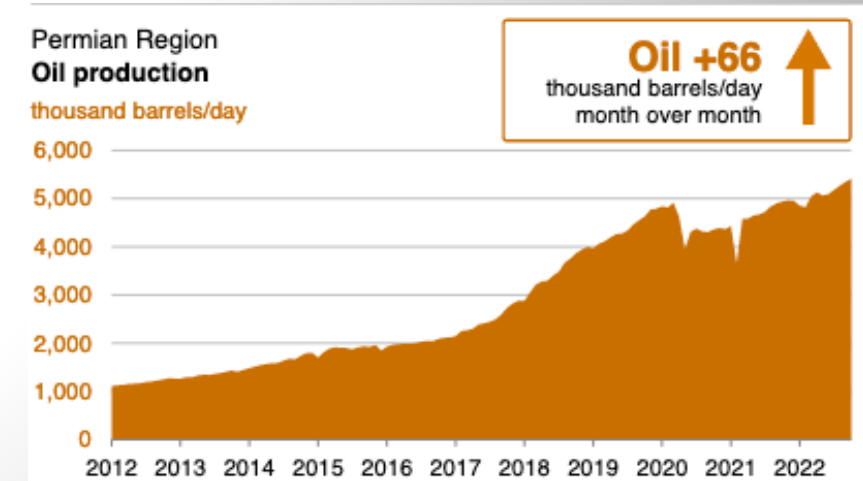
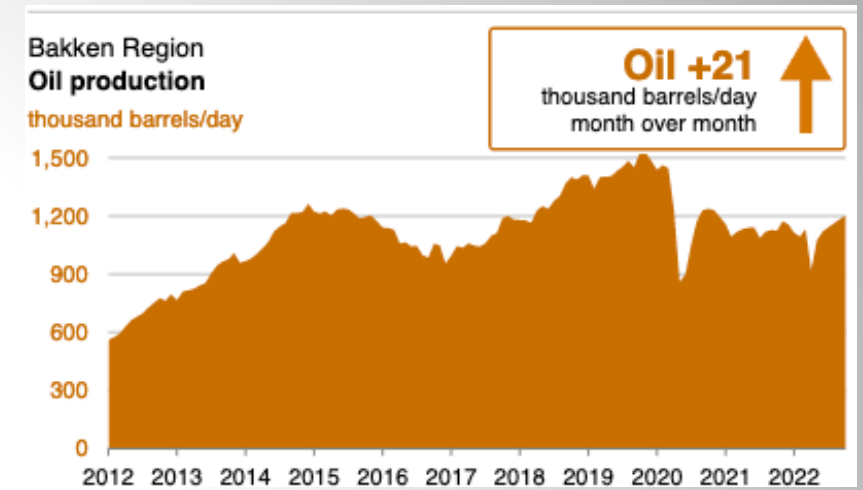
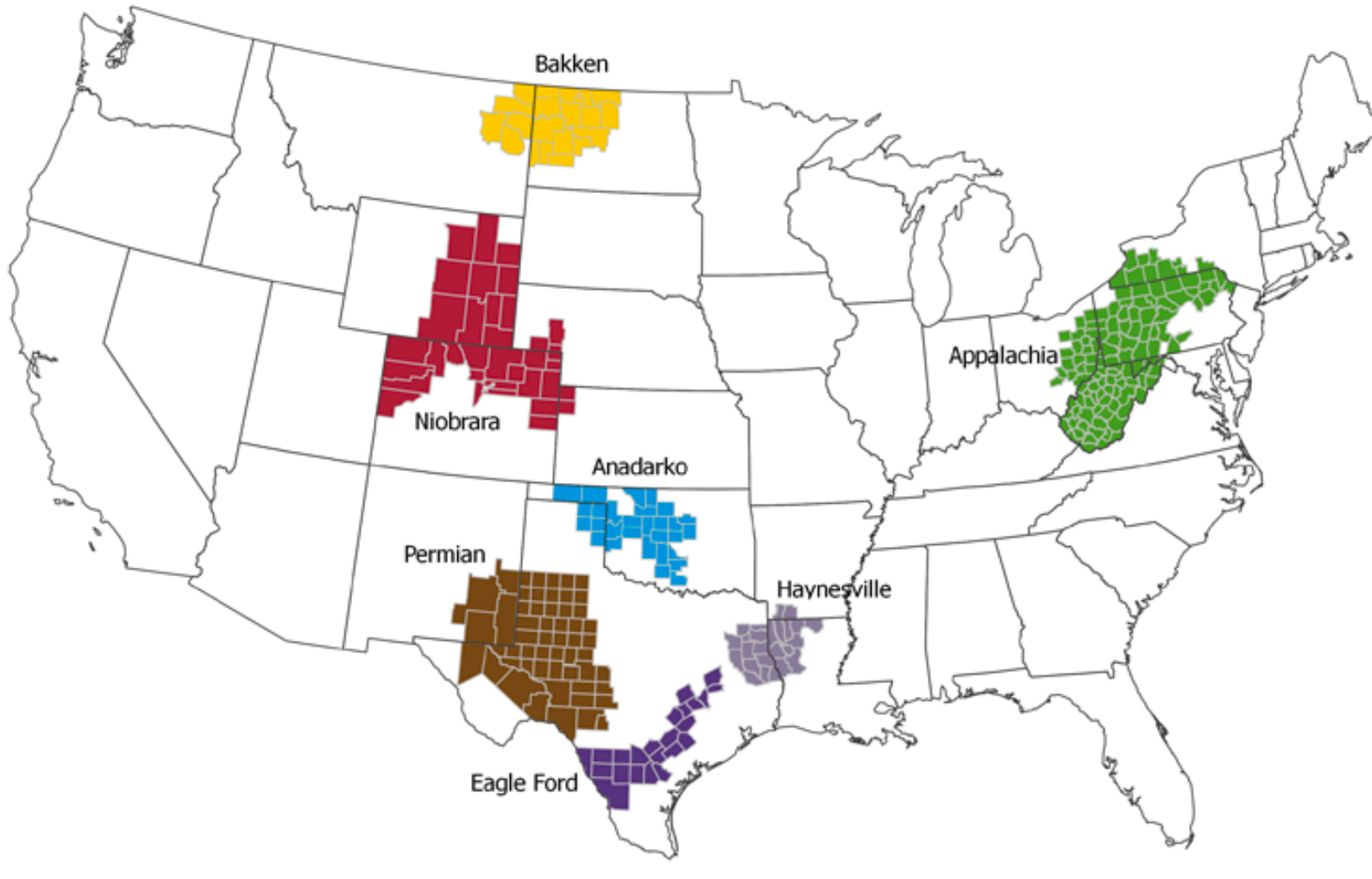
- Ukraine/Russia War
- European Energy Response
- OPEC (small cut in Oct supply, but maintain status quo if price ~\$90/barrel)
- Substitute technologies (e.g., EVs)
- Iranian Nuclear Deal
- Coordinated releases from strategic reserves
- Tripoli violence



Price Forecast



US Tight Oil and NG Producing Regions



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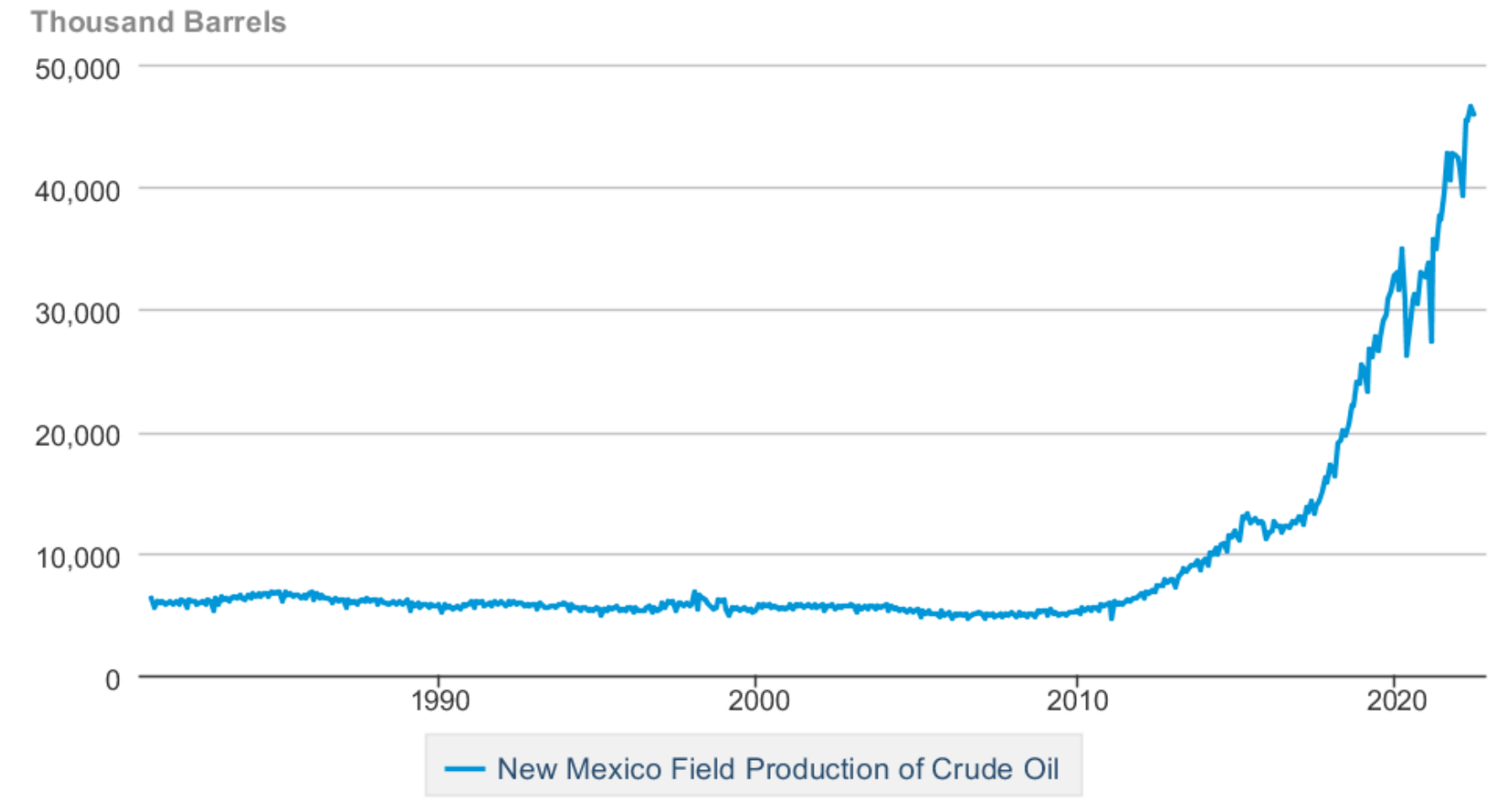
From EIA

New Mexico

- 2nd largest producing state behind TX
- \$1.7 billion tax revenues in the first 4 months of 2022
- “A \$1 increase in the price of oil ➡ \$21 million for the general fund”



New Mexico Crude Oil Production



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From: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=p&s=mcrfpm1&f=m> (last accessed 09/2022)

Considerations

- Oil prices forecast “flat” – but large confidence intervals
- Permian one of the lowest cost basins to produce
- Short-term positive for NM producers and state revenues
- Boom-and-bust economics

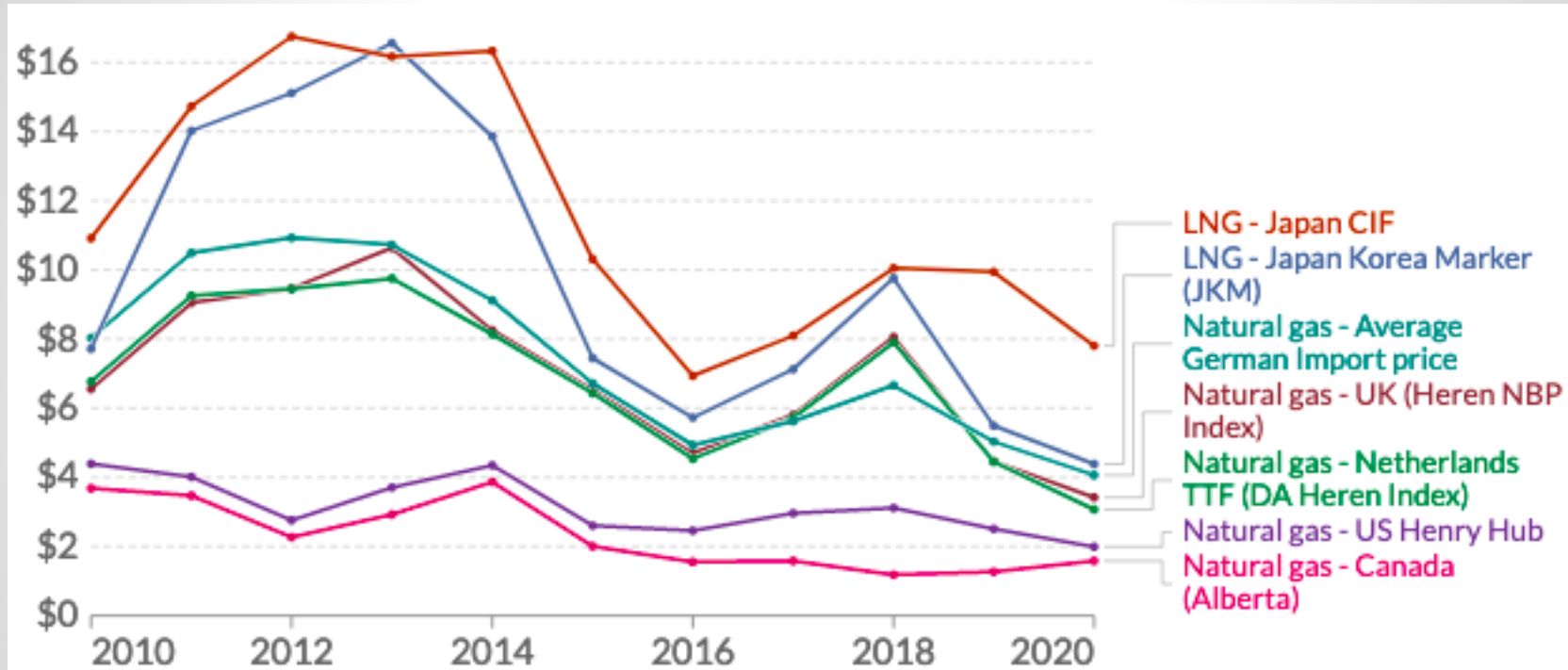


Natural Gas

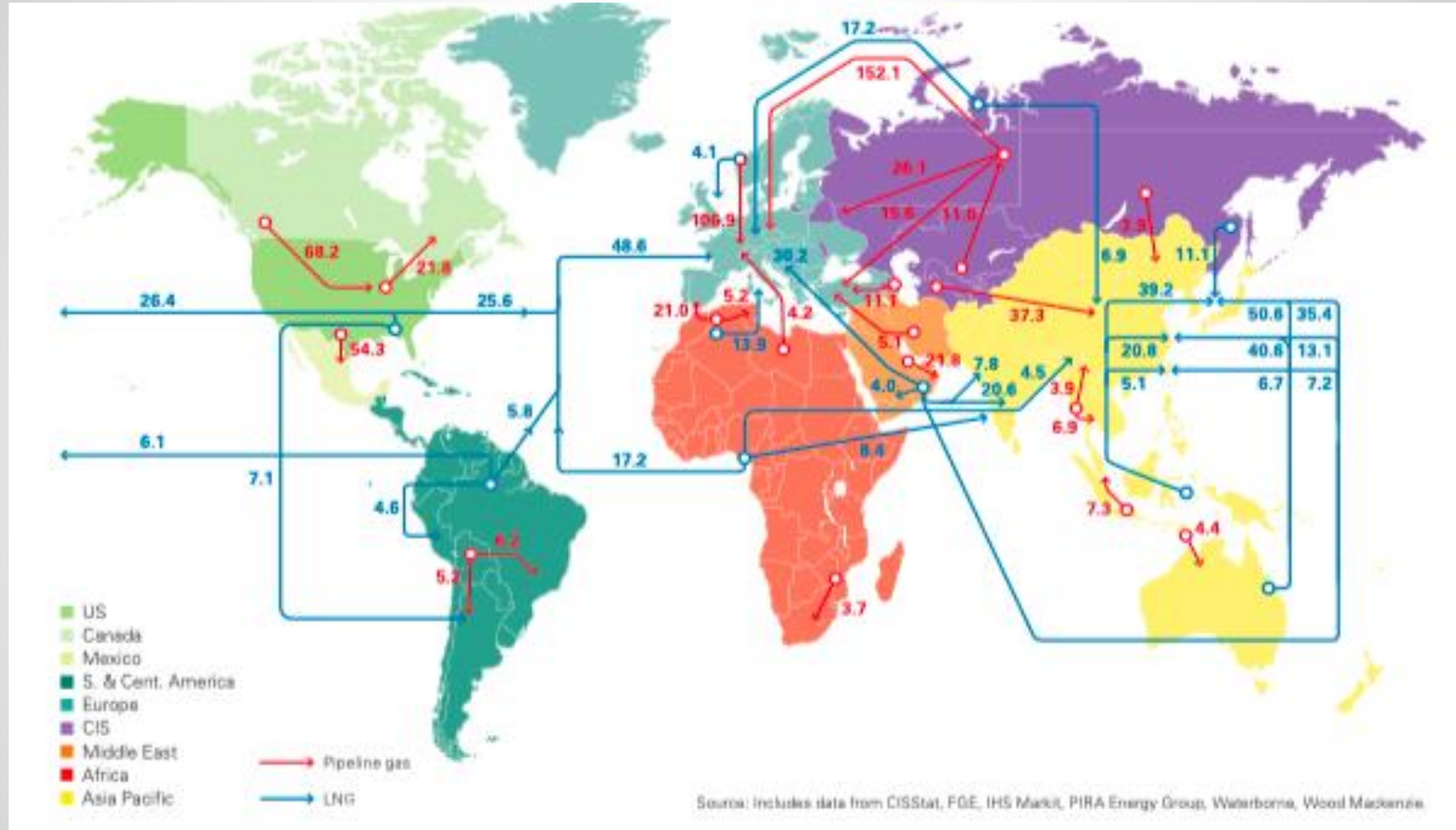
- Demand
- Supply
- Storage
- Transportation
- Seasonality
- Political



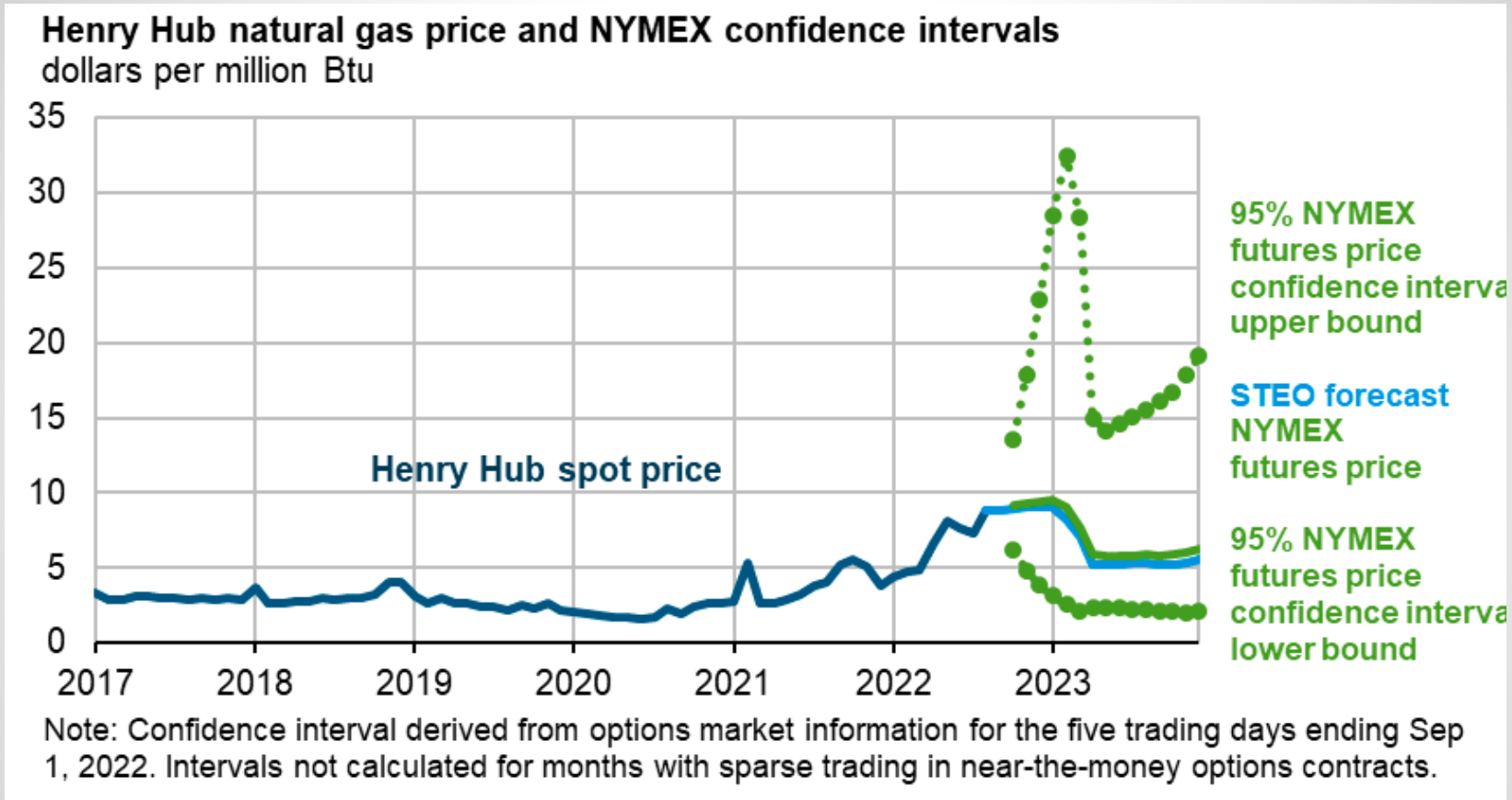
Natural Gas Prices



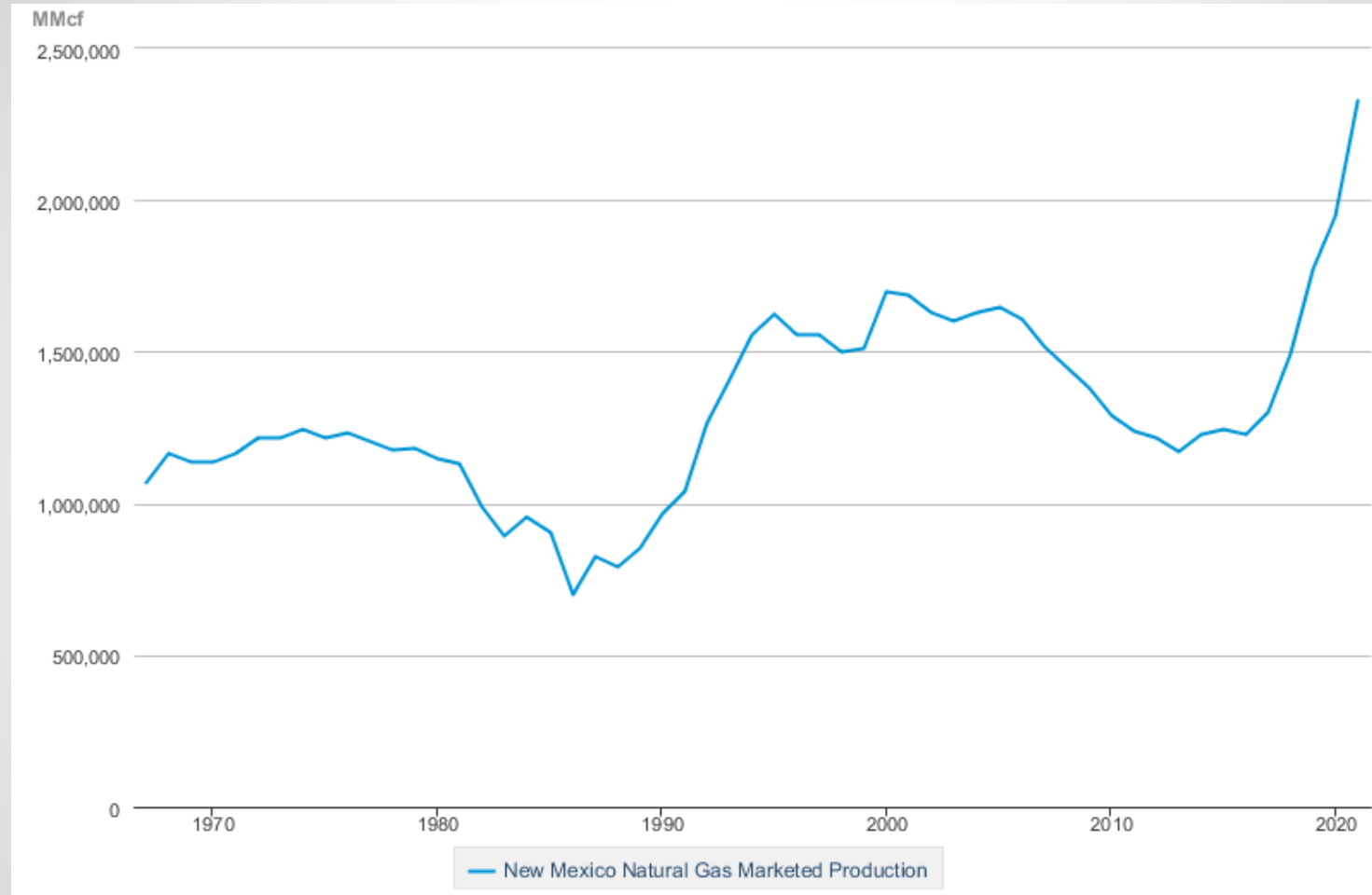
Natural Gas Markets



EIA Natural Gas Price Forecast



New Mexico Natural Gas Production



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From: <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpnm1&f=m> (last accessed 09/2022)

Short-run Considerations

- Seasonality
- Europe natural gas demand
- Political instability
- LNG export capabilities



New Mexico

- 2nd largest producing state behind TX (12.9% of May 2022 production)
- Top 10 natural gas producer (~6% of U.S. natural gas production)
- \$1.7 billion tax revenues in the first 4 months of 2022
- “A \$1 increase in the price of oil ➡ \$21 million for the general fund”
- “A 10 cent increase in the natural gas price ➡ \$15 million for the general fund”

Oil and Natural Gas Markets

- Oil Price - short run EIA forecast \$97 per barrel (Brent) in 2023
(Aug 2022 price \$98 - \$7 lower than July 2022)
- Natural Gas Price - \$6/MMbtu in 2023 (Aug 2022 price \$8.80/MMbtu)

New Mexico Impacts:

- Industry
- Communities
- State
- Consumers



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