

Dallas, TX  
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## Scoping 21<sup>st</sup> Century Energy Geopolitics

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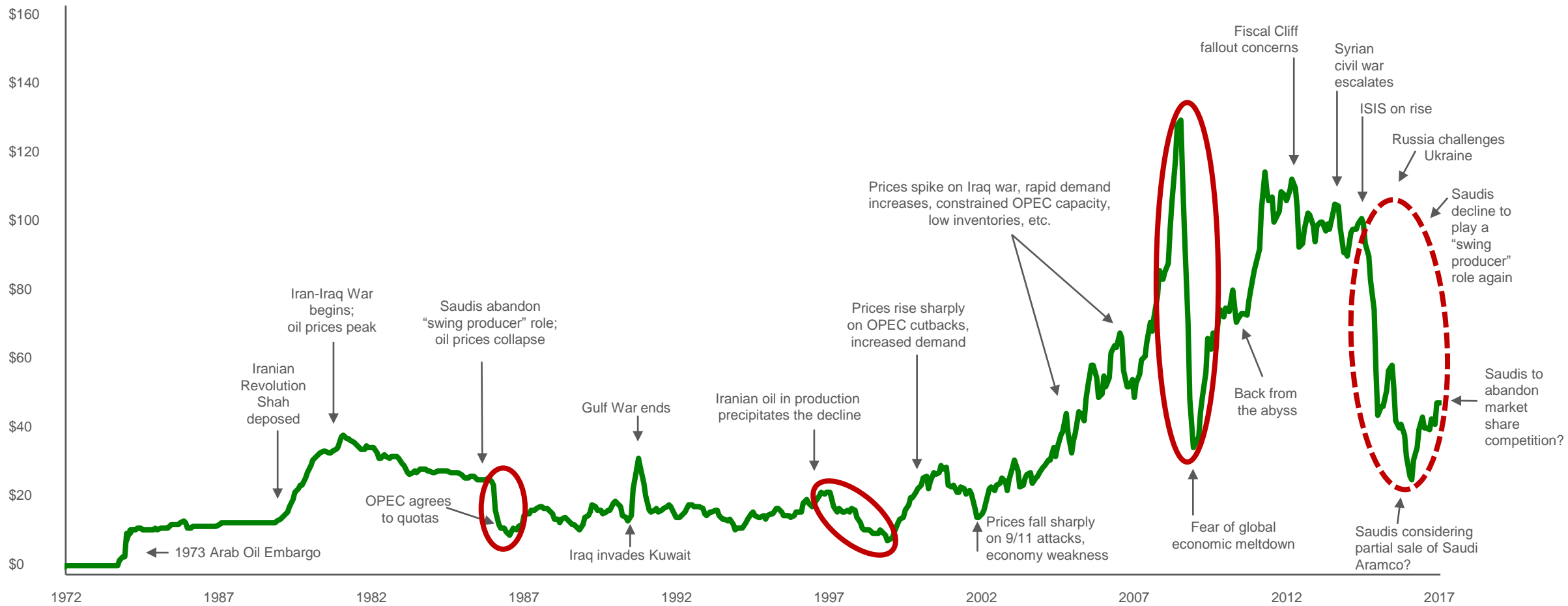
# Topics

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- ❖ Today's Realities
- ❖ Global Perspective on New Production Sources
- ❖ Opportunities vs Challenges
- ❖ Saudi Aramco IPO
- ❖ Implications for American Petroleum Strategy
- ❖ U.S. LNG Exports
- ❖ Concluding Observations

# Today's Realities

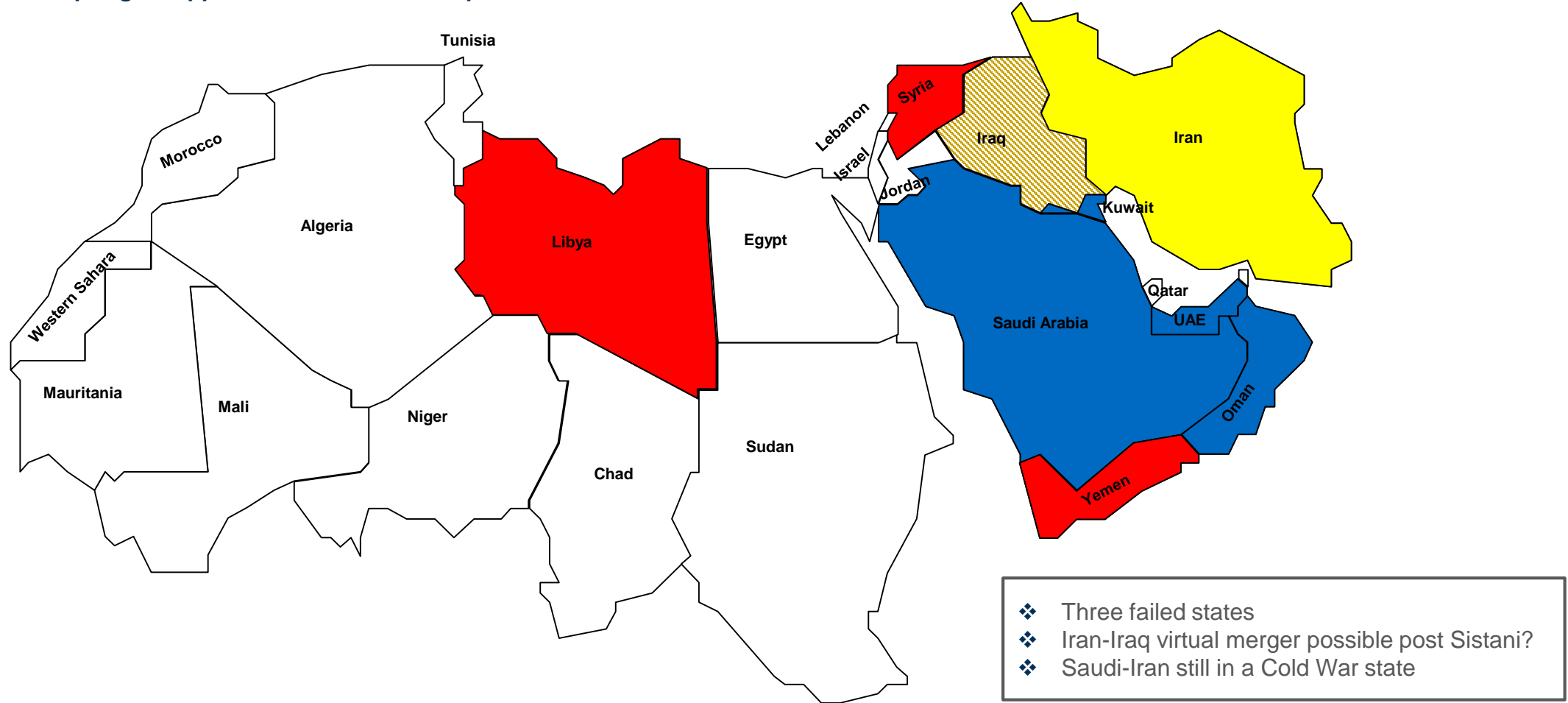
## World Events and Oil Volatility – Nominal per Barrel Pricing (1972 – 2017)



Source: EIA.

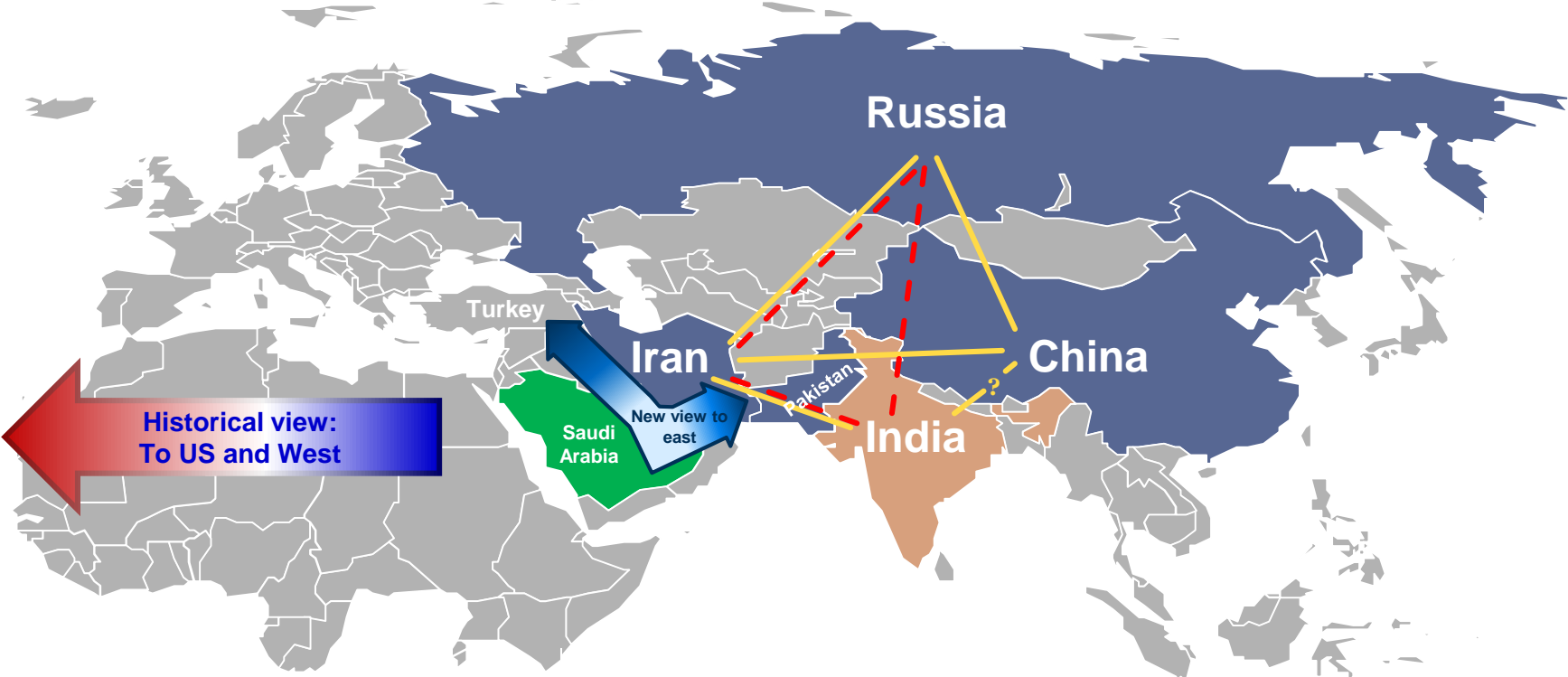
# Today's Realities

The 2011 "Arab Spring" Skipped "Summer" and Morphed Into "Winter"



# Today's Realities

## Evolving Power Triangles



# Global Perspective on New Production Sources

Country	Potential for Production Increases	Observations
U.S.	Possibly Significant	Will involve lead times and sound Trump policy decisions
Saudi Arabia	Quite Possibly Limited	Growing domestic demand challenges export capability (i.e. oil consumption to generate electricity)
Iraq	Very Significant	Very subject to improved domestic security of reduced ethnic tensions
Iran	Potentially Meaningful	However, very dependent on ability to attract foreign investment and subject to development lead times
Russia	Potentially Significant	Rosneft has identified projects with potential to add 600 MBblpd of new production in 2 – 3 years
Venezuela	Likely Very Limited	Issues involve domestic social instability, resource maturity
Nigeria	Notionally Significant But Challenged	Subject to domestic instability, corruption and lead time challenges for new investment
Argentina	Meaningful to Domestic Supply Needs	Unlikely to be a global game changer
Colombia	Meaningful to Domestic Supply Needs	Upside is with the margin of error in global supply

# Opportunities vs Challenges

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## Opportunities

- ❖ Sustainable Saudi/Iranian cooperation on oil pricing
- ❖ Ongoing Russian Support of OPEC cuts
- ❖ Determined Saudi Aramco IPO progress

## Challenges

- ❖ Global oil demand growth could disappoint (possibly down to or below 1.0 million b/d)?
- ❖ A looming peak in China's and India's inventory build?
- ❖ Will a stronger dollar derail oil supply/demand rebalancing?

# Saudi Aramco IPO

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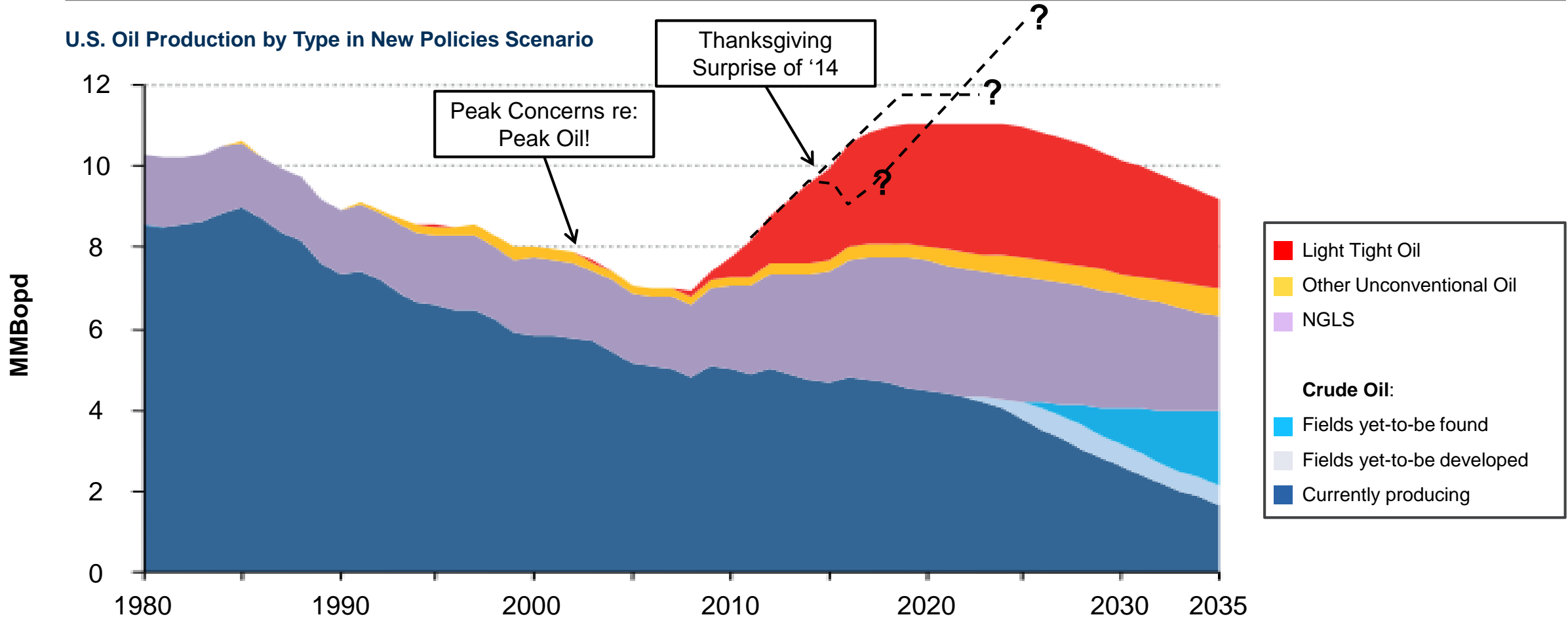
## The Basis for a Tailwind

- ❖ *“Aramco IPO is on Track as Saudi Arabia Weighs Best Road Ahead Minister Says”*
- ❖ *“Saudi Aramco IPO to Offer Shares in Whole Company”*
- ❖ *Valuation remains an open issue*
- ❖ *JP Morgan to lead with Moelis, Morgan Stanley, HSBC and Citi as co-managers*
- ❖ *“Nabors Signs Joint-Venture Pact with Saudi Aramco”*



# Implications for American Petroleum Strategy

U.S. Oil Production by Type in New Policies Scenario

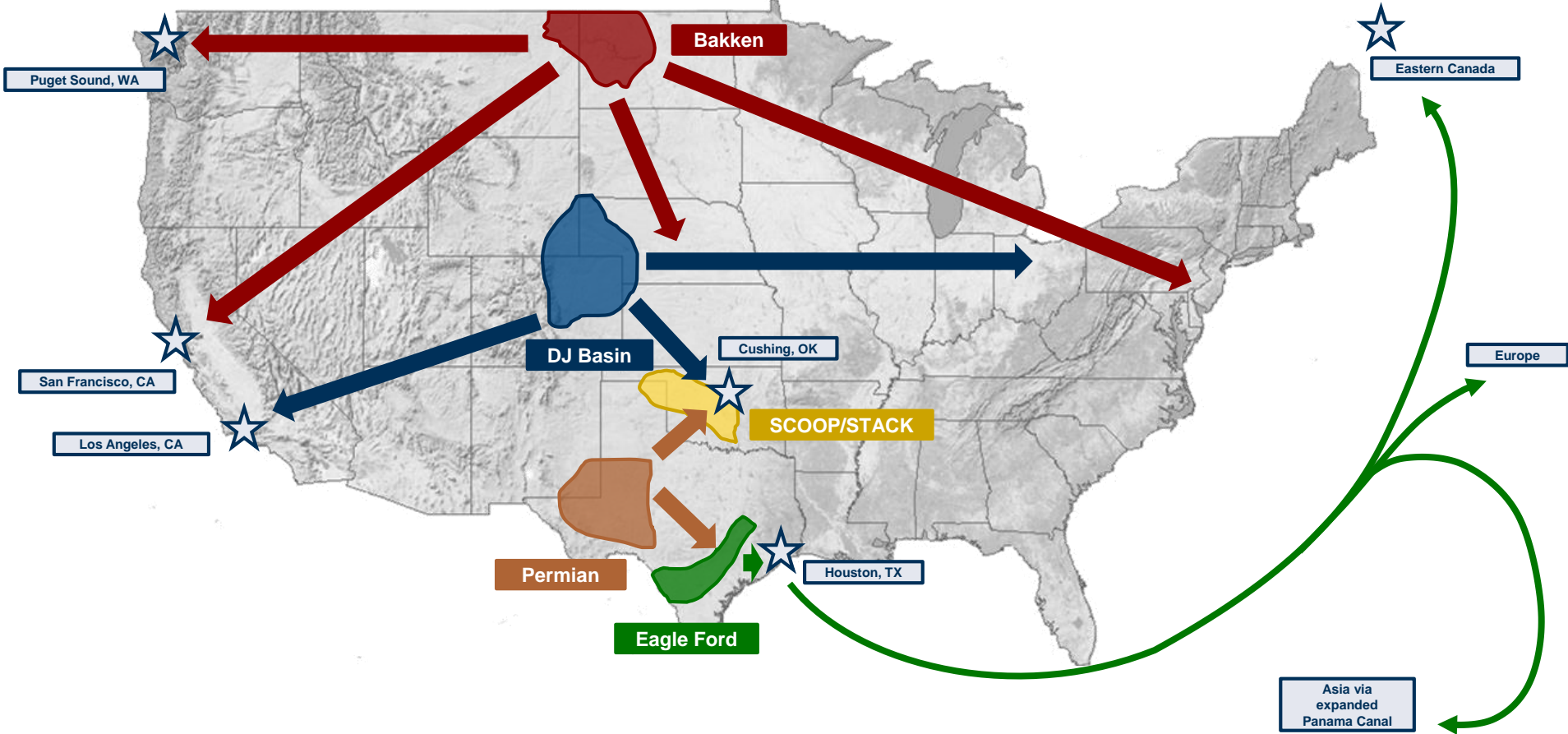


Note: The World Energy Model supply model starts producing yet-to-find oil after it has put all yet-to-develop fields into production. In reality, some yet-to-find fields would start production earlier than shown in the figure.

Source: IEA, World Energy Outlook 2012.

# Implications for American Petroleum Strategy

## U.S. Legacy Infrastructure for Oil Exports

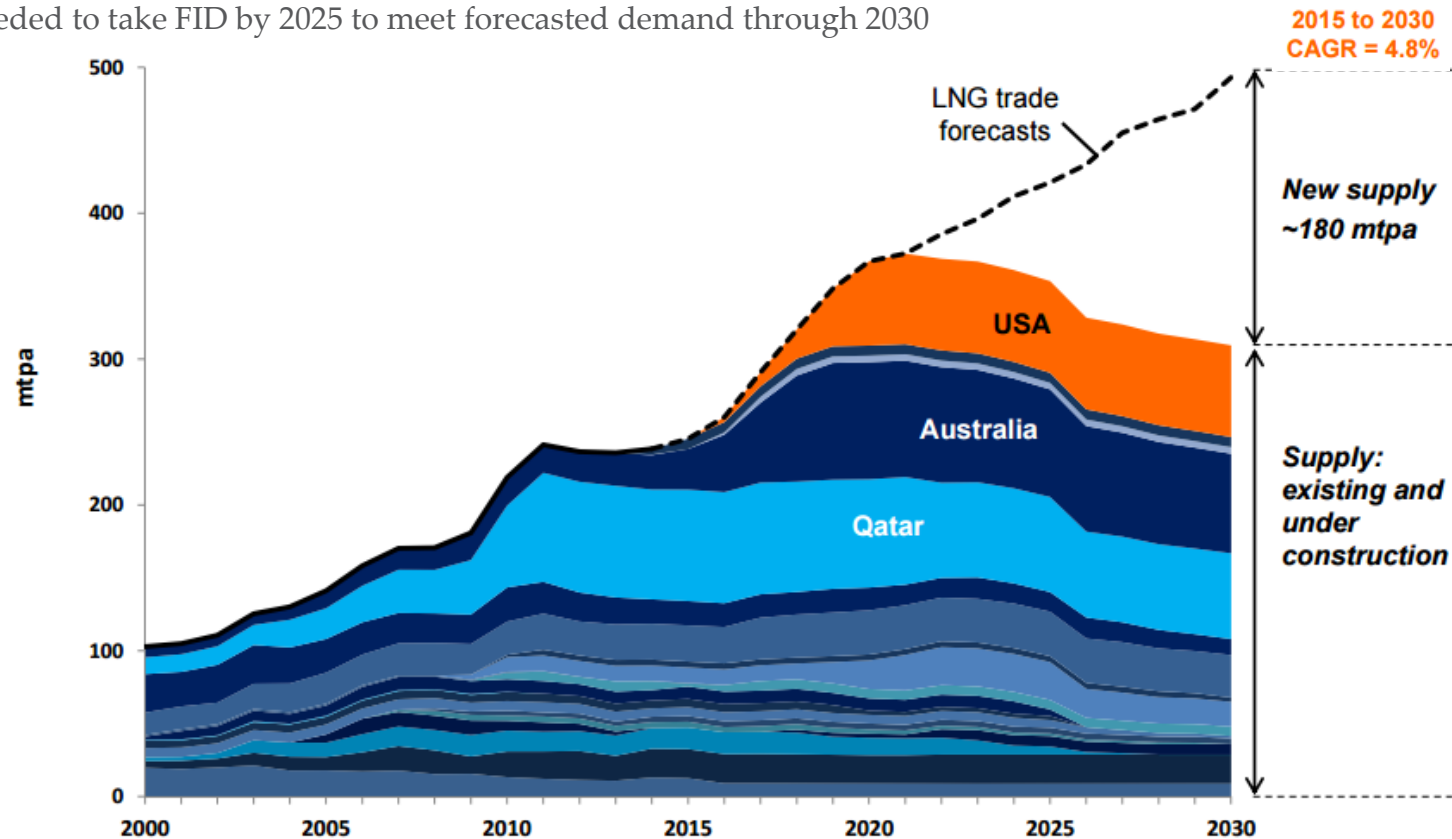


Elimination of the ban on U.S. oil exports potentially a price-capping development

# U.S. LNG Exports

## U.S. A Possible Top 3 LNG Supplier

- ❖ LNG demand expected to grow significantly from 2015 to 2030
- ❖ Supply-demand gap projected to open shortly after 2020 as trade grows and existing production declines in certain regions
- ❖ ~42 new LNG trains needed to take FID by 2025 to meet forecasted demand through 2030

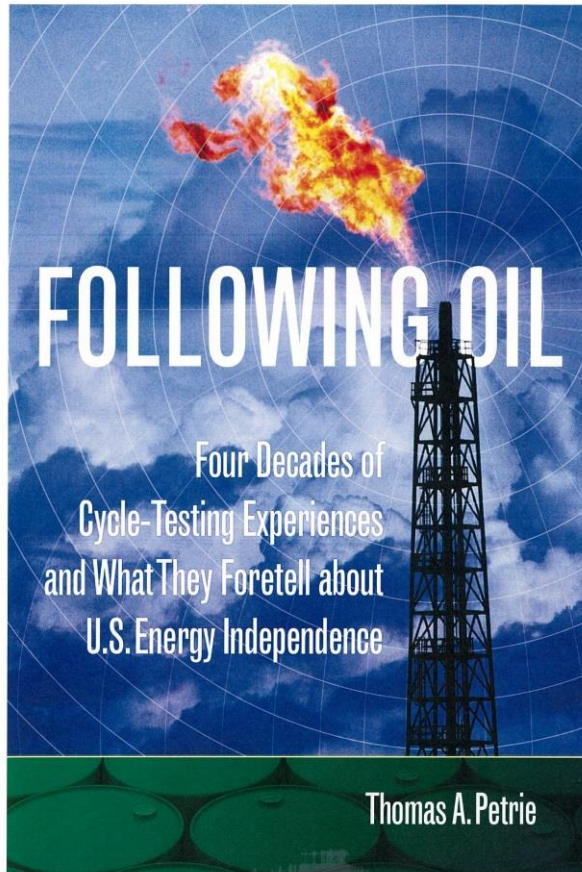


Source: Cheniere Energy investor presentations and Wood Mackenzie estimates.

# Concluding Observations

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## “Following Oil” – Lessons That are Time and Cycle Tested



- ❖ While actions are now speaking louder than words, there remains an ongoing motivation for OPEC to periodically remind us of oil price downside risks.
- ❖ The evolving plan for a 2018 Saudi Aramco IPO is gathering increased market attention.
- ❖ Only a decade ago it appeared that the U.S. was on a path to be the largest LNG import market; barring flawed policy direction post the 2016 election it is now poised to become a top three LNG exporter.
- ❖ Growing LNG volumes represent many opportunities to reduce carbon emissions and improve energy security in the U.S., Asia, and Europe.