

# The United States' Evolving Role in Asian Energy Security

*Hint—It's no longer just about sea lane security.*



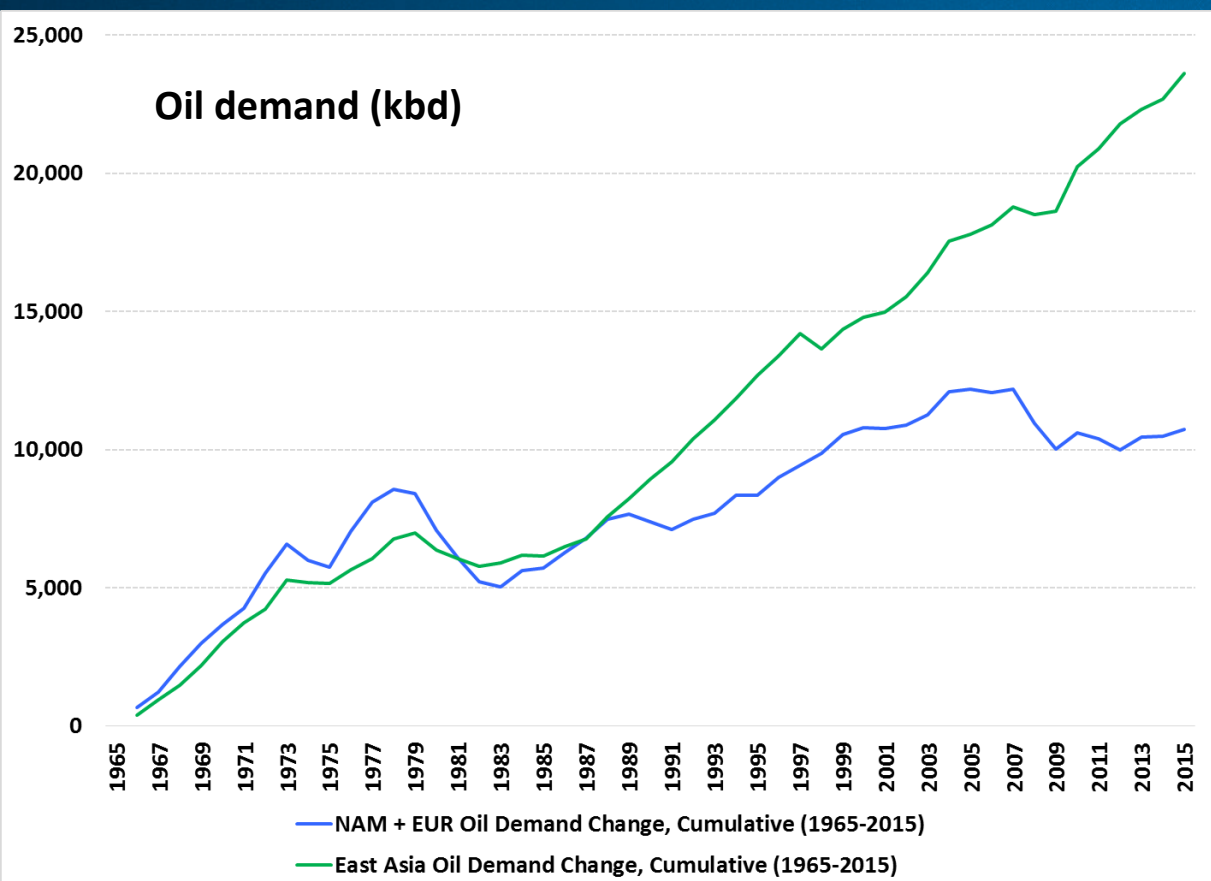
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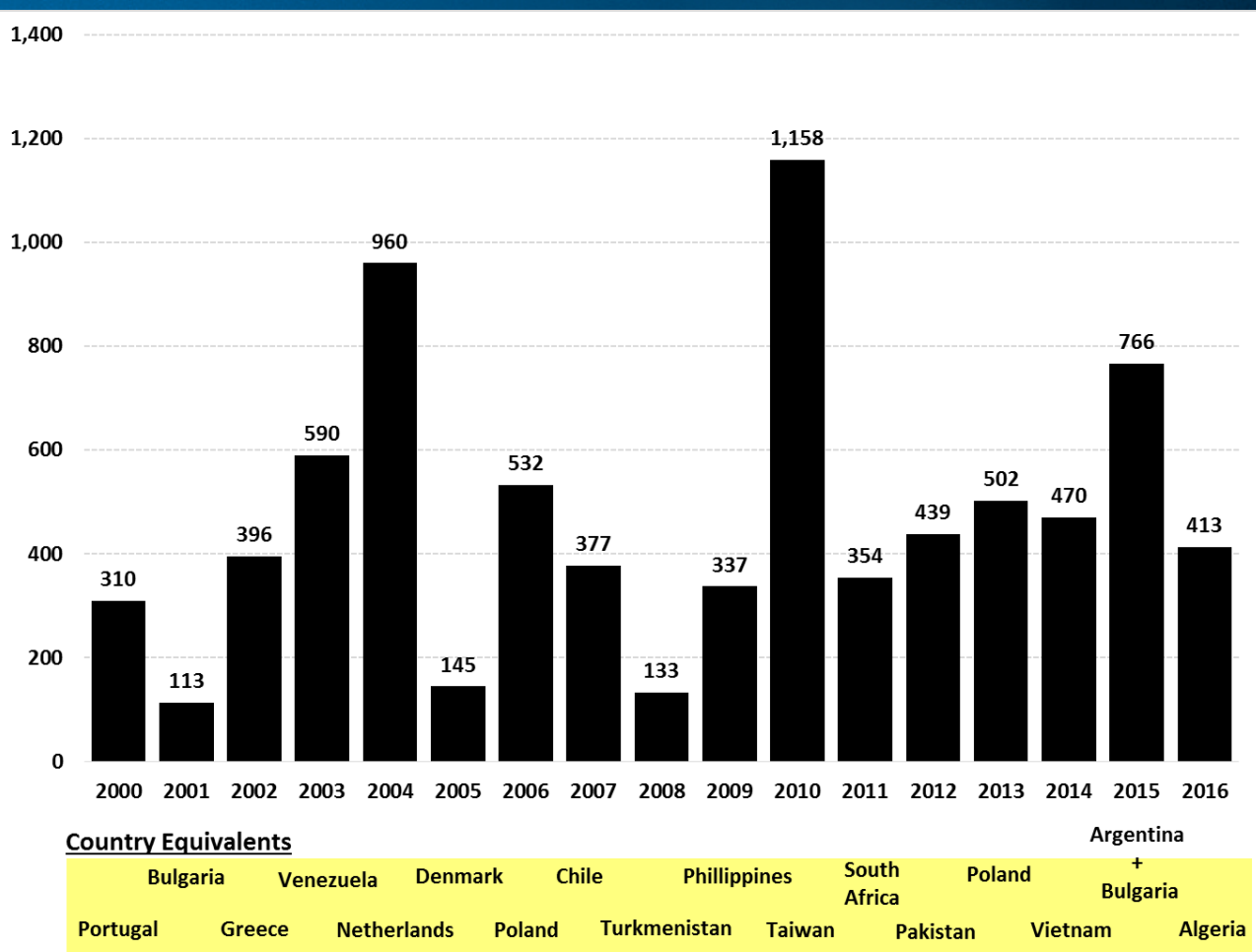
# What is the U.S. Stake in Asian Energy Security Issues?

Ensuring stable energy supplies to major global economic growth drivers, some of which are U.S. treaty allies, is a major strategic priority.

## Region Has Become Top Global Oil User

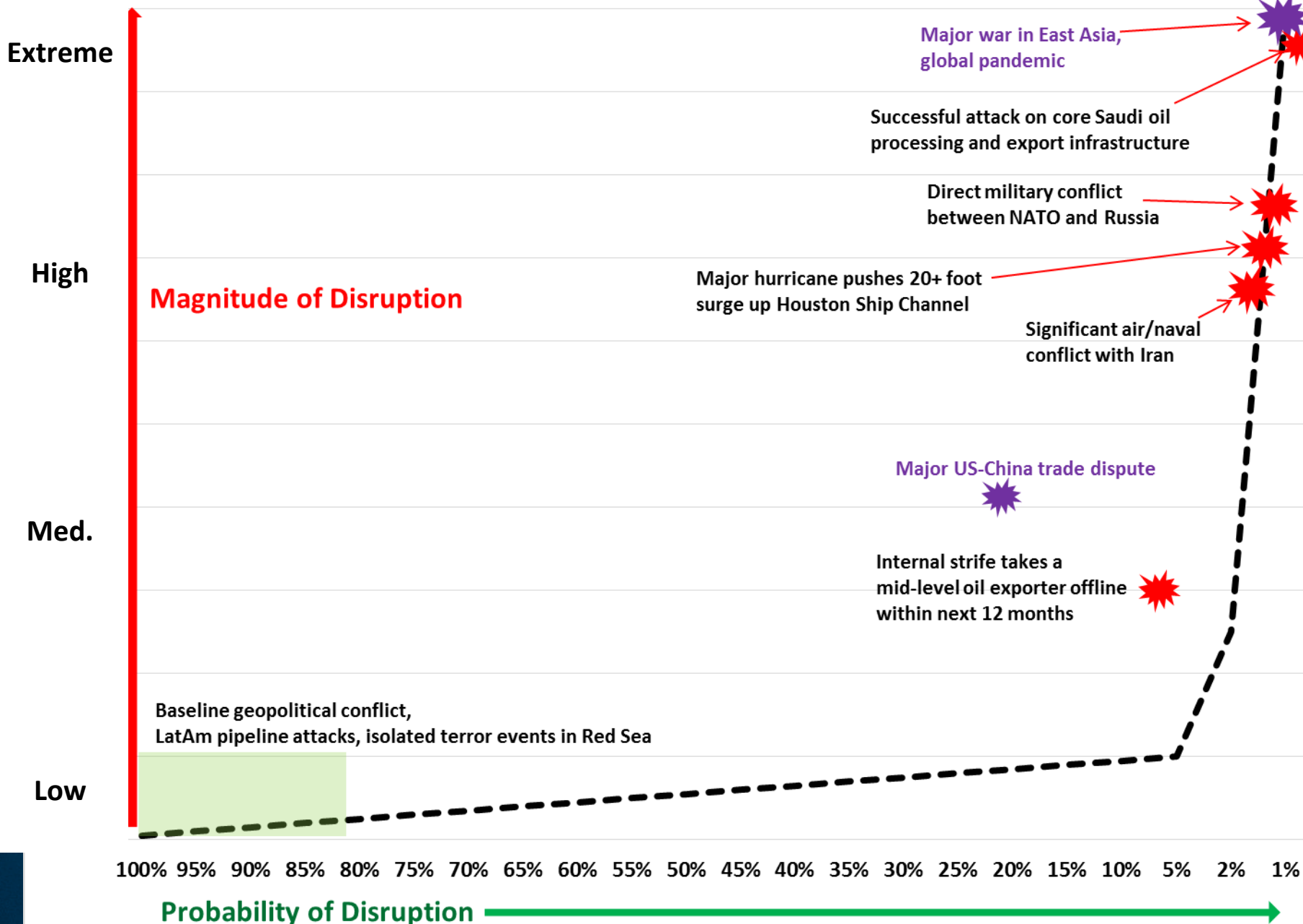


## China is the Prime Demand Driver in Recent Years





# Thinking About Oil and Energy Security



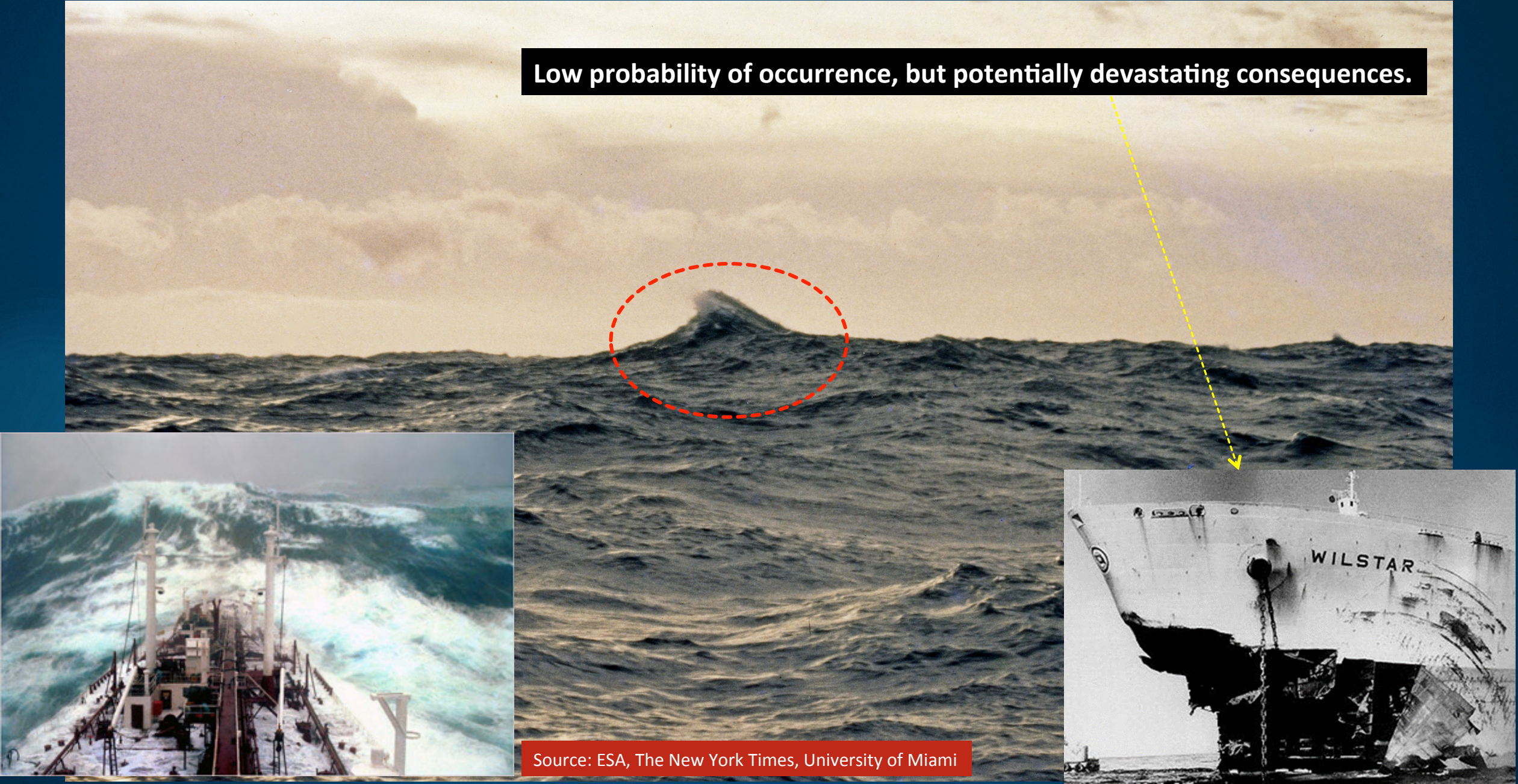
**Obsession with the far end of the curve often drives policy.**

Hard security focuses on and also creates energy security concerns, but the policy solutions encompass multiple domains. Many of these potential threat events—particularly the highest impact ones—are best resolved through proactive diplomacy and passive resilience measures. Energy security is inherently a multi-national enterprise that involves a broad range of commercial and governmental actors.



# Large-Scale Energy Shocks Analogous to Rogue Waves

Low probability of occurrence, but potentially devastating consequences.

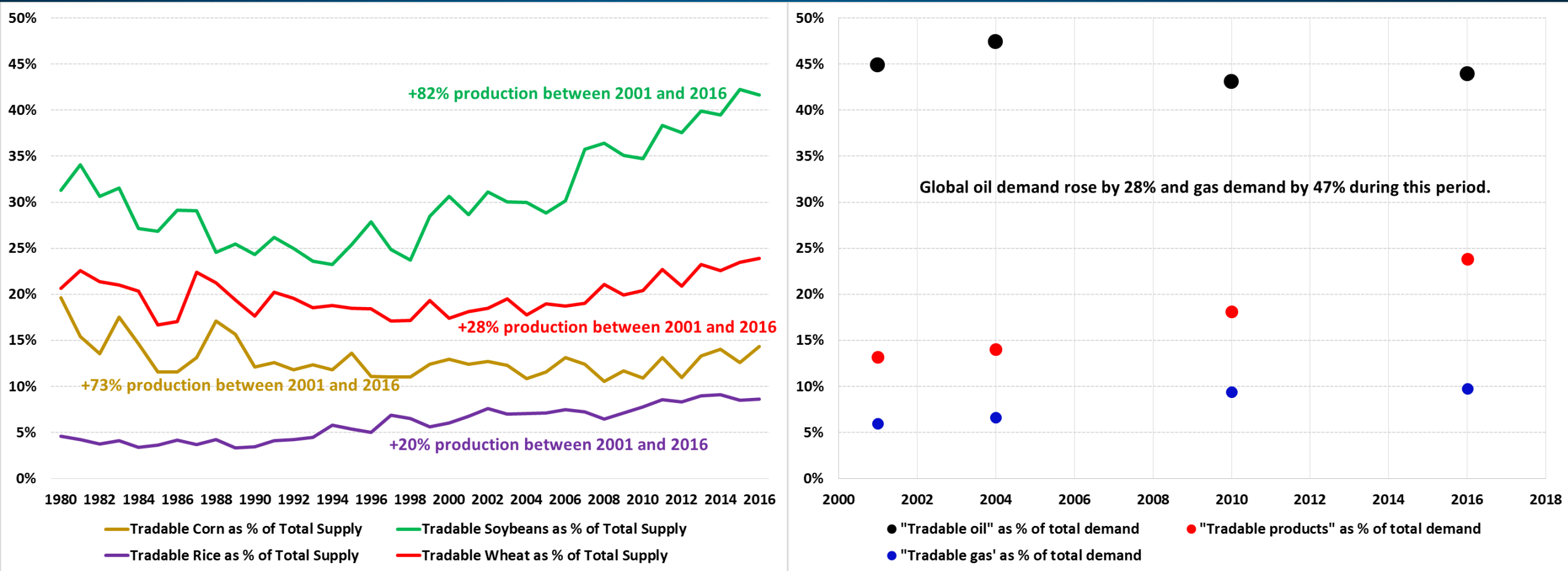


Source: ESA, The New York Times, University of Miami



# Fungible Supplies Help Ensure Oil Security

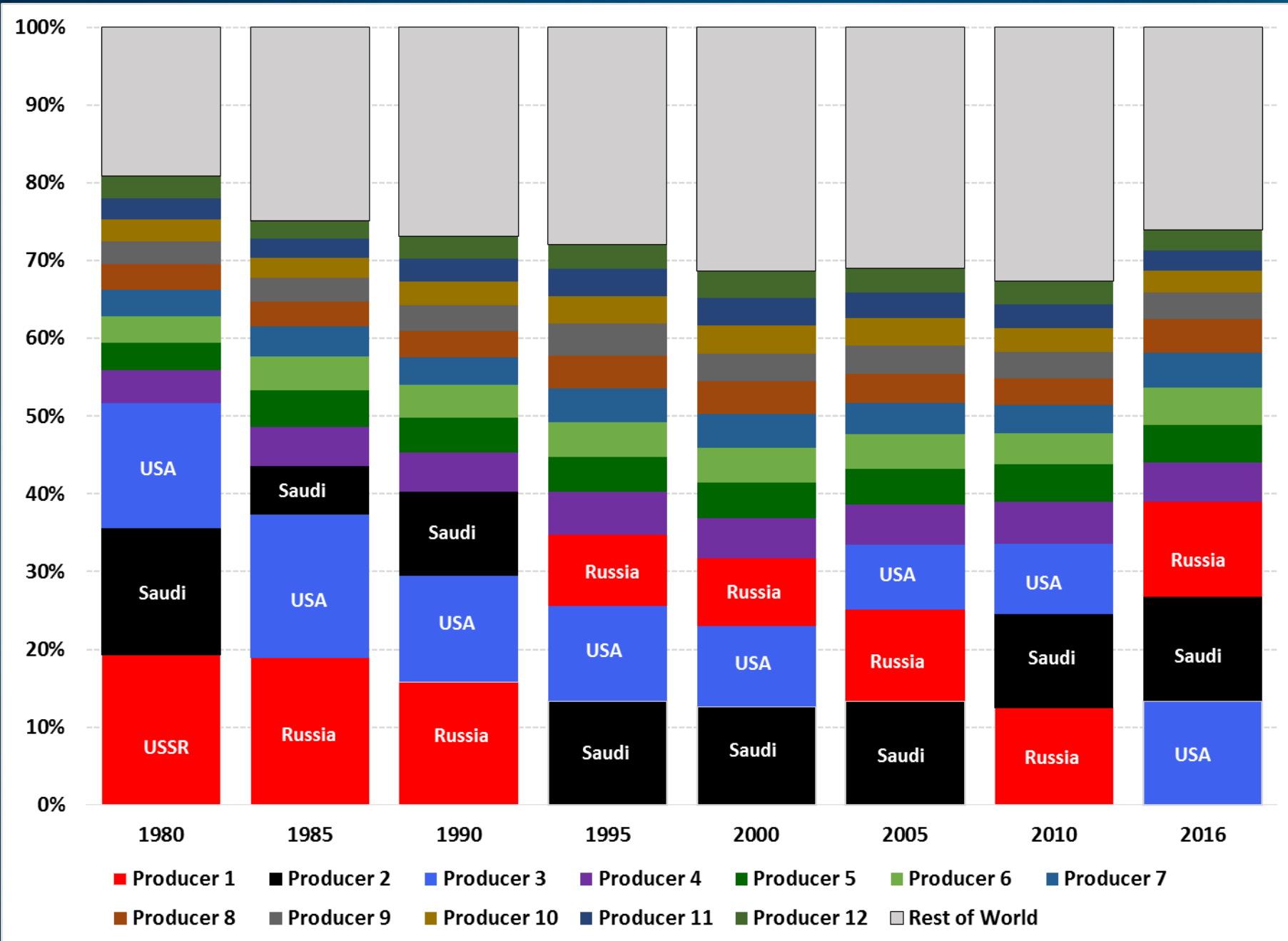
Oil is not just one of the most widely traded global commodities...it is also one of the most tradable.



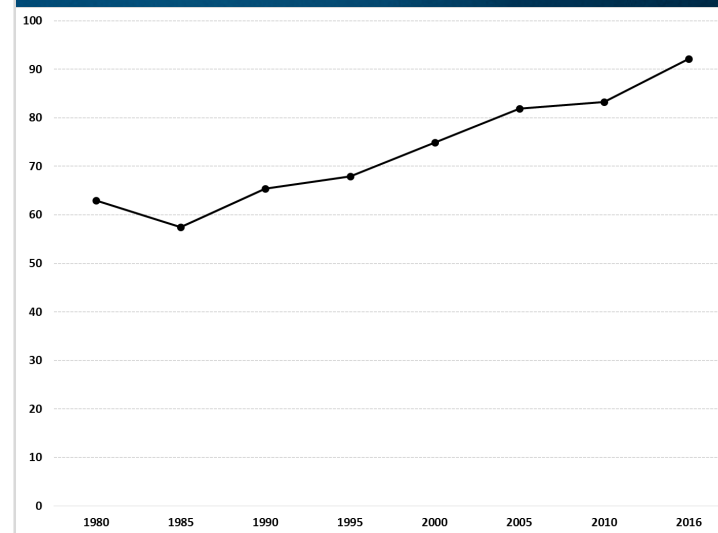
Source: BP Statistical Review, USDA, Author's Analysis



# 10 Largest Oil Suppliers' Share of Total Crude Supply: 1980-2016



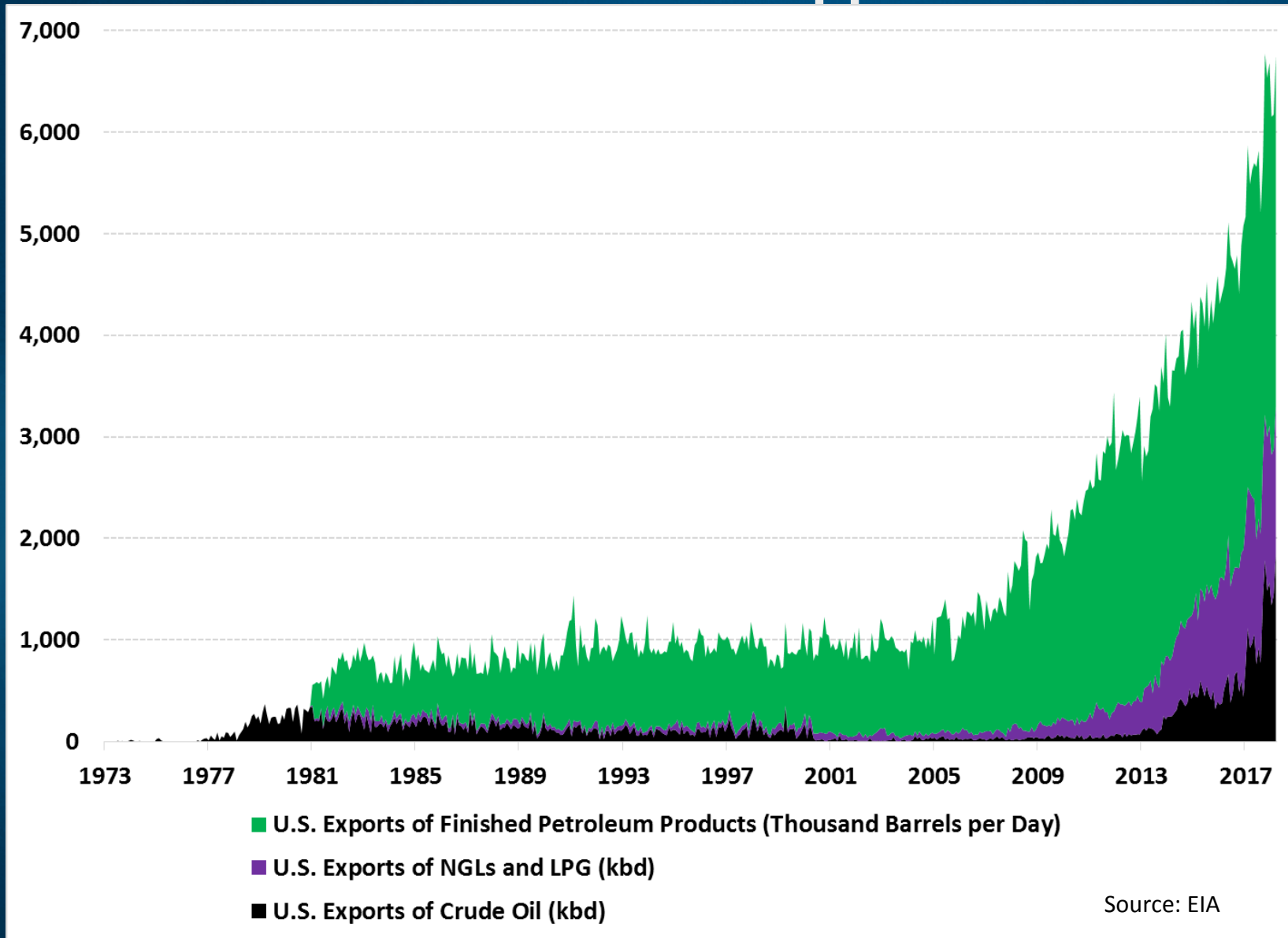
Global Crude Oil Production, Million Bpd



Source: BP Statistical Review

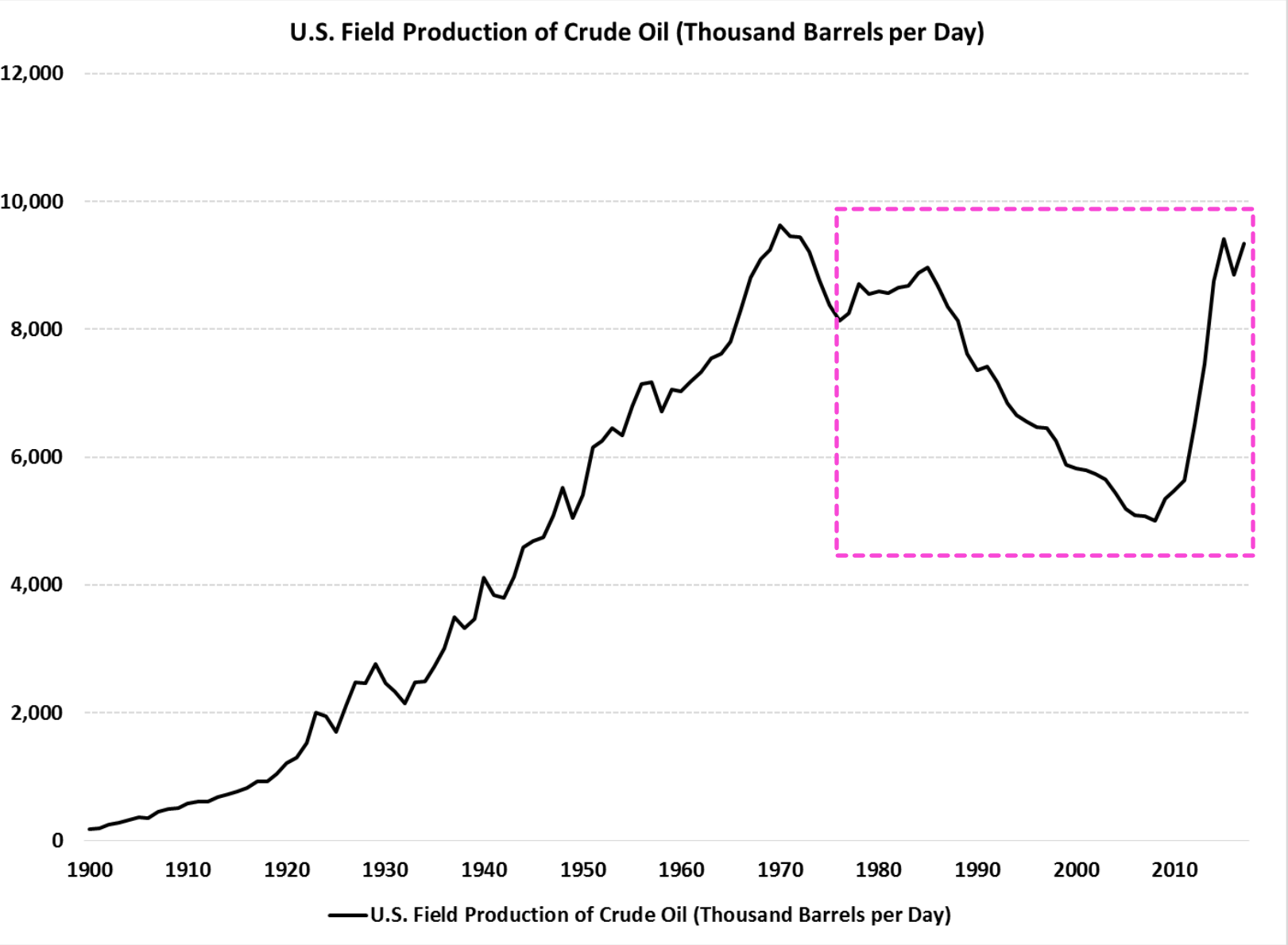


# The U.S. Has Long Supplied Military Assurance For Global Oil & Gas Flows: Now It Supplies Molecules as Well





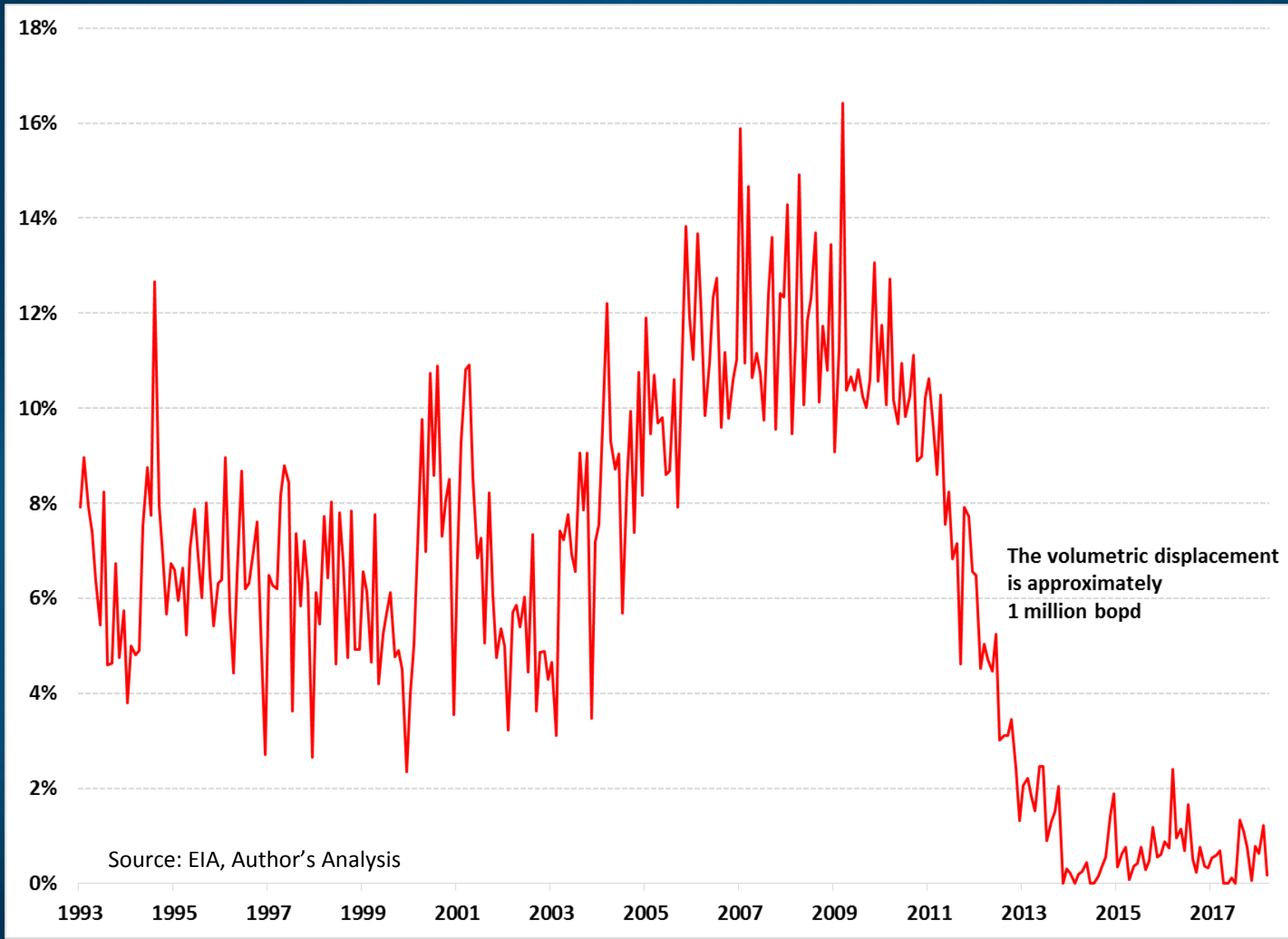
# Perhaps the Biggest Recent US Oil Security Contribution May be the “Passive” One





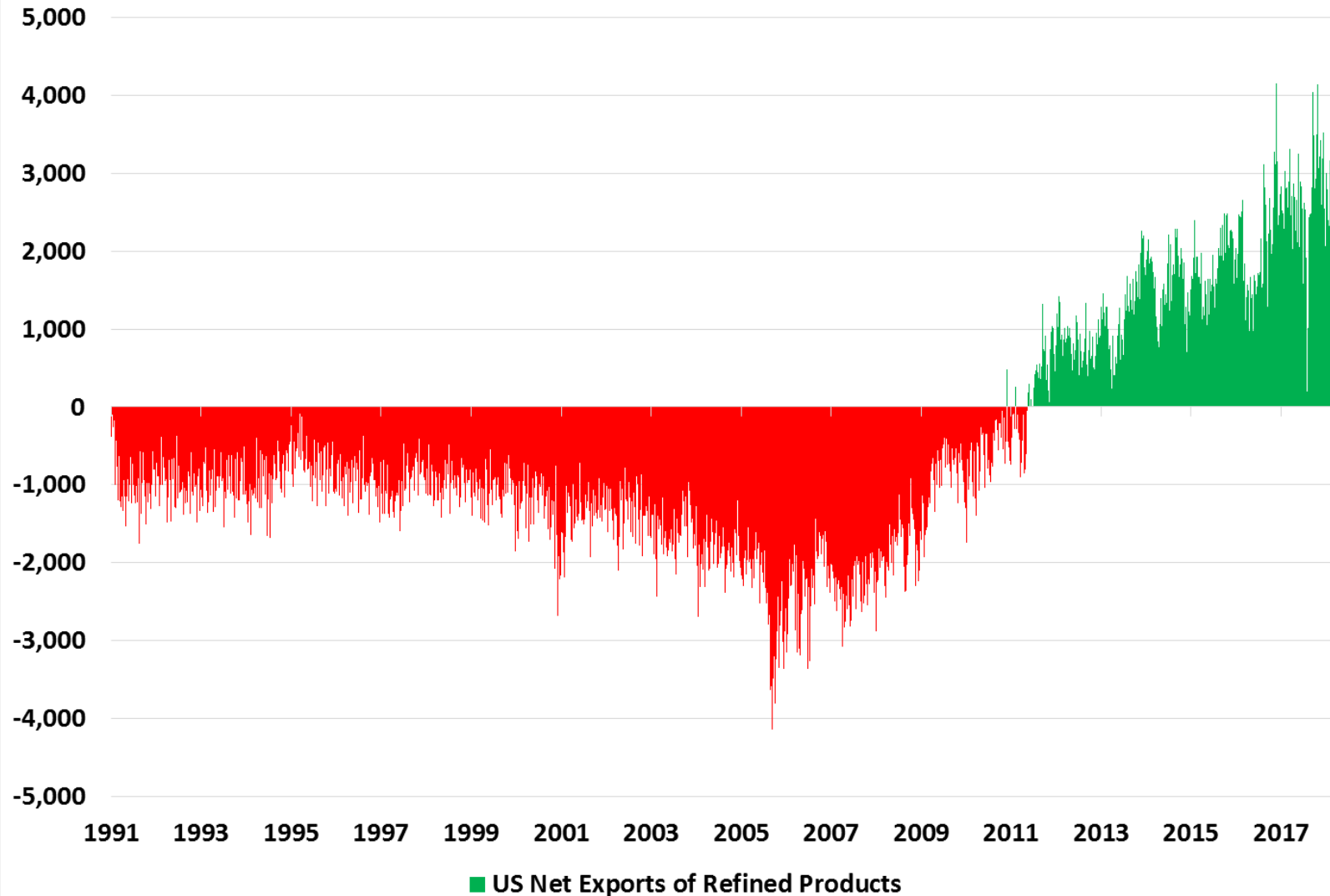
# Passive Influence Exerted Through Displacement of Barrels

West African Crude Oil Supplies as % of Total Refinery Input Volumes in PADD 3 (a/k/a the U.S. Gulf Coast)



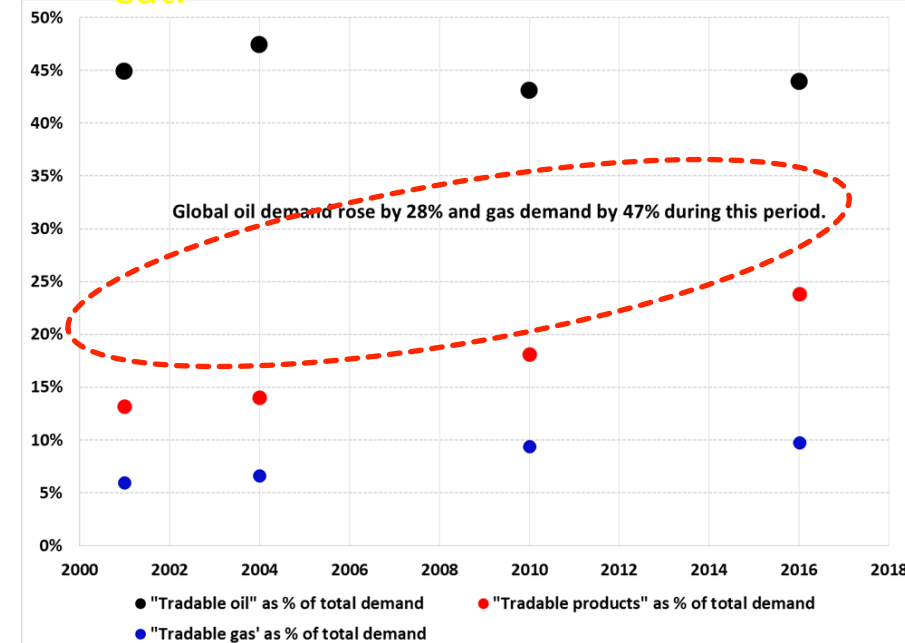
# The Shale Revolution Has Also Made the U.S. a Key Global Refined Products Supplier

US Net Exports of Refined Products (kbd)



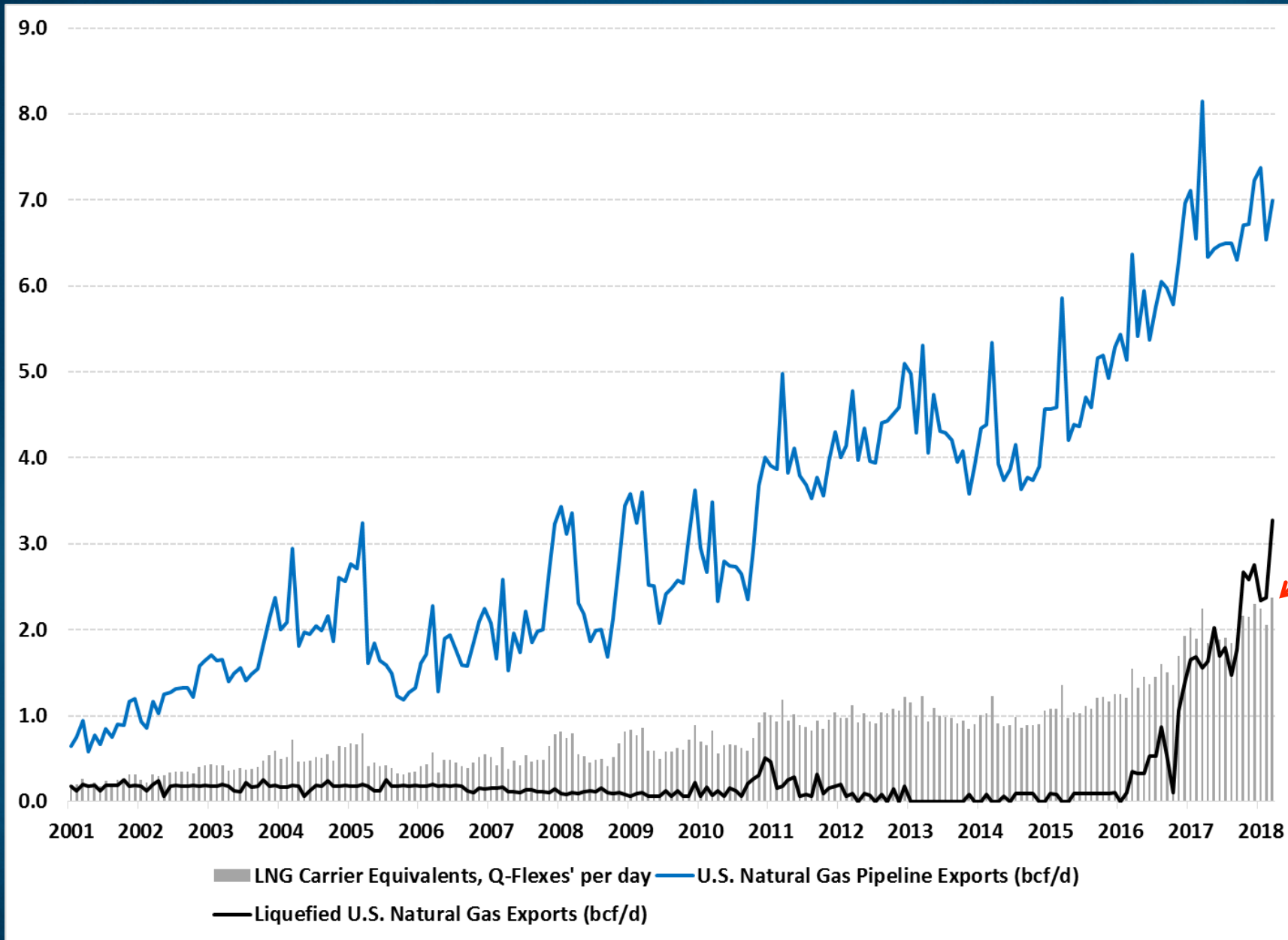
Crude oil is like raw meat—needs to be cooked before it becomes consumable.

But refined products are like hamburgers on a plate—ready to eat.





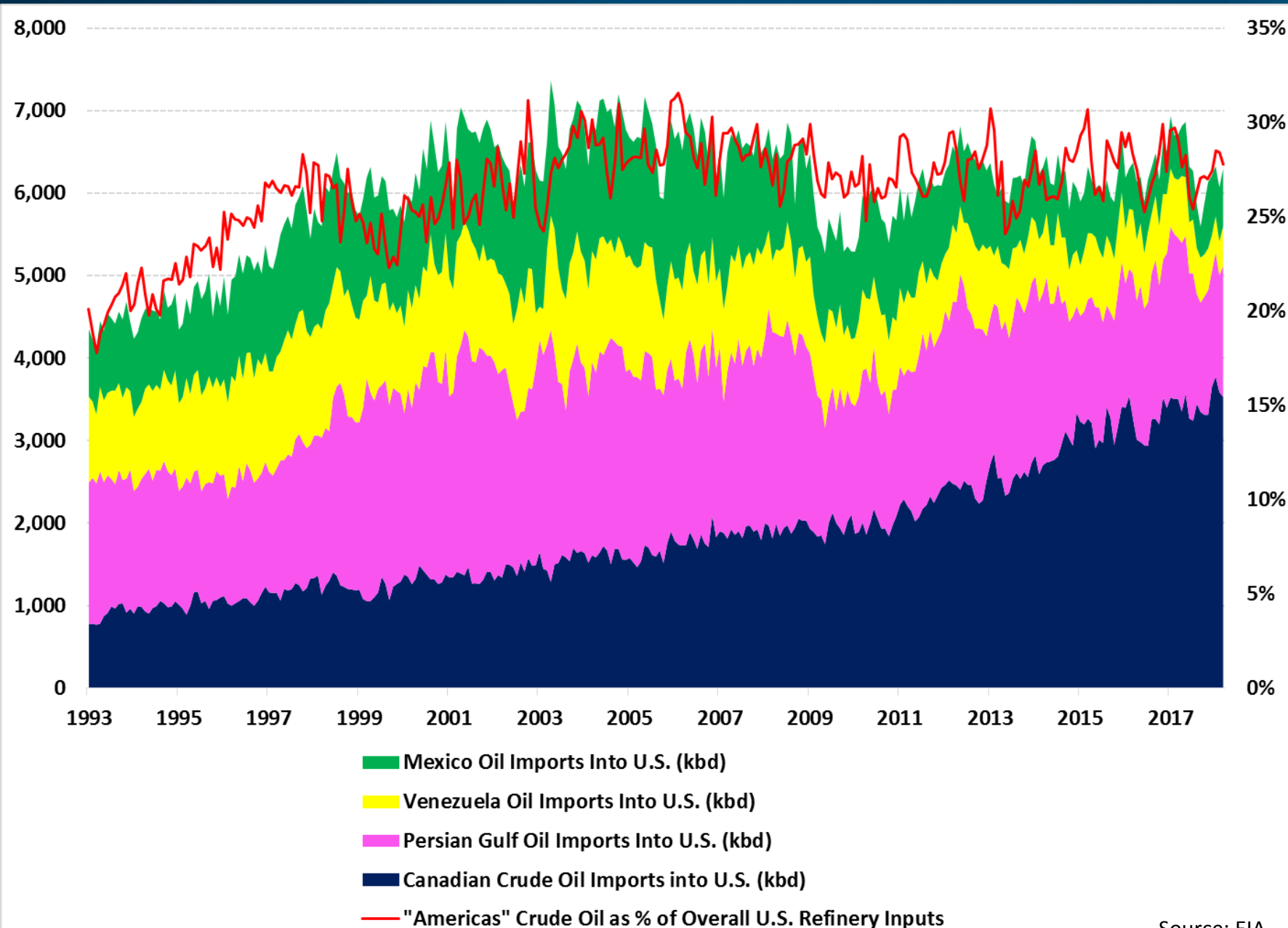
# Displacement Function Also At Play in Natural Gas Sector



Between pipelines and LNG, U.S. now sends out nearly 2.5 Q-Flex ships' worth of gas into world markets each day.

Gas production growth, including associated supplies from Permian Basin, and squeeze on gas generation caused by minimum purchases of electricity from renewables, coal, and nuclear are both likely to drive U.S. natgas exports significantly higher in coming years.

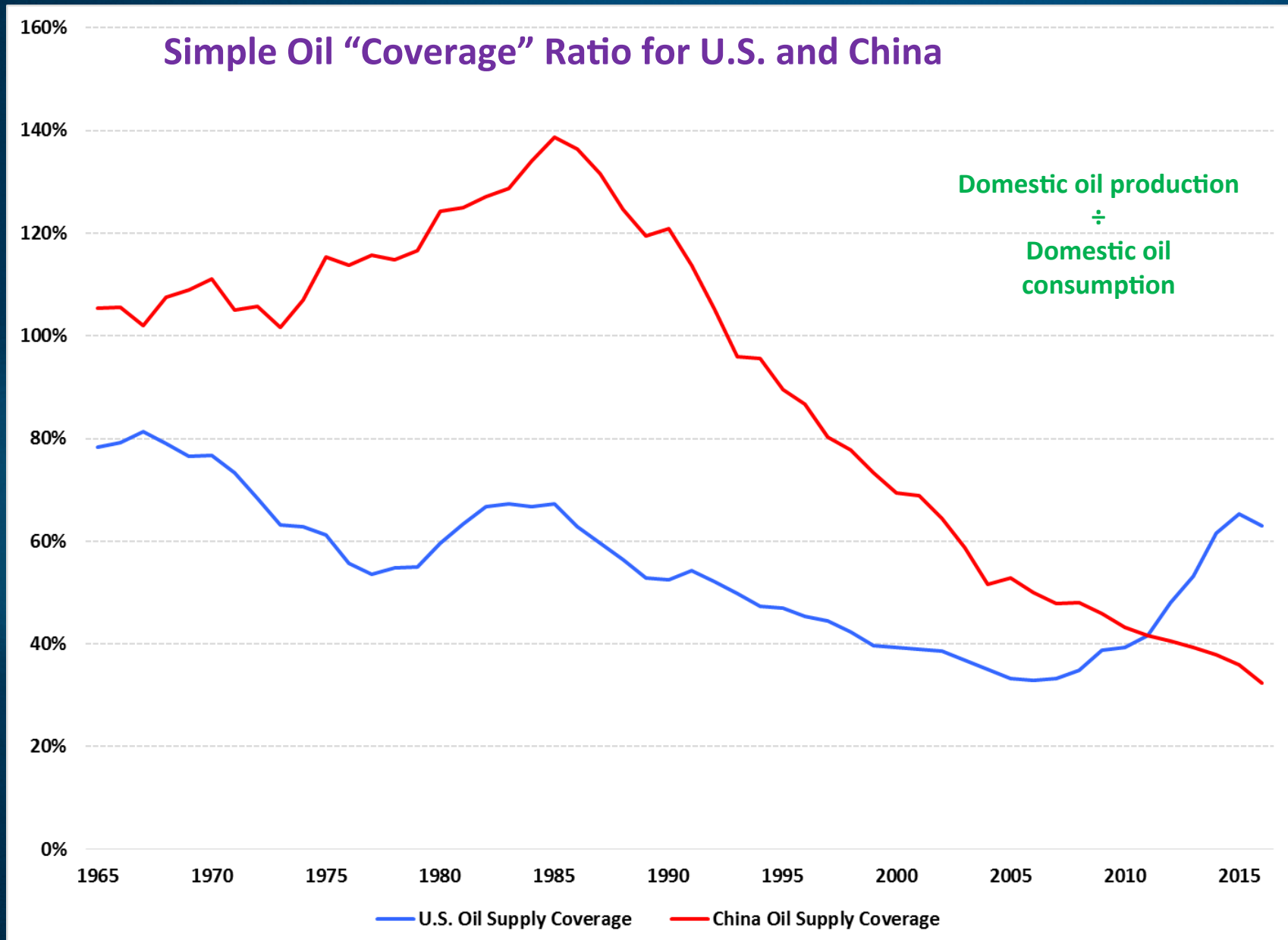
# Canada Has Played a Significant Role as Well



At a fundamental level, U.S. refiners are combining Canadian and other Western Hemisphere heavy crudes with abundant domestic natgas supplies to yield high-quality refined products that are then exported. Western Hemisphere oil supplies are likely to become much more important to global crude and products markets in coming years.



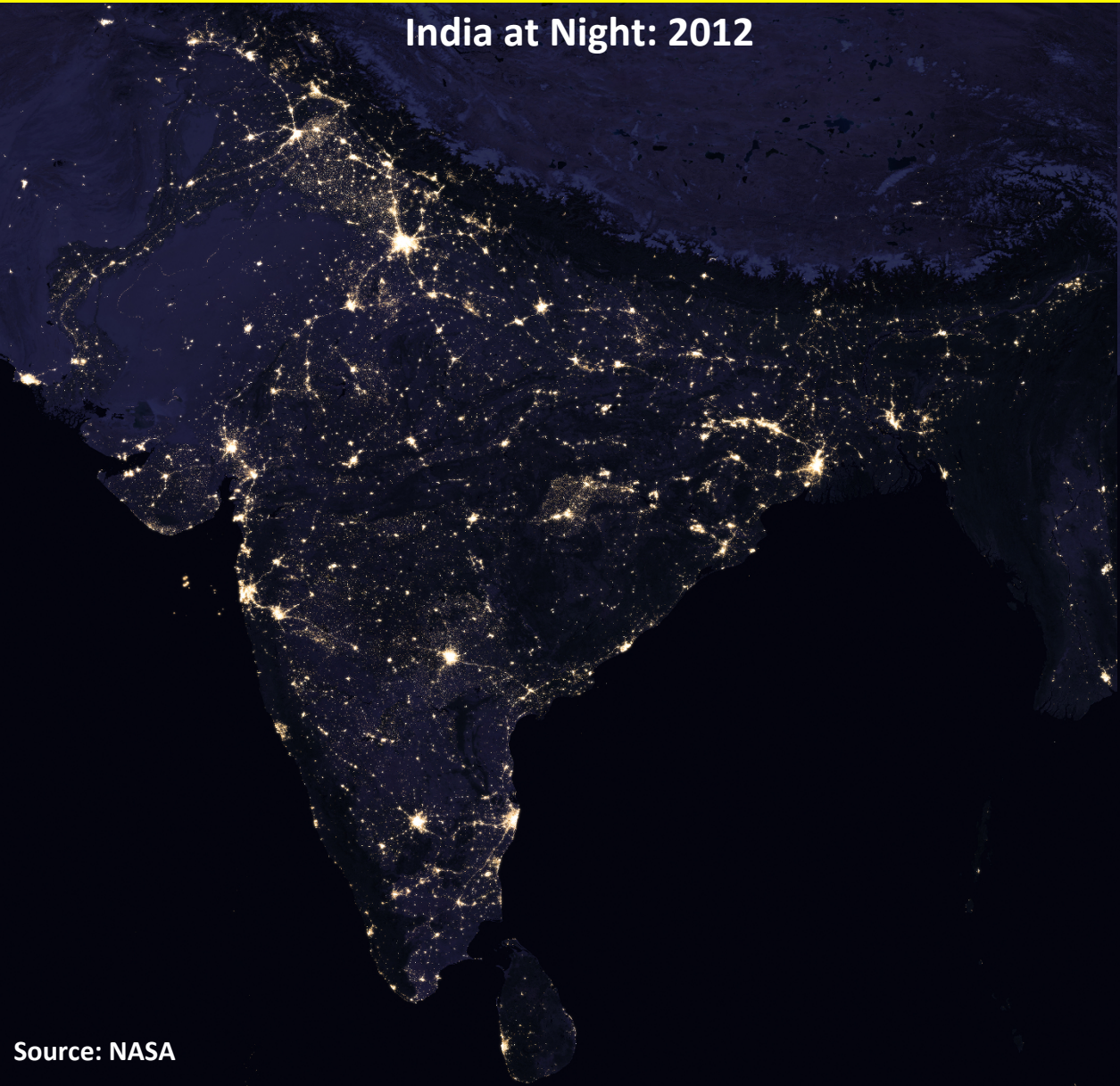
# How is Unconventional Revolution Affecting U.S. and Chinese Stances Toward Oil Market Issues?





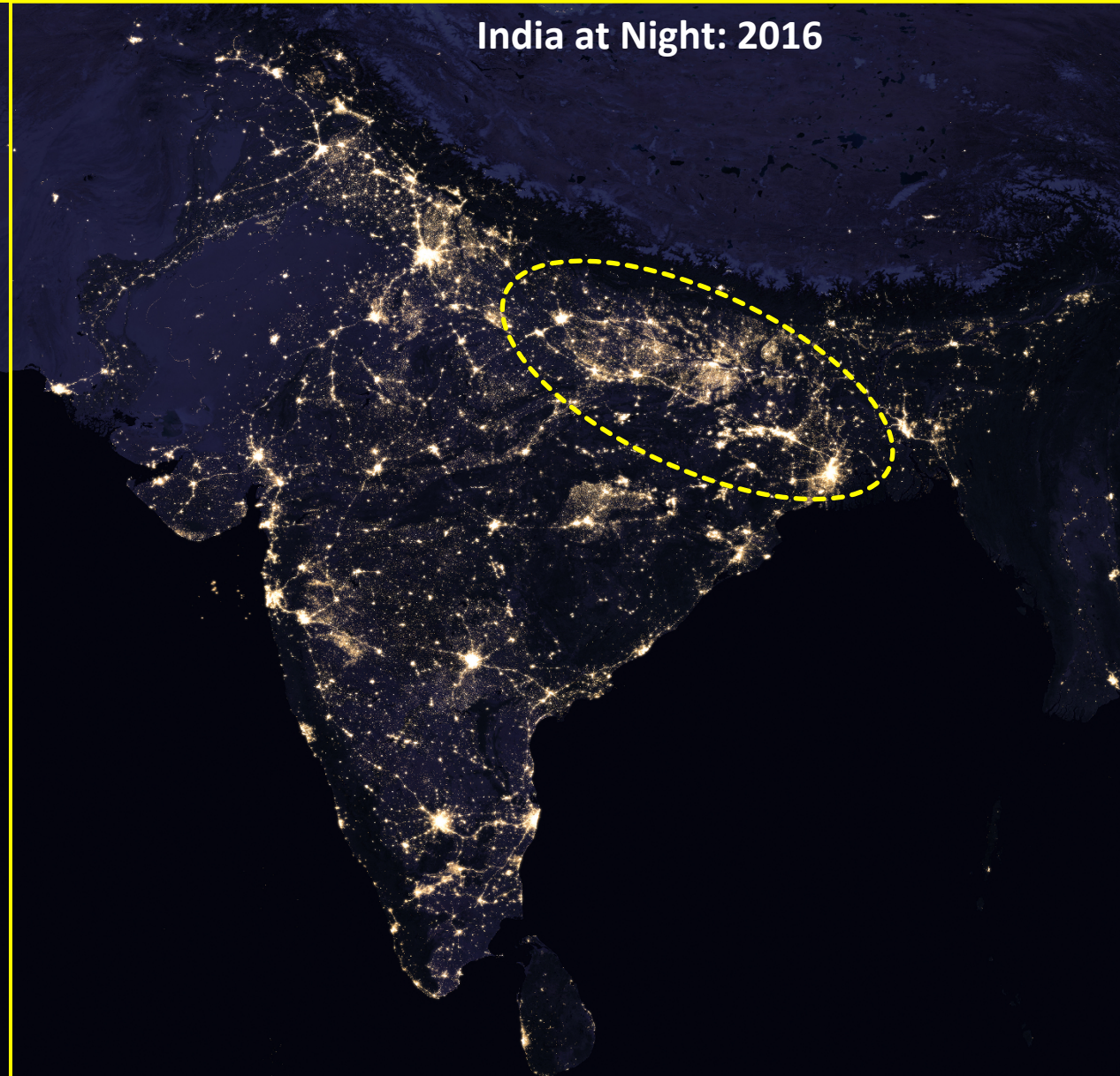
# Energy Security: Where You Sit Influences Where You Stand

India at Night: 2012



Source: NASA

India at Night: 2016





**Thank you for your attention!**

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