



**NEW ENERGY, NEW GEOPOLITICS?**  
The Geostrategic Impacts of the U.S.  
Unconventional Oil and Gas Revolution

**CSIS** | THE CENTER FOR STRATEGIC  
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# U.S. NET ENERGY IMPORTS

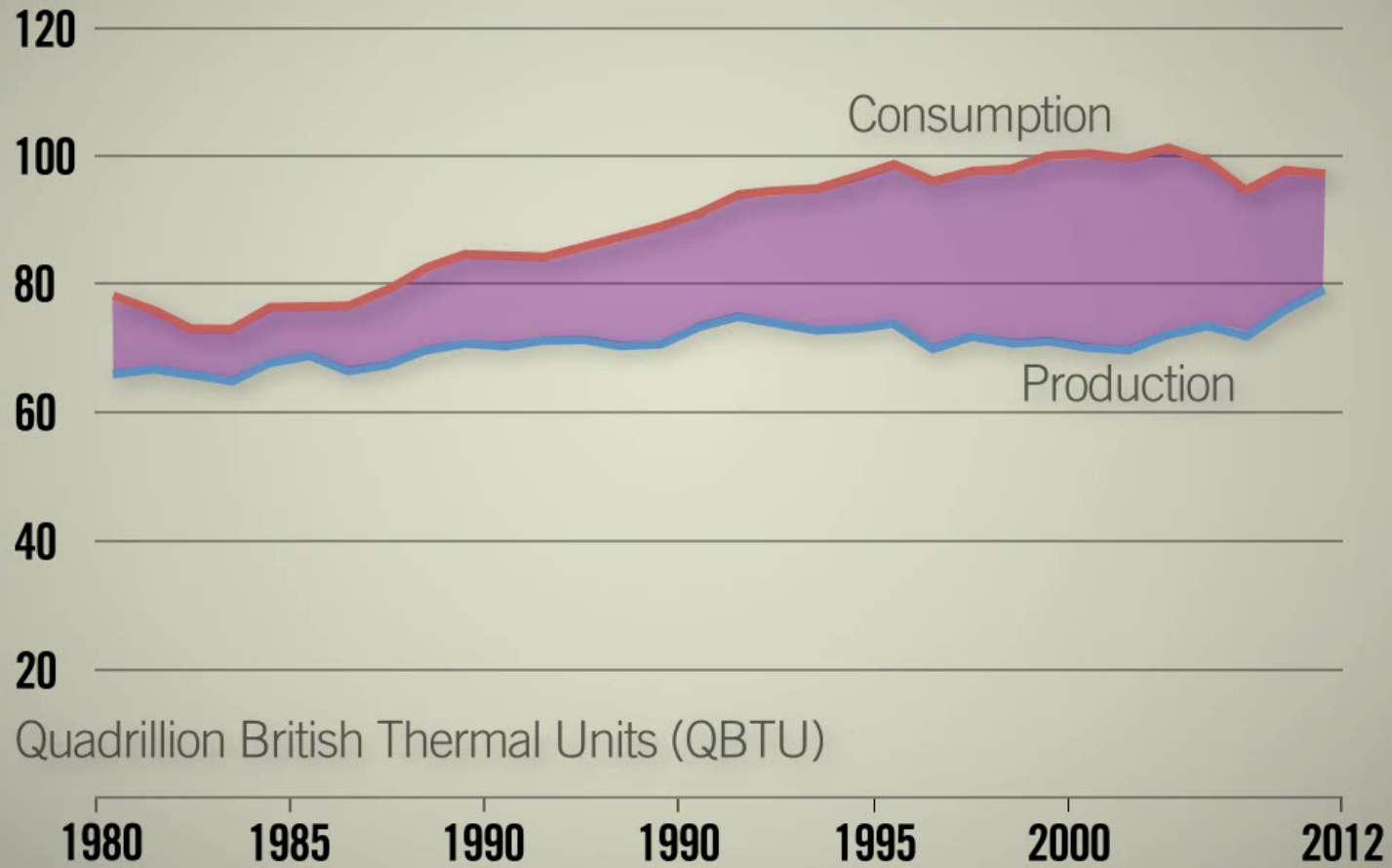




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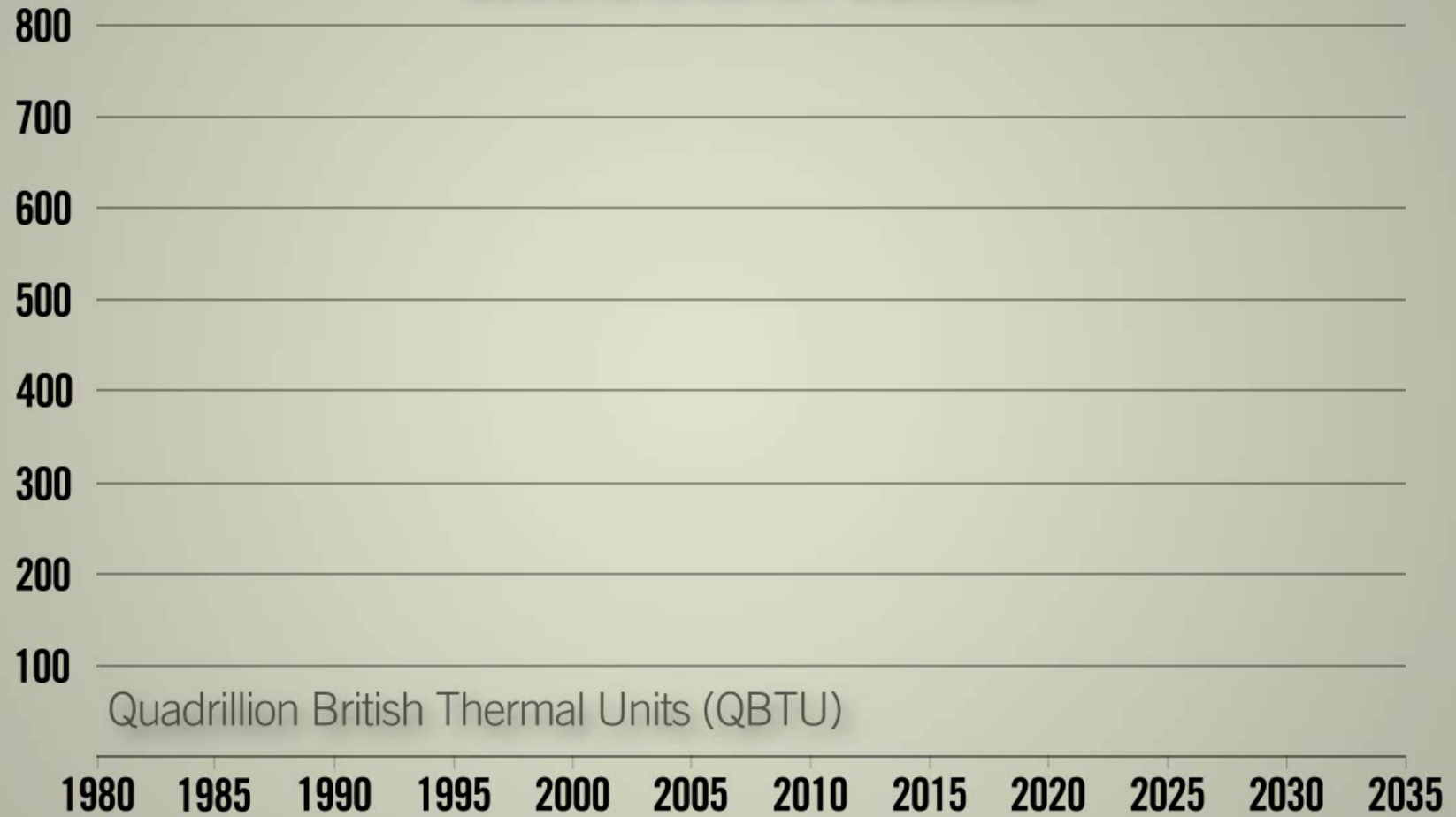


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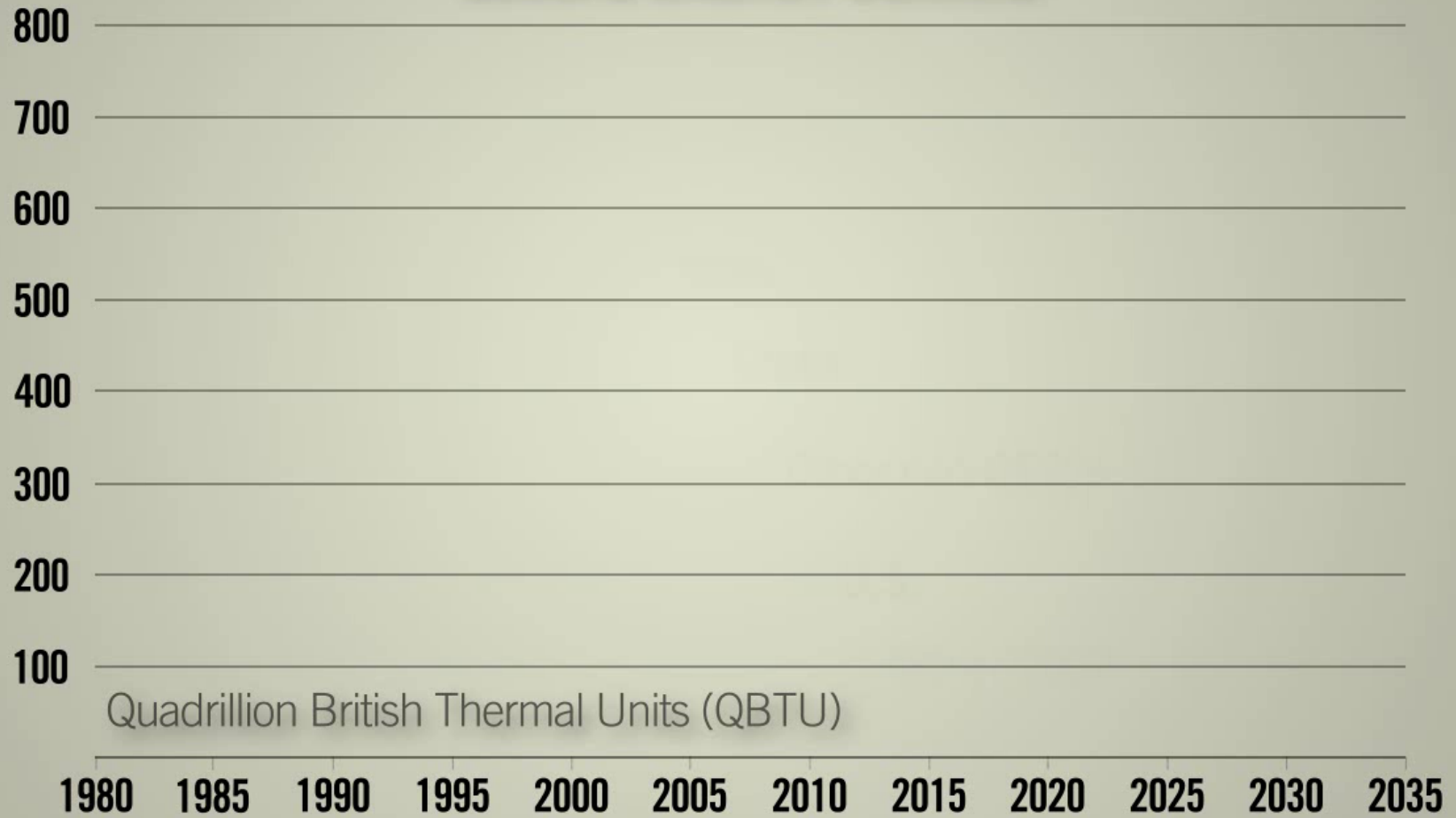
Quadrillion British Thermal Units (QBTU)

# GLOBAL ENERGY DEMAND

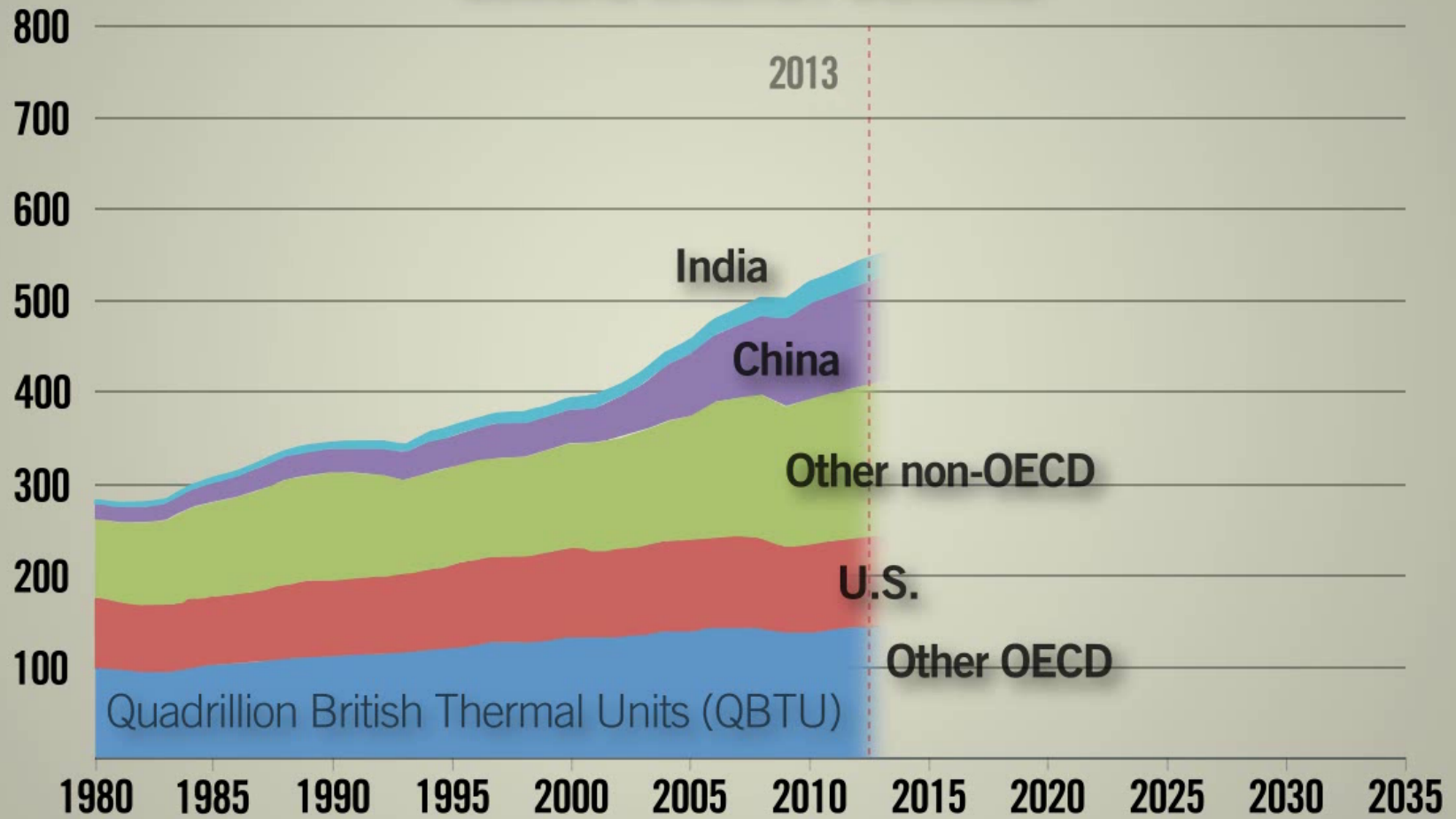




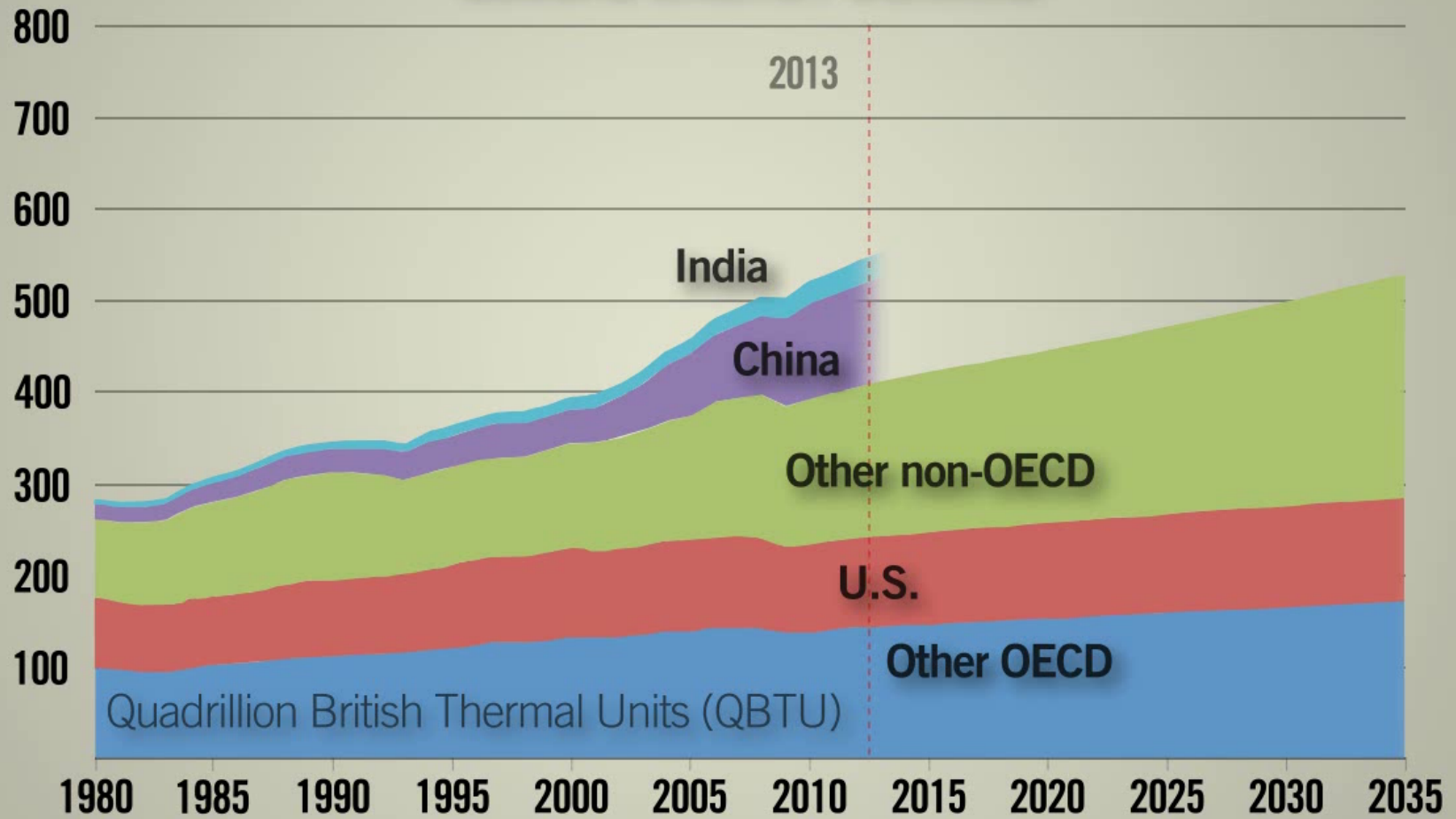
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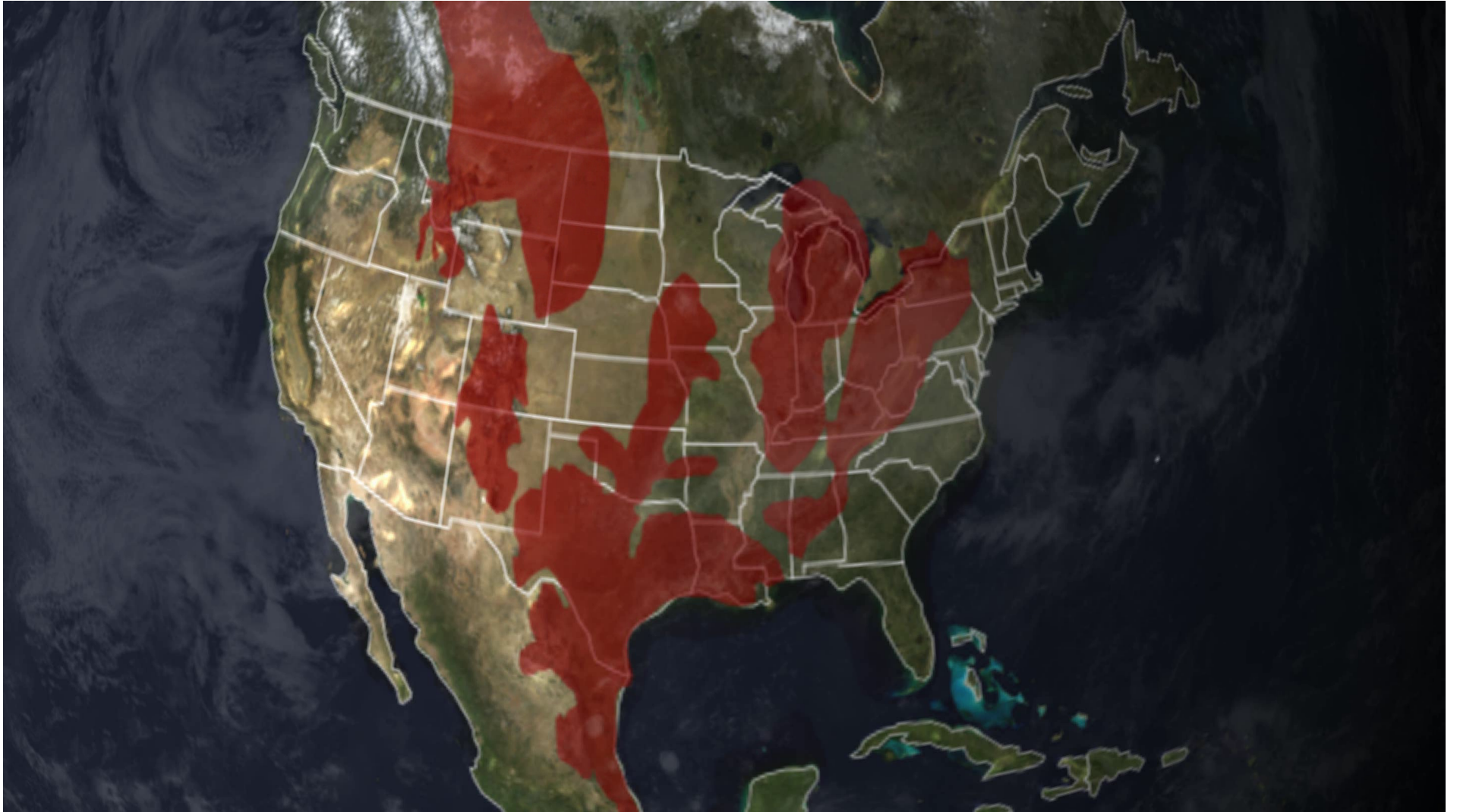


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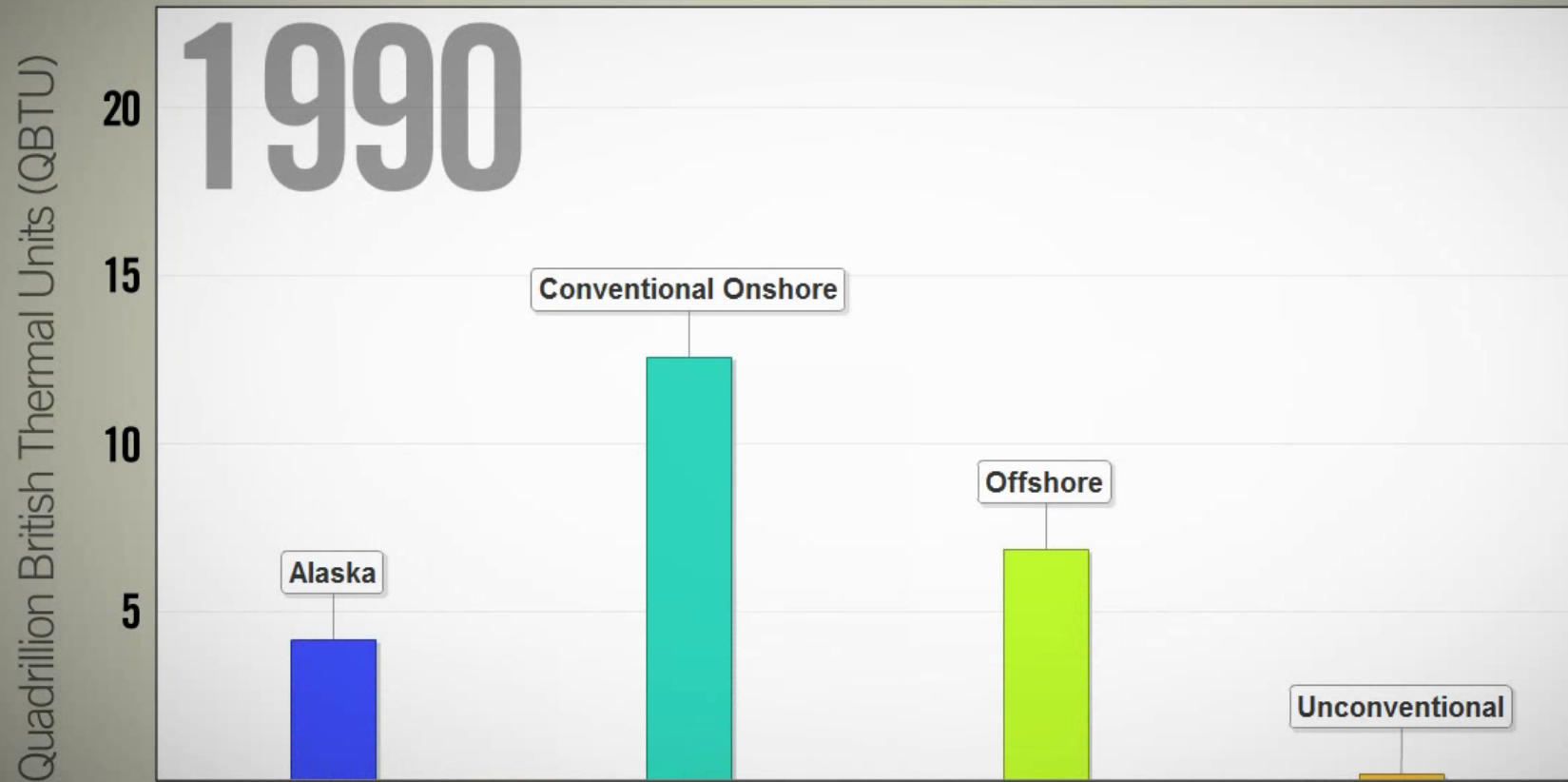


# U.S. OIL AND GAS PRODUCTION

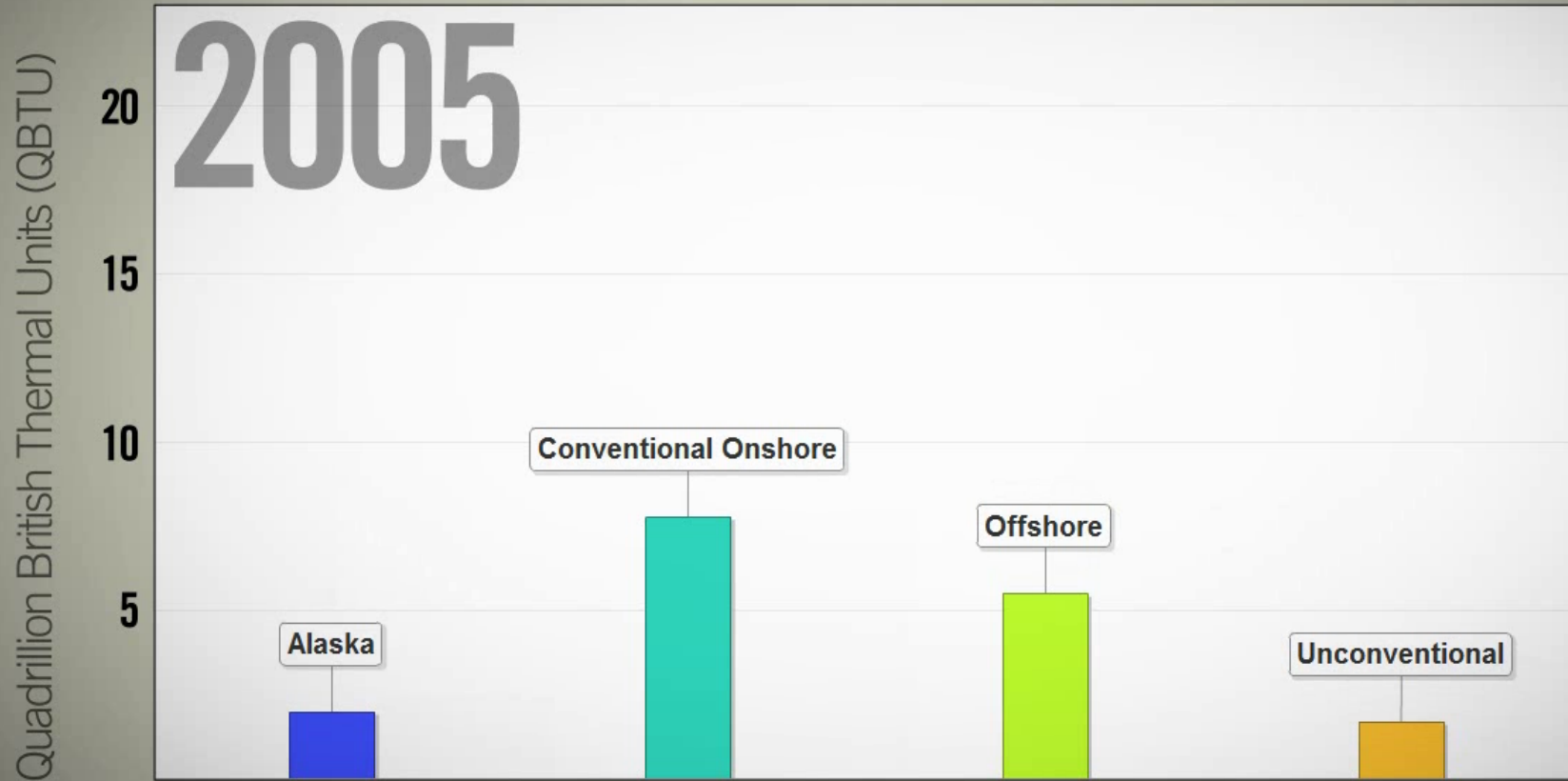




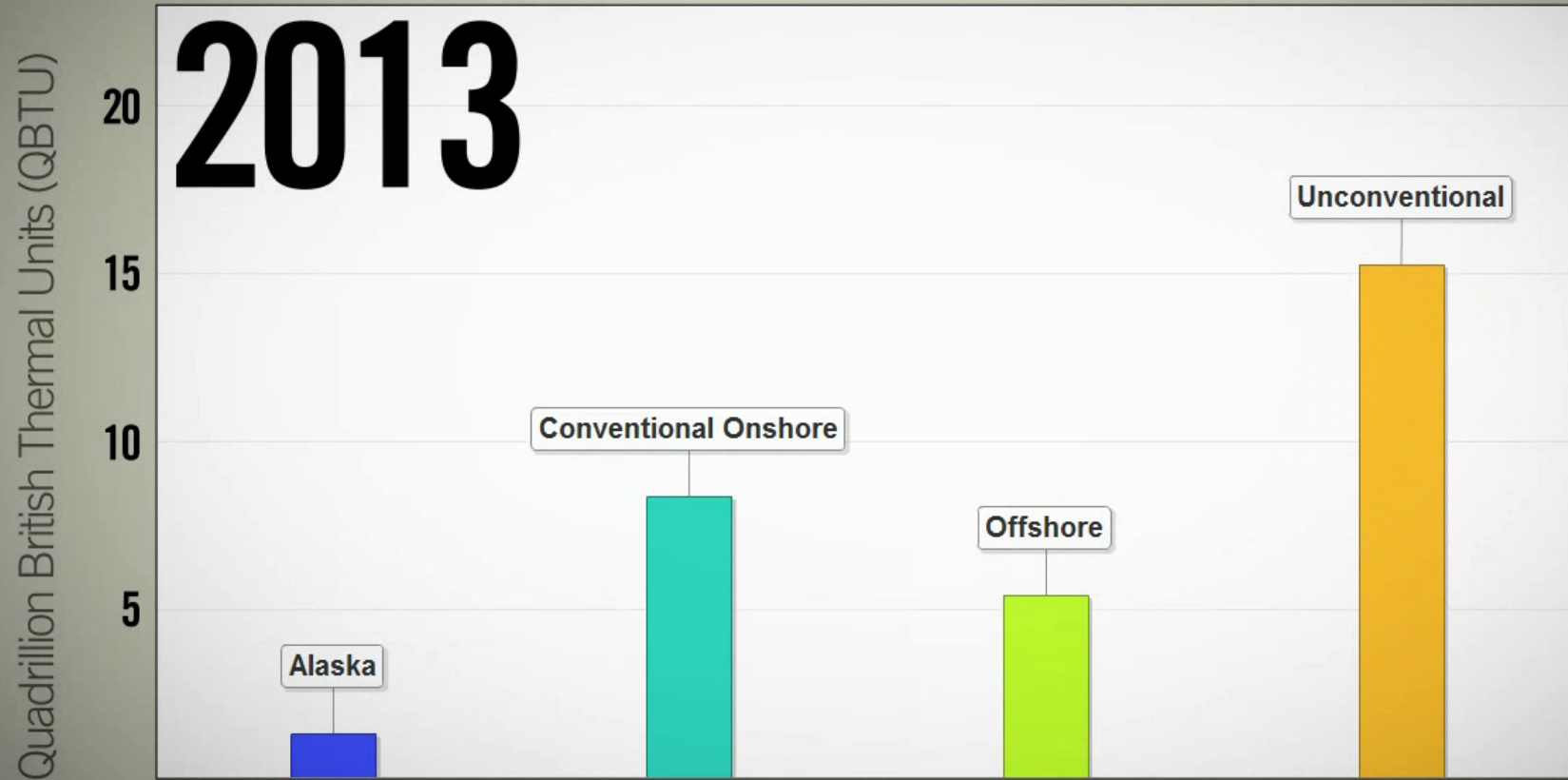
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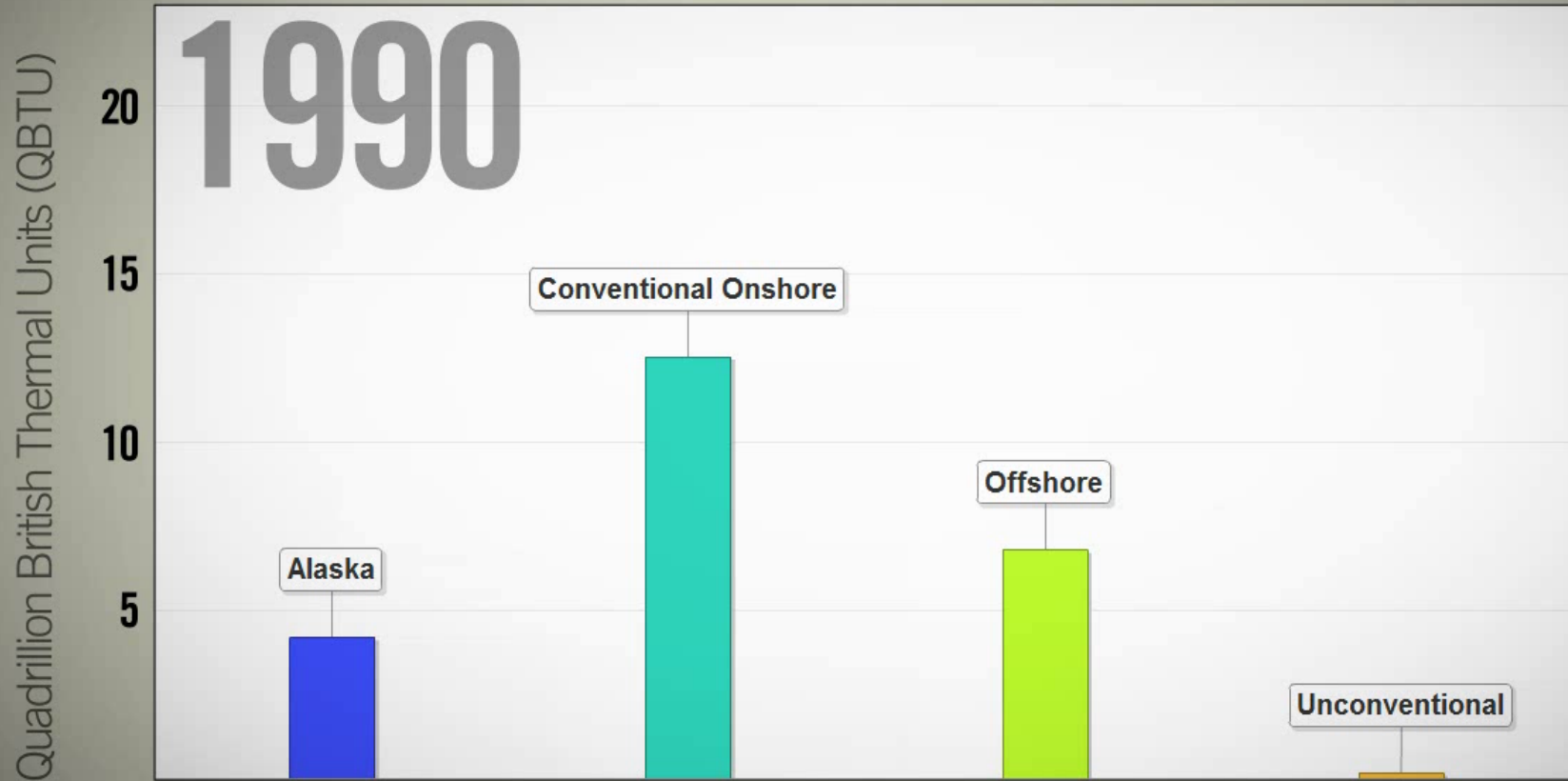
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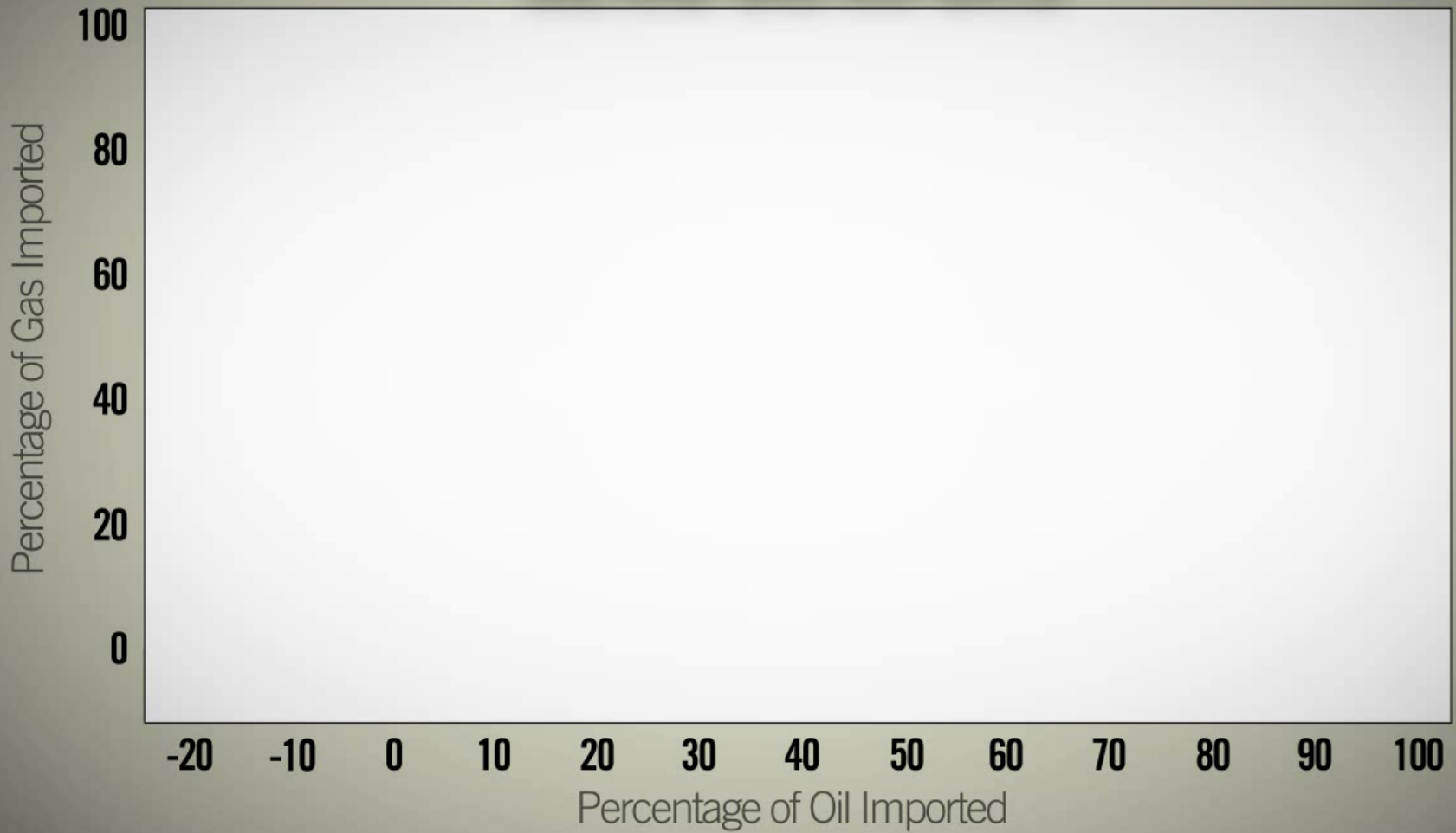
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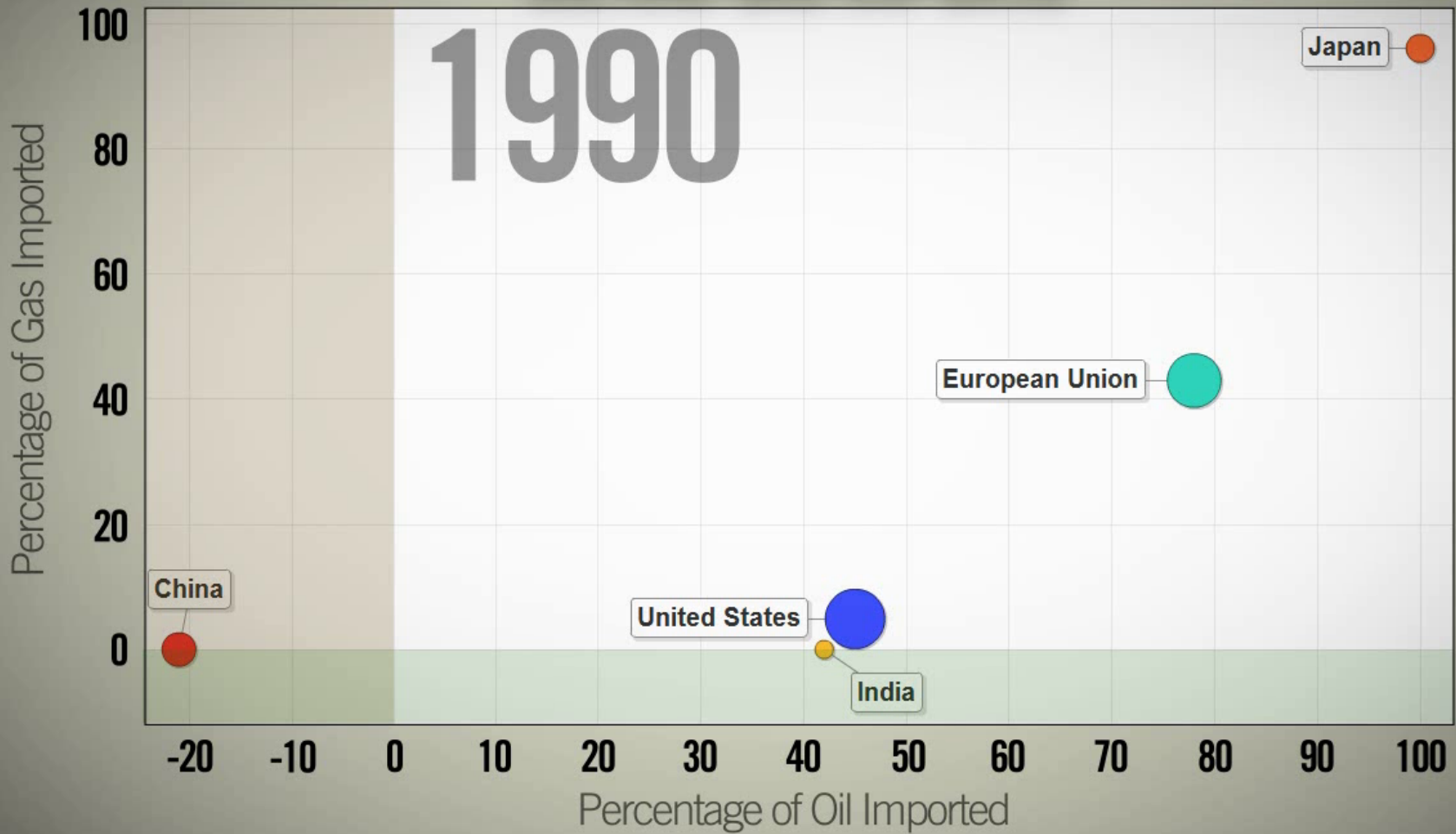


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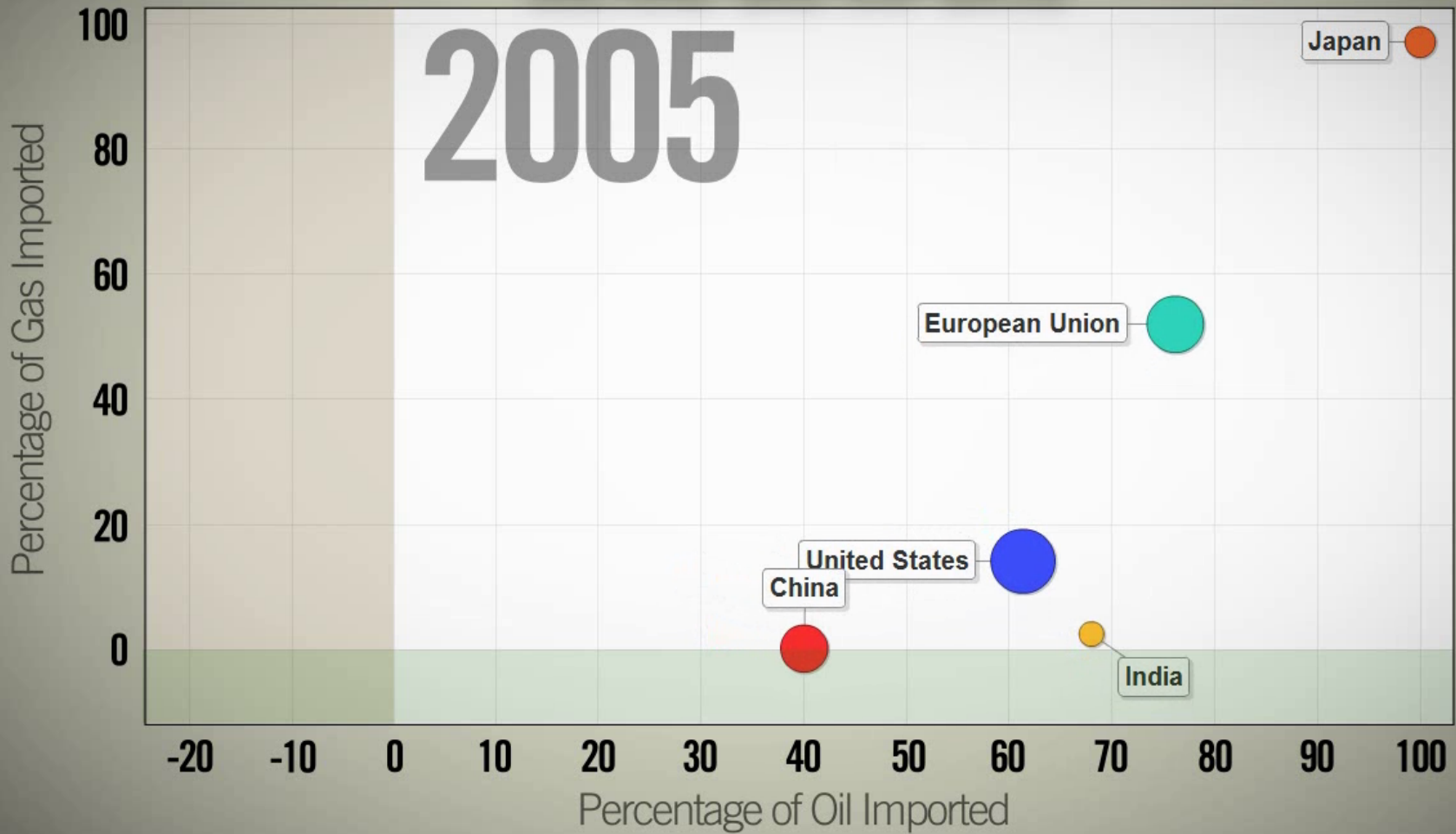
# 1990





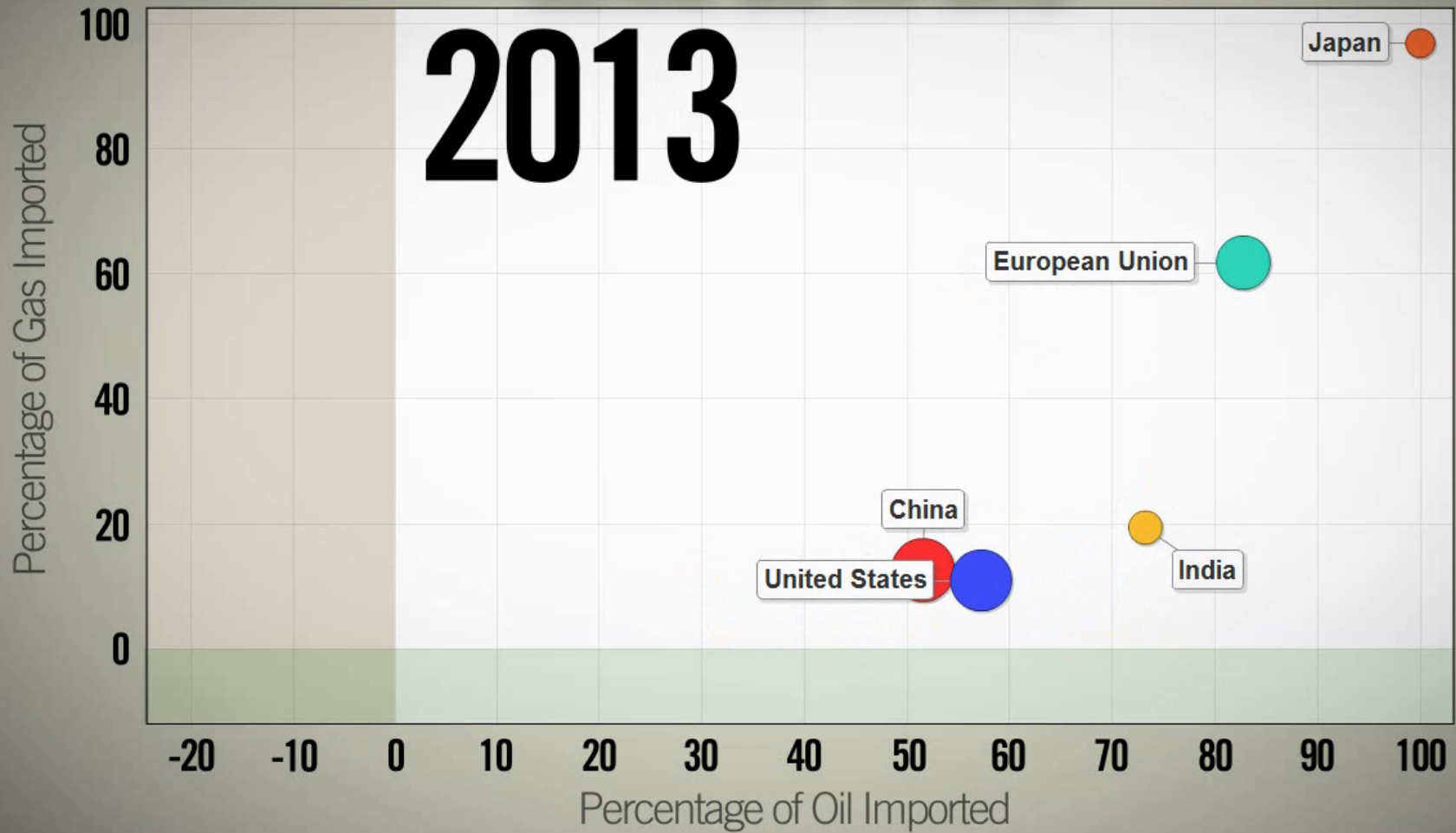
# OIL AND GAS IMPORTS

# 2005



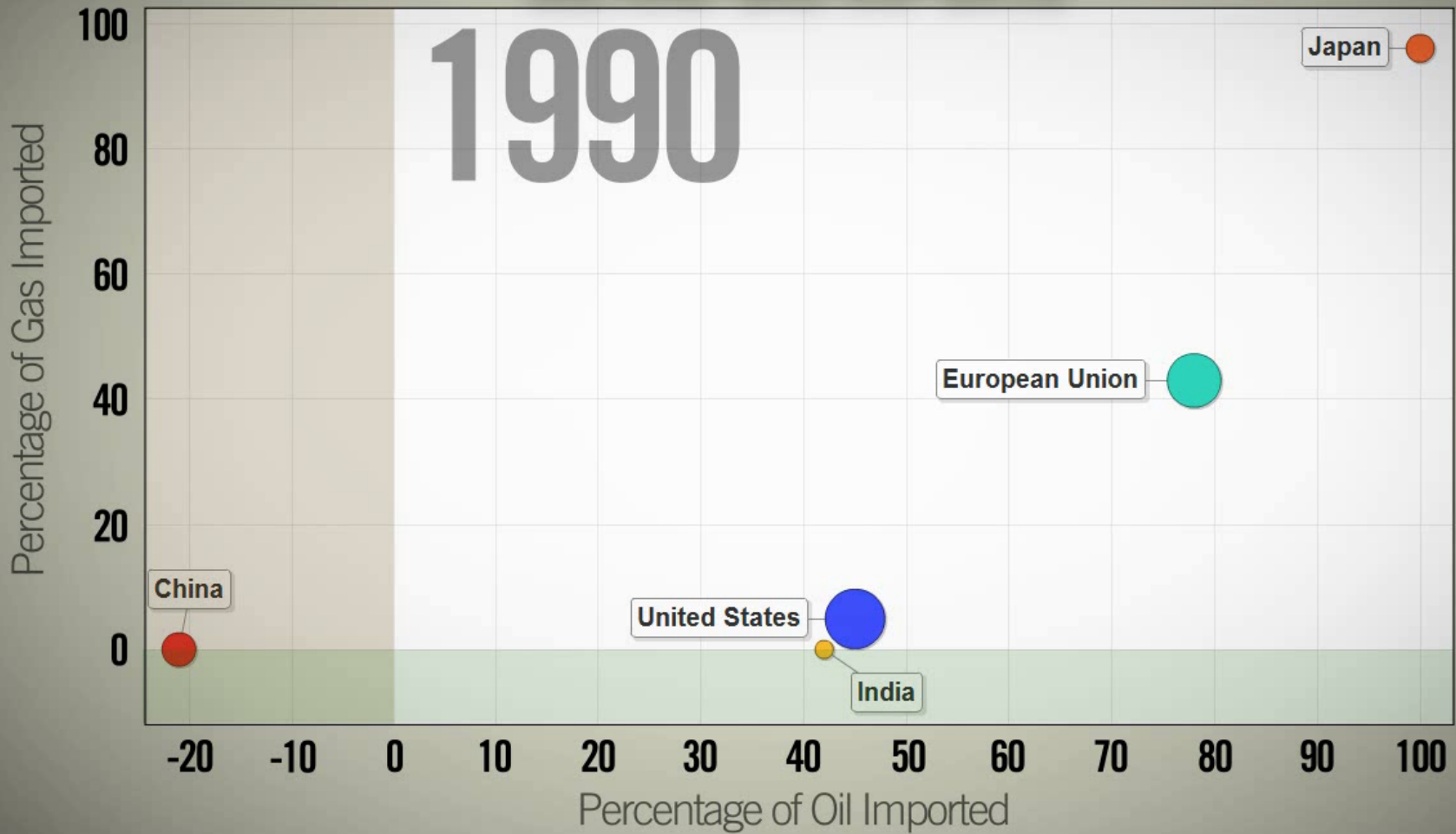
# OIL AND GAS IMPORTS

# 2013



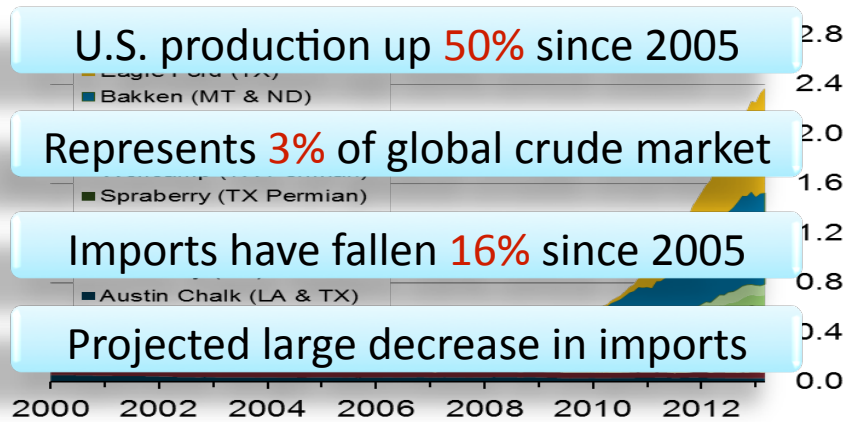
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1990

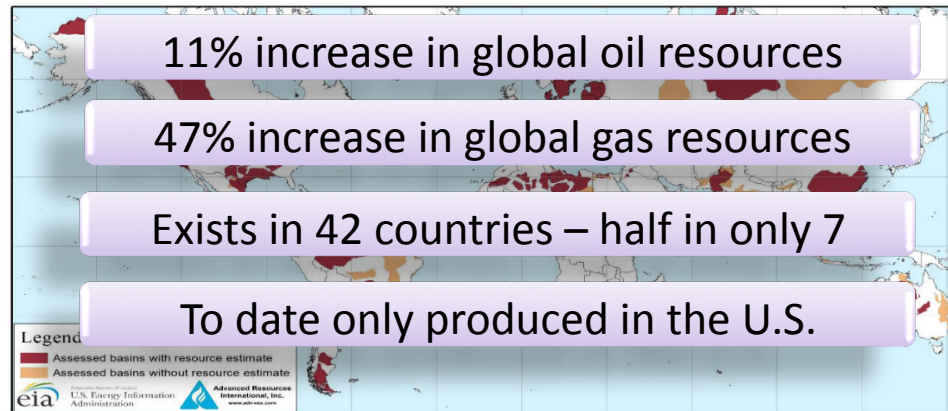
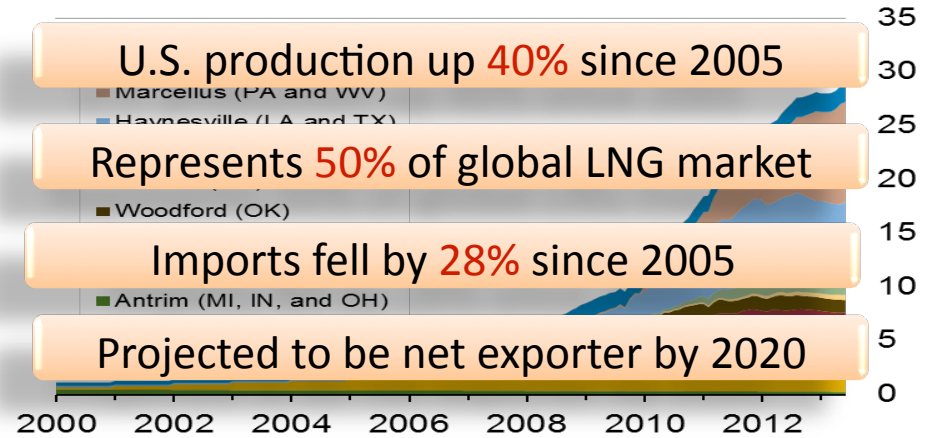


# Unconventional Energy Revolution in Perspective

shale and tight oil production (million barrels per day)

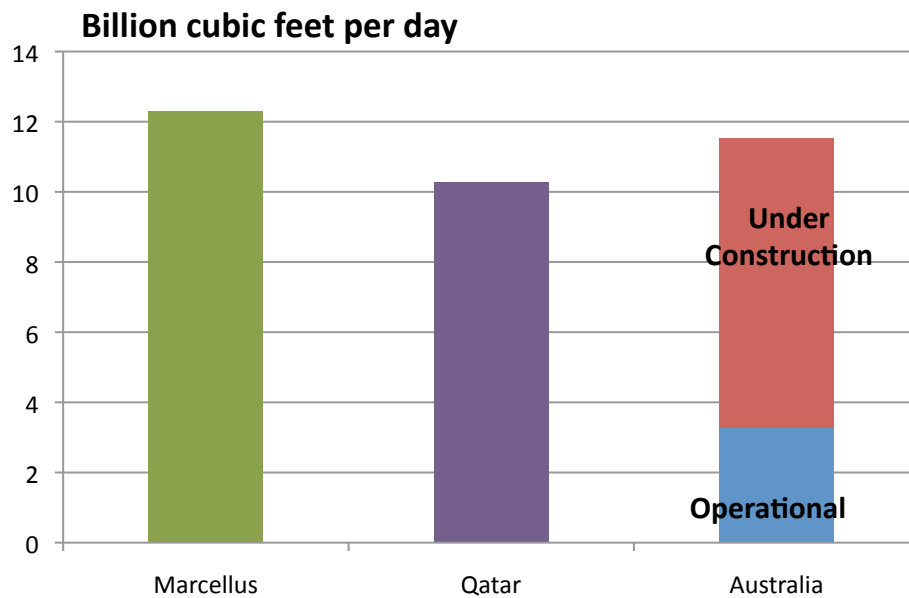
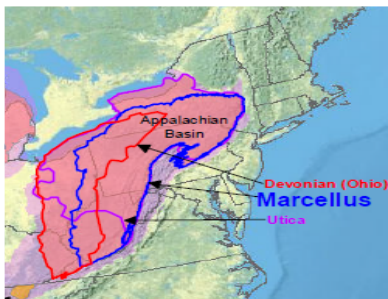


dry shale gas production (billion cubic feet per day)



Shale oil and gas basins

**Marcellus production is greater than the export capacity of the two largest LNG exporters**



Sources: EIA, FGE



## Shift in the World's top liquids producers

**2005 U.S. oil imports peaked this year before declining steadily.** (In million barrels per day)

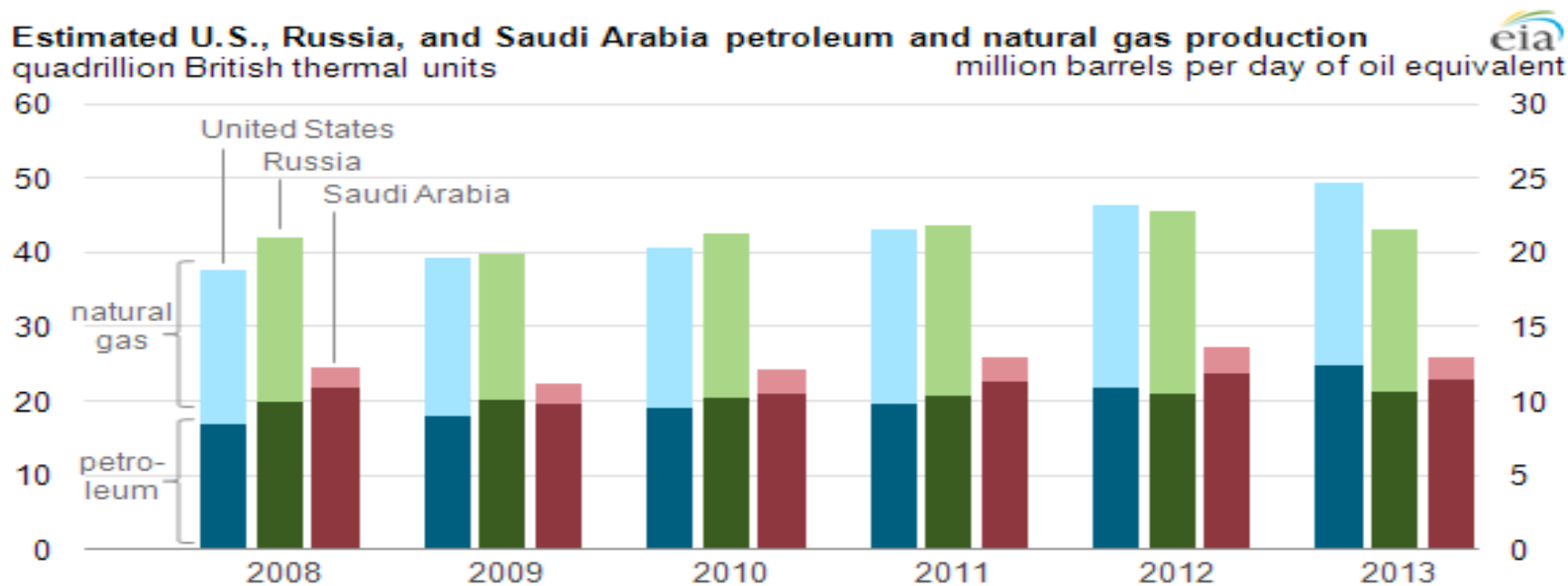


**2012 The International Energy Agency expects the U.S. to surpass Saudi Arabia in oil production by 2020.**



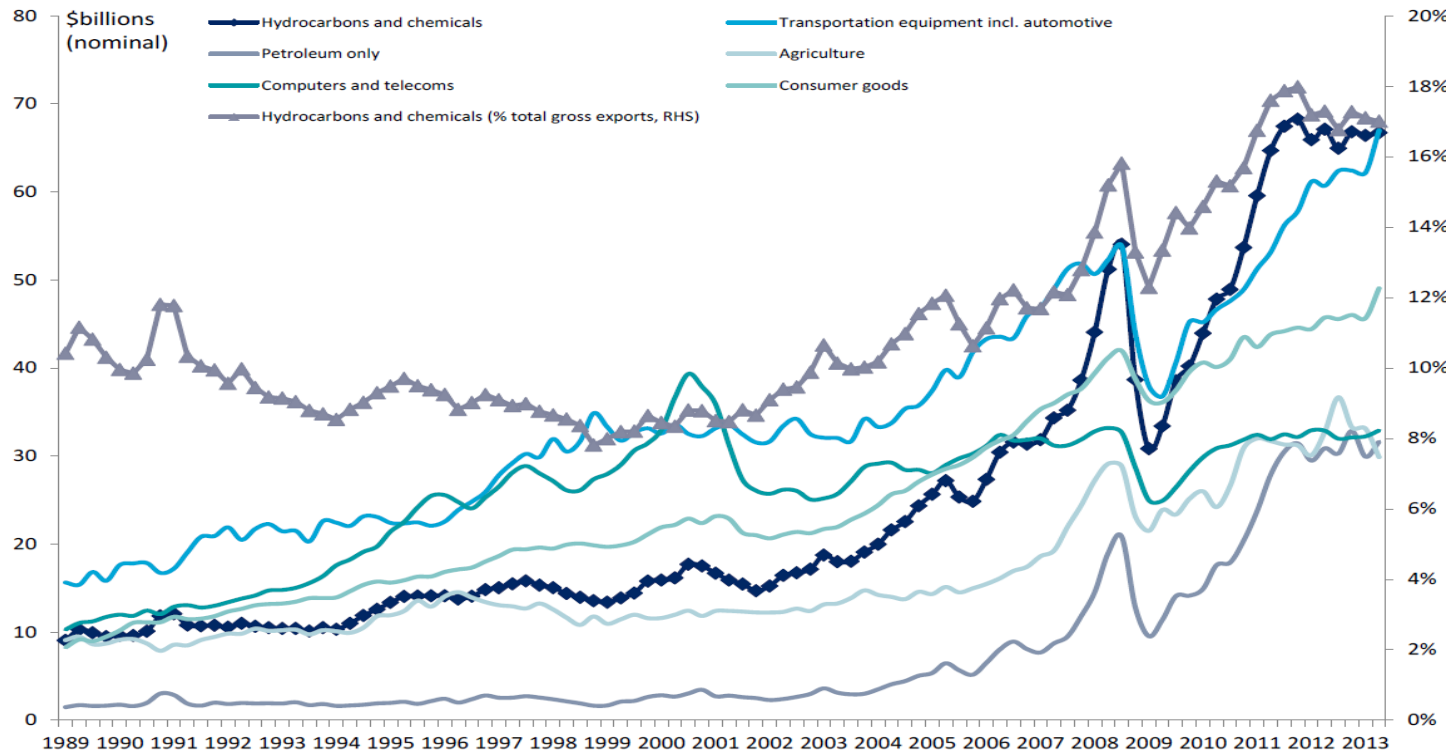
Source: EIA, Politico Magazine

**U.S. Expected to be the largest producer of petroleum and natural gas hydrocarbons in 2013**



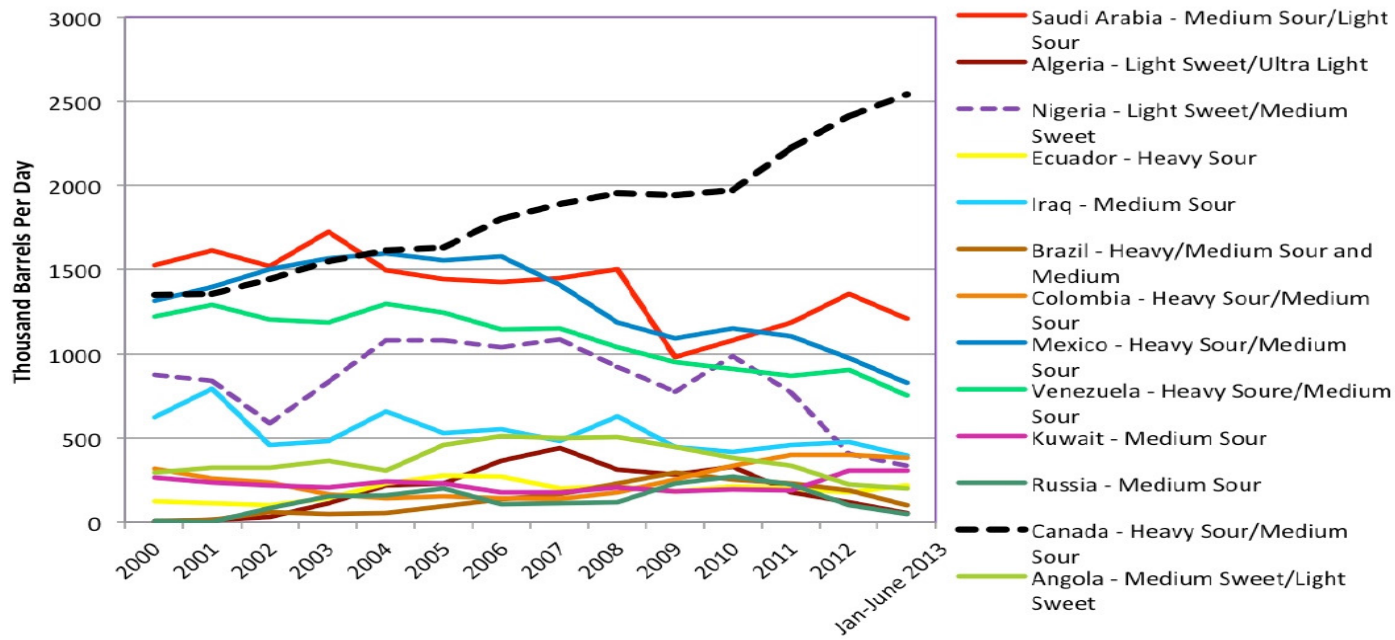
**Hydrocarbons & Chemicals Represents over 16% of Total Gross Exports – now outpacing computers and agriculture**

Major categories of US gross exports



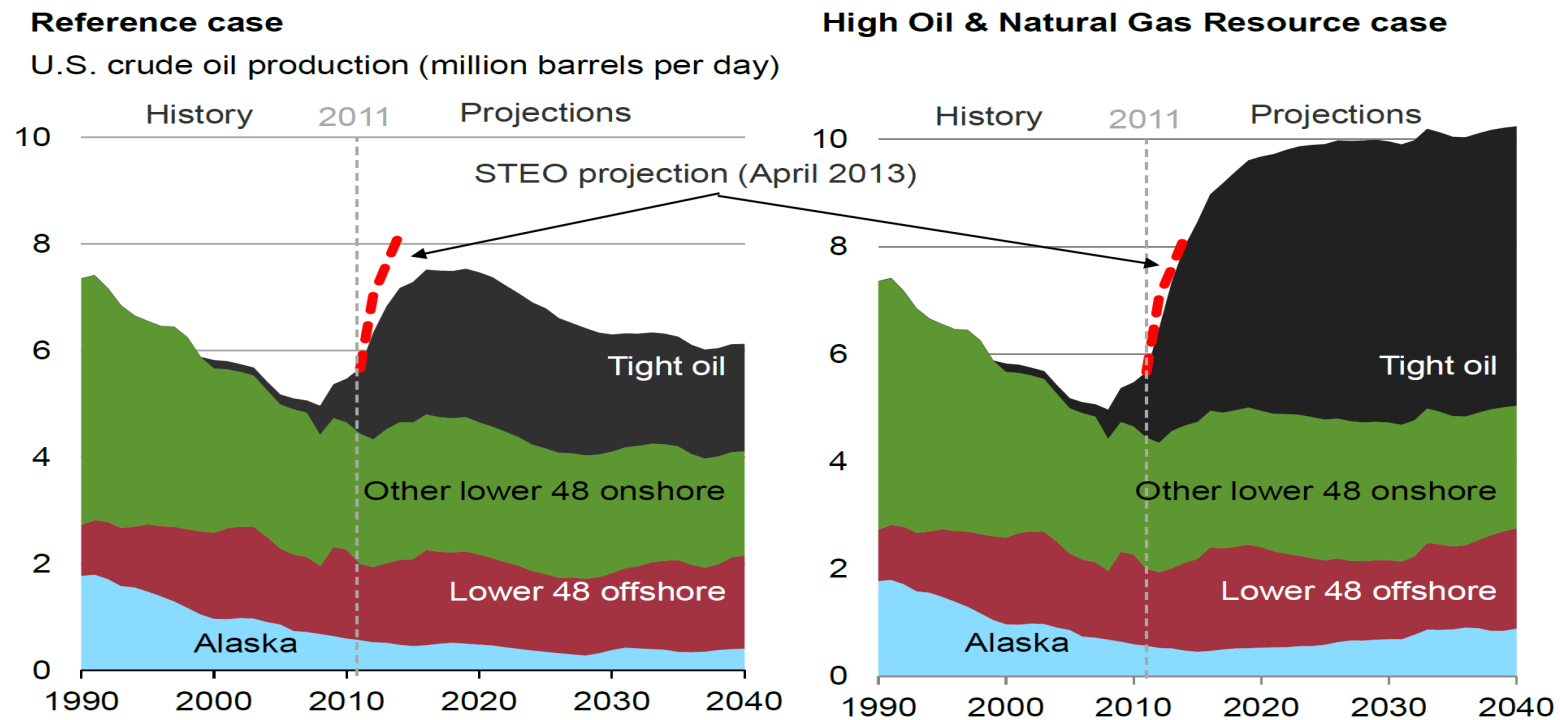
Source: JODI, Citi Research

## Increased US Production Displacing Crude Imports



Source: EIA Data, Oil Types from ENI World Oil Book

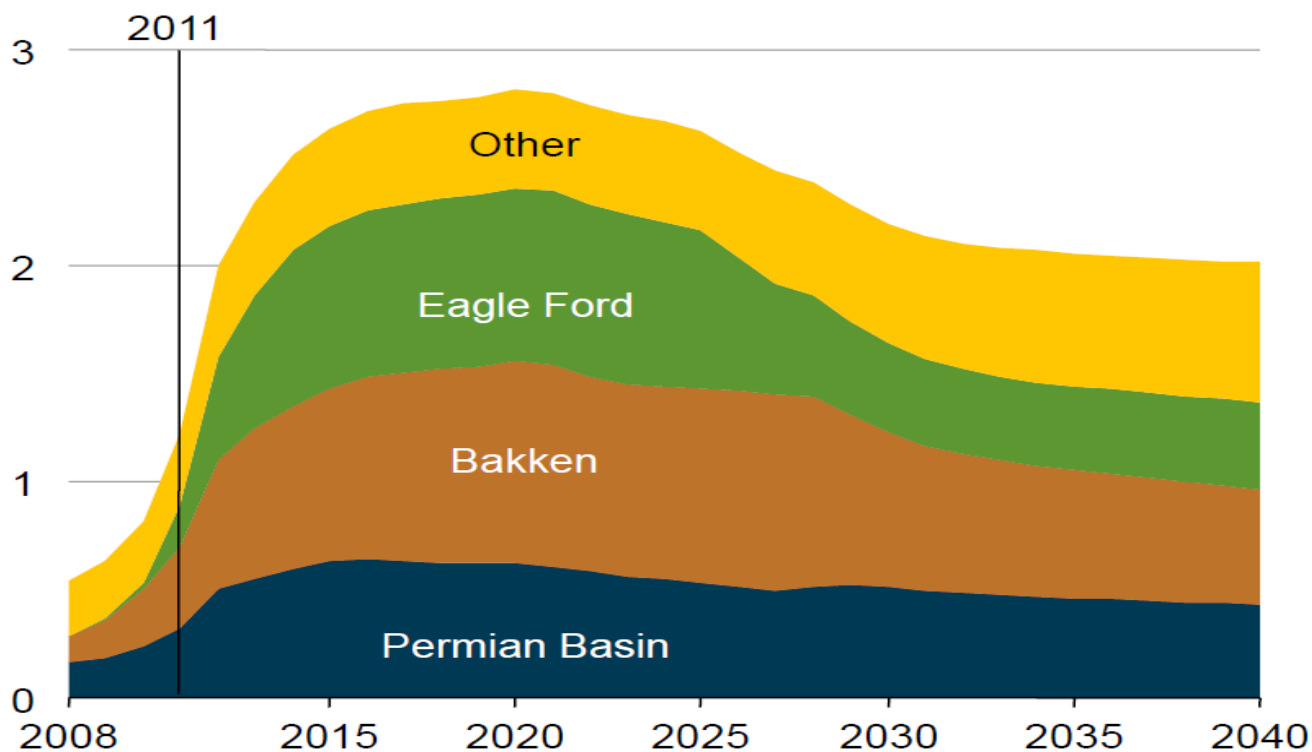
## U.S. tight oil production leads domestic production



Source, EIA AEO 2013, STEO (April 2013)



**Million \$ Question – How Much, How Fast, How Long?**



Source: U.S. Energy Information Administration, Annual Energy Outlook 2013, June 25, 2013









2010



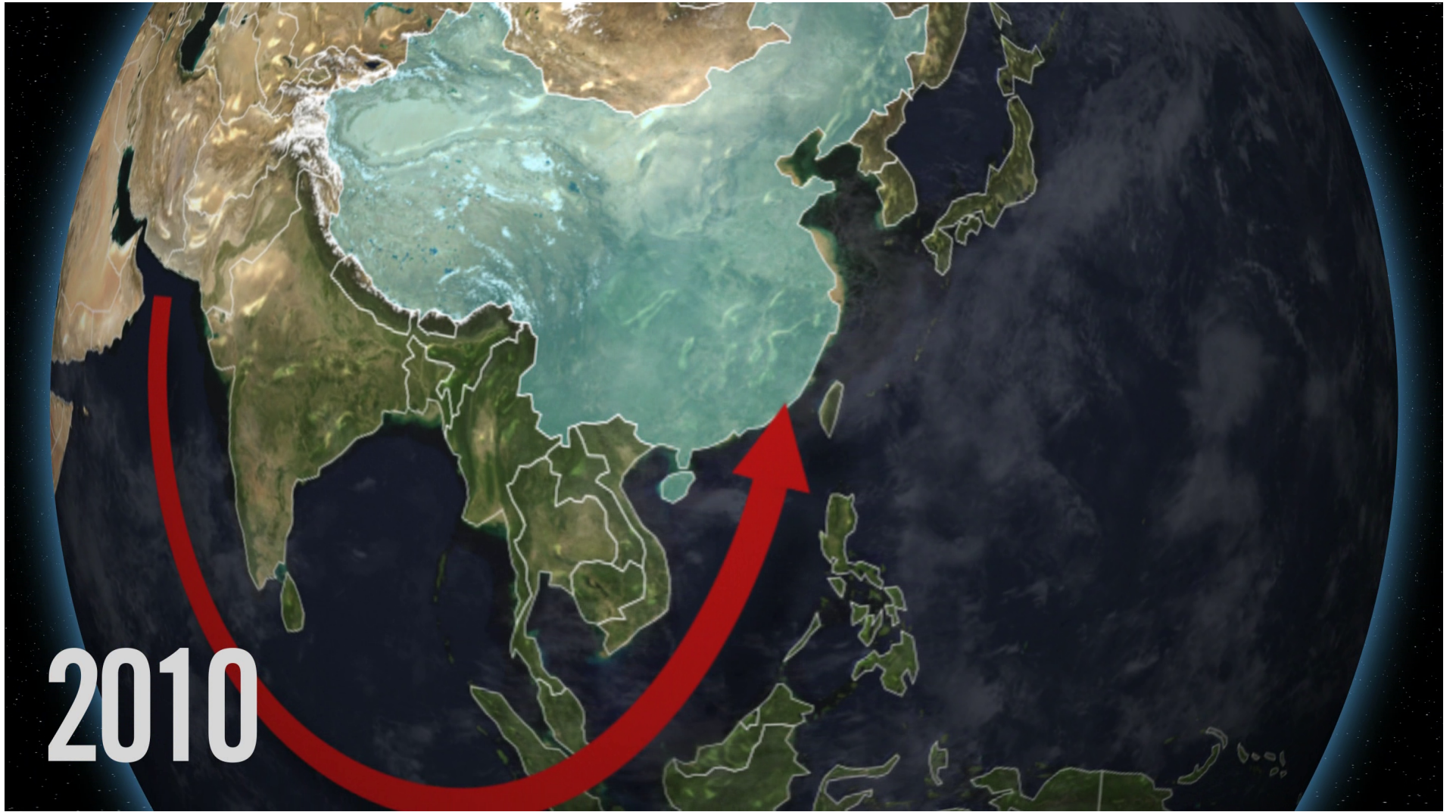
2025



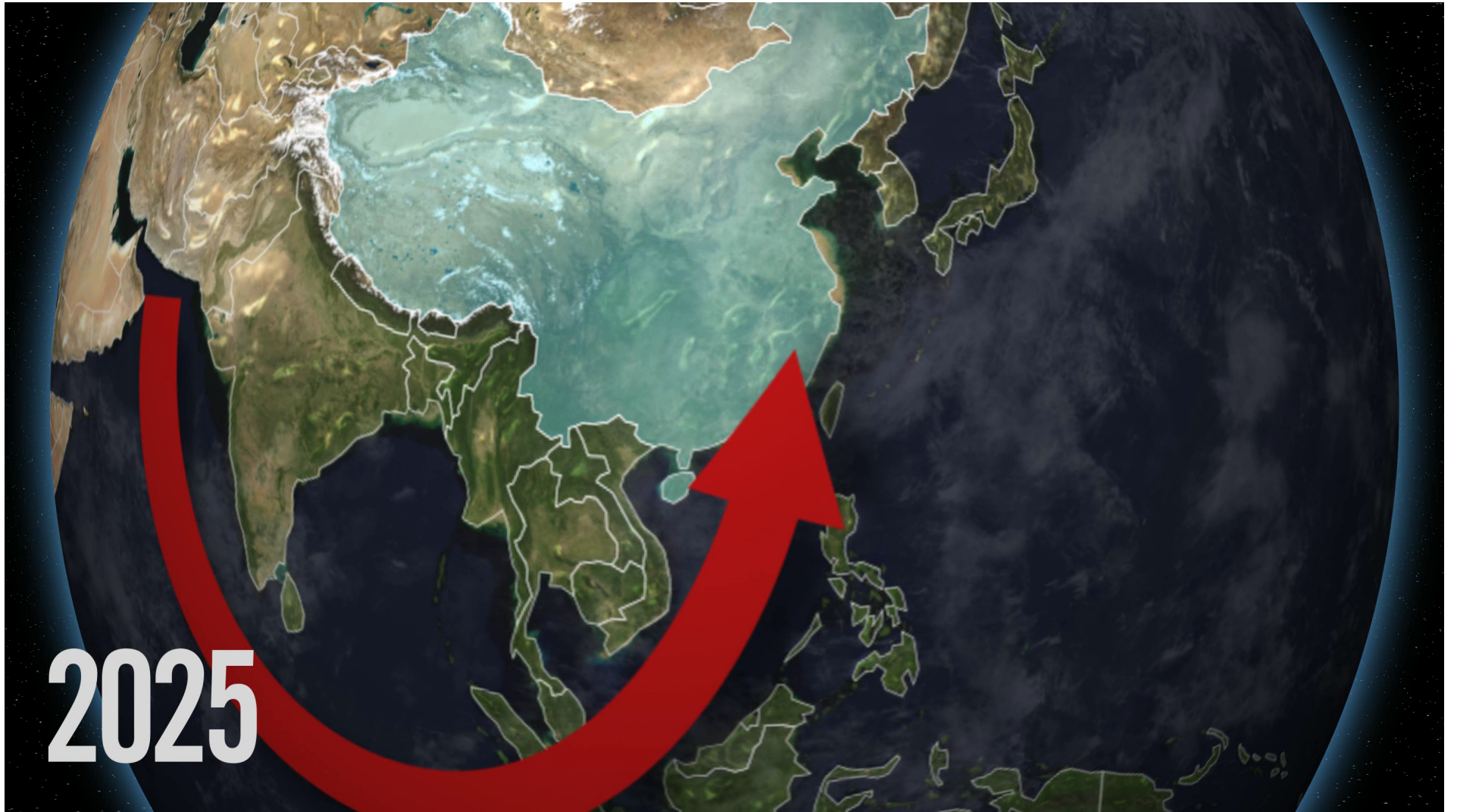






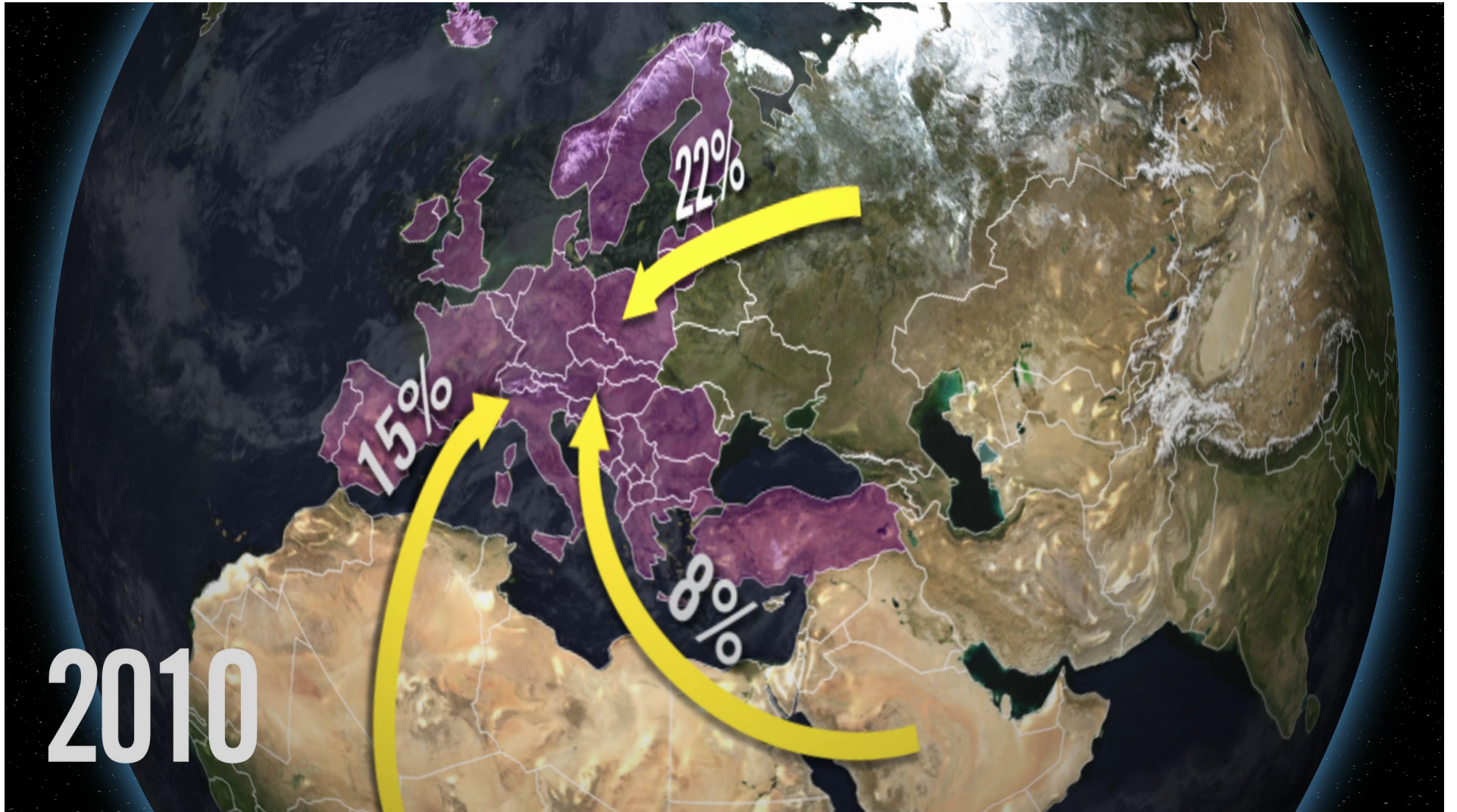


2010

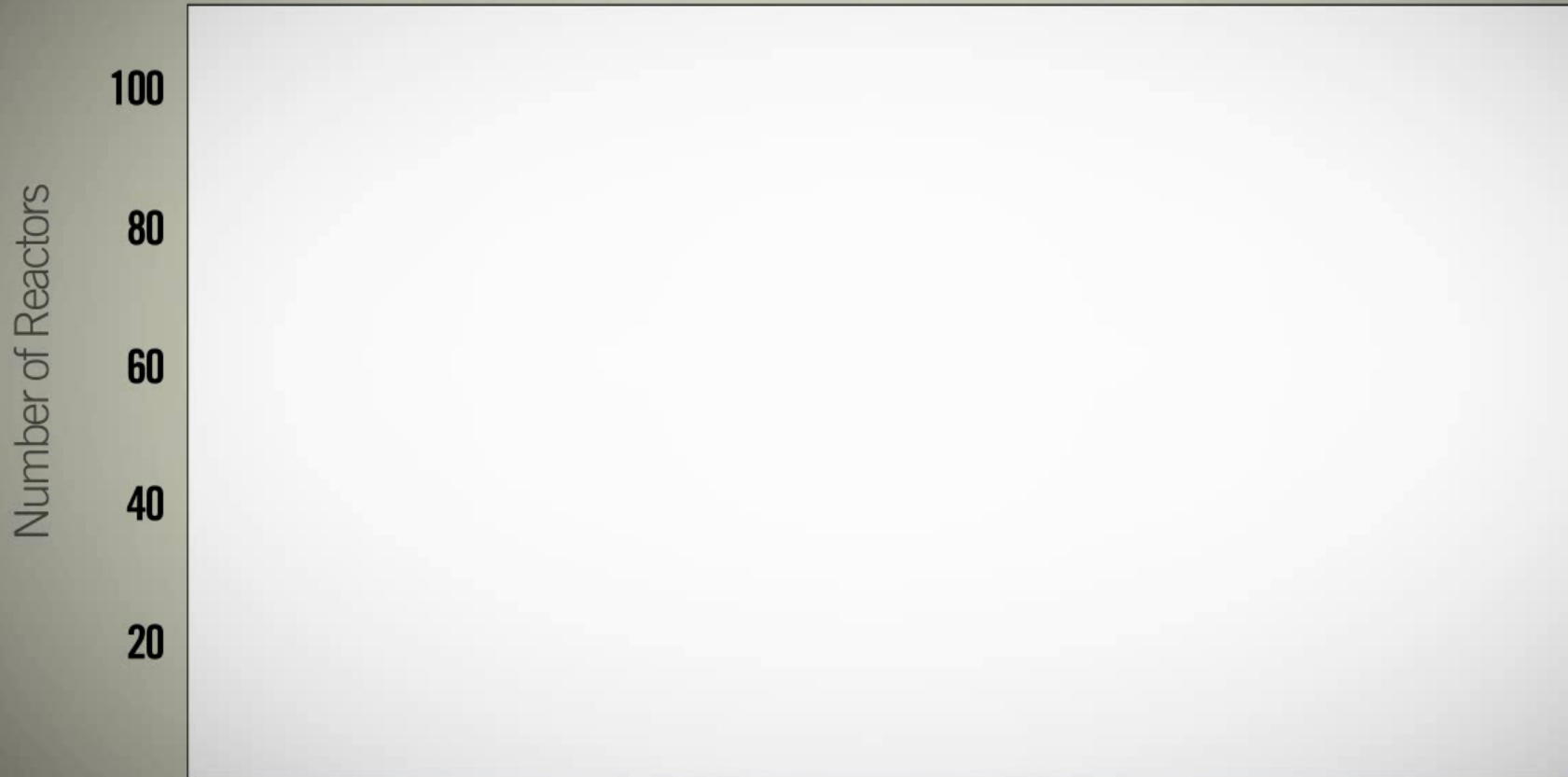


2025



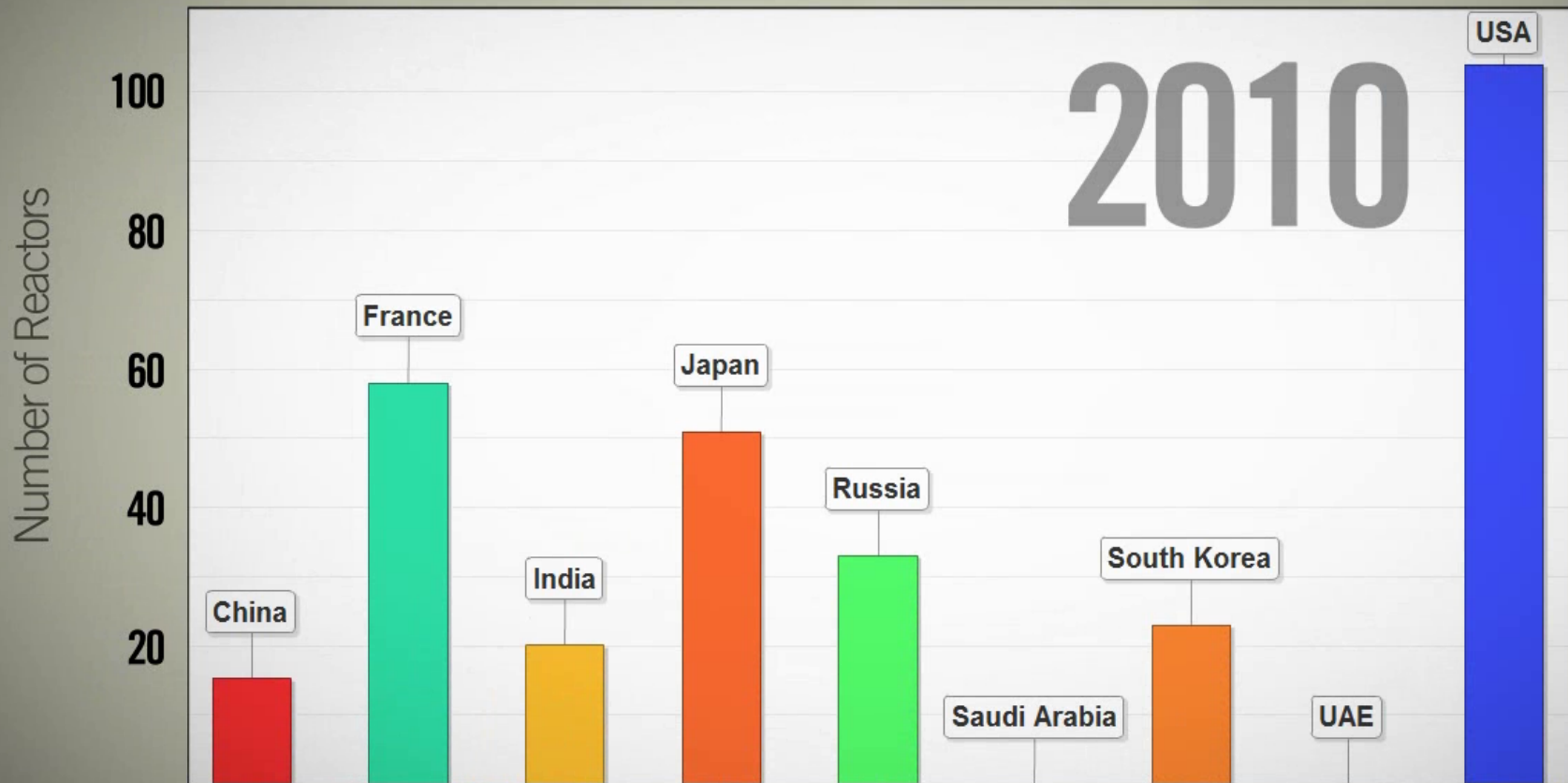


# GLOBAL NUCLEAR REACTOR FLEETS



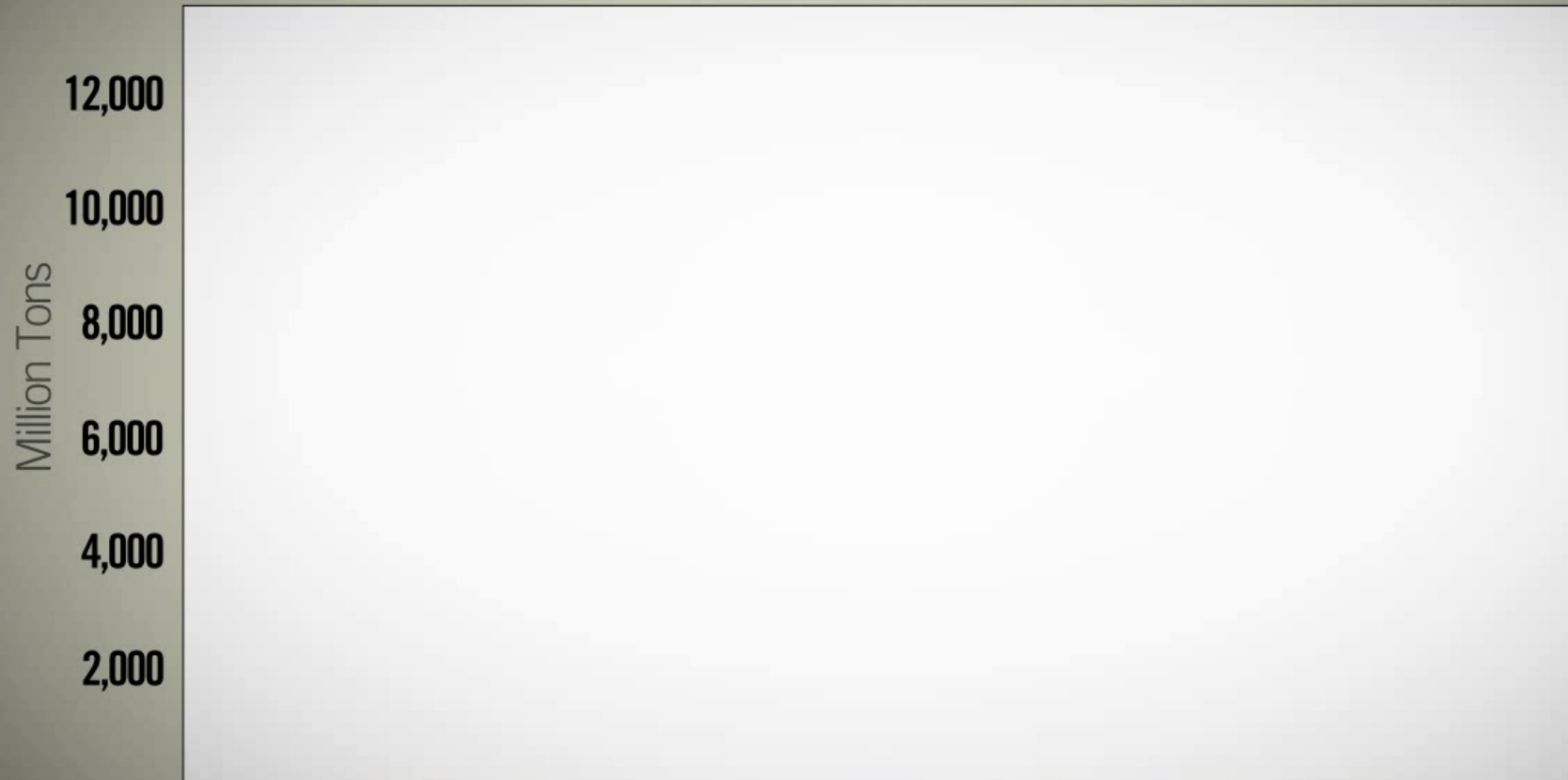
# GLOBAL NUCLEAR REACTOR FLEETS

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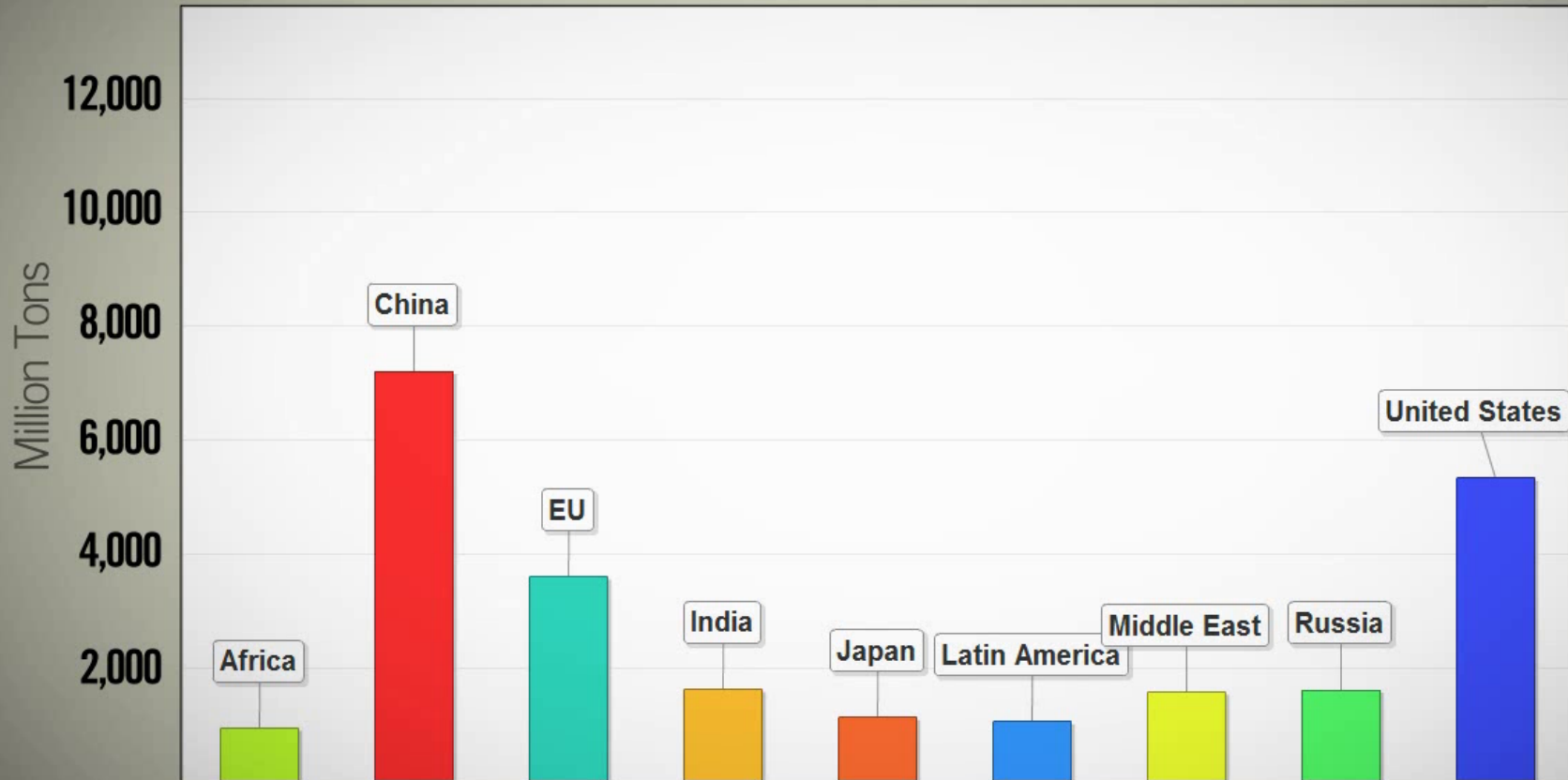




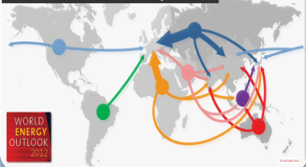
# GLOBAL CARBON DIOXIDE EMISSIONS



# GLOBAL CARBON DIOXIDE EMISSIONS



Global Gas Trade Flows by 2035



## Already impacting the energy landscape

- Major shifts in trade and investment flows
- Reorders commercial hierarchy of energy projects
- Contributing to shifts in domestic energy policies



## Reorders climate change discussion

- Prioritizes finding a role for natural gas
- Strengthens carbon hierarchy among oil resources
- On balance, disadvantages renewables, nuclear and “clean coal”



## Early days for unconventional

- Resource performance in the United States
- Commercial frameworks and resource performance elsewhere



## Perceptions of the future are shaping decisionmaking

- Producer response to “oil abundance” and market softness
- Producer and consumer response to “gas abundance” – new uses, competitive markets, new strategies

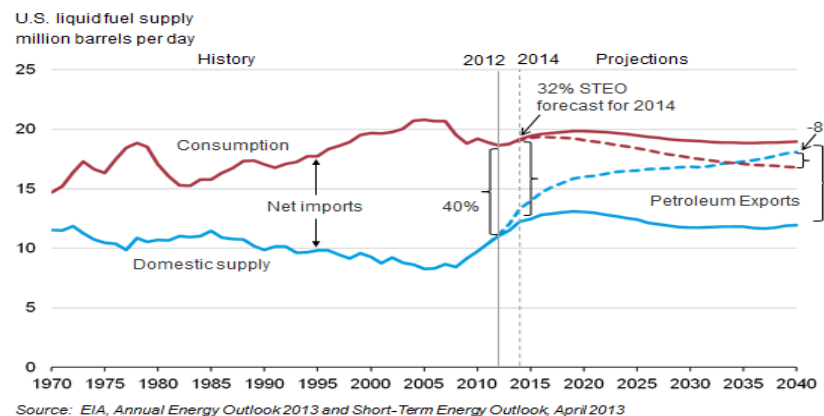
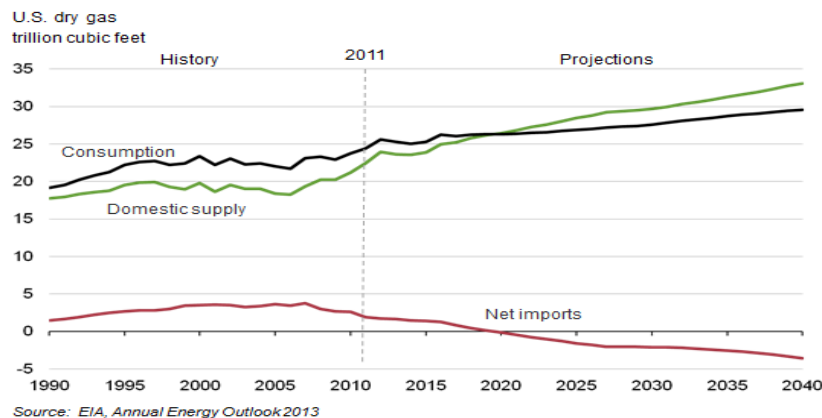
## Geopolitical Impacts

- Does not fundamentally alter U.S. interests in the world
- Changes other countries' perceptions of our interests and capabilities
- Accelerates geopolitical shift to Asia-Pacific
- Complicates U.S. "rebalancing" strategy
- Uncertainty necessitates strategy of sign-posting and flexibility/adaptability

# United States: Self Reliance and Strategic Leverage?

Suppose unconventional leads to U.S. energy self-sufficiency (i.e. we are a net exporter of oil and natural gas outside North America). What does this mean for the U.S. place in the world?

- How could the U.S. most severely mismanage or best exploit its new resources?
- Do we care as much about countries to whom we export as we did about countries upon which we were import dependent?
- Which global reactions to our self-sufficiency should we be most concerned about?
- What if the period of self-sufficiency is short-lived (tails-off post-2020) or limited to natural gas?





A satellite view of Earth at night, showing the illuminated continents and oceans. The United States is prominently featured in the center, with its city lights glowing. To the right, a bright orange and yellow arc, likely representing the sun or moon, curves across the dark sky, creating a dramatic horizon effect. The overall scene is set against a black background filled with stars.

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