



**Energy Community 14<sup>th</sup> Gas Forum**

Ljubljana

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## **U.S. Energy Dominance or Divergence**

*What does it mean for Europe?*

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**CSIS**

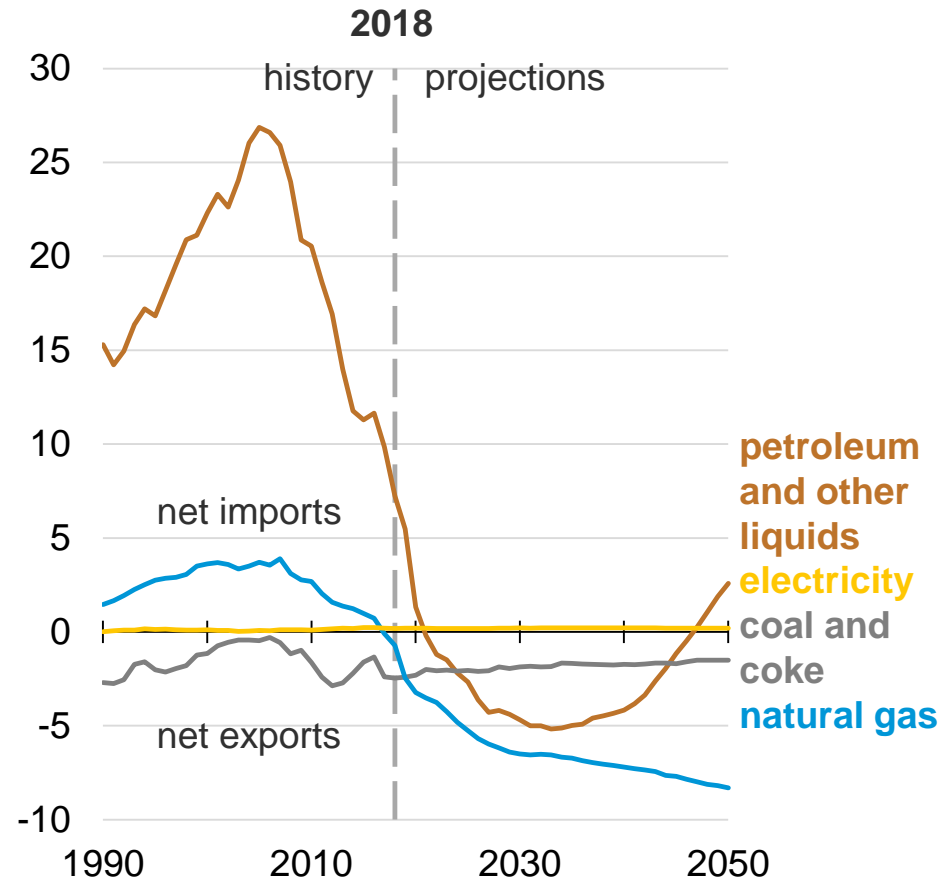
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# U.S. becomes a net energy exporter after 2020

**Gross energy trade (Reference case)**  
quadrillion British thermal units



**Net energy imports (Reference case)**  
quadrillion British thermal units

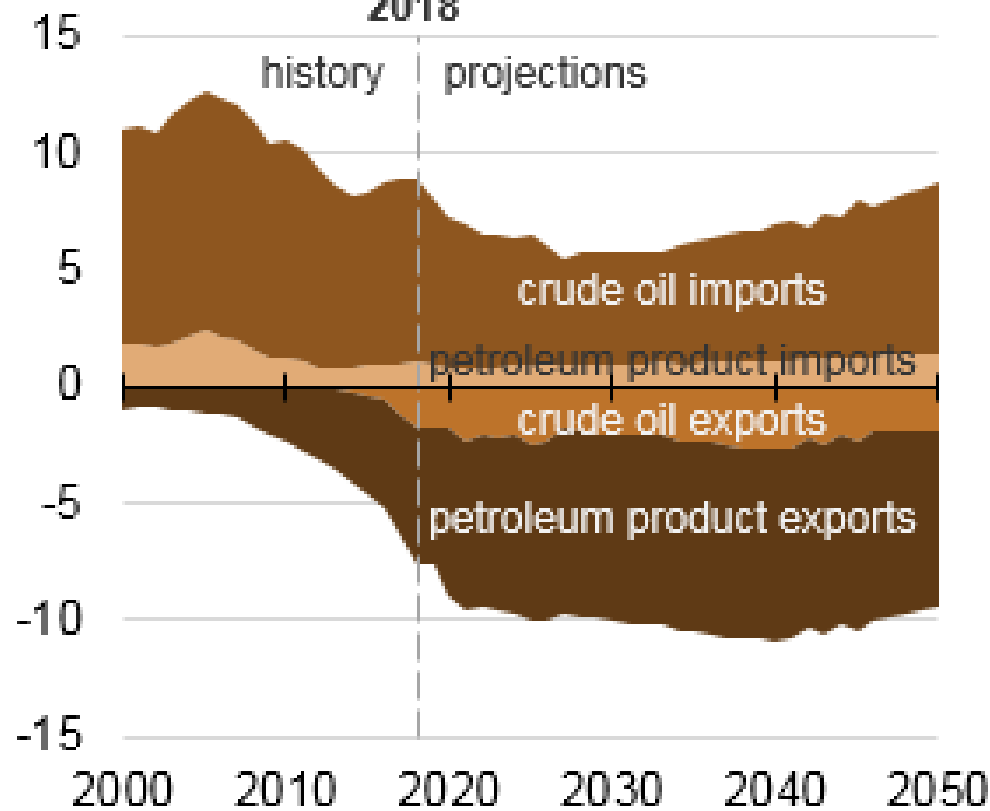


Source: U.S. Energy Information Administration, Annual Energy Outlook 2019

# U.S. becomes a net oil exporter?

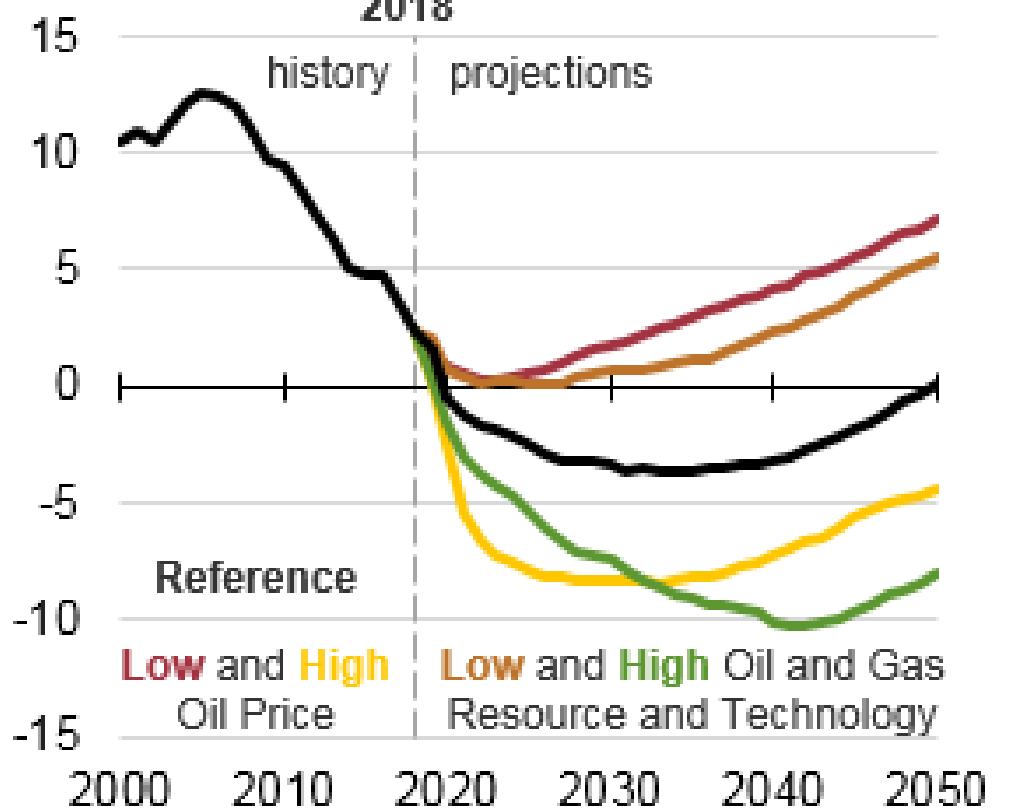
## U.S. petroleum and other liquids trade (Reference case)

million barrels per day  
2018



## U.S. petroleum and other liquids net trade

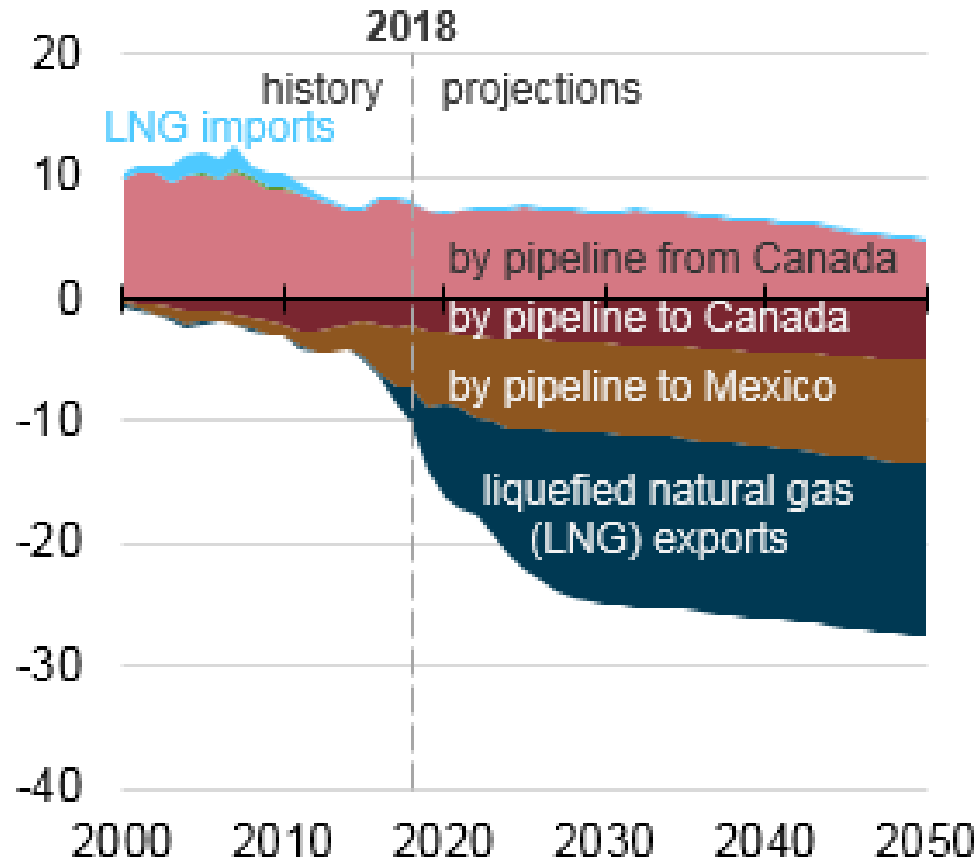
million barrels per day  
2018



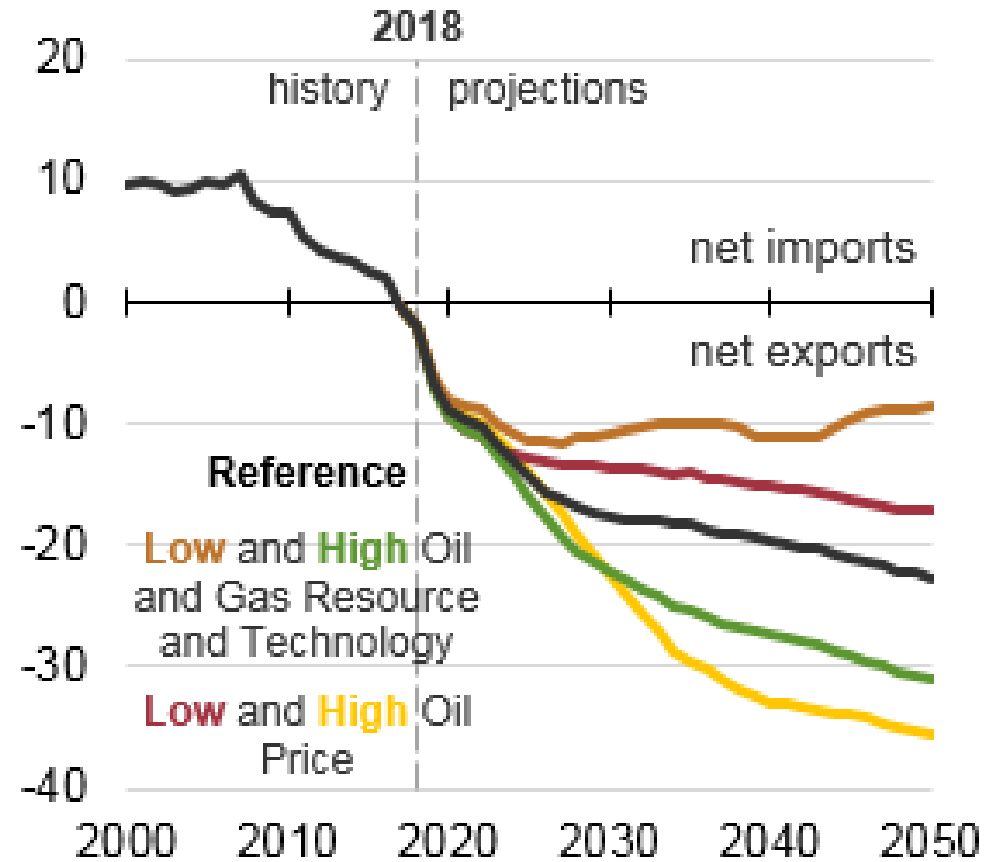
Source: U.S. Energy Information Administration, Annual Energy Outlook 2019

# U.S. is net gas exporter and becoming major LNG exporter

U.S. natural gas trade (Reference case)  
billion cubic feet per day



U.S. natural gas net trade  
billion cubic feet per day



Source: U.S. Energy Information Administration, Annual Energy Outlook 2019

# The Unconventional Oil & Gas Revolution: Why the U.S.?



Known Geology and Data Availability



Competitive Oilfield Equipment and Services Sector



Availability of Investment Funds



Pricing Liberalization



Mineral Rights Ownership



Large Number of Independent Producers



Stable Tax Regime and Regulatory Environment



Existing Infrastructure, although inadequate now with boom

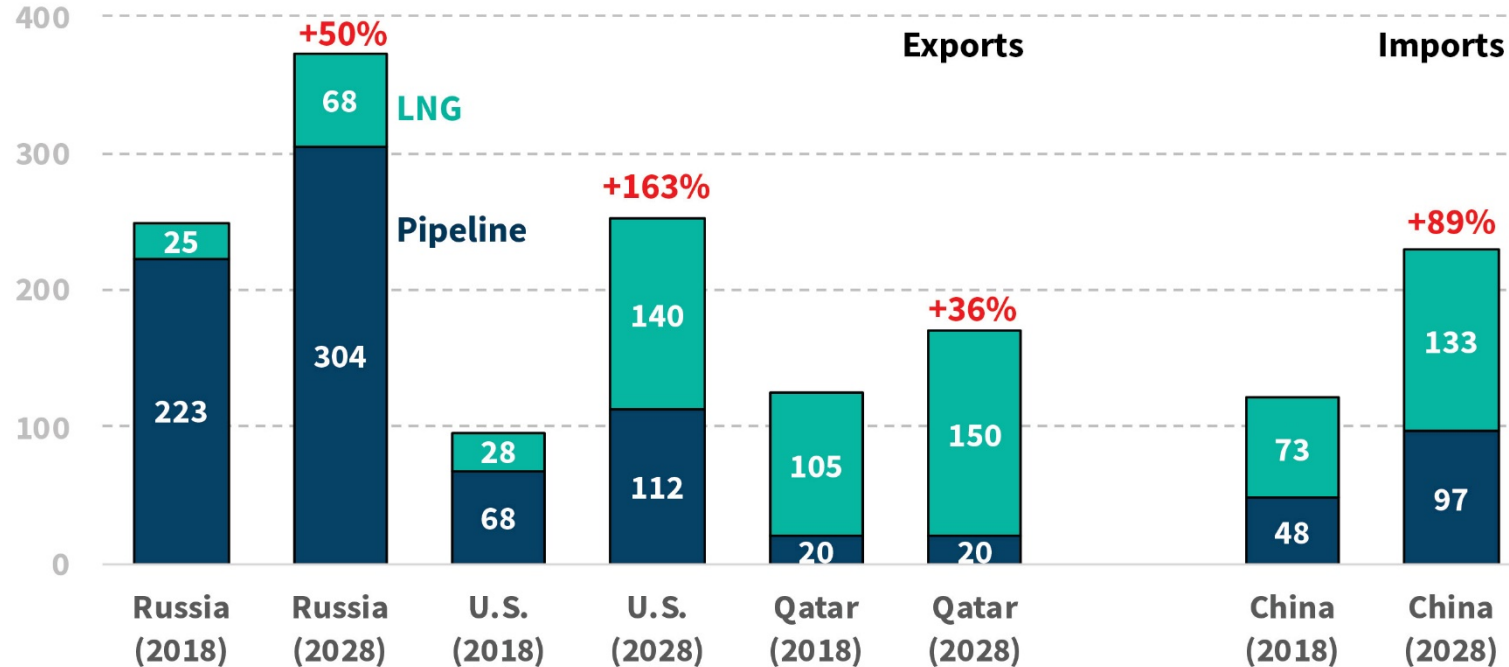
# Lessons Learned for International Market

- Market competition drives innovation and efficiency – fair access, data transparency
- Price control leads to misallocation of resources, energy inefficiency, corruption, and shortages
- Favorable conditions, predictable regulation, and stability of terms attract investment
- Capital seeks highest risk-adjusted rate of return – evaluates opportunity costs
- Private investment more productive than public expenditure
- Subsidies should be short-lived and targeted to those who truly need them
- Demonstration effect of foreign investment just as important as providing capital and technology

# The “Gas Mega-Players”

## The Gas Mega-Players in 2018 and 2028

billion cubic meters (bcm)



Data for 2018 from BP, BP Statistical Review of World Energy (London: 2019). For Russia, the pipeline forecast includes Power of Siberia (38 bcm), Nord Stream 2 (55 bcm), and TurkStream (31.5 bcm), but the latter two are assumed to partially reroute gas now sent via Ukraine (only 50 percent of their capacity is shown as new gas). The LNG value includes Sakhalin-2, Yamal LNG, Arctic 2, Vysotsk, and Portovaya. For the United States, the pipeline value comes from Energy Information Administration, Annual Energy Outlook 2019 (Washington, DC: Department of Energy, January 2019). The LNG value only includes projects online or under construction in August 2019. The LNG figure for Qatar assumes an expansion to 110 million tons of annual export capacity. Pipeline exports are assumed to stay flat. China’s pipeline imports include 35 bcm from Turkmenistan, 10 bcm each from Kazakhstan, and 4 bcm from Myanmar. The LNG value is an extrapolation from International Energy Agency, Gas 2019 (Paris: 2019), which goes to 2024.

# Why Does the World Care About US LNG?

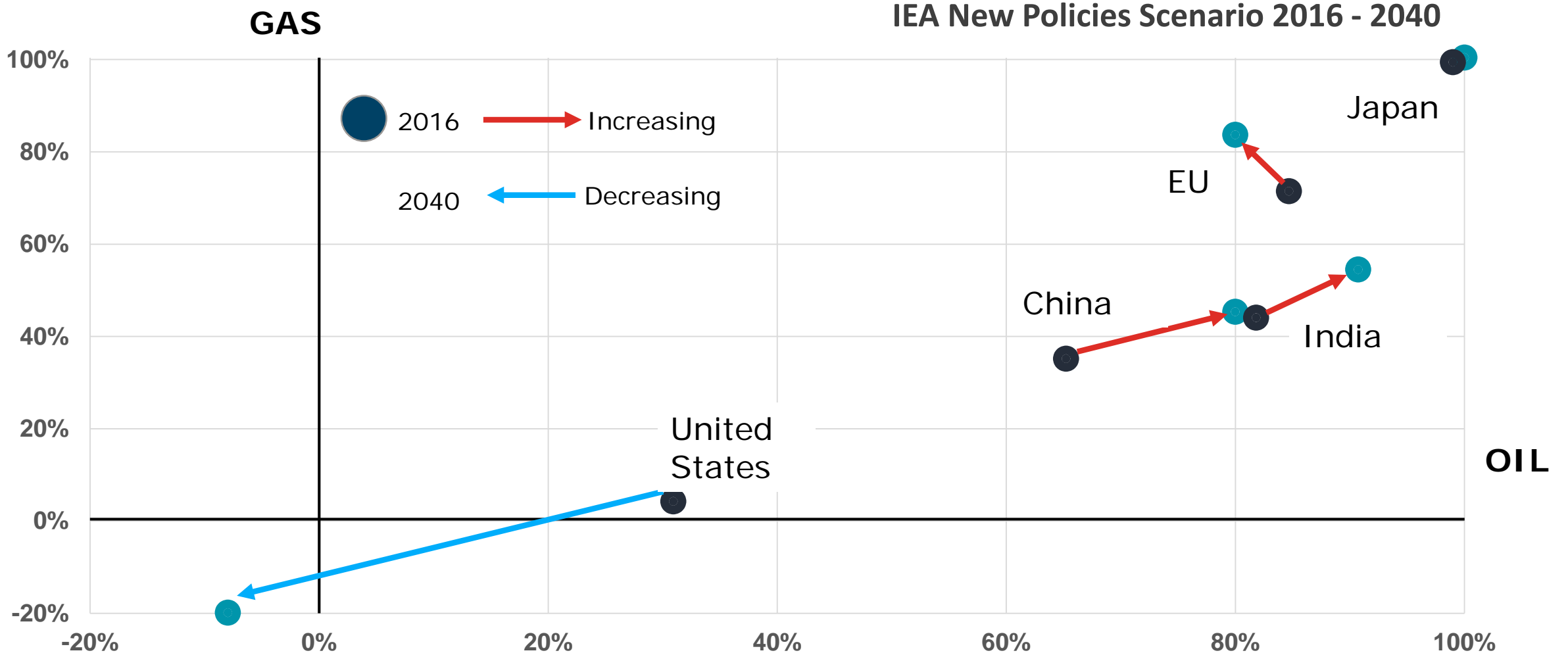
- Add liquidity to global LNG trade
- Bring gas-on-gas competition
- No oil price indexation
- No destination clauses
- Cap pricing by dominant suppliers
- Low political risk
- Promote spot trading



# Why Should the U.S. Care About LNG Exports?

- Export relief supports pricing
- Reduce stranded production
- Minimize stranded assets
- Avoid stranded investments
- Industrial competitiveness
- Balance of trade/payments
- Geopolitical dividend?

# Net Oil & Gas Dependency



Source: U.S. Energy Information Administration, Annual Energy Outlook 2019