

U.S. Energy Resurgence and Its Impacts on Asia

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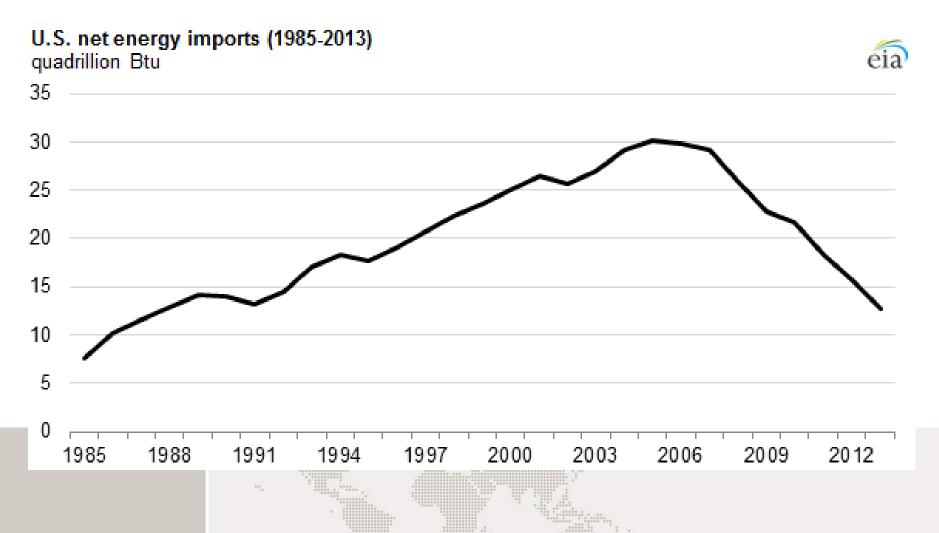
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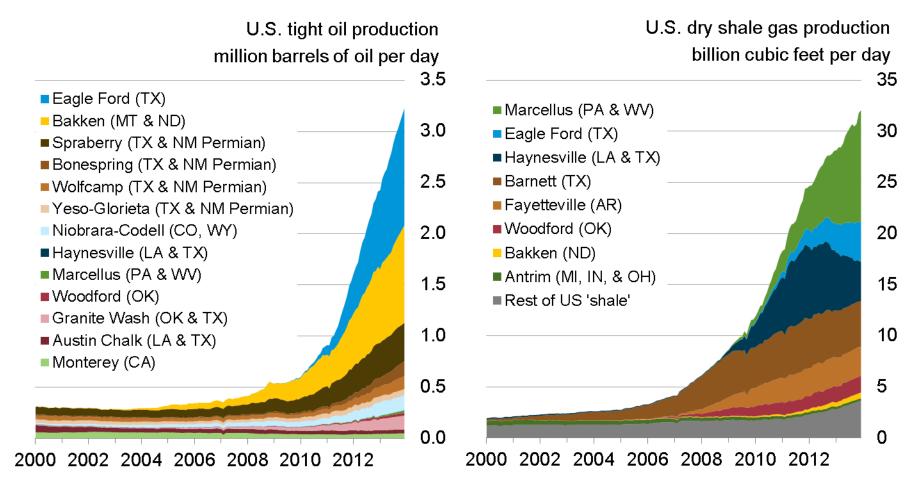
Energy & National Security Program



Net energy imports on BTU basis lowest in 20 years



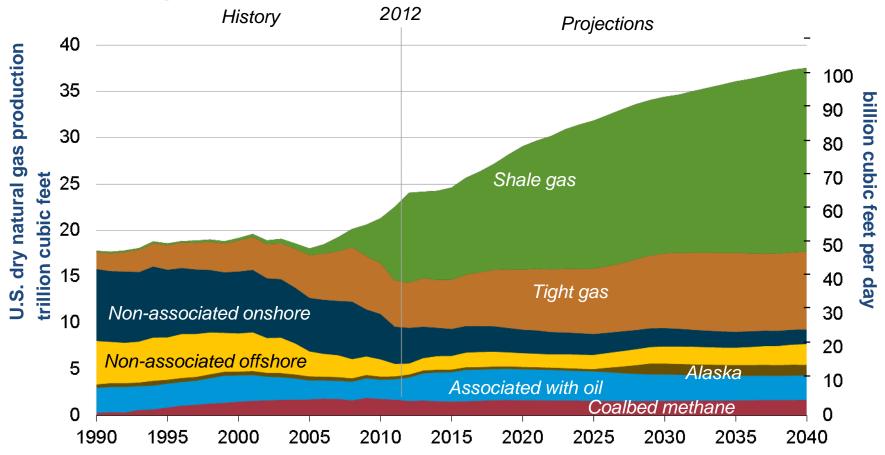
The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources



Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through December 2013 and represent EIA's official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).

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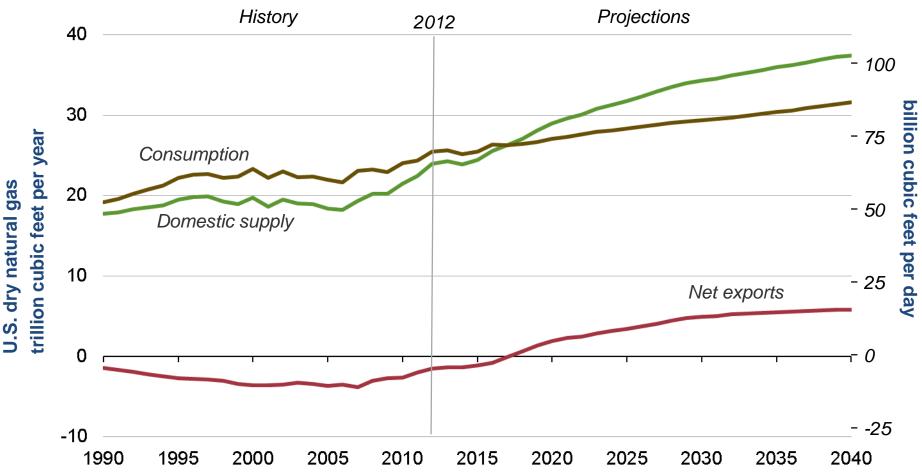
U.S. shale gas leads growth in total gas production through 2040 to reach half of U.S. output





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U.S. soon to become a net exporter of natural gas

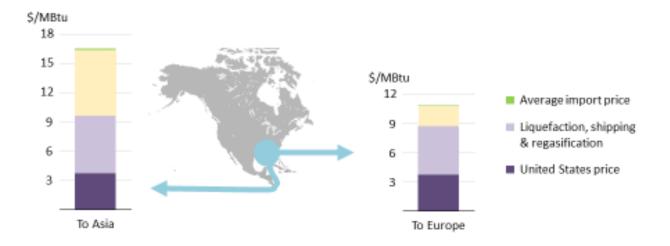


Source: EIA, Annual Energy Outlook 2014 Early Release



LNG from the United States can shake up gas markets

Indicative economics of LNG export from the US Gulf Coast (at current prices)

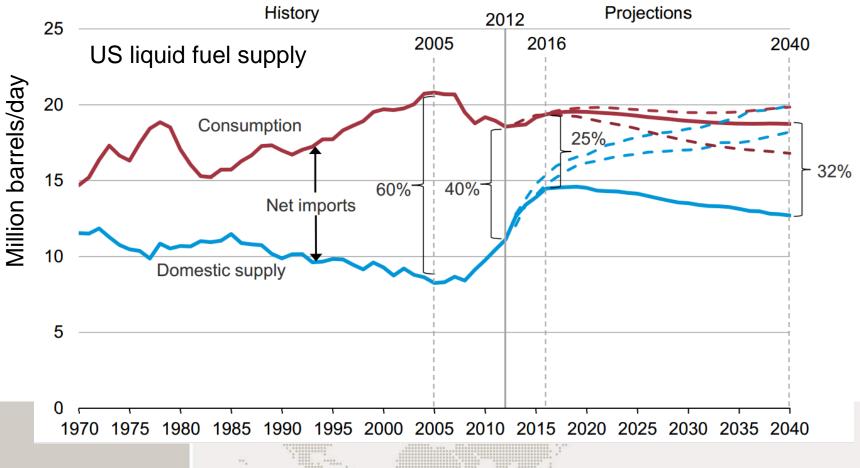


New LNG supplies accelerate movement towards a more interconnected global market, but high costs of transport between regions mean no single global gas price Source: IEA



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US dependence on imported liquids declines, esp. in the near term



Source: EIA, AEO 2014 reference case and draft analysis

CSIS CENTER FOR STRATEGIC & Energy & National INTERNATIONAL STUDIES Security Shale gas has immediate benefits for Asia's LNG importers

- Swing in U.S. expected net LNG requirements 2011-2015
 - LNG supplies for Asia, Europe Qatar
- More LNG available for Japan during its nuclear crisis
- U.S. coal exports increasing
 - Backing out Russian pipeline gas to Europe, prices
 - Pressuring Gazprom to develop Asian markets

Shale gas has larger long-term benefits for Asia's LNG importers post-2015

- U.S. LNG supplies ramping up; supply diversity for Asia
- Japan sees as critical added supply, pricing leverage
 - LNG imports up from 70 to approaching 90 mt/y 2013
 - LNG import costs up 70%
 - Nuclear return scale and pace remain very unclear
 - Investing in upstream US LNG projects, supply contacts, shale gas
- South Korea
 - Russian pipeline gas remains unlikely
 - Nuclear shutdown problems and resistance to return
 - LNG remains only gas option; investing in No. America
- Southeast Asia's growing LNG importers will also benefit

Source: Mikkal Herberg, Research Director, Energy Security Program The National Bureau of Asian Research



Thank you

• Questions?



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