

The benefits of the shale energy boom in the United States are the subject of much attention, but this energy revolution will also provide important international benefits as the prospect of U.S. liquefied natural gas (LNG) exports becomes more apparent.

According to the International Energy Agency (IEA), the factors that drive natural gas demand point to a future that favors a growing role for gas in the global energy mix. The driving force behind this is the competitiveness of natural gas over other energy sources due to an abundance of global supply, low emissions profile and recent changes in technology. These benefits, coupled with growing demand worldwide, underscore a favorable outlook for LNG in the global energy market.

## Environment

Natural gas has roughly half the carbon emissions of coal when used to generate electricity, and has much fewer emissions of compounds linked to smog, acid rain and asthma. Airborne emissions do not stop at international borders, so this benefits the United States and other countries. According to IEA data, increased natural gas use could reduce CO<sub>2</sub> emissions by 740 million metric tons by 2035- more than is currently emitted each year by France, Brazil, the United Kingdom or Canada.

- "Fuel switching from coal to natural gas has had climate benefits for the U.S. -helping our allies do the same can contribute to achieving global greenhouse gas emissions reduction targets" - American Security Project, p. 1

## International Trade

The economic benefits of international trade, for both exporters and importers, are well understood. Increased trade in natural gas, via LNG shipments and pipelines, will provide a clean-burning fuel source for consumers and boost economic growth around the world.

Additionally, many countries around the world, including some of America's closest allies, are in need of reliable energy supplies. Both the prevalence of vast shale deposits in many nations and our ability to transport gas as LNG, mean that the global shale revolution will erode some of the power of those who use energy exports as a geopolitical weapon,

- "[A] move towards more widespread gas-to-gas competition and gas price indexation would be expected to result in lower international gas prices than would otherwise be the case... Over a longer timescale, growing demand can be expected to ease prices upwards and encourage more exploration and development, thus boosting supplies in the longer term." - International Energy Agency: World Energy Outlook 2011, pg. 79

- "Shale gas delays for well over a decade the world's reliance on regions that have historically been volatile and greatly reduces the chance of any individual or group of producers exercising decisive monopoly powers." - Baker Institute: Shale Gas and U.S. National Security, p. 29

- "Exporting liquefied natural gas (LNG) to American allies can improve their energy security, erode oil-indexed gas contracts in Asia, and reduce the influence of unfriendly nations using energy as a political weapon." - American Security Project, p. 1

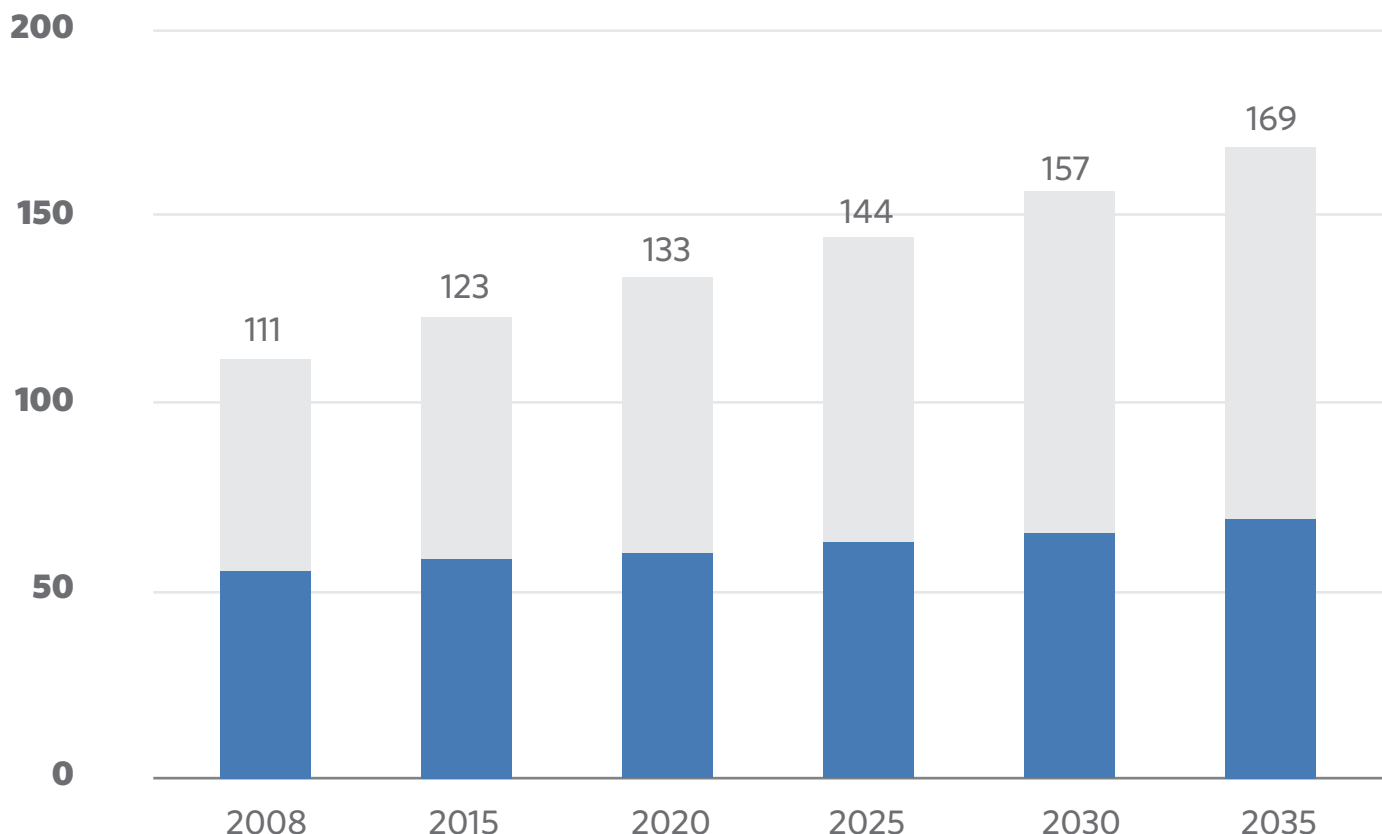
## International Prices

Allowing natural gas exports to reach U.S. trade partners would make the global LNG marketplace more competitive, offer greater energy diversity and security of supply, and potentially make natural gas more affordable for importing nations.

- "Permitting new LNG export capacity will provide more liquidity to the global LNG market, helping to reduce prices and provide alternative supplies for some of America's closest allies." - American Security Project, p. 1

# World Natural Gas Consumption, 1990-2035

■ Non-OECD ■ OECD



This figure from EIA illustrates the growing global demand that increased U.S. LNG exports could serve.

Source: U.S. Energy Information Administration: *International Energy Outlook*

- "Trade between the main world regions more than doubles, with the increase of around 620 bcm split evenly between pipeline gas and liquefied natural gas (LNG). Natural gas markets are becoming more global and regional prices are expected to show signs of increased convergence..."  
- International Energy Agency: *World Energy Outlook 2011*, pg. 8

- "Growth in LNG trade implies growth in physical liquidity, which increases arbitrage, mitigating the impact of any single shock."  
- Baker Institute: *Shale Gas and U.S. National Security*, pg. 29

## U.S. Regulatory Hurdles

Importing or exporting natural gas requires authorization from the U.S. Department of Energy (DOE), which makes its determination based upon the public interest. Selling natural gas to countries with which the United States has a free trade agreement is automatically deemed to be in the public interest, assuming all applicable environmental standards are met. However, selling to countries outside of existing free trade agreements undergoes further regulatory review. To that end, independent experts, the U.S. House and Senate, the Department of Energy and the general public have

engaged in a thorough, year-long, public dialogue about the benefits of selling some of our abundant natural gas supply to our trading partners. The bottom line remains: there is a growing momentum of support across the country for LNG exports. Now is the time for the U.S. government to approve all pending LNG export applications so that the U.S. and global economies can reap the benefits.