

America's Energy Revolution

Maritime Transportation's Critical Role in America's Energy Future



AMERICAN PETROLEUM INSTITUTE



Shipping Oil and Natural Gas Safely



We Are #1

- In 2013, the U.S. maritime transportation system – harbors, ports, channels, locks, dams and waterways – delivered **\$1.75 trillion** of the U.S.'s foreign trade. ¹

Almost half of the \$3.9 trillion in total U.S. foreign trade in 2013 was transported via maritime infrastructure.²



Why Is Maritime Transportation Important?

- Like veins and arteries to the body, so maritime infrastructure is to America's economy: a **critical link** supplying the necessary energy resources to those who need it, while exporting the domestic resources that are making the U.S. an energy superpower.

Currently, the U.S. imports ~10 million barrels a day, that's 4,375 gallons a second.³

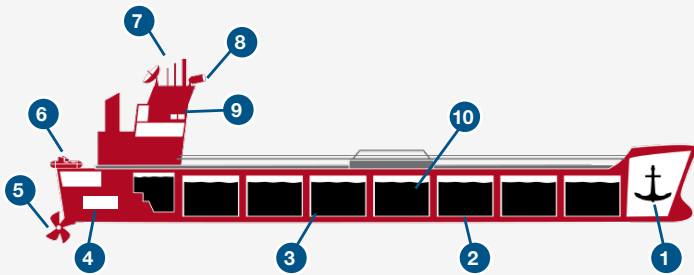
~ 42% of all waterborne trade in the U.S. in 2012 was comprised of crude or petroleum products.⁴



We Are Investing in U.S. Maritime Safety

- Since 1970, there has been a **98%** reduction in oil spilled from tankers worldwide.⁵

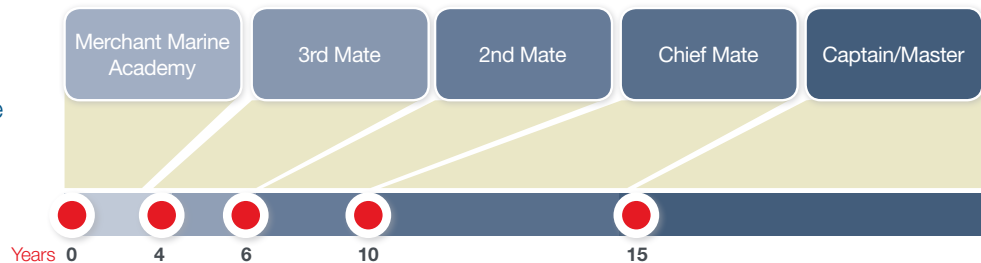
~ 3 billion tonnes of crude oil and petroleum products were delivered in 2012, or 1/3 of all seaborne trade.⁶



Vessel Safety

- | | |
|------------------------------------|---|
| 1 Duplicative anchors | 6 Self-launching lifeboat |
| 2 Double hull | 7 Navigation with collision avoidance systems |
| 3 Non-corrosive cargo tank coating | 8 Duplicative 3D targeting radar scanners |
| 4 Redundant engine rooms | 9 Manual safety systems |
| 5 Bronze-coated propellers | 10 Liquid cargo |

Average Training Experience of Maritime Crew



- It takes **~15 years** to become a captain of an oil tanker. That's over **150 assessments** and **35,000 hours** of specialized training with one goal in mind: safety.

Boosting the U.S. Economy and Job Growth

- Relative to other modes, maritime transportation of petroleum is incredibly economical due to its unparalleled efficiency.
- 1 gallon** of fuel moves one ton of oil **6,842 miles** via tanker.⁷
- The U.S. Army Corps of Engineers calculated that planned improvements to the Savannah Harbor will save shippers \$213 million a year, or over **\$10 billion** over the life of the project. This is one example of how a small investment in infrastructure can go a long way.⁸





What Is the Future?

- In order for America to continue on its path to becoming an energy superpower, investments in America's maritime infrastructure — harbors, ports, channels, locks, dams and waterways — must be made lest aging infrastructure lead to greater inefficiencies, delays and damages costing Americans and our government millions a day.
- Aging infrastructure due to government deferral increases risks to human health and the environment. Underinvestment in maritime infrastructure could result in annual losses of as much as \$49 billion in lost revenue for US businesses by 2020.⁹
- Properly maintaining and updating our maritime infrastructure system provides opportunities for major economic growth and job creation, and is essential for realizing the full benefits of new production gains.

References

- ¹ <http://www.census.gov/foreign-trade/statistics/highlights/annual.html>; http://www.marad.dot.gov/library_landing_page/data_and_statistics/Data_and_Statistics.htm
- ² <http://www.infrastructurereportcard.org/a/#p/inland-waterways/conditions-and-capacity>.
- ³ http://www.eia.gov/dnav/pet/pet_move_impqus_a2_nus_ep00_im0_mbbldpd_a.htm
- ⁴ <http://www.navigationdatacenter.us/wcsc/pdf/wcusnat12.pdf>
- ⁵ http://www.itopf.com/fileadmin/data/Documents/Company_Lit/OilSpillstats_2013.pdf
- ⁶ <http://www.iaphworldports.org/LinkClick.aspx?fileticket=CB2qneCt62M%3D&tabid=4879>
- ⁷ <http://oecd.org/sti/ind/48337841.pdf>
- ⁸ America's Maritime Infrastructure: Crying out for dollars. The Economist: February 2, 2013
- ⁹ *ibid.*

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