Tractebel Electricity & Gas International

Overview of LNG in the United States

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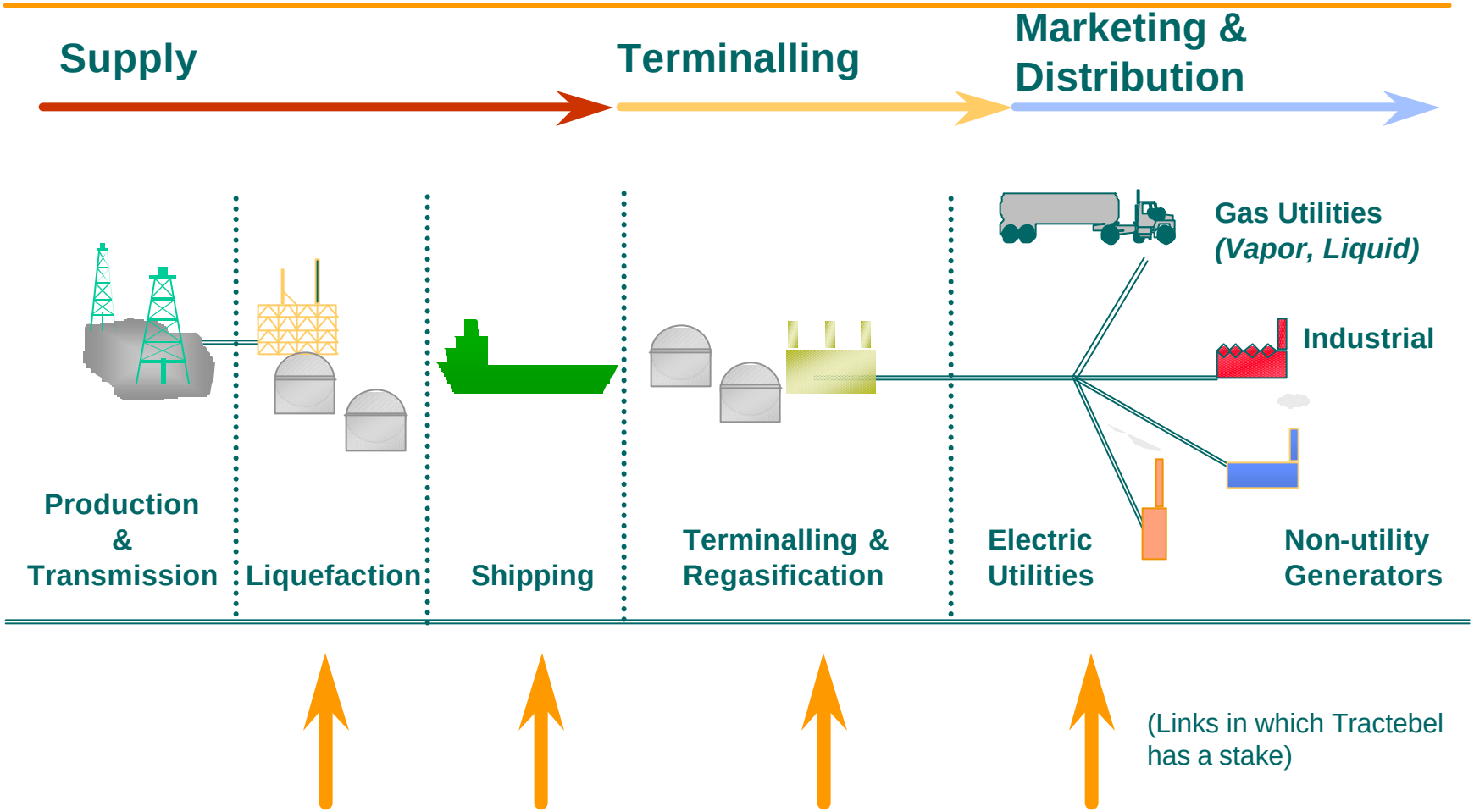
What Is Liquefied Natural Gas?

- LNG is the same natural gas used around the world for heating and power-generation purposes, only in a different form.
- When chilled to -260 degrees Fahrenheit, natural gas liquefies and reduces to 1/600th of its original volume.
- Liquefaction allows large quantities of natural gas to be transported via ship and stored efficiently and economically.
- Sparks for the LNG industry
  - OPEC Oil Embargo in the 1970s
    - Entire countries, or at least regions, needed to diversify fuel sources
    - Gas-rich countries looking to leverage “stranded” reserves
  - January 2001 natural gas price spike
    - NYMEX trades at $10 per MMBtu
    - Today, sustained natural gas futures prices of $4-$5 per MMBtu

LNG Supply Chain



LNG's Appeal Is Growing

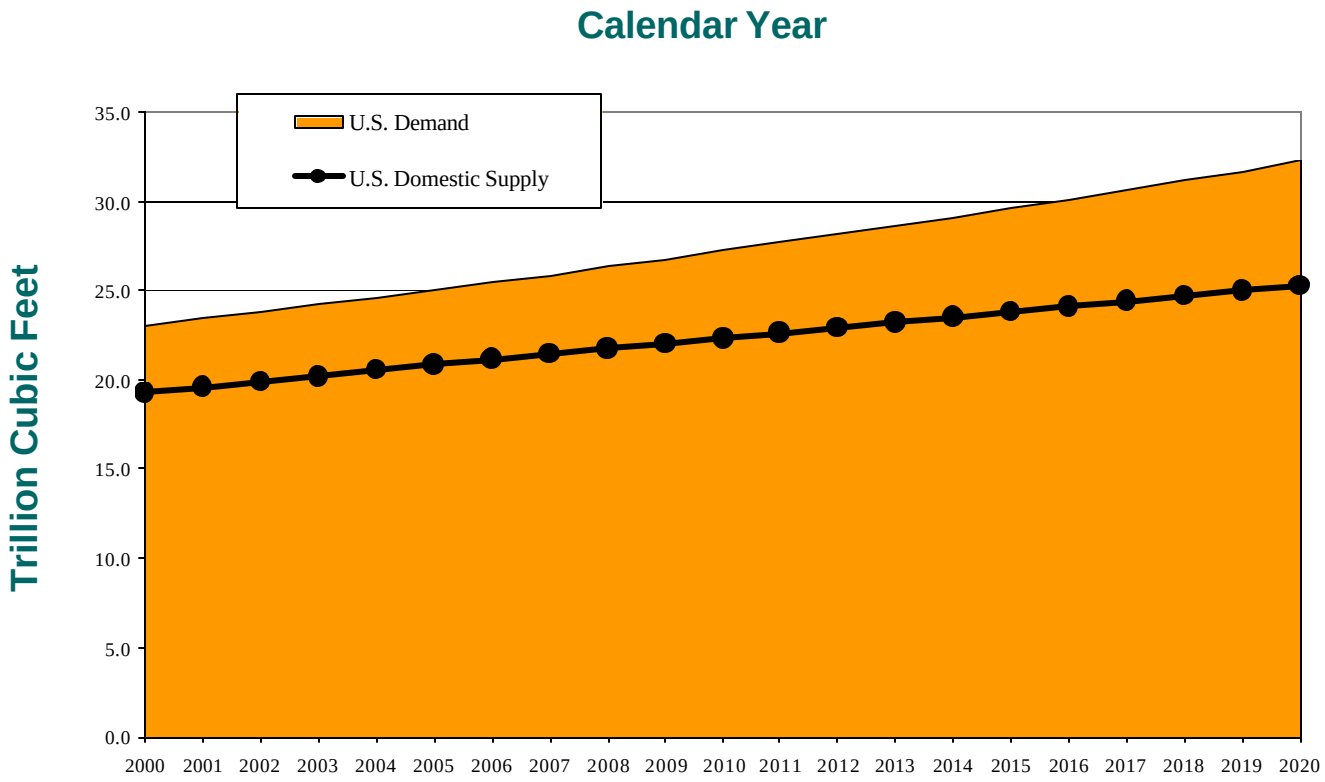
- LNG/natural gas cleanest burning, highest energy efficiency of all fossil fuels
- Ample supply (ex. Trinidad has 70+ trillion cubic feet of proven and probable reserves, Algeria has some 130 trillion cubic feet of proven gas reserves, while Qatar has approximately 900 trillion cubic feet.)
- Decreasing costs (decline of about 30% since 1970s)
- Facilities can be upgraded quickly and substantially to meet increases in demand
- Marketing flexibility
  - Can divert from full markets to thriving ones
  - Can make short-term, even single contracts to maximize both export and import facilities
- Transport cost-competitive with pipelines over long distances

Example of Supply Side Costs *

Exploration and Production	$.75 - $1.00
Liquefaction	$1.00 - $1.50
Shipping (distance related)	$.35 - $1.50
Storage and Regasification	$.15 - $.25
Total	$2.25 - $4.25

*Internal estimates

U.S. Natural Gas Market Growth Projections

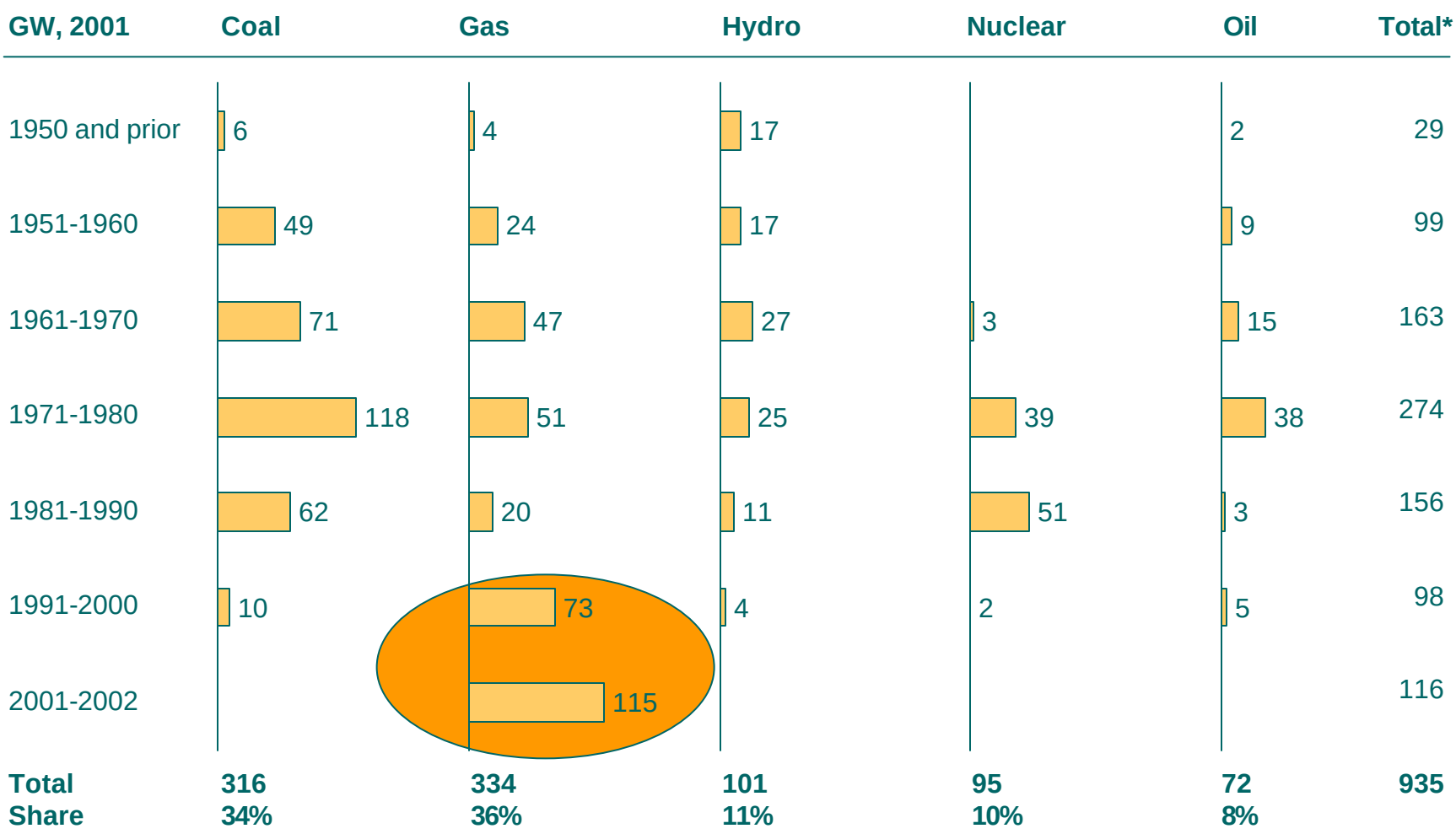


EIA reports that U.S. production is expected to grow from about 19 Tcf to 25 Tcf between 2000 and 2020, while demand is projected to grow from about 23 Tcf in 2000 to 32 Tcf in 2020, a roughly 75% increase in the projected shortfall over the 20 year period.

Source: U.S. Energy Information Administration Annual Energy Outlook 2003

Clear Market Driver: Power Production

U.S. installed capacity by fuel and age

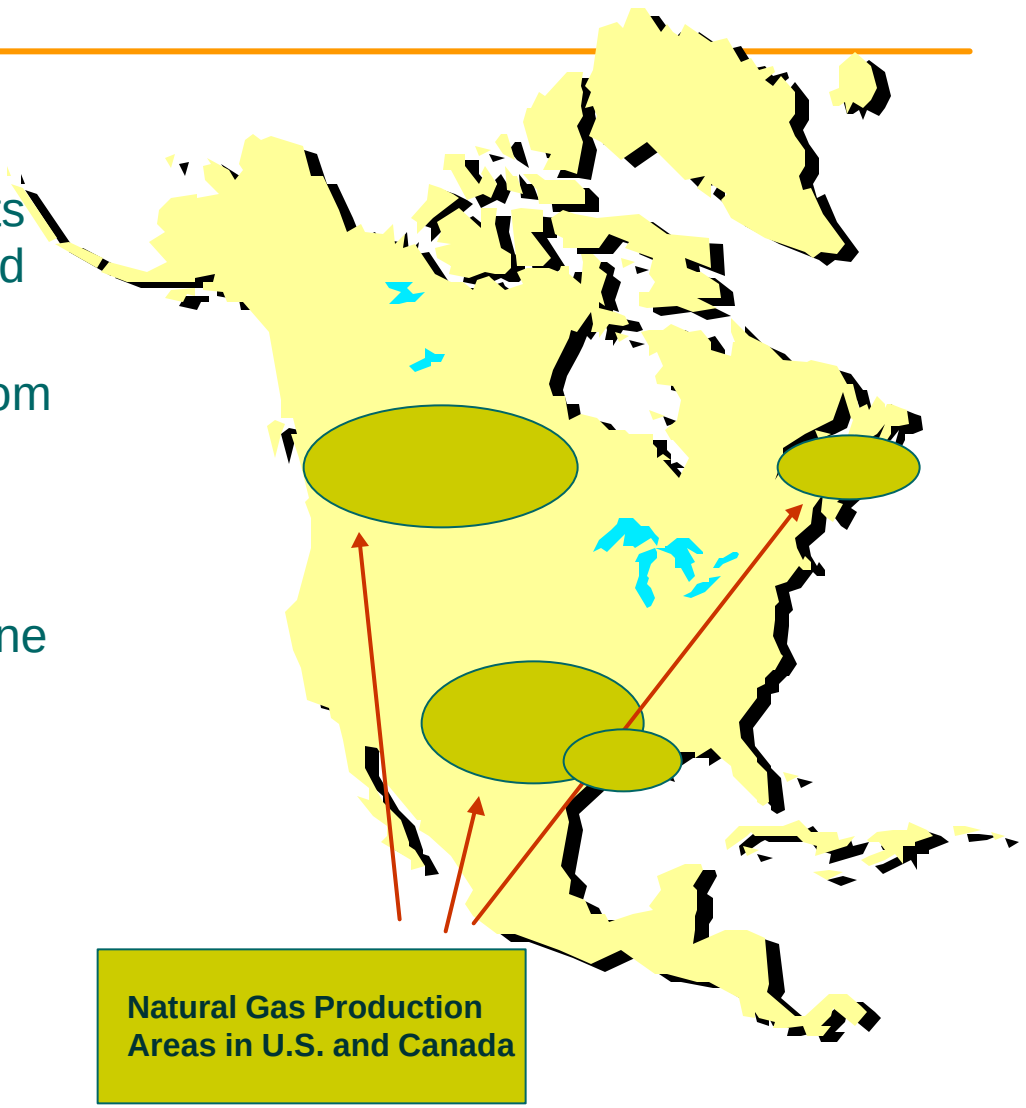


* Total includes all other forms of generation, not listed separately

Source: RDI, CERA

U.S. Natural Gas Market

- Neither U.S. natural gas production nor Canadian imports likely to meet all of the increased demand
- Mexico importing natural gas from U.S. to meet its rising demand
- U.S. market will likely need to evolve from an almost strictly continental market to a global one linked by LNG



Natural Gas Production Areas in U.S. and Canada

Will LNG Account for a Bigger Piece of the Market?

- Prominent organizations and individuals are agreeing that LNG represents an important, long-term natural gas supply solution
  - The U.S. Federal Energy Regulatory Commission
  - The U.S. Department of Energy
  - Alan Greenspan of the Federal Reserve Bank
  - The National Petroleum Council

- Recent Standard & Poor's Report
  - LNG projects "excellent candidates" for financing
  - Project sponsors typically have strong balance sheets, and end users typically have investment-grade credit risks
  - Physical infrastructure in LNG supply chain not susceptible to obsolescence
  - Stranded gas reserves in Trinidad, Algeria, and Nigeria [and other countries] are plentiful, and liquefaction and regasification technology are commercially proven
  - S&P believes these reasons add up to attractive opportunities for energy investors

Challenges in Siting New LNG Facilities in the U.S.

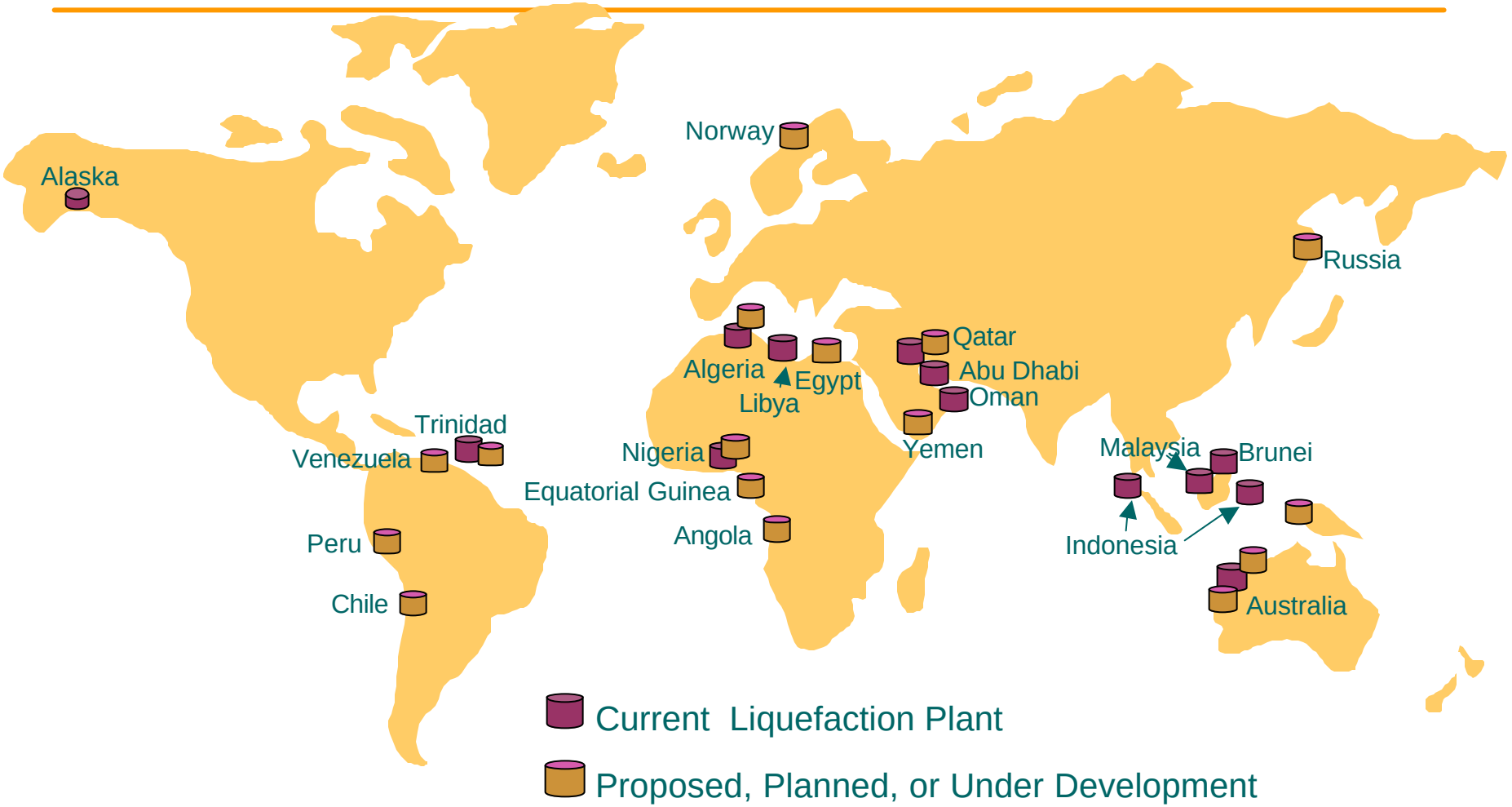
- Long lead times in developing LNG facilities (about 5 years)
- LNG imports require alignment of the entire supply chain
- Complex permitting activities
- Large capital requirements
- Public knowledge of LNG is poor, evidenced by perceptions of safety and security risks
  - NIMBY sentiment continues to be extremely powerful

Recent Federal Government Developments

- In its preliminary approval of the Hackberry LNG project in Louisiana in December 2002, FERC issued a press release which stated that "[FERC] will set a different policy in regulating new LNG projects where markets are competitive and other criteria are met."
- Goal is to remove economic and regulatory barriers to spur development of onshore LNG import terminals. This will allow new imported LNG to supplement existing natural gas supplies.
- Key changes: FERC will no longer require for all new LNG projects:
  - "open access" status
  - FERC-approved cost-based rates
- Any affect on existing LNG terminals?

- Deep Water Port Act amended to include natural gas/LNG/CNG
  - Offshore LNG terminals would be under Coast Guard jurisdiction
  - Offshore LNG permit applications would have discrete timeline

LNG Global Supply Sources



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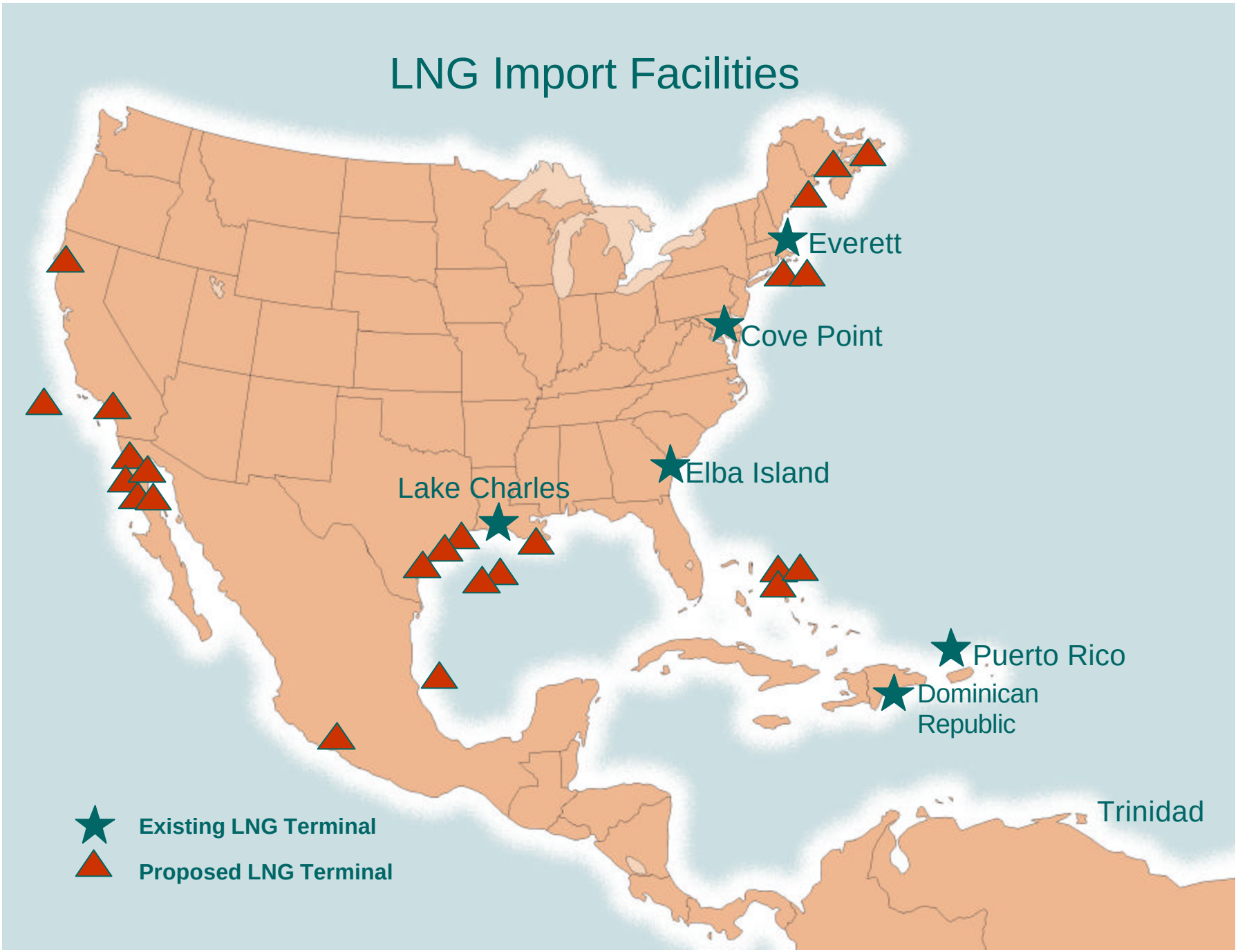
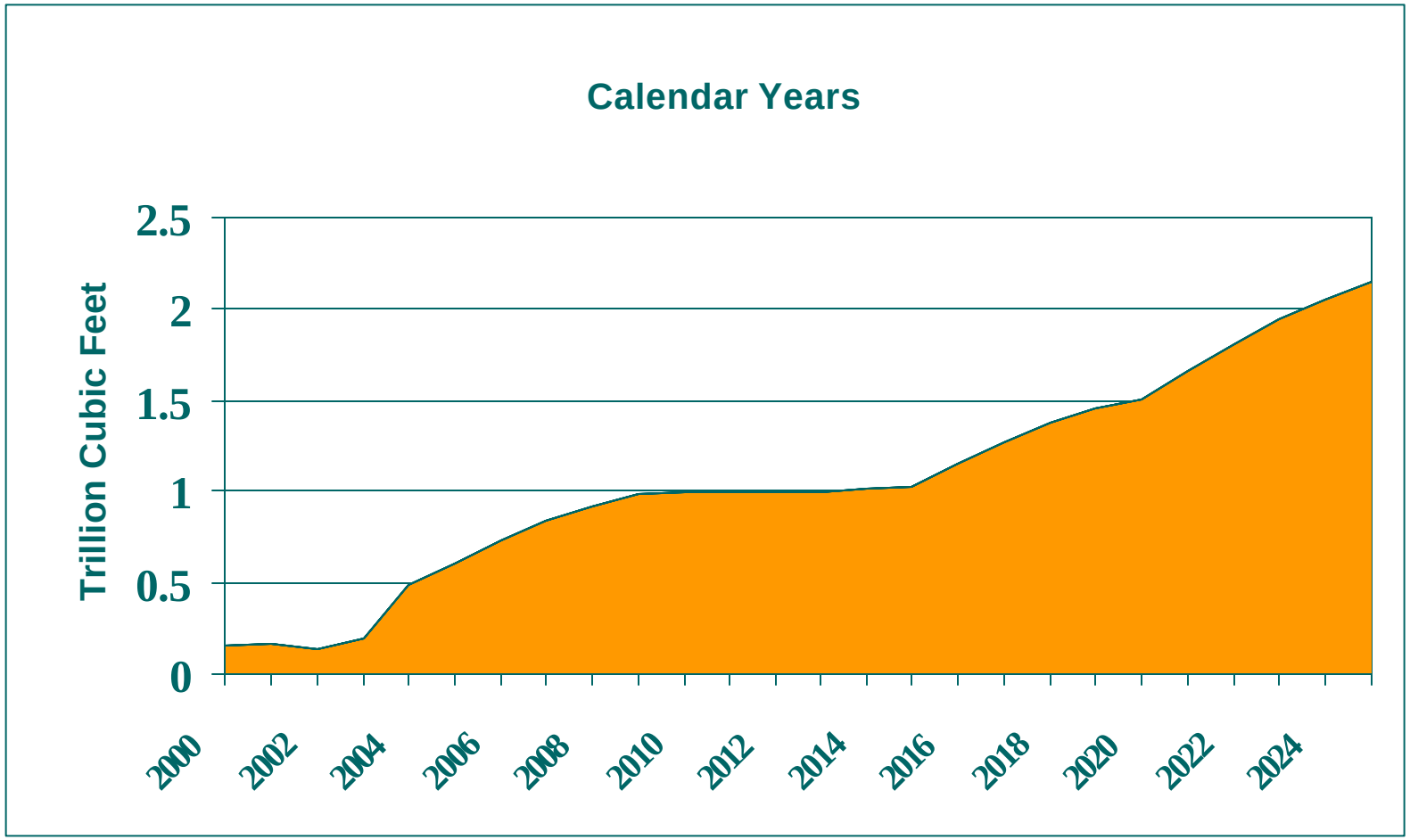
LNG Import Facilities



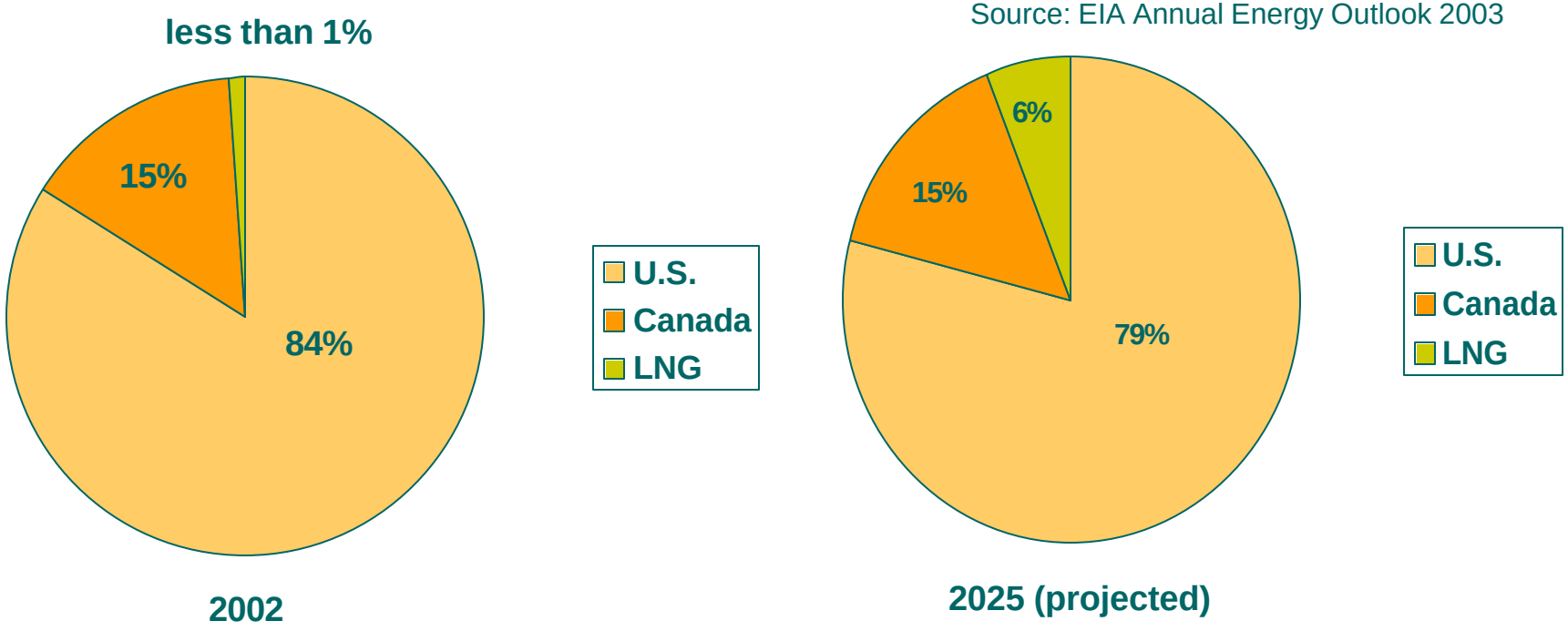
Projected Growth for LNG in the U.S.



Source: U.S. Energy Information Administration Annual Energy Outlook 2003

U.S. Natural Gas Supply Sources

Source: EIA Annual Energy Outlook 2003



U.S. Federal Energy Regulatory Commission Chairman recently said imports, including LNG, should become bigger factors

Pipelines in U.S. getting harder to build

LNG terminals can be placed "right there in the market" that needs it

Conclusion

- Overall, the outlook for LNG in the U.S. is brighter than it's been in a long time
  - Clean, energy efficient fuel
  - Ample supply
  - Decreasing costs across LNG supply chain
    - Transport cost-competitive with pipelines over long distances
  - Facilities can be upgraded quickly and substantially to meet increases in demand
  - Marketing flexibility
  - New, vocal support from federal government and others