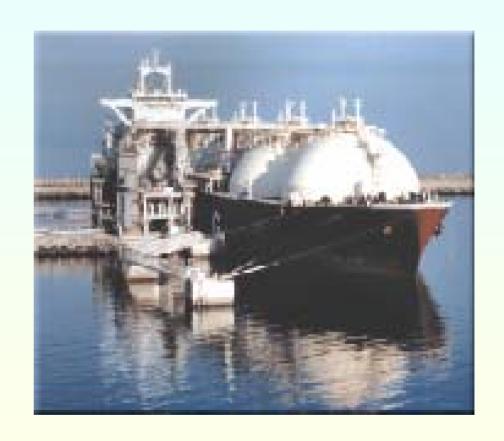
The Rapidly Expanding Role of LNG in North America

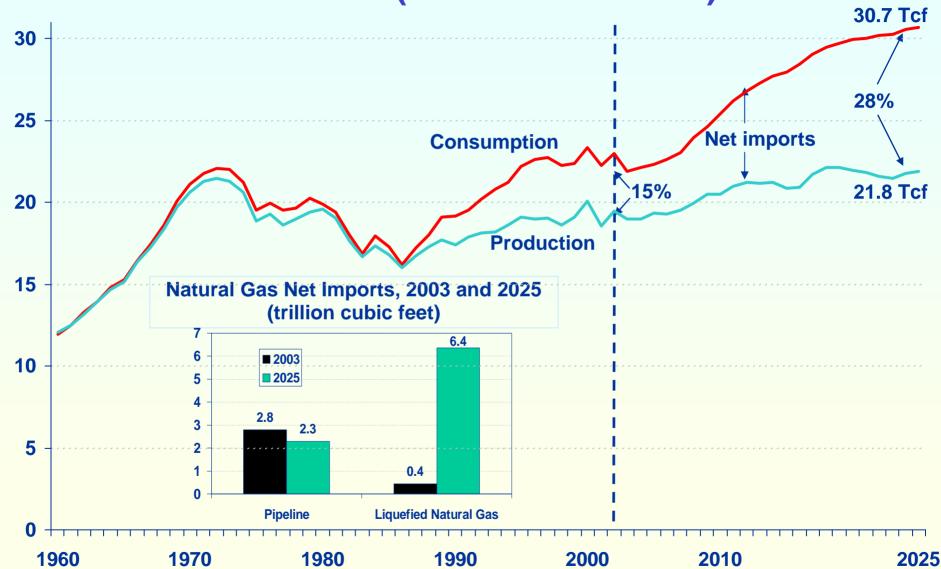
Phyllis Martin
Energy Information Administration
Phyllis.Martin@eia.doe.gov
202-586-9592

EIA Midterm Energy Outlook and Modeling Conference Washington, DC April 12, 2005

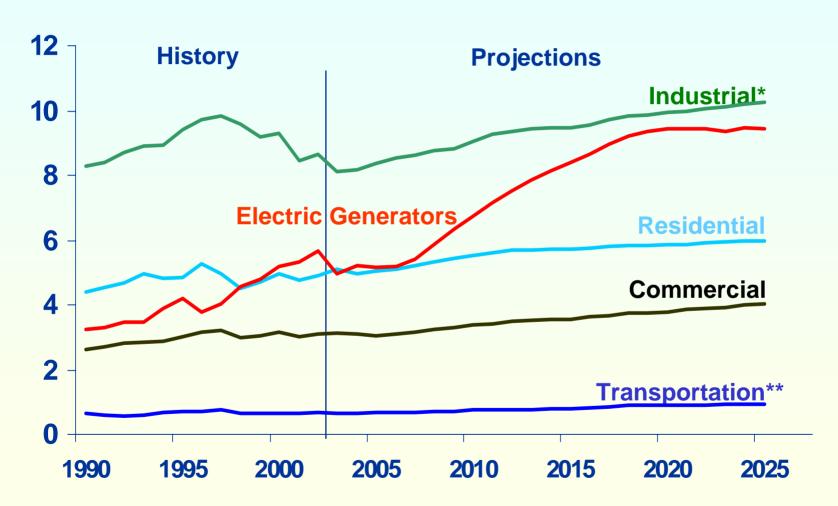


Siting Issues in the Development of U.S. LNG Receiving Terminals

Natural Gas Production, Consumption, and Imports, 1960-2025 (trillion cubic feet)



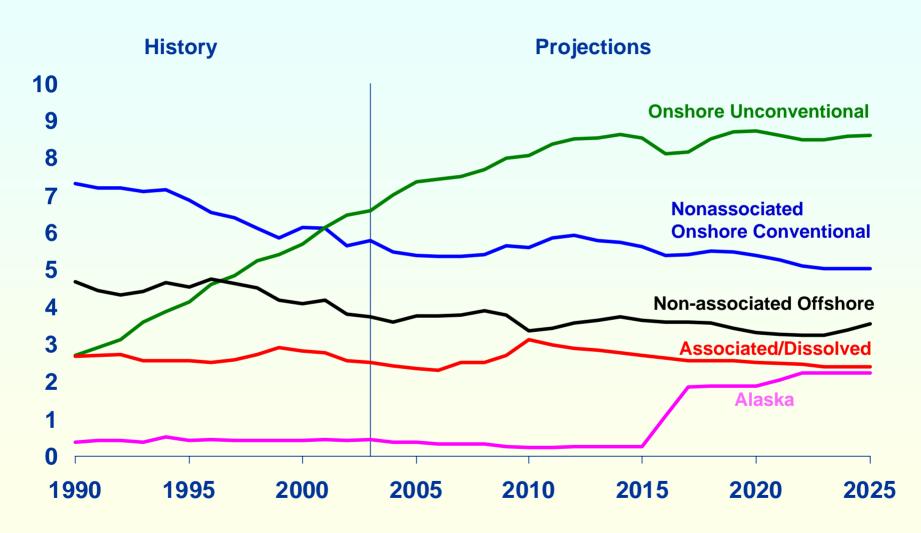
U.S. Natural Gas Consumption by Sector, 1990-2025 (trillion cubic feet)



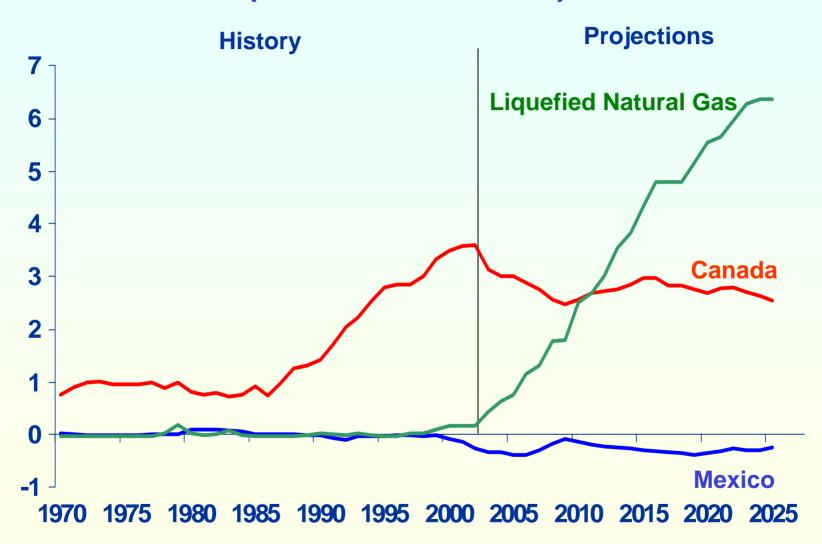
^{*} Includes lease and plant fuel

^{**} Includes pipeline fuel

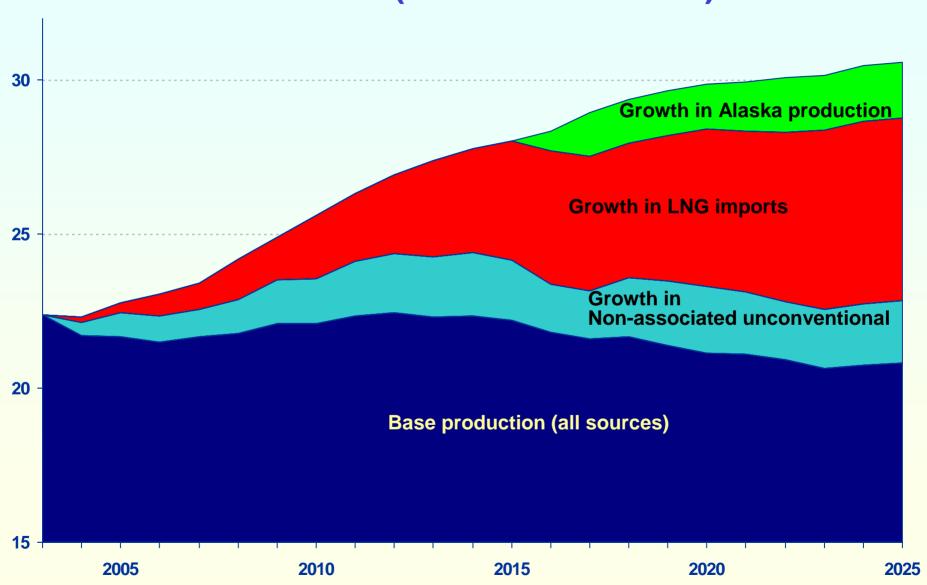
U.S. Dry Natural Gas Production, 1990-2025 (trillion cubic feet)



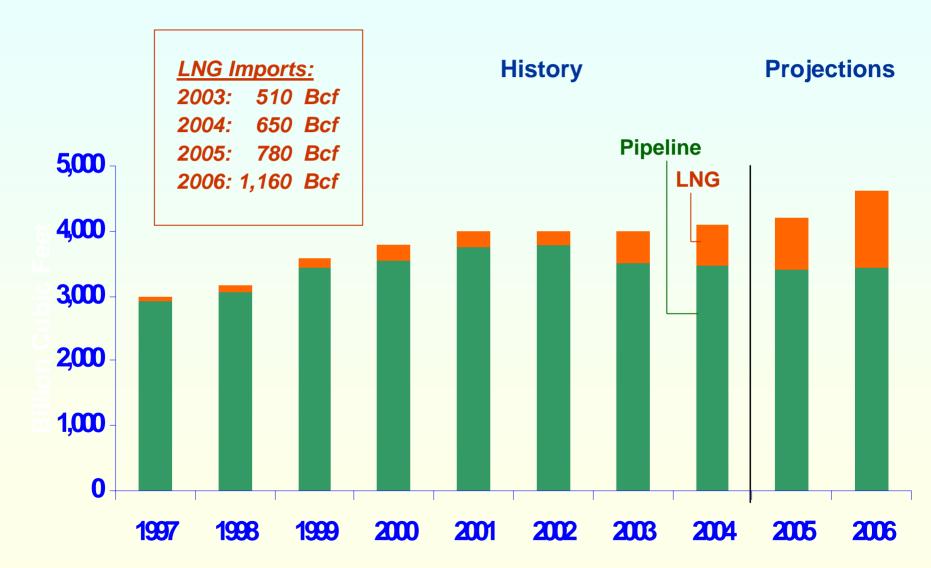
Net U.S. Imports of Natural Gas, 1970-2025 (trillion cubic feet)



Major Sources of Incremental Natural Gas Supply, 2003-2025 (trillion cubic feet)

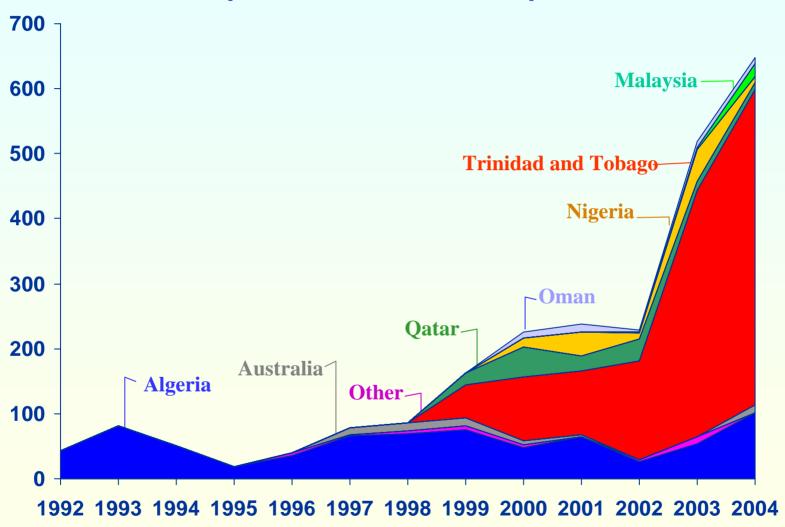


Natural Gas Imports, 1997-2006 (billion cubic feet)

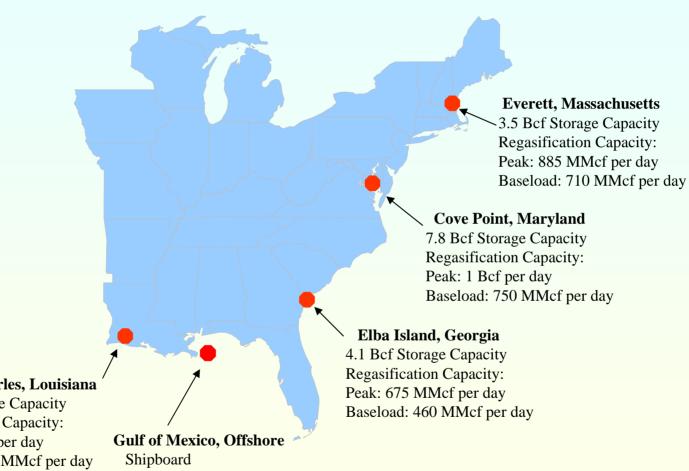


Sources: History: EIA; Projections: Short-Term Energy Outlook March, 2005.

U.S. LNG Imports by Country, 1992-2004 (billion cubic feet)



Current U.S. LNG Import Terminals



Lake Charles, Louisiana

6.3 Bcf Storage Capacity Regasification Capacity:

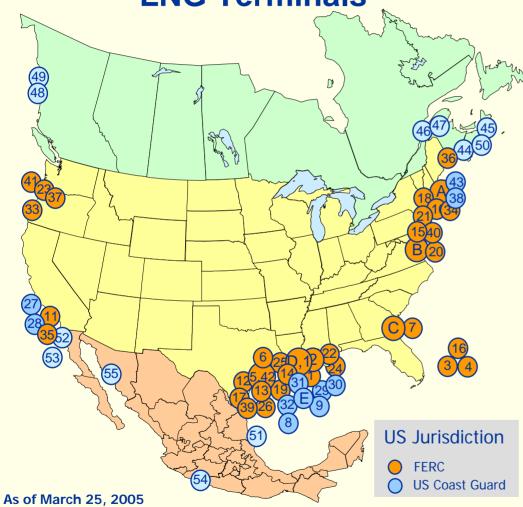
Peak: 1.2 Bcf per day

Baseload: 630 MMcf per day

Regasification Capacity: Peak: 500 MMcf per day Baseload: 500 MMcf per day

FERC

Existing, Proposed and Potential North American LNG Terminals



- US pipeline approved; LNG terminal pending in Bahamas
- ** These projects have been approved by the Mexican and Canadian authorities

Office of Energy Projects

CONSTRUCTED

A. Everett, MA: 1.035 Bcfd (Tractebel - DOMAC)

B. Cove Point, MD: 1.0 Bcfd (Dominion - Cove Point LNG)

C. Elba Island, GA: 0.68 Bcfd (El Paso - Southern LNG)

D. Lake Charles, LA: 1.0 Bcfd (Southern Union - Trunkline LNG)

E. Gulf of Mexico: 0.5 Bcfd, (Gulf Gateway Energy Bridge - Excelerate Energy) APPROVED BY FERC

1. Lake Charles, LA: 1.1 Bcfd (Southern Union - Trunkline LNG)

2. Hackberry, LA: 1.5 Bcfd, (Sempra Energy)

3. Bahamas: 0.84 Bcfd, (AES Ocean Express)*

4. Bahamas: 0.83 Bcfd, (Calypso Tractebel)* **5. Freeport**, **TX**: 1.5 Bcfd, (Cheniere/Freeport LNG Dev.)

6. Sabine, LA: 2.6 Bcfd (Cheniere LNG)

7. Elba Island, GA: 0.54 Bcfd (El Paso - Southern LNG)

APPROVED BY MARAD/COAST GUARD

8. Port Pelican: 1.6 Bcfd, (Chevron Texaco)

9. Louisiana Offshore: 1.0 Bcfd (Gulf Landing - Shell)

PROPOSED TO FERC

10. Fall River, MA: 0.8 Bcfd, (Weaver's Cove Energy/Hess LNG)

11. Long Beach, CA: 0.7 Bcfd, (Mitsubishi/ConocoPhillips - Sound Energy Solutions)

12. Corpus Christi, TX: 2.6 Bcfd. (Cheniere LNG)

13. Corpus Christi, TX: 1.0 Bcfd (Vista Del Sol - ExxonMobil)

14. Sabine, TX: 1.0 Bcfd (Golden Pass - ExxonMobil)

15. Logan Township, NJ: 1.2 Bcfd (Crown Landing LNG - BP)

16. Bahamas: 0.5 Bcfd, (Seafarer - El Paso/FPL)

17. Corpus Christi, TX: 1.0 Bcfd (Ingleside Energy - Occidental Energy Ventures)

18. Providence, RI: 0.5 Bcfd (Keyspan & BG LNG)

19. Port Arthur, TX: 1.5 Bcfd (Sempra)

20. Cove Point, MD: 0.8 Bcfd (Dominion)

21. LI Sound, NY: 1.0 Bcfd (Broadwater Energy - TransCanada/Shell)

22. Pascagoula, MS: 1.0 Bcfd (Gulf LNG Energy LLC)

23. Bradwood, OR: 1.0 Bcfd (Northern Star LNG - Northern Star Natural Gas LLC)

24. Pascagoula, MS: 1.3 Bcfd (Casotte Landing - ChevronTexaco)

25. Cameron, LA: 3.3 Bcfd (Creole Trail LNG - Cheniere LNG)

26. Port Lavaca, TX: 1.0 Bcfd (Calhoun LNG - Gulf Coast LNG Partners)

PROPOSED TO MARAD/COAST GUARD

27. California Offshore: 1.5 Bcfd (Cabrillo Port - BHP Billiton)

28. So. California Offshore: 0.5 Bcfd, (Crystal Energy)

29. Louisiana Offshore: 1.0 Bcfd (Main Pass McMoRan Exp.)

30. Gulf of Mexico: 1.0 Bcfd (Compass Port - ConocoPhillips)

31. Gulf of Mexico: 2.8 Bcfd (Pearl Crossing - ExxonMobil)

32. Gulf of Mexico: 1.5 Bcfd (Beacon Port Člean Energy Terminal - ConocoPhillips)

POTENTIAL SITES IDENTIFIED BY PROJECT SPONSORS

33. Coos Bay, OR: 0.13 Bcfd, (Energy Projects Development)

34. Somerset, MA: 0.65 Bcfd (Somerset LNG)

35. California - Offshore: 0.75 Bcfd, (Chevron Texaco)

36. Pleasant Point, ME: 0.5 Bcf/d (Quoddy Bay, LLC)

37. St. Helens, OR: 0.7 Bcfd (Port Westward LNG LLC)

38. Offshore Boston, MA: 0.8 Bcfd (Northeast Gateway - Excelerate Energy)

39. Galveston, TX: 1.2 Bcfd (Pelican Island - BP)

40. Philadelphia, PA: 0.6 Bcfd (Freedom Energy Center - PGW)

41. Astoria, OR: 1.0 Bcfd (Skipanon LNG - Calpine)

42. Freeport, TX: 1.5 Bcfd, (Cheniere/Freeport LNG Dev. - Expansion)

43. Offshore Boston, MA: 0.4 Bcfd (Neptune LNG - Tractebel)

CANADIAN APPROVED AND POTENTIAL TERMINALS

44. St. John, NB: 1.0 Bcfd, (Canaport - Irving Oil)

45. Point Tupper, NS 1.0 Bcf/d (Bear Head LNG - Anadarko)

46. Quebec City, QC: 0.5 Bcfd (Project Rabaska - Enbridge/Gaz Met/Gaz de France)

47. Rivière-du- Loup, QC: 0.5 Bcfd (Cacouna Energy - TransCanada/PetroCanada)

48. Kitimat, BC: 0.61 Bcfd (Galveston LNG)

49. Prince Rupert, BC: 0.30 Bcfd (WestPac Terminals)

50. Goldboro, NS 1.0 Bcfd (Keltic Petrochemicals)

MEXICAN APPROVED AND POTENTIAL TERMINALS

51. Altamira, Tamulipas: 0.7 Bcfd, (Shell/Total/Mitsui)**

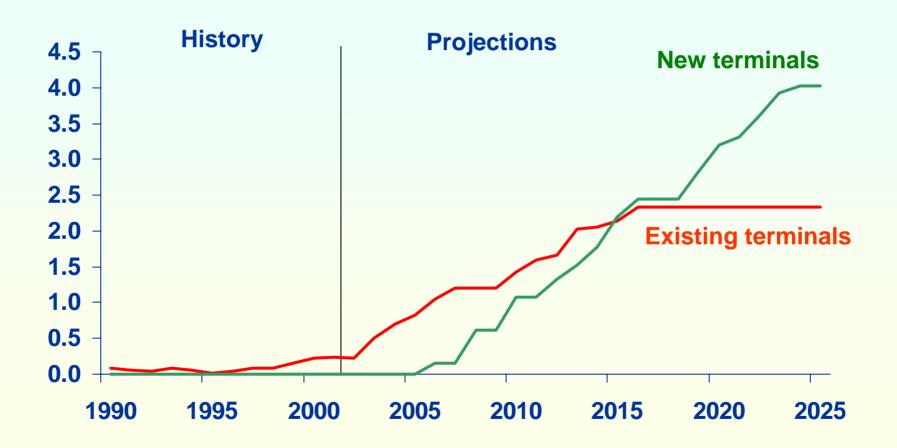
52. Baja California, MX: 1.0 Bcfd, (Sempra & Shell)**

53. Baja California - Offshore: 1.4 Bcfd, (Chevron Texaco)

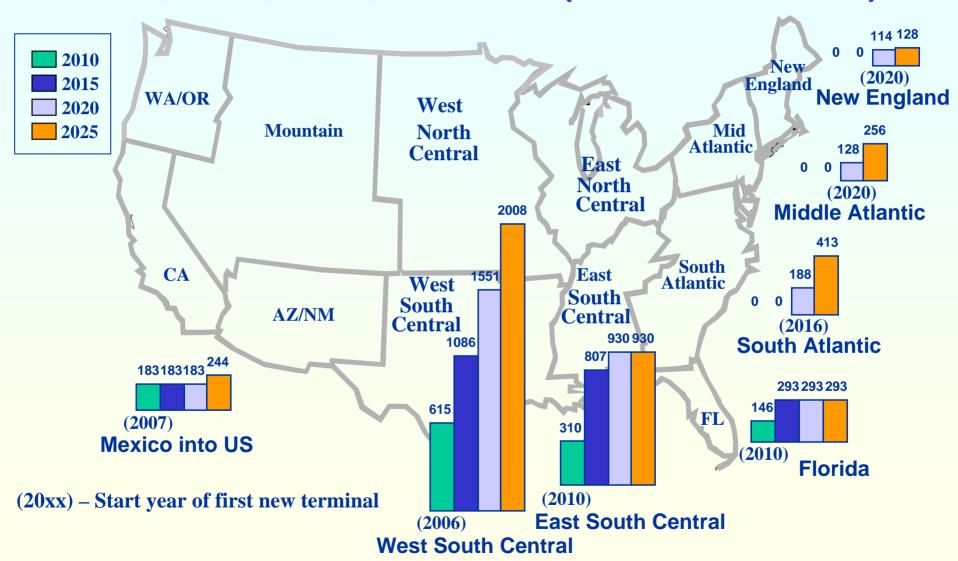
54. Lázaro Cárdenas, MX: 0.5 Bcfd (Tractebel/Repsol)

55. Puerto Libertad, MX: 1.3 Bcfd (Sonora Pacific LNG)

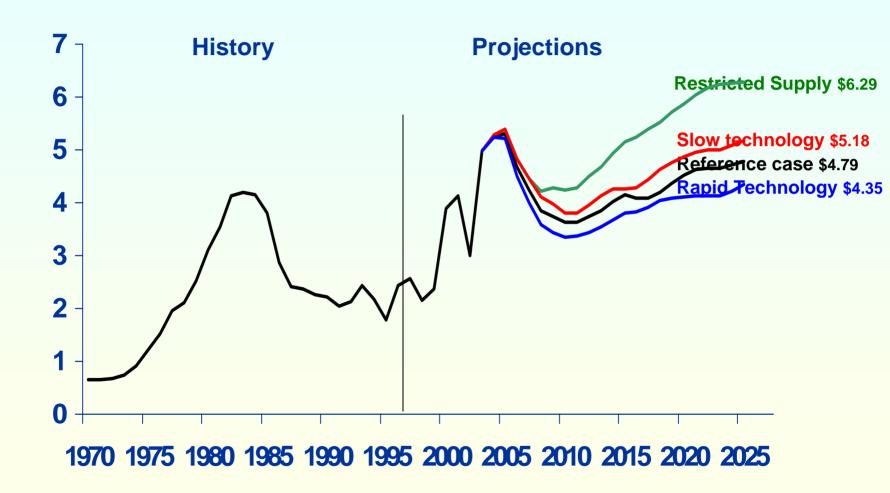
U.S. LNG Imports, 1990-2025 (trillion cubic feet)



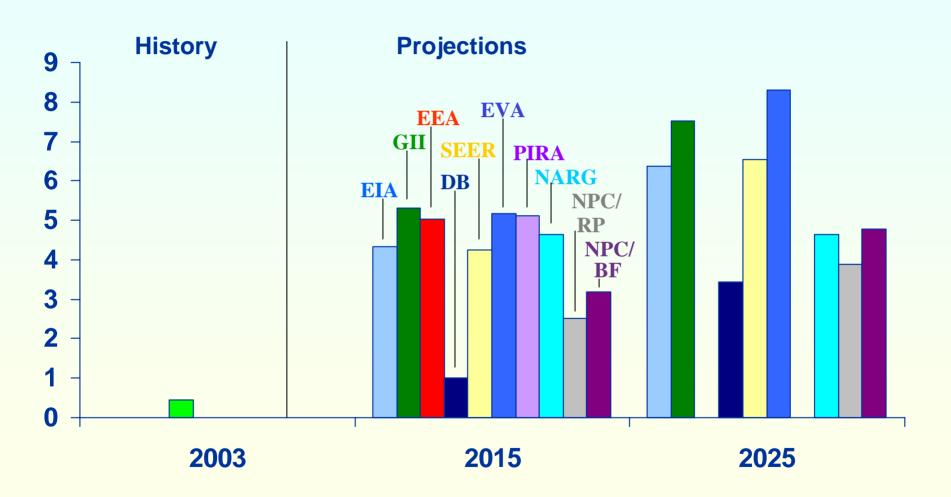
Regional LNG Imports at New Terminals, 2010, 2015, 2020, and 2025 (billion cubic feet)



Lower 48 Natural Gas Wellhead Prices, 1970-2025 (2003 dollars per thousand cubic feet)



Comparison of Net LNG Import Forecasts (trillion cubic feet)



<u>Summary</u>

- ➤ More than 8 tcf of new U.S. gas supply will be needed by 2025, with more than 60 percent coming from imports.
- ➤ By 2025, almost 75 percent of net U.S. imports is expected to come from LNG, as Canadian imports decline.
- >Siting issues are a key component in determining the rate of penetration of new LNG facilities into the marketplace.
- ➤ NIMBY issues and safety concerns must be addressed if LNG is to become a viable source of supplemental supply for North American markets.

Phyllis Martin
Energy Information Administration
Phyllis.Martin@eia.doe.gov