

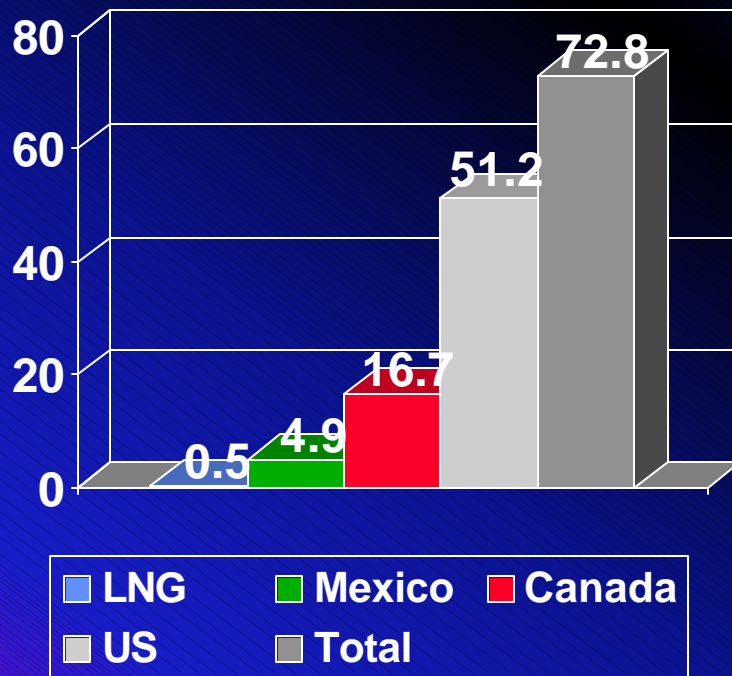
*Session 2: “Bridging the Gap” – Views of
Interim Gas Supply (US Lower 48)*

March 1, 2004

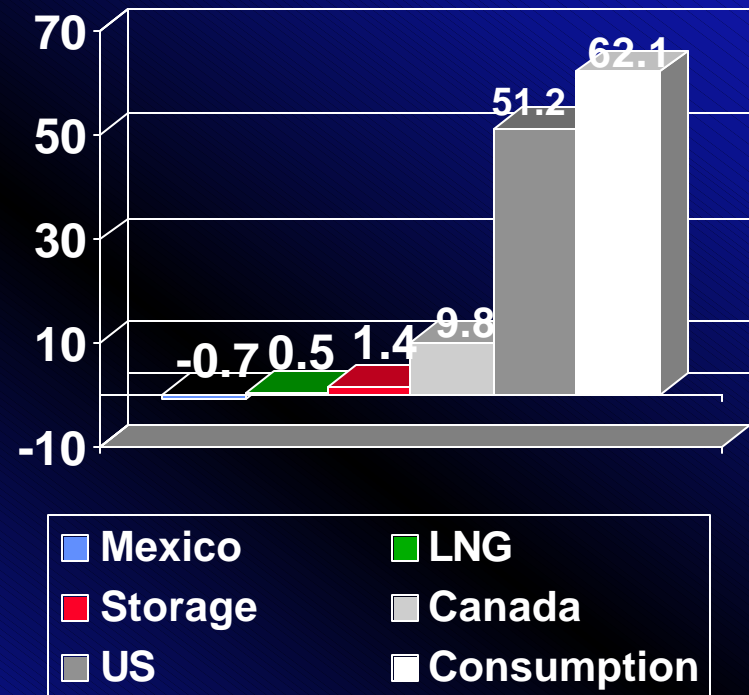
**Ron Denhardt
Chief Executive Officer**

2002 North American Natural Gas Supply was 72.8 Bcfd and US Consumption was 62.1 Bcfd.

North American Natural Gas Supply (Bcfd)



US Natural Gas Supply (Bcfd)

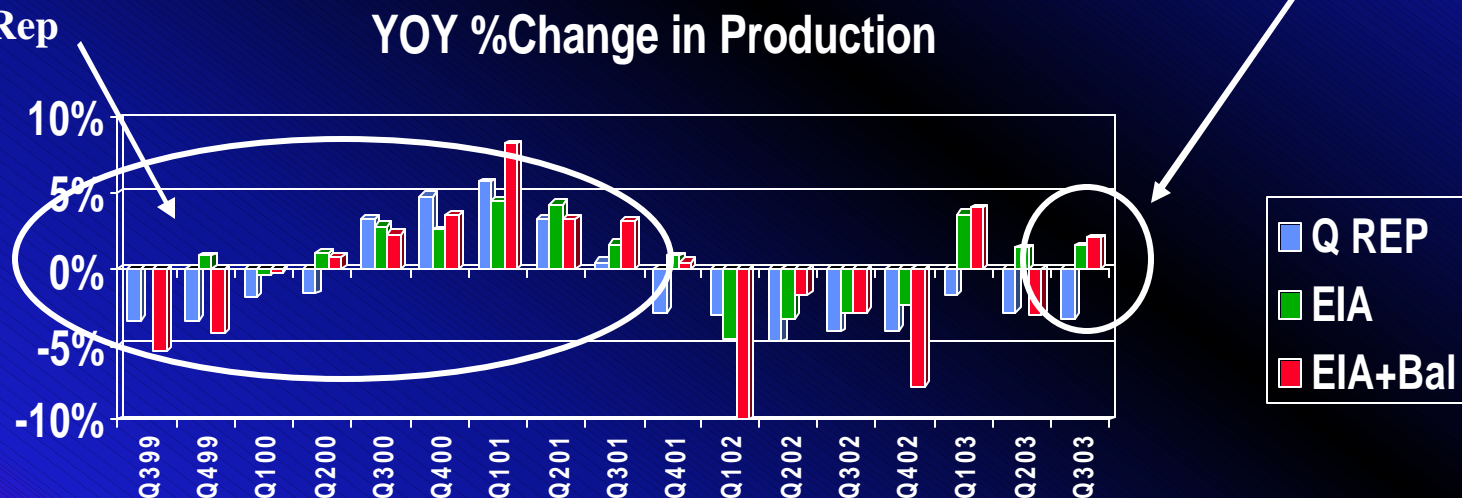


The debate about production has important short-term and long-term implications.

- Company quarterly report data suggest production in 2003 declined 2.8% YOY versus EIA August YTD shows production up 2.4%.
- SEER estimates production declined .8% in 2003 and will be flat in 2004. Supply and disposition must balance but this is a tricky area.

EIA data shows growth
Q Rep shows decline

Final EIA differs
from Q Rep

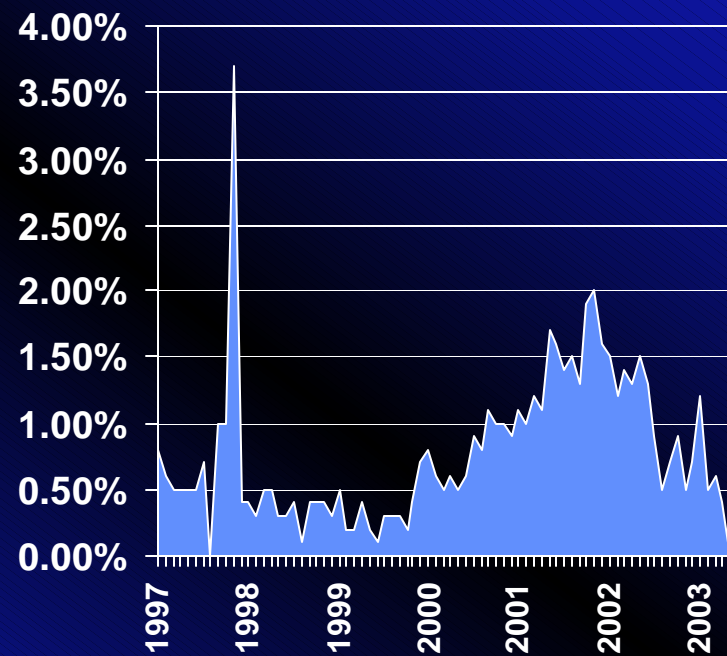


Texas accounts for 30% of US production. Lags in reported data make it difficult to estimate production. Final production has been higher than projected production.

Texas Production (Bcfd)

	<u>2002</u>	<u>2003</u>	<u>2002/ 2001</u>	<u>2003/ 2002</u>
JAN	15.6	15.2	-0.9%	-2.3%
FEB	15.6	15.4	-1.1%	-1.4%
MAR	15.6	15.8	-1.0%	1.1%
APR	15.6	15.7	-1.1%	0.2%
MAY	15.6	15.8	-1.4%	1.7%
JUN	15.6	16.0	-1.8%	3.0%
JUL	15.7	16.0	-0.8%	2.4%
AUG	15.6	16.0	-0.8%	2.1%
SEP	15.5	16.1	-2.2%	3.7%
OCT	15.6	15.1	-2.4%	-2.7%
NOV	15.4	15.6	-1.3%	1.5%
DEC	15.4			
YTD	15.6	15.7	-1.4%	0.8%

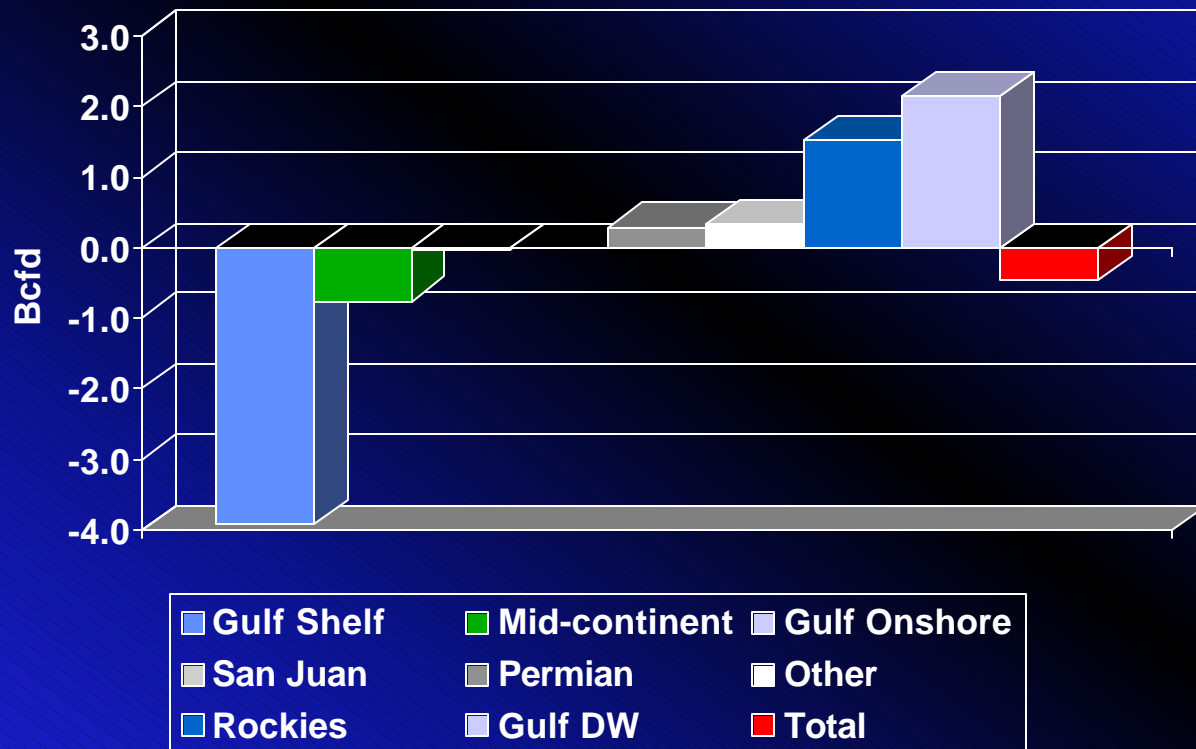
Actual Production as % of Projected Production



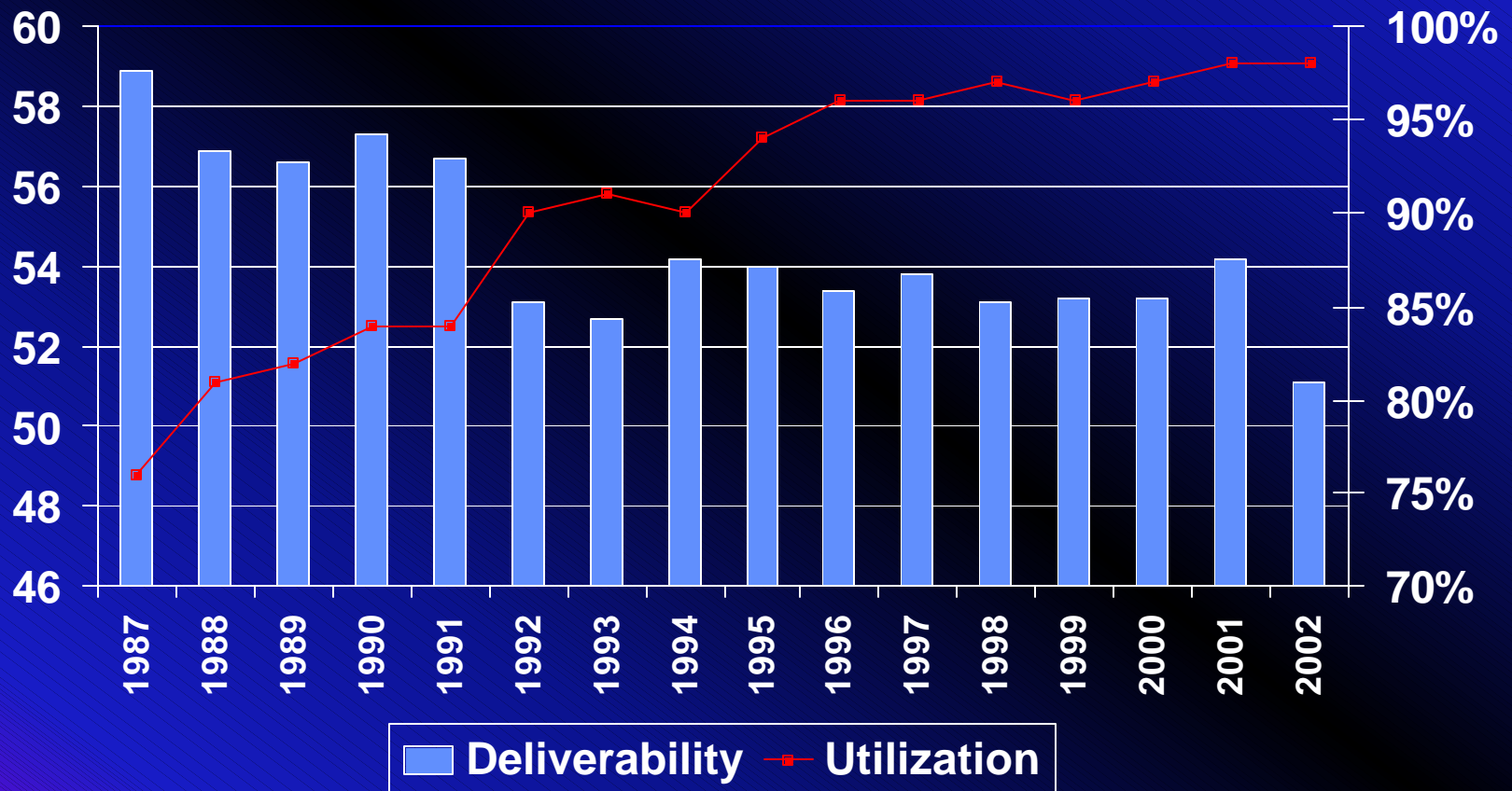
Italics are estimates

Growth in the Deepwater and the Rockies has been more than offset by declines on the shelf and other areas.

Change in US gas Production 1998 - 2003

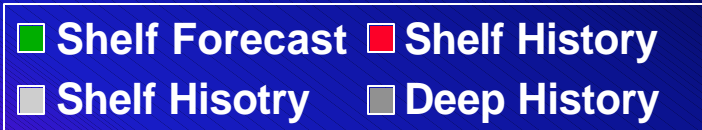
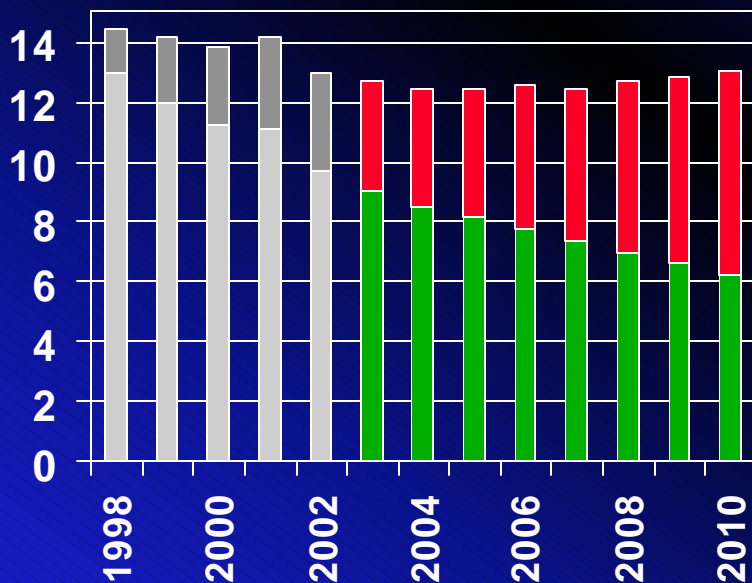


US production growth has come from increased utilization of productive capacity. Productive capacity has been declining for 15 years.

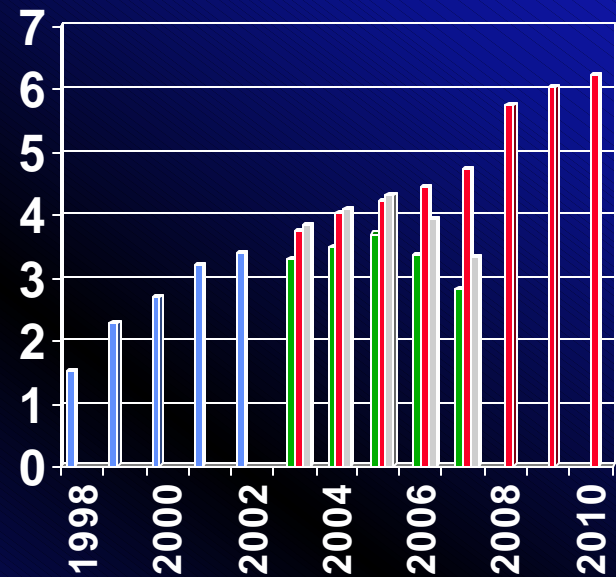


Declines on the shelf are expected to offset growth in the deepwater. The deepwater is still immature, so there is a great deal of uncertainty about the prospects. 2003 deepwater new field wildcats were about 30% of 2002 finds (BOE).

Offshore Production (Bcfd)



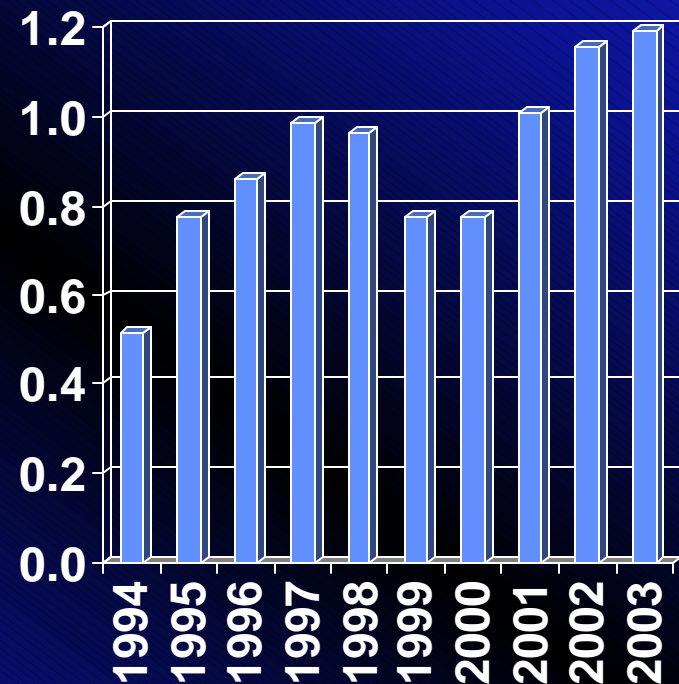
Deep Water Production (Bcfd)



Deep Shelf could maintain shelf production. Ultra deep, 30,000 feet, offers additional potential. In late 2003, the MMS increased recoverable reserve estimates by 150%.

- **Initial potential recoverable reserves estimates were 5 to 20 Tcf with a mean of 10.5 Tcf but the potential has been raised to 55 Tcf.**
- **Wells can be brought on quickly – Timbalier Block 204 was discovered in 2000 and reached peak production of 350 MMcfd in 2002.**
- **Mean size of wells is 30 MMcfd.**
- **Finding cost \$1.67 per MMBtu (El Paso)**
- **There is potential for ultra deep play (25,000 feet) but there are imaging problems and the first two wells were dry holes.**

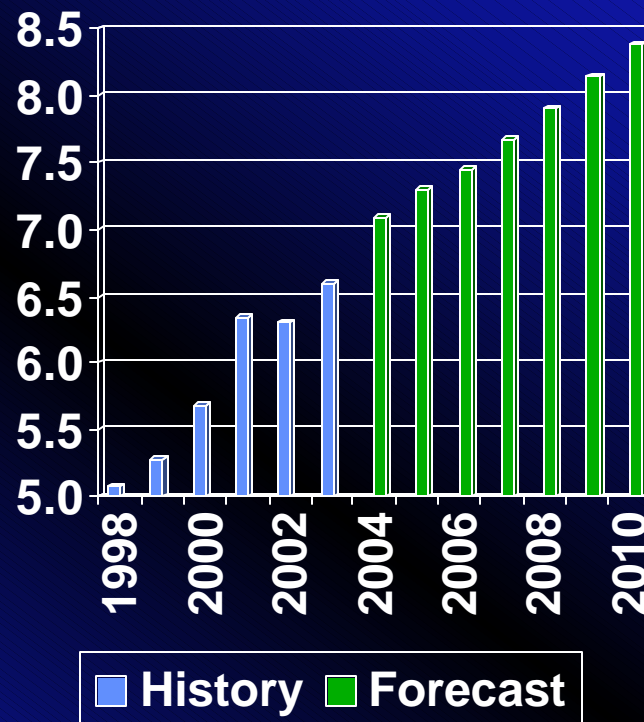
Deep Shelf (Bcfd)



Expected growth from the Rockies is 2 to 4 Bcfd by 2010 but environmental concerns, limited pipeline capacity, and disappointing production results could limit Rockies production.

- **Environmental reviews and a slow down in the issuance of federal drilling permits are expected to keep Wyoming annual production growth to 3% per year for the next three years versus 7% in recent years.**
- **The duration of peak production in WyoDak wells was much shorter, and subsequent well declines much faster than anticipated.**
- **Big George coals require substantial de-watering.**
- **Cheyenne Pipeline will add 730 Bcfd in August 2005 with ultimate capacity of 1.7 Bcfd.**

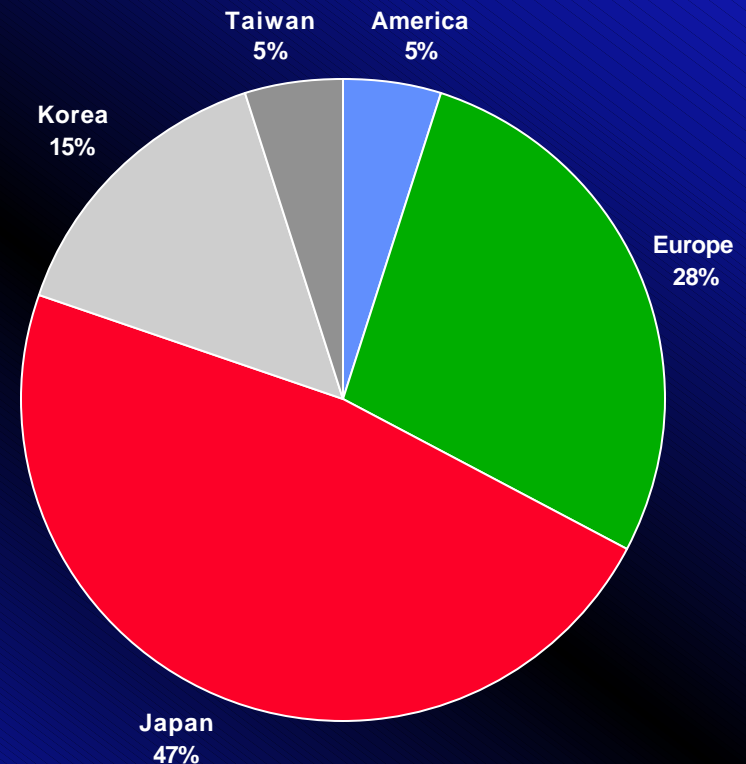
Rockies Production (Bcfd)



The marginal cost of LNG is about \$3.50 per MMBtu and some supplies are economic at \$2.60 per MMBtu. However, liquefaction capacity will be a constraint on new supply and the US is a small player in the LNG market.

- Asia accounts for 2/3 of LNG imports.
- Current world wide capacity is 17.8 Bcfd and probable expansion by 2007 is 4.3 Bcfd(1).
- World natural gas consumption is 155 Bcfd. Small changes in the world market can have a large impact on the availability of LNG.

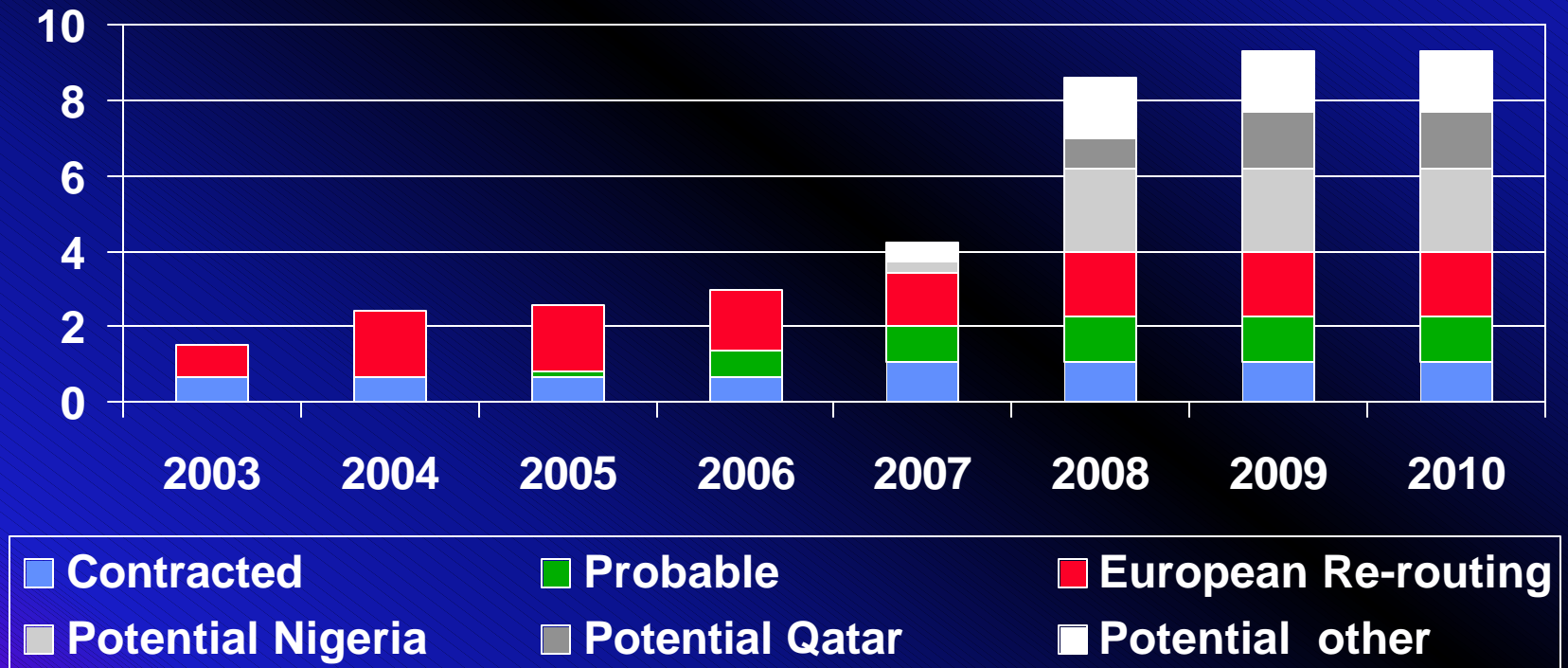
Share of 2002 World LNG Imports
(14.7 Bcfd)



(1) Source James T. Jensen

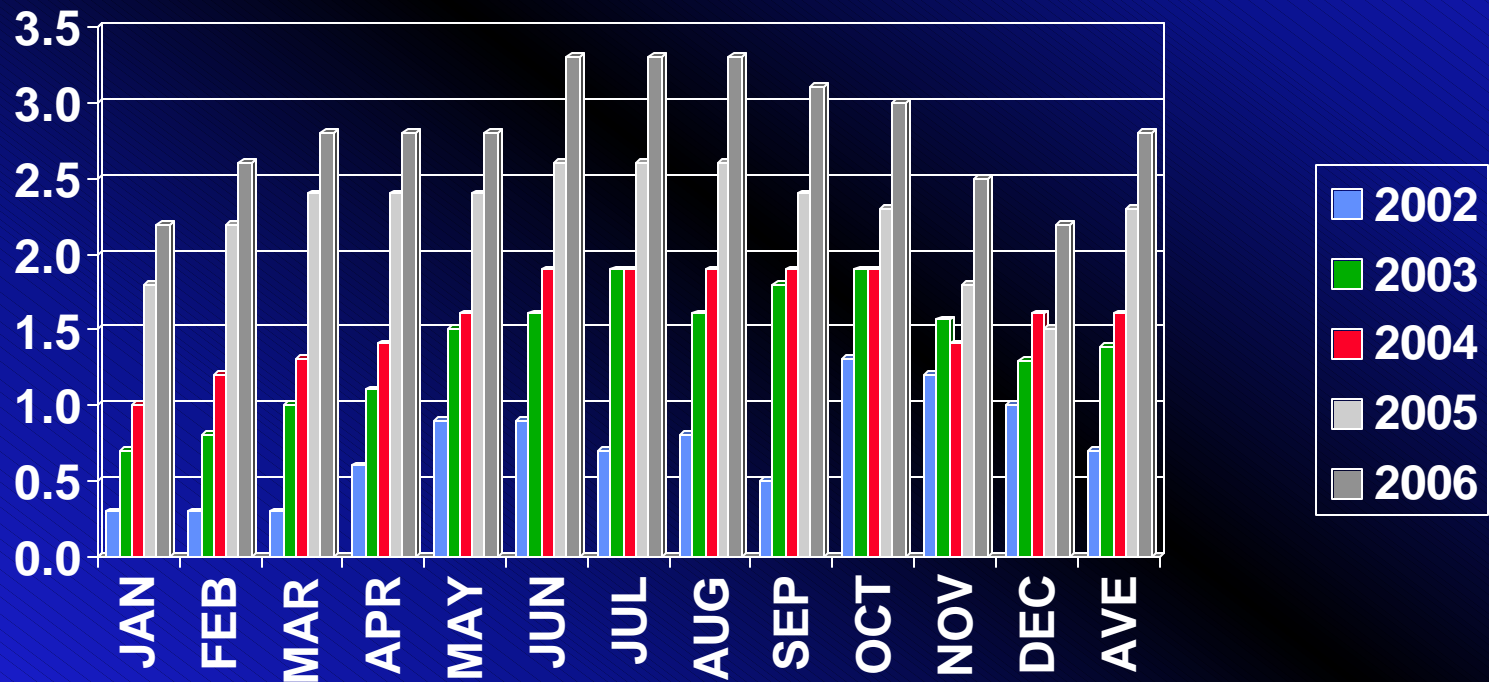
Until 2008 much of North American supply will depend upon re-routing from Europe and after that increased supplies depends on potential projects.

North American LNG Imports (Bcfd)



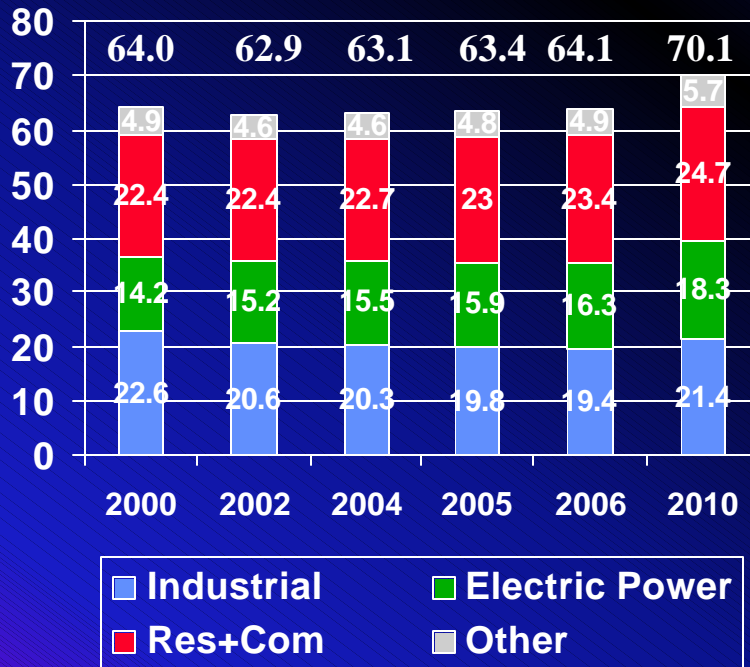
The re-routing of LNG supplies will increase the seasonality of supply and the value of storage.

US LNG Imports (Bcfd)

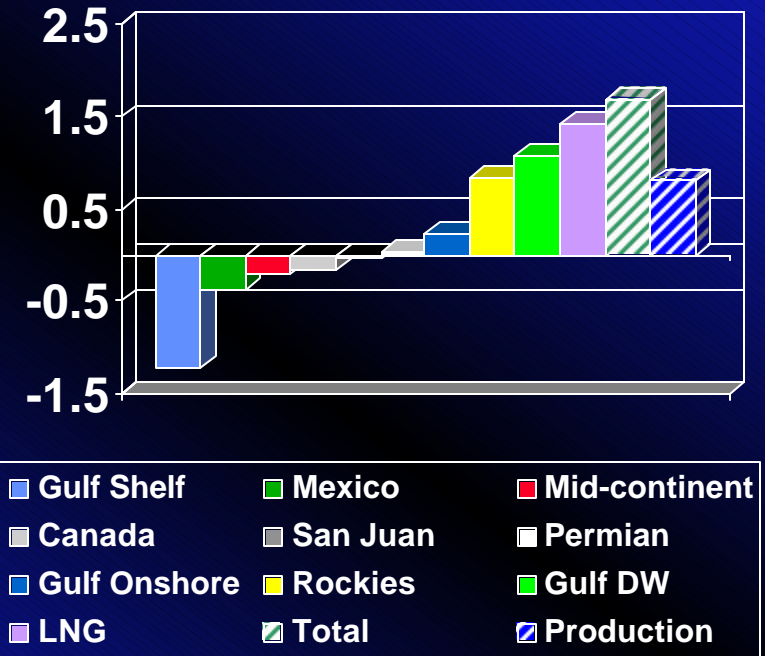


Supply growth is likely to be modest during the next three years and most of the growth will occur in 2006. Prices might have to be high enough to cause further declines in industrial demand.

US Gas Consumption and Supply (Bcfd)

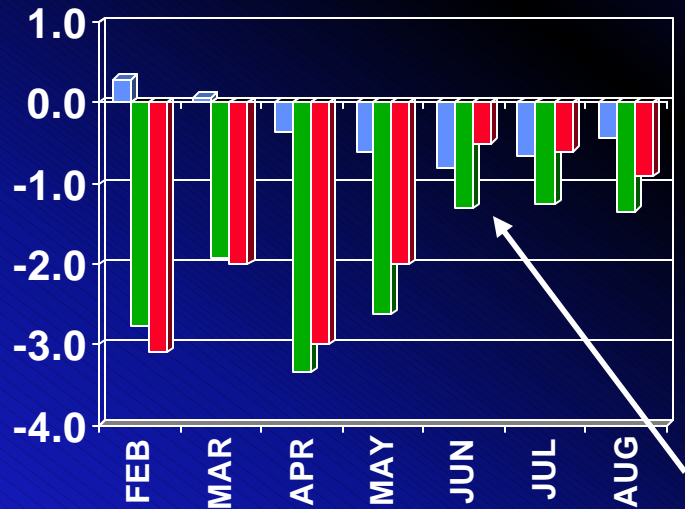


US Supply Growth (Bcfd) 2003 to 2006



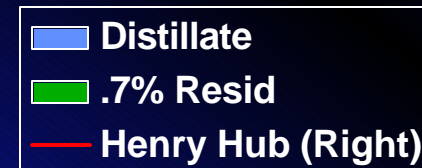
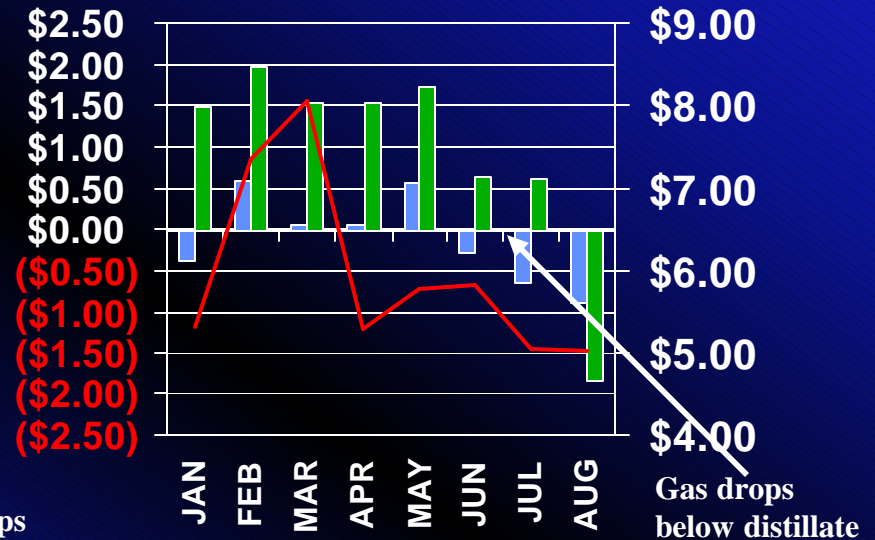
Changes in industrial production only accounted for a small portion of lost consumption in 2003. The remainder was fuel switching, index problems, conservation, and reporting error.

Industrial 2003 vs 2002



Gas drops below distillate

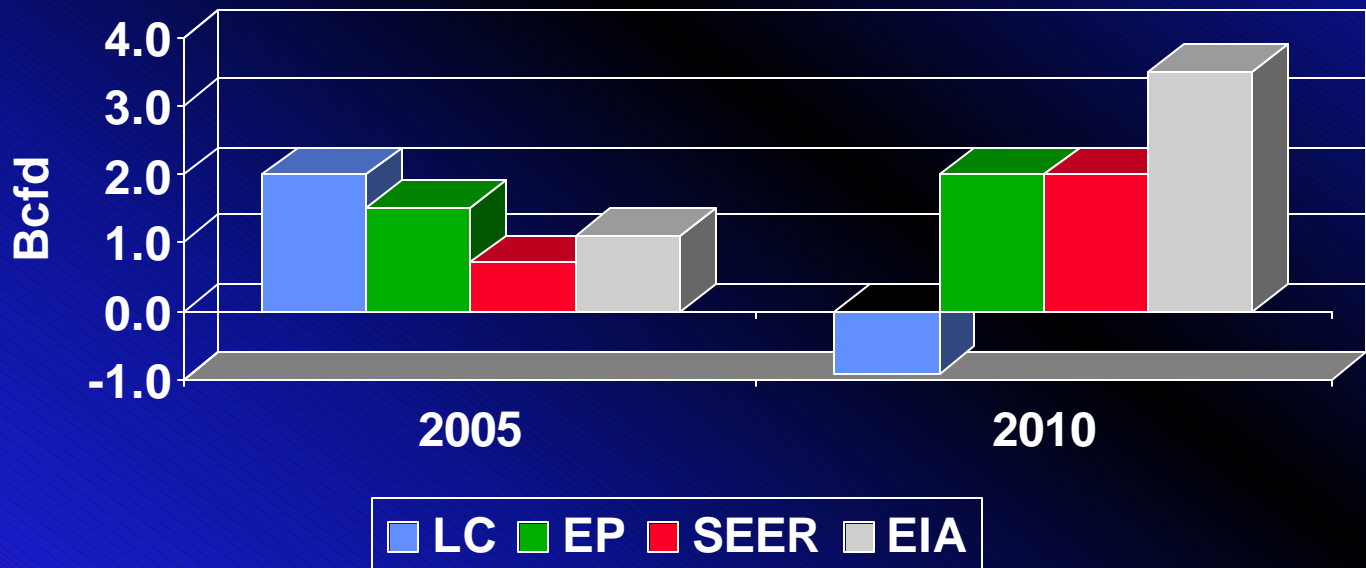
LA Gas less Oil \$/MMBtu



Gas drops below distillate

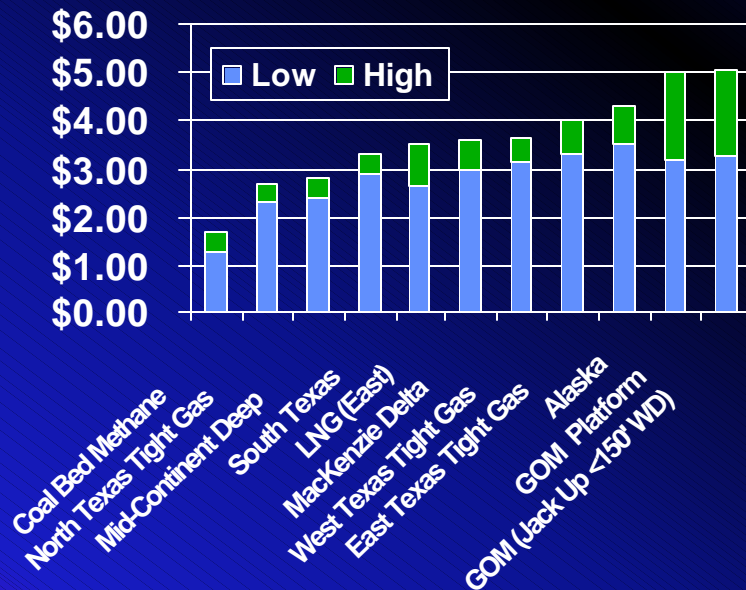
Production growth prospects are modest. Demand growth at 1% per year is about .6 Bcfd. Even with this modest growth LNG imports will be needed.

Lower 48 Production - Incremental Growth From 2003



Supply depends on price. Do we know the marginal cost? Credit problems, accounting cost versus opportunity cost, industry structure are all issues that could change supply costs.

Economics at Henry Hub
(\$2003 per MMBtu)



Henry Hub (\$2003/MMBtu)

