

# **The Energy Market ... A Pipeline Perspective**

Gas Industry Standards Board

Annual Meeting

September 21, 2001

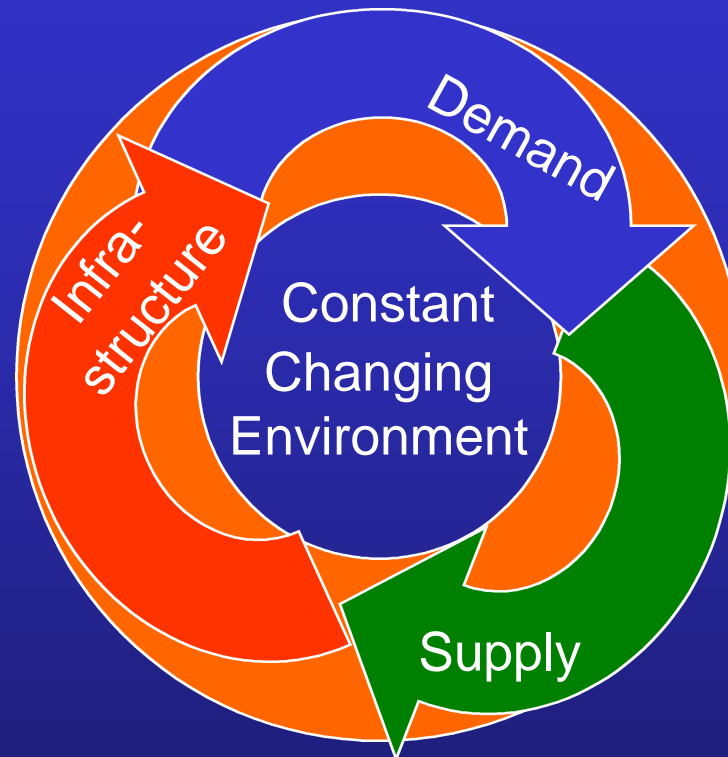
**Jim Moore, Sr. Vice President  
Group Planning & Development  
Williams Gas Pipeline**



# The Interstate Pipeline Industry At A Glance

- Current North American natural gas demand ~70 Bcf/d
- Nearly 300,000 miles of U.S. pipelines
- An additional 3,200 miles of pipe in 2000
- About 400 underground storage wells holding approximately 4 Tcf of supply
- Future for interstate pipeline industry bright

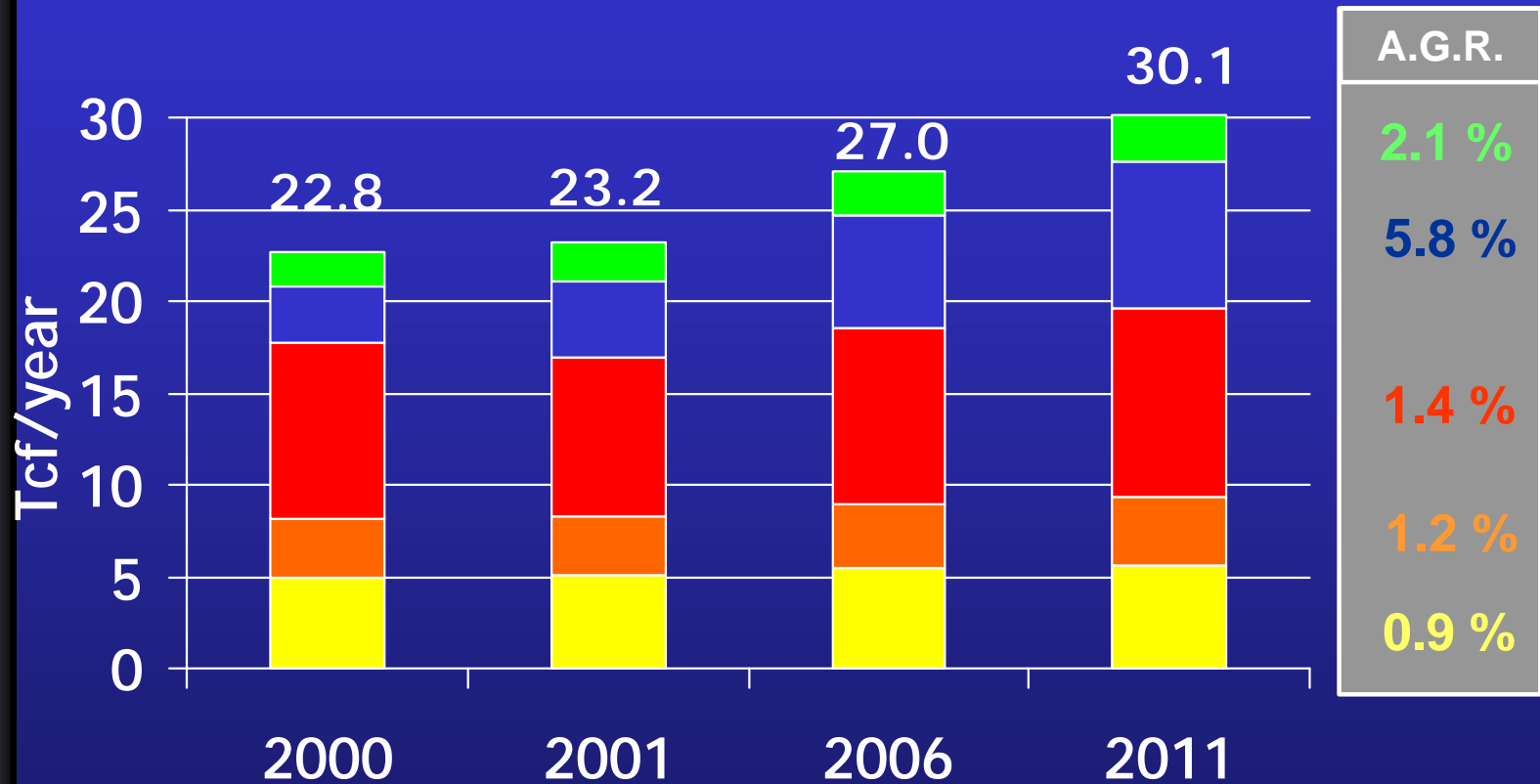
# Evolving Market



Evolving market will create new challenges for the pipeline industry. Addressing these challenges will be key to a stable energy environment going forward.

# Demand

# U.S. Gas Consumption by Sector



A.G.R.

2.1 %

5.8 %

1.4 %

1.2 %

0.9 %

Residential

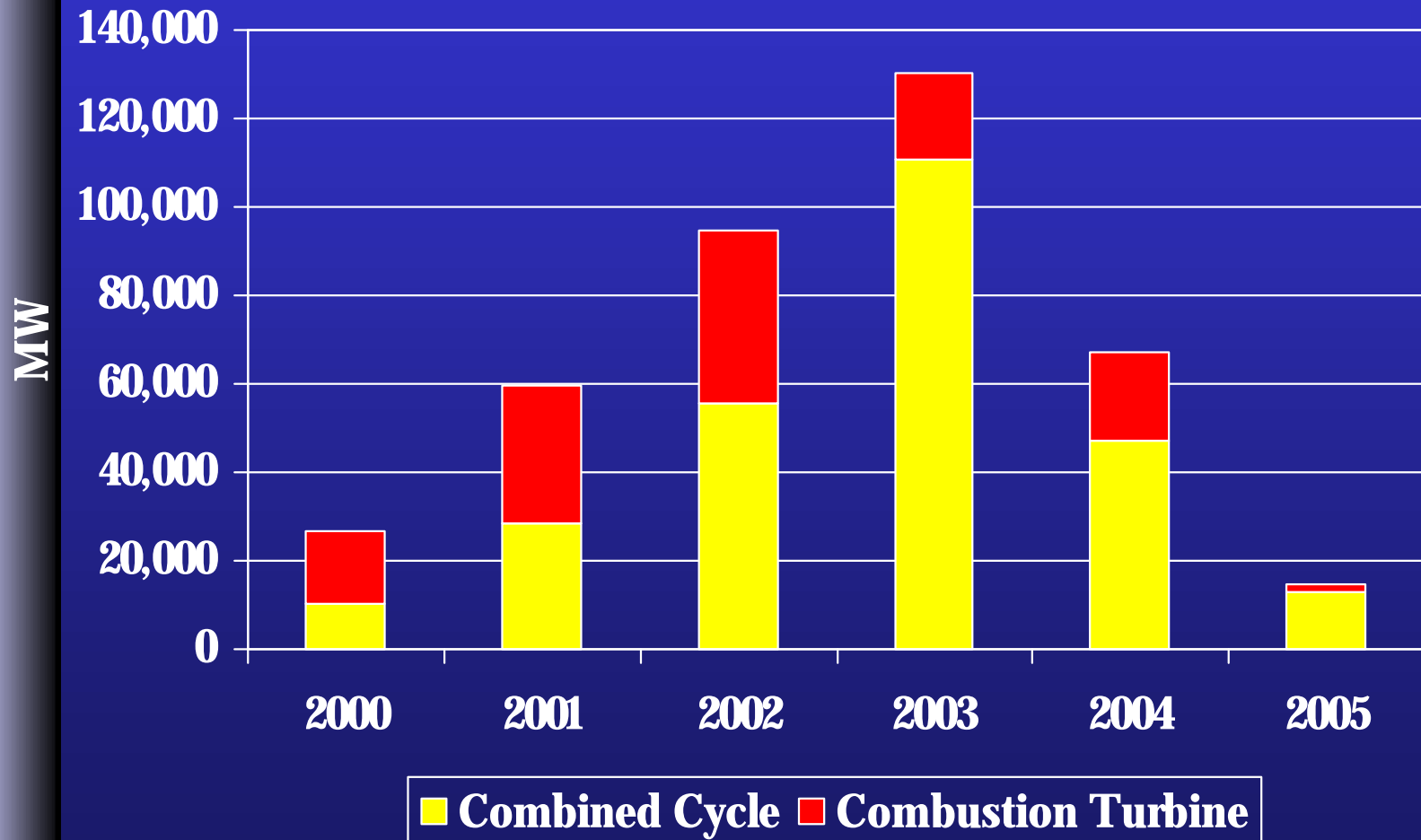
Commercial

Industrial

Power Generation

Other

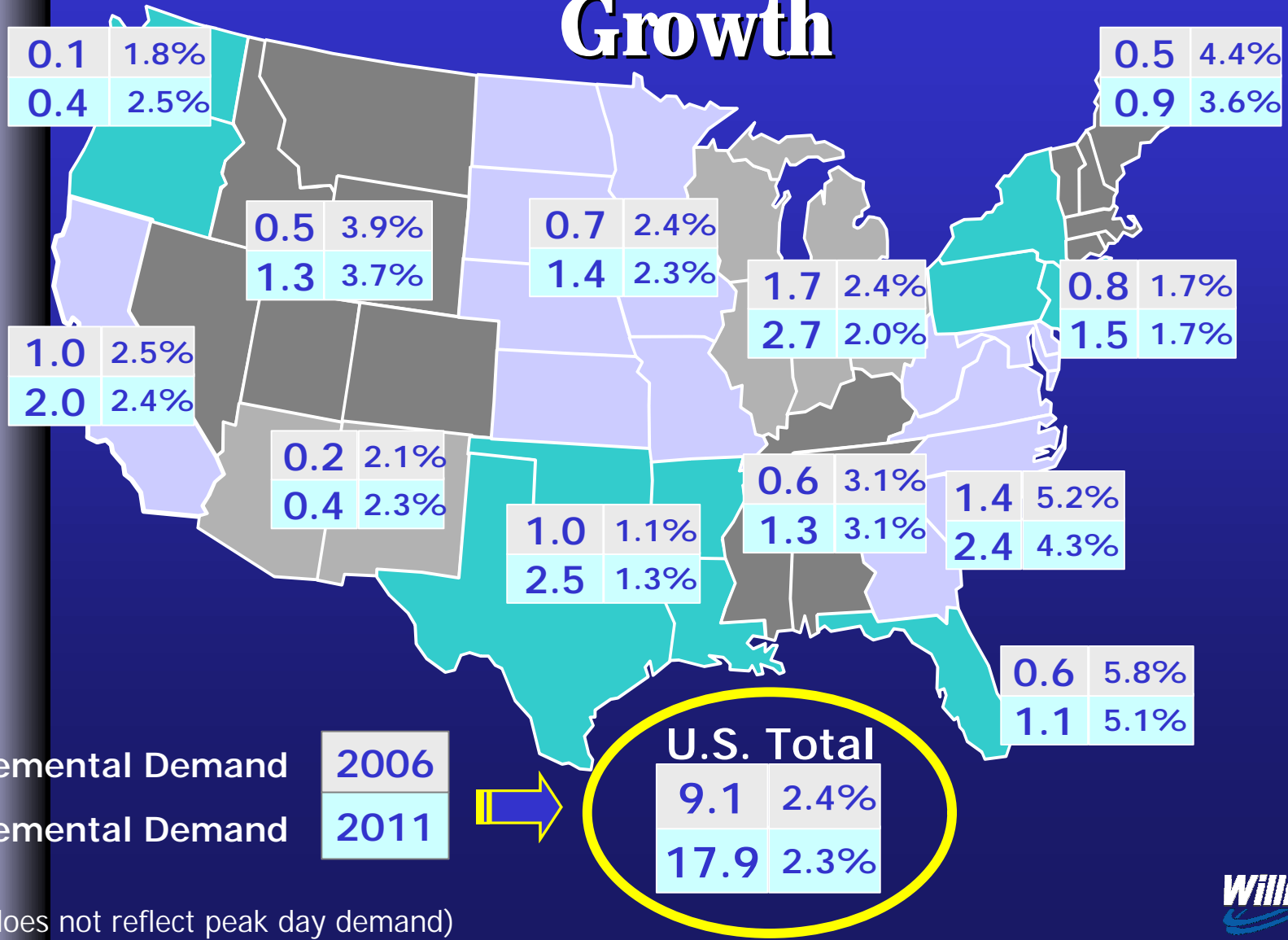
# Historical & Announced Gas-Fired Capacity Additions



Source: RDI NewGen Database



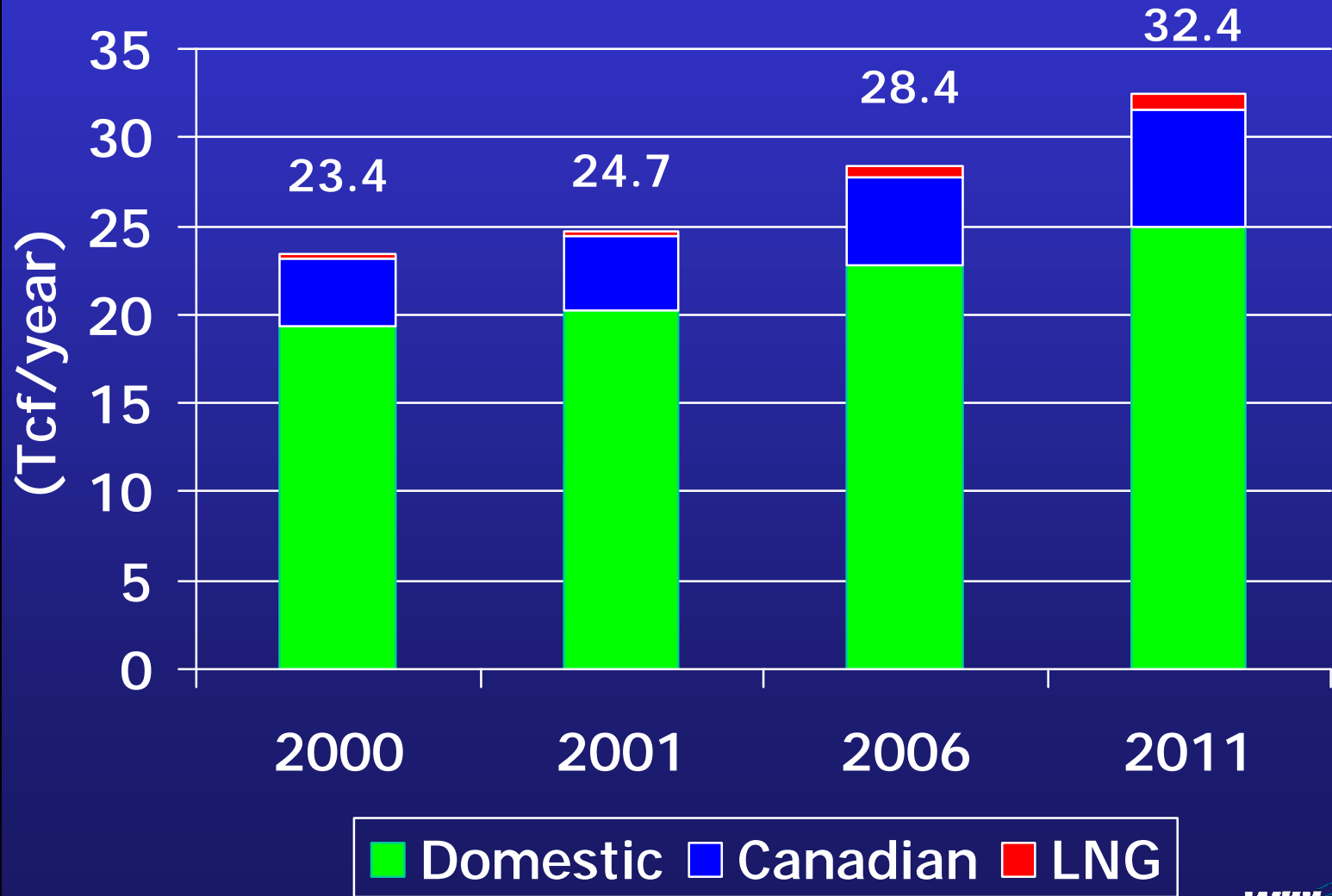
# Gas Demand Change from 2000 (Bcf/day)\* and Average Annual Growth



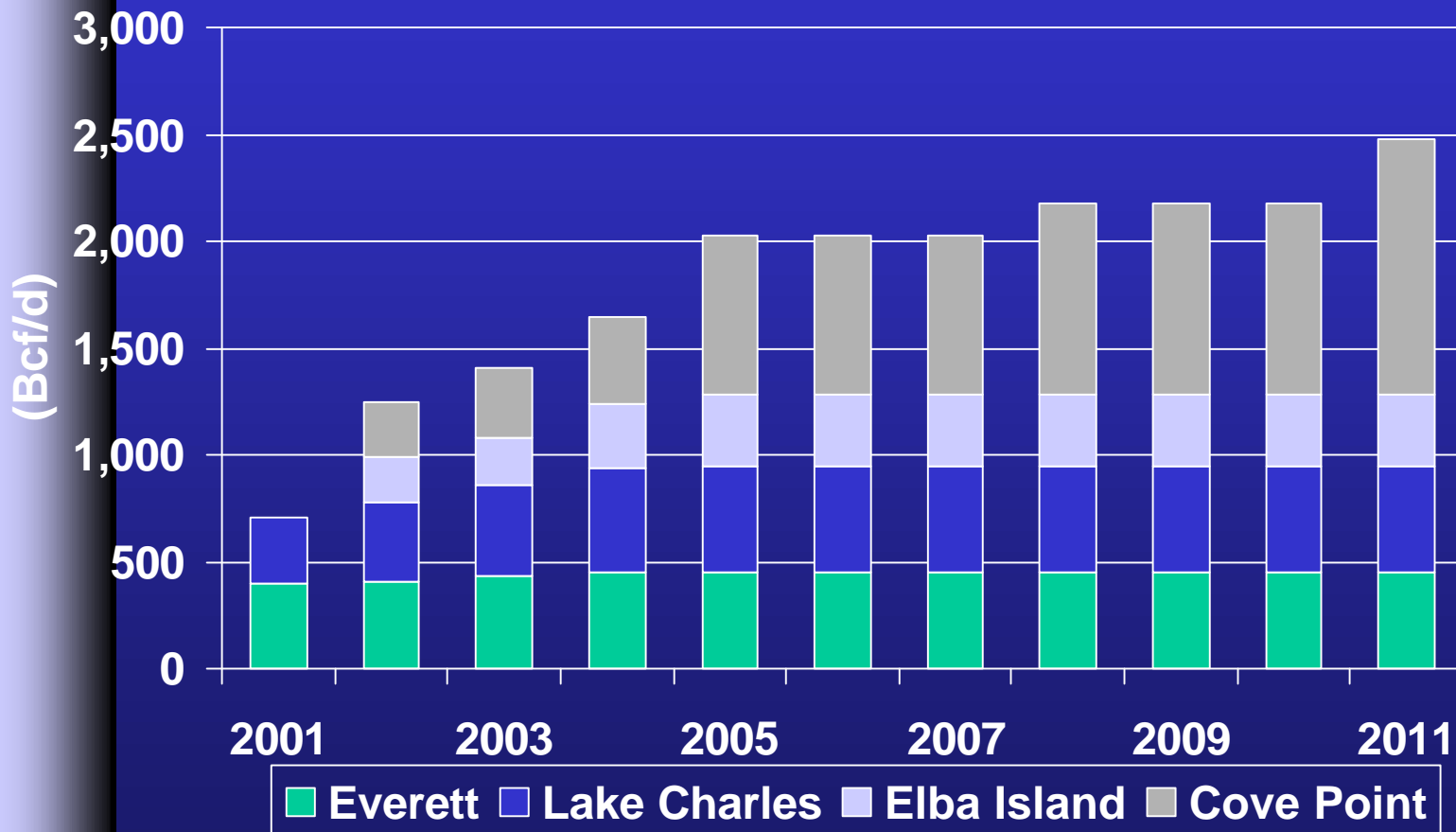
\* Average (does not reflect peak day demand)

# Supply

# U.S. Supply Sources

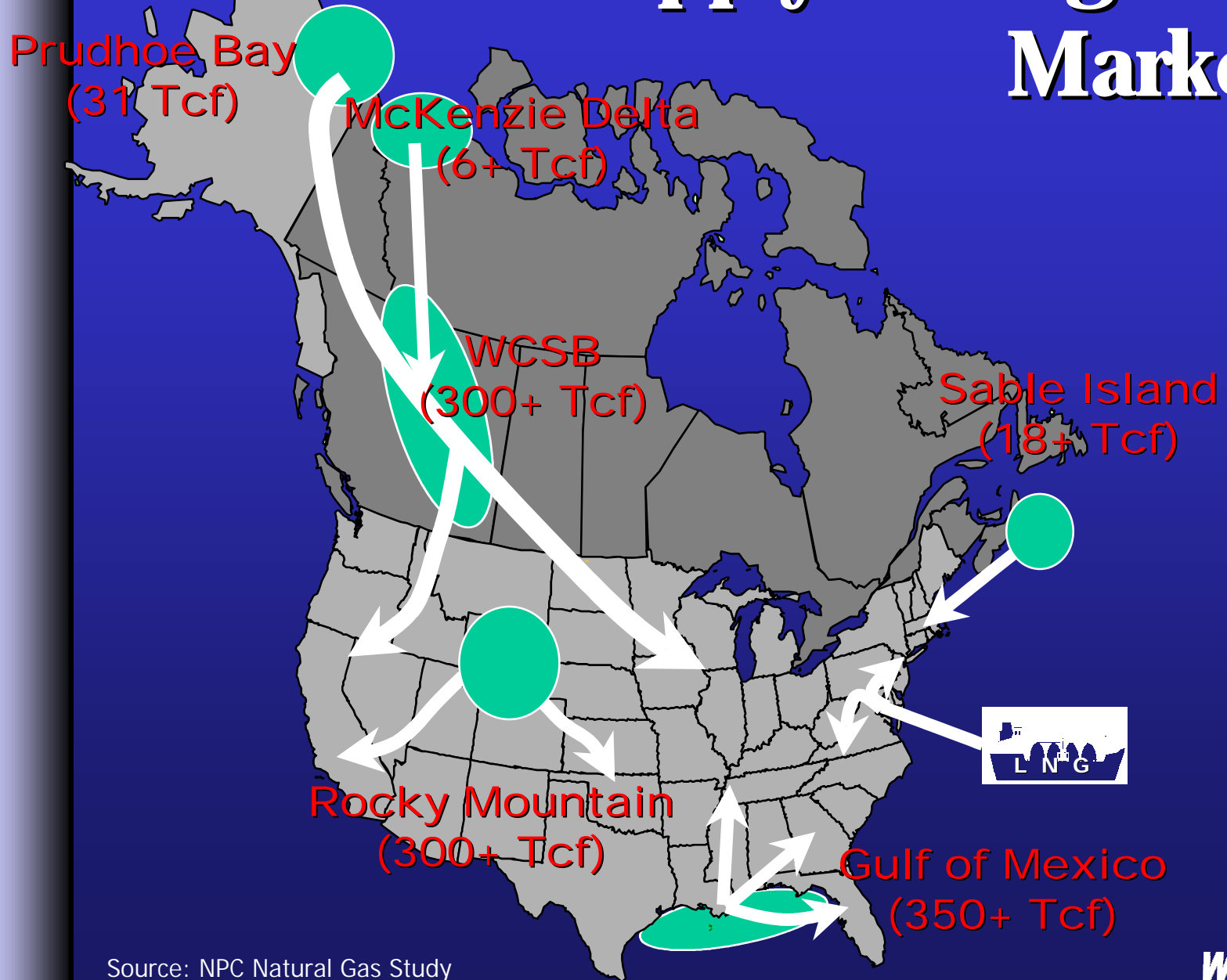


# LNG Imports



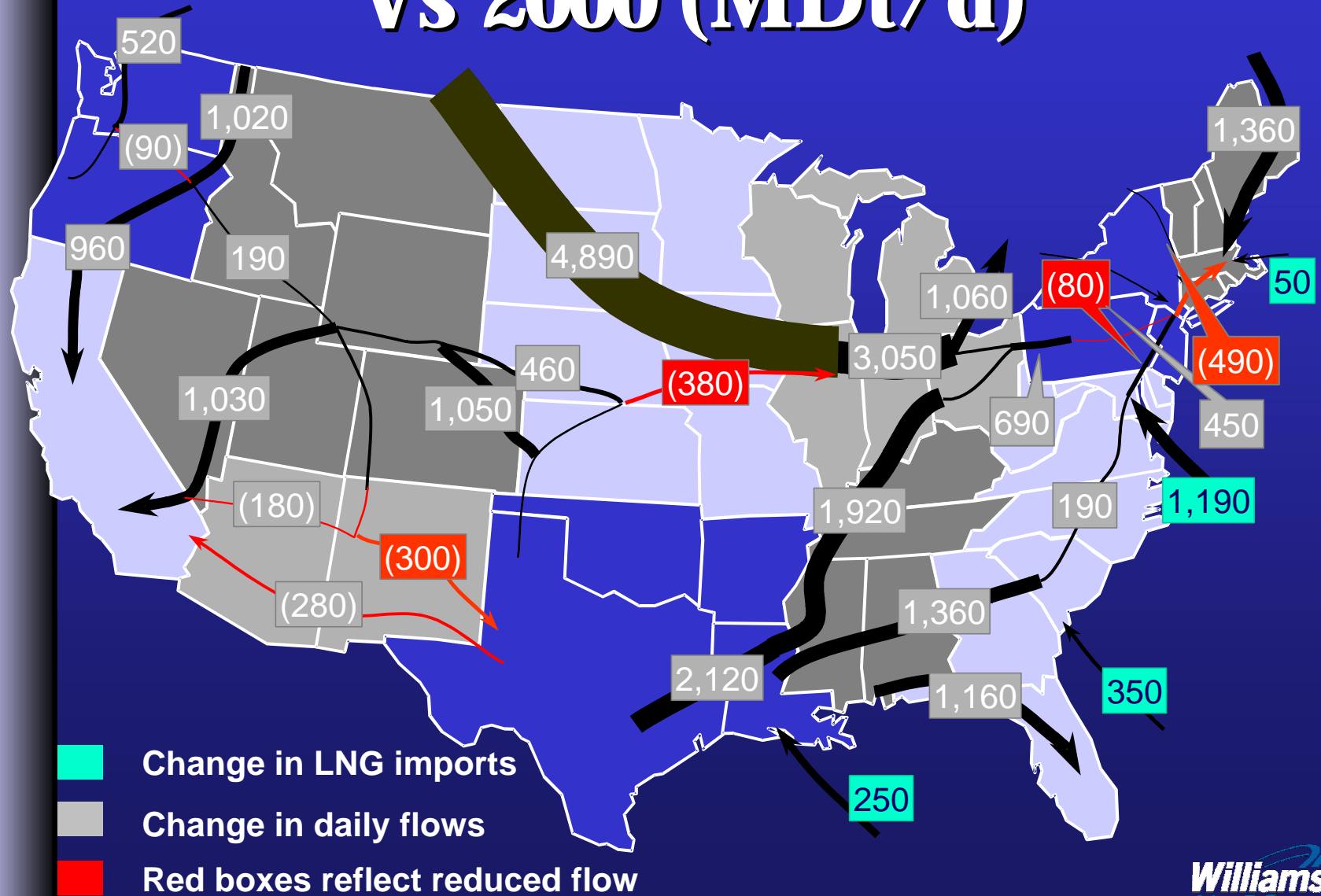
# Infrastructure

# New Supply must get to Market



Source: NPC Natural Gas Study

# 2011 Incremental Flows Vs 2000 (MDt/d)



# Infrastructure Requirements to Meet Future Growth

- 27 Bcf/day of new pipeline capacity
- Over 300 Bcf of new storage
- Additional LNG Import capacity
- Total capital expenditures
  - \$35 billion estimated now through 2011

# Changing Environment

# Customer Base

- Shift from traditional LDCs to Marketers & National players
- Power generation and industrial use account for 75% of consumption increase
- Shorter term contracts
- New, flexible services required

# Operational Requirements

- Serving power generation loads requires greater operational flexibility
- New safety rules impact capital required
- Storage increasingly important
- Operating systems must interact

# Regulation

- Movement toward less regulation
- Public must be educated on need for additional infrastructure and the safety of the pipeline industry
- Competition has increased --- certification process must keep up
- National Energy Policy

# Summary

- Be prepared for a 30 Tcf market
- Supply is sufficient
- Significant infrastructure additions required
- We must manage change