



# Texas Natural Gas Sector Update



**Commissioner Victor G. Carrillo**  
**Railroad Commission of Texas**

**Natural Gas STAR Program Workshop**  
**October 25, 2006**

# Texas Railroad Commission

- Established in 1891
- No rail regulation
- Regulate oil & gas, pipelines, surface mining, natural gas utilities
- "TX Energy Commission"

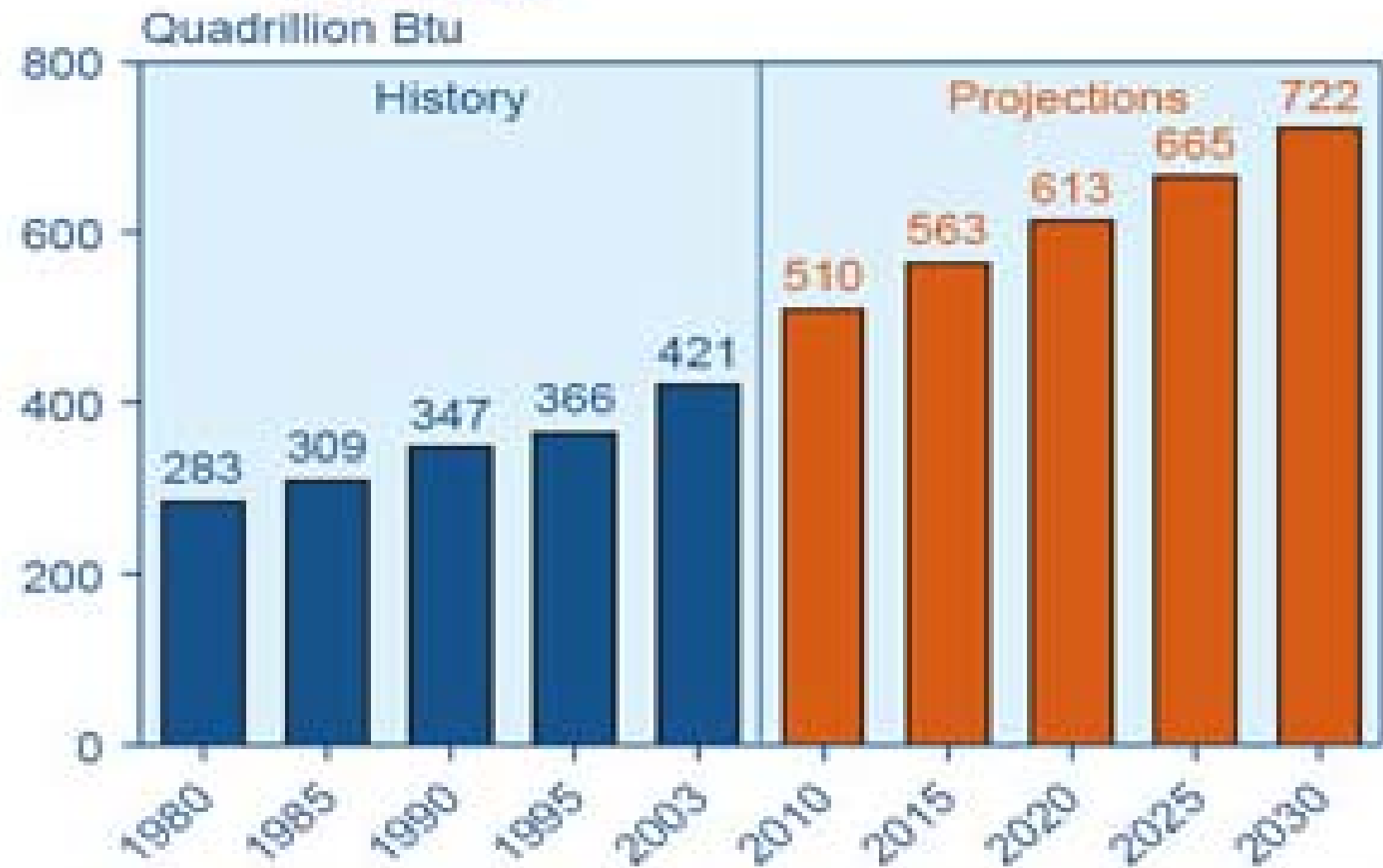




Congressman Joe Barton (R-TX)  
Chair, Energy & Commerce  
Principal author: EPACK 2005

**“There is no greater issue  
facing our world over the  
next century than *energy*.”**

**Figure 7. World Marketed Energy Consumption, 1980-2030**



Source: Energy Information Administration, *International Energy Outlook 2006*

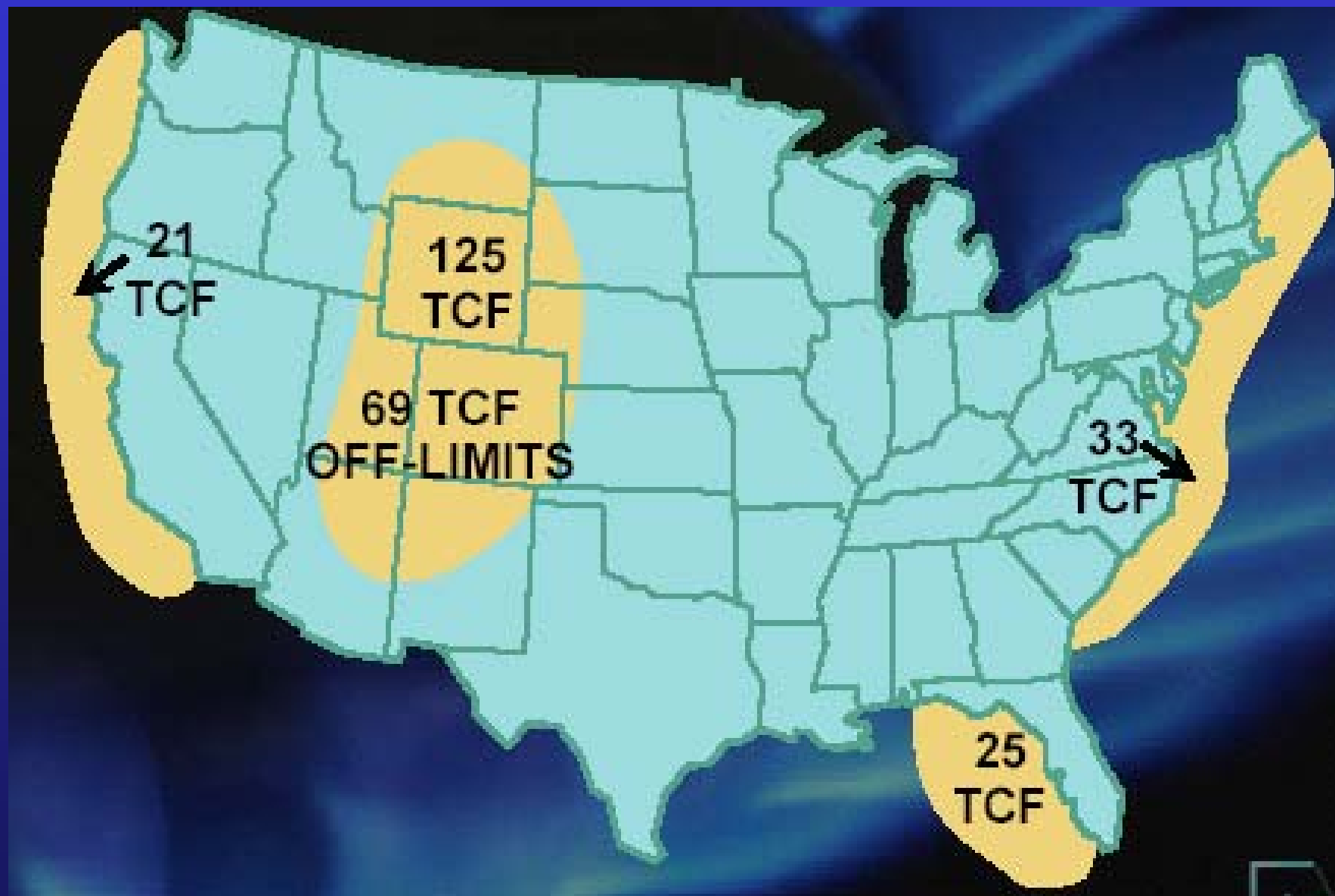
## Problem:

1. U.S. energy demand will continue to grow
2. Domestic oil & gas supplies are flat or declining
3. Leads to growing dependence on foreign sources

## Part of the Solution:

1. Encourage domestic E & P
2. Open up areas currently off-limits
3. Diversify energy source spectrum
4. Emphasize conservation/efficiency

# Potential Resources Currently Off-Limits



## TRADITIONAL ENERGY SOURCES

Oil

Gas

Coal

Nuclear

LNG

Clean  
Coal

## RENEWABLE ENERGY SOURCES

Wind Power

Biomass

Solar Energy

Geothermal

Fuel Cells

# EPA Natural Gas Star Program

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**Designed to cost-effectively reduce methane emissions**

**Win, Win, Win:**

- **Helps protect the environment**
- **Increases domestic natural gas supply**
- **Increases industry profitability**





# TEXAS OVERVIEW

> 6,900 active operators; 229,050 producing wells:  
**149,100 oil**  
**79,950 natural gas**

**#1 producer of oil & natural gas in the U.S**

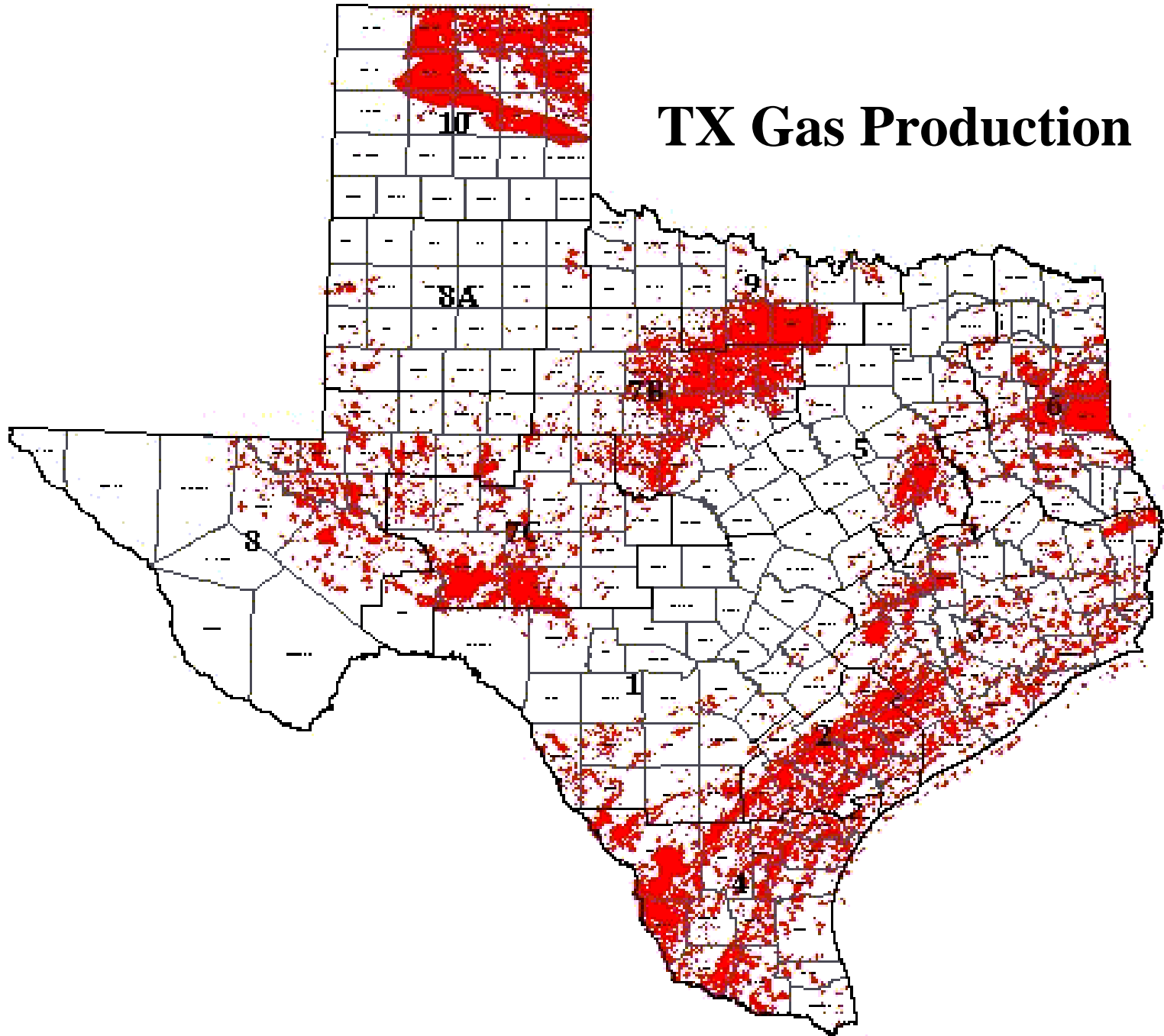
**348 million barrels oil (2005)**

**5.9 Tcf natural gas (2005)**

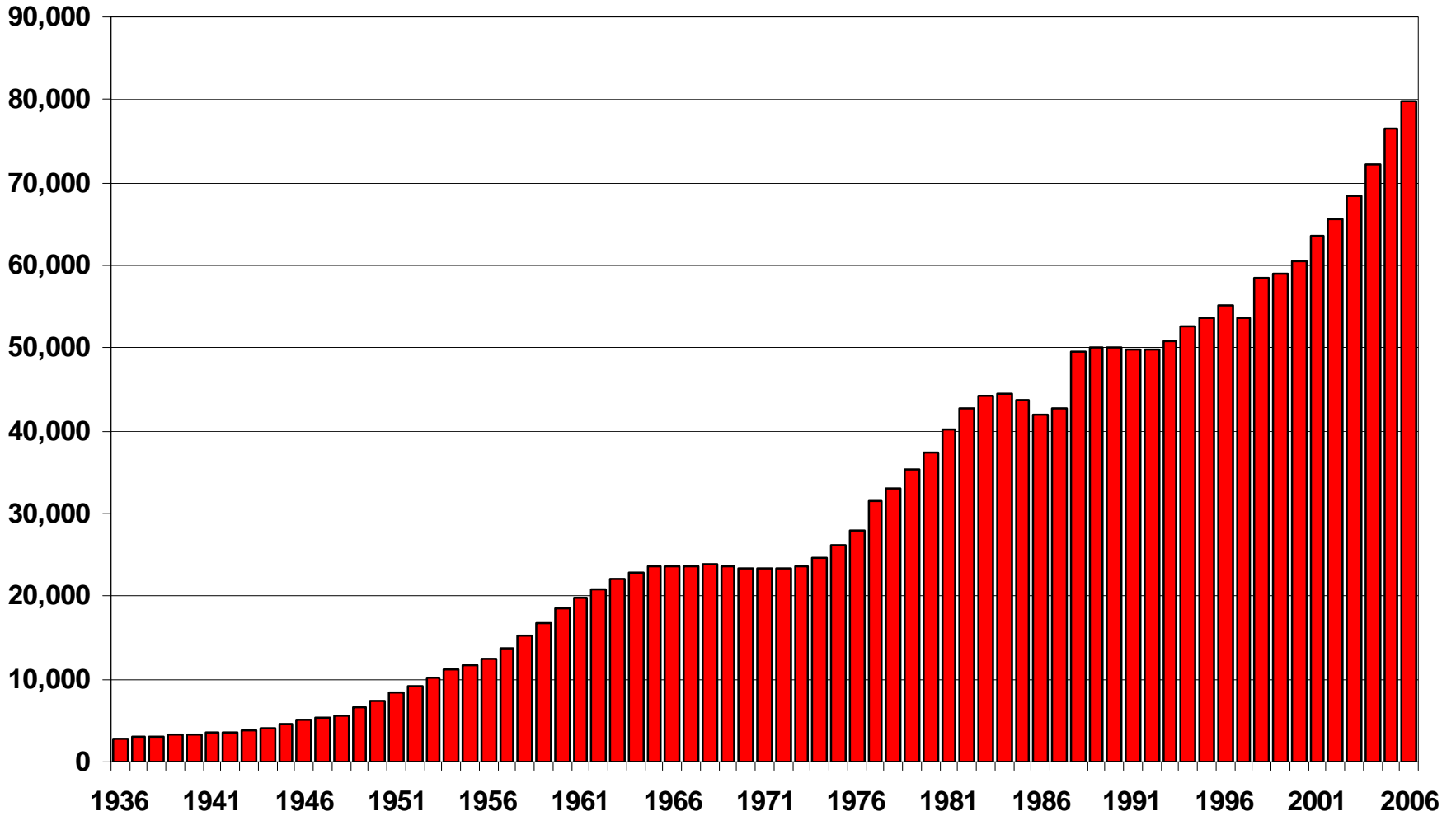
> 25% of total U.S. natural gas demand

- > 42,000 mi. of nat gas transmission & gathering pipelines
- 26% total U.S. refinery capacity (TX: 4.9 mmbopd)
- Oil & gas & petrochemicals = \$100 billion industry in TX

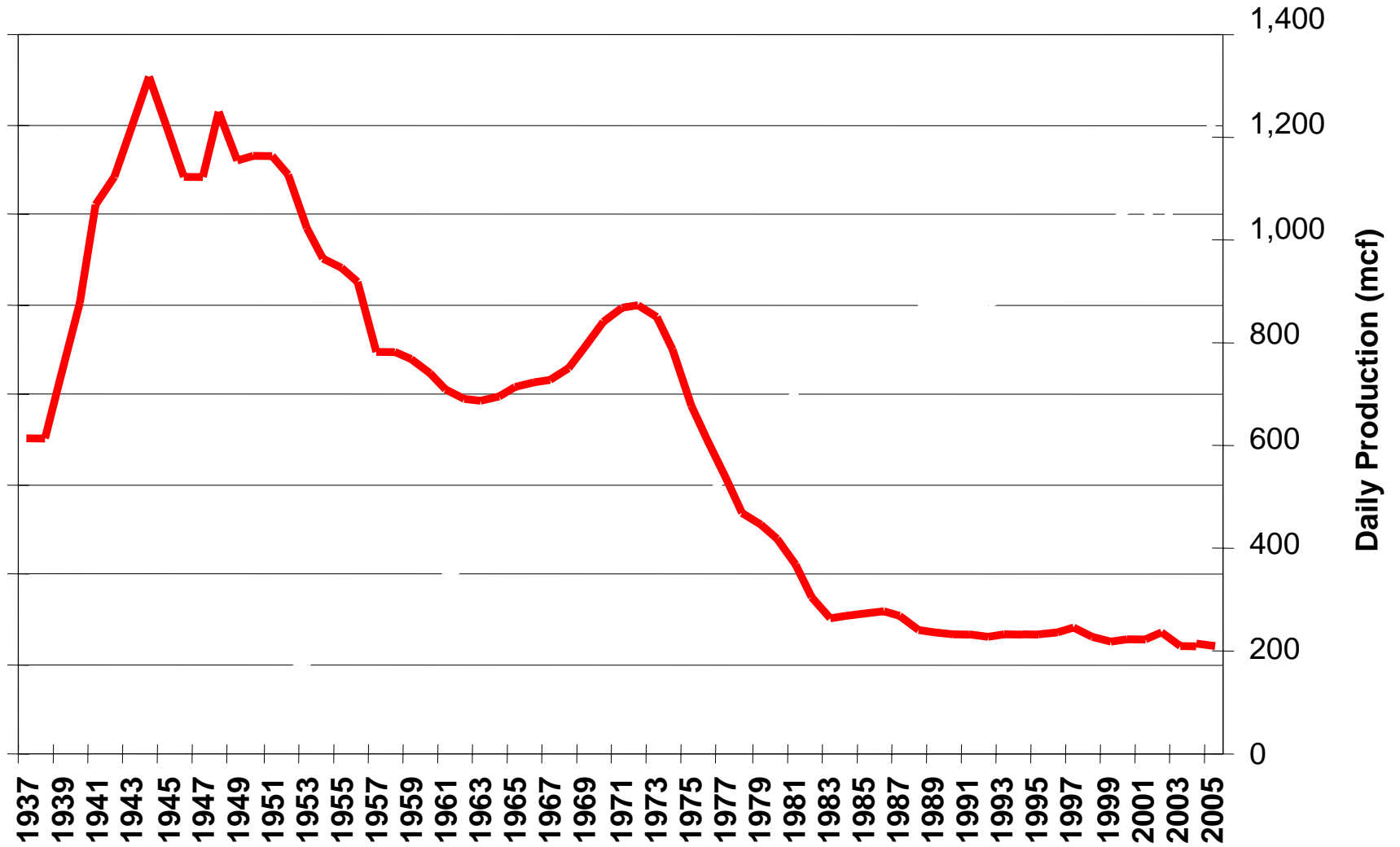
# TX Gas Production



# Texas Total Producing Gas Wells



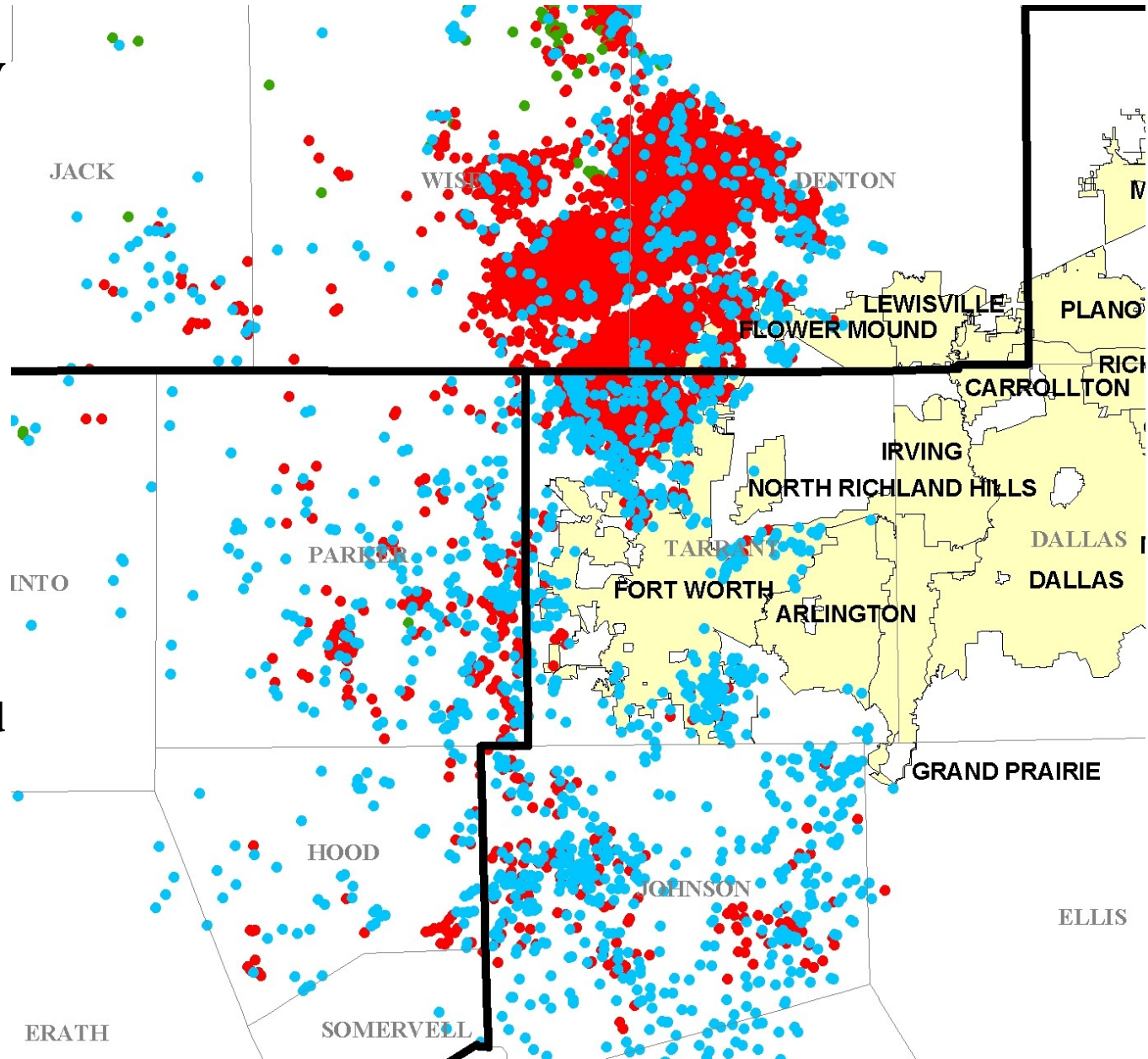
# Average Daily Production Per Well (Mcf)



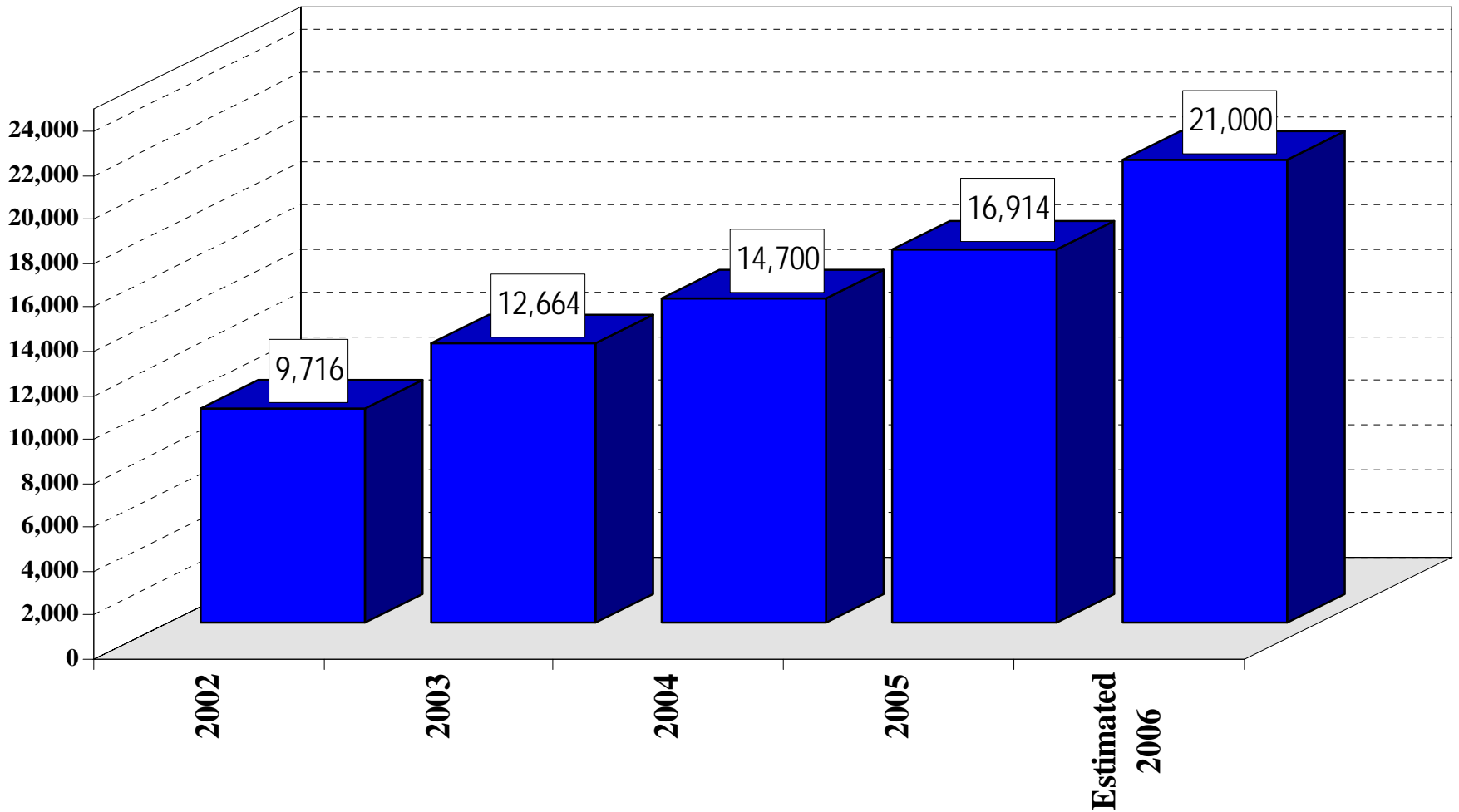
# Barnett Shale Activity

- **Gas wells**  
~ 5,205
- **Permits**  
~ 2,612
- **156 operators**
- **> 160 active rigs**
- **> 1.2 Tcf produced since 2004**

**USGS: 28 Tcf**

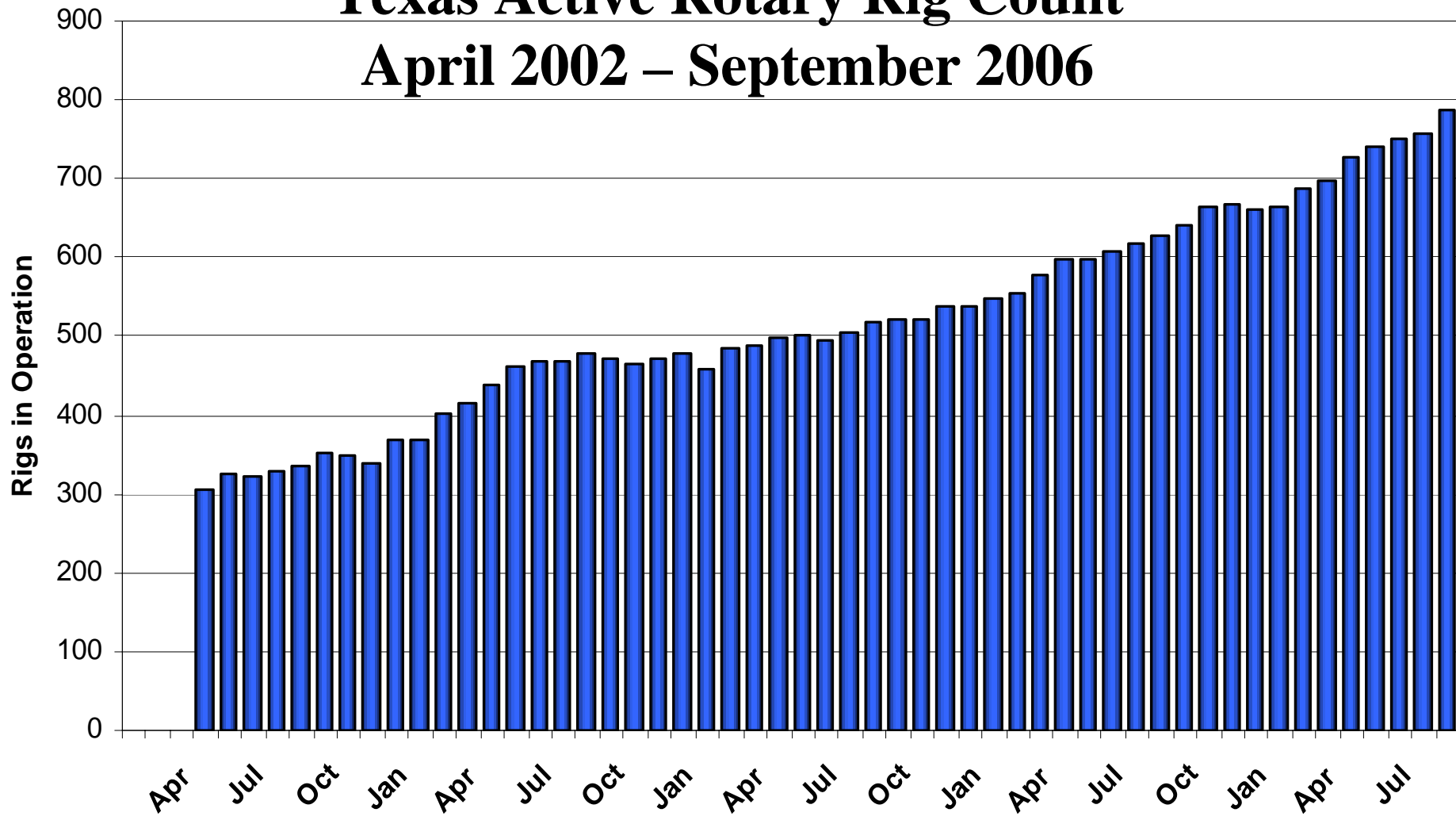


# Drilling Permits Issued In Texas 1998 through 2006



# Texas Active Rotary Rig Count

## April 2002 – September 2006





# Active Rig Count

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United States Total **1739**  
( > 80% natural gas)

U.S. Land Rigs **1629**

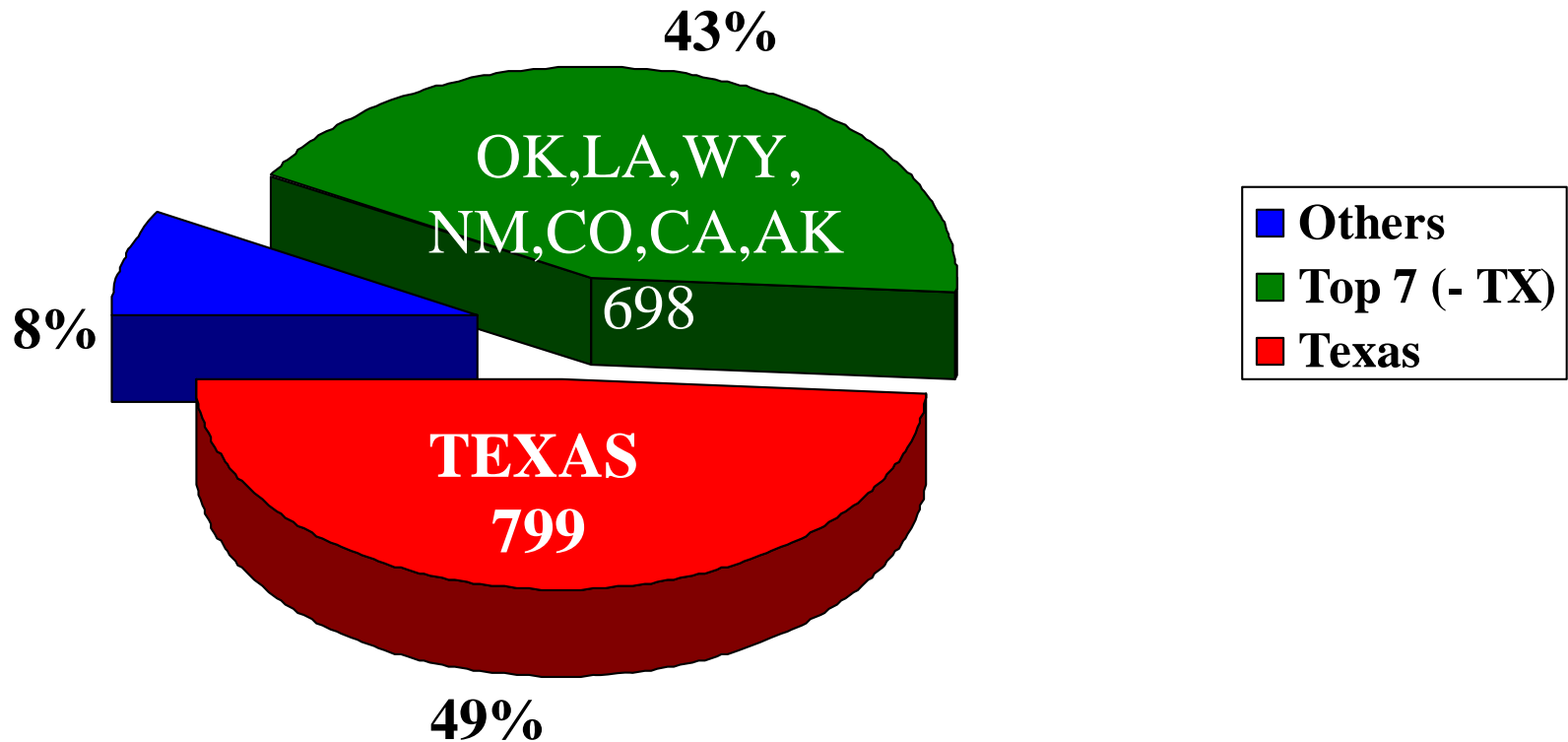
Texas **799**

**= 49% of total U.S. land rig activity!**

(Source: Baker Hughes, Oct 20, 2006)



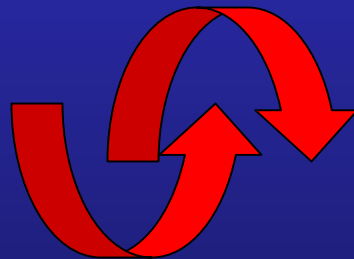
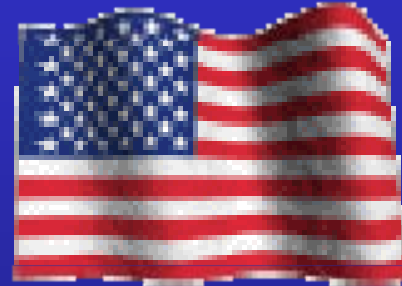
# Total U.S. Land Rig Activity October 20, 2006



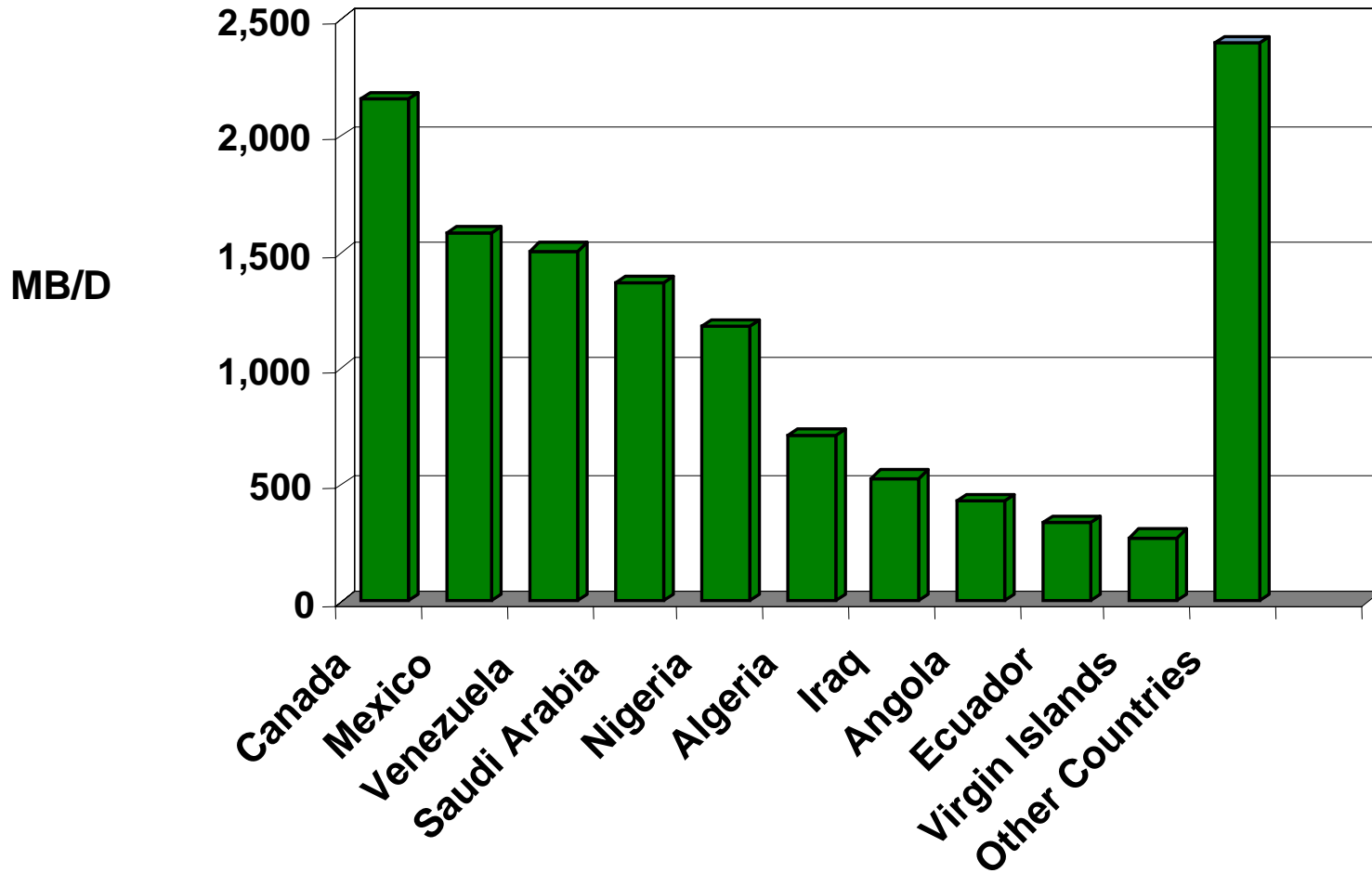


IT AINT  
**BRAGGIN'**  
IF IT'S  
**TRUE**  
APRIL 20 - DECEMBER 31, 2011

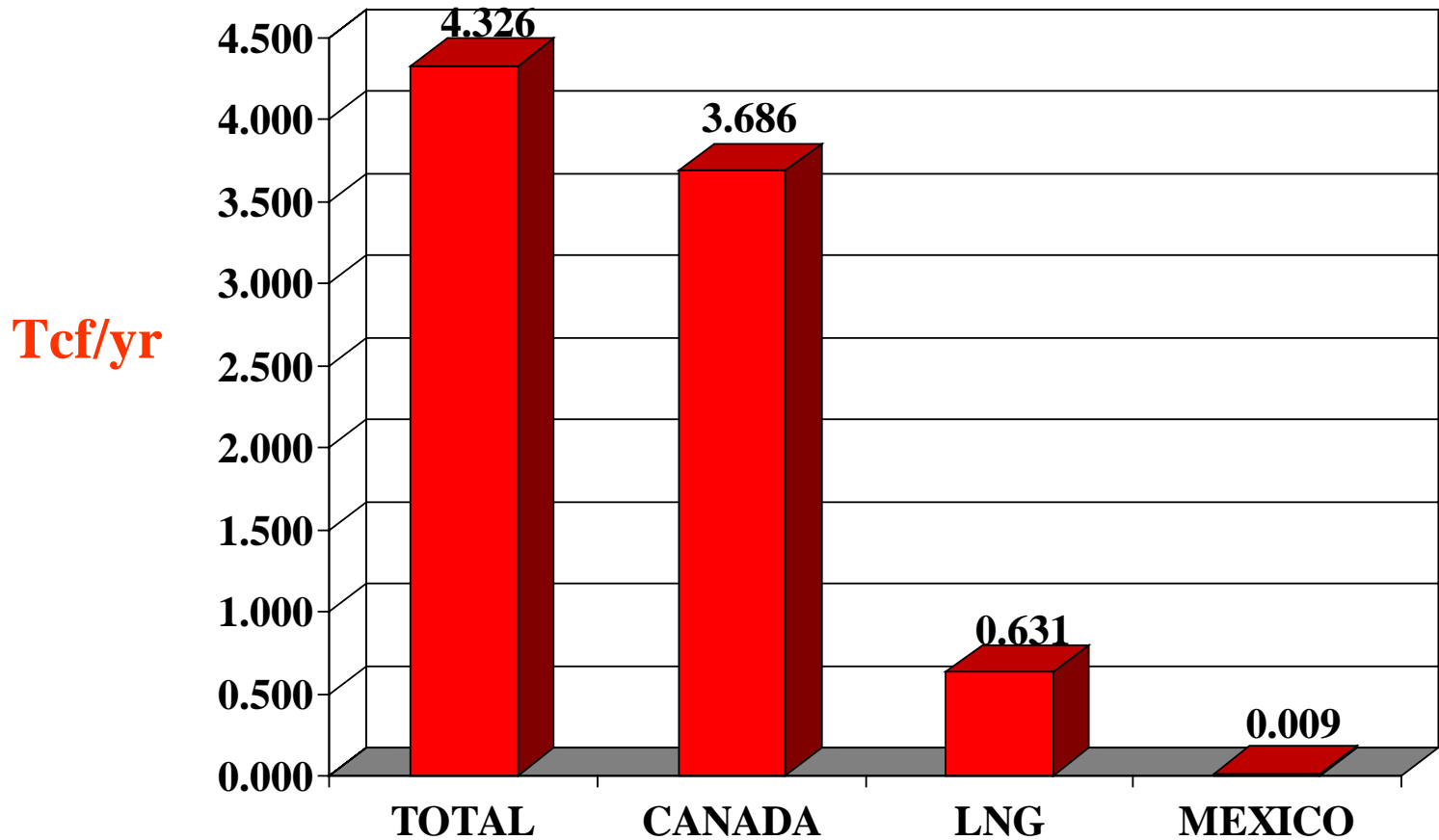
# Imports & Exports



# 2006 Average Daily U.S. Crude Oil Imports

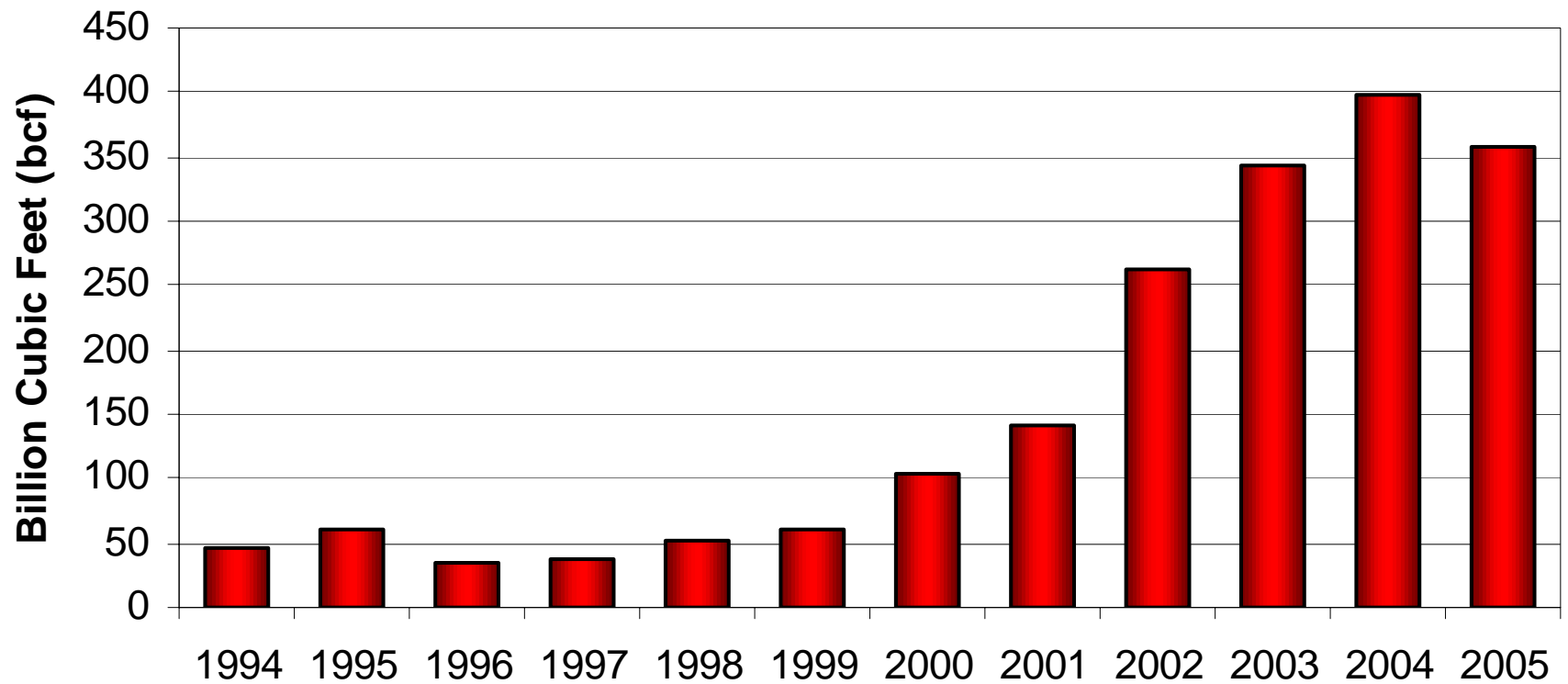


# 2005 U.S. Natural Gas Imports



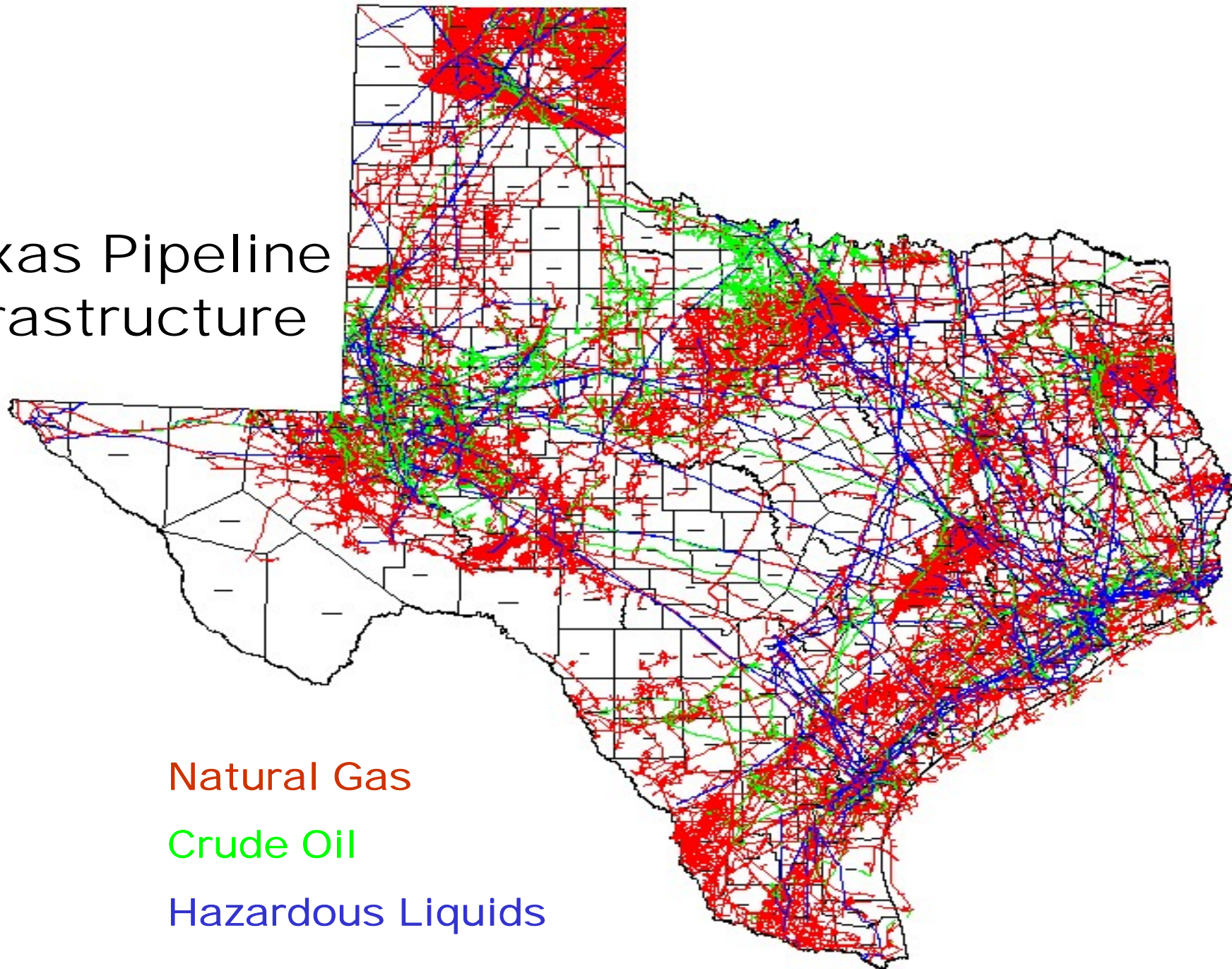
# U.S. Exports of Natural Gas to Mexico

## 1994 - 2005



Source: U.S. Energy Information Administration.

# Texas Pipeline Infrastructure



Natural Gas

Crude Oil

Hazardous Liquids

# Pipeline Regulatory Oversight



1<sup>st</sup> pipeline safety order issued in 1937

- Required gas odorization
- New London, TX school explosion -- 293 died

## RRC Pipeline Safety Program Goals

Encourage efficient & economical pipeline industry

Ensure compliance with state & federal pipeline safety rules

Promote public safety and awareness





## How Do We Accomplish This?

1. Promulgate rules to ensure safety of intrastate pipeline facilities
2. Enforce state/fed pipeline rules for intrastate pipelines  
(e.g., pipeline integrity testing)
3. Conduct ~ 2,500 inspections per year
4. Investigate accidents & complaints involving pipeline facilities

# RRC encourages proactive industry efforts to reduce methane emissions and otherwise minimize waste

- SWR 32: Gas venting & flaring rule
- SWR 103: Gas severance tax exemption for volumes returned to market that would otherwise be vented or flared
- **Waste Minimization Program:** Non-regulatory program encouraging best practice methods to reduce & better manage waste streams from operations
- Support industry events:
  - e.g., Int'l Petroleum Environmental Conference

# *Waste Minimization in the Oil Field Manual*

- Offers source reduction and recycling concepts
- Provides practical examples, including reduction of methane and other VOC emissions
- Provides info & software to help develop your own individualized waste minimization plan



Download from website: [www.rrc.state.tx.us](http://www.rrc.state.tx.us)

## The Commission is an Industry Resource

We support industry efforts to reduce methane emissions and otherwise minimize waste from production operations through regulatory, incentive, and outreach programs

### Contacts:

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**Waste Minimization:** Bart Sims [bart.sims@rrc.state.tx.us](mailto:bart.sims@rrc.state.tx.us)

# Help reduce methane emissions!!

