



An Update on the ERCOT Market

Senate Committee on Business & Commerce
Chairman Troy Fraser
November 18, 2008

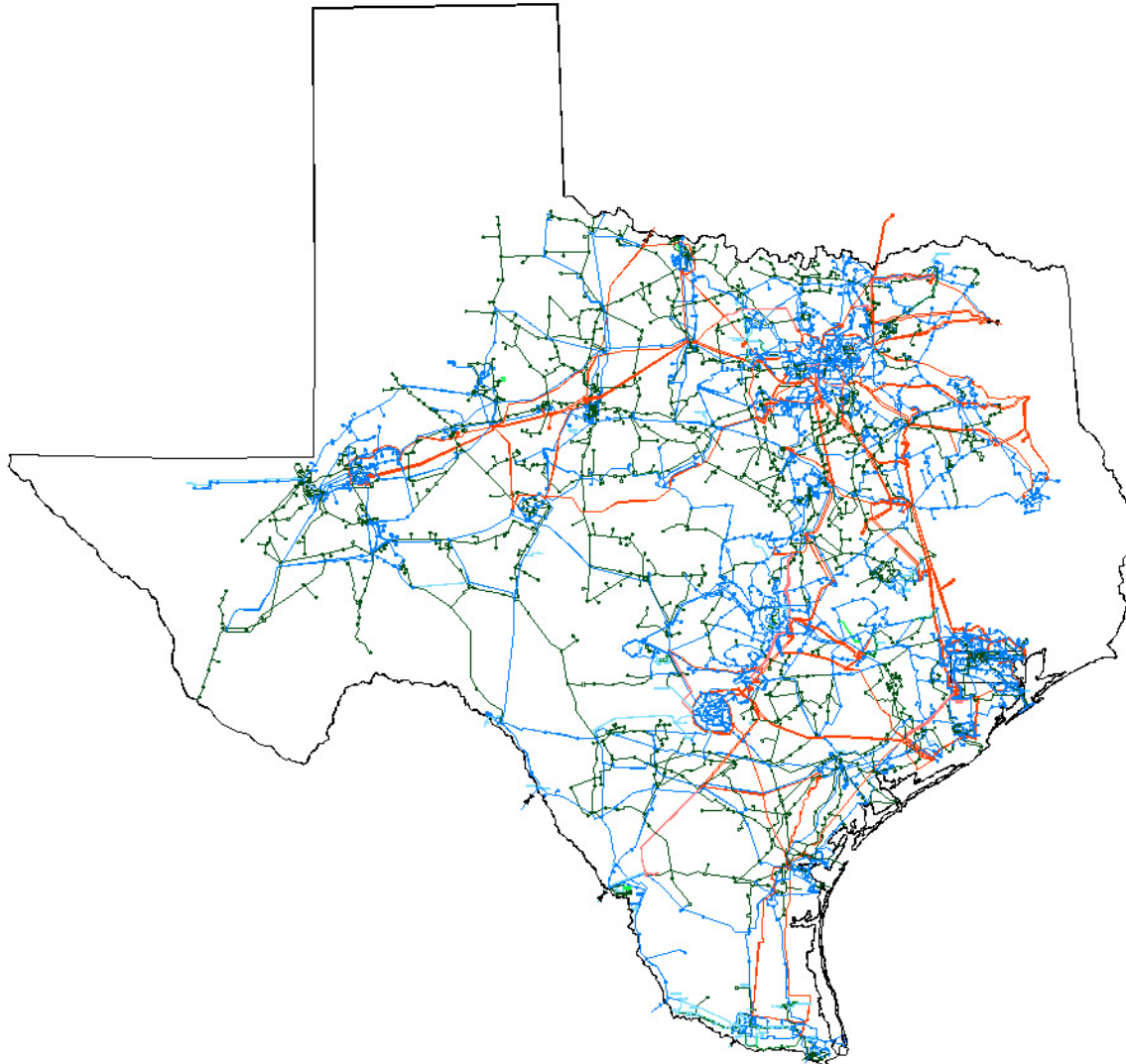
Bob Kahn
President & CEO

Market realities

- **Growth, while slowing from 2.3% to 1.8% annually, is still up**
- **Reserve margins are increasing**
- **Transmission construction and investment still on the way up**
- **Larger and larger amounts of wind generation coming online**
- **Natural gas prices are volatile (around \$2/MMBtu when SB 7 was passed and hovering around \$6/MMBtu today—off highs around \$12)**

The ERCOT Transmission Grid

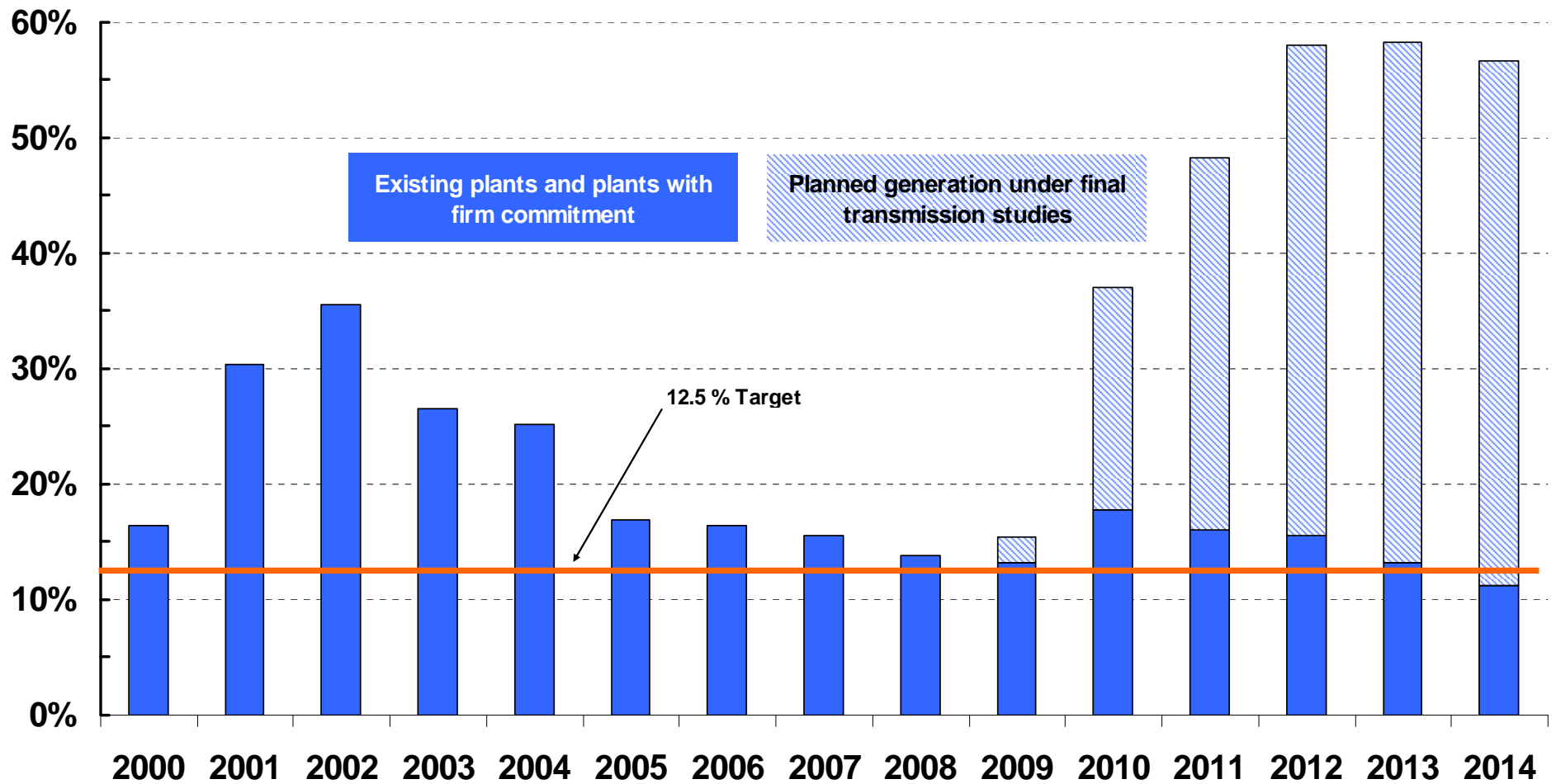
There are 38,000 Miles of Transmission Lines in Texas...



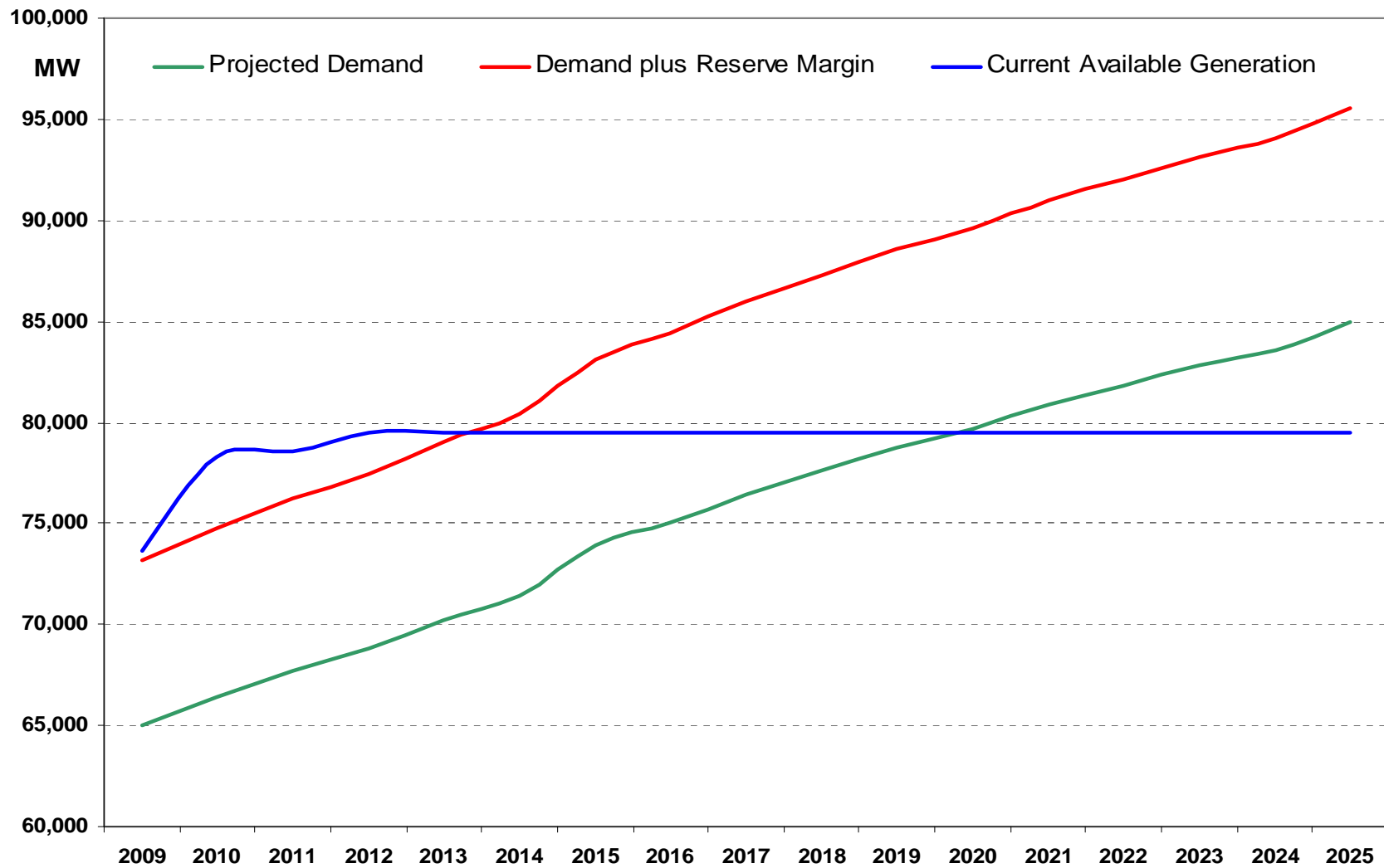
- 8,000 Miles of 345kV Lines
- 16,000 Miles of 138kV Lines
- 6,200 circuit miles of transmission built since 1999
- 2,538 circuit miles of transmission under study
- \$3.9 b investment in transmission placed in service since 1999
- \$3 b under development (independent of CREZ transmission)

Generation reserves appear adequate until 2014

RESERVE MARGINS 2000 - 2014

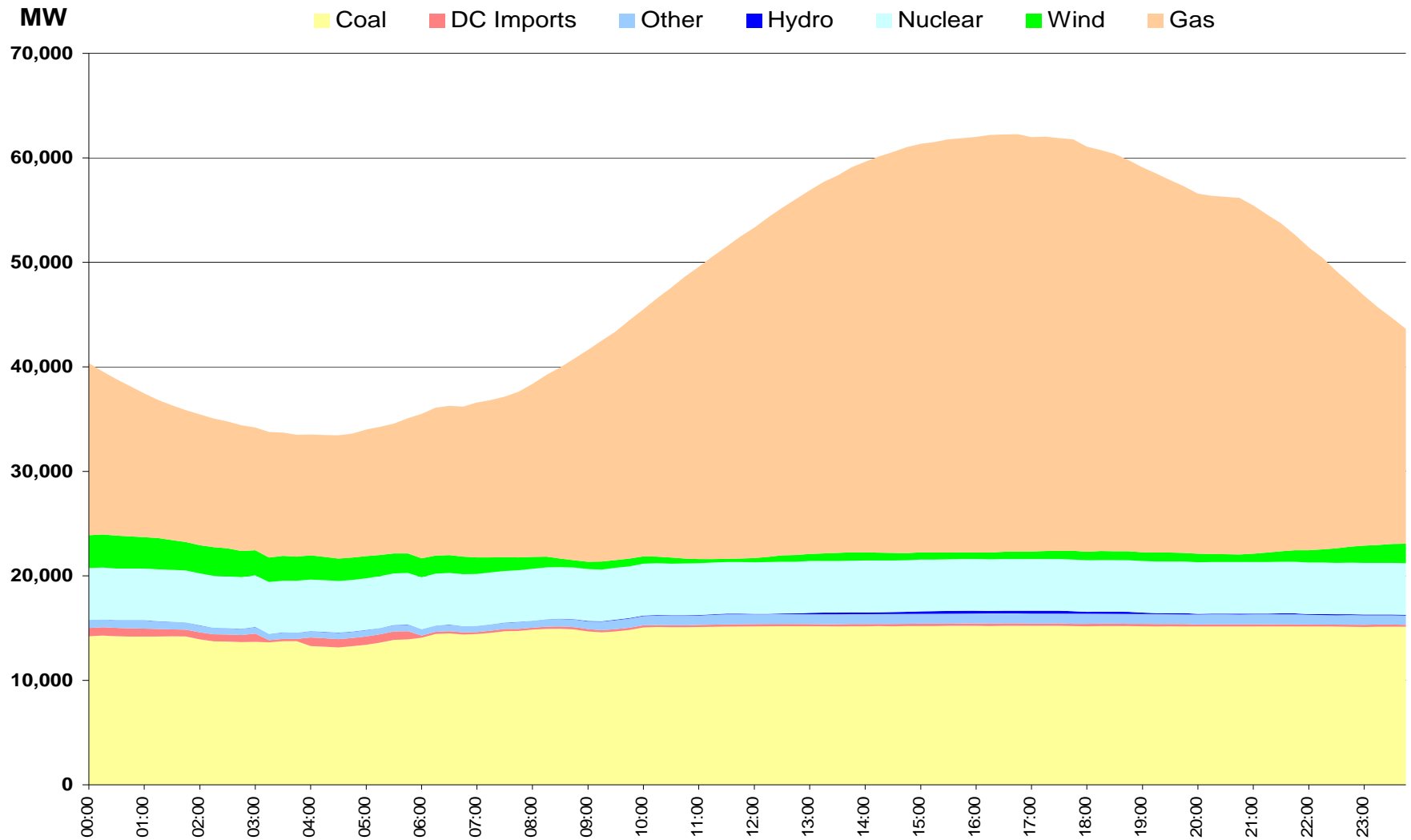


Generation Outlook: 2009 - 2025



Summer Day Load Shape with Fuel Mix

Generation by Fuel - August 4, 2008



Generation "In the Queue"

ERCOT is currently tracking 260 active generation interconnection requests totaling over 110,000 MW

Fuel	Currently Installed (MW)	Under Review(MW)
Natural Gas	51,711	31,834
Nuclear	5,081	12,386
Coal	15,211	9,506
Wind	6,234	53,879
Hydro	442	0
Other	425	2,538
Totals	79,104	110,143

In ERCOT Today...

- **The Current Installed Wind Capacity is ~ 6,234 MW**

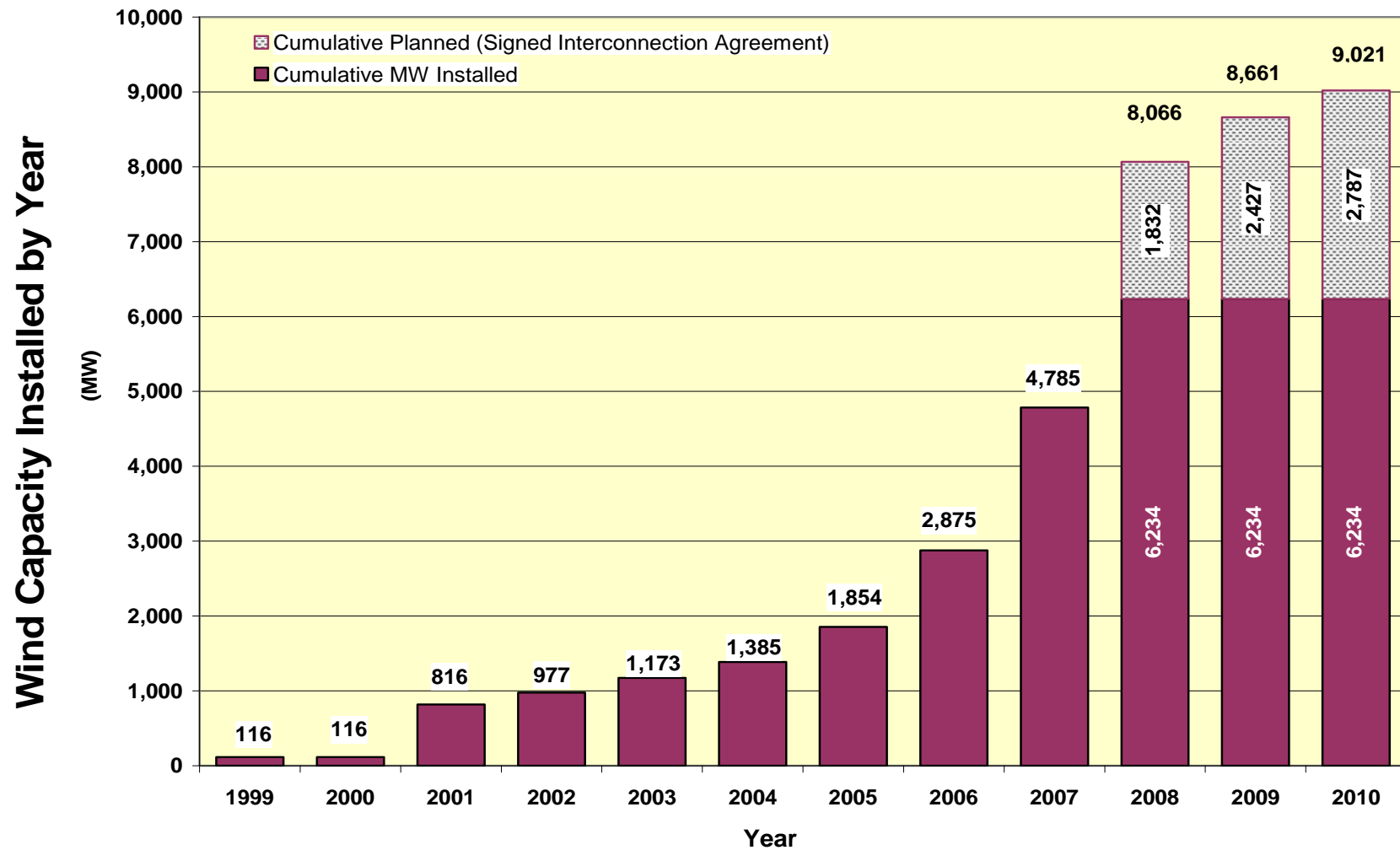
This makes Texas the largest wind power jurisdiction in North America (passing California in 2006)

- **We're studying ~ 54,000 MW in additional wind interconnection development**

Additional bulk transmission lines are already needed in West Texas (independent of CREZ lines)



ERCOT Renewable Generation – Wind



(as of October 31, 2008)

On the Horizon

- **Nodal “Go Live”**
- **Wind integration continues to be a challenge for ERCOT grid operators**
- **To keep pace with the state’s growth, more than 20,000 MW of new generation may need to be added. ERCOT’s duty is to inform policymakers of the need for increased generation resources, but it is ultimately up to market participants to put steel in the ground.**
- **Reducing the ERCOT market’s reliance on natural gas capacity would have positive implications for reliability and price volatility**
- **Advanced metering implementation**