

Texas Renewable Energy Credit Trading Overview



Overview of the Texas REC Market

- Driven by demand created from the Renewable Portfolio Standard (RPS) in Texas
- RPS requires that all competitive retail suppliers have a minimum percentage of their load come from qualified renewables (RECs)
- Goal is to have an additional 10,000 MWs of new renewable capacity built by the end of 2025

What is a REC?

- REC = Renewable Energy Credit
- Created and defined by statute as part of the RPS program
- Every REC is audited and independently certified by ERCOT
- ERCOT hosts a tracking system whereby RECs are transferred between, and eventually retired by, registered participants

Calculation of the State-wide RPS Requirement

- $RPS = Q * CCF * 8760$
 - $Q =$ Assumed capacity for the year
 - 2002-2003 = 400 MW
 - 2004-2005 = 850 MW
 - 2006-2007 = 1400 MW
 - 2008-2009 = 2000 MW
 - CCF = Capacity conversion factor of wind
 - 8760 = Hours in a year
- The 2010+ capacity has not been established

Setting the CCF

- The effective capacity factor of wind is at about 27.6%
 - Distribution congestion
 - Wholesale transmission congestion
- ERCOT has decided to reduce the CCF to 27% from 35%
 - This will result in a significant reduction in 2005 requirements (Approximately 45% - (A credit will be given for 2004 as well))
- CCF will be adjusted on a biannual basis to reflect actual Capacity.

Translating RPS Requirement to Usage

- In 2003, the total RPS requirement came to be about 1,226,400 MWhrs
- In 2004, the total RPS requirement came to be about 2,606,100 MWhrs
- RPS in 2003 amounted to slightly more than 0.6% of the load for a given competitive retail provider
- RPS for 2004 and 2005 should be somewhere around 1% of the load

Interesting Characteristics of RECs

- Have a 3 year shelf-life (2 years from date of creation)
- Can be from ANYWHERE in Texas (ERCOT, SPP, or SERC)
- Can be from wind, hydro, solar, tidal, biomass

Liquidity in REC Markets

- Very little liquidity
 - Trades are sporadic
 - Prices tend to jump
- Participants are mostly buying for their needs, not to speculate

More on REC Markets

- No on-line trading platform for RECs
- Typical REC transactions
 - Broker market (by phone)
 - Auction
 - Bilateral trades
 - Power purchase agreements (PPAs)
- The vast majority of trades are spot transactions
 - Forward agreements are becoming more popular
 - Strip contracts becoming more attractive to buyers now that adoption has occurred and hedging is becoming a more common practice

RECs in Texas Don't Discriminate

- Price for RECs is the same, regardless of resource type
- This is unusual compared to most of the rest of the country
- Driven by the predominance of wind generation in ERCOT and the magnitude of the RPS requirement
- There are no “classes” of RECs

Demand in Current TX REC Market

■ Current RPS

- All retail entities must offset a portion of their portfolio with RECs

■ Green Retail Power Sales

- Companies like Green Mountain, Gexa, Direct, and Austin Energy sell “Green Power,” which is offset on a one-to-one basis

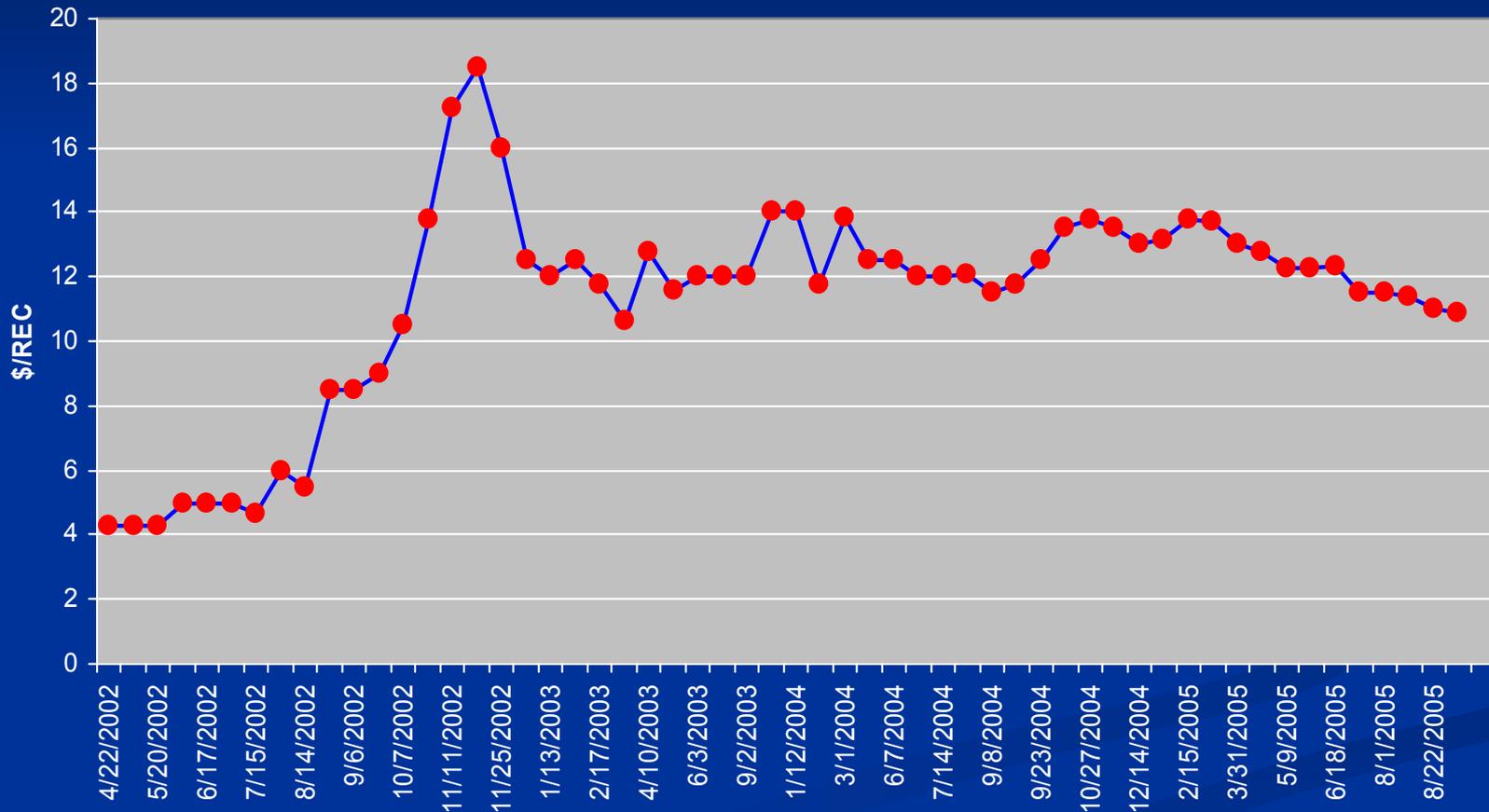
Current Market Conditions

- 2004 RECs Offered @ \$11.50
- 2005 RECs Offered @ \$10.75
 - Note: There is no reason for the 04s > 05s
- Some buyers are interested in forward contracts or strip purchases as a hedge to market risk.
 - A couple of substantial deals have been consummated recently

Senate Bill 533

- Signed into law July 2005
- The RPS has been expanded through 2025.
 - 5880 MW of Renewable Capacity by 2015
 - 500 MW from Non-Wind Renewable Sources
 - 10,000 MW of Renewable Capacity by 2025

History of Texas REC Trading



Questions?

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