Transmission Policies and Planning in Texas

National Association of Regulatory Utility Commissioners

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Transmission Policies to Support Market Entry

Open Access Rules

- In 1996, the Federal Energy Regulatory Commission (FERC) and the Texas Public Utility Commission (PUCT) adopted Open Access rules requiring regulated utilities to allow other utilities and independent generators to buy transmission service on a stand-alone basis
- The rules imposed on transmission-owning utilities an obligation to sell transmission service to potential competitors
- The rules resulted in the disaggregation of utility functions (transmission, distribution, generation) that were previously combined

Open Access Rules of PUCT

- The PUCT called for an *independent organization* to supervise access to the utilities' transmission systems
- The Electric Reliability Council of Texas, or ERCOT, is the *Independent System Operator* that carries out the function of supervising Open Access
- Since 2001, ERCOT administers competitive markets for balancing energy, regulation, and reserve services and manages transmission congestion through a market-based system
- ERCOT is also in charge of planning new transmission facilities

Interconnecting New Generation – FERC and PUCT

FERC policies differ from PUCT policies

- Initially under FERC policies, a generator had to pay for the new transmission facilities needed for interconnection to the electric network
- Under PUCT policies, the transmission owning utility to which a new generator is interconnected has to pay for the costs of interconnection and transmission upgrades required to connect to the electrical network (the utility recovers those costs from its customers)

Interconnecting New Generation - FERC and PUCT

- The PUCT rule stimulates competition by reducing the cost of investing in new generation and accessing the Texas market
- The FERC rule was later reformed to provide credits to a generator that pays for the transmission upgrades needed for interconnection - the payment is returned over time, but the generator still has to pay upfront

Different Outcomes of FERC and PUCT Interconnection rules

- The PUCT rule is more likely to attract investments in new generation, but developers will not take into account transmission costs in their siting decisions, which may not be optimal from a societal perspective
- The FERC rule forces the developer to take into account transmission costs in its investment decisions, and therefore to chose the site that will minimize both transmission and generation costs

Results of PUCT Transmission Policies

The PUCT transmission and interconnection policies have been a success:

- From 1995 to2006, 30,000 MW of new generation was built in ERCOT, a 40% increase
- The new units operate at lower heat rates than the old inefficient gas-fired steam generation. As a result, 10,000 MW of inefficient capacity was retired between 2002 and 2007
- A Reduction in market concentration was achieved in the generating sector as the new units are owned by new entrants, whereas the retired old units are owned by companies that previously were monopoly utilities

Transmission Policies and Planning to Support Wind Development

Competitive Renewable Energy Zones

- A transmission bottle neck threatened the development of more wind projects in West Texas because:
  - Transmission providers did not want to build transmission lines in areas where no wind development had already occurred
  - Wind developers did not want to build wind generation where no transmission lines existed
- 2005 Legislation required PUCT to:
  - Designate zones for renewable energy development
  - Develop a transmission plan

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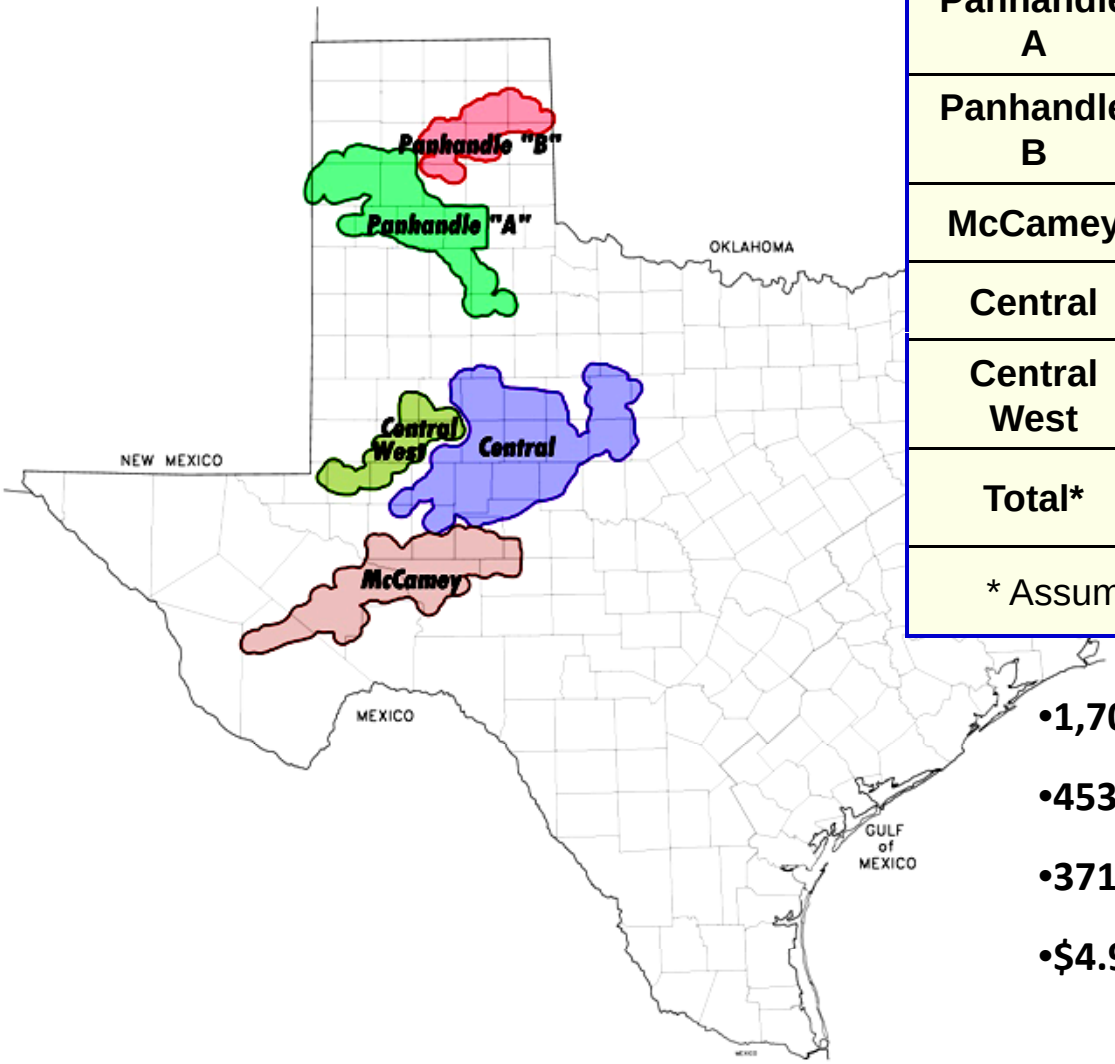
CREZ Stages

- PUC rulemaking 2006
- PUC CREZ proceeding—initiated December 2006
  - ERCOT support: generic wind/transmission study and study of 4 scenarios identified by PUC
- PUC issued CREZ final order--October 2008
- PUC rulemaking on selection of transmission utilities 2008
- Proceeding to select transmission utilities, completed in early 2009

CREZ Scenarios

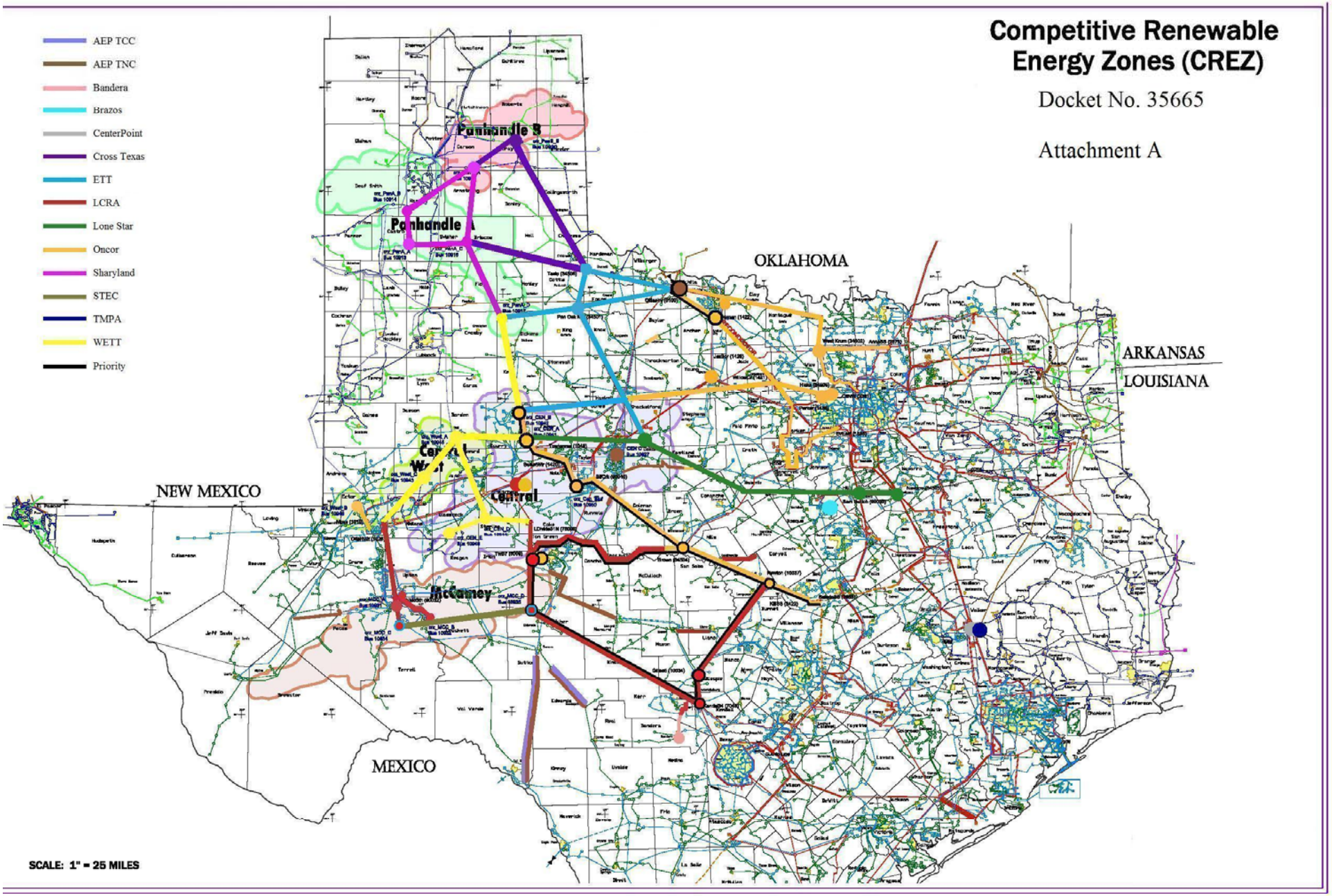


Capacity of New CREZ Wind by Scenario (MW)				
Wind Zone	**Scen. 1**	**Scen. 2**	**Scen. 3**	**Scen. 4**
Panhandle A	**1,422**	**3,191**	**4,960**	**6,660**
Panhandle B	**1,067**	**2,393**	**3,720**	**0**
McCamey	**829**	**1,859**	**2,890**	**3,190**
Central	**1,358**	**3,047**	**4,735**	**5,615**
Central West	**474**	**1,063**	**1,651**	**2,051**
Total*	**12,053**	**18,456**	**24,859**	**24,419**
* Assumes 6,903 MW of existing wind capacity				

- **1,705 miles of new 345-kV double circuits**
- **453 miles of new 345-kV single circuit**
- **371 miles of 345-kV rebuild & upgrade**
- **$4.9 Billion**

Selection of Transmission Providers

- **PUCT selected transmission providers to build CREZ lines**
  - **Non-incumbent companies permitted to make proposals**
  - **17 companies applied, including 4 companies that are not transmission providers in Texas**
  - **Most major projects had 3 or 4 companies that wanted to build**
  - **PUC made selection. Plan includes incumbents and new companies**


Competitive Renewable Energy Zones (CREZ)
Docket No. 35665
Attachment A
AEP TCC
AEP TNC
Bandera
Brazos
CenterPoint
Cross Texas
ETT
LCRA
Lone Star
Oncor
Sharyland
STEC
TMPA
WETT
Priority
Panhandle S
Panhandle
OKLAHOMA
ARKANSAS
LOUISIANA
NEW MEXICO
Central
McCamey
MEXICO
SCALE: 1" = 25 MILES

CREZ Transmission Providers

Company	Miles	$ Millions
AEP-TNC	56	68
Bandera EC	16	20
Brazos		5
Cross Texas	222	403
Electric Trans. Texas	354	841
LCRA	507	694
Lone Star	243	564
Oncor	881	1,346
Sharyland	253	394
South Texas EC	75	105
Wind Energy Transmission Texas	262	402
AEP-TCC	88	88
TMPA/CenterPoint		2

Current Status of CREZ Transmission Plan

- **Small number of line upgrades did not require PUC license, construction started in 2009**
- **Sequence for filing license applications has been scheduled (Oct. 2009 through July 2010)**
- **Transmission license applications require:**
  - **Detailed routing and environmental studies**
  - **Affected landowners can participate and raise issues relating to environment, impact on community, and use of land**
- **PUC review of license applications is expedited: must be completed in 6 months**
- **Construction of transmission: 2011 – 2013**