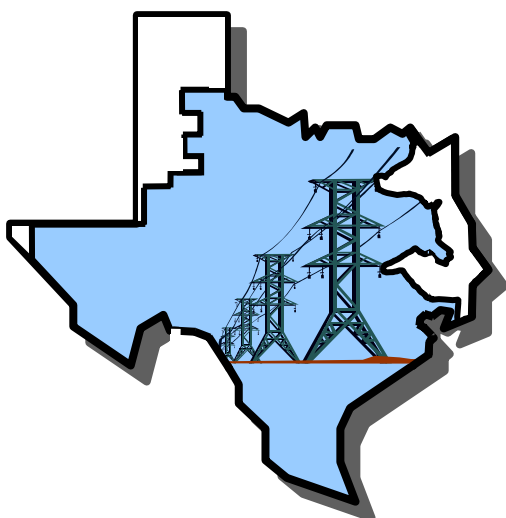




# System Planning Division



## Monthly Status Report to Reliability and Operations Subcommittee for December 2007

### Report Highlights

#### Item

1. ERCOT is currently tracking 220 active generation interconnection requests totaling almost 97,000 MW. This includes over 41,000 MW of wind generation.
2. Regional Planning is currently reviewing proposed transmission improvements with a total cost of \$133.25 M.
3. The 2007 Constraints and Needs Report is now posted on the ERCOT Operations and Planning website: <http://oldercot.ercot.com/tmaps>
4. An update to the 2007 Capacity Demand and Reserves Report has been posted on the ERCOT Operations and Planning website: <http://oldercot.ercot.com/tmaps>

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# 1. Generation Interconnection

Additional information regarding detailed generation interconnection and impact studies is contained in the “Generation Project Interconnection Information” data folder posted in the “Operations and System Planning” data area on the ERCOT website.

## 1.1. New Generation Beginning Commercial Operations

- Barton Chapel Wind Farm, 120 MW in Jack County
- Snyder Wind Farm, 63 MW in Scurry County

## 1.2. Active Generation Interconnection Requests

GENERATION INTERCONNECTION REQUESTS CURRENTLY BEING PROCESSED					
Currently tracking 220 active generation interconnection or change requests					
As of January 3, 2008					
		North	South	West	Total
Security Screening Study		7	11	20	38
SSS Completed		11	5	11	27
Full Interconnect Study		21	30	63	114
FIS Completed		0	2	2	4
Interconnect Agreement Completed		7	4	26	37
Capacity for Grid, MW		28,049	30,512	38,226	96,787
Wind Capacity, MW		1,963	4,139	35,481	41,583

Fuel	Public (MW)	Non-public (MW)	Total (MW)
Natural gas	3,708	27,936	31,644
Nuclear	9,186	6,400	15,586
Coal	4,841	2,708	7,549
Wind	9,841	31,742	41,583
Other	0	425	425
Totals	27,576	69,211	96,787

## 1.3. Potential Future Generation Interconnections

The table below summarizes the publicly known potential future generation projects for the ERCOT region. (IA=Interconnect Agreement, PL=Public Letter)

FUTURE GENERATION INTERCONNECTIONS (PUBLIC PROJECTS)								
As of September 4, 2007								
INR #	Site Name	Status	County	Region	Fuel	In Service Date	MW into Grid	Change from Last Report
07INR0034	Wolf Ridge Windfarm	IA	Cooke	North	Wind	Oct-07	201	
07INR0049	J T Deely Upgrade	IA	Bexar	South	Coal	Nov-07	80	

07INR0045	Airtricity Champion Wind Farm	IA	Scurry	West	Wind	Dec-07	126	
07INR0028	Goat Wind 1	IA	Sterling	West	Wind	Dec-07	150	
04INR0017	Ocotillo Wind Farm 1	IA	Howard	West	Wind	Dec-07	59	
07INR0010	Stanton Wind 1	IA	Martin	West	Wind	Dec-07	101	
03INR0034	Silver Star 1	IA	Erath	North	Wind	Dec-07	60	
07INR0045	Roscoe 1	IA	Scurry	West	Wind	Mar-08	209	
07INR0030	Louis (Buffalo Gap 3)	IA	Nolan	West	Wind	Apr-08	138	
06INR0036	Quail Run Energy Center 2	IA	Ector	West	Gas	May-08	275	
06INR0035	Colorado Bend Energy Center 2	IA	Wharton	South	Gas	Jun-08	275	Changed date
07INR0022	Airtricity Panther Creek Wind Farm	IA	Howard	West	Wind	Jun-08	150	
04INR0011	Cottonwood Wind	IA	Shackelford	West	Wind	Aug-08	100	
04INR0011	Mesquite Wind Phase 4	IA	Shackelford	West	Wind	Aug-08	136	
03INR0030	Wild Horse Wind Farm 2	IA	Cottle	West	Wind	Aug-08	39	
08INR0038	M Bar Wind	PL	Andrews	West	Wind	Sep-08	194	
07INR0025	Airtricity Lamesa Wind Plant	IA	Dawson	West	Wind	Oct-08	183	
07INR0037	Bull Creek Wind Plant	IA	Borden	West	Wind	Oct-08	180	
07INR0045	Airtricity Inadale	IA	Scurry	West	Wind	Nov-08	212	
07INR0045	Airtricity Pyron Wind Farm	IA	Scurry	West	Wind	Nov-08	303	
06INR0022	Penascal Wind Farm 1	IA	Kenedy	South	Wind	Dec-08	202	
08INR0037	Airtricity Panther Creek 2	IA	Howard	West	Wind	Dec-08	220	
08INR0053	Elbow Creek Wind Project	IA	Howard	West	Wind	Dec-08	117	
04INR0011	Hackberry Wind Farm	IA	Shackelford	West	Wind	Dec-08	165	
07INR0005	Notrees-1	IA	Ector	West	Wind	Dec-08	151	
07INR0029	South Trent Wind Farm	IA	Taylor	West	Wind	Dec-08	101	
06INR0026	Wild Horse Mountain	IA	Howard	West	Wind	Dec-08	120	
05INR0015	Gulf Wind 1	IA	Kenedy	South	Wind	Dec-08	283	Changed capacity
08INR0059	Gray Wind Project	PL	Borden	West	Wind	Dec-08	141	
08INR0018	Gunsight Mountain	IA	Howard	West	Wind	Dec-08	120	
08INR0025	Pistol Hill Energy Center	PL	Ector	West	Wind	Dec-08	300	
09INR0026 a	Sterling Energy Center	PL	Sterling	West	Wind	Dec-08	200	
07INR0011	Turkey Track Energy Center	PL	Nolan	West	Wind	Dec-08	300	
08INR0046	Bosque Expansion	IA	Bosque	North	Gas	Mar-09	255	
08INR0047	Buffalo Gap 4	PL	Nolan	West	Wind	Mar-09	378	
09INR0028	V H Braunig 6	PL	Bexar	South	Gas	May-09	185	
08INR0040	Lenorah Project	PL	Martin	West	Wind	May-09	350	
09INR0060	Wind Tex Stephens Wind Farm	PL	Borden	West	Wind	May-09	141	
09INR0045	Sand Hill Peakers	PL	Travis	South	Gas	Jun-09	90	
09INR0027	Winchester Peaking Plant	PL	Fayette	South	gas	Jun-09	178	Changed capacity
09INR0036	McAdoo Energy Center II	PL	Dickens	West	Wind	Jun-09	500	

09INR0026	Sterling Energy Center	PL	Sterling	West	Wind	Jun-09	300	
08INR0003	Sandow 5	IA	Milam	North	Coal	Jul-09	581	
05INR0015	Gulf Wind 2	IA	Kenedy	South	Wind	Sep-09	400	
09INR0015	Comanche Peak 1&2 Upgrade	PL	Somervell	North	Nuclear	Oct-09	86	
03INR0030	Wild Horse Wind Farm 1	IA	Cottle	West	Wind	Nov-09	60	
09INR0006	Oak Grove SES 1	IA	Robertson	North	Coal	Nov-09	855	
09INR0034	Gatesville Wind Farm	PL	Coryell	North	Wind	Dec-09	200	
09INR0037	Scurry County Wind III	PL	Scurry	West	Wind	Mar-10	350	
09INR0006	Oak Grove SES 2	IA	Robertson	North	Coal	May-10	855	
06INR0006	Cobisa-Greenville	PL	Hunt	North	gas	May-10	1750	Changed date
09INR0002	J K Spruce 2	IA	Bexar	South	coal	Jun-10	750	
09INR0001	Sandy Creek 1	IA	McLennan	North	coal	Sep-10	925	
05INR0015	Gulf Wind 3	IA	Kenedy	South	Wind	Sep-10	400	
12INR0003	Thockmorton Wind Farm	PL	Throckmorton	West	Wind	Dec-10	400	
11INR0007	Mountain Creek	PL	Dallas	North	Gas	Apr-11	700	
11INR0001	Twin Oaks 3	PL	Robertson	North	coal	Jun-11	630	
07INR0004	Pampa Energy Center	IA	Gray	West	Coal	May-12	165	
09INR0024	B&B Panhandle Wind	PL	Carson	West	Wind	Jun-12	1001	Changed date
12INR0004	Fort Concho Wind Farm	PL	Tom Green	West	Wind	Jul-12	400	
15INR0002	Comanche Peak 3 and 4	PL	Somervell	North	Nuclear	Jan-15	3200	
15INR0008	STP 3 and 4	PL	Matagorda	South	Nuclear	Jan-15	2700	
11INR0011	Victoria City Nuclear	PL	Victoria	South	Nuclear	Jan-15	3200	
<b>Total</b>							<b>27,576</b>	

## 2. Regional Planning Group Project Reviews

- Luminant has submitted two interrelated, yet independent projects for review. The first project is the planned upgrade of the Tyler Northeast to Tyler East 138 kV line, which was planned to be complete in May 2012, but will be accelerated to May 2009 with an estimated total project cost of \$4 M. The second related project is the addition of the Tyler Grande (Tyler Southeast) 345/138 kV autotransformer and an increase in the planned capacity of Tyler Grande (Southeast) to Tyler South from 326 MVA to 400 MVA. The second project is planned to be complete in May 2009 with a cost of approximately \$10 M and will require ERCOT Board approval due to the new 345/138 kV Tyler Grande switching station and associated autotransformer. This project is in ERCOT Independent Review.
- Oncor submitted a project to rebuild the Big Spring – Chalk – McDonald Road 69 kV line. This project will alleviate overloads due to new wind projects on the Morgan Creek to McDonald Road 138 kV circuit by adding a new 138 kV from Big Spring into McDonald Road on double circuit 138/69 kV structures that will replace the existing 69 kV single circuit structures. The cost of the project is \$10.8 M and due for completion in December 2008. This project is now in ERCOT Independent Review.

- Oncor submitted a two phase project to relieve congestion that will occur when two new Wind units are connected to the transmission system in the Lamesa area. The first phase of the project will upgrade both ends, but not the middle of the Lamesa to Bluff Creek 138 kV line, rebuild the Bluff Creek to China Grove 138 kV line, rebuild the Lamesa to Ackerly Vealmoor 69 kV line to 138/69 kV double circuit, rebuild the Lamesa 138 kV switching station, and build a new 138 kV Ackerly Vealmoor station. All transmission rebuilds will utilize double circuit construction with one circuit in place, except the Lamesa to Ackerly Vealmoor 138/69 kv double circuit. The cost of the first phase of these upgrades is \$40.3 M. The second phase of the project has additional work to be done if a third wind unit signs and interconnect agreement that will add second circuits to all rebuilt lines and include station upgrades at China Grove and Big Spring. The additional cost of the second phase upgrades is \$40.5 M. The first phase was included as an economic project in the 2007 Five Year Plan. The second phase will be studied separately.
- Oncor submitted a project to rebuild the Elkton to Athens North Tap 138 kV line due to post contingency overloads, age of equipment, and ERCOT OOM instructions. This cost this project is \$20.4 M and would be complete by peak 2010. It is currently in the comment phase.
- Oncor submitted a two part project based on the 2007 Five Year Plan that will replace the 517 MVA 345/138 kV autotransformer at Roanoke Switch with a 600 MVA autotransformer in 2009 at a cost of \$7.25 M. In 2010 the old Roanoke auto will be installed at Eagle Mountain which showed high congestion levels in the Five Year Plan at a cost of \$2.0 M. This project is in the comment phase.

### 3. Other Notable Activities

- Draft results for Phase II of the Wind Impact/Ancillary Services study are expected next week (about 1/20). GE is evaluating 4 scenarios of wind capacity on the system: 5,000 MW, 2 scenarios of 10,000 MW, and 15,000 MW. Phase I of the study (a statistical analysis of increased variability with increasing amounts of wind) was completed in October. GE is currently finalizing Phase II of the study, an analysis of the ramping capabilities of units in the existing ERCOT generation fleet and determination of required ancillary services.
- CREZ Study (SB20)
  - System Planning is analyzing transmission solutions as part of the CREZ Transmission Optimization Study. The next RPG-CREZ Task Force meeting will be held on January 25, 2008.
- Individual 2008 Q1 TPIT Worksheets were sent to TO's. Data is due back Friday, February 1<sup>st</sup>.
- The following information is now available at <http://oldercot.ercot.com/tmaps>
  - The updated 2008 Data Set A cases
  - The SSWG 2008 Data Set B cases
  - The **2007 Constraints and Needs Report**

The 2007 Electric System Constraints and Needs report, filed in late December with the Public Utility Commission (PUC), identifies and analyzes existing and potential constraints in the transmission system that could pose reliability concerns or increase costs to the electric power market, and ultimately, to Texas consumers. The report includes \$3 billion in proposed projects for the next five years, expected to add 2,538 miles of transmission lines and additional autotransformer capacity.

The major 345-kV transmission lines planned include:

- 88 circuit miles, Bell County East – Twin Oaks, operational 2012
- 198 circuit miles, Red Creek – Killeen line, operational 2012
- 38 circuit miles, Oklaunion – Bowman line, operational 2012
- 22 circuit miles, Nacogdoches – Lufkin line, operational 2012
- 103 circuit miles, Clear Spring – Salado, operational 2010/2011
- 110 circuit miles, San Miquel – Laredo, operational 2010
- 7 circuit miles, West Levee – Norwood (Dallas/Fort Worth), operational 2009

○ An update to the **2007 CDR Report**

Summary of changes:

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>Reserve Margin (Dec 2007)</b>	13.1%	12.1%	14.0%	12.6%	10.5%	8.2%
<b>Reserve Margin (May 2007)</b>	12.6%	10.1%	8.3%	6.7%	5.9%	n/a

- Reserve margins will drop in 2008 due to the exclusion of 510 MW of mothball returns anticipated in the May CDR. However, there are known re-powering projects awaiting interconnection agreements.
- Increases in Reserve Margins for 2009 can be attributed to 2 units (Sandow and the Bosque Expansion) for 836 MW.