

# **System Planning**

Monthly Status Report November 2013

### Report Highlights

- ERCOT is currently tracking 194 active generation interconnection requests totaling over 50,000 MW. This includes over 22,600 MW of wind generation.
- ERCOT is currently reviewing proposed transmission improvements with a total cost of \$720 Million
- Transmission Projects endorsed in 2013 total \$349.8 Million
- All projects (in engineering, routing, licensing and construction) total approximately \$6.23 Billion.
- Transmission Projects energized in 2013 total about \$3.17 Billion.

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#### 1. Generation Interconnection

Additional information regarding detailed generation interconnection and impact studies is contained in the "Generation Project Interconnection Information" folder in the "Operations and System Planning" area on the ERCOT website: <a href="http://planning.ercot.com/login/login">http://planning.ercot.com/login/login</a>.

#### 1.1 Signed Generation Interconnection Agreements

13INR0052 – Los Vientos III – 200 MW in Starr County 13INR0059b – Hereford Wind – 300 MW located in Castro County 13INR0049 – Friendswood Energy Ctr. – 316 MW located in Harris County 14INR0032a – Route66 Wind – 150 MW located in Randall County 13INR0031 – Mustang Solar – 30 MW located in Travis County

14INR0030b – Panhandle Wind 2 – 198 MW located in Carson County

14INR0049 - Keechi Wind - 102 MW located in Jack County

12INR0018 - Pampa Wind - 500 MW located in Gray County

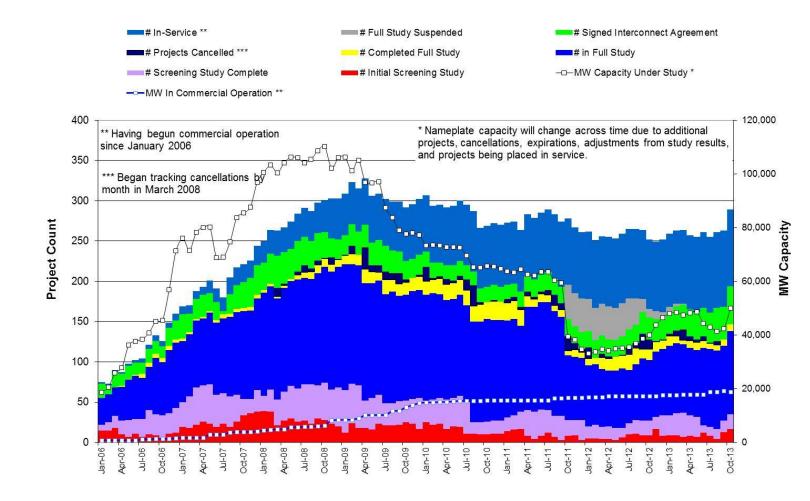
### 1.2 New Generation Approved for Commercial Operations

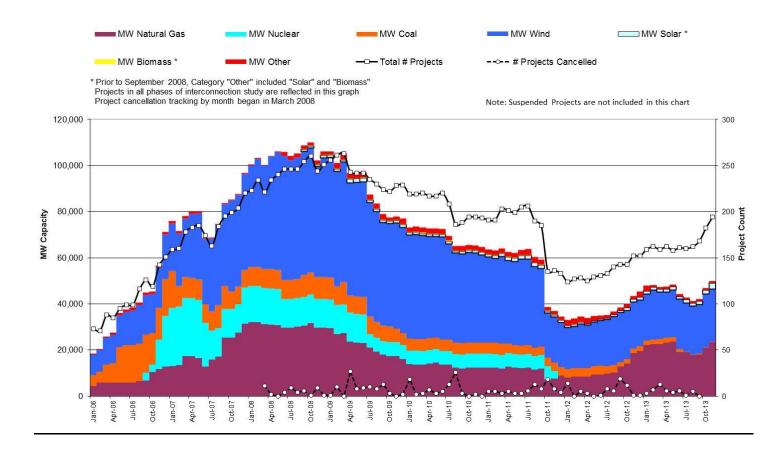
The total installed wind capacity is now reported as 10,970 MW by the resource owners through the registration process. Capacity by North, South and West is 832 MW, 2,775 MW, and 7,363 MW respectively. Eight-hundred fifty MW is able to switch between the West and South zones and is currently shown in the South zone.

#### 1.3 Summary of Generation Interconnection Requests

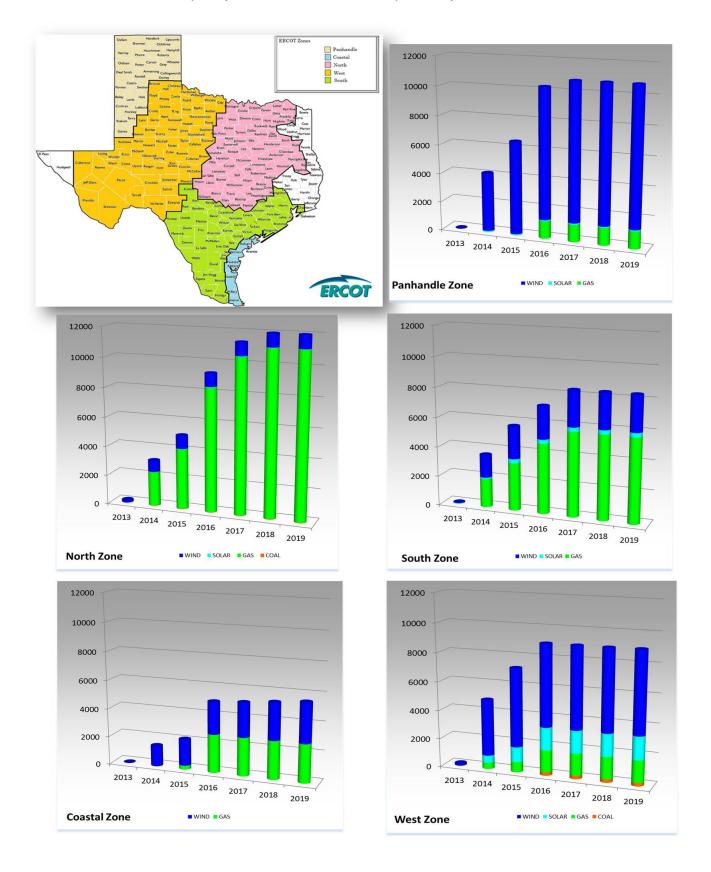
GENERATION INTERCONNECTION REQUESTS CURRENTLY UNDER REVIEW				
Currently tracking 194 generation interconnection or change requests				
As of November 30, 2013	Total			
Security Screening Study	17			
SSS Completed	18			
Full Interconnect Study	103			
FIS Completed				
Suspended Studies	0			
Capacity of Suspended Study Projects				
Interconnect Agreement Completed	47			
Capacity under Interconnection Agreements				
Capacity for Grid, MW				
Wind Capacity, MW	22,693			
Cancelled Projects	0			

Fuel Type	Confidential Projects (MW)	Projects Under Full Study (MW)	Public Projects (MW)	Suspended Studies (MW)	Grand Total (MW)
Gas-AllOther			690	-	7,480
Gas-CombinedCycle			6,515	-	16,208
Total Gas	4,075	12,408	7,205	-	23,688
Nuclear	-	-	•	-	-
Coal	-	30	240	-	270
Wind	3,127	12,495	7,071	-	22,693
Solar	951	1,359	180	-	1,759
Biomass	-	-	1	-	-
Storage	-	874	-	-	874
Petroleum Coke	-	-	-	-	-
Grand Total	8,153	27,166	14,696	-	50,015





### Cumulative Installed MW Capacity of Interconnection Requests by Zone



# 1.4 Projects with Interconnection Agreements

Ge	neration Interconnection Ag	greements	as of No	vembe	r 30, 20	013
INR	Site Name	County	COD	Fuel	MW For Grid	Change from Last Report
12INR0075	Blue Summit Windfarm	Wilbarger	Oct-13	Wind	135	
13INR0058	OCI Alamo 1	Bexar	Oct-13	Solar	50	
11INR0013	Goldthwaite Wind Energy	Mills	Dec-13	Wind	150	
12INR0068	Sendero Wind Energy Project	Jim Hogg	Feb-14	Wind	78	
12INR0034	Stephens Ranch Wind Energy	Borden	Apr-14	Wind	378	
13INR0059b	Hereford Wind	Castro	Apr-14	Wind	300	New
13INR0059a	Hereford Wind	Castro	Apr-14	Wind	200	
13INR0057	Windthorst 2	Archer	Jun-14	Wind	65	
14INR0012a	Miami Wind 1 Project	Gray	Jun-14	Wind	231	
14INR0015	Deer Park Energy Center	Harris	Jun-14	Gas	192	
14INR0016	Channel Energy Center 138/345kV CT	Harris	Jun-14	Gas	190	
13INR0048	Spinning Spur Wind Two	Oldham	Jun-14	Wind	161	
13INR0049	Friendswood Energy Generation	Harris	Jun-14	Gas	316	New
11INR0062	Patriot (Petronilla) Wind	Nueces	Jun-14	Wind	178	
13INR0021	Ferguson Replacement Project	Llano	Jul-14	Gas	570	
14INR0030a_2	Panhandle Wind	Carson	Aug-14	Wind	218	
13INR0040	Rentech Project	Harris	Aug-14	Gas	15	
10INR0021	Panda Sherman Power	Grayson	Aug-14	Gas	809	
10INR0020a	Panda Temple Power	Bell	Aug-14	Gas	791	
11INR0050	Moore Wind 1	Crosby	Aug-14	Wind	149	
14INR0032a	Route66 Wind	Randall	Sep-14	Wind	150	New
13INR0031	Mustang Solar Project	Travis	Oct-14	Solar	30	New
13INR0010a	Mariah Wind	Parmer	Oct-14	Wind	200	
13INR0020a	CPV Rattlesnake Den Ph 1	Glasscock	Oct-14	Wind	200	
13INR0020b	CPV Rattlesnake Den Ph 2	Glasscock	Oct-14	Wind	150	
11INR0054	Midway Farms Wind	San Patricio	Oct-14	Wind	161	
14INR0030b	Panhandle Wind 2 (Phase 2)	Carson	Nov-14	Wind	198	New
11INR0094	White Camp Solar	Kent	Nov-14	Solar	100	
13INR0052	Los Vientos III	Starr	Dec-14	Wind	200	New
14INR0023	Longhorn Energy Center	Briscoe	Dec-14	Wind	361	
13INR0005	Conway Windfarm	Carson	Dec-14	Wind	600	
11INR0079a	South Clay Windfarm	Clay	Dec-14	Wind	200	
06INR0022c	Penascal Wind Farm 3	Kenedy	Dec-14	Wind	202	
14INR0049_2	Keechi Wind 138 kV Joplin	Jack	Dec-14	Wind	102	New
12INR0029	Comanche Run Wind	Swisher	Dec-14	Wind	500	
11INR0057	Cameron County Wind	Cameron	Dec-14	Wind	165	
13INR0010c	Mariah Wind	Parmer	Jan-15	Wind	200	
09INR0051	Mesquite Creek	Borden	Jan-15	Wind	249	
08INR0018	Gunsight Mountain	Howard	Aug-15	Wind	120	

10INR0020b	Panda Temple Power	Bell	Aug-15	Gas	791	
14INR0012b	Miami Wind 1 Project	Gray	Aug-15	Wind	170	
12INR0018	Pampa Wind Project	Gray	Dec-15	Wind	500	New
13INR0010b	Mariah Wind	Parmer	Dec-15	Wind	200	
13INR0023	Texas Clean Energy Project	Ector	Jan-16	Coal	240	
13INR0028	Antelope Station	Hale	Jun-16	Gas	359	
10INR0022	Pondera King Power Project	Harris	Jun-16	Gas	1380	
06INR0006	Cobisa-Greenville	Hunt	Dec-16	Gas	1792	

# 1.5 Projects Undergoing Full Interconnection Studies with Confidentiality Waived

INR	Site Name	County	COD	Fuel	MW for Grid	Change from Last Report

# 1.6 Generation Projects Undergoing Full Interconnection Studies

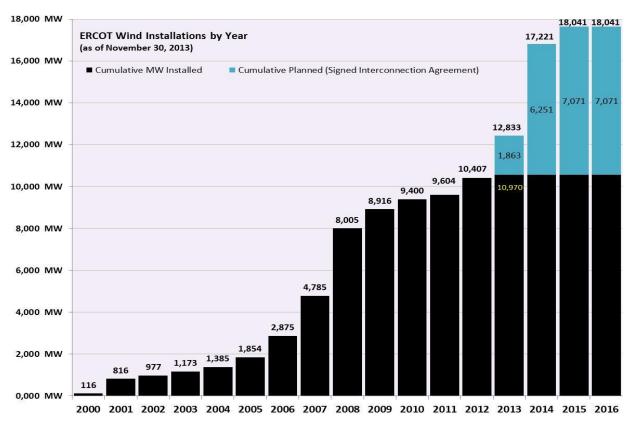
Interconnection Database Reference Number	County	Fuel	Capacity to Grid (MW)	Commercial Operation Data (as specified by the resource developer)
14INR0039	Ector	Gas	450	3/1/2014
14INR0069	Milam	Coal	30	3/31/2014
14INR0013	Cameron	Wind	103	4/1/2014
14INR0024	Kinney	Solar	42	4/1/2014
14INR0048_1	Wilbarger	Wind	114	6/1/2014
14INR0038	Galveston	Gas	390	6/1/2014
13INR0026	Oldham	Wind	201	6/1/2014
14INR0048_2	Wilbarger	Wind	250	6/1/2014
14INR0040	Hidalgo	Gas	225	6/7/2014
12INR0059	Pecos	Solar	50	6/30/2014
14INR0014	Val Verde	Solar	100	7/1/2014
11INR0093	San Patricio	Wind	41	7/1/2014
14INR0059	Kaufman	Gas	52	8/1/2014
13INR0055	Zapata	Wind	250	9/1/2014
13INR0038	Swisher	Wind	300	9/15/2014
14INR0042	Deaf Smith	Solar	80	9/30/2014
14INR0062	Hall/Motley	Wind	200	9/30/2014
14INR0047	Floyd and Crosby	Wind	301	10/1/2014
13INR0036	Hidalgo	Wind	200	10/31/2014
12INR0045	Kleberg	Wind	135	10/31/2014
11INR0065	Nueces	Wind	350	10/31/2014
13INR0025	Randall	Wind	150	11/1/2014

				Commercial
Interconnection				Operation Data
Database	County	Fuel	Capacity to	(as specified by
Reference	County	luci	Grid (MW)	the resource
Number				developer)
14INR0060	Haskell	Wind	400	11/1/2014
13INR0056	Scurry	Wind	366	11/21/2014
14INR0066	Lamar	Gas	130	11/30/2014
14INR0033	Armstrong	Wind	500	12/1/2014
14INR0043	Sterling	Solar	40	12/1/2014
14INR0041	Willacy	Wind	114	12/1/2014
14INR0028	Live Oak	Wind	300	12/1/2014
13INR0054	Bee	Gas	25	12/1/2014
14INR0025a	Floyd	Wind	200	12/1/2014
14INR0044	Reeves	Solar	100	12/1/2014
13INR0050	Comanche	Wind	200	12/1/2014
10INR0085	Ector	Solar	57	12/1/2014
14INR0009	Kent	Wind	248	12/1/2014
11INR0082b	Val Verde	Wind	150	12/1/2014
11INR0082a	Val Verde	Wind	50	12/1/2014
13INR0045	Castro	Wind	288	12/30/2014
13INR0010d	Parmer	Wind	200	12/31/2014
12INR0055	Baylor	Wind	40	12/31/2014
14INR0049_1	Jack	Wind	102	12/31/2014
14INR0045a	Webb	Wind	502	12/31/2014
14INR0057a	Erath	Wind	48	12/31/2014
14INR0057b	Erath	Wind	48	12/31/2014
14INR0056	Mills	Wind	101	12/31/2014
14INR0053	Oldham	Wind	161	12/31/2014
12INR0070	Knox	Wind	300	1/1/2015
14INR0029	Uvalde	Solar	42	2/1/2015
15INR0036	Uvalde	Solar	105	3/1/2015
14INR0020	Floyd & Motley	Wind	150	3/1/2015
10INR0009	Castro	Wind	300	3/31/2015
15INR0053	Winkler	Gas	142	5/1/2015
15INR0054	Reeves	Gas	142	5/1/2015
15INR0055	Austin	Gas	142	5/1/2015
15INR0021	Starr	Wind	200	5/15/2015
14INR0031	Harris	Gas	270	6/1/2015
14INR0027	Guadalupe	Gas	471	6/1/2015
15INR0027	Hidalgo	Gas	79	6/1/2015
15INR0028 15INR0042	Freestone Hood	Gas Gas	160 460	6/1/2015 6/1/2015
15INR0042 15INR0022	Presidio	Solar	75	6/1/2015
15INR0022 15INR0023	Wharton	Gas	700	6/15/2015
14INR0026	Presidio	Solar	30	9/1/2015
15INR0041	Pecos	Solar	51	9/1/2015
TOUNIOU4T	1 5003	Julai	21	3/1/2013

Interconnection Database Reference Number	County	Fuel	Capacity to Grid (MW)	Commercial Operation Data (as specified by the resource developer)
15INR0013	Anderson	Storage	324	10/9/2015
15INR0014	Matagorda	Storage	280	10/9/2015
14INR0030a_1	Carson	Wind	322	11/1/2015
14INR0025b	Floyd	Wind	300	12/1/2015
08INR0019a	Gray	Wind	250	12/1/2015
15INR0035	Kenedy	Wind	200	12/1/2015
12INR0060	Schleicher	Wind	58	12/1/2015
15INR0034	San Patricio	Wind	201	12/1/2015
14INR0045b	Webb	Wind	251.00	12/31/2015
13INR0032	Andrews	Solar	30.00	12/31/2015
15INR0044	Webb and Duval	Solar	200.00	12/31/2015
15INR0049	Zapata / Webb	Wind	250.00	12/31/2015
14INR0072	Briscoe	Wind	300.00	12/31/2015
14INR0018	Nolan	Solar	20.00	12/31/2015
13INR0010e	Parmer	Wind	200.00	12/31/2015
15INR0060	Pecos and Crane Counties	Solar	25.00	12/31/2015
15INR0059	Pecos and Crane Counties	Solar	102.00	12/31/2015
15INR0037	Starr	Wind	200.00	12/31/2015
12INR0002a	Briscoe	Wind	200.00	12/31/2015
16INR0010	Mitchell	Gas	799.00	2/1/2016
16INR0005	Cameron	Gas	871.00	4/1/2016
16INR0009	Calhoun	Gas	510.00	4/14/2016
16INR0008	Grimes	Gas	687.00	5/1/2016
15INR0032	Hale	Gas	197.00	5/1/2016
15INR0033	Hale	Gas	197.00	5/1/2016
16INR0003	Brazoria	Gas	11.00	6/1/2016
16INR0004	Cameron	Gas	730.00	6/1/2016
16INR0007	Hidalgo	Gas	95.00	6/1/2016
17INR0004	Hale	Gas	202.00	6/1/2016
16INR0006	Angelina	Gas	785.00	6/1/2016
14INR0011	Swisher	Storage	270.00	7/1/2016
16INR0013	Nacogdoches	Gas	215.00	7/1/2016
08INR0019b	Gray	Wind	250.00	7/1/2016
16INR0017	Culberson County	Solar	70.00	12/1/2016
08INR0019c	Gray	Wind	250.00	12/1/2016
13INR0006	Gray	Wind	750.00	12/1/2016
16INR0018	Upton	Solar	40.00	12/1/2016
16INR0019	Coke/Sterling	Solar	100.00	12/1/2016
12INR0079	Kenedy	Wind	200.00	12/15/2016

Interconnection Database Reference Number	County	Fuel	Capacity to Grid (MW)	Commercial Operation Data (as specified by the resource developer)
13INR0010f	Parmer	Wind	200.00	12/31/2016
12INR0002b	Briscoe	Wind	200.00	12/31/2016
16INR0011a	Cameron	Wind	18.00	12/31/2016
17INR0002	Henderson	Gas	489.00	6/1/2017
17INR0003	Jackson	Gas	965.00	6/1/2017
17INR0005	Starr	Wind	200.00	6/30/2017
17INR0007	Wharton	Gas	1177.00	7/31/2017
16INR0011b	Cameron	Wind	132.00	12/30/2017

## 1.7 Wind Generation Capacity Installed by Year



The data presented here is based upon the latest registration data provided to ERCOT by the resource owners and can change without notice. Any capacity changes will be reflected in current and subsequent years' totals. Scheduling delays will also be reflected in the planned projects as that information is received.

 $This chart\ reflects\ planned\ units\ in\ the\ calendar\ year\ of\ submission\ rather\ than\ installations\ by\ peak\ of\ year\ shown.$ 

## 2. Regional Planning Group Project Reviews

- CenterPoint Energy submitted the Houston Region Import Capacity project. This is a Tier 1 project that is estimated to cost between \$297 to \$532 million. This project is currently under ERCOT independent review.
- Garland Power & Light (GP&L) and Cross Texas Transmission (CTT) have jointly submitted the Houston Import project. This is a Tier 1 project that is estimated to cost between \$195 to \$317 million. This project has received several RPG comments and it is under study mode.
- Lone Star Transmission has submitted the Houston Import project. This is a Tier 1 project that is estimated to cost between \$417 to \$675 million. This project has received several RPG comments and it is under study mode.
- Oncor has submitted the West Texas Area project. This is a Tier 2 project that is estimated to cost between \$45 million. This project has received several RPG comments and it is under study mode.

# 3. Asynchronous Tie Interconnection

Project	Notification to ERCOT	Reliability Study	RPG Review	Interconnection Agreement	In- service Year
Railroad DC tie expansion (150 MW - CFE)					2014
Southern Cross HVDC (3000 MW - SERC)					
Tres Amigas (1500 MW - SPP)					

Color Legend	
	In progress
	Complete

### 4. Planning Model Activities

• The short term calendar of major planning model events follows:

o Nov 15, 2013 Post 2014 DSB HWLL case to POI

Dec 13, 2013 Complete Transmission Loss Factor calculations

O Jan 10, 2014 Post Planning Data Dictionary

#### 5. Other Notable Activities

- The project to complete the missing and questionable data for the remaining Resource Asset Registration Forms (RARF) nearing the end. A list of entities that received data estimates and did not return a completed RARF by December 2, 2013 was compiled and sent to ERCOT Compliance.
- ERCOT is working on the 2013 Regional Transmission Plan (RTP). The economic start cases were posted at the ERCOT POI on Nov. 22, 2013. ERCOT is currently working on economic analysis and the 2013 RTP draft report.
- ERCOT has posted the draft report on the results of the Long-term study and the improvements to the long-term study process as a result of the grant received from the Department of Energy.
- ERCOT has issued a Request For Proposal (RFP) in order to hire a consultant to perform a small signal stability study.

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