

Texas Renewables Integration Plan  
(TRIP)  
Quarterly Update to the PUCT  
as of May 31, 2009

Prepared by the Renewable Technologies Working  
Group of the ERCOT Technical Advisory Committee

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### Status of Renewable Generation Resources in ERCOT

At the end of April 2009, ERCOT had 8,135 MW of new wind generation in operation. In addition, there were approximately 1 MW of new solar, 37 MW of new biomass, 33 MW of new hydro and 72 MW of new landfill gas renewable generation in operation.

For the three months ending April 30, 2009, the following new renewable resources became operational:

- Goat Wind (Sterling County) – Phase 2 – 70 MW (Wind)

Wind generation has provided **8.2%** of the total energy produced in ERCOT through April 30, 2009. The monthly ERCOT generation fuel mix is available at:

<http://planning.ercot.com/reports/demand-energy/>

In addition to wind generation capacity that is installed and operating, there are a substantial number of wind generation projects in various stages of study by ERCOT as part of the Generation Interconnection Process as shown in Figure 1 below.

Project Description	Capacity (MW)
Projects with Interconnect Agreement/Public Letter	7,374
Projects Under Full Interconnect Study	30,636
Confidential Projects	11,567
Total	48,677

**Figure 1 – New Wind Generation Capacity Under Study**

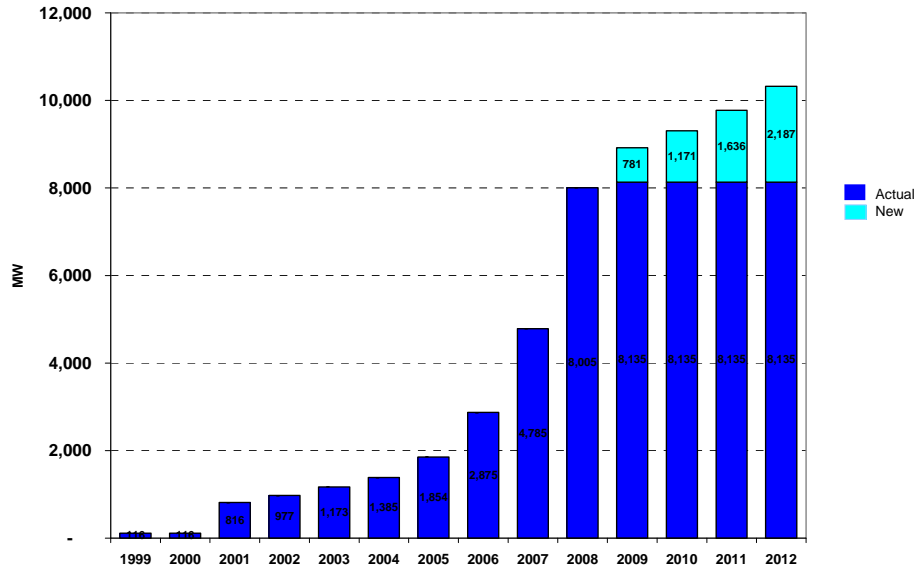
There are 12 projects with Interconnect Agreements or public letters and there are 99 projects undergoing full interconnect studies. In addition, there are three solar projects (369 MW) and one biomass project (55 MW) undergoing full interconnect studies.

For the 3-month period ending May 31, 2009, the following renewable resources signed Generation Interconnection Agreements:

- Senate Wind (150 MW)(Jack County)
- Lenorah Wind (200 MW)(Frio County)
- Sterling Energy Center (300 MW)(Sterling County)
- Langford Wind Power (150 MW)(Tom Green County)
- Panther Creek 3 Wind (200 MW)(Concho County)
- Nacogoches Biomass (100 MW) (Nacogdoches County)

## Texas Renewables Integration Plan for the 3-Month Period Ending May 31, 2009

The annual ERCOT installed wind generating capacities since 1999 are shown in Figure 2 below.



**Figure 2 – ERCOT Installed Wind Generating Capacity (End of Year)**

### Significant Events

During the 3-month period ending May 31, 2009, the Texas Legislature was in session and while several important bills were introduced and under consideration, none were passed that had a significant impact on renewable resources.

### Completed Issues

During the 3-month period ending May 31, 2009, the following Issues were completed:

- MD 2 – Ancillary Services Procurement Optimization for 2009
- SO 13 – Performance Metrics for Wind Generation
- SO 16 – Wind Generation Ramp Limits
- SO 21 – Evaluate Emergency Electric Curtailment Plan (EECP) Steps
- SO 24 – Settlement of Advanced Meters in the Nodal Market
- SO 27 – Manual Curtailment of Wind Generation to Resolve Local Congestion
- SP 1 – Verify Wind Turbine Technical Data

For a detailed list of all Issues and their current status, see the Appendix.

## Texas Renewables Integration Plan for the 3-Month Period Ending May 31, 2009

In addition, the following Protocol Revision Requests (PRRs) impacting renewable resources in the ERCOT zonal market, were approved and/or became effective:

- PRR 788 - Ramp Rate Limits for Existing WGRs (Effective 02-01-2009)
- PRR 792 - Revised Renewable Portfolio Standards Allocation Process, Pursuant to P.U.C. Subst. R. 25.173 (Effective 02-01-2009)
- PRR 793 - WGR QSE Scheduling Metric (Effective 03-01-2009)
- PRR 794 - Meteorological Data Required from QSEs Representing Wind-powered Generation Resources (Effective 004-01-2009)
- PRR 800 - QSE Day Ahead Metric (Approved on 05-20-2009, effective upon system implementation)

### **New Issues**

During the 3-month period ending May 31, 2009, the RTWG began consideration the following issues related to the integration of renewable resources into the ERCOT market:

- SO 30 – Application of Wind Generation Forecast to PASA
- SO 31 – Tension Monitors on Transmission Lines
- SO 32 – Real-Time Wind Generation Capacity
- SO 33 – Real-Time Wind Turbine Availability
- WT 4 – Wind in the Nodal Market

### **Upcoming Events**

The Wind Workshop III has been tentatively scheduled for June 18, 2009 at the ERCOT Met Center in Austin. The RTWG and ERCOT staff are currently securing speakers for the event, which will cover the following topics:

- Data Requirements for LVRT studies
- Telemetry Requirements for Wind
- Review of Resource Asset Registration Forms (RARF)
- Review OGRRs, PRRs, NPRRs that impact Wind
- Wind in Nodal Presentation