

Emerging Technologies Integration Plan Quarterly Update for the Period Ending March 31, 2011

Prepared by the Emerging Technologies Working Group of
the ERCOT Wholesale Market Subcommittee

April 2011

Emerging Technologies Implementation Plan
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Status of Renewable Generation Resources in Texas

As of March 31, 2011, the total new renewable facilities in Texas is at least 10,551 MW¹ which exceeds the 5,000 MW goal specified in the Public Utility Commission of Texas (PUCT) Substantive Rule 25.173 – Goal for Renewable Energy and it exceeds the January 1, 2025 “target” of 10,000 MW.

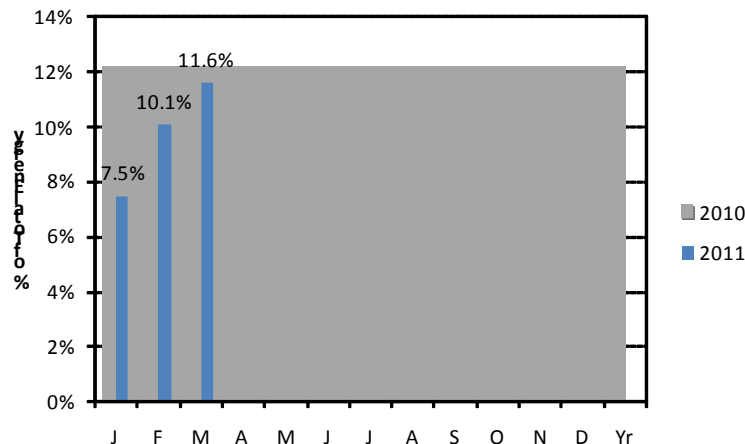
Technology	MW
Biomass	133
Hydro	33
Landfill Gas	99
Solar	29
Wind	10,265
Total	10,551

Figure 1 – New Renewable Generation Capacity Registered with the Program Administrator¹

Status of Wind, Solar, Landfill Gas and Biomass Generation in ERCOT

At the end of March, 2011, ERCOT had at least 9,400 MW of new wind generation capacity, at least 29 MW of utility-scale solar generation, at least 99 MW of landfill gas generation and at least 133 MW of biomass capacity in operation. For the three months ending March 31, 2011, no new wind and biomass resources became operational in ERCOT.

Wind generation has provided 9.6% of the total energy produced in ERCOT from January 1, 2011 through March 31, 2011. The monthly amount of wind energy production as a percentage of total monthly energy production in ERCOT is shown below in Figure 2.



¹ The values shown in Figure 1 are a compilation of data, as of 03-31-2011, from the ERCOT website (<https://www.texasrenewables.com/publicReports/rpt5.asp>) and the Public Utility Commission of Texas. These values do not include those new renewable resources that are not currently registered as a REC Account Holder with the Program Administrator.

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Figure 2 – Monthly Energy from Wind as a Percentage of Total ERCOT Energy Production

The monthly ERCOT generation fuel mix is available at:

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

Furthermore, the amount of energy (i.e., MWh) produced by wind generation in ERCOT continues to increase. Figure 3 below shows the monthly cumulative amounts of wind generation since 2009.

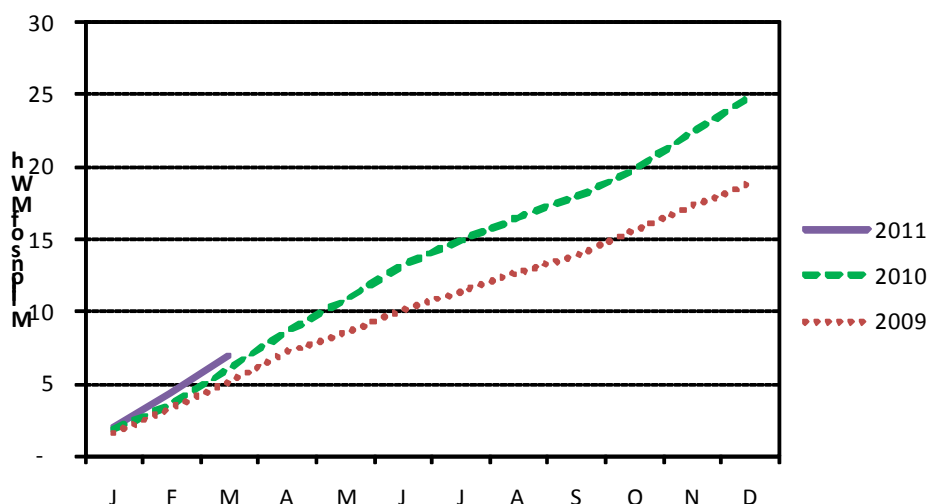


Figure 3 – Cumulative Energy from Wind in ERCOT

In addition to wind generation capacity that is installed and operating, there are a substantial number of renewable generation projects in various stages of study by ERCOT as part of the Generation Interconnection Process as shown in Figure 4 below.

Project Description	Capacity (MW)		
	Wind	Solar	Biomass
Projects with Interconnect Agreement/Public Letter	5,919	0	100
Projects Under Full Interconnect Study	28,188	877	50
Confidential Projects	3,410	566	0
Total	37,517	1,443	150

Figure 4 – New Renewable Generation Capacity Under Study in ERCOT

There are 20 wind generation projects and 1 biomass project with Interconnect Agreements or public letters. In addition, there are 97 wind generation projects

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undergoing full interconnect studies. There are 11 solar projects and 1 biomass project undergoing full interconnect studies.

For the 3-month period ending March 31, 2011, two wind generation resources totaling 600 MW signed Generation Interconnection Agreements.

The annual actual and forecast ERCOT installed wind generating capacities are shown in Figure 5 below.

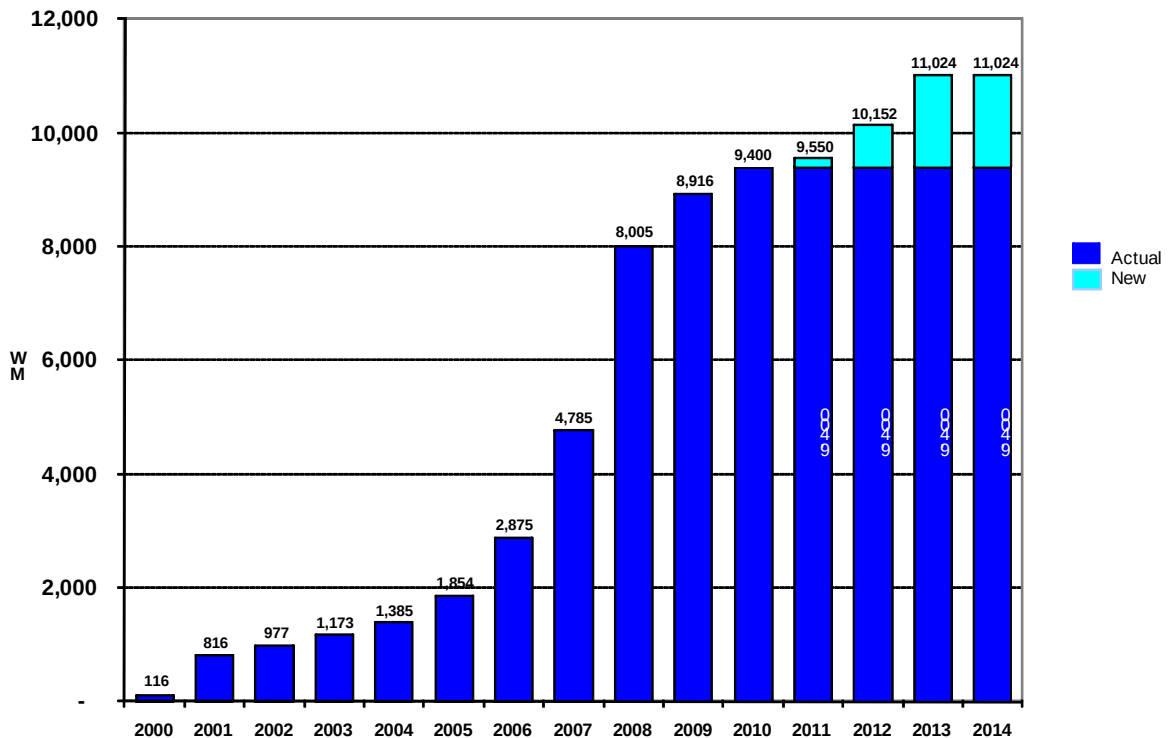


Figure 5 – ERCOT Installed Wind Generating Capacity (End of Year)

Note: "New" in Figure 5 above represents wind generators with a Signed Generation Interconnect Agreement and a planned in-service date in the year shown.

NPRRs Approved During the Quarter

There were no NPRRs approved by the ERCOT Board during the first quarter of 2011 directly related to renewable resources.

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Significant Events During the Quarter

In January of 2011, ERCOT staff presented a summary of the Competitive Renewable Energy Zone (CREZ) Reactive Study to the ERCOT Board. This study analyzed reactive power needs to achieve the cost-effective and reliable implementation of the approved CREZ transmission infrastructure. The study recommended the installation of shunt static reactors and capacitors, and several shunt dynamic reactive devices at various substations, as well as providing specifications for the series capacitors that will be installed on six of the CREZ lines and analyzing the effects of these devices on existing generation. Estimated cost of the shunt devices is \$395 million.