

Renewable Energy Credits: a success in Texas

Renewable energy is booming in Texas as a result of recent legislation and an innovative system of credit trading. **Mike Sloan** explains how the system has evolved and considers where it might lead in future



Texas, the quintessential oil and gas state, is expected to install around 1,000MW of new renewable energy power plants this year – more than has been built in the state during the previous 100 years.

The state's emergence as one of North America's most active renewable energy markets has much to do with recent actions revamping the Texas electric utility industry. The restructuring effort included a mandate that sellers of electricity must, in future, obtain a specified amount of renewable energy and facilitated the creation of a system for tradeable renewable energy credits (RECs). Tradeable credits represent an intriguing new instrument for environmental traders and are a significant development in the quest for cost efficiencies in improving environmental quality.

Texas Renewable Mandate

Texas was the sixth state in the US to adopt laws or rules instituting a requirement to acquire renewable resources – often called a 'Renewable Portfolio Standard' – but it is the first to promulgate meaningful implementation rules.

While Texans have been known to exaggerate their achievements, in this case the results speak for themselves. The estimated 900MW of wind power to be installed in Texas this year represents more wind power capacity than the entire US has previously installed in any two year period. Coupled with new landfill gas-to-electricity projects and renovations to existing hydroelectric facilities, this year's renewable additions will supply

enough electricity for more than 250,000 average Texas homes.

This revolutionary success story begins with a legislative mandate, included in a 1999 electricity industry restructuring law, that 2,000MW of new renewable energy resources be added in the state by 2009. The state's Public Utility Commission successfully tackled the details and delivered implementation rules later that same year*.

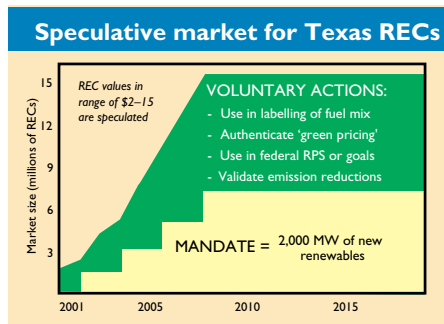
The 2,000 MW mandate set intermediate targets every two years and was converted into units of energy (MWh) to better facilitate trading and incentivise renewable power plant performance. The tradeable instrument, a REC, represents 1 MWh metered at a certified renewable energy facility and can be traded independently from its associated energy. Responsibility for satisfying the goal was placed on electricity retailers, who must acquire and retire RECs based on their pro rata share of state-wide retail energy sales. As retailers must acquire RECs and generators earn them based on performance, a market was born.

The innovation of tradeable RECs allows electricity retailers from any area of the state to seek out the lowest cost renewable resources without having to take physical delivery of the electricity. This has resulted in larger projects and further cost reductions. Other key factors that make the Texas system functional are a long-term commitment continuing 10 years beyond the legislated target (through 2019), meaningful penalties for non-compliance and modest provisions for banking credits.

Beyond the Mandate

Texas has extraordinary renewable resources, opportunities for large installations and favourable electricity transmission rules. As a result, renewable projects can be profitable selling wholesale power at the busbar in the range 3.0 to 4.0 cents/kWh – competitive with conventional power. These facts are shaping a market that will far exceed the 2003 intermediate goal of 400MW and produce a surplus of RECs.

The marketplace is quickly legitimising uses for RECs beyond the mandate for which they were conceived. Voluntary actions, such as those identified in the chart, could grow



the Texas REC market to an annual value (without multiple trading) of \$50 million or more. In the 'green pricing' business – selling electricity based on renewable energy for a premium – Texas now accounts for 60% of new capacity in the US being built to serve such programmes. And, in a development that is sure to catch the interest of emissions traders, Texas' draft rules on electric product labelling will allow tradeable RECs to be used to modify disclosed fuel mix and emissions to customers.

Perhaps most intriguing to the environmental finance community is the potential interplay of RECs with markets in emission reduction credits, such as those for nitrogen oxides and carbon. As all Texas RECs will be issued by the Independent System Operator that oversees the entire electricity market, RECs authenticate actions with a very high level of confidence – a valuable service to emission reduction credit markets. Furthermore, since RECs embody 'all of the renewable attributes associated with' renewable production, the REC may be the starting point for all claims of emissions reductions related to tradeable renewable energy. **EM**
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* www.puc.state.tx.us/rules/rulemake/20944/20944.cfm

The Emissions Marketing Association consists of more than 270 members from 190 companies worldwide. Its aim is to promote market-based trading solutions for environmental control

