



Renewable Market Growth: Key Drivers to Watch in 2011

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Renewable energy staged an impressive comeback in 2010, after a rebound from the financial crisis of 2008 and 2009. Though its recovery may not be complete. Key market drivers to watch in 2011 are highlighted as follows...

Electricity demand

The economic recovery is bringing with it a modest increase in demand for electricity after a precipitous fall in 2008 and 2009. Demand for electricity fell by one percent in 2008 and by 3.4% in 2009—the largest decrease since 1938*. Demand rebounded in 2010, with a 4.2% increase, putting consumption back at pre-recession levels. Although the US Energy Information Administration (EIA) expects electricity consumption to fall this year by a tenth of a percent from 2010 levels, it expects a larger increase (approximately 2.5%) in 2012, and electricity demand appears to be normalizing after a tumultuous couple of years. Moreover, strong growth in the manufacturing sector appears poised to increase industrial electricity demand at the predicted rates of 1.7% in 2011, and 2.3% in 2012.

Shale gas

Increased production of shale gas in the US is adding to the gas glut at a time when demand is falling. Gas prices have fallen dramatically to around \$4.00/MCF from peak prices of nearly \$15.00 in 2008. The dramatic increase in shale gas supply has left domestic LNG import terminals sitting idle, especially considering the multi-billion dollar capital investments to export domestic gas to Asia and Europe—where prevailing market prices are higher. Lower gas prices put downward pressure on

wholesale power markets and renewable developers seeking to develop competitive projects. On the other hand, the increased availability of natural gas may lead utilities to consider accelerating the retirement of up to 60,000 MW of obsolete coal-fired power plants facing substantial environmental compliance costs, opening the energy market for increased gas and renewables' participation.

Project scale

Another factor at play in the renewable market is a trend toward major scale-ups in the size of renewables' projects to achieve efficiencies in capital and operating costs. December 2010 marked a watershed of sorts, as two of the largest solar and wind projects ever developed in the US, Abengoa Solana CSP and Shepherds Flat Wind, achieved financial closing. As new and larger-scale technologies are tested and perfected, some of the obstacles to building and financing large-scale renewable projects may fall away. However, larger projects also put strain on equipment supply chains and the EPC sector. As projects are scaled up, so are the risks that accompany them including cost overruns, delays, foreign exchange, and currency risk. As billion dollar-plus renewable projects have only recently been seen, their impact on the EPC sector remains to be uncovered.

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Domestic supply chain pressures

In addition to the increasing scale of renewables' projects, renewable energy equipment/component producers are facing pressure due to other factors. First, fewer utilities are executing power purchase agreements at prices that make renewable deals feasible as compared to the height of the market in 2007 and early 2008. This diminishing demand may force equipment suppliers to cut prices to maintain adequate production volumes. As the volume of orders declines, large US manufacturers may begin to cut product lines altogether in order to cut costs. Deepening the potential negative impact on the domestic manufacturing base are the rock-bottom prices for components offered by state-backed Chinese manufacturers, particularly in the solar photovoltaic market, with whom US producers are finding it increasingly difficult to compete. Finally, utility scale PV projects are bidding into markets previously occupied by solar-thermal projects, putting even more downward pressure on prices.

Financial market recovery

Although the economy has rebounded since the lows of 2008, banks remain constrained in their lending, particularly for long-term debt. However, competition for short- and medium-term mini perm loans has increased. Moreover, liquidity is increasing in the capital markets, which is proving to be a good source of low-cost funding for investment-grade credits. Sub-investment grade credits will find financing to be more difficult, as the high-yield market tends to be volatile, though competitive pressures are driving down high-yield interest margins and financing terms are generally issuer favorable in the current market. On balance, liquidity is higher than it was in late 2008 and 2009, and there is more term lending. But, there may remain a limited appetite in the capital markets for complex construction projects such as billion dollar-plus renewables' deals. Those projects will continue to rely on government loan guaranty programs and federal and state tax credits.

Tax credits & cash grant uncertainty

As in 2010, the domestic renewable market once again faces a fast-approaching sunset date for its popular Section 1603 cash grant program. The program was set to expire on December 31st, 2010, but was extended at the 11th hour through December 31st, 2011 by the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 (the "2010 Tax Act"). The extension is good news for developers, but the last-minute extension gave a preview of the rush developers will face to begin construction before the start of 2012. Section 1603 is particularly important in the current market as the tax equity market remains capacity constrained, with significantly more demand from developers than the limited number of tax equity investors can satisfy. Pricing has risen in the tax equity

market and developers are increasingly dependent on the cash grant program to successfully raise needed equity capital. Renewable energy interests are lobbying for another extension of the December 2011 sunset date, as well as for an extension of the Section 1705 loan guarantee program from the US Department of Energy. The 2010 Tax Act brought another bonus for developers: 100% bonus depreciation for renewable energy projects during 2011.

Absence of Federal RPS

The lack of a federally mandated renewable portfolio standard (RPS), combined with weak electricity demand and lower gas prices, continues to restrict the long-term off-take options for most renewable developers. There are, however, a few state-level RPS programs. California, for example, requires its retail electricity sellers to procure at least 20% of their electricity each year from renewable sources. New Jersey not only has an RPS program, but also a solar-specific RPS requiring a certain portion of electricity to come from solar sources. Both the RPS and the solar RPS have increases in the renewable energy requirement built in each year through 2026.

Transmission upgrade cost

The high cost of transmission upgrades for interconnecting large-scale renewable projects has resulted in utility proposals for advance funding, subject to FERC review and approval on a case-by-case basis, resulting in significant administrative cost, delay, and uncertainty. In instances where FERC approves advance transmission funding and recovery of abandoned plant costs, problems may still arise at state level with necessary certificate and permitting issuances. Furthermore, even permitted transmission upgrades can take years to finish, which may limit capacity value of renewable projects for utilities' "resource adequacy" requirements under state law.

Conclusion

Overall, there is reason for optimism in the renewables' market. The improving but ever-changing economic scene means there is room for growth and for positive trends in renewable development. The upswing in renewables' activity at the developer, financing, and government levels is good news, and the increased levels of liquidity in the project finance markets may bring more investment, particularly from private equity/infrastructure funds and foreign investors looking to gain a foothold in the sector. As the renewables' market matures technologically and financially, opportunities for investment in the sector are likely to increase.

** References available upon request.*