

Navigating the ever-changing currents of the US renewable energy market | BY BENJAMIN L. ISRAEL AND JAMES W. MCTARNAGHAN

When President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA) into law on 17 February 2009, he put into place key elements of a comprehensive policy to assist the development of renewable energy in the United States. Never before has so much political capital – and real capital – been dedicated toward the growth of the domestic renewable energy market. With the industry's focus on attracting what are significant, but still limited, financial resources, it is even more critical for market participants to understand the ever-changing currents of this still-developing market.

ARRA incentives

The ARRA incentives are a major step forward for the renewables market. On 3 October 2008, President Bush signed into law the Emergency Economic Stabilization Act of 2008, which extended the 30 percent federal Investment Tax Credit (ITC) for both residential and commercial solar, as well as small-scale wind and other technologies, through 31 December 2016. The federal Production Tax Credit (PTC) was also extended for large-scale wind, biomass and geothermal as well, albeit only through 31 December 2009. The ARRA renewable energy provisions reflect a wholesale upgrade of the incentives included in the prior stimulus package. Nonetheless, the patchwork of research and development funding, loan guarantees, incentives and other benefits requires a comprehensive understanding for market participants to successfully navigate the newly enhanced market opportunities.

The renewable energy provisions in the ARRA include: (i) a \$16.8bn grant program for renewable energy developers, to be administered by the US Department of Energy (DOE); (ii) a \$6bn temporary loan guarantee program for developers and manufacturers of renewable energy facilities and equipment, to be administered by the DOE; (iii) an extension of the PTC for electricity derived from wind facilities placed in service by 31 December 2012, as well as for geothermal, biomass, hydropower, landfill gas, waste-to-energy and marine facilities placed in service by 31 December 2013; (iv) an option for owners of PTC-qualifying equipment to alternatively utilise the ITC; (v) an option for owners of ITC-qualifying equipment, including solar and other clean technology projects, to convert the ITC to a one-time payment from the US Department of the Treasury equal to 30 percent of the cost of such equipment; (vi) repeal of the rule prohibiting full ITC qualification for property financed with industrial development bonds or other subsidised energy financing; (vii) \$2.5bn for DOE research, development and deployment funding; and (viii) a tax credit for advanced energy manufacturers.

The ARRA cuts a large swath across the US renewable energy industry. The tax incentives, grants, bonds and loan guarantee program target all forms of renewable electric power generation and transmission. Benefits for alternative fuels and electric vehicles are also included.

The broad focus includes research and development, short-term funding and long-term smart-grid development. While the renewable energy programs envisioned by the ARRA may be viewed as nothing less than extraordinary, the success of these programs is inherently tied to their implementation. Those in the renewable energy industry are awaiting guidance from DOE and Treasury on how these programs will be implemented. It is worth noting that the pre-existing DOE loan program for renewable energy developers under the Energy Policy Act of 2003 distributed its first dollar only in March 2009. However, DOE Secretary Chu has pledged to speed up the loan-making process, promising that the new loan approval system will cut that time to a matter of months, and drastically reduce the amount of paperwork. Treasury has indicated that it expects the ITC grant program to be in place, with an online application process, by July.

Impacts of the ARRA incentives

The tangible benefits brought to the US energy sector are likely to be both immediate and sustainable over the near term. As noted, the ARRA allows wind developers to elect the ITC rather than the PTC, and allows solar developers and other developers of ITC-eligible projects that commence construction in 2009 or 2010 to convert the ITC into a cash payment following commercial operation. As a result, the program embodied by the ARRA allows qualifying renewable energy developers the possibility of moving forward with equity investors who are not focused solely on tax credits. Unfortunately, due to constraints in the debt and equity markets, these opportunities may not translate into near-term financeable projects. However, the DOE loan guarantee program – if timely implemented – allows these same developers access to debt in a cash-strapped market. Taking a slightly longer-term view, developers of renewable energy projects now have the opportunity to engage in longer-term planning necessary for sustained development activity without the risk of the boom-and-bust cycle that has tracked the periodic extension and expiration of the PTC and ITC.

The renewable energy provisions of the ARRA have also created opportunities for new strategic and financial investors in renewable energy projects. These provisions further have the potential to drastically change the financial analysis that has traditionally been employed to evaluate investment opportunities in this market. The new program embodied by the ARRA not only has the potential to liberate ownership structures historically driven by tax equity investment, it also has the potential to reduce the conflicting roles of certain tax investors with preferred distribution rights who might look and behave more like creditors than equity investors. The ITC grant program can also significantly change cash flows following commercial operation, accommodating investors with varying needs for maturity of investment.

Cap-and-trade and national RES proposals threaten market predictability

Notwithstanding the almost immediate change resulting from the ARRA, there are other factors in play in Congress, namely carbon cap-and-trade legislation and a proposal for a national renewable energy standard (RES), that will continue to cause the domestic renewable energy market to shift, ebb and flow.

Part of the Obama Administration's core energy policy includes a cap-and-trade approach to reduce carbon emissions.

While a cap-and-trade regime appears to have prevailed over a carbon tax, Congress continues to debate the structure of a cap-and-trade program, which is projected to further increase the demand for renewable energy resources. The legislative manoeuvring currently suggests that a proposed program may emerge from the US House Energy and Commerce Committee in the next month or so, and that the Senate may take action in late summer or early fall 2009. Yet key issues remain unresolved, including whether emissions allowances will be auctioned or simply given away to electric utilities and energy-intensive industries.

While the cap-and-trade discussion matures, renewable energy industry leaders and members of Congress continue to advocate for a national RES to sidestep the patchwork of state incentives, benefits and market rules. Current legislative drafts contemplate a national RES requiring 25 percent of the nation's energy consumption to be generated by renewable energy resources by the year 2025, or 15 or 20 percent by 2020. This debate trails the action already taken by 28 states and the District of Columbia, which have each enacted their own individual Renewable Portfolio Standard (RPS). To varying degrees, most of the 28 states with an RPS have seen continuing growth of the development and consumption of renewable energy resources in their states. Not only are these states already leading the United States in renewable energy development, they are also likely to be the primary beneficiaries from the new investment arising from the ARRA incentives as a result of the early creation of their own renewable energy markets.

A national RES would presumably create a national renewable energy market in which kilowatt-hours from renewable energy resources would be reduced to a pure commodity that could be traded across the country. An issue with this analysis is that renewable energy resources are not evenly distributed across the United States. While photovoltaic solar

technology offers varying degrees of efficiency in almost any region of the country, concentrated solar power technology is currently commercially feasible only in the Southwest. Utility-scale wind is feasible only in certain windy regions, and biomass and geothermal resources are similarly limited by geography and geology. Meanwhile there is a continuing debate on whether the Southeast has adequate renewable energy resources to compete with other regions. The concern is that regions that are not rich in renewable energy resources may be required to effectively subsidise renewable energy-rich regions should Congress enact a national RES that does not account for these regional geologic, geographic and meteorological differences.

Consequently, the debate has not yet been refined with enough specific details to suggest that a national RES is on the immediate horizon. It is also important to note that a report just released by the Energy Information Administration forecasts that even the proposed national RES requiring 25 percent renewable energy generation by 2025 is not expected to affect national average electricity prices until after 2020. In other words, even enactment of a national RES would not drastically change electric power market prices for at least 10 years. So while the federal government debates cap-and-trade and national RES proposals, there is a relatively predictable market in which the states continue to create, control and enhance market opportunities, and thereby influence where renewable energy investments will be made.

In essence, just when the market structure may be viewed as more predictable with the ARRA incentives, market participants are likely to be faced with a need to adapt to continued changes in speed and direction of the renewable energy current, as Congress continues to develop a comprehensive policy for renewable energy development. Before developers, investors or lenders jump back into the water, they are well-advised to look at the evolving market patterns and pressures and maintain enough flexibility with their plans to be able to adapt, because the renewable energy current is likely to continue to change. ■

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