HSBC Climate Change

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US Stimulus Package – implication for Renewables

Better-than-expected package of stimulus measures for Renewables – but is it enough?

- **US President Obama is expected to sign into law the final American Recovery and Reinvestment Act on 16 February**
- **The Act contains USD65bn worth of stimulatory measures for the Renewable Energy Industry**
- **These are better than had been initially expected but may not be enough to prevent a difficult 2009**

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Obama shows strong support for Renewables

Following intense lobbying by the Renewables Industry and a well-flagged pre-electoral commitment to create green collar jobs by President Obama, the American Recovery and Reinvestment Act (ARRA) did not disappoint. In fact, the final Act that navigated through Congress on Friday 13 February was, if anything, better than the previous iterations of the Bill that had been debated in both Houses in the preceding three week period.

Wind the major beneficiary from US Stimulus …

Wind appears to be the major beneficiary of the ARRA with key subsidy extensions plus new grants and loan guarantees. Specifically, the provisions that are new for Wind are:

- 3-yr PTC extension until 2012;
- Wind developers now able to take advantage of the ITC (30% capital subsidy) instead of the PTC (greater subsidy, on average, plus has the advantage of being a large upfront cash sum); and
- Bonus depreciation of 50% in year one (through 2009).

… with key measures for Renewables in general

Key measures to support the Renewables industry overall (rather than just wind)

- Treasury grants in lieu of the ITC for those without sufficient taxable profits to offset
- USD 6bn of loan guarantees
- ITC (30% capital subsidy) to be made available to manufacturers wishing to build

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Key provisions for Renewables in ARRA

Provision	Benefit
Wind Production Tax Credit extension	3 Yrs (until 31 Dec 2012)
Geothermal/Biomass PTC Extension	3 Yrs (until 31 Dec 2013)
Investment Tax Credit Option	Developers of PTC-qualifying projects may opt for the benefit of the ITC instead
Treasury Department grants (proposed originally as Department of Energy grants)	Developers may opt to receive a cash grant benefit equal to 30% of a project's cost in lieu of tax credits.
"Bonus" depreciation extension	Extends 50% first year depreciation established in 2008 through 2009
Department of Energy loan guarantees for transmission upgrades and smart grid development	$11bn
DOE loan guarantees for renewable energy	$6bn
Energy efficiency updates and research funding	$18.4bn
Manufacturing ITC	30%, up to $2bn total programme

Source: HSBC, NEF, US Senate and House of Representatives

Total package for Renewables is estimated at USD21bn of stimuli

The total cost of the various stimuli for Renewables is estimated by US Congress to be USD21bn for the tax incentives. We note that this figure is an estimate, as the PTC and ITC extensions are open-ended and the total cost will depend on the magnitude of new installations.

ARRA 2009 - Cost of Tax Incentives

Incentive / programme	Final cost (USDm)
Three-year PTC extension (through 2012 for wind, 2013 for biomass, geothermal, marine)	$13,100
Option to select the ITC instead of the PTC	$285
Repeal of the small-scale generation caps and of the rule preventing government funded projects from using PTC/ITC credits	$872
$1.6bn in new clean renewable energy bonds	$578
$2.4bn in new qualified conservation bonds	$803
Tax credits for energy efficiency updates	$2,000
Manufacturing ITC (30% up to $2.3bn)	$1,600
Five-year depreciation for smart meters, renewable energy projects	No designated cost
Plug-in electric vehicle drive credit on first 200,000 plug-in vehicles produced in the US	$2,000
Treasury Department Grants programme (in lieu of the PTC/ITC)	$5
Credits for alternative fuel pumps	$54
Total cost of tax incentives	**$21,297**

Source: HSBC, NEF, US Senate and House of Representatives

The total cost for the Incentives programmes, including energy efficiency, clean coal and grid infrastructure is estimated by Congress to be around USD44bn, taking the overall total to USD65bn.

ARRA - cost of US Govt spending programmes

Government programme	Cost (USDm)
Reliable, efficient electricity grid	$11,000
Renewable energy loan guarantees	$6,000
Efficiency updates for federal buildings	$4,500
Local government efficiency grants	$6,300
Home weatherisation	$5,000
Clean coal, CCS research and demo	$3,400
Energy efficiency and renewable energy research	$2,500
Advanced batteries grants	$2,000
Efficiency housing retrofits	$250 (will also take a share of $4bn for general public housing upgrades)
Department of Energy science research	$2,000
Electric and alternative transport, and energy efficient appliances	$1,000
Total cost of spending programmes	**$43,950**
Total cost of bill (tax incentives + spending programmes)	**$65,247**

Source: HSBC, NEF, US Senate and House of Representatives

Key positive - Attempting to overcome some of the financing hurdles

We believe that one of the key debates around the legislation centred on how to "fix" the "broken" system of fiscal subsidies.

A large portion of the Renewables Industry in the US relies on one of two fiscal subsidies: the Production Tax Credit (PTC) or the Investment Tax Credit (ITC). In order to take advantage of these fiscal subsidies, Wind/Solar developers must have sufficient taxable profits to offset against the credits, or if not (as in most cases), they need to arrange tax equity finance through usually a US tax paying financial institution. The provision of tax equity finance has all but disappeared in the aftermath of the latest phase of the financial crisis, thus rendering the PTC and ITC subsidies in force but effectively useless.

In order to circumvent this, Congress had proposed replacing the PTC and ITC with grants from the Treasury (or DoE previously). However, this provision had been removed from the Senate version of the bill but Treasury grants have been inserted into the final version of the ARRA. This is, in our opinion, the key stimulus measure contained within the ARRA and in this respect the Act is very positive.

Potential issues – still no commercial project finance?

However, we note that whilst the ARRA does indeed provide a number of incentives to get the Renewables markets off the floor in the US, it is NOT however the saviour for Renewables' financing. Indeed the lack of available bank capital to lend to finance projects remains a serious issue. The US loan guarantees and the US Treasury grants in particular will only partly address the lack of financing available to the Industry. The bottom line is that if there is no commercial lending market, then subsidies and grants to part fund developments remain of academic interest and somewhat anaemic.

In the absence of being able to fund on balance sheet, all developers will therefore still need to source construction finance (to build wind/solar developments) plus a further 70% of the capital cost of a facility. The lack of such finance may render the measures less successful than intended.

This places a lot of onus of the USD6bn of loan guarantees for Renewables projects. We have two observations in regard of these measures. First, we estimate that US Wind and Solar industries spent around USD18-20bn on new installations in 2008, and thus USD6bn (of loan guarantees) would represent a vast drop in outlay. Second, we note that US government expects that the loan guarantees could be levered up in public/private partnerships in a ratio of as much as 8:1, i.e. over USD40bn of investment finance. We regard that as ambitious in the current market.

Implementation timetable?

In addition to the lack of available commercial finance, we note that these measures may well take time to implement, particularly the US Treasury grant programme. This is in spite of a 2010 year end expiration and because we believe that the relevant staff to implement the plan at the Treasury have yet to be hired.

Sector conclusions

As a result of the above, we therefore expect that the ARRA will merely act to stem the decline in markets, rather than provide a stimulus for a resumption of growth in Wind and Solar. We would therefore continue to expect 2009 to be a difficult year with lower volumes and ASPs for Wind and Solar. Increasingly 2009 is looking like a year of two halves – with H1 2009 very weak before a muted recovery in H2 2009. We expect 2010 to show a strong recovery versus 2009, in large part as a result of the ARRA.

We still prefer Wind stocks to Solar, and the Utilities to the Equipment manufacturers and this investment orientation has only been enhanced by the ARRA.

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