The outlook for European renewables

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Summary

- Generous price subsidies and supportive legislative frameworks have led to an explosion of renewable energy in the EU, especially in Germany, Spain and Italy. However, in the past eighteen months subsidies regimes across Europe have been significantly pared back.

- This change in the weather is driven by three things: attempts to lower costs for consumers, a growing sense of the longer term gas alternative and falling cost of some renewables, particularly solar photovoltaic and onshore wind.

- This confronts European policy makers with the distinction between supporting renewables electricity generation in the EU and supporting the manufacture of renewables technology in the EU. The competitive challenge from China in particular makes the latter look increasingly like an uphill battle against Chinese cost competitiveness. The EU's posture on Chinese competition will be an important signal of how it sees this particular fight.

In last week's Global Counsel Insight we looked at the changing regime for renewable energy in the UK. This week we shift the focus to the European level. Since around 2000 both domestic and European level legislation has encouraged the establishment of generous subsidy packages and supportive legislative frameworks for renewable energy in many of its member states, particularly Germany, Spain and Italy. As a result Europe has become the world's leading market for renewable energy.

This strong consensus behind the subsidised generation of renewable energy is being eroded by a number of factors. European governments have reduced indirect subsidy systems that support renewable generation through higher consumer prices. The growing perception that in the longer term Europe will have access to large volume low cost gas supplies has also provided additional leverage to the political case against large scale price support for renewables. The combination of reduced subsidies, oversupply and aggressive price competition from Chinese manufacturers has led to a number of bankruptcies in European renewables equipment manufacturers.

This inevitably raises the question of the future for renewables investment in the EU. This Global Counsel Insight argues that whether the sector can survive in its current form largely depends on whether European policymakers decide that Europe's renewables industry is an end in itself, or merely a way to achieve its renewable energy targets.

Blooming in the sunshine of subsidy

For the last decade Europe's governments have set out a programme of carbon emissions reduction and targets for increasing power generation from renewable energy sources. Domestic legislation such as Germany's 2004 Renewable Energy Sources Act led the way in promoting renewable energy. With strong German backing, the EU's 2008 climate and energy package institutionalised this programme at the European level and broadened it by placing obligations on all member states to

meet targets for reductions in carbon emissions, improvements in energy efficiency and increases in renewable energy generation. Central to this was the target of 20% of European energy generation from renewable sources by 2020.

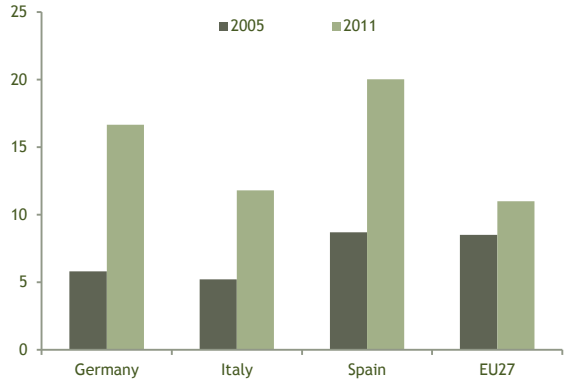

Fig 1: Renewable electricity generation in Europe (% total electricity consumption)

Source: BP Statistical Review 2012

The various applications of this target – usually through artificial price floors for renewable energy paid for by consumers – have helped turn Europe into the world's leading renewable energy market. Both renewable energy generation and the manufacture of renewable energy equipment have grown rapidly (Fig 1). Indeed part of the motivation for the institution of the EU renewables targets was to provide long term security for industries which had already developed in Germany, Spain and Italy. For policymakers, the opportunity to merge carbon mitigation policy and industrial policy has proved be an attractive one.

Purely in terms of the volume of electricity generation, European support schemes have been a striking success. Europe has around 75% of the world's solar electricity capacity and in 2011 Germany and Italy together installed just under half of the world's new solar electricity generation capacity. Europe also has the world's largest installed wind capacity, although onshore wind is considerably more advanced than offshore where generation capacity remains low. Although it is difficult to make predictions in a market as volatile as energy, the EU looks to be largely on track to meet its target of 20% renewable energy generation by 2020.

This progress has, however, come at a cost. As many generators rushed to begin producing electricity under generous terms, the cost to consumers of subsidising this new production has also risen sharply. In 2011 it was estimated that Spain was facing an 'electricity tariff deficit' (the difference between the sum cost of supplying renewable electricity and the sum total paid by consumers) of €24 billion. Although on a lesser scale, billions of euros have also been spent in Italy (around €7 billion in 2011) and Germany (€13.2 billion in 2010).

This has prompted a range of attempts to recalibrate the system. Significant energy reform bills have been passed or are being formulated in the Czech Republic, Germany, Italy, Spain and the UK – which together account for around half of all European electricity generation. All of this legislation has been characterised by a paring back of direct or indirect subsidy support for renewable generation. In the largest renewables markets, German solar feed-in-tariffs have been reduced by around 30% and Italy's fifth Conto Energia package could cut premium rates for renewable energy by as much as 36%.

From the point of view of investor certainty, the actions of the Spanish government are perhaps the most dramatic. Shortly before Christmas 2010 the Spanish government announced a cut of 30% to solar photovoltaic (PV) feed-in-tariffs lasting out to 2014. What outraged the industry and investors was that the cuts acted retroactively on plants built before 2008. The government has followed this in January 2012 with the announcement of a moratorium on subsidies for new renewable energy projects in order to address the massive electricity tariff deficit. There have also been reports of a plan to introduce a 19% tax on revenue generated by solar PV systems which receive a feed-in-tariff.

The political wind turns

What is driving this wider rethink on support for renewables? Partly politics. A number of governments in Europe have identified cutting

subsidies for renewables as an easy way to deliver some relief to austerity-weary populations through lower energy prices. For now, much of the sensitivity over the price of energy is actually due to the current high price of gas in the European market. In the longer term however, the prospect of falling gas prices in Europe due to LNG imports and domestic shale production, especially if combined with forms of carbon capture is also providing an attractive alternative to comparatively expensive renewables investment.

But the reduction in subsidies is also a reflection of the rapidly improving economics of some forms of renewable energy. Most notably the price of solar PV energy, which has been one of the most expensive sources of renewables, fell by 75% between 2008 and 2011 (measured in $/peak Watt) due to advances in panel technology and cost savings from a rapid expansion of manufacturing scale. As an estimated 65% of the cost of a solar PV installation is the panel itself, this fall in cost has to some extent mitigated the impact of the reduction in subsidies for generators of solar energy. Similarly wind turbines are at their lowest cost since 2008, when price monitoring began, and increasing number of analysts are predicting that onshore wind and solar PV will be competitive with fossil fuels across significant areas within three years.

Fig 2: Aggregated net margins for the solar PV industries in China and western markets

Source: IMS Research 2012

Have these falling costs compensated for reduced subsidies for manufacturers? Not on the whole. The announcement in Germany of a cut to the subsidy for solar PV in February was followed by a raft of bankruptcies and shutdowns, including US solar panel manufacturer First Solar announcing that it will close both of its German plants before the end of 2012. German companies Solarhybrid AG, Q-Cells and Solon all filed for bankruptcy in the first half of 2012.

This is in large part because a significant driver of the fall in unit costs for solar PV and wind turbines comes in the form of rapidly expanding Chinese competition. Chinese manufacturers have managed to turn their lower cost base into market share in export markets including Europe. In 2011 four of the top five suppliers of solar PV panels measured by shipping volume were Chinese, China holds over 70% of the European market and imported over €17.5 billion of solar product exports into Europe in 2011.

The combination of slowing demand growth in Europe and an oversupply of Chinese imports has caused a glut of equipment that has pushed down global prices. Bankruptcies in Europe have been matched with the failure of a number of Chinese companies as margins have been eroded for manufacturers both in the West and in China (see Fig 2). The industry has suffered from two difficult years - the Bloomberg Global Leaders Solar Index which monitors the market performance of 37 companies across the world has fallen 80% since the middle of 2010.

The reaction to this squeeze is a reminder of how embedded the renewables industry has become in Europe. Over 1.1 million people are now employed in the sector in Europe and the industry is estimated to be worth over €23 billion. In March Berlin saw protests over the legislation to cut the subsidies for solar PV which unusually involved both environmentalist groups and representatives of various industrial unions. Plans to speed-up the rate of cuts were also resisted by various German states looking to protect their burgeoning renewables industries. This is the first sign of the emergence of a green growth industrial lobby in which the goals of environmental and industrial lobbies align in support of the renewables industry.

Energy or industry or both?

It is this industrial lobby that points to one of the bigger questions for renewables manufacturers in Europe. Is the aim of renewables policy in Europe to deliver renewable energy, or to produce a renewable energy industry in Europe? At the heart of the problem for European renewables manufacturers is the fact that it is difficult for them to differentiate their products from those of non-European competitors through branding or added value. Apart from marginal differences in efficiency, renewables technologies such as solar PV panels and wind turbines currently compete primarily on price - an area in which European companies face inherent disadvantages vis-a-vis China. The gas lobby has been assiduous in pointing out that the solar industry may well be in a losing fight with mass-producers in China.

What is certain is that renewables manufacturers and their political supporters are unlikely to go down without a fight. The US has already launched a WTO anti-subsidy case against alleged Chinese subsidies for solar panel manufacturing, and the EU is considering its own case. European solar manufacturers have filed a anti-dumping complaint in Brussels accusing Chinese companies of using Chinese subsidy support to 'dump' panels on the European market at under cost price in order to gain market share. Whether the Commission takes action on this – and it probably will - will provide an important political signal of the importance of the European renewables industry. Such duties will however raise the costs of PV panels – something which would sit incongruously with the overall goal of lowering the cost of renewables installation.

Another important signal will be the decision of the EU on whether to adopt new renewables targets (as opposed to carbon emissions targets) for 2030. The previously enthusiastic European Commission has increasingly seemed cooler on renewables targets, preferring a functioning carbon market that drives carbon emissions down without being prescriptive on technologies. This leaves the European Parliament as the only vocal defender of such targets – voting a call for binding targets in March 2012. Obviously agreeing to targets does not automatically imply support for domestic industry, but the two are closely linked politically.

The current phase of consolidation in European renewable manufacturing may yet produce companies capable of accessing growth in renewables use both domestically and globally. Whilst it will be painful, the increasing exposure of the industry to market discipline and external competition will help produce companies with the scale and efficiency to drive down cost. Some companies may even find new business models in joint ventures with Chinese companies to match European brand and marketing skills with Chinese production.

However, unless European policymakers actively increase their support for the industry, the European renewables manufacturing industry, at least for base technologies such as solar and onshore wind, faces a serious squeeze. The reduction in imported unit prices and the prospect of falling gas prices means that government support for European renewables manufacturing will look like an increasingly expensive way to achieve their renewables targets. Previously, European policymakers could argue that subsidies for domestic renewable technology industries had both an environmental and economic logic. The recessionary squeeze on European consumers and dynamic of global competition means that this argument may no longer ring true.

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