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Renewable energy: A new support mechanism for France

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DEBATE

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France is expected to introduce a mixed market mechanism for the sale of renewable electricity from January 1st, 2016. The German and UK renewables markets provide useful insights into measures that could facilitate the transition, as well as the potential impact on specific technologies and the investment environment.

There is one thing you can be certain of…

Sam Street
Senior consultant at Frontier Economics
Former senior economist at the UK Government Department of Energy and Climate Change

Energy policy in Europe is dominated by the 'Trilemma', namely the need to achieve in parallel the three goals of decarbonisation, supply security and least cost.

The UK introduced wide-ranging market reforms to deliver on highly ambitious decarbonisation targets and attract the huge amounts of capital required. The reforms included a specific support regime for low-carbon technologies based on: the transition from a premium feed-in tariff (FIT) framework to an ex post premium contract for difference (CfD) regime; allocation via auctions; and a long-term budget for low-carbon support payments.

The CfD mechanism

The UK aimed to develop a market system that could apply to all energy technologies, including nuclear and carbon capture and storage, and would provide sufficient certainty to reduce the cost of capital. The CfD guarantees a price per kWh based on the wholesale strike price for a given technology, smoothes fluctuations through a top-up and pay-back system, and maintains generator participation in the market while minimising excessive rents. It is, however, a more complex than a premium FIT system.

A back-stop Power Purchase Agreement (PPA) was established in response to concerns about the ability of small renewable generators to cope with the new system and participate in the market, specifically their ability to access long-term PPAs. The current

expectations are that there will be little call for this service.

Allocation via auction

The decision to allocate contracts by auction followed an initial phase of contracts based on administrative prices. One auction has been held thus far and the results are promising, with prices significantly below the previous administrative prices. It is estimated that had the previous contracts been purchased at the clearing prices in the auction, it would have saved approximately GBP 300 million.

Long-term budget for support payments

The introduction of a fixed budget extending beyond the political cycle provided visibility to investors and facilitated the financial management of long-term contracts.

Review and outlook

Despite early signs that it has produced savings, the system is hampered by uncertainty. The government is unwilling to provide clarity on its pace of decarbonisation to 2050 so there is little clarity on how it sees the technology mix in 2030; the lack of visibility is creating difficulties for the renewables industry and feeding uncertainty among investors. There is a serious lack of funds up to 2020 for new investment due overspending of the existing budget. This is in part due to flaws in the initial design of the budget, and unexpectedly strong uptake for small-scale renewables that receive fixed FITs as well as substantial changes in the wholesale energy prices. The government may also continue to tinker with the regime – for example it is thinking about system costs and the wider balancing and security issues associated with renewable technologies. Unlike in France, renewables are not included in the UK capacity mechanism.

There are signs the new UK government is slowing down its decarbonisation ambitions and cutting the investment and subsidy programmes for renewables. It is reasonable to assume that there will be adjustments made to the auction mechanism in future and it is not clear when the next CfD auction will take place. These recent changes in the UK environment highlight the importance of political risk for investors.

The development of renewable energy support mechanisms in Germany

Sven Rösner
Deputy managing director of the Franco-German Office for Renewable Energies (OFAEnR)

The Franco-German Office for Renewable Energies is a public-private partnership that provides a platform for the exchange of information and best practice.

Regulatory framework and support mechanisms

FIT has been a key support mechanism in Germany since the introduction of the Renewable Energy Act in 2000. In 2012, the federal government decided to improve the integration of renewable energies into the market and the electricity system. It introduced competition between FIT and three alternatives (direct marketing plus a market and management premium, direct marketing plus certificate of origin, and direct marketing without incentives) and delegated responsibility for the sale of electricity to producers. Most producers using direct marketing schemes have delegated the sale of electricity to aggregators, which already managed other costly, complex and time-consuming tasks such as forecasting and balancing.

Direct marketing

Direct marketing with premiums has proved popular and now accounts for the majority of renewable energy sales. Direct marketing has been mandatory for large installations of more than 500kW since 2014 and will become mandatory for installations of more than 100kW in 2016. The systems must be remotely controlled and integrated into a balancing or sub-balancing zone with half-hour balancing windows, which further increases the importance of aggregators.

The market premium was based on previous FIT rates and premiums are allocated on the basis of the average SPOT price for the month. This ensures that the premium is stable for a given technology regardless of where or when the energy is sold, but increases the importance of accurate and effective market placing. Accurate forecasting is also important, especially for solar and wind, as operators have financial responsibility for correcting any surplus or deficit that arises relative to their one-day forecasts.

Funding is generally not an issue. Most contracts run for 20 years and all major technologies have a cap beyond which no additional support mechanisms will be provided. This provides investors with good visibility. Consumers tend to support the need for energy transition and accept its impact on the price per kWh.

Outlook

European guidelines require the introduction of an auction system from 2017. Germany has been reluctant to implement auctions as they may limit development and provide no guarantee that the capacity will be installed. A pilot system is underway for photovoltaic (PV). Auctions will use a pay-as-bid system; a capacity component is being considered.

There are concerns that auctions based solely on price will reduce diversity among technologies and producers. Community cooperatives currently account for around a

quarter of renewables in Germany but this is not likely to be sustainable in the long term.

Finally, the European Commission requires that at least 5% of volume must be open to projects from other countries. The condition of reciprocity appears to be limiting the potential for Franco-German interaction on this market.

Discussion

What are your views on the allocation of market, pricing and balancing risk, specifically with regard to renewables producers and off-takers?

Sam Street: In the UK, the risk varies depending on the mechanism used. CfDs shift the market price risk from renewable generators to the government or the consumer. Renewable generators negotiating PPAs can pass the balancing risk to the offtaker. The move to CfDs should reduce costs for these generators since they do not need to pay for a fixed or floor price in the PPA anymore. That price risk is handled by the CfD.

Sven Rösner: The aim was to delegate risk management to the producers, but they have delegated it to aggregators that work full time on balancing, forecasting and counterbalancing mix and production variations to spread risk. It makes financial sense to work with an aggregator.

Does the presence of an 'off-taker of last resort' create an incentive for producers to sidestep market mechanisms? How is this being managed?

Sven Rösner: In Germany, the transmission system operators (TSO) are the off-taker of last resort and purchase at the reference value minus 20%. This system was introduced to alleviate the banks' concerns at the introduction of direct marketing but there is no demand for it.

Sam Street: The UK situation is similar: the system was introduced to reassure lenders and the government but the pricing is so unattractive that it is hardly likely to be used, if at all.

Why is price the sole criterion used in tenders? How about geographical factors?

Sven Rösner: It is important to use criteria that can be compared mathematically. For example, factors such as 'integration into the landscape' are essentially subjective. The first round of PV tenders in Germany has highlighted the risk to diversity posed by a price-only approach, but efforts are being made to rectify this.

Sam Street: The UK has a price-based auction system but uses other mechanisms to incentivise efficient location and investments in future technology. For example, funding decisions for subsidies take account of the maturity of the technology and pay some technologies higher payments relative to others. There is a willingness to promote diversity and pay a premium to develop decarbonisation solutions that should become cheaper in future.

It appears that there is significant potential for auctions to deliver cost savings in the UK and Germany. There is a need for more work to ensure the winning projects are delivered.

Why were costs significantly over estimated in previous contracts and auctions?

Sam Street: It is inherently difficult for external bodies to estimate costs given that information often comes from the industry. Costs might rise in the future as the initial auctions will have picked off the smallest and cheapest projects.

Sven Rösner: The situation in Germany is still developing but prices in the PV test tenders appear to be consistent with previous rates. Tendering bids were slightly higher due to the greater uncertainty involved but the government and the industry have concluded that the difference is not significant.

What is your top piece of advice for the French sector as it makes this transition?

Sam Street: Be realistic about what can be delivered. An open and honest debate with consumers and the government about the costs and challenges involved is the best way to develop policy and create a good environment for investment.

Sven Rösner: My advice is similar: transparency and dialogue enabled the government and the industry to smooth out problems prior to the introduction of the framework in Germany and supported a smooth transition. Secondly, fix and respect objectives. It facilitates access to finance and makes things cheaper for everyone.

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