



# energy perspective

## A good FiT?

Following a campaign led by the Renewable Energy Association (REA), Friends of the Earth and others, the Energy Act 2008 introduced enabling powers for the Government to introduce feed-in tariffs (FiTs) for 'small scale' electricity and a Renewable Heat Incentive (RHI), which in turn included an incentive for biomethane fed into the gas mains.

The Government has subsequently announced that the electricity FiTs will be introduced in April 2010 and the RHI in April 2011 and is now consulting with stakeholders on the detail. Given the relatively short time-scale in which this needs to be achieved, we examine in this *Energy perspective* current proposals on the table for tariff design and consider some of the possible impacts on the wider market.

### You're fit and you know it...

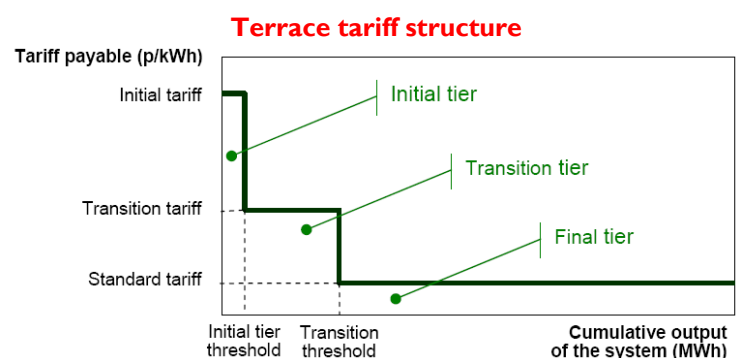
Put simply a FiT offers a small-scale generator a fixed price, for a given period, per unit of energy generated and/or exported to the grid. At present FiTs are in operation in 17 of the 25 EU member states as the main instrument to support the generation of renewable electricity. With this wealth of experience from other countries developing viable options for the British market should not be too difficult in principle. But as we shall see the impacts on the wider market will not be inconsequential and in some respects making "a FiT fit" properly and without unintended consequences is where more thought and work is required.

The Government's Heat and Energy Saving Strategy consultation (*Energy Spectrum 171*, p2) is seeking views on the construction of FiTs and a RHI. To input into this process, the REA published its "green blue-print" at a conference in London on 27 March. The document, a preliminary report from a network of working groups established by the REA earlier in the year, suggested that the FiT mechanisms should include the following features:

- cover all renewable power up to 5MW;
- owners to be paid for all the renewable energy produced whether exported or used on-site;
- the payment to vary by technology so that all renewable resources could make a contribution;
- a 'terraced tariff' proposal (see below) to ensure that tariffs work from the micro-end of the scale to the large 5MW (for power—there's no upper limit for the RHI) end; and
- the administration of the scheme should be simple and un-bureaucratic and designed for the "energy user" rather than the industry "expert".

### Fit for purpose?

The 'terraced tariff' model sets a standard tariff but also provides for two limited higher levels to be payable in the early stages of the life of the energy installation. The tariffs paid for *any* energy installation would be at the initial tariff for the first few MWh of output. For a large system, this high tariff would apply for a very short time, perhaps only a few days. But for a very small system, such as a domestic-sized wind turbine, it could last a few years. The transition tariff would then come into force on a similar basis before the payments return to the enduring basis of the standard tariff. This mechanism is intended to provide a way of establishing an effective sliding scale of tariffs for different system sizes without any step changes at specific sizes.



Source: Preliminary blueprint. The REA

## Fit as a fiddle...

On 24 March renewable electricity supplier Good Energy published its analysis of the suitability of FiTs. This report analysed six different potential models, all of which are in operation in overseas markets, and it then assessed their operation, impact on consumer choice and the possible cost implications to suppliers. Importantly the document highlights issues that go significantly beyond tariff design, including administration of the subsidy.

The models analysed were:

- **Banded Rocs: further development:** From April 2009 the technologies eligible for RO support will be banded with micro-generation (up to 50kW) will receive 2 Rocs/MWh of output. Under this expanded approach different bandings could be introduced to match the principles and aims of the UK FiT;
- **Supplier purchase obligation:** This model would oblige suppliers to pay a fixed price for the total generation, the exported electricity, or a combination of both produced by customers from small-scale renewable energy installations. To ensure that all suppliers can operate equally under this model, a “balancing mechanism” would be required so that suppliers that have a greater number of generating customers than others are reimbursed by those that only supply a few with FiTs;
- **Distribution purchase obligation:** This model obliges DNOs to purchase electricity from generators located within their incumbent regions. As above a balancing mechanism would be necessary as each DNO would have different potential (customer numbers, renewables sources etc.) for FiTs;
- **Central fund:** This model would make available a pot of money to pay generators, which would be raised through a levy or a direct charge on suppliers. Both the levy and the direct charge would be based on the amount of energy supplied to customers. In the event that additional funding was needed to balance any shortfall, an advance to cover costs could be directly injected through a central government ‘overdraft’ facility. This capital would be recovered through balancing the levy amount or supplier charging in subsequent years of operation;
- **Central purchase:** This model would be coordinated by an administering body responsible for the purchase of energy, at a fixed price using a long-term power purchase agreements, from renewable generators. The administrator would auction the energy (and potentially the renewable benefits) to suppliers; and
- **Grant provision:** This model is similar to the central fund model but provides up-front capital for renewable energy projects, rather than ongoing payments for the energy generated.

The report concluded that several of the models could be implemented, with the central fund the best option for the UK market. This preference chimes closely with the preliminary views of the REA stance, which stated that the most straight-forward way to set the levy is in terms of pence per each kWh supplied (as opposed to customer numbers, carbon intensity of the fuel mix etc.).

## Does the cap FiT?

So far, so good. But the FiT proposals identified raise important issues of equity and access on both the supply and demand sides of the market, which have been less debated.

For consumers, supporting renewables through a common levy on bills raises the prospect of the better-off being treated on a par with the fuel poor. Arguably the more affluent are also able where they invest in generation to earn a subsidised payback. To some extent the CERT, the RO and, for business, the CCL all raise issues of this kind as the above-market costs are recovered across all customers, but if the FiT and RHI are to be used to ramp-up micro-generation, non-energy costs could increase significantly at a time when fuel poverty has been deteriorating.

On the supply-side the potential consequences are also significant. They concern the access to wholesale supplies and the cash-flow implications for niche operators. There seems to be a break in the market for offtake contracts at about 10MW capacity. Above that level the Big Six are generally active seeking offtake contracts, but below it is where smaller players tend to source their green power. A 5MW threshold if applied to existing and new generation could remove a large chunk of that market from innovative smaller players in both household and business supply markets. The major players are unlikely to object to this, and the objections of the smaller suppliers seem to be being ignored.

At a more mundane level the monies required to fund the new tariffs raise cash-flow issues for smaller suppliers, particularly in the current climate (for instance the exit of Bizz Energy from the market was precipitated in part when it could not fund additional obligations under the RO buy-out fund). Some of the smaller suppliers are also already actively promoting schemes for export payments from their generating customers. Setting aside any contractual issues which may arise from customers who have already signed deals with these suppliers for export (and the impact this has on

business models and forecast), any time-lag between paying out to customers and compensation from the central fund/scheme administrator could impact on suppliers' cash balances. Further it is also critical that the redistribution of funds via any balancing mechanism is efficient. This suggests the need for some central agent, perhaps the Non-Fossil Purchasing Agency, to administer the levy and ensure unnecessary timing distortions do not arise.

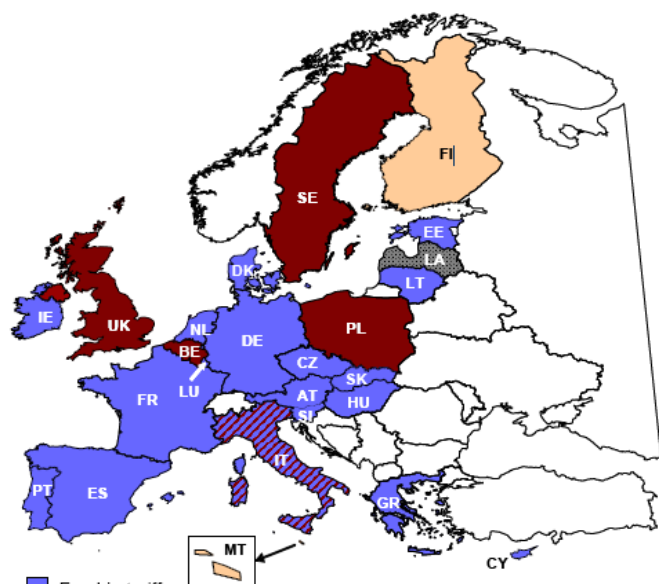
### If the facts don't fit the theory, change the facts

Unlike FiTs the introduction of a RHI would be novel as there is no experience to draw on from other markets. It also differs from the FiT insofar as there is no proposed upper limit on the size of an installation which could receive payments. As heat, as a discrete energy source, has joined the low carbon debate late, it is no surprise that the Government has stated that the development of a RHI should take a year longer than the introduction of FiTs.

At first glance the introduction of FiTs and RHI could be seen as a boon for CHP developments. But the CHPA has already begun to make noises about its opposition to the use of the RHI as a stimulus for heat production from renewable fuels in a CHP plant. It argues that the prospect of an RHI for CHP might defer investment in CHP until such time as the RHI regulations come into effect, whereas the RO suitably modified by contrast could stimulate CHP investments today. Once implemented, a combined incentive of RO in its present form and RHI might also present arbitrage opportunities for operators that are not, the Association argues, consistent with wider policy objectives.

The Government has already said that the funding for the RHI will come from a levy on suppliers of fossil fuels for heating. The CHPA points out that the levy is not proposed to be applied on fossil fuels used for power generation. This additional cost would also act as a disincentive for CHP. Instead the Association suggests that the ideal approach would be to exempt CHP input fuels from the levy in a system analogous to that used for the CCL. The REA also believes that the Climate Change Levy could be adapted in order to collect funds for the RHI.

### Schemes to support EU renewables generation



Source: Evaluation of different feed-in tariff design options - Best practice paper for the International Feed-in Cooperation. Energy Economics Group.

### The shoe that fits one person pinches another

In order to ensure that both FiTs and RHI tariffs are paid on the basis of energy produced, metering will be necessary to measure power and heat outputs. But as the REA has pointed out there may be cases where this may be inappropriate, which in turn could introduce the need for creating profiles to estimate output. This is particularly true for metering heat output, and proxies, such as amount of biomass fuel delivered or biogas produced could be used. Another suggestion is that the Government could ensure that the specification for smart meters should enable all potential requirements for the renewable energy tariffs to be accommodated—including the ability to meter and transmit data on heat. Perhaps this is why we have yet to see details of a smart meter roll out, first mooted for release in December 2008.

But while profiling may reduce installation costs and administrative burden if applied to smaller renewable power installations, it could lead to an increase in balancing and settlement costs for suppliers at a time we should be looking to move away from profiles and

the inherent subsidies and associated complexity they bring. The inaccuracy of profiles for domestic electricity imports already embeds significant costs into the central trading system.

### Avoiding a retro-FiT

Thus far the debate on the FiT has been entirely producer-led and scarcely focused on affordability and downstream distributional issues. There has been little apparent thought to date into the cost, equity and wider impacts of delivering relatively small (and relatively expensive) incremental renewables capacity. This should be a concern to the industry as it can make it appear greedy at a time when many consumers are suffering. Moreover by seeking a quick FiT we could be storing up trouble for the future in critical areas of the energy markets such as settlements and the supply market. All these issues require careful consideration before decisions on tariff design can be locked in.