UKBCSE draft outline response to the Consultation on Renewable Electricity Financial Incentives

Introduction

The UK Business Council for Sustainable Energy (UKBCSE) brings together the key players[1] in the energy sector to develop an effective dialogue with Government that can help strengthen the UK's strategic agenda for sustainable energy.

The UKBCSE welcomes the Department on Energy and Climate Change (DECC) consultation on 'Renewable Electricity Financial Incentives 2009'. Renewable electricity − large-scale but also decentralised and smaller scale generation − will have a key role to play in ensuring the UK meets its statutory 2020 target for renewables. The Council supports the Renewables Obligation (RO) as the core UK mechanism for incentivising renewables investment, and DECC proposals to strengthen the RO though introducing headroom are particularly welcome. Feed-in-tariffs (FiT) will be useful for incentivising investment in smaller scale technologies.

While the timescales for delivery of the FiT system are challenging, the companies believes a workable solution can be implemented if operational challenges are overcome and if the right balance can be struck between delivering policy goals, value for money and keeping costs to consumers down. Since Government policy on smart metering and grid is still being developed, it will be important to remain mindful of the need to balance the costs of short-term policy implementation with the long-term technology outlook and overall benefit to customers. It will also be critical that as the FiT regime is being developed investor confidence in the Renewables Obligation is maintained.

Key points

- *Stabilising ROC prices* − The companies welcome the introduction of headroom. However the suggested introduction of a price stabilisation mechanism represents the layering of unnecessary complexity to the RO. Such interventions at this time are unlikely to stimulate additional investment.
- *Early visibility on key FiT scheme elements* − In order for supply companies to set up the systems needed to run the FiT system, DECC will need to provide early detail on who owns and has responsibility for the various meters, who pays for them and their installation, who is responsible for meter readings and how checks to validate claims should also be provided. By the end of November 2009 decisions on how levelisation and administration will be required. By the end of December 2009 companies will need to know the expected scale of the scheme, tariff levels and overall costs and how switchover of customers from RO to FiT will be facilitated.

[1] Members of the Council include Centrica, EDF Energy, E.ON UK, National Grid, RWE npower, Scottish and Southern Energy, and Scottish Power.

- *Short term solutions* − For generation meters, it is recommended that the customer continues to own and provide meter readings on a mandated annual basis to suppliers, who would act as the system 'interface', ensuring generation is appropriately recorded and rewarded. For export metering, given the high costs of rolling out temporary import/export metering capability that with smart meter roll out will become obsolete, a more cost efficient interim approach should be considered. Possible alternative options could be to pay for export through an increased generation tariff that is deemed per technology or through the tariffs offered by companies currently and on a competitive basis be continued.
- *Longer term solutions* − In the longer term suppliers will need to assume responsibility for generation and import/export meters, which will require new governance arrangements and administrative processes. In order to ensure system efficiency, the timescales for this shift in responsibility should be consistent with the roll out of smart meters − which DECC should provide guidance on at the earliest opportunity. Additionally, a robust system will need to be put in place for calculating the value of the exports to FiT suppliers relative to the guaranteed export price and for compensating for any difference through the levelisation process. It is suggested that the most transparently cost-reflective approach would be to use the average of the System Sell Price (SSP) for such smaller FiT customers.
- *Levelisation* − Government and industry will need to agree a fair and equitable system to redistribute costs. Early visibility on how the process will work is needed, including detail on: which costs are recoverable; the frequency and administration of payments; and processes for central management, which will need to be transparent and accountable.
- *Accreditation and registration* − This would seem to be a substantive issue for Ofgem, rather than the industry, but companies will need to know: whether/ how details will be provided on likely microgen outputs; how companies will interface with the Ofgem registration system; how/whether companies will be enabled to carry out relevant spot checks in due course; and whether registration systems will be in place by April 2010 to enable existing customers to be moved onto the new system.

Reform of the RO

1. Revenue stabilisation mechanism

In the interests of preserving investor confidence in the RO mechanism, adjustments should be kept to a minimum. DECC's proposals would introduce a floor and cap on the revenues a generator can earn from the combined value of electricity sales and ROCs. While this may be welcomed by developers that are less comfortable with managing revenue risk − because it would stabilise income levels − it would be of limited value to other developers, including some of the companies, who have created systems to manage that risk through hedging incomes across a balanced portfolio. For this reason the companies see limited benefit from adding this new complexity to the RO. It represents further unnecessary 'policy churn' that is unlikely to stimulate additional investment.

The RO was set up to reward those developers that deployed renewables at times when the rest of the market was under-delivering, for whatever reason, with high ROC prices. To date, under-delivery in the market has principally been caused by grid and planning failures rather than a failure of the RO mechanism. Thus, the removal of the ROC price upside through the price stabilisation mechanism for developers at a time when planning and grid barriers have not yet been resolved may result in fewer renewables in the interim, as the risks implicit in projects are no longer fairly rewarded by the ROC price.

What would be preferable is an interim reliance on headroom arrangements to stabilise the market and consideration of a review of price stabilisation options once planning and grid

access issues − onshore and offshore − have been resolved.

2. ROCs for non-UK projects

While the option to build renewables in non-UK countries seems attractive in terms of potential cost efficiencies there may be practical difficulties and therefore relatively limited application. DECC could consider allowing non-UK build where there is a direct connection to the UK − but annual caps should be applied to prevent distortions in the market that would see renewables targets secured but at the cost of security of supply ambitions being unfulfilled. In addition, DECC would need to provide early visibility of the treatment of any such international joint ventures and the nature of any bilateral agreements. If restrictions are placed on ROC claims under such schemes, this will affect the economics, meaning such schemes won't get built. In the longer term, if a European supergrid is achieved, virtual connections could be considered.

3. ROC banding

3a. Co-firing
The companies agree with DECC proposals for the cap on co-firing to remain in place. As indicated in Oxera's analysis, raising the cap would risk a collapse in the ROC price − acting as a dis-incentive to invest in renewable assets.

3b. Offshore wind
A number of large offshore wind projects are in need of additional financial support if they are to go ahead under the currently very challenging economic environment created by the credit crunch. In this respect, the Government's proposals to award 2 ROCs to offshore wind could help, however there are concerns about the non-level playing field this creates for similar projects that may have been approved only a few months apart. This goes against the principles of accreditation set up for banding only very recently and will create a potential distortion in the O&M market between upbanded and non-upbanded projects that had otherwise very similar capital and operational cost structures. This approach has the undesirable side-effect that it can act to delay investment because it signals to the market that it is better to wait rather than invest − because waiting ultimately delivers higher levels of support.

With regard to rewarding 2 ROCs to projects in a time-limited fashion, there is merit in both the Government proposal based around entering into contracts and the alternative proposed by RAB for eligibility based on RO accreditation by Ofgem. The former gives certainty to developers on how many ROCs will be awarded to projects so long as progress is made in construction by certain dates, while the latter increases risk that projects will miss out on the higher multiple due to circumstances out of developers' control, such as weather delays. The RAB proposal has the merit of rewarding the completion of plant and thus ensures actual generation is rewarded. Although the companies had different views on the detail, they agree there is a need to avoid discrimination on otherwise equal projects.

3c. Treatment of re-powering
The companies agree that investors will benefit from greater certainty when investing in a brownfield as opposed to a greenfield site, particularly with regard to certainty of MWh output. However we do not agree that where re-powering is undertaken a project should be moved to the lowest band after 20 years. Re-powering has not been clearly defined, in large part because even the earliest wind farms in the UK have yet to reach the end of their 20 year lives. In the future, wind farm investors will face economic decisions as to how, or indeed, whether to extend the life of a wind farm.

There is a substantial difference between undertaking activities to extend the life of an asset for a matter of years (such as replacing generators or blades for example) and decommissioning and rebuilding a wind farm such that it can operate for a further 20 years. The cost implications of this choice are far higher and this should be reflected in the banding level allocated.

Where substantive re-powering is undertaken, a number of high capital cost items may need to be replaced. This is likely to include all or a combination of towers, turbines, blades and possibly foundations. Improvements in technology will mean that machines are likely to be replaced with those of higher rated capacity. As a result, in addition to submitting for planning consent, developers are likely to have to submit a new Environmental Impact Assessment, as tip heights may be higher for example. Foundations may need to be replaced or re-sited to accommodate bigger machines and different spacing requirements. All these items add cost. Increased capacity could also require additional expense in upgrading the grid connection.

It will not be economically viable to undertake substantive re-powering unless supported by the RO at the banding level for that technology at the time. Both new and re-powered projects should receive the same band. We strongly believe that it is more rational to re-power brownfield wind sites rather than build on greenfield sites, not least as this would reduce stress on the planning system. The level of support available through the RO mechanism should therefore encourage this approach.

We suggest therefore that 'refurbishment' and 're-powering' should be differentiated and banded accordingly. 'Refurbishment' should be defined as investment in low capital cost items to extend the life of an asset for a number of years whereas 're-powering' should be defined as investment in a number of high capital cost items such that the full life of an asset is fully refreshed.

4. End date extension and headroom

The companies welcome the proposed extension to the RO, which is more reflective of the investment timescales (20 years) and therefore certainty over revenues required by developers over those time periods. However, it would seem to be logical for the Government to extend the end date not to 2037 but to 2040 in order to ensure investment is encouraged right up to 2020. That said, it will be important that Government maintains a clear message that public funding support will be limited to the level and duration necessary to bring forward any given technology. Any decisions about renewables support for the post-2020 period therefore should be made in the context of wider low carbon technology delivery.

The guaranteed headroom arrangements introduced in the Energy Act 2008, have been welcomed by the companies, and effectively set a year-on-year ceiling for the Renewables Obligation. The companies see no additional benefit in adopting an explicit cap for the RO (e.g. 10% by 2010, 35% by 2020). The Government's focus should be on delivery of the 15% renewable energy target and it is important that rigid targets in any particular sector do not foreclose economic solutions that may emerge in other sectors. Instead, the headroom arrangements should be used to increase the target for renewable electricity taking into consideration actual and planned project delivery. The transition should be made in a single stage, not as a series of increments. This will provide investors with the assurance of a minimum level of support for renewables without exposing consumers to unreasonable costs.

FiTs

5. Meeting the 2010 deadline: short term issues

Early visibility will be needed from DECC on a number of factors that are critical to the timely development of company systems in order to successfully implement the Government's FiT scheme. In terms of timelines, the following are required.

By the end of November 2009:

- A decision on the arrangements for managing levelisation and administration, and which agency will operate that system; and
- Early confirmation of whether or not this agency will make FiT payments to customer or whether energy suppliers will do this, to enable appropriate marketing and other arrangements to be made.

By the end of December 2009:

- Clarification on how existing microgeneration customers will be treated under the new FiT scheme, including how ROC payments will be reconciled with FiT payments;
- Expected tariff levels (and final payment levels);
- Expected volume of take up and detail on any overall target or cap on support available;
- Expected rate of increase in take-up;
- Overall costs of the scheme;
- Expected size and form of the levy that will be collected by companies to fund the scheme; and
- Expected time of first FiT payment to customers.

It is assumed that DECC expects initial FiT uptake levels to be fairly low (10,000s not 100,000s), with a minimal impact on retail energy prices so that it can be structured within existing energy company tariffs. High uptake could significantly impact on energy prices and so it should be noted that companies are obliged to give notice of tariff changes within 65 days and that this will therefore need to factored into Government decision-making timescales.

5a. Generation tariff short term solutions

Greater and early clarity on who will own and have responsibility for generation meters should be provided as a priority. In the long-term it will be prudent for suppliers to own and maintain such meters − but in the short term, this is not possible because generation meters are not covered by the existing industry codes and therefore operational processes. Therefore new processes will need to be established − which will be impossible ahead of April 2010. In the short-term therefore, it is recommended that over the first 1−2 years for small FiT customers (i.e. <30 KW and non-half hourly metered) existing manual processes for metering generation, as under the RO, be adapted. Under this system the customer would:

- Continue to own and maintain the generation meter;
- Continue to provide meter readings on a mandated annual basis (and more frequently if requested by the customer);
- Continue to provide those readings to suppliers, who would act as the system 'interface', ensuring generation is appropriately recorded and rewarded.

Data provided from customer meter readings could be sense-checked against a standard list of expected levels of generation for each type and scale of technology to ensure that no unreasonable claims were being made. However this would rely on the separate implementation of an accreditation and registration scheme ahead of April 2010 that would provide suppliers and Ofgem (and also customers, on the installation of kit) with details of

likely output levels from technologies and a system that would enable suppliers to interface with any new Ofgem-led registration system.

5b. Export tariffs: short term solutions and avoiding stranded assets
Initially manual systems will be required. The value of the exported power to suppliers will need to be calculated using a time or demand-weighted price based on the System Sell Price (SSP), discussed later. Any difference between the calculated value and the export tariff fixed by the Government must be recoverable by the suppliers.

Beyond this, there are issues about how export is measured. Providing a guaranteed export tariff should be straightforward for larger customers (with installations >30kW) who have or can have half-hourly metering installed − the electricity use can already be settled through balancing and settlement system. For generators at the residential and small business scale, a non-half hourly (NHH) export meter would be required to record the energy exported to the grid. NHH export meters are available and would cost around £100 to install. This is calculated as a conservative estimate as 5p/kWh over 4 years at 500 kWh generation per year − it is a significant concern that this charge could be equivalent or even more than the proposed value of the export tariff. As it is likely these new meters would need to be replaced after only a few years with the roll out smart meters, they would become stranded assets with sunk costs that would need to be recovered by the energy companies and therefore factored into the overall FiT scheme costs.

Government will be keen to develop a coherent FiT scheme that delivers its policy goal of initiating a mass roll out of smaller scale renewables while ensuring value for money is achieved for consumers. Given the high costs of rolling out temporary import/export metering capability that will in a very short space of time become obsolete, a more cost efficient interim approach should be prioritised. Possible alternative options could be paid through the generation tariff:

- A deemed amount per technology;
- Tariffs offered by companies currently and on a competitive basis be continued.

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These approaches will require manual systems for reconciliation, but avoid sunk costs and provide better value for consumers. Import/export meter options could be offered to consumers who want them − but on a voluntary basis, with those customers only paying for the metering solution received.

5c. Interim financing of scheme
Early investments to resource the FiT scheme, principally to cover new staff costs, will be required from the energy companies ahead of the FiT scheme going live in April 2010. Early assurances will be needed from Government that these upfront costs will be included in the Government's overall assessment of the scheme costs and that process will be put in place, through levelisation or otherwise, to enable companies to recoup these costs.

5d. Facilitating short-term scheme implementation
Because of the tight timeframes for delivery, initially the IT systems required to deliver the FiT scheme will be manual. These will be used in the interim as more sophisticated and automated systems are put in place to manage the longer term expected increase in demand. These manual systems and processes will be time and resource intensive to use. It will be critical reputationally for the scheme that data is managed effectively. Smooth delivery of the FiT system would be greatly facilitated if there were to be minimal initial changes to the databases, consideration could be given by DECC to a short-term moratorium on FiT customer switching to ease this process.

6. Enduring solutions

6a. Generation tariff: long-term solution
In the longer term suppliers will need to assume responsibility for generation meters. This will require new governance arrangements and administrative processes. In order to ensure system efficiency, the timescales for this shift in responsibility should be consistent with the roll out of smart meters. Smart meter allocation could be prioritised for FiT customers in the interests of simplifying processes in the move to automation.

While smart metering technology will enable the automation of some readings it is unlikely to cover generation directly − therefore customers will need to continue to report readings to suppliers manually, just as happens for water and gas meters. However it is far from clear currently when smart meter roll out will begin or complete − and so DECC will need to consider in more detail the impact of new demand for automated meter reading and requirements for FiT metering going forward.

6b. Export tariff: longer term solutions
Over the longer term, once smart meters are rolled out a robust system will need to be put in place for calculating the value of the exports to FiT suppliers relative to the guaranteed export price and for compensating for any difference through the levelisation process. It is suggested that the most transparently cost-reflective approach would be to use the average of the System Sell Price (SSP) for such smaller FiT customers.

The suggested methodology for calculating the value of exports under the SSP system is as follows: two variations are proposed either of which could be calculated over a range of time periods by the scheme administrator.

Time-weighted price: This is a simple calculation, but one that takes no account of the profile shape of the export.

Export value (p/kWh) = average of SSP

There are 48 SSPs per day, one for each half hour. These prices can be averaged these prices over the specified period. For example, if an export price for August is calculated, it would be the average of the 1,488 SSPs (31 days at 48 periods per day).

Demand-weighted price: This calculation is more complex, taking into account the profile shape of the export. The NHH export is settled using Profile Class 8 in settlements, to give an average microgeneration export shape. This profile class has various standard settlement configuration codes attached, which change with the basic profile shape, by type of generation (so that for example, there should be no export from solar PV during the hours of darkness). It can be calculated as:

$$\text{NHH export value (p/kWh)} = \frac{\text{Sum of profile shape (kWh) x SSP (p/kWh)}}{\text{Sum of profile shape (kWh)}}$$

6c. Interface with RHI and RO
Early clarity will need to be provided on arrangements for switch-over between the RO and FiT schemes. It will also be important to ensure the interface between the RHI and the FiT is properly managed so that no unintended double counting results, particularly when customers transfer. This will require the registration database to be ready and available for suppliers to access by April 2010.

6d. Interface between the RO and FiT
Currently the FiT would apply to assets up to 5 MW capacity: at this end of the scale the FiT would be worth more to developers than ROCs. This is counter-intuitive: it does not reflect the revenue risk reduction for projects financed under the FiT arrangement compared to equivalent projects financed under the higher risk ROC regime. It is recommended that the proposals be amended to take this into account and properly reflect project risk profiles at

the RO/FiT interface so that FiT-financed projects receive a lower reward compared to projects financed under the RO regime. It will be important to give the companies some visibility of expected uptake for the FiT compared to the RO mechanism to avoid large swings in the ROC price from year to year and to more accurately calculate the costs of funding the FiT.

7. Cost and funding issues

7a. Import tariff, recovery of fixed costs and fairness issues

Within the tariffs charged by energy companies for power supplies the majority of costs are due not to wholesale energy prices but to the fixed costs associated with environmental levies and transmission and distribution charges. As an illustrative example, on a tariff of 13p/kWh of power provided, around 10p/kWh relates to these fixed costs and the balance of 3p/kWh covers the costs of wholesale energy. Under DECC's proposed system − in which the expectation is that FiT customers have access to the same types of tariffs as other customers − there is the potential for significant under-recovery of the fixed costs of centralised power generation and the networks required to deliver this, amounting to around £200m per year by 2020. (Calculated as the Government's FiT target of 2 TWh per annum at a 10p/kWh under-recovery rate.)

The can be addressed by requiring non-FiT customers to cross-subsidise FiT customer fixed charges, with the subsequent increase in energy costs for non-FiT customers. This has a logic to it in that the customers using more centralised fossil fuel energy will pay more to address the costs (environmental and fixed) associated with delivering this. However, in terms of the fairness agenda that is being strongly promoted by DECC the approach is counter-productive because FiTs are most likely to be taken up, at least initially, by wealthier customers, who will be being subsidised by the less wealthy. An alternative − and preferable model with respect to this fairness agenda − would be for standing charges (representing the fixed costs) and unit charges for energy sold to be rebalanced for all customers. If DECC decides against this latter approach, Ofgem should be made aware of this in the context of future expected price increases and impact on vulnerable customers as related to FiT uptake.

It will not be possible or appropriate for fuel poverty to be addressed through the FiT policy, but rather separate and targeted policy instruments should be used.

7b. Request early visibility on indicative scheme costs and expected funding sources

Companies need clarification from DECC on the level of the obligation and how it will impact on charges to customers. In terms of funding sources, the levy approach would be preferable to the use of general tariffs. Use of a levy has the advantage that it would provide greater certainty to the companies on funding sources, greater transparency for consumers and enables costs to be allocated across the business and residential sector in a way that couldn't happen if tariffs are used. This is because long-term contracts are used with the business sector, which precludes the use of adjusted tariffs.

Whatever the outcome a decision needs to be made quickly on whether a levy or other approach will be taken in order to ensure systems are in place by April 2010. It is not possible, under Competition Law, to discuss the likely costs and pass through levels for the scheme as an industry. Therefore it would be helpful if indicative forecasted scheme costs could be set out a year in advance by DECC upon which all companies could base estimates − with reconciliations to the forecast organised on an annual basis.

8. Administration

A concerted effort will be needed to ensure a workable implementation plan is developed by the end of November 2009 and systems in place by April 2010, including for accreditation, registration, cost recovery and levelisation.

The preferred option for administration would be an Ofgem-directed agency. If such an agency were to administer the FiT scheme, there may be commercial or legal implications. DECC would need to make a decision on this following guidance from various stakeholders including the energy companies, and then undertake modifications to the industry licenses (such as the balancing and settlement codes) to give the body responsibility to administer the scheme. There may also need to be a competitive tender process to appoint the scheme administrator, who would manage the levelisation and other process − which will have time implications.

8a.Transfer of existing customers
Existing microgen customers should be given the opportunity to access FiTs, albeit on a shorter timescale compared to new adopters, so as not to penalise early adopters. DECC will need to clarify what tariff levels they will transfer across at.

8b.Keeping export and import together
However, as mentioned earlier, in the interests of ensuring value for money, short-term export tariffs should not be implemented for smaller customers − and that instead increased generation tariffs or similar should be used. However, where there is a need to implement export tariffs these should be coupled to the company paying out the FiT, in the interests of offering a streamlined system.

If this is not implemented, under current market arrangements implementation could see customers sourcing export, import and FiT tariffs from different suppliers. Given that administrative systems will initially be manual − and not necessarily compatible between companies − splitting out FiTs, import and export will create significant and unnecessary administrative complexities. In the short-term therefore it would be preferable to keep all FiT elements with one supplier.

8c.Accreditation and registration
DECC will need to establish at the earliest opportunity who will be responsible for accreditation − and ensure sufficient capacity and appropriate processes are in place. Any technology under 50 kW will need to be installed by a Microgeneration Certification Scheme accredited installer or similar. This would seem to be a substantive issue for Ofgem, rather than the industry, but companies will need to know:

- Whether/ how details will be provided on likely microgen outputs;
- How companies will interface with the Ofgem registration system;
- How/whether companies will be enabled to carry out relevant spot checks in due course;
- Whether registration systems will be in place by April 2010 to enable existing customers to be moved onto the new system.

Ofgem would be the most appropriate body to set up a registration system. However, companies would need to either have direct access to the system or monthly downloads from Ofgem so that the system could be kept up-to-date. Arrangements for registration are initially likely to be complicated by the mix of existing and new customers, and it will be critical that assigned rights are clarified within from day 1 so that correct individuals receive FiT payments and that a record is kept of whether or not customers have opted for a guaranteed or negotiated tariff.

8d. Levelisation

Government and industry will need to agree a fair and equitable system to redistribute costs. The preferred administration process is one in which capital raised to fund the FiT scheme would be raised and then transferred to the administration agency, which would manage the levelisation process, but then disburse funds to FiT suppliers who would then make FiT payments direct to their customers. This approach would enable companies that wanted to make bonus payments to customer as part of a marketing strategy able to do so.

Early visibility on how the process will work is needed, including detail on:

- which costs are recoverable;
- the frequency and administration of payments; and
- processes for central management, which will need to be transparent and accountable.

Finally, it should be noted that energy companies use 3−5 year fixed contracts with business customers that cannot be altered within term, which means that initially at least greater proportion of cost recovery will fall on residential customers.

Conclusion

We welcome the opportunity to provide input to the Government's consultation on Renewable Electricity Financial Incentives and will continue to work with the Government to support their work in this area.