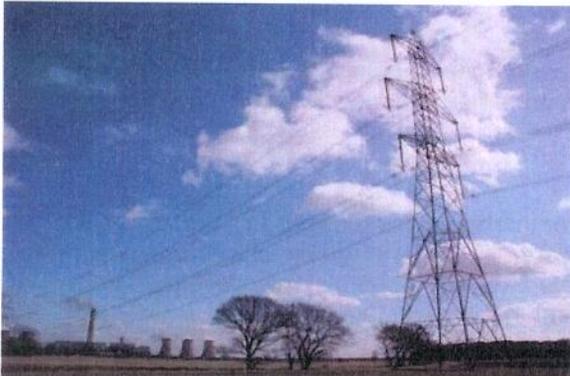
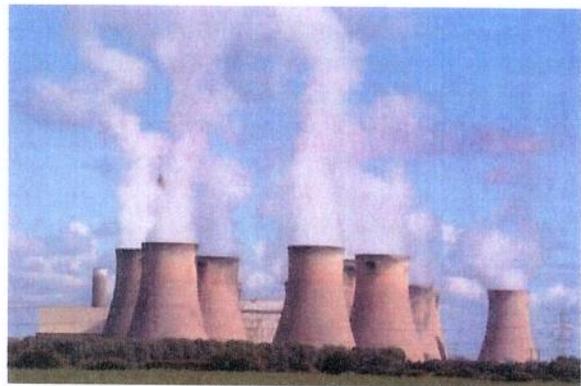


ELECTRICITY MARKET REFORM



**Response to Consultation Document on
Electricity Market Reform**

1 Introduction

J R Power Ltd is a consultancy that specialises in identifying sites for electricity generation facilities, including CCGT, biomass, onshore wind farms, solar PV and hydro plants. The staff of J R Power and its associates has over 70 years of experience in the electricity supply industry.

Members of our team have been involved in the development of the UK power industry since 1969, through privatisation of the industry and subsequent market reforms. This enables us to take a view on the changes required to the industry having been able to see the successes and failures of previous market arrangements.

Our response which follows includes general comments on the Electricity Market Reform proposals as well as our responses to the specific questions raised in the consultation document. It ends with our recommendations on how the Government should take forward its reform agenda in a way that will ensure a stable, low cost, low carbon and transparent electricity market.

2 General comments

We are in general agreement with the description of the Challenge as described in the Executive Summary.

We agree that the current level of liquidity of the electricity wholesale market is inadequate and reform is required to make the market more transparent.

The consultation document proposes a four pronged approach, including Carbon Price Support, Feed-in Tariffs (FiT), Capacity Payments and an Emissions Performance Standard (EPS).

2.1 Carbon Price Support

At first reading this suggests that a tax will be placed on carbon dioxide emitted by fossil fired electricity generation plants. This tax will be set at a certain value and will steadily increase year by year. This tax will make the price of electricity generated from fossil fired plants more and more expensive and encourage the construction of low carbon generation facilities.

In fact, this would appear to be a tax that can be varied at least annually in the budget of the Government in power at that time, thus providing no long term certainty to investment. Such a tax gives no confidence or assurance to investors in fossil fuelled generation, which the Government acknowledges will be required to maintain fuel flexibility and security of supply in the years to come.

2.2 Feed-in Tariffs

FiTs have been introduced in a great number of countries around the world. They generally offer a guaranteed price for electricity generated and are often linked to inflation. This gives certainty to investment decisions and has encouraged private investors, equity funds, institutions and banks to invest in renewable technologies.

In the recent past there have been several decisions made by both the UK Government and other governments that have begun to cast doubts over the credibility of FiT regimes. These are primarily:

- The decision by the Coalition Government, after less than one year of operation of the UK small scale generation FiT scheme, to undertake a root and branch review of the structure and tariffs that were originally guaranteed for 25 years;
- The decision by the Spanish Government to retrospectively reduce FiT for projects already constructed and in operation;

- The French Government's decision to call an immediate halt to its FiT while undertaking a root and branch review; and
- The Czech Republic Government's decision to charge an additional, retrospective tax to the income generated by projects which receive FiT payments.

In the UK, the Government's handling of the FiT is having a significant negative impact on investors' confidence in the Government's ability to commit to long term incentive mechanisms without the danger of knee-jerk reactions and shifts in policy. Statements from Government ministers accusing investors in projects brought forward under the existing FiT scheme as being "speculation and hot money" are signs of a deep rooted ignorance amongst politicians as to how energy projects are developed. They appear to believe that new generation capacity will somehow present itself without investors who wish to receive a return on their investment.

If the existing FiT scheme, with its tiny budget compared to that which will be required for nuclear power and offshore wind, is subject to such a lack of commitment from the Government, then how easy will it be to convince people to invest in billion pound projects without the fear of losing their investment when the Government changes its mind on a one technology or another?

2.3 Capacity Payments

Capacity payments are already handled to some extent by the National Grid STOR scheme, although the present system does not provide sufficient cover for any expansion in renewable electricity generation.

2.4 Emissions Performance Standard

This is a back stop to limit the emissions of carbon dioxide from fossil fuelled electricity generation facilities. The purpose of the EPS is not clear, but it could be used to supplement the Carbon Price Support Mechanism if the tax imposed was not sufficient to limit generation by fossil fuelled plant.

Under the current proposals the Government would set the EPS. This is a matter of concern for investors as the Government of the time may decide that for security of supply reasons the EPS should be changed to allow power plants that emit higher quantities of carbon dioxide to operate at times of high electricity demand, or vice versa. This again gives no confidence to investment in either fossil fuelled generation or low carbon generators (in isolation from the other prongs of the reforms).

In our opinion the above points mean that the Electricity Market Reform proposals are not likely to achieve their intended outcome. In Section 4 below we make some recommendations in this regard, while in Section 3 we respond to the specific questions raised in the consultation paper.

3 Specific replies to Questions

3.1 Question 1

The current market does not sufficiently support investment in low carbon generation to meet the Government's aims and targets.

3.2 Question 2

While we broadly agree with the Government's assessments of the risks to security of supply in the coming years, we do not entirely agree with the Government's statement that:

"Over 19 GW of nuclear, oil, coal and gas plant is scheduled to close over the coming decade as stations reach the end of their design lives and due to the effects of environmental legislation. Over 20 GW of new capacity is either in construction or development and will therefore enable the UK to maintain secure supplies for the time being."

We believe that this is an overly optimistic view of the likely development of new capacity under current market conditions. We are unsure from where the figure 20 GW has been sourced. If this is the number of applications under Section 36 of the Electricity Act and applications for Development Consent Orders to the Infrastructure Planning Commission (IPC), then this is an unrealistic assumption.

We would advise the Government never to make the assumption that a project which is being proposed will ultimately enter into operation. The attrition rate from project conception to planning consent, to financial close, to operation is not even close to 100%. For instance, a number of large scale projects which have recently been proposed were subsequently abandoned due to the lack of available finance (some of which are still listed as being under consideration by the relevant planning authorities). Others have been dropped due to local resident or NGO opposition, or even simply due to technical issues identified during detailed studies.

Consideration must also be given to the length of time taken to obtain planning consent for large scale energy projects. From site identification to consent this is at least two years for the least controversial projects, and possibly as many as 5-10 years for say a nuclear power station or coal-fired power station (as evidenced by Sizewell B nuclear power station, now built, and the recently proposed Kingsnorth coal-fired power station, now abandoned).

3.3 Question 3

FiTs have now been somewhat discredited by the action of the Government to have a root and branch review of the FiT for small scale generation less than one year after it was introduced.

3.4 Question 4

The difficulty with FiT with CfD is establishing a genuine value for the price of electricity. The introduction of NETA and BETTA and the dominance of vertically integrated companies have resulted in a wholesale electricity market that is not particularly transparent.

Full transparency could only be achieved by the break up of vertically integrated companies in the energy sector. It is EU policy for electricity suppliers who also own transmission assets to be 'un-bundled', due to their ability to restrict competition and reduce investment, at the expense of consumers.

While either preventing electricity suppliers from owning generation assets, or preventing them from selling electricity to themselves, may seem drastic, it may be the only way of ensuring that the true price of generation, transmission and distribution is ultimately charged to the consumer.

A half-way-house would be a system where an electricity supplier can not generate more than say 15% of the electricity it provides to customers, although this does still leave some potential for vertically integrated companies to abuse their position under any of the proposed FiT arrangements.

3.5 Question 5

It is our strong belief that Governments should not have any role to play, or any influence, in setting tariff levels.

If the impending electricity shortfall has taught successive Governments anything it should be that political interference in the electricity industry causes uncertainty and hesitancy in investment. The shortfall has been brought about by constantly changing and mixed signals from Government. For example, the moratorium on gas (c. 1998) which was removed (late 2000), the long time anti-nuclear feeling which was ultimately abandoned (c. 2005), the introduction of Feed-in Tariffs for projects of up to 5 MW (April 2010) which is now the subject of a root and branch review less than a year later, current investors in nuclear power are faced with the fact that control of energy policy is in the hands of a minister who was historically anti-nuclear.

It is not unreasonable to assume that market forces would have brought about the required investment in a cost effective fashion had it not been for the uncertainty caused by Government policies.

We recommend that, if the Government does intend to roll out a much wider FiT programme than the existing FiT scheme, this is handled by an independent body, either Ofgem or a new organisation, responsible for setting tariffs and reviewing them at appropriate intervals.

It must be noted that developers need certainty when they begin to develop a project. In the case of say a nuclear power station the developer may have spent millions of pounds over the course of 3-4 years before an application for permission to build and operate the station has even been submitted, and then perhaps another 7-8 years before it begins to operate. In this time they need certainty that their tariff will not be changed to result in a different rate of return on their investment by the time they come to operate.

To reiterate, politicians must not be allowed to interfere in the setting and reviewing of tariffs if investors are to require the lowest possible reasonable rates of return.

3.6 Question 6

As discussed in the answer to Question 4 we believe that, unless vertically integrated companies are forced to substantially reduce the amount of electricity they sell to themselves, none of the FiT proposals will fully incentivise efficient operating decisions.

3.7 Question 7

We agree that technologies which are currently uneconomic will be incentivised by any form of FiT, although we anticipate higher rates of return being required due to the uncertainty caused by the Government announcement of a review of the existing FiT less than one year after it was introduced.

3.8 Question 8

The confidence of both new investors and existing investors has been damaged by the Government's announcement of a review of the FiT less than one year after it was introduced.

The ability to attract investment will depend on the rates of return that are guaranteed to investors by the levels of the tariffs. However, we do agree that a fixed FiT would have the greatest effect, followed by a CfD FiT, followed by a premium FiT.

3.9 Question 9

As discussed in our response to Question 4, we believe that the FiT models may offer opportunities for vertically integrated companies to abuse their ability to manipulate the visible wholesale price of electricity in order to receive a higher payment.

Existing generators could also be put at somewhat of a disadvantage compared to their counterparts in the FiT scheme. For example, a biomass generator who built their plant before the introduction of the FiT, at much higher risk, could find themselves in a position of being priced out of the market by a FiT biomass generator who could offer their electricity for sale at a much lower rate.

3.10 Question 10

As discussed above, greater liquidity is of the utmost importance to a FiT with CfD. Vertically

integrated companies must not be allowed to manipulate the visible wholesale price of electricity in order to abuse the FiT scheme.

At very least vertically integrated companies should be limited to generation of 15% of the electricity they supply to consumers.

3.11 Question 11

Any FiT should be paid on output.

3.12 Question 12

Yes.

3.13 Question 13

600 kg/MW. The Government should not treat demonstration projects differently from new, commercial projects. The purpose of demonstration projects is to prove that something is achievable and such projects are awarded subsidies and grants to do so.

3.14 Question 14

Yes, grandfathering should take place from the point of planning consent. Grandfathering should be for a minimum of 25 years to ensure certainty is afforded to investors.

3.15 Question 15

Yes. This could be implemented through the Environmental Permitting regime.

3.16 Question 16

Yes.

3.17 Question 17

Biomass is largely CO₂ neutral. It should be covered by any proposed FiT to incentivise its uptake and should certainly not be subject to an EPS.

3.18 Question 18

Unfortunately this would reduce the incentive for the existing large energy companies to invest in new technology. However, security of supply must be paramount in any market reforms.

3.19 Question 19

Yes

3.20 Question 20

Yes

3.21 Question 21

Very little

3.22 Question 22

We agree with the need for a central body but believe the system should be price based and market- wide. We believe that this is the best way to ensure than sufficient certainty is given to encourage investment.

3.23 Question 23

We do not foresee any significant adverse impacts on investment in demand side response.

3.24 Question 24

Economic dispatch.

3.25 Question 25

Yes.

3.26 Question 26

We believe that the Government may be trying to do too much at once and risks creating too much uncertainty when new generating capacity is needed more than ever before. We believe that the EPS and carbon floor price proposals are perhaps achieving similar goals and only one should be chosen to avoid confusion.

Our comments on the individual mechanisms are provided above.

3.27 Question 27

These are discussed above and in Section 4 below.

3.28 Question 28

Impacts in other areas are inevitable, but we do not expect them to present insurmountable problems.

3.29 Question 29

As mentioned above, we think the Government may be trying to do too much at once. In particular, we believe the EPS and carbon floor price proposals cover too similar ground. If a high carbon floor price is introduced, in combination with the existing planning climate for coal fired power stations, we do not see the need for an EPS.

3.30 Question 30

The main risk is that the package of reforms will take too long to implement and for investors to understand. Unfortunately, although reform is badly needed it could not have come at a worse time; when the need for a large amount of new capacity has never been more pressing. Hence we believe that a staggered approach, without leaving too much uncertainty, may be the most appropriate way forward.

3.31 Question 31

Auctions were used in the NFFO and the result was that many auction winning plants were not constructed. While one way of controlling this would be for the winners to deposit a large bond that is lost if the development is not completed within a certain time period, this and similar guaranteed methods would stifle investment in new innovative emerging technologies which need all their funding for development and would have no spare funds for bonds.

Auctions for mature renewable technologies such as onshore wind, could be viable. Auctions, tenders or administrative setting should be technology specific.

Prices should be set for individual technologies, so that the most suitable locations for these projects are selected.

There is sufficient competition only for mature technologies.

An auction could help to prevent the FiT from incentivising one particular technology.

An alternative would be a capacity cap on each technology based on the independent regulatory body's opinion on the most appropriate mix of generating technologies. This is likely to need tweaking at each tariff review.

3.32 Question 32

As discussed above, we believe that either the break up of vertically integrated companies or a limit on the amount of electricity which an electricity supplier can purchase from a group company, say 15%, is required to restore transparency to the wholesale price of electricity. This is desirable to reduce the potential for vertically integrated companies to manipulate the payments made under any FiT regime.

One other aspect which is without the scope to this present review is the planning regime under which large energy projects are brought forward.

While we applaud the Governments wish to involve local communities in the planning process, the construction of electricity generation facilities is a national matter and it should be decided by a national body taking into account the national need for electricity. Planning roadblocks must be removed to ensure that new generating capacity can be quickly brought forward when it is required, including a willingness from the relevant planning authority to accept that local resident and NGO opposition is inevitable, no matter the nature of the project or its location.

Our belief is that significant reforms are still required to the planning system to prevent local or NGO opposition from stalling projects which are of national significance and are urgently required.

The Secretary of State must be given the power (and must be willing to use it at the perceived expense of electoral votes) to step in and award planning consent to a project which he deems necessary to deliver secure electricity supplies. We believe that the experiment with an independent planning body (the IPC) has proven to be a failure and that its proposed replacement will be equally unable to allow new, large scale projects to be brought forward in time to meet the forthcoming shortfall in electricity supplies. Weak, light-touch Government can no longer be afforded.

While we acknowledge that this topic is outside of the remit of this consultation, we believe that electricity market reforms alone will not deliver the Government's aims and targets in the timescales required without significant reforms of the planning system. It is a combination of reforms of the electricity market and the planning system that is required to bring about the Government's vision of a decarbonised electricity supply industry, in a timely manner, and which will remove the uncertainty of investment caused by both of the current systems.

3.33 Question 33

Effective, hands-on regulation to step in where abuses of the system are identified would help. This should never extend to making retrospective or unexpected changes to tariffs. It should primarily be used when abuses of market dominance or vertical integration are identified.

3.34 Question 34

We agree that the implementation of such wide ranging reforms risks delays in projects being brought forward at a time when they are most needed. The Government should consider how it can assure investors in projects currently under development that they should continue to invest.

3.35 Question 35

It is not only renewables projects which need assurance as to what the future of the electricity market holds, although we agree with the transition proposals for the RO.

3.36 Question 36

Option 2.

We believe that all ROCs should be grandfathered. Lack of full grandfather rights for biomass has delayed the financing of all major biomass projects.

Grandfathering should be based on the date of the award of consent, rather than operation or accreditation. Reviews of banding should be every 4 years.

Incentive mechanisms should only be subject to early reviews in emergency situations as a last resort, and only if transition arrangements are made for those who have invested heavily bringing forward projects which have not yet been awarded planning consent.

Projects in the "vintaged" RO should be given the choice to be moved into a new regime, but should not be forced to move.

3.38 Question 38

Fix the price of a ROC for existing and new generation.

4 Recommendations

To improve transparency in the wholesale electricity market, which will be required to ensure that the proposed reforms are not open to manipulation, either vertically integrated companies should be broken up or limited to generating no more than say 15% of the electricity that they sell. Ideally this would induce those suppliers with excess generation capacity above this level to sell their assets and introduce more competition into the generation market.

Consideration should be given to reintroducing a pool system, although possibly under a 'what you bid is what you get' arrangement. I.e. not awarding the highest price paid to all those who bid less than this amount.

Either create a new body, completely independent of Government influence, to regulate the generation of electricity, its sale to electricity suppliers and to deal with carbon floor pricing, capacity payments and Low Carbon Generation Payments (LCGP). The LCPG would effectively be a fixed Feed-in Tariff under a name which perhaps has less negative connotations under the current climate.

This independent body would set the guaranteed payments for electricity generated by:

- New nuclear power plants
- New offshore wind farms
- New coal fired power plants with CCS
- New biomass power plants
- New onshore wind farms
- New solar PV facilities
- New hydroelectric plants
- New concentrated solar energy plants
- New tidal power plants
- Any other new, low carbon technologies.

The LCGP would be fixed at the date the generation facility receives planning permission, which would avoid any complications caused by the different time scales involved in construction of different generating technologies. For example nuclear will take 7-8 years to build, offshore wind will take

about 4-5 years, onshore wind about 1 year, biomass about 4 years, coal with CCS about 5 years, solar PV less than 1 year, solar concentrated about 2 years, hydro anywhere from 1 to 4 years depending upon size and tidal 3 to 8 years again depending on size.

The fixed LCGP would be guaranteed for a set number of years of operation, typically 20-25, depending on the technology, dependent upon construction of the project beginning within a set time period from award of planning consent, say 2 years, to avoid developers from securing a high tariff and then waiting for a more economically advantageous time to begin construction.

The independent body would review the LCGP for new projects every 4 years, through a full consultative process to ensure that decisions are based on accurate market information. This would provide confidence to investors in the development of projects and also enable the independent body to assess any incentives needed to increase the development and installation of any particular technology.

The RO should remain available to all renewable generation until such a time as any replacement is well established and is operating effectively.

With regard to capacity payments, the new independent body would review all technologies available for standby capacity and decide what mixture of these is best suited to deal with the future increased intermittency of generation, taking into account cost to the consumer, CO₂ emissions and response time from cold start to full operation.

One aspect which is outwith the scope to this present review is the issue of obtaining planning consent to construct these various forms of electricity generation.

Our belief is that the current and proposed planning system will not effectively deliver the aims of the Government. Significant reforms to the planning system are required to prevent local or NGO opposition from stalling projects which are of national significance and are urgently required.

The Secretary of State must be willing and able to step in and award planning consent to a project which he deems necessary to deliver secure electricity supplies.

While we acknowledge that this topic is outside of the remit of this consultation, we believe that energy market reforms alone will not deliver the Government's aims and targets in the timescales required without significant reforms of the planning system. It is this combination of reforms that is required to bring about the Government's vision of a decarbonised electricity supply industry in a timely manner and which will remove the uncertainty of investment caused by both of the current systems.

