Summerleaze

Electricity Market Reform Project
Department of Energy & Climate Change
4th Floor Area E
3 Whitehall Place
London
SW1A 2AW

10th March 2011

Dear Sir/Madam,

Response to the consultation on Electricity Market Reform

Summerleaze welcomes the opportunity to respond to the Government's consultation on Electricity Market Reform. Our answers to the 38 questions posed in the consultation document follow overleaf.

Summerleaze Ltd is a family company based in the Thames Valley. Its original and core business is in extraction and supply of aggregates to the construction industry. Summerleaze has been investing in renewable energy since the mid 1980s, and this has come to be the largest part of its activities. It was one of the first renewable generators in the country, commissioning its first power station (on landfill gas) in 1987. The landfill-gas business grew to be one of the largest renewable generators, producing over 300 GWh p.a., before being sold to Infinis Ltd in 2007. Since the turn of the century, Summerleaze has been investing, to replicate its success in taking landfill gas from immaturity to maturity, in other renewable sectors, through subsidiaries in anaerobic digestion (AnDigestion Ltd), renewable hydrogen (Green Hydrogen Ltd), and wood-pellet distribution and supply (Forever Fuels Ltd).

Summerleaze is a member of the Renewable Energy Association and the Association of Electricity Producers.

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Response of Summerleaze Ltd

to consultation by the Department for Energy and Climate Change on

Electricity Market Reform (EMR)

Current Market Arrangements

1. *Do you agree with the Government's assessment of the ability of the current market to support the investment in low-carbon generation needed to meet environmental targets?*

The housing market in the United States was unable to support the investment in sub-prime property needed to meet equality targets, until a series of interventions by politicians and bankers produced conditions that broadened ownership to include a large number of people whose incomes were insufficient to meet their financial obligations.

It is the targets that are the problem, not the failure of a set of institutional arrangements to deliver something unrealistic. Failure to achieve targets that can only be achieved at exorbitant and unsustainable expense should be seen as reason to abandon the targets, not to make further efforts to over-ride market resistance.

Targets imply either that governments know how much can be achieved at what cost and what the consequences will be, or that the objective is so important that it must be achieved at any cost (assuming that it can be achieved within a cost that does not cause a collapse in the economy and the loss of the means needed to achieve the targets).

The ongoing discrepancy between intellectual-expectation and policy-outcome in the face of many revisions of policy (all based on supposedly-expert calculation) gives cause to doubt that this time is different, and that the government really does know exactly how much everything will cost, how much can be delivered, and what the effects of that delivery will be.

It is a basic tenet of welfare economics that, where the cost of mitigating an externality exceeds the cost of adapting to and compensating for the externality, the socially-optimal option is to adapt and compensate, not to mitigate. Environmental externalities are a case in point. There are many uncertainties and a wide range of opinions regarding the price at which it is better to adapt than to mitigate, but there is little justification or support for setting that price infinitely high. Yet that is the implication of an environmental target that must be achieved at any cost.

If one accepts that there is a price at which it is better to adapt than to mitigate, and that government's knowledge is not perfect, then one cannot justify a fixed target. Government fallibility means that one cannot know whether the achievement of that target would require the subsidy of measures whose cost is greater than the benefit. Instead, one must create an institutional framework that internalises the externality, and thereby discover what quantity of mitigation is justified at that price, and by what means it can be delivered.

The environmental targets are not only unjustifiable, but also counter-productive. A key argument put forward for yet another bout of institutional modification is that the current arrangements expose investors to excessive political risk. The hope is that new institutional arrangements can reduce that risk, lower the cost of capital, and thereby reduce the cost of delivering the environmental targets.

But it is the targets that create the risk. No government can bind a future government, so no institutional arrangements can eliminate the risk that a future government might change the economic conditions to the disadvantage of some investors. Even long-term, government-backed contracts cannot eliminate that risk, as investors remain exposed to measures that affect their costs, or the relative value of the contract, or (ultimately) that a government that over-promises may have to renege on long-term contracts, however solemn and sincere the original commitment.

Investors must weigh the likelihood of that happening. Targets, and the failure to achieve them, are the main self-inflicted pressure that drives governments to keep changing factors within their control, in ways that are not usually predictable by investors. If a price rather than a target is set, there can be no accusations of "under-delivery". The amount that is delivered is the amount that ought to be delivered, by definition.

It is rational for investors to expect the continued failure to achieve the targets, and that the government will therefore change things again within a few years. Change is predictable, but the form of that change is not. That reality creates significant disincentives to invest, which cannot be altered by institutional modification while the targets remain in place. Counter-intuitively, the best way for a government to reduce political risk is to abandon targeted measures and move to simple mechanisms to internalise externalities – one mechanism and one price for each externality. The abandonment of the targets would increase the efficiency of delivery.

The current market will not support the investment in low-carbon generation needed to meet environmental targets, but neither, at reasonable cost, will any other set of mechanisms that maintain or extend those targets. The proposals under consideration in this consultation are designed to address the wrong part of the problem correctly identified in this question.

2. *Do you agree with the Government's assessment of the future risks to the UK's security of electricity supplies?*

There are three threats to the UK's security of supply:

(a) Misguided investment and unresponsive demand, due to the over-riding of market signals by policy interventions,

(b) Insufficient investment due to poor incentives on the incumbents and high barriers to entry, and

(c) Excessive dependence on a single type or source of primary energy (across all our energy uses, not just electricity), exposing the UK to the risk of interruption or price spikes due to local difficulties for one of a handful of key producers.

(a) Misguided investment and unresponsive demand

Many of the measures under consideration in this consultation have exactly this effect. Their purpose is to over-ride market signals, on the assumption that the market will not deliver political objectives. Yet the cost of over-riding market signals is always to confuse the information on which good investment, production and consumption decisions are taken.

Measures to insulate investors in nuclear, wind, carbon-capture-and-storage (CCS) and other technologies against the costs of their weaknesses have unintended consequences that may not only outweigh the supposed benefits of delivering more of these technologies than would be delivered without intervention, but may even counteract the effectiveness of the measures in delivering the technologies, leaving less than anticipated of the intended benefit to weigh against the unintended consequences.

Different types of intervention work more or less with or against the grain of market signals. Targeted measures work against the grain, and produce the greatest distortion in signals, and the greatest degree of malinvestment. Simple measures, which price an externality and leave it to the market to decide how to respond to that price, work with the grain of market signals and result in the least distortion and malinvestment. The measures under consideration in this consultation fall mostly into the first category.

(b) Insufficient investment and barriers to entry

In a market where demand is price-inelastic, suppliers can maximise profits by maintaining a slight insufficiency of capacity, whose positive effect on margins should greatly exceed the negative effect on volumes. The factor that tends to prevent incumbent suppliers in such a market from acting this way is the threat that new entrants will be attracted by the high margins. In the absence of significant barriers to entry, incumbents must either act to keep prices low enough to make entry unattractive, or see capacity significantly expanded and their margins undermined by new entrants.

Unfortunately, there are high barriers to entry in the electricity market. The high capital costs are a natural barrier to entry, but capital should nevertheless be attracted to markets with high returns, which certainly exist in the UK energy market, as the financial performance of the "Big Six" Vertically-Integrated Large Energy (VILE) companies demonstrates.

But that capital will only be attracted to the energy market if the output from the investment can be sold on a competitive basis. In the case of the British (and broadly the European) energy market, new entrants cannot be confident of being able to sell their output in a straightforward competition with other generators, as most of the generation with which they are competing is operated by the VILE companies who dominate (as buyers and sellers) the market into which the output must be sold. In a market dominated by VILE companies, new-entrant generators are inevitably the swing producers, and therefore face significantly higher risks. Likewise, new-entrant suppliers must draw from a small and therefore less reliable pool of independent generation, or rely on the output of their competitors, either option placing them at a distinct disadvantage to their VILE competitors.

This problem of market liquidity is widely-recognised, and indeed acknowledged in the consultation. There are only two ways to solve the problem (and only one, (b) below, that properly reduces market power and avoids unnecessary complexity and opportunities for gaming and rent-seeking):

(a) Force all power to be traded through an exchange, like the Pool of old, or

(b) Dis-integrate the VILE companies, restoring and maintaining the clear separation between generators, suppliers and distributors, which was necessary for systems of bi-lateral contracting, like NETA/BETTA, not to be undermined.

Neither of these options is considered in the consultation, and neither appears to be under serious consideration in Ofgem's review of liquidity. In the absence of a clear commitment to implement one of these options, EMR will have failed to address the biggest shortcoming in the current energy market. No set of institutional arrangements can be effective without fixing this problem, and many of the ineffective or harmful measures under consideration would be unnecessary were this fundamental problem to be addressed.

(c) Excessive dependence on a key fuel or producer

The UK's electricity supplies were never less secure than when we were dependent on British coal. Increased imports of coal were one of the first means to break that dominance and vulnerability, followed by increasing contributions from other fuels. The key to security is diversity, not self-sufficiency.

That diversity must be maintained across our energy systems, not just within the electricity sector. Electricity is usually the focus of energy security, but it is the other two uses – transport and heat – where we suffer from a particular lack of diversity and security. Oil dominates transport, and leaves us vulnerable to interruptions to production or export from a few key countries, as the effect of interruptions to even a minor player (Libya) is demonstrating at the moment. Natural gas dominates heat, and leaves us vulnerable to interruptions and declining production or export from key producers like Norway, Russia and Qatar.

A reduction in our use of a fuel in one sector has benefits for the availability and security of that fuel across all sectors. Our vulnerability is proportional to our dependence on a fuel across the sectors. We can maximise our security, then, by using alternatives to these dominant fuels in ways that maximise their displacement of the dominant fuels.

For example, we can use biomass to generate electricity to displace gas-fired generation, or we can use biomass to produce heat to displace gas-fired heating. To the extent that there is any initial preference, it should be to increase diversity in the sector that is least diverse, i.e. heat. But even without that initial bias, the preference should be to use biomass for heat (with or without combined power), simply because the displacement effect is greater. Gas can be used to produce electricity at a conversion efficiency of 50-60%. Biomass cannot easily or economically be converted to electricity at an efficiency of 40%, and is more typically converted at efficiencies of 20-30%. Both gas and biomass can be converted to heat at efficiencies of around 90%. Given a TWh of gas and a TWh of biomass, if we use the former to produce electricity and the latter to produce heat, we will have over 500 GWh of electricity

and 900 GWh of heat. If we use the former to produce heat and the latter to produce electricity, we will have 200-400 GWh of electricity and 900 GWh of heat. If that TWh of biomass were displacing gas-fuelled supplies in either sector, it would have displaced a TWh of gas for heating in the first case, and 400-800 GWh of gas for electricity-production in the second case.

It is nonsensical, then, to treat electricity separately from other uses for this purpose, and even more nonsensical to conclude from a myopic analysis of the electricity sector that one should pay whatever is needed (for example) to encourage the use of biomass to displace fossil-fired generation, and/or as a greener standby form of generation for intermittent renewables. The misplaced boundary of the study has created a false conclusion.

Instead of trying to micro-manage the fuel-mix in a single sector, a government determined to maintain diversity without creating distortions and mis-allocation of resources might mandate that the fuel-mix and source-mix for our energy supplies as a whole and for each major energy company individually should not incorporate more than a given percentage of any one fuel or source. This could be enforced without limiting the necessary short-term flexibility by implementing it as a barrier to the addition of capacity once the limits had been reached.

For example, the Government might say that no fuel should constitute more than 40% of the mix (overall, and for each major energy company), and no source should constitute more than 20% of the mix. Once a fuel reached 40% of a country's energy supplies, no company would be permitted to offer it to customers who did not already use it. Once a fuel reached 40% of a major company's energy supplies, that company would not be permitted to offer it to any customers who did not already use it. Likewise (at the respective percentage) for sources of fuel, such as Russia or Saudi Arabia.

All companies would remain free to make their own judgments of how best to supply their customers within these restrictions. Where fuels or sources already exceeded the limits, no draconian action would be required, as this rule would not require a reduction, it would simply prohibit exacerbation of the dependence through increased reliance on the fuel or source. It would drive the market gradually but firmly towards a diverse mix across all the sectors, without substituting central planning for commercial judgment.

Options for Decarbonisation

Feed-in Tariffs

3. Do you agree with the Government's assessment of the pros and cons of each of the models of the feed-in tariff (FIT)?

The broad assessment is correct so far as it goes, but misses some key strengths and weaknesses. In particular, the FIT with CfD is so dependent on a liquid, traded wholesale electricity market that it is either a strength of the proposal, if the dependence were translated into determination to implement measures to create the necessary liquidity, or a weakness, if it is introduced without the necessary liquidity. Without substantial liquidity in a traded market

for wholesale electricity (from all technologies), the reference price needed for the mechanism will be an artificial construct vulnerable to gaming, and independent generators are likely to have difficulty achieving the sales prices indicated by the constructed reference price.

Fixed FITs, by over-riding the price signals in the wholesale electricity market, would be likely to cause the greatest malinvestment, where people continued to invest in technologies that were having increasingly negative effects on prices in the market. For instance, if Fixed FITs delivered so much wind-power that prices were driven negative during many of the windier periods, price signals would normally deter further investment at this point, but a Fixed FIT would insulate wind developers from these price signals, and enable investment in unwanted and under-utilised capacity. A FIT with CfD would have a similar effect, with only marginally greater exposure to price signals.

Of the three main options, only the Premium FIT would maintain a decent amount of exposure to price signals. For this reason, and the improbability that the Government or OFGEM will take the necessary measures to create the liquidity on which a FIT with CFD depends, the Premium FIT is the least bad of the three main options under consideration.

But this is an ugly contest, where the winner is only marginally less hideous than the other competitors. We are seeing the negative consequences of FITs across Europe, where one after another country is having to dramatically reduce levels of support to avoid bankrupting their economy and delivering unbalanced quantities of certain technologies. This has a very bad effect on the renewable industries in those nations, which have built up capacity based on political promises (just like the ambitions set out in this consultation) that the market would expand well beyond its current levels, and now find themselves under-employed (and looking to dump their products and services into the UK market, undermining any supposed industrial-policy benefit from generous taxpayer subsidy for certain uneconomic technologies).

The correct solution is a combination of carbon tax and fossil-fuel tax, to price the externalities, and to encourage diversification away from fossil fuels where we are at risk of becoming dependent on too few significant sources. This was the policy approach adopted by Sweden many years ago. The only targeting they allowed themselves were sensible measures to mitigate the impact of high energy costs on their industry. Otherwise, they let prices do their work. It is not coincidental that the Swedes have the most diversified energy-mix, the highest levels of energy-efficiency, and the strongest economy in Europe at this time of high and volatile energy prices, despite their lack of fossil-fuel resources.

4. *Do you agree with the Government's preferred policy of introducing a contract for difference based feed-in tariff (FIT with CfD)?*

No, for the reasons stated in the previous question. The disadvantages of a FIT with CfD might be worth tolerating if it forced the issue of real liquidity reform, but as that does not appear to be on offer, a FIT with CFD is all pain and no gain.

One other negative consequence of a FIT with CFD has not received much attention: the powerful advantage it gives (yet again) to the VILE companies. Generators will be paid the difference between the strike price and a (relatively) short-term reference price. In the absence of proper liquidity, there is a significant risk that the VILEs will find ways to game the reference price to capture some of the value.

But even if the reference price is constructed in such a way that it is reasonably close to a genuine market value for electricity, the VILEs will be able to seize some of the value from many independent generators. Long-term PPAs are usually discounted heavily compared to shorter-term prices. Many independent generators have to sign up to long-term PPAs (usually with one of the VILEs directly or indirectly) in order to secure finance for their projects. They will therefore be paid the difference between the strike price and a reference price that is higher than they actually receive. VILEs who develop their own renewable projects, on the other hand, will be able to capture the full value between their generation and their supply arms, as they will be selling the output to themselves.

It has been suggested that the heavily-discounted PPAs simply reflect the costs to the VILEs of contracting this power, and that this is therefore a fair market reflection of the value of projects that cannot finance off balance-sheet. But as there is no upfront payment, the cost to the purchaser is simply the cost of whatever is paid at each period of the contract. If there were real costs, prices to companies like Summerleaze who have the means to self-finance and freedom to go short on PPAs would also fall over time. In practice, we have found that we have done very much better by going short than we would have done if we had accepted a longer-term PPA (with one exception, in 2009, when we locked in to high prices for two years).

The most charitable way of expressing the real cause of the heavy discounting is that it is the heavy price that the VILE companies place on a somewhat abstract risk. In reality, it is simply the price that they know they can get away with offering. Whether you view it as sheer profiteering on the bank of an uncompetitive market, or as realising the value of this risk, there is no doubt that the VILEs can capture this value with in-house projects, where independent generators cannot, and that the VILEs will therefore be in a significantly stronger position than independents to develop new projects. This may account to some extent for their preference for a FIT with CfD. It should be a sufficient reason for a government with any residual interest in competition not to adopt the mechanism.

A FIT with CFD will quite likely reward Summerleaze's investments in renewable energy quite generously, and Summerleaze will benefit as much as any other renewable generator from having moved most of the risk onto the taxpayer or energy-consumer. But a mechanism that won't deliver what it is supposed to deliver, but will deliver a reduction in competition, helps no one in the long-run. A FIT with CfD is bound to have too many unintended consequences to survive longer than previous mechanisms intended to over-ride market signals to deliver unwise targets. We oppose a FIT with CfD despite the potential short-run benefits to our company, because of the long-run costs to everyone, including ourselves.

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5. *What do you see as the advantages or disadvantages of transferring different risks from the generator or the supplier to the Government? In particular, what are the implications of removing the (long-term) electricity price risk from generators under the CfD model?*

Investors should be fully-exposed to market risks. They should not be exposed to political risks. The more that a government insulates businesses from market risks, the more it encourages the wrong kind of investor, whose expertise is in rent-seeking rather than predicting what the market requires.

6. *What are the efficient operational decisions that the price signal incentivises? How important are these for the market to function properly? How would they be affected by the proposed policy?*

The price signal influences investment as much as operational decisions. There are many small choices that a generator can make that require a trade-off between cost and resilience/availability. Buffer storage of fuel is an obvious case for biomass/biogas technologies, and standby capacity in many difference facets of the installation for many technologies.

One can always improve resilience/availability, but there are diminishing marginal returns. The pattern of price signals, not just their overall levels, determines which measures are worth taking. The more that price signals reflect the momentary conditions in the market, the more that generators will be incentivised to implement the measures that most accurately respond to the needs of the market.

There are two sides to the price-signal coin. If you damp or distort price signals to generators, you cannot easily expose consumers to realistic price signals. Worthwhile demand management relies on having sufficient rewards from prices varying according to the conditions in the market.

7. *Do you agree with the Government's assessment of the impact of the different models of FITs on the cost of capital for low-carbon generators?*

No. As explained in the answer to Q.1, the main risk is the political risk associated with targets. Long-term contracts provide a modicum of security, but financiers are well aware of the residual exposure to many risks that cannot be eliminated by a contract for one aspect of a project's economics.

In any case, there is an ongoing, unresolved tension between ultra-low base rates, and much higher real costs of capital (and rates of inflation). The base rates influence the level of return that investors might be forced to accept, but many of them would rather not put their money up at all for investments that offer returns that price inadequately for the risk. Sooner or later (probably sooner), investors know that base rates will have to rise, or at least adjust themselves to a more realistic relationship with inflation(/deflation).

Faced with this likelihood, investors will not want to be locked into long-term investments at returns well below the market rates that are likely to be prevailing in the not too distant future. They may also fear that the official rates of inflation may not accurately reflect the real rates of inflation, and that any indexing will therefore not be as good security as it might appear.

The current extreme monetary policy (strongly negative real rates) both drives investors to invest wherever they think they can get any sort of protection for their money, and deters them from investing in anything carrying much risk, as returns are unlikely to justify the risk when rates are as low as they currently are. Hence money pours into assets that are seen as least risky relative to the probability of appreciation, or assets that offer the prospects of high returns to accompany higher levels of risk. The middle-ground, where most business exists, is unattractive, and is not much helped by the illusory promise that politicians have somehow eliminated the risk that future governments might implement measures that could not have been anticipated.

8. *What impact do you think the different models of FITs will have on the availability of finance for low-carbon electricity generation investments from both new investors and the existing investor base?*

Fixed FITs are likely to prove the most attractive to investors from the financial sector with minimal experience of energy or anything else that is real. Most of them imagine that it's just a question of numbers, and underestimate the wide variety of technical challenges, events and circumstances that can have major practical impacts, which feed through to the bottom line.

The sector is already awash with failed projects by drop-outs from the financial sector, who thought that all it would take was a bit of capital and their financial acumen to turn unproven technologies into money-printing machines. There is a gross failure within the cosseted financial community to understand the complexity of the practical challenges of industrial development, and the persistence and entrepreneurial expertise usually required to pick a real winner and develop it to maturity. They are usually attracted to the grand, sophisticated idea that will pay off big if they crack it (which they rarely do), and ignore the smaller, incremental improvements and less glamorous technologies that offer the more genuine prospects for meeting our needs and growing our capital. They are not so different in this regard from other members of the intellectual class (in the Hayekian sense).

Given that the British financial sector mostly lacks the skills nowadays to tell a golden goose from a turkey (in the industrial sector at least, and possibly wider), the best mechanism would be the one that is least attractive to this primary source of potential new investment. The less we can attract them, the less capital will be destroyed. In the worst case, the capital that is currently being risked and burnt by green investment funds is money that is supposed to be invested securely for people's futures, such as pension funds. That this money is being attracted into speculative investments such as immature power technologies is reprehensible. For governments to try to encourage it is worse.

Investments should be limited to the scale that can be deployed with the industry's existing capital, the risk capital that can be attracted to immature technologies, and the conventional finance that can be obtained for mature technologies. It would be a mistake to design an incentive mechanism to try to pull more capital into the sector than that. Better to abandon the targets than to burn precious capital like that.

9. What impact do you think the different models of FITs will have on different types of generators (e.g. vertically integrated utilities, existing independent gas, wind or biomass generators and new entrant generators)? How would the different models impact on contract negotiations/relationships with electricity suppliers?

The benefit of CfDs to the VILEs has already been explained in Q.4. Fixed FITs would be most helpful to technologies with high capital costs, low running costs and intermittent operation, like onshore wind. Premium FITs would favour technologies with the opposite features.

Fixed FITs eliminate the need for negotiations with electricity suppliers. Premium FITs and CfDs both weaken the independent generator's hand in negotiations with suppliers (mostly the VILE companies).

10. How important do you think greater liquidity in the wholesale market is to the effective operation of the FIT with CfD model? What reference price or index should be used?

Vital. See above. The only credible reference price would be a wholesale price generated in a liquid market in which the output from all technologies were traded.

11. Should the FIT be paid on availability or output?

Output. Paying on availability both adds complexity and would mask vital signals that ought to tell investors in intermittent technology that there is enough on the system already.

Emissions Performance Standards

12. Do you agree with the Government's assessment of the impact of an emission performance standard on the decarbonisation of the electricity sector and on security of supply risk?

We have no relevant experience on EPS, and it would not affect us. We are inclined to believe the argument of the VILE companies that the costs of this device substantially outweigh the benefits. It is in no one's interests to impose unnecessary and ineffective costs on the major electricity producers.

13. Which option do you consider most appropriate for the level of the EPS? What considerations should the Government take into account in designing derogations for projects forming part of the UK or EU demonstration programme?

See 12.

14. Do you agree that the EPS should be aimed at new plant, and 'grandfathered' at the point of consent? How should the Government determine the economic life of a power station for the purposes of grandfathering?

See 12.

15. Do you agree that the EPS should be extended to cover existing plant in the event they undergo significant life extensions or upgrades? How could the Government implement such an approach in practice?

See 12.

16. Do you agree with the proposed review of the EPS, incorporated into the progress reports required under the Energy Act 2010?

See 12.

17. How should biomass be treated for the purposes of meeting the EPS? What additional considerations should the Government take into account?

See 12.

18. Do you agree the principle of exceptions to the EPS in the event of long-term or short-term energy shortfalls?

See 12.

Options for Market Efficiency and Security of Supply

19. Do you agree with our assessment of the pros and cons of introducing a capacity mechanism?

The negatives discussed in paragraph 69 (and earlier) are about right. In the light of those negatives, it is surprising that the option of not introducing a capacity mechanism has not been given fuller consideration.

20. Do you agree with the Government's preferred policy of introducing a capacity mechanism in addition to the improvements to the current market?

No. It distorts the market signals in ways that will have a significant negative effect on demand management and on the provision of the most flexible, peaking capacity.

It is not clear that the system will avoid the potential for abuse that dogged the last capacity mechanism. The industry is strongly opposed to a targeted capacity mechanism, but an untargeted capacity mechanism would almost certainly be subject to abuse, as many generators would be paid for doing exactly what they would be doing for free in the absence of the capacity mechanism.

The way to cut the Gordian knot is not to have a capacity mechanism.

21. What do you think the impacts of introducing a targeted capacity mechanism will be on prices in the wholesale electricity market?

It will dampen them: lower peaks and higher troughs. That will reduce responsiveness to positive and negative imbalances between supply and demand.

22. Do you agree with Government's preference for the design of a capacity mechanism:
- ***a central body holding the responsibility;***
- ***volume based, not price based; and***
- ***a targeted mechanism, rather than market-wide.***

Better not to have a capacity mechanism, but if it has to be, it might as well be a targeted mechanism, and waste less money.

23. What do you think the impact of introducing a capacity mechanism would be on incentives to invest in demand-side response, storage, interconnection and energy efficiency? Will the preferred package of options allow these technologies to play more of a role?

Strongly negative. The point of a capacity mechanism is to prevent the extreme swings in price that would incentivise these sorts of developments.

24. Which of the two models of targeted capacity mechanism would you prefer to see implemented:
- ***Last-resort dispatch; or***
- ***Economic dispatch.***

No opinion.

25. Do you think there should be a locational element to capacity pricing?

No. There should be connection and use-of-system costs, but that's a different matter.

Analysis of Packages

26. Do you agree with the Government's preferred package of options (carbon price support, feed-in tariff (CfD or premium), emission performance standard, peak capacity tender)? Why?

No. They add significantly to the complexity and partiality of the market, without resolving the main issues (e.g. liquidity).

The correct solutions are dis-integration of the VILEs, a carbon tax, fossil-fuel tax, and mandatory diversity requirements. See above.

27. What are your views on the alternative package that Government has described?

Marginally better than the preferred package, particularly if real reform to provide liquidity is not delivered. But still not good.

28. Will the proposed package of options have wider impacts on the electricity system that have not been identified in this document, for example on electricity networks?

Anything that delivers the volume of wind and other intermittent power anticipated by this mechanism (25 GW by 2020, 30 GW by 2030), and upto 15 GW of nuclear, will have serious impacts on networks.

An increase in the use of electric heating, as anticipated in the first bullet-point of the Executive Summary, would have an even more serious effect on the electricity network. Heat is strongly seasonal and weather-dependent, so a doubling of demand for electricity, if it were largely on account of increased electric heating, would imply somewhere between a tripling and a quadrupling of peak demand. The whole electricity network would have to be significantly reinforced for that purpose. And yet it would imply a reduction in our non-electric heating of only just over one-third.

There is little correspondence between the patterns of production of wind or nuclear power, and the patterns of demand for heat. There are no storage technologies suitable for the scale and duration required to balance these sources of electricity with heat demand. There are gross inefficiencies in burning fuels to produce electricity to turn back into heat, rather than just burning the fuels where the heat is needed. Heat is simply a bad match to electricity, because it is so seasonal and inflexible in demand and electricity is so difficult to store.

The electricity networks will have quite enough to cope with if there is significantly increased electric transport (which there should be). Transport and existing electricity uses are a much better fit (diurnally and seasonally) than heat and electricity. A small proportion of transport energy usage, if diverted to electricity, could absorb all the swing output in current production and demand, increasing utilisation of the infrastructure and reducing the costs to consumers.

29. How do you see the different elements of the preferred package interacting? Are these interactions different for other packages?

They are complex and contradictory. At a basic level, you have to choose whether to fix a price and discover what volume is delivered, or fix a volume and see what price results. You can't do both. Yet the carbon floor-price is a fixed price aiming to discover the volume, the capacity payment is a fixed volume aiming to discover the price, and the FIT delusionally imagines that you can fix both price and volume.

Implementation Issues

30. What do you think are the main implementation risks for the Government's preferred package? Are these risks different for the other packages being considered?

31. Do you have views on the role that auctions or tenders can play in setting the price for a feed-in tariff, compared to administratively determined support levels?
- ***Can auctions or tenders deliver competitive market prices that appropriately reflect the risks and uncertainties of new or emerging technologies?***
- ***Should auctions, tenders or the administrative approach to setting levels be technology neutral or technology specific?***
- ***How should the different costs of each technology be reflected? Should there be a single contract for difference on the electricity price for all low-carbon and a series of technology different premiums on top?***
- ***Are there other models government should consider?***
- ***Should prices be set for individual projects or for technologies***
- ***Do you think there is sufficient competition amongst potential developers / sites to run effective auctions?***
- ***Could an auction contribute to preventing the feed-in tariff policy from incentivising an unsustainable level of deployment of any one particular technology? Are there other ways to mitigate against this risk?***

Summerleaze was involved in NFFO from the start. Government auctions/tenders are a disaster, as you would expect of any monopolistic or monopsonistic arrangement. They deter investment by requiring significant effort and expenditure that may not be rewarded regardless of a project's merits. They tend to reward the most optimistic / least realistic bidders, which results in major under-delivery and deterrence of more realistic investors.

If the Government were determined to implement an auction/tender system, the Renewable Energy Association has some interesting ideas for how the negative effects could best be mitigated.

A calculated/administered price has its own problems. Without an auction, it will be very difficult for the Government to budget the cost of the mechanism. And if the history of government calculations of the potential and price-trajectory of technologies since the introduction of NFFO has anything to teach us, it's that the Government might as well pick prices by pinning a tail on the donkey.

In any case, this all assumes that bands are appropriate. Bands are not appropriate. They run counter to basic welfare economics. If not for the environmental costs, it might be argued that they are justified by industrial policy, but the history and economics of industrial policy suggest that this is no better an application of central planning and government "expertise".

32. What changes do you think would be necessary to the institutional arrangements in the electricity sector to support these market reforms?

Shouldn't implement the reforms, so haven't given much thought to the institutional arrangements. It will obviously require a large quango or equivalent to house all the central planners who will do the calculating of appropriate support-levels and operating of the bureaucratic systems needed to implement the transfers.

33. Do you have a view on how market distortion and any other unintended consequences of a FIT or a targeted capacity mechanism can be minimised?

By having carbon and fossil-fuel taxes instead...

The general rule is: the less complicated, targeted, and insulated, the less severe the distortions. If we have to have another new framework, the damage can be minimised by keeping the mechanisms as simple and undifferentiated as possible.

34. Do you agree with the Government's assessment of the risks of delays to planned investments while the preferred package is implemented?

There will inevitably be a hiatus until the industry has clarity and certainty on the details of how the schemes will be implemented. There will be a lesser inhibiting effect after that, as the financial sector (and the energy industry to some extent) get comfortable with the new arrangements.

Those technologies with long lead-times (e.g. nuclear, wind) will be worst affected.

35. Do you agree with the principles underpinning the transition of the Renewables Obligation into the new arrangements? Are there other strategies which you think could be used to avoid delays to planned investments?

The proposed transition arrangements are about as good as could be achieved, if the new mechanisms have to be introduced.

There is significant confusion over grandfathering. The Government is doing the right thing by promising to grandfather existing projects. However, this does not protect existing projects as much as the Government imagines. For those technologies with significant operating costs or other revenue streams (e.g. gate fees) that could be affected by demand, such as biomass and biogas, any significant discrepancy in value between the new scheme and the RO threatens to undermine the economics of the existing scheme, making the new parasitical on the old.

The same is likely to happen to earlier projects in the new scheme. Later projects are likely to be parasitical on the earlier projects. The marginal cost of delivering the thousandth megawatt of a technology with significant fuel costs is likely to be higher than the marginal cost of delivering the hundredth megawatt, simply because the availability of the fuel (e.g. waste suitable for digesting) will not increase at that rate, so new projects will have to be predicated on using more difficult feedstocks. Government projections have always over-estimated the significance of the learning curve relative to the cherry-picking effect (or diminishing marginal returns).

In most other regards, the new projects are likely to be no more expensive than the earlier projects, and indeed may well be cheaper or more efficient (as this is where learning curves are likely to be experienced). There are few opportunities for biomass and biogas projects to lock their feedstock into long-term supply contracts. So the new projects with higher levels of support and lower costs in other regards can compete for the fuel used by the earlier projects. This will drive up the fuel-cost (or down the gate-fee) for all projects (old and new) to the level of the marginal cost of the fuel. The new projects (with higher support and lower costs) will be able to cope, and the old projects will not.

Of course, once this process becomes apparent, it will deter investment, resolving the tension by simply failing to deliver, like these packages' close antecedent: NFFO.

36. We propose that accreditation under the RO would remain open until 31 March 2017. The Government's ambition is to introduce the new feed-in tariff for low carbon in 2013/14 (subject to Parliamentary time). Which of these options do you favour:

- ***All new renewable electricity capacity accrediting before 1 April 2017 accredits under the RO;***
- ***All new renewable electricity capacity accrediting after the introduction of the low-carbon support mechanism but before 1 April 2017 should have a choice between accrediting under the RO or the new mechanism.***

(b) A choice.

37. Some technologies are not currently grandfathered under the RO. If the Government chooses not to grandfather some or all of these technologies, should we:

- ***Carry out scheduled banding reviews (either separately or as part of the tariff setting for the new scheme)? How frequently should these be carried out?***
- ***Carry out an "early review" if evidence is provided of significant change in costs or other criteria as in legislation?***
- ***Should we move them out of the "vintaged" RO and into the new scheme, removing the potential need for scheduled banding reviews under the RO?***

Fix the bands and the levels of support in both the RO and the FIT for these technologies. Any potential for the adjustment of the level of support is a threat to projects of these technologies, for the reasons explained in Q.35.

Failing that, (c) Move it all into the FIT is the least bad of the three options.

38. Which option for calculating the Obligation post 2017 do you favour?

- ***Continue using both target and headroom***
- ***Use Calculation B (Headroom) only from 2017***
- ***Fix the price of a ROC for existing and new generation***

Because Summerleaze has historically contracted short for electricity sales, there is little downside for us to the simple option of fixing the ROC price. The RO has really been a complicated FIT anyway since the introduction of banding, so we might as well have the benefit of simplicity to go with it.

However, we understand that this approach has significant implications for other companies who are tied into longer-term PPAs that might be breached by this approach. We would support whatever is the simplest mechanism that protects the commercial position of as many existing projects and players as possible.