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31st March 2010

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Project Discovery
Options for delivering secure and sustainable energy supplies

Dear Ian,

Thank you for the opportunity to comment on the above consultation. This response is provided on behalf of the RWE group of companies, including RWE Npower plc, RWE Supply and Trading GmbH and RWE Innogy GmbH. We have split our response into two parts, the first which is immediately below contains the high level points we wish to make, while the second, which is attached as an appendix, contains specific answers to the questions you have asked.

Present Market Arrangements

- The electricity industry has demonstrated its ability to build new plant in good time to maintain healthy capacity margins under the current GB market structure. Enough new fossil capacity is already under construction to replace the opted out coal plant which will close between 2012 and 2015. Government has also made welcome progress in introducing flexibility into the Industrial Emissions Directive (IED) proposals. Provided that this flexibility makes it through the ensuing legislation, the threat to capacity margins has been averted by allowing for phased closure of opted out coal plant to 2023 and signalling to market well ahead of time, thus allowing companies to invest in new capacity.

- We fully recognise that market arrangements may not remunerate all energy investments, as has been the case with renewables and the renewables obligation. We are sponsoring KPMG to carry out an independent study, which will look at the issue of securing investment in low carbon technologies.

- The current market design is robust to increases in penetration of renewable generation to the levels sufficient to deliver the government's targets.

- Increased volatility of prices resulting from penetration of renewables will tend to encourage investments in flexible and peaking generation capacity. The higher that prices are in the peak periods, the greater the rewards for generators capable of capturing those prices, and the higher the penalties will be for companies that are 'short' of generation in those periods.

- Reforms to the balancing mechanism to give sharper price signals would

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enhance short term signals to market participants to balance but it also provides the signals to invest in future peaking plant and demand side management tools.

- Further investments planned and underway for more gas storage, interconnection and LNG will enhance gas security. The gas market has already demonstrated is ability to respond to market signals by building 125 bcm/yr of new gas import capacity and storage over the past 20 years.

- It is essential that the large scale of investment in smart meters and grids leverages the demand side to smooth the demand profile and prices.

When considering whether the present market design will meet the objectives required of it, we believe that there are a number of principles that should be adhered to, these are;

- Ensure there is a problem - do not make changes unless it is clear the current market design will not meet policy objectives.

- Make the solution fit the problem - change to market design has high costs for participants, so make targeted responses.

- Act in a timely manner -intervene in a timely manner, not too late, but equally don't solve problems which may emerge some years ahead, or not at all.

- Develop alternatives - recognise that there is no one answer and in many cases the best response may not be a change to market design.

- Ensure risks to low carbon generation imposed by other policy settings are manageable - intervention in the market will need to be greater if policy settings, such as commitments under the Renewable Energy Directive, create excess risk for other low carbon generation.

- Do not try to pick winners, both in terms of technology support and policy interventions.

We believe that in the present set of proposals, Ofgem has gone beyond the above principles in a number of areas and we shall return to them in our responses to your questions.

Yours sincerely

Alan McAdam
Economic Regulation

Attachments

Appendix 1 – answers to specific questions.

Appendix 1 – answers to specific questions

1.0 **Chapter 3**

Question 1: **Do you agree with our assessment of the current arrangements?**

1.1 The Project Discovery consultation goes beyond the scenario assessment into the policy development role. We are concerned that the suggested interventions are in some cases a disproportionate response to the problems identified and do not deliver a credible set of arrangements that would enable the market to deliver the competing policy goals of the Government.

1.2 We believe that there is an opportunity to consider the enduring and robust market arrangements that are required to develop the policies mandated by Government. A detailed review of these under different market arrangements is required prior to assessment of the potential interventions indicated by Ofgem. This would reveal, for example, the impact of "sharper price signals" on the market and on its participants. Such an analysis would help the industry to understand the scale and magnitude of the gaps revealed in the Project Discovery scenarios.

1.3 Paragraph 3.3 states that there are two main objectives of the current arrangements and then goes on to say that past performance would suggest that the arrangements have performed reasonably well against both objectives. One area where the arrangements may have performed less well is in the bringing forward of investment in low carbon generation. But the market arrangements were never designed to pick such high cost technologies ("winners") but to deliver an economic and efficient market response to a set of signals. To that end they are delivering and have enabled a transition to a lower carbon energy market by bringing forward significant investment in CCGT's and replacing the least efficient older fossil power stations. To quote the figures in the consultation document, 30GW of new generation capacity and 125 bcm/yr of new gas import capacity and storage over the past 20 years. This does not suggest to us that industry has not responded to these signals under the present arrangements. The industry continues to bring forward investment in gas and electricity infrastructure. Uncertainty over the market arrangements may, in fact, deter investment.

1.4 As a major investor in generation in the GB market, we find that some of the discussion in Project Discovery and other studies around the impact of renewables on investment incentives is misguided. RWE are already making substantial investments such as Pembroke and Staythorpe, as well as upgrading existing plant at Aberthaw (FGD), Little Barford and Didcot B **in the knowledge that the share of renewable generation will increase substantially**. The importance and value of flexibility in a market with high renewable penetration has specifically been taken into account in the design of these projects. Higher variability of prices enhances incentives to invest in constructing and maintaining flexible generation. Recognition of this fact has been a key element in RWE generation strategy in the UK and in other European markets.

1.5 Project Discovery does not give adequate recognition to the major changes underway in the gas market as a result of exploitation of unconventional gas resources in the USA and potentially globally. Experience during this winter has shown that the UK is uniquely well placed to benefit from this recent development. This is not just a fortuitous accident. Both the development of unconventional gas, and its impact on the UK market is a compelling demonstration of the power of market mechanisms, encouraged by foresighted regulation, in discovering unexpected solutions to perceived problems. The UK, as the most liberalised gas market in the world, is arguably the main beneficiary of these developments and this will be of enormous benefit to consumers since gas prices have been constrained as a result of this market-led activity. It is important to remember that

these investments have been made on the presumption that the market will largely continue to operate as it is today and that the introduction of unnecessary and costly obligations on market participants or distortions of prices from such obligations will constitute a considerable disincentive to further investment. There would not be much prospect for attracting further investment into the UK if the expectations of providers of previous rounds of capital expenditure are disappointed

1.6 Energy markets have a track record in delivering on emission reduction objectives, both in responding to strict limits such as Nox and Sox as well as through the Emission Trading Mechanism. For example, even though carbon prices are relatively low compared to previous expectations, this does not mean that the objectives have not been achieved. The UK will be well under the target agreed under the Kyoto protocol for the period 2008-12. There is no reason why this should not go on to be the case for further reductions.

Question 2: **Are there other aspects of the current arrangements which could have a negative impact on secure and sustainable energy supplies, or costs to customers?**

1.7 We believe that the present market arrangements will continue to deliver the appropriate price signals to market participants such that the market is cleared efficiently both in the short and long term. This will provide the lowest cost solution to consumers and the most efficient electricity system. It is the policies that have been developed to deliver government objectives that increase costs to consumers as they are a distortion to normal market arrangements; this is not to say that these objectives are not valid.

1.8 We are sponsoring an independent market design study that will enable us to better understand the economics of building high capital cost low carbon generation. Whatever the outcome of this study we would expect the conclusions to work in conjunction with the present market arrangements.

Question 3: **Do you agree that the five issues we have highlighted are the most important?**

1.9 We broadly agree that the five issues you have highlighted are important in the future evolution of the GB electricity and gas industries. We note that, in addition, Government policy and any associated intervention remains an important issue for the evolution of the electricity and gas industries.

1.10 However in our view the conclusion that risk 4, “interdependence with international markets will expose GB to a range of additional risks that may undermine GB security of supply”, is potentially misleading. We believe that increased interdependence is a positive as it delivers a diverse range of options for securing our gas and electricity supplies. The gas market has responded by building the necessary infrastructure to ensure we have a diverse supply of gas backed up by market arrangements. The electricity market, to a lesser extent, is also capturing the benefits of increased interconnection and responding to market signals and this should increase in future. This winter has demonstrated that we have a diverse supply that can respond to fluctuations from individual sources whilst maintaining supplies.

Question 4: **Do you have any comments on our description of what might happen if no changes are made to the current arrangements?**

1.11 A range of outcomes if no changes are made to current arrangements are presented in the conclusions document. However, we note that significant changes are already being made. Government is bringing forward new policy interventions, moving forward on CCS, nuclear and SMART meters and SMART grids, tightening environmental targets and reforming the planning

regime. All of these are having an impact on the market. Furthermore participants are responding too. We believe that the current market arrangements will continue to develop incrementally and respond to changes in the environment within which it operates. As long as Government sets clear policy direction there will be no need to bring forward fundamental changes.

2.0 **Chapter 4**

Question 5: **Do you believe that our policy packages cover a sufficient range of possible policy measures?**

2.1 It would be hard to argue that a broad range of policy packages has not been brought forward. The overall impression given by these is a move away from competitive markets to one of increasing central control not only in policy development but in how that policy is delivered. Ofgem could have made it clear that the starting point for the possible policy responses is the present market arrangements. In addition, some analysis of the potential impact on the various policy packages is required to understand fully whether they are internally consistent and capable of delivering Government targets. We are particularly concerned that the packages that include greater central control will dilute the market signals for investment.

2.2 Although Project Discovery has considered a wide range of policy options, there are certain omissions. For example although the document considers the enhancement of price mechanisms it does not specifically consider some of the potential improvements in much detail. Just as there are a range of potential interventions into market processes as set out in packages B to E in the document, there are is also a range of possibilities with respect to increasing the role of the price mechanism in delivering secure, sustainable and affordable electricity and gas supplies as follows:

- Examining the roles of locational signals in transmission tariffs which would help manage the costs of incorporating large volumes of renewable energy into the network. There are several existing examples such as market splitting (Nordpool) and locational marginal pricing (PJM) that could be used as reference points for this.

- Consideration of the tariff structures that are used by retail supply businesses and how these might change in response to the mandated use of smart meters and the potentially increased volatility of wholesale prices.

- Measures to encourage greater use of electricity in the heat and transport sectors that would reduce the issues created by intermittent and inflexible supplies, reduce the UK dependence on imported gas supplies and increase the range of possibilities for the supply of short term operating reserve to transmission and distribution networks.

- Measures to increase transparency for gas producers and shippers which would provoke the correct price response to operational incidents as they occur.

Question 6: **Do you have suggestions for variants to these policy packages?**

2.3 As we said above Ofgem has covered a broad range of responses. We would have preferred more focus on some elements of package A with an analysis of the potential impact of the policy packages on the evolution of the electricity and gas markets.

Question 7: **What other policy measures do you believe should be considered, and why?**

2.4 Other than the comments above, we do not believe that further policy options should be considered, we set out our views on the various packages in our response to the questions from chapter 5.

3.0 **Chapter 5**

Question 8: **Do you agree with the assessment criteria that we have used to evaluate the policy packages?**

Question 9: **Do you have any comments on our initial assessment of each of the packages?**

Question 10: **Do you agree with our summary of the key benefits and key risks of each policy package?**

Question 11: **Do you have a view on which package is preferable or alternative policy measures or packages that you would advocate? We are particularly interested any analysis you may have to support your views.**

3.1 **Comments on the Packages**

Rather than answer the individual questions above, we have provided our thoughts on the individual packages below. Our overall view on the packages is that Ofgem should focus on two elements of package A, being, improved price signals and improved ability for demand side to respond.

3.2 **Package A**

Minimum carbon price

3.3 We would challenge your starting assumption that uncertainty around the future price of carbon is a significant impediment to investment in low carbon technologies:

- Carbon price risk is only one of the risks facing investors in high capital cost, low carbon generation such as new nuclear build. Recent analysis by CBI/McKinsey demonstrates that the scale of any carbon price risk is far outweighed by uncertainties on power prices over the verylong payback periods and the uncertain costs of construction.

- Uncertainty around the ongoing political commitment to carbon markets at the UK and EU level is a far more significant risk to investment than carbon price uncertainty, which generators can reasonably be expected to manage alongside other commodity price risks. The EU ETS framework already provides a tough, declining cap for Phase 3 of the scheme (2013-2020), plus trajectory for further reductions (at 1.74% per annum) post 2020 and the political priority should be to provide increased regulatory certainty by defining the EU ETS cap and trajectory to align with investment timescales.

- The introduction of a unilateral carbon tax to underpin the EUA price will serve to introduce more regulatory risk, further undermining investor confidence in the EU ETS.

3.4 We agree with the Ofgem conclusion that a minimum carbon price has limited effectiveness as a long term investment signal.

3.5 The decisions companies will be required to make on new nuclear investment now relate to a payback period over several decades from the beginning of the next decade. A carbon floor price will not be effective in delivering high capital cost, low carbon investment because the carbon pass through into the power price will be eroded over time by the very investments it is intended to support. As the electricity system is decarbonised (i.e. to achieve a largely carbon free electricity sector in the 2030s), low carbon generation will increasingly set the price. When nuclear or renewables set the price, the market cannot pass through carbon-related costs. Consequently an EU ETS-linked carbon tax or floor does not guarantee a revenue stream to low carbon technology as the carbon intensity of the UK portfolio decreases. In such circumstances, increased demand side participation will be vital to avoid prolonged negative prices arising not from economic fundamentals, but from the knock-on effects of the support mechanisms e.g. RO or feed-in tariff.

3.6 A carbon floor price provides no more political, regulatory and price certainty for investors than the EU ETS alone as it could be subject to considerable change over the estimated 35-40 year payback period for new nuclear.

3.7 A carbon floor price will unnecessarily reward old nuclear plant and be poor value for money as a result. A tax on EU ETS combustion emissions would penalise fossil generators, particularly those with a predominantly coal portfolio, while resulting in substantial windfalls for existing nuclear in the near term. Even if the implementation date for a carbon floor price is deferred until the first new nuclear plant becomes operational or until 2020 as Ofgem suggests, a carbon floor price is unable to discriminate between new and existing assets and could still result in significant windfalls for up to 15 years.

3.8 A carbon tax on EU ETS combustion emissions perversely incentivises direct gas consumption over electricity, running counter to the consensus view that a shift away from oil/gas to low carbon electricity for heating (and transport) is required if the UK is to meet its 2050 emissions reduction target.

3.9 Given that a carbon floor price will be ineffective in stimulating investment in low carbon generation projects as outlined above and the impacts are potentially negative for many generators, eroding profitability, it will not improve the attractiveness of the UK for investment.

3.10 A carbon tax on EU ETS installations, which could force older fossil plant out of the market early while failing to stimulate investment in low carbon generation, could tighten capacity margins and threaten security of supply. This will be exacerbated if significant levels of intermittent renewables are built into the market and there is insufficient flexible fossil capacity available to provide system security.

Improved price signals

3.11 It is worth noting that Ofgem have previously rejected various modification proposals that would have introduced sharper price signals in the electricity market. Most notably a modification proposal to introduce a single price was rejected in 2002 (P74), a marginal price modification was rejected in 2004 (P136/P137) and the inclusion of demand in the calculation of cash out prices was also rejected in 2004 (P138) and again in 2006 (P199). More recently (October 2008) a modification proposal designed to introduce more marginal cash out was rejected in favour of the current basis of deriving cash out prices from up to 500MW of offers or bids (P217). Given the policy precedents established by Ofgem decisions in cash out there has been a reluctance to promote further cash out modifications that would appear to have little chance of success. However, the Project Discovery document appears to open up this area once again.

3.12 It is widely recognised that deficiencies remain in the current electricity cash out pricing mechanism. In particular:

- **Average Pricing**: The current basis for calculating the main cash out price on an average basis using up to 500MWh of offers or bids may significantly understate the costs of energy balancing. This is particularly the case with respect to the difference between the average price and the marginal price (i.e. the cost of the next incremental MWH required to balance the system). Consequently cash out prices cannot provide the economically efficient signals with regard to energy balancing and investment in new power stations;

- **Dual Cash Out**: The use of dual cash out arrangement also fails to provide the correct incentives to balance since imbalances in the opposite direction to the system imbalance are inadequately rewarded. In other words there is insufficient incentive on market participants to anticipate the direction of system imbalance. It should be noted that the System Operator has expressed concerns about the use of a single price since in their view it may increase volatility and the cost of balancing. The counter view is that a single price would result in an economically efficient outcome as users modify behaviour to reduce overall system balance. In addition, there may be enhanced liquidity as a consequence;

- **Pricing of Reserve**: There is no doubt that the current cash out arrangements significantly understate the cost of reserve. This gives rise to a significant "missing money" problem. The costs of reserve availability are reflected into cash out through the Buy Price Adjuster, a time weighted and volume weighted uplift adjustment based on historic patterns of reserve usage. This buy price adjuster does not therefore correctly reflect the opportunity cost of reserve into cash out. This problem is enhanced by the fact that there is no mechanism to reflect the effects of demand interruption into cash out and there is, therefore, no price for the value of lost load. There are a number of ways in which the missing money issue could be addressed either through structural arrangements such as a day ahead reserve market or through administered solutions such as a VOLL price for a volume of demand interruption.

3.13 The outcome of electricity cash out reform to introduce single marginal cash out price that correctly includes reserve is likely to be higher and more volatile cash out outcomes. This has two general effects in the electricity market: increasing the costs of imbalance introduces a much greater incentive on parties to balance; and there should be more economic and efficient market operation both in terms of trading (liquidity) and signal for closure and new entry.

3.14 In the gas market Ofgem approved UNC44 which was designed to provide an estimate of the amount of gas subject to curtailment in the event of a gas emergency in order to provide more cost reflective cash out arrangements. It also recently approved UNC260 which was designed to encourage non-UKCS gas supplies into the GB market in an emergency and to more appropriately allocate the costs of an emergency upon those who fail to meet their demand. We find it hard to see how the existing market arrangements can realistically be enhanced to further sharpen shipper incentives or attract more non-UKCS gas bearing in mind, it may be extremely difficult for market participants to effectively trade gas in an emergency since, by definition, the continuation of normal market arrangements has ceased and the NEC will be issuing gas flow directions which shippers have a statutory duty to comply with. To this extent we believe that in the event further changes to the gas emergency arrangements are considered necessary they should be based around the NEC taking a primary balancing role and procuring any additional non-UKCS gas that may be available on behalf of shippers, then smearing the costs incurred to short shippers.

Improved ability for demand side to respond

3.15 The role of the demand side in the market has, to date, been neglected. Without active demand there will never be a satisfactory solution to the range of issues that will be created during the transition to the low carbon economy. The mandated installation of smart meters, combined with greater use of electricity in the heat and transport sectors has to be one of the key elements of energy policy going forward. As well as allowing for improved price signals to all market participants, it will also resolve the ongoing debate about the relationship between wholesale and retail electricity and gas prices. Once smart metering is in place, consumers will have a clear choice between a price that directly reflects wholesale market conditions at all times, and a fixed price arrangement where the supply companies carry those risks for consumers. Project Discovery is an opportunity to, at last, bring the demand side into the market as an equal partner.

3.16 The demand side has the potential to improve the operation of the system in; i) the peaks, by curtailing or interrupting load, and ii) the off peaks, through shifting electrical demand into these times.

3.17 This enables some renewable generation, which does not have the same load profile as that of demand, to be supported by load shifting or curtailing this same demand.

3.18 At present, even large industrial consumers do not participate fully in demand side response as the price signals available do not recompense for the costs of interruption. This situation could be improved with cost reflective cash out prices that would incentivise further demand side response.

3.19 Domestic consumers commonly have a greater proportion of discretionary load, but fewer tools to handle load management contracts. In addition, high resolution price signals are not possible with current settlement arrangements. Smart meters and settlement will enable the consumer response and we expect the relating supporting arrangements to be developed.

3.20 Therefore we expect demand side response to play a significant role in balancing electricity in the peaks and the off peaks.

3.21 **Package B – Enhanced Obligations**

Enhanced obligations on suppliers

3.22 Some attention needs to be given to the coherence of the packages being put forward. In particular, it is difficult to see how measures to improve demand response, can be compatible with measures placing obligations on either suppliers or system operators with regard to storage or generation capacity. Such obligations would tend to imply that demand is taken as an exogenous variable and that the imposed security requirement would be made in relation to that projected level. It would not, therefore be possible to sensibly implement packages B or C as currently configured.

3.23 There is no evidence to support capacity obligations and plenty of evidence against them.

3.24 Broad based capacity obligations are not an efficient solution in that they reward all types of plant equally. This encourages old plant to remain on the system and delays investment in low carbon technology. A fully competitive market with the correct pricing signals is sufficient to reward flexible plant operating in the BETTA market.

3.25 Capacity obligations are likely to have a have a huge impact on the development of a demand side response and make it much more difficult to achieve government low carbon targets.

3.26 Sharp price signals drive suppliers to ensure flexible cover rather than driving suppliers to procure more energy.

3.27 A capacity obligation virtually guarantees a system shortfall in extreme events (as short term signals are lost), whereas having no capacity obligation and allowing the development of price signals virtually ensures no involuntary shortfall in any event.

Enhanced obligations on the System Operator

3.28 RWE does not support enhanced "public service" obligations on the System Operator. Any enhanced obligations over and above the current normal requirement for operating the electricity and gas market would significantly undermine the incentives in the market for parties to deliver economic and efficient outcomes. Indeed, an SO obligation may have the effect of chilling investment signals. In addition, public service obligations may themselves contribute to emergencies, since users may fail to contract forwards in the knowledge that the wider insurance arrangements would ensure that other users carried this cost.

3.29 It is difficult to understand how any enhanced public service obligations would be delivered under the current electricity and gas market designs. For example, obligations on the System Operator to purchase additional reserve or to contract for storage or to ensure diversity of imports would be a significant distortion of the current market arrangements and risks making them unworkable. The obligations would probably require significant intervention by the System Operator. In addition, services would have to be procured on a long term contract basis and the system operator and users would have to demonstrate that the services remained available. If the role of the system operator is significantly enhanced, market participants may respond by relying on the mutual insurance scheme, thereby enhancing the requirement on the system operator to procure the services. This is inefficient.

Obligations on gas fired power stations

3.30 The market should provide signals that would incentivise developers to build dual firing capability. Introducing obligations are likely to have an impact on overall flexibility within the gas market as investors would take such an obligation into account when building new infrastructure.

Centralised renewables market (CRM)

3.31 The idea of a centralised renewable market based on some form of feed in tariff or a fixed price, which features in a number of the policy packages does not have a particularly good record in other jurisdictions. For example in the German market, centralised management of the renewables volume by the system operators is currently creating considerable distortion of the wholesale price. The main issue is that the output from renewable generation is offered into the market as a single block which gives no possibility for individual operators to respond to price conditions. This makes prices more volatile than necessary and casts doubt on the credibility of the market, especially when prices are highly negative. Similar issues would apply to any renewable output purchased through a tender mechanism. In general we would advise against larger scale renewables being supported by mechanisms which cannot be made coherent with wholesale markets. Feed in tariffs should, as a maximum, be restricted to small scale generation, as is the case in current legislation.

3.32 For larger renewable installations, an important aspect of market design is the extent to which they have similar requirements relating to nomination and balancing than other generation. Without this requirement there is little prospect of incorporating large volumes of renewables into the network in

a cost effective and reliable way. The ERGEG consultation paper on this subject reached a similar conclusion in this respect.

3.33 Companies can deliver government's renewables generation targets. It is not the energy market that is causing an issue but the significant up front guarantees required for OFTO and NGET (up to £800m for a single round 2 project and £6bn for a round 3 project, with the commitment required up to 5 years ahead of what would be needed if developers were managing their own grid connection). This impacts balance sheets and absorbs the capital required to develop renewables projects.

3.34 The OFTO arrangements should be cost reflective and the developer should only need to underwrite OFTO costs when they occur.

3.35 Interference in the support methodologies would create a hiatus in investment at the time it is needed.

Package C – Enhanced Obligations with Renewables Tender

3.36 Our comments for package B apply here also.

3.37 Winning a tender does not guarantee build, even where non-performance sanctions exist. A tender process was used under the NFFO which failed and led to the introduction of the RO mechanism.

3.38 If tenders are technology specific, someone will have to determine the preferred fuel mix. Innovative technologies that become economic can be frozen out of the process.

Package D – Capacity Tenders

3.39 These are blunt instruments that will severely damage the present market arrangements. It is likely to lead to an inefficient allocation of resource as whatever allocation is made, will by definition be wrong. The tender process will either lead to under or over capacity which will result in different outcomes in terms of supply but the same in that the customer will ultimately pay.

3.40 The current GB market structure has demonstrated its ability to build new plant in good time to maintain healthy capacity margins for both gas and electricity. On electricity enough new fossil capacity is already under construction to replace the opted out coal plant which will close between 2012 and 2015. Government has also made welcome progress in introducing flexibility into the IED proposals. Provided that this flexibility makes it through the ensuing discussions in the European Parliament, the threat to capacity margins has been averted by allowing for phased closure of opted out coal plant to 2023 and signalling to market well ahead of time, thus allowing companies to invest in new capacity. The 125 bcm/yr of new gas import capacity and storage over the past 20 years do not suggest to us that the gas market arrangements have not delivered and will not continue to do so.

3.41 In relation to the other packages, the use of "tenders for all capacity", one of the components of Package D, does not appear to be consistent with Directive 2009/72 (Article 8) in that tenders are only permitted where generation capacity being built or demand side measures are insufficient to ensure security of supply. This is not the case in the GB market which is currently in a position of considerable overcapacity which is likely to continue until at least 2016. Indeed the extent of the current investment programme of generation construction is testament to the delivery of required capacity under a market based process. Directive 2005/87 on Electricity Security of Supply is also relevant here since it give a clear hierarchy of measures possible with respect to balancing of

supply and demand. Article 5 requires Member States to encourage a wholesale market framework that provides suitable price signals for generation and consumption.

3.42 Moving from the present arrangements, which do not discriminate between technology or whether it is generation or demand side, towards a tender mechanism would dampen the signals for the demand side to participate, just when the industry is about to invest significant amounts in rolling out smart meters (in excess of £7bn) that could make this the cheapest and most environmentally benign option.

Package E – Central Energy Buyer

3.43 We assume that this package is included for completeness and that Ofgem does not envisage a return to one entity buying all the output from generators and selling it to suppliers under standard terms.

3.44 An EU Directive precludes any kind of mandated centralised dispatch mechanism of this type. Article 15 of Directive 2009/72 (Article 11 of 2003/54) requires system operators to dispatch generation installations "without prejudice to the supply of electricity on the basis of contractual obligations". The removal of the single buyer option from the first electricity Directive 1996/92 is clearly indicative of the intent of Community legislation in this respect.

4.0 **Chapter 6**

Question 12: **Do you agree with our assessment of the timing for important investment decisions?**

4.1 It is true that there are important investment decisions to be made over the next few years, but this is also true of the past. In paragraph 6.1 Ofgem state that, "however, we recognise the need for a stable environment for investment". This statement does seem at odds with the scale of the proposals considered. It is our view that all proposals other than some of package A are likely to make GB a more difficult place to invest.

Question 13: Do you believe that early actions should be considered?

4.2 The early actions that should be considered are the improvements to the electricity pricing signals and the engagement of the demand side.

Question 14: Do you think that the issues are such that policy measures should be considered as a package or should they be considered on a case by case basis?

4.3 No comment.

5.0 **In Summary**

- Although we supported Ofgem's work in developing a range of scenarios, we do not understand how you have made the leap from that work to the package of reforms now being consulted on.

- Record levels of investment are required to meet government targets, the packages even in consultation form are likely to have an impact on how GB is viewed as an investment opportunity.

- Before embarking on such an exercise we believe that Ofgem should have carried out and brought forward their modelling that support such an interventionalist collection of packages.

- Surely, the starting point in this exercise should have been the present market arrangements and how they could be improved so as to support government meeting its low carbon future.

- Despite the challenges that both the gas and electricity markets have been exposed to over the years, they have risen to this with record levels of investment and look set to continue to evolve to meet the challenges of the future, if allowed.

- Unintended consequences of the packages have not been fully thought through; we have highlighted a number of concerns with the packages.