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Dear Ian,

Addressing Market Power Concerns in the Electricity Wholesale Sector – Initial Policy Proposals

Key Points

- An appropriate regulatory framework already exists to tackle market abuse through the provisions of existing European and national competition law and specific market rules and regulations, which can be changed at short notice if required. The application of general competition rules to the UK power market is the unacknowledged but central problem of the Proposals Document. A more detailed guidance document in Ofgem's enforcement of the Competition Act is required to give all parties comfort.
- We do not support any moves to introduce additional generic ex-post prohibitions via licence conditions as a means of tackling the adverse effects of market power. Such a prohibition would cause uncertainty and would risk deterring normal competitive behaviour, and thus inhibit the operation of the market. This was the view supported by the Competition Commission in 2000 in respect of its investigation into similar proposals.
- We believe that the options identified in chapter 2 of the document that seek to change existing market arrangements is worthy of further consideration.

General Comments

We welcome the opportunity to respond to this consultation. This issue is of real significance to the industry and has been on the agenda for at least ten years. We fully recognise the need for properly functioning energy markets that operate in a transparent and orderly fashion. As in other markets, the scope for market abuse can exist. It is therefore important that an appropriate regulatory framework is in place to prevent and protect against abusive behaviour, which could negatively affect competition and the integrity of the market generally. That framework already exists through the provisions of existing European and national competition law and specific

market rules and regulations (which can be changed at short notice if required, including the Financial Services Authorities market abuse regime). We would have very serious concerns with any moves to introduce new generic market abuse powers through a licence condition. Given the complex nature of the generation market, a generic condition itself will in any case be difficult to draft. The Competition Commission concluded that an ex post regime could in itself “cause uncertainty, because of the difficulty of distinguishing between abusive and acceptable conduct.” Furthermore, the proposal “would risk deterring normal competitive behaviour.”¹

EDF Energy broadly agrees with Ofgem’s assessment of market power outlined in chapter 1, as far as it goes. However the issue of how existing competition policy can be effectively applied to the energy sector needs to be solved *before* Ofgem can proceed to choose new policy instruments. EDF Energy would have preferred some more detail on the appropriate tests Ofgem would seek to use to identify abuse of a dominant position, bearing in mind the differences between the electricity and other markets. These issues will need to be clarified regardless of the option Ofgem chooses. We have included some of the options available for identifying the right competition tests in our response.

EDF Energy believes the Competition Act is the most efficient enforcement vehicle for the regulation of market abuse. We note that in 1992 OFFER investigated abuse of a dominant position which had both a locational and to a lesser extent a temporal dimension². Of the options presented in the consultation paper EDF Energy would support a programme of modifications to the existing market and incentive arrangements outlined in chapter 2. The divestment option as stated on p24 would still amount to a Competition Commission referral, as it would undoubtedly be challenged. If this is the case this proposal is little different from a straight industry review by the Commission, only with the added dimension of the third package industry structure options. The licence condition option outlined in the document would again require detailed guidance on its application and as a proposal would be difficult to draft and enforce effectively.

EDF Energy strongly recommends the preparation of some detailed guidance notes that inform industry participants on the application of competition law³ to the power sector, as the Commission has completed its review of the Application of Article 82 on the Abuse of a Dominant Position in February 2009, which was previously seen as a barrier to drafting detailed guidance notes in 2005.

¹ Competition Commission *AES and British Energy: A Report on References Made Under Section 12 of the Electricity Act 2009* p69 para 2.329. January 2001

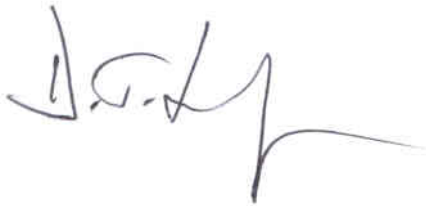
² *Report on Constrained Plant* October 1992

³ This was acknowledged by Ofgem who said in 2005 “In light of the Commission’s review of the application of Article 82 Ofgem considers it inappropriate to publish, at this time, detailed guidance on abuses of dominance” *Responses to Energy Sector Consultation 2005* http://www.ofg.gov.uk/shared_ofg/business_leaflets/ca98_guidelines/oft428a.pdf

More detailed answers to the questions in the consultation document are given in the attachment to this response.

We hope you will find our response helpful. If you have any queries on it, please do not hesitate to contact Sebastian Eyre on 020 312 62325 or myself.

Yours sincerely

A handwritten signature in black ink, appearing to read "D. Linford".

Denis Linford
Corporate Policy and Regulation Director

Attachment

Addressing Market Power Concerns in the Electricity Wholesale Sector – Initial Policy Proposals

EDF Energy's detailed response

Chapter 1: Introduction

Question 1: Do you agree with our analysis of market power concerns in the GB wholesale electricity sector?

Market power concerns: Adapting mainstream Competition policy to the Energy Sector

EDF Energy broadly agrees with Ofgem's assessment of market power in chapter 1 so far as it goes. However, the GB electricity wholesale forward market is largely competitive and has significant diversity of ownership. We agree that there is scope for abuse of market power within certain specific areas of the market. Significant and known transmission constraints can effectively divide the market and create a persistent market for essential balancing services to resolve constraints in a particular part of the country.

There are two further issues that EDF Energy would have liked the consultation to discuss relevant to market power. Firstly there is the issue of how existing competition policy can be more effectively applied to the energy sector which needs to be solved *before* Ofgem thinks about the choice of alternative policy instruments. EDF Energy believes the existing European and national competition law is the most efficient enforcement vehicle for the regulation of market abuse. Secondly we would have preferred some details on what the appropriate tests for identifying market power bearing in mind the differences between power and other markets.

Features of Electricity markets require careful application of existing economic theory used in competition policy. The OFT acknowledge this issue by stating that Ofgem does not have to use the standard SSNIP's⁴ test for defining the relevant market and could "adopt alternative analysis when defining the relevant market"⁵. Furthermore, if there is no fair and universal application of the economics underpinning competition policy creates an unacceptable regulatory risk is placed on market participants and the legitimacy of the policy is called into question. The OFT argued that "the relative complexity of and mandatory adherence by market participants of the various rules" are also an issue. Furthermore it states that "dominance may involve more than one undertaking" (3.18 p15).

⁴ SSNIP: Small but Significant Non Transitory Increase in Price by a hypothetical monopolist

⁵ *Application of Competition Law to the Energy Sector* OFT 2005 3.11 p13

http://www.of.gov.uk/shared_of/business_leaflets/ca98_guidelines/oft428.pdf

Nature of market power

We can say that if a generator has accepted offers over its marginal costs or withholds output that could otherwise be produced profitably it will have exercised market power. Market power is generally defined as the ability to profit by moving the market away from a competitive price. In the UK market “withholding” can mean-

1. Physically not generating
2. Financially withholding (i.e. only offer high prices)
3. Using balancing mechanism instead of forward markets
4. Exploiting constraints that create reduction in TEC and therefore have the effect of withholding production or being paid not to generate.

From a regulatory perspective market power of a seller is the ability to profitably maintain prices above competitive levels for a significant period of time. There is a distinction between *having* and *abusing* market power. However, the assumption here is that it is profitable to do so. Exercising market power is a three stage process (1) the process of abuse itself which leads to (2) an effect on either price or quantity of electricity produced with a material (3) impact on market participants. It is important to note that abuse of a position of market power can only occur within the real time market (Within Day, spot market/balancing mechanism) as customers can always wait for another trading opportunity if they think the price is too high. In the real time market they can wait no longer.

The generator setting the market price (marginal generator) is not always exercising market power. Other generators (inframarginal generators) may be withholding the capacity which would have made them the marginal generator in a competitive market. Ofgem have not addressed this issue in their assessment of market power.

High mark ups in themselves are not indicators of market power as models are not always able to effectively distinguish between long run and short run marginal costs on the supply side and a high degree of inelasticity on the demand side. Furthermore supply and demand curves may not intersect so that while the average cost of production could be for example £40MWh, prices of £5,000MWh have occurred in the odd half hour. The percentage increase in retail cost caused by the average mark up is a better assessment of competition. OFFER were able to identify short and long run marginal costs coupled with an inelastic demand side response in their 1992 investigation.

The threat of new entrants is traditionally used as a force for disciplining market power as they will be encouraged to invest to gain artificially high rates of return. The negative effect of abuse of market power is that the new capacity may actually not be needed if the price signal was incorrect as it was artificially high. The market effectively becomes

structurally long creating more problems. However by using a hit and run strategy a dominant generator can attempt to avoid this issue.

Question 2: To what extent should further policy intervention be progressed or are there alternative approaches that can be adopted for dealing with the concerns?

As stated above, there is already and an appropriate regulatory framework in place to prevent and protect against abusive behaviour, which could negatively affect competition and the integrity of the market generally. However, the primary problem appears to be the effective application of this regulatory framework to the electricity sector. When competition policy experiences problems which are technically complex and therefore regulatory risk creating, “guidance” documents explaining the treatment of cases have been published. For example the US Department of Justice Merger Guideline’s have been in place since 1966⁶. This practice has spilled over into other jurisdictions and including the UK. For example in June 2003 the Competition Commission published Guidance on mergers as it was required to do under the Enterprise Act (EA) 2002 106 (3)⁷. It explains the CC’s approach to the questions to be answered in respect of merger references made to it by the Office of Fair Trading (OFT) under sections 22 or 33 of the Act. We strongly argue for this approach to be developed in the case of market power.

The Office of Fair Trading also publishes the application of the Competition Act in the Energy sector which is set at a higher level than existing guidelines. This was acknowledged by Ofgem who said in 2005 “In light of the Commission’s review of the application of Article 82 Ofgem considers it inappropriate to publish, at this time, detailed guidance on abuses of dominance.⁸” (8.2 p5). However the review is over⁹ and a guidance note was issued in February.¹⁰ It is now time for Ofgem to develop guidance specifically for the energy sector. Even if guidance was not an option the approach taken by the International Competition Network is helpful who publish some useful “workbooks” on competition policy issues¹¹ and we see no reason why this should not form a useful approach.

We see the following advantages for this approach as it will-

1. be consistent with existing competition practice both in the UK, EU and the world;

⁶ <http://www.usdoj.gov/atr/hmerger/11247.htm>

⁷ http://www.competition-commission.org.uk/rep_pub/rules_and_guide/pdf/cc2.pdf

⁸ “Responses to the Energy Sector Consultation”

http://www.offt.gov.uk/shared_offt/business_leaflets/ca98_guidelines/oft428a.pdf

⁹ <http://ec.europa.eu/competition/antitrust/art82/index.html>

¹⁰ http://ec.europa.eu/competition/antitrust/art82/guidance_en.pdf

¹¹ http://www.internationalcompetitionnetwork.org/media/library/conference_5th_capetown_2006/ICNMergerGuidelinesWorkbook.pdf

2. contribute to solve the problem of enforcement identified by the investigation issue as will identify anti competitive behaviours;
3. provide comfort for all generators as the document would address behavioural issues;
4. allow for formally consult with the industry and competition authorities such as the OFT/ CC;
5. be a less costly approach compared with other options.

We fully accept that guidelines are not perfect and constitute the best available thinking. They will not be able to define all the conceivable contexts. As the OFT argues, markets, economic theory, legal thinking and best practice evolve. Guidance can be revised from time to time to reflect such change or in the light of the CC's experience may require new guidance.

Chapter 2: Changes to existing market arrangements.

Question 1: To what extent to you think that changes to SO and TO incentives and/or changes to other market arrangements are likely to be effective in addressing the concerns discussed in Chapter 1?

One option is to fix outage periods to make them binding and inflexible. This would remove uncertainty regarding the actual start or end date of the outage which can aggregate effect on constraints. However, the inherent inflexibility of fixed dates means that outages cannot be adjusted to help minimise constraints.

The other option is to make outages more flexible to help reduce constraints. However, a mechanism would need to be put in place to incentivise transmission operators to consider the effect of constraints when planning outages. This would involve rewarding TO's for scheduling outages to minimise constraints. This option would comprise some element of forward planning and price signalling to enable decisions to be made around future outage planning. We would fully support further work to be undertaken in developing further this option.

A cost-sharing scheme is more retrospective as it involves simple apportionment of costs between the TO and SO after the event. This might encourage the TO to do its own analysis around the likely costs of future constraints which would reduce the cost to the industry as a whole.

However, these are stand alone measures which only partially address the underlying issue of constraints. Constraints arise for a variety of reasons other than being a function of outages alone, including systematic under-investment in transmission capacity and abuse of market power.

It seems far from clear however, that changes to the existing market arrangements are actually needed because Ofgem's fear of the potential enforcement gap in the CA98 (e.g., Ofgem's ability to deal with constraint gaming effectively) maybe over done. They may already have adequate powers. Further additional powers may have been blocked by the courts for good reason, for example because such interventions would worsen the outcome.

Question 2: Are there any other changes to existing market arrangements that Ofgem should consider?

EDF Energy recognises that changes to market arrangements to address market power concerns are likely to have wider impacts. However, we believe that this option is worthy of further consideration. We have already stated that there is a market power cost associated with certain behaviour in the Balancing Mechanism and it is this cost that should be addressed. We believe there may be options beyond Ofgem's consideration of a cleared price auction which should be considered. Any potential changes to market arrangements which address market power would be of a fundamental nature. As such, this is an issue that should be debated across industry and is an example of the kind of issue that Ofgem might use to initiate a Major Policy Review.

Chapter 3: Changes to existing assets and/or ownership of assets

Question 1: To what extent do you think increased transmission investment is a feasible option and likely to be effective in addressing the problem?

Whilst building extra transmission capacity between Scotland and England should in theory help to elevate the problem, in practise much of the benefit from currently planned construction such as the Hunterston - Deeside link and the Peterhead to Hawthorn Pit, will be offset by the increases in Scottish generation mainly in renewable energy.

Question 2: To what extent do you think that the other asset related options discussed are likely to be effective in addressing the problem?

Both physical and virtual divestments are extreme measures. Both will tend to have the same limited effect as the locational constraint will remain prone to being gamed by the new asset owners albeit in a less co-ordinated fashion fragmented asset ownership structure. In other words, gaming could follow the asset, however the firm action against the past gaming would tend to mitigate against this.

Furthermore physical and virtual divestments would create uncertainty for the industry which may well deter future private sector investment. We therefore do not support this option.

Question 3: Are there other asset-related remedies that Ofgem should consider?

None at this time.

Chapter 4: Specific mechanisms for addressing market power concerns

Question 1: Is a licence condition on generators appropriate? If so, do you have views on what form of condition is the most appropriate?

EDF Energy believes a licence condition would be unworkable to draft appropriately if there has not been a development of Ofgem's thinking about market power. The impact of a licence condition could create problems or uncertainties for market participants and may adversely influence market behaviour rather than having the desired affect.

It is worth noting that an announcement by the Authority, that court proceedings are being considered under Art 82 in respect of certain companies' activities, could well have the effect of stopping the undesired behaviour. There is precedent for this in the action taken by Offer (Ofgem's predecessor) in dealing with market abuse by Hams Hall and Ferrybridge in early 1992, when a public announcement lead to the gaming being stopped.

Question 2: How important would a formal appeals mechanism be?

It would seem logical and fair to have a formal appeals mechanism to enable errors in implementation of the license condition to be addressed.

Question 3: Is an ex-ante price framework an effective tool? If so, do you have any views on what would be the most appropriate form?

It would be effective in damping price spikes but may be too effective, potentially removing too many price spikes making some stand by or reserve plant uneconomic.

The difficulty remains in identifying the difference between price spikes which are a consequence of underlying market conditions, which are a necessary feature of a well functioning market, and those which are a result of undue exploitation of market power.

Additionally the costs of setting up an ex ante system as used in the New York and New England markets for example would be substantial.

The ex ante US systems that are referred to by Ofgem do not provide the broadly defined powers that they appear to be seeking in any case. In order to avoid excessive price spike dampening Ofgem would have to narrow and tightly define what is acceptable behaviour and the form of any abuse. To do otherwise, and have the 'flexibility' of broadly defined powers would exacerbate uncertainty and be detrimental to competition in the electricity markets.

Question 4: Are there other specific mechanisms that will effectively address the issues identified?

We have already stated (Chapter 1 Question 2) that Ofgem should give further consideration to appropriate guidance for participants within the GB energy markets. We refer Ofgem to arrangements on the Ireland Single Energy Market where a Bidding Code of Practice must be adhered to. EDF Energy would welcome further industry debate on these issues

Chapter 5: Potential mechanisms for implementation

Question 1: Do you have any views on the preferred mechanism for implementation?

In our answer to Question 2 we have stated that the key issue is the application of competition economics to the power sector. A market investigation would have use the extensive investigatory powers of the Competition Commission but this of course will depend on the terms of reference of the review.

Primary legislation is an unlikely policy instrument given the specific nature of the policy problem.

ANNEX

Ofgem may find the following table helpful in highlighting the various models and techniques that are available to it to deal with the market under the Competition Act and avoid the need for a MPLC.

After the process of defining the relevant market Ofgem should consider the appropriate tests for competitiveness and their limitations when applied to the power sector. Table 1 is the result of a literature review of the standard competition indices and major schools of thought on how to test for dominance. Each test is assessed in terms of its applicability to the power sector.

Table 1 Review of techniques for modelling market power

Test	Issue	Applicability to the power sector
I Indices of market power		
Pivotal Supply Index	<ul style="list-style-type: none"> Accurate record of the market as far as it goes but suffers from similar problems to conventional market share measurements 	<ul style="list-style-type: none"> Bespoke market share test for generation sector Does not recognise fuel switching dynamics which change the merit order over time and therefore competitive dynamic.
Herfindhal Hirschman Index. Market power is related to the number of and relative size of the market participants.	<ul style="list-style-type: none"> Accurate record of market as far as it goes, but ultimately a historic measure of past performance Does not take account of context for any particular year as ex post measure e.g. a plant returning from long term outage May not be the best inequality index. How about Hannah and Kay or simple concentration ratios? Dependant for success on market conditions 	<ul style="list-style-type: none"> Is easily applied to energy production Issue surrounding one single wholesale market vs. sub sectors. For example does highly flexible peaking plant compete with base load? May be difficulties in interpreting results given the highly capital intensive generation assets
Lerner index Monopoly power can be measured by the extent it can raise prices above marginal cost measures the mark up above cost and compares it with the extent to which consumers respond to changes in price (elasticity).	<ul style="list-style-type: none"> Again very powerful indicator but takes no account of the context as relies historic data Potentially difficult to gather primary data needed 	<ul style="list-style-type: none"> Easily applicable to energy sector Results need to be interpreted over the assets lifetime and stage in the energy cycle. As with HHI need to be contextualised
Combined tests for unilateral action . In cases where all	<ul style="list-style-type: none"> Combines problems of both indices 	<ul style="list-style-type: none"> In summary, no real issue with it's application to the power

<p>generators move their prices upward without collusion. By dividing the HHI by demand elasticity it is possible to calculate the average mark up</p>	<ul style="list-style-type: none"> • However gives good overall view of an industry 	<p>sector</p>
<p>II Models that assess the competitive process in order to determine the extent of market power</p>		
<p>Structure Conduct performance (S-C-P) holds that industries performance in producing benefits for consumers depends on</p>	<ul style="list-style-type: none"> • Too descriptive and not analytical enough • However it is a well established literature with some famous case studies 	<ul style="list-style-type: none"> • Energy companies may face the same marginal cost and similar production capabilities
<p>Industry models of market power. One approach to understanding market by using separate demand and optimality equations to estimate the marginal revenue curve. Any deviation from the curve can be explained by the exercise of market power?</p>	<ul style="list-style-type: none"> • May be difficult to interpret results as there are two schools of thought. One school is agnostic about what it tells about firm's behaviour. It is simply the gap price and marginal cost. Others interpret it as an index of market power given that it reflects firms observed behaviour. • Can be dangerous as this type of model suggests what should be rather than what is. It ignores intermediate classes of market that are outside the specification of the model. 	<ul style="list-style-type: none"> • May not be applicable as model assumes it is difficult to assess marginal cost. In fact this class of models is a way of inferring marginal cost. Energy however is a homogenous product so that the average market price and total output are useful statistics. Efficiencies of each class of plant are also readily available.
<p>Dynamic Estimation Models move away from the assumption that firms compete in a series of static games and assume that firms interact over time. Dynamic models can capture strategic and fundamental objectives of competing firms and also develop optimisation models.</p>	<ul style="list-style-type: none"> • Model is ultimately an abstraction of the competitive process rather than identifying market power per se • Difficulty in understanding outcomes. Static models have a limited range of outcomes including perfect competition, collusion and non co operative equilibrium. The outcome in this model may lie between these well known categories. 	<ul style="list-style-type: none"> • Possible to apply to the sector but it is not certain if it would find dominance any more effectively than the other tests available. • Uses "soft data" i.e. data of what might happen rather than matching it up to observed behaviour • Style of competition: may assume suppliers compete on by choosing a level of output with the assumption that other generators will be affected by their decision. This may not be realistic in a power market as if a generator cuts back others will

	<ul style="list-style-type: none"> • Still has difficulties in capturing the impact of innovation 	<p>take their place as they are bidding on upward sloping curves</p>
<p>Estimating Strategies. Rather than estimating market power it is possible to estimate firm's strategies. Once estimated it is possible the competitive equilibrium and how it can vary with factors that affect firms strategies</p>	<ul style="list-style-type: none"> • Sees the competitive process as dependant on firms strategies which is methodologically more sophisticated than previous approaches • However the model is still an abstraction which may not capture real world activity • Harder to determine the assessment of market power 	<ul style="list-style-type: none"> • May well come to the same conclusion of less sophisticated index's mentioned above • May ignore customer dynamics that also have purchasing strategies. Forward contracting allows customers/ suppliers to lock in and therefore avoid excessive prices

From a review of the common tests we can conclude that-

- All the standard competition models require careful application to wholesale electricity markets.
- The standard competition indices of market power are applicable to the electricity markets but only infer dominance. The Pivotal Supply Index is a bespoke test for the generation market and the Lerner Index a powerful tool but will only work if the context is taken into account. For example if a plant is undergoing extended maintenance will change production and therefore market shares.
- Since these categories are widely defined there is scope for adaptation to the power sector.

EDF Energy
May 2009