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Energy market investigation  
Competition and Markets Authority  
Victoria House  
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London  
WC1B 4AD

14<sup>th</sup> August 2014

Dear Sirs,

## University of Exeter Energy Policy Group response to the Energy Market Investigation Statement of Issues

### Introduction

1. The EPG welcomes this CMA investigation. The Statement of Issues (henceforth the Statement) states that the investigation (para 2) 'is required to determine whether any feature or combination of features of each relevant market prevents, restricts or distorts competition in connection with the supply or acquisition of any goods or services in the UK or part of the UK'. The Statement sets out its initial theories of what might be adversely affecting competition and what those adverse outcomes might be. Such impacts could take the form of higher prices to customers; reduced service quality to customers; reduce choices of product and supplier; reduced innovation; insufficient supply in the future, as a result of underinvestment, increasing the probability of energy outages. The Statement sets out the CMAs initial 4 high level hypotheses for investigation – the areas where harm to competition may occur – and asks for comments on them or for other Theories of harm. The Statement's 4 Theories of harm are:
  - Theory of harm 1: Opaque prices and/or low levels of liquidity in wholesale electricity markets create barriers to entry in retail and generation, perverse incentives for generators and/or other inefficiencies in market functioning.
  - Theory of harm 2: Vertically integrated electricity companies harm the competitive position of non-integrated firms to the detriment of customers, either by increasing the costs of non-integrated energy suppliers or reducing the sales of non-integrated generating companies.
  - Theory of harm 3: Market power in electricity generation leads to higher prices.
  - Theory of harm 4: Energy suppliers face weak incentives to compete on price and non-price factors in retail markets, due in particular to inactive customers, supplier behaviour and/or regulatory interventions.
2. We, the Energy Policy Group (EPG) of the University of Exeter, see these Theories of harm, which we agree lead to negative impacts for customers, as being outcomes of another Theory of harm: **the current structure of the energy system, and its current form of governance** (discussed further in Section 2 and Section 5). Thus, efforts can be made (as has already occurred) to improve the competitive outcomes of

the current system, but ultimately those efforts cannot really succeed unless the fundamental problem, the structure of the energy system, is dealt with.

3. Because we would argue that the 4 Theories of harm put forward by the CMA are outcomes of our additional Theory of harm, we have not proposed it as a Fifth Theory of harm. However, the CMA may prefer to think of it as a proposed 5<sup>th</sup> theory of harm. Moreover, because it has overlaps with all the Theories of harm it is possible to break down our additional Theory of harm to provide additional hypotheses for the CMA's 4 Theories of harm. For example, the CMA's first theory of harm might additionally investigate whether the design of the current bilateral market leads to opaque prices.
4. We strongly urge the CMA investigation to broaden its scope to explore whether the structure of the energy system is the fundamental block to enabling better service for customers, more choice of products and so on. This would alter the focus of the CMA investigation somewhat from narrowly looking at means to improve competition within the current system to looking at the means of improving competition, including through re-regulation.
5. This submission is set out in the following way: Section 2 examines the negative aspects of the current energy system structure; Section 3 sets out the changing economics of energy and its disruptive qualities; Section 4 comments on the 4 Theories of Harm in the Statement; and Section 5 looks at additional areas that EPG would hope the CMA would incorporate into its investigation.

### **The Current Structure of the Energy System**

6. Whilst we agree, as said above, that the 4 Theories of harm cause negative customer impacts, we would hope that the CMA does not accept the current structure of the electricity market as a given. As Littlechild et al argue in their submission to the investigation, there is a value to taking a historical perspective when looking at the current situation, although their recommended deadline is the 2008 Energy Supply Probe. We would argue, however, that the need for the Probe came out of the structure of the energy industry created at the times of privatisations where regional electricity companies and British Gas gained millions of captive customers, and then this was exacerbated by the introduction of the New Electricity Trading Arrangements (NETA) in 2001. The design of the NETA market, and particularly the Balancing Mechanism, created the impetus for vertical integration and incentives for bilateral trading to the detriment of market liquidity.
7. These characteristics are not, as the CMA Statement seems to accept, an inevitable part of an electricity system. They are the result of institutional decisions and should be examined as part of the investigation to establish whether other trading arrangements might be more effective at delivering competitive performance. Investigating the design and impacts of NETA (and subsequently BETTA) in shaping the electricity industry would allow the CMA to take a more holistic view of many of its theories of harm, and to develop possible solutions based on the overall design of the market, rather than just addressing individual aspects of it.
8. Our additional Theory of harm sees the structure of the electricity system and its regulation establishing a self-reinforcing decision making environment and an entrenched mode of problem solving. Put conceptually, the electricity system and its regulation is looking at today's challenges through yesterday's spectacles with an inability to recognise that a different prescription exists. Thus, the links between, and mind-set of, the Government, Regulator and Big 6 seem to lead to regulations and policies which essentially maintains the current means of operating and regulating the energy system to the benefit the incumbents but which undermines competition and innovation and leads to higher than necessary costs paid for by customers.

9. We are pleased that the CMA raises the possibility of taking international experience into account in its investigation. This will be particularly important in examining the design, implementation and impact of policies and regulations. The University of Exeter is currently engaged in an EPSRC research project on innovation and governance in energy systems (IGov [www.exeter.ac.uk/igov](http://www.exeter.ac.uk/igov)) which has examined various market models and measures in the US, Germany and Denmark. The success of these markets in encouraging more renewable generation, flexible system operation (including incorporating the demand side) and technical innovation while also ensuring system security and affordability offers some powerful lessons for the GB system, and we would be happy to provide more information on this, and all areas of this submission, if requested by the CMA.

### **Disruption of the energy system - changing economics of energy and new challenges**

10. As touched upon in the Statement, the economics of the energy sector world wide are being turned upside down where there is a significant proportion of power supplied from renewable energy (Citi, 2014; Citibank 2013; FT a and b, Aug 2014; Bloomberg New Energy Finance, 2014; Nillesen and Pollitt, 2014; C. Burger, 2014; Mitchell, 2014). Up until a certain point, renewable electricity can be marginal to the impact on the electricity system but there is a tipping point at which time there is an **existential** impact on the operation of the electricity market in that peak prices fall. This is the theft of peak demand as Citibank calls it, and this has a follow-on impact on electricity company profits, share prices and business models. Technologically the energy sector is moving towards a more decentralised, smaller-scale, 'smart' model (WNSR, 2014; REN21, 2014; Bloomberg New Energy Finance, 2014) based on new system operation models enabled by communication technology – as telecoms, the print / media, the travel industry with the rise of air bnb etc; finance with rise of Zopa etc - are also having to grapple with.
11. This outcome is exactly what climate change policies are meant to achieve - the transition to a low carbon energy system. Nevertheless, from the perspective of the conventional fossil fuel sector – whether generators or their supply chains - this outcome is disruptive. For the first time, the 'sustainable' energy system is genuinely threatening, and having an existential impact on, the conventional energy industry – in Germany, Denmark and California. It is the contention of this submission that the conventional energy industry in the UK is doing its best to both maintain the GB energy rules and regulations to suit them and to stop any other changes which may help / encourage / support new business models. This includes the rules of market places; the way the energy system is operated (whether via the SO, the BM, Codes and Licenses and through capacity payments); the way networks are accessed; the relationship with customers; and the way GB is linked to other countries through interconnectors.
12. Our additional Theory of harm argues that the structure of the industry both enables and drives an entrenched mode of problem solving which seems unable to grasp the opportunities of this disruption for the benefit of customers through innovation and competition.
13. This submission welcomes the Statement saying the CMA investigation should be forward thinking (para 18). The Statement then lists various fundamental elements of both the regulatory framework and supply and demand characteristics which will be subject to change over the next few years.
14. We accept that some of the changes noted by the Statement are occurring, and as such are 'changes'. For example, we recognise that the roll-out of smart meters should help a more efficient operation of the system. It also notes 'the fundamental change in the types of plants expected to be generating electricity over the next few years, as fossil fuel plants are increasingly replaced by renewable generation, with different cost and operating characteristics, and in particular a growing share of capacity and output of wind generation, which is dependent on weather'. We agree with this (although would add solar in addition to wind). The Statement does not expand on this to highlight the likelihood

of reduced profits for the fossil fuel generators, and the disruption this may cause to their particular business model; nor does it explicitly note the increasing decentralisation of the energy system.

15. However, we would argue that the other 'changes' put forward (a change in policies designed to incentivise investment in low carbon generation; the introduction of a capacity payment; the attempts to increase liquidity in the wholesale power markets; and the 'reforms' of the Retail Market Review (RMR)) are simply maintaining the current system rather than allowing innovation and greater competition (and potentially disruption) to come through. The EMR process is, in effect, a retrenchment of the energy system. One of its mechanisms, the market-wide capacity mechanism, is an example of a change which fundamentally supports the incumbents, and is mainly a supply orientated function when it could have been incentivising capabilities necessary for running an efficient, integrated energy system (Mitchell, 2014 b). The outcomes of the Retail Market Review (RMR) have not made the tariff system or bills 'more understandable'. We would argue they have made innovation and competition harder (discussed below).
16. The Statement omits some of the more major global changes we would see as having the potential to have a material difference on the GB energy system such as (1) moves toward a more energy efficient system – whereby all demand side resources are captured; where demand reduction is central to energy policy; (2) the slow but steady global downturn of nuclear power not just because of Fukushima and the increased rate of nuclear closures in Germany but because of (3) the increasing proportion of global investment going to renewables, and the resulting reduction in their costs; and (4) the global trend towards decentralisation because of this and the increasing understanding (and capturing) of the economic benefits of greater integration of system operation.
17. We welcome the CMA's forward looking investigation in the hope it makes recommendations about how to unlock the customer benefits of this disruption.

#### **EPG Comments on the Statement's 4 Theories of harm**

18. As said in the introduction, our view is that these Theories of harm derive from our additional Theory of harm: the system structure, and its governance. However, we make some comments on the individual Theories of harm below.

#### **Theory of harm 1: Opaque prices and / or low levels of liquidity in wholesale electricity markets create barriers to entry in retail and generation, perverse incentives for generators and / or other inefficiencies in market functioning**

*Hypothesis 1a: The market rules lead to opaque prices and low liquidity in wholesale electricity markets creating barriers to entry in retail and generation, perverse incentives for generators and / or other inefficiencies in market functioning*

*Hypothesis 1b: Vertical integration leads to opaque prices and low liquidity in wholesale electricity markets, creating barriers to entry in retail and generation, perverse incentives for generators and / or other inefficiencies in market functioning*

19. Liquidity issues relate to two main areas, and both have been dealt with (or not) via first an Energy Supply Probe in 2008 (Ofgem, 2008) and then Retail Market Review which began in 2010 and made recommendations in 2013. The first area of concern relates to not having enough transparent trades within electricity markets, both intraday and forward trading, to enable sufficient liquidity to (i) minimise the risk of ending up without enough physical electricity or paying too high a price when balancing, and also (ii) to illuminate a transparent electricity price and trend. The second area relates, according to Ofgem's reading of the problem, to customers and the degree to which they 'switch' suppliers or the

degree to which they 'stick' with their suppliers. This second area is dealt with under the 4<sup>th</sup> Theory of harm below

### **Liquidity in intraday and forward trading**

20. All generators have to sell electricity in 'real time' when the physical generation is linked with the technical operating requirements of the network. Countries with actively traded electricity tend to have a real time market; multiple forward markets ( i.e. markets which sell electricity at any point in the future i.e. for a day ahead, a week, month, year, 2 years ahead etc); and intraday markets.
21. These markets can either be physically based – meaning that their bids and sales end up being related to physical electricity – or they can be financially based – which means that they are essentially financial instruments to hedge the price of the physical electricity that generators and suppliers have bought and sold. These financial instruments do not finally trade out to physical electricity but to money lost or gained. These forward markets can be traded in directly from a company's trading arm (which will have paid to be a member of the market) or they can be accessed via a platform (which the company will also have paid to access). A company like Bloomberg has a platform through which electricity trades can be made in many different markets around the world, whether physical or financial. Transaction costs can therefore be a problem for new or small companies.
22. The UK's Balancing Mechanism (BM) is where only the balancing portion of electricity is traded. Generators can sell into the future and buyers can buy ahead in various markets and platforms in order to hedge their position. Gradually time moves on to catch up with these forward trades, and the BM market operator balances all of the contracts for selling and buying electricity in one particular period of time – whether they were originally traded for a day ahead or two years ahead.
23. Buyers and sellers of electricity need to make sure that whatever contracted position they have made (in whatever futures market and/or with whatever bilateral contracts) 'unwinds' in such a way that they are in balance (i.e. buying and selling what they are contracted to do) and that they have not lost money in that process. Buyers and sellers use various forward or intraday electricity markets to balance their contracted positions. It is therefore important that markets are 'liquid' meaning that there is enough electricity for sale for different time periods and in different, and small enough, 'clip sizes' to enable the buyers and sellers to match their needs.
24. The needs of different generators and suppliers will differ. Generators of variable<sup>1</sup> power require liquid, forward and intraday markets more than generators of firm<sup>2</sup> power because they are more uncertain about what their actual output will be at any one time. Smaller generators need access to smaller 'clip sizes' and markets which don't have large up front transactions costs for users.
25. Ofgem's latest actions to increase liquidity were to increase auditor scrutiny; to undertake a transfer pricing review; and to establish greater insight into trading activities. However, this submission would argue that this is not enough. In brief, in line with our additional Theory of harm, we would argue to increase liquidity in GB electricity markets structural changes are required such as (and discussed further in Section 5):
  - the bilateral market (which causes so many problems of transparency and transfer trading, as well as increases risk for generators and retailers and which has driven the move to VI, as discussed below) should be re-regulated to become a Pool
  - generation and retail businesses need to be ring fenced or separated;
  - 100% of trades have to be external to generation and supply companies and via the Pool;

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<sup>1</sup> meaning that the output from the power plants changes depending on weather conditions and cannot be counted on to be dispatched when the system operator wants it

<sup>2</sup> power is known as firm if it can be dispatched when the system operator wants it

- all markets should publish all price and volume details;
- there should be an 'independent' market monitor (accomplished either via a separate body or by dividing Regulator).

### **Vertical Integration – bad for customers, new entrants and innovation**

26. The rules of the bilateral electricity market (NETA and BETTA) encouraged the vertical integration (VI) of generation and supply companies. This was a response to mitigate the market risk of the bilateral electricity market and the potential high costs of being out of balance. Broadly this incentivises VI: meaning that customer demand of a supplier is matched to the generation owned by another subsidiary of the same parent company. The generator sells to a supplier – at an unknown price – and this also reduces liquidity in the market. Given that the energy suppliers do not want to lose market share, this means, at best, that (1) there is little (or no) incentive on the Big 6 to encourage their customers to be more engaged and proactive about their energy use. Arguably, it is positively not in their interest to get customers interested in their energy use in case those customers then leave them; and (2) they will not want their customers to use less energy partly because they want to sell as much as they can (i.e. maximise market share) but also because if they do not sell all their generation output to their customers, then they have to find other customers to use their generation capabilities and this will have a cost.
27. This wish to match customer demand and supply has a number of knock-on effects. New entrant energy service companies (ESCOs) (whether generators, suppliers etc) can survive to the degree that they are able to attract/access customers to sell their products to them. If an ESCO cannot access enough customers then they are unable to make enough money to survive as a business. Enabling access to customers is therefore vital, hence Ofgem's focus on retail market reform and 'switching' (see liquidity case study above). Thus, in a situation where all the large energy companies want to maximise their market share and want to match their generation to supply, there is a strong momentum to maintain the current system as it is, including keeping customers. The strategies of the Big 6 are therefore to maintain their position, and this leads to similar behaviour.
28. Some of the smaller energy suppliers have developed new business models as a way to get round this conundrum. Good Energy, for example, has tried to match generation to its customer demand but rather than own the generation they are contracting with 'prosumers' or small, independent generators to buy their energy. GE now contracts with about 85% of the household, on-site photovoltaic producers. This also means that they have incentives to encourage a different type of customers. They want connected, engaged customers who both proactively 'switch' to them but who also think about where their energy is coming from. They provide newsletters and recently have offered a bond issue to access finance for investment in generation, which was oversubscribed within days. Even so, all the new entrant suppliers together only supply a few percent of the electricity market.

### **Opaque Prices**

29. Opaque prices are a result of a combination of factors to do with the structure of the wholesale market – its bilateral nature as well as the lack of liquidity in forward and intraday markets – combined with vertical integration and lack of adequate rules on transfer selling and pricing. In order to have transparent prices, there needs to be systemic, structural change as discussed above, and as discussed further in Section 5.

**Theory of harm 2: vertically integrated electricity companies harm the competitive position of non-integrated firms to the detriment of customers either by increasing the costs of non-integrated energy suppliers or reducing the sales of non-integrated generating companies**

30. See our discussion above. Vertically integrated electricity companies can make it more difficult for independent generators in terms of not offering competitive rates for the non-integrated / new entrant company generation; because they can offer loss leaders / predatory pricing (OVO, 2014b) and pass the costs on to their 'sticky' customers; because they can minimise their encouragement of a 'literate' energy citizen customer thereby dampening the chance of customer switching to non vertically integrated / new entrants; and because of the opacity of prices so that it is difficult to know how much is a 'fair' price.
31. As said in the section above, this is because of a number of issues relating to the structure of the system. This is exacerbated by transactions costs which negatively impact new entrants / smaller companies. These transaction costs end up with a cost but they are not only direct monetary costs, such as the costs of being a Code Member or to sign up for a trading platform. It is also the cost of having the capacity to understand a 1000 page Balancing and Settlement Code or a 300 page Licensing Agreement; the cost of keeping up with all the modifications made upon all the Codes (as discussed further in Section 5).

**Theory of harm 3: Market power in generation leads to higher prices**

32. We agree with this but have no particular points to make.

**Theory of harm 4: Energy suppliers face weak incentives to compete on price and non-price factors in retail markets, due in particular to inactive customers, supplier behaviour and / or regulatory interventions**

*Hypothesis 4a: Inactive customers reduce the incentives of energy suppliers to compete*

*Hypothesis 4b: Tacit co-ordination between energy suppliers reduces their incentives to compete*

*Hypothesis 4c: Regulatory interventions reduce the incentives for suppliers to compete*

33. With respect to Hypothesis 4a, good liquidity of customers is important for 2 reasons (1) if new entrants cannot access customers, they cannot provide new services; and (2) if energy companies expect to retain their customers, come what may, they can make more profit out of them than is warranted and pass on the costs of predatory pricing etc. From the suppliers point of view: sticky customers are useful because (i) they are a dimension which helps the suppliers to understand how much energy they are going to sell and therefore what they have to do to remain in balance in the electricity markets; (ii) if customers 'stick' they don't interfere with the VI balance between supply and demand (see above); and (iii) energy companies are able to worry less about competition with other suppliers or retaining their market share. For all of these reasons, there is little incentive on suppliers to educate their customers to the possibilities of alternative tariffs or reducing demand. Tacit co-ordination between the big energy suppliers also complements this approach.
34. With respect to Hypothesis 4c, we would argue that regulating interventions broadly take place in three areas: regulations are used to make the market and networks function; to protect customers and to deliver Government policy. This is a very broad area to be commenting on because there are good and bad examples in each of these three areas.

35. We take the view that we should be moving towards a new era where there is a different balance between regulation and competition. In the past, regulation has been seen primarily as a means to overcome market failures in the quest for competition, which it has assumed will lead to greater customer benefits. This assumption is becoming more questionable because of (1) the need to move more **rapidly** to a low carbon future in an affordable manner but also (2) because of the newly available technical ability and economic benefits of greater co-ordination and integration of energy system operation (not just in the UK but with continental Europe).
36. This might be viewed as Phase 1 and Phase 2 type energy system operations. Phase 1 is where conventional energy systems dominated by large fossil and nuclear plant operate with some renewables, and where the economics of the power plants drive the economics of the energy system; and the second Phase 2 energy system is where efficiency of operation of the system becomes the driver of the efficient economics of the energy system not the individual power plants. Denmark, Germany and in a slightly different way California are all in Phase 2. Phase 2 is our goal but needs greater strategic control because of its technical complexity. Leaving regulation to ensure greater competition will not get us there. We need an electricity structure which enables competition. Moving to that electricity structure will require re-regulation.
37. Overall therefore we see regulatory intervention as a necessary function to move to a more competitive and innovative energy system, given the situation, goals and challenges we face. That regulatory intervention needs to focus on achieving innovation and greater efficiency of operation while meeting its goals. We would argue that, at the moment, this is not the case. A few examples are provided below.
38. With respect to protecting customers and regulating tariffs, the ongoing RMR came to the view, put baldly, (Ofgem 2013) that customers don't understand tariffs and the differences between them, and so they don't switch. Ofgem has decided to regulate and/or cap the number of tariffs on offer in order to make them more accessible to customers. It is not clear what the extra cost of this is – but to the degree that it introduces cost, it becomes more complex and more difficult for new entrants to enter.
39. The Statement says it will be investigating '...the impact of the measures imposed to simplify tariff structures on consumer inertia and competition.' We welcome this, but tender that the market has far from been simplified:

**Figure 1 - Effects of our proposals in the number of core tariffs available**

Fuel	Core tariffs	Online/Offline	Variation by payment type <sup>+</sup>
Electricity	4	8	24
Gas	4	8	24
<b>Total</b>	<b>8</b>	<b>16</b>	<b>48</b>

Each of the 'core' offers available both online and offline.

Equal and cost-reflective adjustments to core tariff's charges reflecting payment type.

Plus dual fuel discounts, and bundles offered across all tariffs

40. As shown in Figure 1 taken from Ofgem 2013, this means that there are 48 tariffs available from each one supplier, which can vary depending on how you choose to pay. There are also a fresh range of tariffs available by meter type - i.e. Economy 7, Economy 10, Smart Meters etc. 48 Tariffs x 6 big suppliers = 288 Tariffs, plus more for the main small suppliers.



41. It is also unclear what the benefits are to customers because it is not so much the number of tariffs which is the problem – given that the new rules themselves create hundreds of different versions of the basic 4 tariffs - but the difficulty in comparing them.
42. However, what the 4-tariff ruling has done is restrict the space for innovative new tariff structures. The RMR has also introduced strict rules around tariff charge structure, they must now be made up of a single unit charge, and a daily standing charge (which can be set at zero). This eliminates the scope for falling block tariffs which reward higher levels of consumption, however they also prevent rising block tariffs which would have had the effect of incentivising lower consumption, which is to be recommended. Moreover, tariffs related to local schemes have to obtain derogations from Ofgem. Not only should it not be down to the Regulator to say one way or the other about what customers want, but there is something wrong with the process if it is stopping new, innovative, competitive services to be provided.
43. Establishing a template and then regulating comparison sites would seem to be a vital aspect of market liquidity but as yet this does not occur. Electricity is the same product at the point of use, although very different in the ways it is produced. If tariffs and bills do not show this differentiation between suppliers, then customers have limited means of understanding what is different about the different tariffs, and therefore whether they would like, or benefit from, a move.
44. Another solution is also greater disaggregation on bills of both costs but also where the energy is sourced or what sort of energy is being sold so that customers can understand how the bill is made up and what the differences are. Such information is fundamental to customer choice. It would also be easier to work out what companies are making money on. Ofgem has not pushed the Big 6 on this point although the smaller companies would welcome this (OVO, 2014; Good Energy, 2014).
45. We would welcome therefore an exploration of RMR, and whether or not it actually has improved competition and consumer services.
46. With respect of regulatory intervention to make the market function better, there are some positive examples. For example, increasing the de minimus on social and economic obligations on suppliers from 50,000 to 250,000 customers has been central to the increase in numbers of new suppliers and new retail options for customers. It now creates some issues when moving past that de minimus but there would not be the number of smaller suppliers without that de minimus rise. The discussion above of RMR is a more negative example.
47. With respect to regulatory intervention for Government policies, there is a very complicated picture. We do, as a country, need to counter climate change. The latest IPCC report makes clear how important the energy system is for reducing emission (IPCC, 2014). We recognise that considering all regulations would not be feasible for the investigation. However, we urge the Authority to specifically consider the measures put forward under the Electricity Market Reform (EMR) process, including the capacity market; and why it is that the Government has not been more successful in improving household energy efficiency through the Green Deal.
48. The need for the EMR grew out of an increasing recognition that “without action the current market will not deliver the investment required” to meet the Government’s carbon and security goals (DECC 2012 p7). However, since the initial proposals for market reform were made, more information has emerged about the costs of the interventions, and particularly about the level of support being given to the nuclear industry. The European Commission’s investigation into State Aid in relation to Hinkley Point C nuclear power station (EC 2013) clearly identifies the impacts of nuclear Contracts for Difference (CfDs) on the broader market, both in terms of future investments and competition:

- *[410] The CfD for nuclear energy significantly lowers the profitability of existing power plants, hence distorts investment patterns.*
- *[413] The CfD has the effect of ‘homogenising’ electricity prices, and thus also other generators’ revenues – thereby resulting in a lower degree of profit dispersion. This is, again, a substantial impact on the competitive process compared to a no aid scenario.*

49. A consideration of how CfDs may impact on the market therefore seems directly relevant to the CMA’s investigation into which features of the market might restrict or distort competition.
50. Also as part of EMR, GB is now to have a market-wide capacity market rather than a targeted capacity mechanism, as was the original preference of the Government. This is a retrenchment, not a reform, of the electricity market; it is good for the incumbents and their plant; it is bad for the environment, because it is very conservative on the demand side; it is unnecessarily expensive; and it is bad for GB innovation (Mitchell, 2014b). Again, a consideration of the impact of this mechanism on competition and innovation seems directly relevant to the CMA investigation.
51. Finally, a real material issue for customers is the energy efficiency of their households. Electricity price rises which result from environmental obligations, network upgrades and so on would be of little importance to householders if they have significantly improved energy efficiency of their houses, appliances and so on. In this sense, the key goal of energy policy should be to increase the energy efficiency of households. The Government has put in place the Green Deal which was intended to lead to a step-change in the efficiency of households and yet has been unsuccessful and expensive. Again, the decision-making process behind the implementation and details of that policy is a good example of how the structure of the electricity system works against innovation whilst at the same time causing customers to pay.

### **Areas that would be useful for the CMA to Investigate**

52. This submission would hope that the CMA would extend their investigation in 4 areas:
- as set out in Section 1, the key argument of this submission is that it is the structure of the electricity system, and its governance, which is fundamentally impeding competition.
  - Codes and Licenses
  - more consideration of the demand side
  - transaction costs.
53. The goal of this submission is mainly to comment on the CMA’s initial ideas for investigation, and it is not really intended to look at solutions. However, our additional Theory of harm posits that the structure of the energy system, and its governance drives decision-making which benefits incumbents and a continuation of the present system to the detriment of customers. We argue that structural change is needed to enable innovation, and its benefits to flow to customers. Examples of this might be:
- (1) ring fence supply and generation businesses within vertically integrated companies, or entirely separate them out;
  - (2) improve competition, transparency and liquidity in the wholesale market by moving from the bilateral market to a Pool; ensure 100% sale of generation into the Pool as the first trade; ensure that 100% of trades are external to generation and supply companies; require all markets and exchanges to publish all price and volume details;
  - (3) establish template for tariffs so consumers can compare prices and engage with the market;

- (4) restructure governance of energy system – by altering the remit of Ofgem and the System Operator; create an independent market monitor; separate technical regulation from consumer protection; separate the system operator (SO) arm from National Grid and make the SO a state-owned not for profit entity responsible for security and the technical transition, and bring the system operator and market operation functions together in the SO;
- (5) update Codes and Licenses to enable innovation and change and to not de facto protect incumbent interests (discussed further below);
- (6) firmly support retail competition, but regulate certain aspects including (i) moving to one year, fixed price contracts like annual contracts for insurance for cars, telephones etc; (ii) regulating comparison sites (iii) ensuring disaggregation of costs on bills etc; explore a rising step tariff as a default service, as occurs in 16 of the 17 US States which have retail competition (Mitchell, 2014c).

54. We recommend that the CMA extends its investigation to explore the extent to which it is the structure of the electricity system which leads to the adverse effects on customers.

#### **Codes and Licenses - Not Fit for Purpose**

55. All electricity and gas actors sign up to Codes – there are 7 in all for electricity and gas. The Codes are the basis of the rules and incentives of all aspects of the energy system. Each code sets out the legally required behaviour within the area the Code is responsible for. In addition, actors require a License (for example, to operate, to supply etc) which tends to be more linked to general policy. Licenses require actors to sign up to a Code, and the Code sets out the detail of the behaviour. License and Codes are therefore entirely linked although the hierarchy of the two is unclear. As a right of joining a Code, for example the BSC, the signatory has the right to change the Code via a Process set out in the Code, known as raising a Modification. This is known as a living rule. In effect, the incumbents are responsible for the operation of the network or the market (whichever Code) and this de facto enables incumbents to maintain their preferred rules and incentives.

56. At best, the Codes are fit for purpose for trivial change that few have an interest in. However, the Codes are not fit for purpose for significant changes because new modifications can be continually added thereby frustrating changes. A Code Governance Review in 2008 concluded that Codes were poor at enabling change. As a result of the Code Governance Review, Ofgem can now initiate a Significant Code Review (SCR) within a specific Code. While the SCR is open, other Code members cannot initiate / raise modifications. Project TransmiT was, for example, a SCR. Ofgem can raise a SGR but they cannot be sure they will get the outcome they want. Three SGRs have occurred in relation to transmission charging issues but none have led to change.

57. Thus, the process of change within the Codes is very slow and complex. Smaller companies have greater difficulties in being able to afford to keep an eye on all the Modifications to the Codes. Until the process of Codes and Licenses is overhauled, there can be no proper innovation and change within the energy system.

58. We would hope that the CMA includes the impacts of Codes and Licenses within the investigation.

#### **More consideration of the demand side and transaction costs**

59. There is very little consideration for demand-side measures within the Statement. Given that the scope of the investigation is to include barriers to innovation, it is essential the investigation is not limited to barriers to innovation within the existing supply framework.

60. Transaction costs are a serious barrier to new entrants and new practices. The time consuming nature of keeping up with the Code modifications is an example of an outdated process which needs root and branch change to overhaul it into the 21<sup>st</sup> Century.

## Conclusion

61. The EPG at the University of Exeter welcomes the CMA investigation. The main contact for the EPG is Catherine Mitchell. It would be our pleasure to discuss these issues with the CMA Panel.

Yours faithfully,



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