

March 2011

## **CONSULTATION RESPONSE**

### **Department of Energy and Climate Change - Electricity Market Reform**

#### **Executive Summary**

1. This submission addresses one component of the electricity market reform (EMR) consultation – CO<sub>2</sub> Emissions Performance Standards (EPS) for power generation. ClientEarth supports the swift introduction of CO<sub>2</sub> EPS for the power sector as necessary environmental regulation that must be accompanied by other measures contained within the proposed EMR package, such as carbon floor price and effective design of capacity mechanisms. However, the levels and design of the EPS proposed are deeply flawed. As a first mover on EPS in the EU, it is vital that the UK designs an effective and replicable EPS model.
2. As regards the proposal to 'grandfather' EPS on new fossil fuel plants for the duration of their economic life, we conclude that this gives rise to 3 material modifications of the Framework for the Development of Clean Coal 2009 (FDCC) that risk increasing the environmental impact of that plan. Notwithstanding the fact that the duration of economic life has not been defined, any plausible metrics for economic life will likely result in further lock in to unabated fossil fuel when compared to the timescales and future requirements adopted in the FDCC. As that plan was subject to the legal requirements of the EU Strategic Environmental Assessment Directive (2001/42/EC), the government cannot lawfully implement this type of grandfathering without first undertaking a new Strategic Environmental Assessment (SEA), factoring in the various effects of grandfathering.
3. In order to avoid the need to undertake a new SEA, or risk potential legal challenge, the government should pursue alternative EPS design that strikes the appropriate balance between industry certainty, investment incentives and the overriding objective of decarbonising the power sector in line with the recommendations of the Committee on Climate Change. Such alternative design would avoid leading to perverse incentives to bring forward development applications and lock in additional high carbon infrastructure, and can avoid undermining important elements of the FDCC which were assumed in the SEA report. These include the requirement that new coal demonstrating CCS to partial capacity would be required to retrofit CCS to full capacity within 5 years of CCS

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being proven, and contingency measures to remove unabated coal in the event that CCS is not proven on time.

4. As regards the proposed EPS levels of 600g and 450g/kwh, ClientEarth concludes that both of these are insufficient and will fail to achieve many of the objectives of introducing an EPS. As regards EPS for new power, there is good evidence to support the desirability of establishing the level according to best available technology for new gas plant. This would suggest an initial level of 350g or lower, with carefully designed special provisions to allow CCS demonstration projects to proceed until such time as they are required to retrofit CCS to full capacity.
5. The Redpoint analysis underpinning the consultation document fails to adequately consider or model the effects of EPS in combination with other components of the EMR package. By only modelling its effects as a standalone policy, the assessment is flawed. ClientEarth considers that concerns about an EPS deterring investment can be balanced by effective design of other measures such as a floor price on carbon and forward capacity mechanisms.
6. ClientEarth notes the recommendation in the House of Commons EPS report from 2010 that the government explore the possibility of retiring an equivalent number of ETS allowances to the emissions saved by a national EPS, in order to ensure that a national EPS gives rise to net climate benefit. This submission contains brief comment on legal options available to the government. When reviewed in 2014, we recommend the government supports an amendment to the EU ETS Auctioning Regulation that would establish a cancellation mechanism. One approach to creating such a mechanism is to provide Member States with conditional access to auctions, requiring immediate cancellation of allowances following a successful bid. As auction revenues ultimately flow back to Member States under phase 3 of the Union scheme, this would represent cost free abatement without undermining the objectives of centralised and harmonised allocation during phase 3. Legal options available now include hiring an intermediary to purchase allowances on behalf of the government, equivalent to the estimated missions saved by an EPS, or purchasing allowances from the secondary market and then retiring.

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## Background

7. ClientEarth is a European environmental law and policy organization based in London, Brussels, Warsaw and Paris. During 2010 we were requested to provide legal policy advice to the Irish Minister for Environment on the legality and design of legislative provisions for CO<sub>2</sub> emissions performance standards (EPS) for power generation. During 2009 and 2010, ClientEarth produced a series of legal submissions and consultation responses to the previous UK government's plans for 'capture readiness' and the Framework for the Development of Clean Coal (FDCC).<sup>1</sup> We were also involved in securing a recently adopted amendment<sup>2</sup> to the EU Industrial Emissions Directive recast clarifying the ability of EU Member States to legally introduce greenhouse requirements such as CO<sub>2</sub> EPS for installations covered by the ETS.
8. This submission responds to questions 12 through 17 of the Electricity Market Reform (EMR) consultation, as well as providing brief further comment on legal issues raised in the House of Commons report into EPS from 2010.

## Consultation Questions

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

9. No. Concerns about an EPS deterring investment and increasing security of supply risks are generally overstated and can be managed in various ways including by designing the EPS in consort with other elements of the EMR package, and in ways that achieve an appropriate level of regulatory certainty. We consider that the appropriate way to establish future regulatory certainty is to ensure that the legislative instrument introducing EPS signals the future trajectory of the regulation, in

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<sup>1</sup> See ClientEarth, *Towards Carbon Capture and Storage A Consultation Document published by Department for Business Enterprise & Regulatory Reform (BERR CCR Consultation)* (11 September 2008); ClientEarth, *response to the DECC consultation on the draft Supplementary Guidance for Section 36 Electricity Act 1989 Consent Applicants for Coal Power Stations*, 29 January 2010

<sup>2</sup> New Recital 10 introduced into the Industrial Emissions Directive 2010/75/EC reads: "In accordance with Article 193 of the Treaty on the Functioning of the European Union, nothing in this Directive prevents Member States from maintaining or introducing more stringent protective measures, for example greenhouse gas emission requirements, provided that such measures are compatible with the Treaties and the Commission has been notified."

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line with the advice of the Committee on Climate Change. The elements of the EMR package of particular relevance to balancing concerns about deterring investment include the floor price on carbon and both supply and demand side capacity mechanisms. A key omission in the Redpoint analysis is the failure to adequately model the effects of an EPS in combination with these or other parts of the EMR. Instead, the analysis only appears to model the effects of EPS as a standalone policy.<sup>3</sup>

10. The government implies that grandfathering to economic life is necessary to ensure security of supply and avoid deterring investment, stating that “without such protection in place, the regulatory risk around investing in any new fossil-fuel power stations might prevent any new flexible plant being built, creating a risk to security of supply. The Government’s initial view is, therefore, that the EPS be grandfathered.”<sup>4</sup> This analysis fails to consider the potential to tailor and optimize the various combinations within the suite of EMR measures. In particular it fails to acknowledge the ways in which capacity mechanisms, (including targeted capacity mechanisms), can complement an EPS and balance potential risks about the introduction of CO<sub>2</sub> regulation deterring investment, with consequent security of supply concerns.
11. We agree with the government’s identification of the potential for EPS to act as a flexible regulatory tool to ensure compliance with CCS demonstration requirements post construction - to ensure that CCS capacity is operated at times when the carbon price is low. However, the purpose of introducing EPS must not be limited to this. EPS can and should be designed to serve multiple objectives: immediate regulatory backstop on new unabated coal, defining the future regulatory environment for both coal and gas generation in ways that spur technology forcing and private sector investment in low carbon technologies, and, when an EPS tightens, stimulating the development of renewable energy technologies.
12. In order to meet these multiple objectives, the EPS level must be more stringent than either of the two levels currently proposed. We consider that the legislation introducing EPS must signal its future application to existing fossil fuel plants on a staged basis. It is essential to anticipate a gradually tightening EPS, rather than risking additional lock-in to high carbon generation that would arise from the proposal

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<sup>3</sup> Redpoint, *Electricity Market Reform - Analysis of Options*, (December 2010) “..it appears that a strong EPS is unlikely to be the most effective mechanism to drive low-carbon investment as a stand-alone policy, but a Targeted EPS designed as an insurance policy against low-carbon prices could be effectively combined with other policy options” at 9.

<sup>4</sup> Department of Energy and Climate Change, *Electricity Market Reform Consultation*, (2010) at par. 90

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to grandfather the EPS for the economic life of new coal and gas plants. This issue is addressed in depth in our response to question 14.

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

**Levels of an EPS**

13. ClientEarth is opposed to the construction of any new unabated coal in the UK.

However, if the government adheres to the plan of allowing new coal on the condition of demonstrating partial CCS capacity from day one, it is essential that the level of the EPS is not set according to the emissions performance rates of these partially abated coal plants. In our evidence provided to the Select Committee, we advised that the optimal approach to the statutory design of EPS was to design the regulation so as to cover all forms of fossil fuel generation, and that the starting point for the appropriate level should be the emissions rate of best available technology for new gas plants. In order to allow CCS demonstrations to proceed as planned, special provisions should be designed, with the statute clearly requiring that these new plants demonstrating CCS will be required to fast-track CCS retrofit to 100% of their capacity by the date signaled in the FDCC (2025 at very latest). In order for the government to avoid becoming exposed to potential legal challenge due to a material modification of the FDCC plan without first completing a new SEA, the level of EPS for new fossil fuel plant cannot be grandfathered to the full economic life of new plant. The reasoning underpinning this conclusion is set out in full in our response to question 14.

14. We do not support the proposal to set the EPS level at 600g/Kwh. Such a level will fail to be transformational for the power sector, and if grandfathered to full economic life risks increased lock-in of high carbon generation. As regards coal, this level will achieve nothing in addition to the existing requirements under the FDCC, except by providing a regulatory tool to ensure compliance with the EPS, i.e. – to ensure that the CCS capacity is run once new plant is operational. A level of 600g/kwh will also fail to send the necessary investment signal to kick start private sector investment in CCS technology. This failing will be exacerbated by the inability of such a level to influence gas generation, or bring renewables closer to within striking distance of market competitiveness. The proposals fail to consider the prospective potential of an EPS – which can be implemented now with the statute signaling that the level will tighten by a designated timeframe in the future. If this approach is pursued, EPS can and should

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be designed as an effective technology forcing measure, coupled with other elements of the electricity market reform package, such as targeted capacity mechanisms.

15. The Redpoint analysis of options commissioned by the government alongside the EMR proposals confirms that a level of 600g alone will not drive low carbon investment. It states: 'set at this level, the EPS would not be sufficient alone to drive the low-carbon investment required to achieve a carbon intensity of 100 g/kwh by 2030. The Strong EPS policy option would therefore need to consider capturing all plant (new and existing) and be set at a much tighter level.'<sup>5</sup>
16. In the strong EPS scenario, the Redpoint analysis fails to consider a two tiered approach that ClientEarth has recommended in the past: 1) EPS for new power is introduced immediately and set at a level informed by best available technology (BAT) for gas generation. 2) the statute signals that further Regulations will be introduced at a future date extending the application of the EPS (or an alternative EPS) to existing plant. In light of the advice of the Committee on Climate Change, including the need to achieve almost complete decarbonisation of the power sector by 2030, and that there is no room for unabated coal beyond the early 2020s, an approximate date for the introduction of Regulations extending EPS to existing plant would suggest no later than 2018 or 2020 to begin the staged phase out of existing unabated fossil fuel.
17. It is unclear why the second level proposed is set at 450g. This level is clearly not informed by BAT for new gas, which is approximately 300-350g/kwh. An EPS for new power should be set by reference to BAT at the time of implementation.<sup>6</sup> Prospective EPS can spur the development of market technologies by signaling future tightening of the EPS. We note that in evidence given to the House of Commons Select Committee, GE Electric cautioned against an EPS more stringent than 360g/kwh stating that this would risk penalizing the fuel advantages of natural gas 'by unnecessarily increasing capital and operating expenditures.' We note that this level is considerably more stringent than either of the two levels being proposed by the government in this consultation.
18. A variety of literature exists examining possible scenarios for levels and timing of EPS. A couple of important findings to highlight include that a good starting point for

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<sup>5</sup> Redpoint, *Electricity Market Reform - Analysis of Options*, (December 2010) at page 48

<sup>6</sup> GE Electric, House of Commons Select Committee on Energy and Climate Change – call for evidence on Emissions Performance Standards (2010), supplementary evidence available at: <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/523/523uw.pdf> page 68

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setting the level of an EPS for new power is the carbon efficiency of the most efficient ICCG gas plant with heat capture. On current technologies, such a starting point would suggest at EPS of approximately 350g/Kwh or lower.<sup>7</sup>

19. Our conclusion is that both of the levels proposed are inadequately stringent.

**Derogations for CCS demonstration plants**

20. As regards derogations from an EPS for projects forming part of the UK or EU CCS demonstration programme, we note that the consultation document only anticipates such derogations on the 450g scenario, as would be necessary to allow such projects to proceed. The level of 600g would not require any derogations for plants demonstrating CCS to at least 300MW net of capacity, in line with the consent requirements established in the FDCC. In the 600g scenario, and potentially on the 450g scenario, it is clear that the government proposes to apply the grandfathered EPS.

21. In recommending the adoption of more stringent EPS, informed by BAT for gas generation, ClientEarth acknowledges that special provisions will be required in order to allow UK or EU CCS demonstration projects to proceed. Any special provisions or derogations from a stringent emissions performance standard to allow FDCC CCS demonstrations to proceed must be carefully designed to achieve the following 2 objectives: 1) to signal and compel the fast-tracking of CCS retrofit to full capacity in line with the FDCC, and 2) to ensure that the partial CCS capacity is run as soon as the plant is operational. Together, these factors lead to the conclusion that that CCS demonstration projects must not be entirely exempt from an EPS, but that alternative levels should apply to such plants designed so as to allow the projects to proceed until such a time as they are required to retrofit to full capacity shortly after CCS is proven. Additionally, a strictly limited amount of flexibility may be required to allow for testing of CCS capacity. On our analysis, an EPS designed as an annual plant level limit can easily accommodate these considerations.

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<sup>7</sup> Ecofys *Scenarios for the introduction of CO2 emissions performance standards for the EU power sector*, (2009) page 15



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

**Legal implications of proposed grandfathering – modification of Framework for the Development of Clean Coal is unlawful in the absence of a new Strategic Environmental Assessment**

22. The proposal to 'grandfather' the level of EPS for the full economic life of new generating stations amounts to a modification of the Framework for the Development of Clean Coal 2009 (FDCC)<sup>8</sup>, and risks significantly increasing the environmental impacts of that plan. The consultation document only mentions the option of derogations or exemptions from an EPS of 450g and not for the 600g option. Therefore, we infer that, at least for the proposed level of 600g and possibly for the 450g level, the government proposes to apply the grandfathering to CCS demonstration plants as well as other new fossil fuel plants. While the duration of 'economic life' is not defined in the consultation document, we understand that for new coal, and probably for new gas, any reasonable definition of economic life is highly likely to extend well beyond expected dates for CCS technology becoming proven. By way of illustration, in the Canadian proposals for EPS, the economic life of new coal plant is set at 45 years.<sup>9</sup>
23. ClientEarth asserts that the grandfathering proposed gives rise to 3 modifications to the FDCC. Firstly, notwithstanding the fact that the duration of 'economic life' has yet to be defined, we understand that on any definition of economic life, for new coal this will almost certainly exceed the time by which CCS will be proven, and for new gas is also likely to exceed this date. In the FDCC, the very latest acceptable date for CCS becoming proven was 2020. Therefore, the proposed grandfathering until economic life modifies the requirement in the FDCC that new coal plants demonstrating partial CCS will be required to retrofit to full capacity within 5 years of the technology being proven. Secondly, the proposal undermines options for future contingency plans which the government acknowledged will be necessary in the event that CCS is not proven

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<sup>8</sup> UK, Department of Energy and Climate Change, *Framework for the Development of Clean Coal* 2009

<sup>9</sup>Environment Canada, CO<sub>2</sub> EPS proposals available at <http://www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=55D09108-5209-43B0-A9D1-347E1769C2A5> as accessed 1 March 2011.

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by the expected timeframe. Thirdly, the proposed grandfathering risks creating perverse incentives for developers to bring forward applications to receive the security and lock-in that the grandfathered EPS will afford them. This risks giving rise to an increased volume of unabated gas (and, at worst, coal) generation on the grid earlier than needed, leading to potential surplus capacity and serious implications for meeting carbon budgets and legally binding reduction targets under the Climate Change Act 2008.

24. Legally, ClientEarth advises that the design and implementation of EPS cannot be considered in isolation from the previous government's FDCC. The FDCC was subject to the legal requirements of a Strategic Environmental Assessment, pursuant to Directive 2001/42/EC, transposed into UK law by the Environmental Assessment of Plans and Programmes Regulations 2004.<sup>10</sup> In those regulations, the definition of 'plans and programmes' expressly extends to *modifications* of plans and programmes as well as their initial creation.<sup>11</sup> We advise that the government cannot lawfully introduce measures that modify and undermine key elements of the FDCC without first undertaking a new Strategic Environmental Assessment which would, in our view, reveal preferable alternatives to the grandfathering proposed.

25. The introduction of EPS, a necessary tool to assist in achieving the decarbonisation of the power sector, has intimate connections with the previous government's FDCC, where it was expressly discussed in the context of compelling CCS retrofit and/or contingency measures. On the 25 November 2008, ClientEarth put DECC on notice that we would commence proceedings for judicial review if DECC attempted to unlawfully adopt a capture ready plan/programme that purported to allow the Secretary of State for Energy and Climate Change to grant consent to any future 'capture ready' coal power stations under s36 of the Electricity Act 1989 without first conducting a SEA.<sup>12</sup>

26. Subsequently, the government acknowledged the application of the SEA Directive to elements of the FDCC more broadly. The ENTEC Environmental Report that was

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<sup>10</sup> UK, *The Environmental Assessment of Plans and Programmes Regulation* 2004 No.1633

<sup>11</sup> UK *Environmental Assessment of Plans and Programmes Regulation* 2004 No. 1633. Regulation 2 that "Plans and programmes' means plans and programmes, including those co-financed by the European Community, as well as any modifications to them..."

<sup>12</sup> ClientEarth, letter to Dr Drage, Department of Energy and Climate Change, 25 November 2008, paragraph 57.

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produced was designed to meet the requirements of the SEA Directive and expressly stated that:

*'specific aspects of the FDCC proposals are likely to affect how future planning applications will be judged, and in this respect, may be regarded as a 'plan or programme' that sets a framework for future development consents as detailed in the [SEA] Directive.' In these circumstances DECC has determined that it would be prudent to carry out [an SEA] on these specific aspects of the emerging policy to inform the policy making process and ensure full compliance with the relevant legislation.'*<sup>13</sup>

27. We disagree with the government's narrow interpretation of the scope of the SEA Directive, confining the meaning of 'framework' to affecting how planning applications will be judged, which is not, in our view, supported by a textual analysis of the SEA Directive.<sup>14</sup> The SEA Directive legally requires assessment of cumulative impacts and in our view was required to apply to the entirety of the FDCC package, which together constituted the consent 'framework' for new coal. The very purpose of the SEA Directive is to complement project level, consent based assessments by assessing the connections and relationship between them, and overall environmental impacts influenced by government plans and programmes. Failure to assess the entire framework, including consent conditions such as future requirements to abate, renders it impossible to assess whether the plan or programme will have a significant impact on the environment, including effects on investment, energy mix, and the cumulative effects on the earth's climatic systems. Grandfathering in the manner proposed modifies key elements of the FDCC in the 3 ways described and risks leading to clear and detrimental impacts on all these factors for the reasons described in this submission.

28. The only aspect of the FDCC that was expressly excluded from the scope of the ENTEC environmental report was the financing of CCS demonstration projects. While we disagree with the government's narrow interpretation of the scope of the SEA Directive, even on this narrow interpretation, we still consider that the type of grandfathering proposed gives rise to material modifications of the FDCC in ways that

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<sup>13</sup>Department of Energy and Climate Change, ENTEC Environmental Report, *Strategic Environmental Assessment for a Framework for the Development of Clean Coal*, main report, June 2009 at page 3.

<sup>14</sup> EU Strategic Environmental Assessment Directive 2001/42/EC. For energy projects such as power stations, a strategic environmental assessment is required for plans and programmes 'which set the framework for future development consent of projects listed in Annex I and II to Directive 85/337/EEC'. (Article 2(2a).)

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have clear potential to influence how future planning applications will be judged, and the volume of lock-in to unabated fossil fuel generation.

*First modification of FDCC plan – grandfathering represents roll back on requirement to retrofit CCS demos to full capacity within 5 years of CCS being proven*

29. We note the governments own previous assertions about the scope of the SEA Directive have acknowledged that SEA is required where a plan or programme 'creates *or influences* consent regimes'.<sup>15</sup> The ENTEC SEA report stated that one key component of the FDCC was the commitment to require that new plants consented on the condition of demonstrating CCS to part of their capacity will be required to retrofit CCS to 100% of their capacity within 5 years of CCS being commercially proven.<sup>16</sup> The environmental assessment in the report therefore proceeded on this assumption. Regarding anticipated timelines, the final FDCC stated that 'we expect demonstration plant will retrofit CCS to their full capacity by 2025, with the CCS incentive able to provide financial support.'

30. Under the FDCC framework, consents of new coal fired power stations were to be judged on the understanding that they would be required to retrofit to full CCS within 5 years of CCS being proven, this being 2025 at latest, or else be subject to contingency measures such as an EPS or limited running hours. We acknowledge that the government has yet to define 'economic life.' However, even on metrics strictly limited to the duration of economic return, we understand the duration of economic life for industrial scale coal plant (and potentially gas) would almost certainly exceed 12 years taking us beyond 2025. 2025 was the very final date by which the FDCC signaled that new coal demonstrating partial CCS would be required to retrofit to full capacity, consistent with the advice of the Committee on Climate Change in its first report.<sup>17</sup>

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<sup>15</sup> UK Government white paper, 'Planning for a Sustainable Future' May 2007 "The SEA Directive applies mainly to plans and programmes which "sets the framework for development consent of projects"-those which create **or influence** consent regimes, particularly for projects subject to Environmental Impact Assessment under Directive 85/337/EEC (as amended)..." (emphasis added)

<sup>16</sup> ENTEC, Environmental Report – *Strategic Environmental Assessment for a Framework for the Development of Clean Coal*, June 2009, at 2.

<sup>17</sup> UK Committee on Climate Change, *Building a low carbon economy* 2008. "There is therefore a strong case for buttressing the carbon price lever by establishing a clear and publicly stated expectation that coal-fired power stations will not be able to generate unabated through the 2020s and beyond the early 2020s" at 199.

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*Second modification to FDCC plan – grandfathering undermines options for contingency plan in the event CCS is not on track*

31. Grandfathering, as proposed, undermines options for the government's future contingency plan which, as acknowledged in the FDCC, will be necessary in the event that CCS is not proven as early as expected in that plan. Contingency options included were a restriction on running hours, an annual cap on plant level emissions, or an EPS. A statutory EPS grandfathered in the manner proposed establishes a legal barrier to utilizing the last two options as contingency tools. More importantly, it sends a signal to industry that they will not be subject to any such contingency measures prior to the end of their economic lifespan – which will extend well beyond 2020/2025 for coal, and quite possibly for gas. This signal impedes the ability of the power sector to adequately plan the transitional path necessary to meet future CO<sub>2</sub> regulation in the early 2020s. As will be explained further, implementation of future contingency measures has a clear bearing not only on the achievement of carbon budgets and reduction targets, but also on future planning considerations.

*Third modification to FDCC plan – grandfathering risks creating perverse incentives to bring forward additional applications for unabated coal and gas, leading to increased amounts of fossil fuel emissions with implications for meeting carbon budgets and legally binding reduction targets*

32. Grandfathering in the manner proposed risks creating perverse incentives for developers to bring forward applications to receive the security and lock-in that the grandfathered EPS will afford them. There is a risk that grandfathering spurs investors to rush through or bring forward applications for new fossil fuel power (particularly gas, but potentially affecting investor interest in coal.) This risks an increased volume of unabated gas (and, at worst, coal) generation on the grid earlier than needed, which could lead to surplus capacity and raise serious implications for meeting carbon budgets and legally binding reduction targets under the Climate Change Act 2008.

33. While we acknowledge that some 'gate closure' incentives may arise from the introduction of any EPS, these can be effectively managed by signaling in law the future tightening of EPS on specified timelines. We consider that the perverse incentives are significantly more acute under the scenario of grandfathering to full economic life than where an EPS is introduced immediately with statute signaling the future tightening of the EPS by a specified date. These timelines must align with the advice of the Committee on Climate Change and at minimum, adhere to the timelines announced in the FDCC.

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34. In the current proposal, the government has failed to demonstrate how it has taken account of, or will manage, these risks created by grandfathering.

*Activation of Strategic Environmental Assessment Regulations – modification of plan establishing consent framework and clear potential to influence how future planning applications will be judged.*

35. This submission has already demonstrated that grandfathering in the manner proposed gives rise to 3 modifications of the FDCC that risk increasing the environmental impacts of that plan when compared to the FDCC, or when compared an EPS that is not grandfathered to full economic life. Regulation 2 of the UK *Environmental Assessment of Plans and Programmes Regulation 2004* provides that "Plans and programmes" means plans and programmes, including those co-financed by the European Community, *as well as any modifications to them...* (emphasis added.)
36. For the reasons previously described in this submission, ClientEarth considers that the government's position on the extent to which the SEA Regulations applied to the FDCC is overly narrow and not supported by legal analysis. The FDCC package in its entirety constituted the 'framework' and confining the scope of SEA to elements of a plan or programme that affect the way future consent applications will be judged is not supported by legal analysis. Failure to undertake the broader assessment neglects one of the central purposes of Strategic Environmental Assessment law, - to complement project based environmental impact assessments by a broader assessment of cumulative effects, inter-relationships between individual projects and the impact of plans and programmes as key components of government policy driving environmental impact. Without this broad assessment, (which in the case at hand arguably requires assessing the likely volume of unabated fossil fuel applications consented and not merely their specifications), it is impossible to properly assess the environmental impacts of plans and programmes.
37. However, as above, the government has acknowledged that a SEA is required where a plan or programme not merely creates a consent regime, but also *influences* a consent regime. This section will demonstrate that, even on the government's assertion of the extent to which elements of the FDCC were subject to SEA, grandfathering in the manner proposed represents a modification that activates the requirement of the UK Strategic Environmental Assessment Regulations.<sup>18</sup>

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<sup>18</sup> UK, *The Environmental Assessment of Plans and Programmes Regulation 2004* No.1633

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38. The type of grandfathering proposed has clear potential to influence or affect how future planning applications will be judged. Under the current regime, consent for new generating stations constituting nationally significant infrastructure projects for the purposes of section 14 of the Planning Act 2008,<sup>19</sup> is in essence a discretionary power exercised by the Infrastructure Planning Commission (IPC) where an applicable National Policy Statement is in place, and ultimately, by the Secretary of State.<sup>20</sup> As a discretionary power it is amendable to being influenced by a range of relevant legal and policy considerations. We understand that the government has the intention of abolishing the IPC and that this may result in a return to more centralized consent processes. Future planning matters, including both individual decisions about consents and the future consent regime for new fossil fuel power stations are likely to be influenced by the proposed grandfathering of EPS in several ways. Such influence may result in more aggressive consent decisions, including refusal of fossil fuel development consent or more stringent consent requirements, so as to ensure that carbon budgets, targets, and decarbonisation objectives consistent with the advice of the Committee on Climate Change are met.

39. Proposals for the construction of new power generation are legally subject to environmental impact assessments, required by UK Regulations transposing the EU Environmental Impacts Assessment Directive.<sup>21</sup> The government acknowledges that such assessments are required to address CO<sub>2</sub> and other climate impacts. Decision makers cannot legally omit to take into account the results and information gathered during environmental impact assessments in granting consent to individual projects.<sup>22</sup> The estimated emissions from a plant expected to retrofit CCS to full capacity within 5 years of CCS being proven or else shut down prior the end of its economic life, are

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<sup>19</sup> UK, *Planning Act 2008*

<sup>20</sup> Currently, where an applicable National Policy Statement is in place, applications are made to infrastructure planning Commission. Section 109 of the Planning Act provides the power of the Secretary of State to intervene in the event of significant changes in circumstances since the adoption of a national policy statement applying to the development consent in question. After intervening the Secretary of State has power to examine and decide the consent.

<sup>21</sup> EU Council Directive 85/337/EEC, *on the assessment of the effects of certain public and private projects on the environment*. See also UK *Infrastructure Planning (Environmental Impact Assessment) Regulations 2009* (SI 2009/2263).

<sup>22</sup> Regulation 3 of UK *Infrastructure Planning (Environmental Impact Assessment) Regulations 2010* (No. 2263) prohibits the granting of development consent unless the decision maker has taken into account the environmental information resulting from the assessment.

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likely to be significantly different from the emissions of a plant whose emissions requirements are grandfathered until the end of its economic life.

40. Indeed, the draft fossil fuel National Policy Statement (NPS) affirms the duty of the IPC to consider *any* impacts it determines are relevant and important to its decision, and not merely those listed in the NPS:

*"The impacts identified in Part 5 of EN-1 and this NPS are not intended to be exhaustive. Applicants are required to assess all likely significant effects of their proposals (see Section 4.2 of EN-1) and the IPC should therefore consider any impacts which it determines are relevant and important to its decision."*<sup>23</sup>

41. By locking in additional high carbon infrastructure for longer durations than anticipated under the FDCC, grandfathering to full economic life impacts on the future profile of the UK's energy sector in ways that have clear potential to influence consent decisions and the weight accorded to decarbonisation objectives if the UK is not on track to meeting carbon budgets or reduction targets.
42. EPS design, as a component of electricity market reform, is an important part of the government's energy policy and a relevant consideration for consent decisions, regardless of whether or not it is included in the final draft National Policy Statement for Fossil Fuel Power.<sup>24</sup> We consider that National Policy Statements for fossil fuel power must include EPS. Currently, the draft NPS for fossil fuel power acknowledges that power stations will be required to comply with any EPS that may be in place, but states that EPS is not part of the consents process. Even if this text remains in the final NPS, considerations about emissions reduction objectives, and the UK's future energy profile are clearly relevant considerations that will influence the discretionary power to grant consent to new power stations, regardless of whether or not an NPS removes an obligation for decision makers to assess GHG emissions from individual applications against carbon budgets.<sup>25</sup>

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<sup>23</sup>Department of Energy and Climate Change, *Revised Draft National Policy Statement for Fossil Fuel Generation Power* (EN-2) (October 2010) at 2.4.2

<sup>24</sup> Department of Energy and Climate Change, *Revised Draft National Policy Statement for Fossil Fuel Generation Power* (EN-2) (October 2010) at 2.4.2

<sup>25</sup> Department of Energy and Climate Change, *Revised Draft Overarching National Policy Statement for Energy* (October 2010) "Although an Environmental Statement on air emissions will include an assessment of CO<sub>2</sub> emissions, the policies set out in Section 2, including the EU ETS, apply to these emissions. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this section does not address CO<sub>2</sub> emissions or any Emissions Performance Standard that may apply to plant." At 5.2.2



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43. The government has a duty to take into account the implications of the Climate Change Act 2008 when determining new policy.<sup>26</sup> These carbon lock-in effects of grandfathering, representing a retreat from the environmental stringency of the FDCC, raise concerns and implications for meeting the objectives and legal requirements of the Climate Change Act 2008 – another important consideration with clear potential to influence the discretionary power to consent new fossil fuel power stations, regardless of any attempts to draft an NPS so as to remove the obligation to undertake such considerations. The current proposal fails to demonstrate how the government has taken account of, or will manage, the clear risk that the type of grandfathering proposed creates perverse incentives to lock-in additional unabated gas and coal generation, when compared to the framework established by the various elements of the FDCC.
44. For the reasons discussed, we consider that the grandfathering of EPS to economic life of new plant would modify the FDCC in ways that are likely to lead to additional significant impacts on climate change, and may also influence the way future consents are judged. Accordingly, we advise that the government cannot lawfully implement the grandfathering element of the proposed EPS design without first undertaking a new Strategic Environmental Assessment. We are confident that such an assessment would reveal preferable alternative ways of designing EPS.

*Alternatives to grandfathering – preferable ways to establish investment certainty*

45. ClientEarth considers that CO<sub>2</sub> EPS, designed in the right way, must be introduced as soon as possible to provide necessary environmental regulation and investment certainty. Therefore, as an alternative to producing a new SEA, a lawful alternative for the government is to replace grandfathering with a system of a tightening EPS in the future. If designed in the right way, the statute can effectively equal or exceed the environmental stringency of the FDCC (including timeframes set for fast tracking CCS retrofit, or contingency measures,) rather than modifying it, whilst still providing the appropriate level of certainty for industry. This can be done by enshrining the maximum or minimum point in time by which the EPS will tighten, both for new plants

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<sup>26</sup> *R (on the application of the London Borough of Hillingdon and others) v Secretary of State for Transport* [2010] EWHC 626 (Admin). ('Heathrow case') Lord Justice Carnwath: "Even before the changes introduced by the Planning Act 2008, it was not open to the Secretary of State simply to stand on the principle of the policy decision made in 2003, without regard to the important developments since then, particularly in relation to climate change policy. Indeed, that was implicitly acknowledged in the announcement, made at the same time as the 2009 Decisions, of the intention to seek advice from the CCS on the 2050 cap " (referring to the 2050 target in the Climate Change Act 2008)."

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and for plants already subject to an EPS (to compel CCS retrofit and/or staged closure of unabated capacity).

46. As discussed, we consider that concerns about an EPS stalling investment can be balanced by other components of the EMR, such as well designed capacity mechanisms, a floor price on carbon, and financial measures such as CCS incentives.

47. We acknowledge that a strictly limited amount of grandfathering may be necessary as regards the existing cohort of pending applications for new gas generation. Provided this is strictly constrained to development consents granted but not yet operationalised or constructed, or to applications already made that are already pending and apply to gas alone, this limited grandfathering should be able to be designed without risking roll back on the environmental credibility of the FDCC, or triggering the need to undertake a new Strategic Environmental Assessment.

#### **Necessity of signaling future application of EPS to existing plant**

48. The Committee on Climate Change has recommended that by 2030 the power sector will need to be decarbonised to below 70g CO<sub>2</sub>/kwh.<sup>27</sup> Unless a massive increase in renewable energy development is launched, this is unlikely to be achievable without widespread deployment of CCS technology on fossil fuel plant. According to DECC averages, the estimated average carbon intensity of all electricity generation in the UK in 2009 was 452g. Coal generation averages at 915g, (modern unabated coal is 850g) and gas averages at 405g.<sup>28</sup> Industry must be assisted to manage the staged transition down to 70g and below. In our view, this necessitates sending the clear signal that existing fossil fuel plants will be subject to a requirement to either retrofit CCS to full capacity or significantly limit their running hours in the future.

49. As succinctly put in the European Climate Foundation's *RoadMap 2050 study*, "a massive and sustained mobilization of investment into commercial low-carbon technologies is needed, the vast majority of which will probably come from the private sector. Investors need greater certainty about future market conditions and the future

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<sup>27</sup> House of Commons, Select Committee on Energy and Climate Change, *Emissions Performance Standards*, First Report of Session 2010-11, at summary.

<sup>28</sup> House of Commons Select Committee on Energy and Climate Change, *Emissions Performance Standards*, first report of session 2010-11 at 7 (averages, EV 39 (DECC.)

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competitive landscape.”<sup>29</sup> An EPS for new power enshrined in statute, combined with provisions anticipating or requiring the staged introduction of EPS for existing power by a specified future date, will provide this certainty and simultaneously kick start large scale investment in CCS from the coal sector.

50. Accordingly, we recommend the optimum statutory design of EPS is to immediately introduce EPS for new plant (including updates and life extensions), whilst also signaling in statute that additional regulations extending EPS to existing plant will occur within a maximum or minimum timeframe. It may be desirable for the EPS applying to existing plants to be set at a less stringent level than the EPS for new plants, to continue to spur technological innovation while managing the staged transition of existing plant at a pace that does not jeopardize energy security objectives. We consider that this represents a superior approach to balancing the UKs decarbonisation objectives and legally binding reduction targets, with the need to establish adequate investment certainty in ways that will stimulate much needed private sector investment in CCS.

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

51. Yes. ClientEarth supports the immediate introduction of CO<sub>2</sub> EPS for new as well as extended and upgraded power plants. We do not support the consent of life extensions to any existing unabated coal at this critical moment in the earth’s climatic history. If consent is granted for life extensions to gas plants, for example to reduce the need for construction of new gas generation, then we strongly support the application of CO<sub>2</sub> EPS to these plants. We acknowledge that regulation of upgrades should be designed so as to avoid disincentives for plants to move to cleaner technologies or operational systems. However, in reality, we understand that material upgrades to cleaner generating capacity (for example upgrading to super critical coal) will generally occur in conjunction with, or amounting to, a life extension, or where significant future life exists. For these reasons, both life extensions and upgrades should be subject to the EPS.

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<sup>29</sup> European Climate Foundation, *Roadmap 2050* (2010) at page 17

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

52. We agree that levels of EPS must be subject to periodic statutory review and tightened in accordance with technological developments as well as progress towards meeting decarbonisation objectives. However, we also note that this approach creates significant uncertainty. We recommend the government signal in statute the future dates by which the EPS will tighten, and enshrine minimum levels of ambition for such reductions as can be inferred now from the advice of the Committee on Climate Change. This should exist in addition to periodic statutory review.

53. We also consider that EPS should be included within the NPS for fossil fuels, and within the overarching national policy statement for energy. Failure to include EPS in these amounts to omitting a key element of UK energy policy that has potential to influence future consent decisions (as well as future revisions to national policy statements) for the reasons we set out in our response to question 14.

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

54. We note that the Californian EPS legislation contains a formula prescribing an alternative metric to take account of combined heat and power generation.<sup>30</sup> ClientEarth recommends that the UK government consider cogeneration in such a way as to retain the competitiveness of combined heat and power, while carefully ensuring that combined heat and power generation does not become an excuse for not incorporating CCS technology. Similarly, given the complexities and uncertainties concerning biomass and associated land use emissions, an essential consideration with biomass co-firing is that the measurement of emissions performance of such a plant attempts to account for lifecycle emissions of biomass. While the EPS should be designed in a non-discriminatory and technology neutral manner, an alternative metric for calculating the CO<sub>2</sub> emissions from these categories of generation is desirable.

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<sup>30</sup> California, Senate Bill 1368, Chapter 598. See also California Public Utilities Commission, GreenHouse Gas Emissions Performance Standard, Decision 07-01-039 January 25, 2007, available at: [http://docs.cpuc.ca.gov/published/FINAL\\_DECISION/64072.htm](http://docs.cpuc.ca.gov/published/FINAL_DECISION/64072.htm)

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## **Other issues – legal issues raised by House of Commons Select Committee on Energy and Climate Change EPS report 2010**

55. ClientEarth notes that two legal issues were raised by the House of Commons EPS Report 2010. The first issue concerned the interaction of a national CO<sub>2</sub> EPS with the EU Emissions Trading Scheme. Specifically, the House of Commons Select Committee on Energy and Climate Change report<sup>31</sup> recommended that the government retires an equivalent number of EU Emissions Trading allowances to those saved by the EPS in order to ensure the EPS has a net impact on global emissions.
56. In addition to the points raised in the government response to the House of Commons report, we note that legal options for the government to remove allowances from the system in accordance with emissions saved from an EPS do exist. For phase 3 of the Emissions Trading Scheme, the power sector will be subject to full auctioning from 2013. Under current EU law, the clearest options will involve some cost to the government. These costs will either result from purchasing allowances from the secondary market, or paying an intermediary to purchase them on behalf of the government during primary auctions. However, we recommend the government consider possible revisions to the EU ETS Auctioning Regulation<sup>32</sup> (scheduled for review in 2014.) We consider that simple amendments allowing Member States or their representatives conditional access to auctions would open up cost free avenues for the government to acquire and retire allowances in the future.
57. In its current form, the ETS Auctioning Regulation limits the eligibility of persons that may participate in auctions (article 18.) Member States and public bodies, are not generally permitted to access auctions. The one exception provided in this article applies to public bodies that that exert commercial control over ETS operators. While this may create an avenue for governments with regulated, publically owned industries to access and retire permits, Member States with de-regulated markets such as the UK, have no such direct means of acquiring allowances from auctions.

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<sup>31</sup> House of Commons, select Committee on Energy and Climate Change, *Emissions Performance Standards*, First Report of Session 2010-11. See recommendations 4 and 17, pages 36 and 37.

<sup>32</sup> Commission Regulation (EU) No. 1031/2010 of 12 November 2010, *on the timing administration and other aspects of greenhouse gas emissions allowances*.

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58. The desirability of Member States having limited or conditional access to auctions in order to then cancel allowances represents one important way for Member States to exercise of their constitutional right in article 193 of the Treaty on the Functioning of the European Union to adopt more stringent environmental measures than those EU measures adopted under the environmental chapter of the Treaty. We acknowledge that any such measure must be consistent with the objectives of the ETS Directive. On this note, we recommend amendments that would allow Member State public bodies conditional access to primary auctions, conditional upon immediate cancellation following a successful bid. Provided the amendment is designed to establish a cancellation mechanism to ensure net climate benefit from national actions such as EPS, and not for the purposes of hoarding or other attempts at market manipulation, we consider that such a measure can be designed to be consistent with the ETS Directive 2009, and in particular article 10(4) thereof.
59. The second legal issue raised in the House of Commons report related to the legality of national CO<sub>2</sub> EPS in light of article 9 of the EU Industrial Emissions Directive (IED) 2010.<sup>33</sup> During 2009 and 2010, ClientEarth provided extensive legal advice on this issue to NGOs and MEPs, leading to the successful amendment in a recital to the Directive that confirms the legality of national EPS. Our extensive legal analysis demonstrated that article 9 of the Integrated Pollution Prevention and Control Directive, now amalgamated into the Industrial Emissions Directive, did not and could not prevent Member States from implementing national CO<sub>2</sub> measures applying to ETS installations, provided they were implemented outside of the IPPC/IED permitting regime rather than included within an IPPC permit.
60. We invite the government to refer to our extensive legal analysis on this issue as was provided to the Department in a series of legal submissions and consultation responses during 2009 and 2010.<sup>34</sup> We would be pleased to discuss this matter further with the Department.

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<sup>33</sup> EU, Industrial Emissions Directive 2010/75/EC

<sup>34</sup> For an overview, see ClientEarth, *response to the DECC consultation on the draft Supplementary Guidance for Section 36 Electricity Act 1989 Consent Applicants for Coal Power Stations (the draft DECC Coal Guidance)*, 29 January 2010.

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ClientEarth is a non-profit environmental law organisation based in London, Brussels and Warsaw. We are activist lawyers working at the interface of law, science and policy. Using the power of the law, we develop legal strategies and tools to address major environmental issues.

As legal experts working in the public interest, we act to strengthen the work of our partner organisations. Our work covers climate change and energy system transformation, protection of oceans, biodiversity and forests, and environmental justice

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