



**Consumer  
Focus**  
Campaigning for a fair deal

# **Response to HM Treasury consultation: ‘Carbon price floor: support and certainty for low carbon investment’**

**February 2011**

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## About us

Consumer Focus is the statutory consumer champion for England, Wales, Scotland and (for postal consumers) Northern Ireland.

We operate across the whole of the economy, persuading businesses, public services and policy makers to put consumers at the heart of what they do.

Consumer Focus tackles the issues that matter to consumers, and aims to give people a stronger voice. We don't just draw attention to problems – we work with consumers and with a range of organisations to champion creative solutions that make a difference to consumers' lives.

# Executive summary

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We provide more detailed answers on questions posed in the consultation in the Appendix, but first set out the general context in which they should be viewed.

## Overview

Project Discovery highlighted the formidable challenges that the UK faces to decarbonise its energy sector; challenges that the Treasury and DECC are seeking to rise to with the Electricity Market Reform (EMR) package. A core component of these proposals is the introduction of a carbon price floor.

The carbon price floor proposals have significant strengths and weaknesses. The introduction of a carbon price floor would strengthen the relative attractiveness of investment in zero carbon, or low carbon, generation when compared with conventional fossil fuel generation. However, it is by no means certain that a floor price for carbon on its own will provide the necessary investor certainty required to incentivise investment in low carbon generation. In any case such a mechanism would come at a significant social cost; the modelling in the Impact Assessment suggests that it would inflate retail energy prices until the late 2020s, with pensioners and those on low incomes the hardest hit.

In its current form there is a real risk that this policy may simply displace detriment; reducing the likelihood that the UK will miss its carbon targets (although the extent to which it may achieve this is open to debate) but significantly increasing the likelihood that it will miss its fuel poverty targets, water down disposable incomes and dilute the international competitiveness of our economy.

If the Government is wholly committed to the introduction of policy reform in this area it needs to do more to balance the package; we see nothing in it on the affordability front. As a minimum, we would like to see the significant tax receipts generated by this proposal – estimated at between £200 million and £400 million per year even under the lowest of the three tax scenarios presented<sup>1</sup> – hypothecated and returned to consumers, with priority given to those least able to pay. For example additional funds could be made available for energy efficiency measures (to reduce customer bills) or increase social price support funding.

But our preference would be that the Government considers alternative approaches to encouraging decarbonisation that may deliver better value for money. Its separate proposals for Feed in Tariffs with Contracts for Difference (Fit with CfD), while still needing further development, appears to provide a better route to deliver a low carbon generation fleet, with greater certainty and less front loading of costs on to consumers. We think there may also be value in investigating whether accelerated substitution of high carbon fossil fuel generation with lower carbon fossil fuel generation may deliver significant carbon savings at lower cost to consumers.

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<sup>1</sup> Page 7, impact assessment.

## A very mixed picture

On the positive side, carbon floor price support would:

- Increase the relative attractiveness of zero carbon investments by decreasing the competitive advantage of fossil fuel generation through higher taxation
- De-risk low carbon generators assumptions on carbon prices; providing them with a stable, rising, higher carbon price – acknowledging that to date the EU ETS has only provided volatile, inconsistent, comparatively lower carbon prices (although working with EU member states to solve the apparent deficiencies of the operation of the ETS would appear to be a more cost effective approach)
- Raise revenues for the Treasury at a time of difficult public finances (although we note that this will not necessarily benefit consumers – how this money is utilised will determine whether consumers benefit)
- Be much easier to implement than other aspects of the EMR, because the CCL and Fuel Duty are already established instruments
- Be relatively compatible with the existing liberalised energy model we have; because it would not prescribe volumes or types of new generation to be built, these decisions would rest with the market

But the picture is mixed. On the negative side, carbon floor price support would:

- Hike consumer bills, at a time when record numbers of customers are in fuel poverty, bills are already at record levels, incomes are flat and affordability is deteriorating
- Only provide investor certainty and reduce volatility for a comparably small element of the export price. Commodity price volatility would be unaffected by the introduction of a carbon floor price. Reducing such volatility would be the most effective way to provide improved incentives to facilitate greater investment in low carbon generation. This would in our view require a different regulatory intervention. Therefore there is a real risk that carbon price support on its own will not provide the necessary investor certainty required to incentivise increased low carbon generation investment (and as such come with a cost but no benefit). However, implemented in conjunction with an additional mechanism (say FITs with CfDs) the carbon price support runs the risk of being superfluous and as such an unnecessary cost for consumers
- Provide lesser investor certainty than a contractual based approach would, noting that governments are not bound by their previous taxation decisions. This is particularly pertinent given that energy has increasingly become a political football – at a time of mass fuel poverty and rising retail energy prices it seems naive to expect that a tax based route will not come under future pressure
- Result in windfall gains and losses for existing generation, including providing price support for zero carbon assets that have been already built, and which could therefore be reasonably regarded as economically viable without further price support. Consideration should be given to clawing back some of these gains, most obviously from existing nuclear plant

- Front-load consumer liabilities when compared to other interventions considered by the EMR. Consumers would start paying higher prices immediately the tax treatment of generation changed, even if new low carbon generation was not installed until many years later (or at all). Indirect taxation will also be at its highest in the earliest years of implementation, when a comparatively greater proportion of the generation fleet is fossil fuel based. Consumers would be hit on all sides with additional costs during this period; away from investment in generation Ofgem anticipates that a colossal £32 billion of investment is needed in the energy networks before 2020<sup>2</sup>
- Flow through to bill increases regardless of whether additional low carbon generation is actually delivered or not

## Is this measure needed as well as FiTs?

The EMR contains four measures, but while the Emissions Performance Standard and Capacity Payments mechanism each appear to be tackling discrete issues (preventing non-abated coal plant from being built, and ensuring that peaking plant is available to deal with intermittency respectively) the carbon floor price and FiTs with CfD appear to be separate approaches to tackling the same issue – encouraging new low carbon generation.

It is not clear that both measures are needed to tackle the same issue. We note that a number of witnesses to the Energy and Climate Change Committee have challenged whether it is necessary to introduce carbon price support, if a FiTs with CfD approach is implemented and we have sympathies with that view.

This is not to suggest that the FiTs with CfD option is particularly attractive in its own right – it would still likely result in material increases in consumer costs and there are formidable implementation issues that would still need to be considered and resolved – but in comparative terms it would appear to provide consumers with a better balance of risk and reward than carbon price support would.

We illustrate some of the comparative weaknesses in the carbon price support approach when compared to the FiTs with CfD approach in the table below.

Issue	Carbon price support	FiTs with CfD
Impact on consumer bills	Price rises, front loaded. Wholesale costs inflated from implementation date, even if new generation only delivered years later.	Price rises, tied to delivery. Additional consumer costs only incurred once new renewable generation is delivered (ie once CfD can be called on)
Linkage of consumer benefit with consumer cost	Muffled. Likely to incentivise low carbon generation, but consumers will pay more regardless of how much and when it is delivered (it is an incentive, not a guarantee).	Direct. Consumers only incur costs if new low carbon capacity is delivered.

<sup>2</sup> <http://bit.ly/9pobhu>

Issue	Carbon price support	FiTs with CfD
Increase in investor certainty	<p>Moderate.</p> <p>Governments are not bound by their predecessors (or their own) tax decisions. Long term cross-party consensus needed.</p> <p>Carbon price is only one component of export price.</p> <p>A precedent for having introduced retrospective tax hikes is generally undesirable if you are trying to create investor confidence.</p>	<p>High.</p> <p>Counterparty risk remains, but contracts are more binding than government tax statements.</p> <p>Guaranteed export price.</p>
Temporal impact and competitive distortion	<p>Retrospective as well as prospective.</p> <p>Windfall gains for existing low carbon build. May aggravate security of supply problems if encourages accelerated plant closure this decade.</p>	<p>Prospective.</p> <p>No windfall gains.</p>
Security of supply incentives	<p>Negative.</p> <p>May encourage existing peaking plant – invariably fossil fuel based – to close earlier than otherwise would. Discourages new peaking plant.</p>	<p>Negative, but probably to a lesser extent.</p> <p>Unlikely to affect existing peaking plant, but may discourage new peaking plant (ie comparatively less attractive compared to other investments).</p>
Consumers share of risk	<p>Downside only.</p> <p>Proposal is for ‘top-up’ to desired trajectory. No suggestion that tax will be refunded if EU ETS delivers a stronger carbon price.</p>	<p>Both downside and upside.</p> <p>Debit or credit to generator (and indirectly, to consumer) depending on wholesale price.</p>

## Policy needs to be joined up

We can understand the need to separately consult on the carbon floor price support mechanism from the remainder of the EMR package, given the split in implementation responsibilities between HM Treasury and DECC. But we are concerned by the assertion in the consultation document that the Government intends to publish its response before the Budget – at which time the separate DECC consultation on its part of the EMR package will only just have closed.

There are such significant interactions between the carbon floor support price and other parts of the EMR package that it appears deeply unwise to make a decision on this part of the package before the Government has reached views on the other proposals. We urge you to wait until DECC has had an opportunity to absorb the responses to its consultation before a decision is made on this measure.

# Appendix: views on consultation questions

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We do not have views on every question posed within the consultation document and therefore have chosen to simply answer a subset.

## Question 3.A3: How much certainty would investors attribute to a carbon price support mechanism if it were delivered through the tax system?

Tax based incentives tend to provide less certainty than contract based approaches, because they are much less binding; governments are not bound by the taxation decisions of their predecessors (or indeed by their own previous statements). Any perceived risk that a government will not abide by its previous tax decisions – or that an opposition will alter them if it gets in to power – will dilute the credibility of taxation based price support measures.

It should be noted that if uncertainty over cross-party commitment to taxation based price support emerges it may have a chilling effect on both zero-carbon and fossil fuel based generation, ie just as the former may refuse to invest if they think it will be cut, the latter may refuse to invest if they think it may be hiked. This could leave consumers in the worst of all worlds – paying additional indirect taxation but without this delivering either better security of supply or decarbonisation.

Because of that risk, notwithstanding that we are not supportive of the proposal in its current form because of the absence of measures in it to tackle its negative impact on affordability, if the Government does go ahead with it we would urge it to try and demonstrate commitment to maintaining the mechanism at its implemented level. Ongoing tinkering would harm consumers' interests.

## Question 3.A4: In addition to carbon price support, is further reform of the electricity market necessary to decarbonise the power sector in the UK?

We will provide a more expansive response on complementary or alternative reforms in our response to the DECC consultation, but suggest that a number of additional measures may be worth considering.

Firstly, some reform of the electricity balancing and settlement arrangements appears necessary. The electricity balancing and settlement arrangements in Great Britain are designed to encourage market participants to match their physical supply and demand with their contracted position. At times when the system is tight, imbalance prices will rise to reflect the marginal cost of ensuring that demand is met – which should provide incentives to build peaking plant.

The capacity mechanisms proposed in the separate DECC consultation appear likely to separately incentivise building (or maintaining) peaking plant. If implemented without reform to the balancing arrangements, this could result in consumers paying twice for the same service – so reforms to the latter may be necessary to prevent this.

More broadly, the Government needs to resolve the desperately poor levels of liquidity in our wholesale power markets. This is freezing out competition to the Big 6, which may result in consumers paying more than they need to for their energy. It may also leave us overly, and unnecessarily, dependent on a small coterie of firms to provide the investment – which they may struggle to fund on their own. An aspiration of the EMR review must be to try to open up the market to wider competition, in order to try and mitigate cost increases as much as possible.

We note Professor Dieter Helm's evidence<sup>3</sup> to the Energy and Climate Change Committee proposed that an alternative way of meeting the government's climate targets but at a materially lower cost may be to accelerate the closure of coal plants and building more gas fired generation. His proposition was that although the latter were not zero carbon they were much lower carbon than coal and that significant carbon savings could be made from this substitution process. He further argued that even if these replacement plants were themselves subject to early closure a significant cost saving could be achieved while meeting a similar carbon trajectory. It is not clear to us how robust the analysis underlying the claimed cost savings is, but the essential thesis – that fuel source substitution may provide material carbon savings at a lower cost than some of the interventions being considered – does strike us as a reasonable one that should be further investigated.

**Question 4.C1: Do you agree that all types of electricity generators should be treated equally under the proposed changes? If not, please explain why.**

We think that this question is trying to explore whether respondents agree with your view that fossil fuel fired combined heat and power (CHP) should be subject to climate change levy (CCL) and fuel duty taxation as well as fossil fuel fired 'conventional' generation. In principle, this seems reasonable – it would appear illogical to treat such plant as zero carbon if it is not.

It may however be worth giving consideration to whether it is appropriate to apply a single CCL/fuel duty rate per input fuel (as appears to be proposed), or whether there should be a range of rates depending on the carbon intensity of the generator's output. The carbon efficiency of plant will depend on a range of design factors. For example, one would expect that a newly commissioned power plant using the latest designs would be more thermally efficient than an ageing one reaching the end of its economic life, even if both were using the same input fuel. Similarly, a fossil fuel powered CHP unit may have a lower carbon footprint than other generation using the same fuel source if the heat created as a by-product of the generation process is being sold on to customers rather than simply emitted.

So rather than treating each fossil fuel source as having a 'one size fits all' carbon intensity, it may be appropriate to have a sliding scale that reduces the tax burden for those plants that use that fuel more efficiently. This would result in a more complicated and potential costly mechanism, but would seem to more clearly deliver the intent of the proposal.

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<sup>3</sup> Oral evidence, 31 January 2011.

**Question 4.C2: Is there a case for providing additional or more preferential treatment for CHP? If so, what is the best way of achieving this?**

See our answer to question 4.C1 above.

We think there may be a case for providing preferential treatment for fossil fuel based CHP where the by-product heat is being used (for example, in district heating projects). This is because the heat provided may be reducing the need for other fossil fuel consumption (ie to separately heat the water). In this kind of scenario, preferential treatment for CHP would appear to be due discrimination and consistent with the intent of the policy.

As highlighted in 4.C1, we think the means to achieve this may be to have a sliding scale of tax rates for each input fuel type rather than a single rate. This would be a more complicated and potentially costly scheme to implement, but would seem to more clearly deliver the intent of the proposal.

**Question 4.C3: Do you agree that tax relief should be considered for power stations with CCS? If so, what are the practical issues in designing a relief; what operational standards should a CCS plant meet in order to be eligible; and how might these issues differ for demonstration projects?**

Yes, this should be considered. The principal underlying driver of this proposal is to encourage low carbon generation and discourage high carbon generation. As such, a tax regime that treated successful CCS projects as resulting in the same emissions as unabated plant would be perverse. If anything, this might actually discourage low carbon generation (because CCS enabled plants would have the same tax treatment, but would be more costly to build than unabated plant subject to the same taxation rate).

As highlighted in previous answers, if the Government does favour a carbon price floor we would encourage it to look at applying a sliding scale based on emissions intensity, rather than a flat tax rate based on input fuel. Although this would be more complicated to implement than a flat tax rate, it might avoid some of these risks of perversities whereby plant is treated as significantly “cleaner” or “dirtier” than it actually is.

CCS is a nascent technology and we do not have a view on the sub-question regarding what operational standards should be applied.

**Question 4.D1: What impact would the Government's proposals have on electricity generators and suppliers that export or import electricity?**

These proposals would hike indirect taxation on electricity produced within the UK, while leaving it unchanged outside our borders. As such it will increase the relative attractiveness of importing electricity compared to producing it domestically.

On the margins, in some settlement periods this may ‘flip’ the interconnectors from exporting to importing (ie because the UK is paying a premium on continental prices, rather than vice versa). It may also make investment projects close to (but not within) our borders comparatively more attractive. The extent to which this may occur is unclear from the modelling.

We note the desire and intention of the European Commission to create a harmonised internal market in energy; it would be prudent to assess whether this proposal would assist or impede this aim. For example, the Irish Single Electricity Market (SEM) may see some distortions from having generators in the north subject to a new tax that is not also applied to those in the south of the same market.

#### Question 4.F3: When would be the most appropriate time for introducing a carbon price support mechanism and what would be the most appropriate level?

We do not support this proposal, but if the Government does go ahead, we would urge it to take two factors in to account when deciding timing.

Firstly, to combine its decision making on a carbon price floor with its decision making on the wider Electricity Market Reform package. The proposals in the EMR package interact, and the effectiveness (or not) of this proposal will be contingent on what other measures the Government chooses to adopt. It would appear hugely inadvisable to make a decision on carbon price floor reform in advance of reaching conclusions on any other part of the package. In this regard, the decision to run the Treasury and DECC consultations to separate timetables, and the implication in the consultation that a decision on carbon floor price reform will be made in advance of the remainder of the package, is deeply unhelpful.

Secondly, the date on which new generation brought forward by the carbon price floor will start exporting energy on to the network. The carbon floor price will start having an inflationary effect on wholesale prices, and by extension consumer bills, from the date on which it is implemented. This may be considerably sooner than the date on which any low carbon generation incentivised by the measure comes online. Any commencement date for a carbon floor price should be future-dated, rather than immediate, to mitigate this frontloading effect on consumer bill rises. We note the proposal for a 1 April 2013 start date, but cannot see an explanation for why this date has been chosen – it would be useful if we could understand why this date has been chosen rather than any other; does the modelling suggest materially different costs if a later or earlier date is chosen?

#### Question 5.B1: What impact would you expect the carbon price support mechanism to have on investment in low-carbon generation?

It would remove one area of risk involved in low carbon investments, which should act as an incentive to such investments. It would not tackle other areas of risk, for example wholesale price volatility, and is unlikely to be sufficient to bring forward enough low-carbon generation to meet carbon targets if pursued in isolation. Under such a scenario there is a real risk that consumers would pay the costs without receiving the corresponding benefits. On the otherhand, if the carbon price floor was introduced in conjunction with say FiTs with CfDs there is a real risk that consumers will be paying unnecessarily high levels of support to achieve statutory government targets ie the carbon price floor will be superfluous.

Although in general terms there should be a positive effect on investment in low carbon generation the rather crude 'flat tax per fuel type' approach proposed may create some perversities – for example, treating CCS fitted generation, or fossil-fuel based CHP where the by product heat is sold, as being as high carbon as plant without these mitigating measures. Some low carbon technologies may actually be discouraged by these proposals; slipping down the merit order when compared with other technologies.

As previously mentioned, investor confidence in tax based incentives is inherently influenced by their views on whether such treatment will persist – so the extent (or absence) of enduring cross party political support for this measure may enhance or impede its effectiveness.

**Question 5.C2: What would be the implications of supporting the carbon price for existing electricity generators and how should the Government take this into account?**

The carbon price floor proposal has retrospective as well as prospective effect, ie it will change the operating costs of existing generating plant as well as new operating plant. By inflating fossil fuel generation costs it will implicitly have a distributional impact that rewards existing low carbon generation and penalises existing high carbon generation.

This re-distribution is largely a deadweight cost although on the margins it may have some influence on accelerating or deferring closure decisions, or on which plants are operated. The principal effect is likely to be windfall gains for low carbon generators, in particular nuclear power (because of its scale).

We are uncomfortable with the creation of windfall gains for existing generation – consumers are already being asked to pay a great deal to decarbonise the economy, and it is morally questionable to expect them to pay additional money for nothing; these plants have already been built and do not need further financial incentives. As such serious consideration should be given to clawing back some of the windfalls received by existing low carbon generation ie those plant built before the implementation of any legislation required to bring in to being a floor price.

More broadly, most flexible plant is currently fossil fuel fired; incentivising its early closure may reduce the probability of keeping the lights on rather than improve it. The combination of reduced flexible plant and increased intermittency is likely to increase the costs that National Grid incurs in balancing the networks; costs that are ultimately met by consumers.

**Question 5.D6: Do you have any comments on the assessment of equality and other impacts in the evidence base of the Impact Assessment?**

It would be useful to provide further detail, and scenarios, on your assumptions on future fossil fuel prices – as you highlight, assuming lower fossil fuel prices would reduce the amount of low carbon investment delivered by this policy. You highlight that the assumptions made are based on DECC's June 2010 Updated Emissions Projections. Those projections are themselves based on analysis conducted in May 2009<sup>4</sup> and are therefore likely to be somewhat out of date. More recent projections from organisations such as the International Energy Agency<sup>5</sup> suggest a relative benign pricing environment for gas, at least in the short term. This is not to suggest that there is such a thing as a definitive energy price forecast – quite the opposite; that there is no clear consensus on such trends. The future is very uncertain, and we would like to see more scenario modelling in the public domain so that we can understand how robust this proposal is to different price scenarios (and not simply the central forecast of the Updated Emissions Projections).

Similarly, it is not clear what assumptions you have made regarding future trends on energy consumption. You model wholesale power prices roughly doubling by 2030 while household bill changes remain in single digit percents. This infers very heavy energy usage reduction in that window. This is plausible, but, again, it would be useful to have more detail on the assumptions underlying the modelling and to see some scenario modelling to understand how robust this proposal is to different efficiency scenarios.

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<sup>4</sup> See page 7, Updated Energy And Emissions Projections (Urn 10d/510)

<sup>5</sup> See its World Energy Outlook 2010, published November 2010.

We note that BIS and DECC are working on a joint project looking at the cumulative impact of energy and climate change policies on energy intensive industries in the UK. We hope that this will include an assessment of whether or not these will result in carbon leakage (ie relocation of investment or production to countries without carbon constraints). We would like to see this research published in time to inform the Government's decision on the EMR package.

The impact assessment highlights that pensioners, single parent families and the poor will be hardest hit. If the Government is determined to press ahead with this proposal we urge it to consider ways to make sure that the tax receipts are hypothecated and returned to consumers, with priority given to those least able to pay. For example additional funds could be made available for energy efficiency measures (to reduce customer bills) or increase social price support funding.



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