



Department of Energy and Climate Change  
3 Whitehall Place  
London  
SW1A 2AW

10<sup>th</sup> March 2011

Dear Sirs,

**Consultation Document on Electricity Market Reform:  
Response by CoalImp – Association of UK Coal Importers**

I am pleased to respond to the Electricity Market Reform (EMR) consultation on behalf of CoalImp – the Association of UK Coal Importers. This consultation has major implications for our members and for the country. Whilst there are some aspects of the package which are supported by our members, there are also others which, we believe, entail major risks. These aspects risk, on the one hand, damaging the diversity and security of UK electricity supplies in the short to medium term whilst, on the other hand, failing to support the demonstration of coal with carbon capture and storage (CCS) – one of the key planks of the UK's decarbonisation agenda.

CoalImp represents major coal users (including virtually all of the coal-fired generators in the UK), rail companies, ports and other infrastructure operators in the coal supply chain. The twenty members (listed in the attached Appendix) account for the handling, transportation and use of the majority of imported supplies into the country, in turn accounting for over half of the UK's coal-fired electricity.

Individual CoalImp members will be submitting detailed responses to the Consultation, answering the complete list of questions posed. This response concentrates just on those key questions of major concern and where there is consensus across our membership. Major points are brought together in this covering letter. I have also attached our earlier response to the Carbon Price Floor consultation as an Annex.

**Background – Coal-Fired Electricity Production**

The UK electricity generating industry wants to retain coal-fired production in the generating mix, for the diversity that it offers, the flexibility that it provides and the need to retain continuity in the supply chain, in the hope and expectation that it will serve carbon capture and storage (CCS) in the longer term. CoalImp is pleased to note, in the consultation on Electricity Market Reform, that the Government recognises the important role that coal-fired generation can play.

We welcome the Government's intention to provide a stable and long-lasting framework for investment in the electricity industry. The challenges facing the coal industry – indigenous and imported – are directly related to those facing the electricity generating industry. Credible and stable market arrangements are essential to give companies the confidence to invest in the UK. We therefore encourage policy makers to strive to achieve, across political parties, a consensus on the electricity market reforms to reduce the risk of further changes to the arrangements in the medium term.

There is clear need for massive investment in the period ahead to replace generating plant which will be decommissioned, and to meet future demand. But, opportunities for investment in new coal-fired power stations are restricted by

- Uncertainty about the future of EU ETS as the main policy instrument for CO<sub>2</sub> emissions reduction, exacerbated by proposals for a carbon price floor and an EPS;
- The requirement to fit partial CCS (which does not apply to gas-fired plant);
- The need for CCS to be demonstrated successfully on a large scale; and
- The slow progress with CCS, which is likely to lead to more new capacity being (unabated ) gas-fired unless policies are changed.

Investment in the generation market, or lack of it, also has major implications for the coal supply chain, including ports and railways. Although indigenous coal supply is often cited as a key element in security of supply, it should be noted that coal imports complement this security in a number of ways:

- Indigenous coal output is, by its very nature, inflexible. By supplying the balance between indigenous production and overall market demand, imports provide this flexibility. This has been clearly demonstrated in 2010 where the downturn in coal demand from generators fell entirely on imported steam coal supplies which were down by around 45% on the previous year. Indigenous production could not respond to this level of flex.
- The lower sulphur content of most imported coals will enable generators to manage the supply mix to meet the requirements of the Industrial Emissions Directive. Even in the case of opted-in plant with flue gas desulphurisation, some would struggle to meet the relevant emission limit values from 2016 with a pure diet of high-sulphur indigenous coals.
- A similar consideration is likely to arise in respect of NO<sub>x</sub> limits, although the relationship between coal quality and NO<sub>x</sub> emissions is less clearly defined than in the case of sulphur.
- Geographical considerations and generators' concerns to maintain supply diversity are likely in any event to keep an element of imports in the mix, even at lower levels of overall demand.

## **The Importance of Carbon Capture and Storage**

The Electricity Market Reform (EMR) will be critical in establishing the route forward for coal-fired power generation, Carbon Capture and Storage and the coal industry. EMR needs to allow for a situation where as old coal power plant closes, new coal-fired plant, meeting current requirements for CCS is built. This will also help to ensure that the coal supply chain and related infrastructure is maintained. If coal infrastructure is not maintained, then it is more difficult, if not impossible, to envisage a future for coal-fired electricity with CCS. With this in mind coal-fired generation and CCS need the earliest possible execution of the demonstration projects and a clear framework of support under the EMR for follow-on projects, so that work on the development of these will commence as soon as possible, in parallel with the building of the demonstration plants.

UK industry, has matched the commitment of Government in CCS, developing the capture technology for coal and gas and building teams of people in anticipation of successful CCS demonstrations and an implementation programme consistent with global climate targets.

The deployment of clean coal with CCS within the UK is important to ensure security and diversity of clean energy supplies, to maximise the use of economically advantageous indigenous resources and to reduce the risks of over-dependence on imported gas. These objectives will be achieved only if

- (i) CCS is successfully demonstrated as early as possible and then deployed in the UK and abroad, and
- (ii) the UK infrastructure and skills for the coal supply chain and coal-fired generation are preserved at adequate scale.

## **The EMR Proposals**

The Electricity Market Reform proposals need to allow for new coal-fired plant to be built, but, they do not seem suited to deliver CCS first-of-a-kind costs, so a supplementary mechanism funded by the CCS Levy or the CPS is needed. Policy should be designed to enable sufficient CCS to be developed to allow the technology to play its important part in meeting the 2030 decarbonisation target.

The proposal for a **Carbon Price Floor** could have a very negative impact on generation from coal and major consequences for the coal industry, and will not provide certainty for investment in CCS unless greater clarity is given on the exemption of CCS from the Climate Change Levy. The Department is asked to take account of the response of CoalImp to HM Treasury's recent consultation on the proposed Carbon Price Floor. Our views are attached in the form of an Annex to this response.

We are supportive of a **Feed-in tariff** for all low carbon electricity generation based on a contract for difference with the wholesale electricity price. How that

price should be determined is clearly an issue, but it should take account of fossil fuel price volatility. Additional support will be appropriate for specific technologies (e.g. new, more expensive higher risk technologies such as offshore wind, wave, tide and CCS).

An **Emissions Performance Standard** is an unnecessary duplication of existing policy which adds to investor uncertainty and creates no additional benefit. This is elaborated in the CBI's evidence to the Energy and Climate Change Committee's inquiry into Emission Performance Standards<sup>1</sup>. An Emissions Performance Standard will not incentivise the construction of new fossil fuel plant with CCS; it will merely disincentivise the construction of new coal-fired plant compared to the alternative of unabated gas. A single, non fuel-specific EPS will always disadvantage coal-fired generation and, as such, will reduce diversity and hence security of supply.

It should be recognised that the existing fleet of coal-fired power plant does an excellent service of covering for output shortfalls elsewhere. It is important that existing coal plant should be able to continue to provide this service, albeit gradually diminishing, until suitable new low-carbon capacity (including coal with CCS) can take over this essential role. In the early 2020's the problems associated with the intermittency and unreliability of wind generation, and the inflexibility of nuclear generation will be increasing, but deployment of fossil fuels with CCS may still be relatively limited. **Capacity payments** may represent a suitable mechanism. However, there are differing views amongst members on the need for capacity payments and what form they should take, if they were introduced.

Yours faithfully

**Nigel Yaxley**  
Managing Director

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<sup>1</sup> <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/writev/523/eps28.htm>

## Responses to individual questions

### Current market arrangements

**1. Do you agree with the Government's assessment of the ability of the current market to support the investment in low-carbon generation needed to meet environmental targets?**

Yes.

**2. Do you agree with the Government's assessment of the future risks to the UK's security of electricity supplies?**

No. There are a number of areas where CoalImp believes the Government's assessment of future risks is too optimistic.

CoalImp considers that the EMR package exacerbates the risks of premature plant closures with earlier security of supply risks than anticipated. It is imperative that the transition from old coal plant to new plant with CCS is carefully managed and that the closure of existing coal-fired capacity does not take place too quickly.

### Options for Decarbonisation

#### *Feed-in Tariffs*

**3. Do you agree with the Government's assessment of the pros and cons of each of the models of feed-in tariff (FIT)?**

We are supportive of a feed-in tariff for all low carbon electricity generation based on a contract for difference with the wholesale electricity price. How that price should be determined is clearly an issue, but it should take account of fossil fuel price volatility. Additional support will be appropriate for specific technologies (e.g. new, more expensive higher risk technologies such as offshore wind, wave, tide and CCS).

**4. Do you agree with the Government's preferred policy of introducing a contract for difference based feed-in tariff (FIT with CfD) ?**

Yes, provided there is some linkage to fossil fuel prices.

**8. What impact do you think the different models of FITs will have on the availability of finance for low-carbon electricity generation investments from both new investors and the existing investor base?**

This depends on the relationship between the FIT and fossil fuel prices (see Q.3 above) The difference between low carbon coal or gas generation with CCS and biomass generation on the one hand, which are exposed to fuel prices, and other forms of low carbon generation without such exposure on the other, which are

not exposed to fuel prices, must be recognised and taken into account in the FIT design, if investment is to be bankable.

### *Emissions Performance Standards*

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

No. The proposal as it stands merely restates existing Government policy in another way. As such, it will not incentivise the construction of new fossil fuel plant with CCS; it will merely disincentivise the construction of new coal-fired plant compared to the alternative of unabated gas. A single, non fuel-specific EPS will always disadvantage coal-fired generation and, as such, will reduce diversity and hence security of supply.

### **Options for Market Efficiency and Security of Supply**

#### **19. Do you agree with our assessment of the pros and cons of introducing a capacity mechanism?**

It should be recognised that the existing fleet of coal-fired power plant does an excellent service of covering for output shortfalls elsewhere. It is important that existing coal plant should be able to continue to provide this service, albeit gradually diminishing, until suitable new low-carbon capacity (including coal with CCS) can take over this essential role. In the early 2020's the problems associated with the intermittency and unreliability of wind generation, and the inflexibility of nuclear generation will be increasing, but deployment of fossil fuels with CCS may still be relatively limited. **Capacity payments** may represent a suitable mechanism. However, there are differing views amongst members on the need for capacity payments and what form they should take if they were introduced.

### **Analysis of Packages**

#### **26. Do you agree with the Government's preferred package of options (carbon price support, feed-in tariff (CfD or premium), emission performance standard, peak capacity tender)? Why?**

No. The Electricity Market Reform proposals need to allow for new coal-fired plant to be built, but, they do not seem suited to deliver CCS first-of-a-kind costs so a supplementary mechanism funded by the CCS Levy or the CPS is needed. Policy should be designed to enable sufficient CCS to be developed to allow the technology to play its important part in meeting the 2030 decarbonisation target.

We are supportive of a Feed-in tariff for all low carbon electricity generation based on a contract for difference with the wholesale electricity price. How that price should be determined is clearly an issue, but it should take account of fossil fuel price volatility.

Carbon price support will incentivise switching from coal to gas with all the security of supply and price risks that will entail.

An Emissions Performance Standard is an unnecessary duplication of existing policy which adds to investor uncertainty and creates no additional benefit.

There are differing views amongst members on the need for capacity payments and what form they should take, if they were introduced.

## **Implementation Issues**

### **30. What do you think are the main implementation risks for the Government's preferred package? Are these risks different for the other packages being considered?**

CoalImp considers that the main risk arises from the complexity of the package with a high potential for unexpected interactions and unintended consequences.

CoalImp urges the Government to carefully consider how the package will interact with the EU ETS and with the impact of the Industrial Emissions Directive and any potential related revisions to the National Emissions Ceilings Directive and the Best Available Technology Reference Documents for Large Combustion Plant. Given these complex interactions, it would be all too easy to lose existing coal capacity too quickly before new low carbon plant (including coal with CCS) is available.

### **34. Do you agree with the Government's assessment of the risks of delays to planned investments while the preferred package is implemented?**

It is imperative that the CCS demonstration is not delayed. To this end, there needs to be immediate clarification that carbon abated from CCS plants will receive relief from carbon price support and that some relief applies to the unabated proportions of such plant. With respect to the latter, CoalImp cannot see any commercial argument for investing in a CCS demonstration plant (even if the CCS element is fully funded) as opposed to an unabated gas plant.

## **Carbon Price Floor: Support and Certainty for Low-Carbon Investment Consultation Response by CoalImp – Association of UK Coal Importers**

I am pleased to respond to the Carbon Price Floor consultation on behalf of CoalImp – the Association of UK Coal Importers. This consultation has major implications for our members and for the country. It risks, on the one hand, damaging the diversity and security of UK electricity supplies in the short to medium term whilst, on the other hand, failing to support the demonstration of coal with carbon capture and storage (CCS) – one of the key planks of the UK's decarbonisation agenda.

CoalImp represents major coal users (including virtually all of the coal-fired generators in the UK), rail companies, ports and other infrastructure operators in the coal supply chain. The twenty members (listed in the attached Appendix) account for the handling, transportation and use of the majority of imported supplies into the country, in turn accounting for over half of the UK's coal-fired electricity.

Individual CoalImp members will be submitting detailed responses to the Consultation, answering the complete list of questions posed. This response concentrates just on those key questions of major concern across our membership. Responses to the individual questions are, by their very nature, somewhat repetitive, so the major points are brought together in this covering letter.

### **Background – Coal-Fired Electricity Production**

The UK electricity generating industry wishes to retain coal-fired production in the generating mix, for the diversity that it offers, the flexibility that it provides and the need to retain continuity in the supply chain, in the hope and expectation that it will serve CCS in the longer term. CoalImp is also pleased to note, in the consultation on Electricity Market Reform, that the Government recognises the important role that coal-fired generation can play.

### **The Government's Proposals**

CoalImp acknowledges the huge level of investment required to achieve the transition to a low carbon electricity generating industry. It further recognises that, whereas the EU Emissions Trading Scheme (EUETS) will achieve the reduction in emissions which is proposed for the EU, it does not offer sufficient visibility beyond 2020 to bring forward the diverse low carbon investment required to meet the more challenging reductions adopted unilaterally by the UK Government. Those more challenging reductions are related to the Government's intention that the UK should take a leading role, globally, in reducing carbon emissions, although additional emission reductions in the UK will be offset by lower reductions elsewhere in the EU within the EU ETS cap. If the Government remains confident that it should continue to adopt this position, then we recognise the reason for proposing major reform of the electricity market and we see the proposal for a price floor for carbon emissions as a part of that, but we are concerned about its impact.

In essence, the Government's proposals are put forward as a means of mitigating one of the risks faced by low carbon generating technologies, particularly new nuclear power. CoalImp is not anti-nuclear power, or, anti any particular generating technology, but, for the reasons outlined above, it is concerned to see that coal-fired power generation has the opportunity to play its part in the diverse energy mix which the Government seeks for the UK. With that in mind, we have concerns about the proposal for a carbon price floor.

We note that there was an impact assessment for this proposal, but, are not clear how exhaustive this has been. The Government should assure itself that this has been sufficiently thorough to take account of the impact on employment and tax revenue associated with the coal supply chain, including ports and railways.

### **CoalImp's Concerns**

Our concerns are partly on behalf of existing coal-fired electricity production, the supporting infrastructure for which has to be maintained if future 'clean coal' generation is to be a reality. But we also see a threat to investment in CCS.

Unless sufficient of the current coal-fired production is maintained, clean coal technology with CCS will be much harder to develop, because, by the time CCS is available at large scale, there is a risk that the UK's infrastructure and expertise, upon which it depends, will have disappeared.

The Government's proposals will affect the investment decisions of the electricity generating industry which, through the effect on the market for coal, has a major impact on the investment decisions of those in the coal supply chain including ports and railways. Although indigenous coal supply is often cited as a key element in security of supply, it should be noted that coal imports complement this security in a number of ways:

- Indigenous coal output is, by its very nature, inflexible. By supplying the balance between indigenous production and overall market demand, imports provide this flexibility. This has been clearly demonstrated in 2010 where the downturn in coal demand from generators fell entirely on imported steam coal supplies which are likely to be down by around 50% on the previous year. Indigenous production could not respond to this level of flex.
- The lower sulphur content of most imported coals will enable generators to manage the supply mix to meet the requirements of the Industrial Emissions Directive. Even in the case of opted-in plant with flue gas desulphurisation, some would struggle to meet the relevant emission limit values from 2016 with a pure diet of high-sulphur indigenous coals.
- A similar consideration is likely to arise in respect of NO<sub>x</sub> limits, although the relationship between coal quality and NO<sub>x</sub> emissions is less clearly defined than in the case of sulphur.
- Geographical considerations and generators' concerns to maintain supply diversity are likely in any event to keep an element of imports in the mix, even at lower levels of overall demand.

An ill-timed introduction of a price floor at too high a level could jeopardise the viability of coal-fired power stations, which will make an important contribution to security of supply until there is sufficient, reliable low-carbon production to maintain that security. This could give rise to a greater risk of security of supply problems – perhaps a ‘cliff edge’ situation, instead of a more manageable transition. The Government should take careful note of this in the context of investment decisions facing coal-fired power stations which are subject to the requirements of the Industrial Emissions Directive in the period after 2015.

The particular risk to CCS investment lies in the threat that a new demonstration coal plant with, for example, 25 per cent of its capacity running CCS, would have to face the carbon price floor costs on the remaining 75 per cent of its production. A carbon price floor which was ‘too high, too soon’ could have a seriously detrimental effect on the economics of the CCS demonstration.

It is, therefore, most important that, if a price floor for carbon is introduced, it is set at a level which does not disadvantage coal-fired electricity production so much that it is no longer commercially viable. Furthermore, the price floor should not be raised until it becomes relevant to incentivising necessary new investment. In the longer term, CoalImp recognizes that a robust carbon price is important to support CCS development and implementation. Indeed, the inclusion of CCS plants in the UK supply mix would ensure the continuing relevance of a carbon price to the UK electricity market, in the absence of other policies to drive low carbon investment.

We note, however, that in the Government’s consultation on Electricity Market Reform, there is a proposal for a Feed-in Tariff (FiT) with a contract for differences (CFD). The Government should assure itself that the carbon price would remain an influence. It appears possible that a long-term CFD would make generation economics indifferent to the carbon floor price.

The Government should also take account of the risk of introducing a UK carbon price which so influences electricity wholesale prices that it could result in some of the UK’s electricity production being displaced by imports via the interconnectors – which are fuelled by fossil fuels, potentially as high in their carbon content. It will also wish to bear in mind that proposals for an EU-wide carbon tax are likely to be put forward this year.

If a price floor is introduced, the carbon price support rates should be set to provide:

- certainty for operators in the electricity market e.g. by giving visibility of their introduction three years ahead;
- an indication of the direction of travel in the longer term;
- a link with the existing carbon market e.g. via reference to a traded index
- rates which are set annually, based on a carbon market index averaged over a specific annual or biennial period to reflect future carbon prices.

## Summary

- The Government recognises the important future role of coal-fired electricity production but a carbon price floor could threaten this
- Low carbon generation has to be achieved through transition in electricity production, without which security of supply may be threatened
- Development of carbon capture and storage depends on maintaining coal-fired electricity production and its infrastructure
- Insensitive application of a price floor could have perverse outcomes, including the import to the UK of high-carbon electricity and a threat to investment in carbon capture and storage
- The proposal has to be considered in the context of the consultation on Electricity Market Reform, where it appears that other low carbon incentives could render it superfluous
- The Government should review the impact assessment for this proposal to assure itself that it took full account of the impact on the coal supply chain in the UK.

## Responses to Individual Questions

### Investment

#### **3.A1 What are your expectations about the carbon price in 2020 and 2030? And how important a factor will it be when considering investment in low-carbon generation?**

The carbon price will be fundamentally influenced by decisions at a European level on whether to go further than is presently planned under the EU ETS to 2020 (i.e. whether to aim for a 30% rather than a 20% reduction in carbon emissions) and on the post 2020 regime.

To the extent that the UK takes unilateral action through the introduction of a carbon price support mechanism, this will allow emissions to increase in the rest of Europe, within the overall European CO<sub>2</sub> cap. This will cause 'carbon leakage' from the UK to the rest of Europe and will make the EU ETS price lower than it would otherwise have been.

In the Government's consultation on Electricity Market Reform (EMR), there is a proposal for a Feed-in Tariff (FIT) with a contract for differences (CFD). The Government should assure itself that the carbon price would remain an influence. It appears possible that a long-term CFD would make economics of low-carbon generation indifferent to the carbon price.

#### **3.A2 If investors have greater certainty in the future long-term price of carbon, would this increase investment in low-carbon electricity generation in the UK? If so, please explain why.**

CoalImp recognizes that a robust carbon price is important to support carbon capture and storage (CCS) investment once demonstration is complete, and in the longer term. Indeed, the inclusion of CCS plants in the UK supply mix would ensure the continuing relevance of a carbon price to the UK electricity market, in the absence of other policies to drive low carbon investment.

However, there is a particular risk to investment in CCS demonstration coal plant with, for example, 25 per cent of capacity running CCS, where operators would have to face the carbon price floor costs on the remaining 75 per cent of its production. A carbon price floor which was 'too high, too soon' could have a seriously detrimental effect on the economics of CCS demonstration.

The price floor should therefore not be introduced or raised until it becomes relevant to incentivising necessary new investment.

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

This question is posed the wrong way round. It is the other elements of the EMR package, which will mainly drive the decarbonisation of the power sector. The Government should assure itself that the carbon price would remain an influence when considered alongside FiTs. It appears possible that a long-term CFD would make economics of low-carbon generation indifferent to the carbon floor price.

## **Types of Generator**

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

Given that the other elements of the EMR package, specifically FiTs, do not, by their very nature, treat different types of generation equally, this question is redundant. The main consequence of the carbon price floor will be to offer a significant advantage for gas-fired compared to coal-fired generators and lead to large-scale fuel switching.

### **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. Potential investors in CCS projects need clarity now when projects are being developed that they will have full relief from the Climate Change Levy (CCL) for all CO<sub>2</sub> stored, both at the demonstration stage and at the retrofit stage when CCS is extended to the full power plant. It is not sufficient to leave this for further future legislation. If an exemption from the carbon tax is not received, then CCS demonstrations will require much higher support through the FiT/CFD mechanisms under the EMR proposals.

The particular risk to CCS investment lies in the threat that a new demonstration coal plant with, for example, 25 per cent of its capacity running CCS, would have to face the carbon price floor costs on the remaining 75 per cent of its production. A carbon price floor which was 'too high, too soon' could have a seriously detrimental effect on the economics of the CCS demonstration.

It is, therefore, most important that, if a price floor for carbon is introduced, it is set at a level which does not disadvantage coal-fired electricity production so much that it is no longer commercially viable. Furthermore, the price floor should not be raised until it becomes relevant to incentivising necessary new investment.

## **Imports and Exports**

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

The carbon tax would increase electricity prices above average prices in France so that the current connector would likely continually import electricity into the UK rather than the current two-way trade. The higher UK prices could also accelerate plans for building electricity interconnectors as a possibly less expensive and faster way to provide electricity to the UK instead of building generation capacity in the UK. The Government should also take account of the risk of introducing a UK carbon price which so influences electricity wholesale prices that it could result in some of the UK's electricity production being displaced by imports via the interconnectors – which are fuelled by fossil fuels, potentially as high in their carbon content.

## **Carbon Price Support Mechanism**

### **4.E1 How should the carbon price support rates be set in order to increase certainty for investors, in particular over the medium to long term?**

A stronger carbon price signal need not begin until 2017 to coincide with the first new nuclear plant coming online. Starting a carbon tax in 2013 does not necessarily increase investor certainty that the tax would continue to be in place and be of sufficient strength to support low carbon investment that operates beyond 2020. The Government could seek cross-party support for a carbon tax on fossil fuels for power generation that starts in 2017. Whilst this could provide a degree of investor certainty, there would be limitations, as one Parliament cannot bind future Parliaments on budget matters.

Our reservations related to the premature closure of existing power stations are partly due to the consultation's proposal to start the carbon tax in 2013. A third of the UK's power generation capacity is already set to close over the next 10 years due to plants reaching their end of life and LCPD/IED requirements. Some power plants have forward contracts (up to ~2016) for the sale of electricity. These companies would not be able to pass on the cost of a tax that starts in

2013, putting further economic pressure for premature closure. Some thermal power plants could receive investments in the future to enable them to operate as standby, back-up and peaking stations that operate for a limited number of hours per year. Instead of relying on capacity payments to bring forward new investment to provide back-up to the growing fleet of wind farms, existing power stations could be used to balance supply and demand at times when a large low pressure zone reduces the amount of wind generation at a time of high power demand.

Combined cycle gas turbine plants, renewable electricity and other power plants currently under construction or in the planning permission process will fill the gap of planned power station retirements through the 2010s. These planned investments are being financed through the Renewables Obligation, the current EU ETS price on carbon and low commodity gas prices. Starting the Carbon Price Support in 2013 will not necessarily accelerate low carbon investment.

## **Future Price of Carbon**

### **4.F1 Should the Government target a certain carbon price a) for 2020 and b) for 2030? If so, at what level?**

If a price floor for carbon is introduced, it must be set at a level which does not disadvantage coal-fired electricity production so much that it is no longer commercially viable. Furthermore, the price floor should not be raised until it becomes relevant to incentivising necessary new investment. CoalImp recognizes that a robust carbon price is important to support CCS investment once demonstration is complete, and in the longer term. Indeed, the inclusion of CCS plants in the UK supply mix would ensure the continuing relevance of a carbon price to the UK electricity market, in the absence of other policies to drive low carbon investment.

If a price floor is introduced, the carbon price support rates should be set to provide:

- certainty for operators in the electricity market e.g. by giving visibility of their introduction three years ahead;
- an indication of the direction of travel in the longer term;
- a link with the existing carbon market e.g. via reference to a traded index
- rates which are set annually, based on a carbon market index averaged over a specific annual or biennial period to reflect future carbon prices.

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

A stronger carbon price signal need not begin until 2017 to coincide with the first new nuclear plant coming online – see the answer to 4.E1 above.

## **Electricity Investment**

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

CoalImp recognizes that a robust carbon price is important to support CCS investment once demonstration is complete, and in the longer term. However, there is a particular risk to investment in CCS demonstration coal plant with, for example, 25 per cent of capacity running CCS, where operators would have to face the carbon price floor costs on the remaining 75 per cent of its production. A carbon price floor which was 'too high, too soon' could have a seriously detrimental effect on the economics of CCS demonstration.

The price floor should therefore not be introduced or raised until it becomes relevant to incentivising necessary new investment.

### **5.B2 What other impacts would you expect carbon price support to have on investment decisions in the electricity market?**

An ill-timed introduction of a price floor at too high a level could jeopardise the viability of coal-fired power stations which will make an important contribution to security of supply, until there is sufficient, reliable low-carbon production to maintain that security. This could give rise to a greater risk of security of supply problems – perhaps a 'cliff edge' situation, instead of a more manageable transition. The Government should take careful note of this in the context of investment decisions facing coal-fired power stations which are subject to the requirements of the Industrial Emissions Directive in the period after 2015.

Instead of investing to convert existing coal stations to run as back-up or peaking plants, companies may prematurely retire existing generation capacity. Plans for investment in electricity interconnectors would likely be accelerated.

Unless sufficient of the current coal-fired production is maintained, clean coal technology with CCS will be much harder to develop, because, by the time CCS is available at large scale, there is a risk that the UK's infrastructure and expertise, upon which it depends, will have disappeared.

### **5.D6 Do you have any comments on the assessment of equality and other impacts in the evidence base of the Impact Assessment, included at Annex D?**

The impact assessment does not take account of the impact on employment and tax revenue associated with the coal supply chain, including ports and railways.

The Government's proposals will affect the investment decisions of the electricity generating industry which, through the effect on the market for coal, has a major impact on the investment decisions of those in the coal supply chain including ports and railways. Although indigenous coal supply is often cited as a key element in security of supply, it should be noted that coal imports complement this security in a number of ways:

- Indigenous coal output is, by its very nature, inflexible. By supplying the balance between indigenous production and overall market demand,

imports provide this flexibility. This has been clearly demonstrated in 2010 where the downturn in coal demand from generators fell entirely on imported steam coal supplies which are likely to be down by around 50% on the previous year. Indigenous production could not respond to this level of flex.

- The lower sulphur content of most imported coals will enable generators to manage the supply mix to meet the requirements of the Industrial Emissions Directive. Even in the case of opted-in plant with flue gas desulphurisation, some would struggle to meet the relevant emission limit values from 2016 with a pure diet of high-sulphur indigenous coals.
- A similar consideration is likely to arise in respect of NO<sub>x</sub> limits, although the relationship between coal quality and NO<sub>x</sub> emissions is less clearly defined than in the case of sulphur.

Geographical considerations and generators' concerns to maintain supply diversity are likely in any event to keep an element of imports in the mix, even at lower levels of overall demand.

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