Impact of the UK Carbon Price Floor

OECD & E3G workshop: Beyond getting the prices right

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TO CLIMB A NEW ROUTE SUCCESSFULLY FOLLOWING CAREFUL ANALYSIS AND PREPARATION
Contents

• Policy background and Redpoint analysis (in conjunction with Trilemma) for Electricity Market Reform and Carbon Price Support consultations for DECC / HMT
• Implementation and pricing of Carbon Price Support
• Impact so far: GB merit order
• European perspective
Carbon Price Floor: timeline

• Original rationale: tackle uncertainty in EUA price for GB investors in low carbon technologies
• Role of Carbon Price Support has evolved, in context of ongoing Electricity Market Reform

2010

May 2010: Coalition Agreement commits to Carbon Price Support

December 2010: Electricity Market Reform and Carbon Price Support Consultations (DECC / HMT)

2011

March 2011: CPS level for 2013 announced in Budget 2011

July 2011: Electricity Market Reform White Paper

2012

March 2012: CPS level and details announced in Budget 2012

December 2011: Electricity Market Reform Technical Update

2013

From April 2013: Carbon Price Support at £4.94

Ongoing development of EMR policies
Redpoint analysis for EMR & CPS consultations

• We modelled the impacts of Carbon Price Support on investment decisions:
  • Expectation of higher power prices
  • Investor perception of earnings risk – possible reduction in project hurdle rates

• Assumptions on certainty investor place on CPS are critical

• For EMR, analysed the price required to decarbonisation power sector purely through existing policies combined with carbon pricing (£50/t in 2020, £70/t in 2030)

• For CPS consultation, modelled a range of trajectories
Redpoint analysis: Results

- Earlier reduction in GB carbon emissions, but with higher near term wholesale prices
Carbon Price Support and EMR

• Our analysis indicated that, in the near term, CPS leads to higher costs to consumers and higher rents for existing low carbon generators
• Assuming EUA prices do eventually rise, possible for CPS to be a net benefit
• Questions on ability of CPS to provide long term signal for decarbonisation
  • Investor confidence in stability of taxes
  • Reduced long term signal as marginal carbon intensity of power system reduces
• Implementation in combination with CfDs (and Capacity Mechanism & EPS) offsets this
Published trajectory to reach £30/t in 2020

Indicative values to 2030 level of £70/t (no Government commitment to this)
From a floor price trajectory to a tax: setting the Carbon Support Price

- CPS for 2014/15 set at £9.55 (nominal terms)
- Set based on average of outturns of forward prices over year preceding 2012 budget
From a floor price trajectory to a tax: setting the Carbon Support Price

Declining EUA price leads to total level lower than trajectory in both 2013 and 2014.

EUA forward prices as of 30 March 2011
Impact on GB merit order

Fewer coal plant running – reduction in carbon emissions
European perspective

**GB merit order**

**NL merit order 2013**

NL now cheaper than GB in this hour – power flows to GB
Summary

• In the context of Electricity Market Reform, Carbon Price Support has a more limited role to play in driving the long term structural changes required for decarbonisation of the GB power market.

• The impact of Carbon Price Support on the GB merit order and dispatch can lead to near term reductions in GB carbon emissions.

• To what extent will there be carbon leakage to Europe as a result of greater power imports and increased power prices for GB end users?
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