Single Electricity Market Committee

Bidding the Opportunity Cost of Carbon Allowances

A Consultation Paper

SEM-08-xx

20 February 2008

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BIDDING THE OPPORTUNITY COST OF CARBON ALLOWANCES

1 Introduction

In designing the SEM the Regulatory Authorities developed a market power mitigation strategy. This requires, among other things, that price bids by market participants be submitted to the Single Market Operator at Short Run Marginal Cost (SRMC). The requirement to bid SRMC is reflected in a condition in all electricity licences in both jurisdictions.

The licence condition also requires that the licensee adheres to a Bidding Code of Practice. The Bidding Code of Practice was published on 30th July 2007 in Annex A to AIP-SEM-07-430. It:

- stipulates that the costs referred to ordinarily represent the opportunity costs incurred in generating; and
- sets out the principles by which opportunity cost is to be calculated, including the requirement that, wherever possible, opportunity cost is to be defined by reference to prevailing market prices.

Nonetheless, the Regulatory Authorities expressed their concern in AIP-SEM-07-430 about the implications for end-customer tariffs of requiring generators to bid the full opportunity cost of carbon. The SEM Committee has estimated that, on the assumption that 100% of the cost of carbon allowances are reflected in the wholesale price of electricity and that the price of carbon allowances in 2008 is €20/tonne, ESB Customer Supply tariffs will be about 10% higher in 2007/08 than they would have been in the absence of the European Union's Emissions Trading Scheme (ETS). [1]

A significant proportion of the generators' carbon allowances over the second phase of the ETS (i.e., for the period 2008 – 2012) were allocated free of charge by the UK and Irish Governments. The reflection in wholesale electricity prices of the full opportunity cost of carbon allowances will therefore result in substantial windfall gains for generators at the expense of end-customers.

In August 2007, the Regulatory Authorities stated their intention to consult on whether to allow greater flexibility in the bidding of carbon costs to give generators the flexibility to compete away some or all of the benefits of the allocation of free carbon allowances; and committed to consulting on the issue in due course. This note sets out the arguments for and against allowing greater flexibility in the bidding of the opportunity costs of carbon.

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1 Customers in Northern Ireland are protected to a great extent from higher wholesale prices as a result of the full cost bidding of carbon allowances through the operation of the Public Service Obligation (PSO).

The SEM Committee has determined that issues related to the market power mitigation strategy in generally and to the Bidding Code of Practice in particular is an SEM matter within the meaning of the legislation.[2] The SEM Committee invites interested parties to send comments on the issues raised in this Consultation Paper by 5pm on **14th March 2008**, preferably in electronic form, to:

Stephen Powell
Commission for Energy Regulation
The Exchange
Belgard Square North
Tallaght
Dublin 24

spowell@cer.ie

Tadhg O'Briain
NIAUR
Queen's House
14 Queen Street
Belfast
BT1 6ER

tadhg.obriain@niaur.gov.uk

The SEM Committee prefers to publish all comments received. Those respondents who would like all or some of their responses to remain confidential should submit the relevant sections in an Appendix marked "Confidential."

2. The Case for Allowing Greater Flexibility

There are a number of arguments in favour of changing the Bidding Code of Practice (BCOP) to allow generators to bid up to the full opportunity costs of carbon.

First, generators were granted free of charge a significant proportion of the tradable emissions allowances they need to meet their obligations under the ETS over the period to 2012. These allowances have a market value. The BCOP - as currently written - ensures that the full market value of the allowances will be reflected in the wholesale price of power. As a result, generators will make substantial windfall gains through adhering to the BCOP. Governments elsewhere in Europe have taken action to claw back some of these windfall gains. For example, the Spanish Government passed a law in February 2006 enabling the Government to claw back windfall gains of more than €1 billion made in 2006 and 2007. The Spanish Government passed a similar law in December 2007 which will allow it to do the same in respect of 2008 allowances. The proceeds will be redistributed to electricity consumers. In the absence of similar government action in Ireland, the only viable alternative is to amend the BCOP to allow some or all the windfall gains to be competed away to the benefit of end-consumers.

2 The SEM Committee is established in Ireland and Northern Ireland by virtue of Section 8A of the Electricity Regulation Act 1999 as inserted by Section 4 of the Electricity Regulation(Amendment) Act 2007, and Article 6 (1) of the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007 respectively. The SEM Committee is a Committee of both the CER and NIAUR (together the Regulatory Authorities) that, on behalf of the Regulatory Authorities, takes any decision as to the exercise of a relevant function of CER or NIAUR in relation to an SEM matter.

Second, the BCOP as currently written assumes that generators act to maximise their profits. However, generators might pursue strategies other than short term profit maximisation.[3] For example:

- generators might seek to bid below the full opportunity cost of their carbon allowances with the objective of maintaining or increasing market share;
- voluntary agreements or the threat of regulatory intervention in the market if generators make excessive windfall profits from the free allocation of allowances might induce generators to bid less than the full opportunity cost; and
- the incidence of non-optimal behaviour among power producers, market imperfections, time lags or other constraints, including the incidence of risks, uncertainties, lack of information, and the immaturity or lack of transparency of the carbon market may result in less than full bidding.

3. The Case against Allowing Greater Flexibility

There are a number of arguments against changing the Bidding Code of Practice to allow generators to bid up to the full opportunity costs of carbon.

First, bidding to reflect the SRMC of generation meets several objectives:

- it prevents the abuse of a dominant position;
- it promotes transparency;
- it leads to efficient dispatch;
- it sets the correct signals for investment; and
- by altering the pattern of dispatch and by raising the end-customer price of electricity, it results in lower carbon emissions than would otherwise be the case.

Allowing generators to bid less than the full opportunity cost of carbon would mark a fundamental shift away from this approach, which was widely accepted by market participants during the process of developing the market power mitigation strategy.

Second, the SEM Committee's existing position assumes rational behaviour on the part of market participants. Treating carbon differently from other cost items on the basis that generators would value it less because allowances were given free of charge would undermine the credibility of the SEM Committee's position in relation to the BCOP in general.

Third, treating carbon on the same basis as other generation costs is in line with a wider international understanding of how competitive electricity markets work. For example one of the key messages in the International Energy Agency (IEA) February 2007 Report was that:

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3 See Sijm J., Neuhoff K., and Chen Y.: CO_2 Cost Pass Through and Windfall Profits in the Power Sector, mimeo May 2006.

"In a competitive market, the pass through of CO_2 prices in electricity prices is inevitable. Electricity prices that reflect the cost of CO_2 are needed to encourage investment in clean generation, demand side response and the adoption of efficient end-use technologies."[4]

Fourth, changing the BCOP would give market participants the signal that the Regulatory Authorities will interfere in the market to influence prices. This would increase regulatory risk, raise the cost of capital and deter entry.

Fifth, Governments in both the UK and Ireland have set ambitious targets for the development of renewable generation. Less than full pass-through of the value of carbon allowances in the SEM price will have a direct impact on the investment climate for renewable generation. It would also go against the grain of the very objective of the EU's ETS, namely to reduce CO_2 emissions and stimulate cleaner technologies.

Finally, allowing flexibility in the bidding of carbon would require arbitrary assumptions to be made about the appropriate percentage of the market price of carbon (other than 100%) which should be passed through into Directed Contract (DC) and Public Service Obligation (PSO) contract prices.

4. Conclusions

Having considered the case for and against allowing greater flexibility in the bidding of carbon, the SEM Committee is minded not to change the Bidding Code of Practice to allow generators to bid less than the full opportunity cost of carbon.

While the SEM Committee acknowledges that giving generators leeway in the bidding of carbon allowances might give a short-term benefit to customers in the form of lower electricity tariffs, it believes that such a change would mark an untenable move away from the explicit position on the bidding of carbon allowances which was taken (and generally endorsed by market participants) during the course of the development of the SEM.

The SEM Committee is aware that generators will make sizeable windfall gains as a result of their adherence to the BCOP during the course of the second phase of the ETS (which runs over the period 2008 – 2012). The SEM Committee is of the opinion that it is the role of governments in both jurisdictions – and not the Regulatory Authorities through interference in the market - to take action to redistribute these windfall gains to electricity customers, as the Spanish Government has done. The proceeds could be used in a number of ways to benefit electricity consumers on the island – e.g., to fund the installation of smart meters or to finance the development of the transmission networks to facilitate the connection of wind generation in the years to come.

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[4] *CO_2 Allowance & Electricity Price Interaction: Impact on Industry's Electricity Purchasing Strategies in Europe*. International Energy Agency, IEA Information Paper, February 2007