

Single Electricity Market Committee

Treatment of the Carbon Revenue Levy in SEM Commercial Offers

Consultation Paper

SEM-10-071

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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) (See AIP/SEM/116/06). The requirement to bid SRMC is reflected in a condition in all licences to generate electricity in the Republic of Ireland and Northern Ireland.

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.

The Electricity Regulation (Amendment) (Carbon Revenue Levy) Act 2010 was enacted in Ireland on 30th June 2010. The Act introduced a levy on affected generators in the Republic of Ireland participating in the SEM. The 2010 Act came into effect on 1st July 2010.

Prior to its enactment, the SEM Committee discussed the Carbon Revenue Levy at its May meeting in Belfast. The minutes of that meeting are available on the All-Island Project website.

Since the coming into effect of the 2010 Act, a number of generators that are required to pay the carbon levy have indicated to the Regulatory Authorities that they intended to include the costs associated with the levy in their Commercial Offer Data. The SEM Committee has since taken a number of steps to ensure that the carbon revenue levy is not reflected in generators SEM commercial offers.

The purpose of this paper is to set out the SEM Committee's proposal to provide generators with additional clarity in this context by introducing a modification to the Bidding Code of Practice.

Responding to this Consultation Paper

The SEM Committee invites interested parties to send comments on the issues raised in this Consultation Paper by 5pm on **10th December 2010**, preferably in electronic form, to:

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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. SEM Bidding Principles

The CER and the Utility Regulator developed a market power mitigation strategy as part of the implementation of the SEM. A key part of the mitigation solution is the requirement on generators to bid their short run marginal costs (SRMC) into the SEM. A decision was made on the bidding principles in September 2006 (AIP/SEM/116/06).

2.1 The Bidding Code Of Practice (BCOP)

The BCOP was developed pursuant to Condition 15 of the SEM Generation Licence, which authorises the Regulatory Authorities to establish a code for the purposes of (a) defining the term Opportunity Cost (which generators are obliged to use when submitting bids according to Condition 15), (b) making provision for the treatment of certain matters in respect of the calculation of Opportunity Cost and (c) setting out other principles of good market behaviour.

The BCOP currently sets out a number of principles to be used in calculating the costs to be reflected in the commercial offer data which they submit to the Market Operator. The BCOP was developed in following public consultation and was published on 27th July 2007 (AIP/SEM/07/430).

The principles contained in the BCOP set out, among other things, how generators are to calculate Opportunity Cost. The BCOP was designed to formalise the contents of the Bidding Principles Decision Paper [AIP/SEM116/06] and Consultation paper [AIP/SEM/73/06] which set out the basis on which generators would be expected to bid in the SEM.

The bidding code of practice is monitored by the Market Monitoring Unit (MMU) which is located in the offices of the Utility Regulator in Belfast.

3. Introduction of the Carbon Revenue Levy Act

The Electricity Regulation (Amendment) (Carbon Revenue Levy) Act 2010 was enacted on 30th June 2010. Section 3 of the 2010 Act amends the 1999 Act by inserting a new Part VIB. Section 40D of the 1999 Act, as so inserted, requires (subject to and in accordance with various provisions) each electricity generator to pay to the Commission a levy on such amount of the revenues received during the levy period by the generator concerned, through participation in the Single Electricity Market, as is attributable to the emissions from each installation operated by it.

The amount of the levy is to be calculated, in the first place, according to a formula set out in Section 40D which, in summary, involves multiplying the total applicable emissions from the relevant installations during the relevant period (in tonnes of CO₂ equivalent) by the average daily price for carbon allowances for the levy period.

The amount resulting from this formula is then multiplied by a percentage rate determined by or under s.40F so as to produce a final amount due by the generator. The percentage rate is stated to take into account the fact that generators, for the purposes of compliance with the 2004 regulations relating to the EC emissions trading regime, may require to purchase a proportion of their allowances.

4. Inclusion of Carbon Levy Costs in Commercial Offer Data

At its meeting in May 2010, the SEM Committee discussed the planned imposition of the carbon levy on generators. The published minutes of that meeting stated:

“Having reviewed and considered the matter of the Carbon Revenue Levy further, based on its principal statutory objective to protect the interests of consumers of electricity, the SEM Committee determined that since consumers were already paying for the opportunity cost of carbon in end-customer tariffs, consumers should not in addition have to pay for the cost of the Carbon Revenue Levy.

The SEM Committee expects that generators would respect this position in composing their bids when the Bill becomes law in the ROI”.

Following the introduction of the 2010 Act the Regulatory Authorities were approached (at different times) by a number of generators indicating that, absent any further reasoned direction from the SEM Committee, they would include the cost of the carbon revenue levy imposed under the 2010 Act in their commercial offers to the SEM. The generators considered the position taken by the SEM Committee to be inconsistent with the SEM Generator Licence and the BCOP (specifically the definitions of Short Run Marginal Cost and Opportunity Cost) and that they considered those instruments to compel them and other plant to include the costs of the carbon revenue levy within Commercial Offer Data.

The SEM Committee gave consideration to the provisions of the SEM Licence to Generate and the principles set out in the Bidding Code of Practice (BCOP) to such conduct, and reflected on the submissions from generators. It concluded that it would be contrary to the

provisions of both those instruments for generators to include the costs of the carbon revenue levy in their commercial offers.

The Committee takes the view that, whilst the language of paragraph 3 of Condition 15 might on a simple reading appear sufficiently broad to capture costs such as carbon levy payments, that provision should be read in light of the policy intention underpinning the Condition which was, as the Regulatory Authorities stated in their Decision Paper on the BCOP (AIP-SEM-07-430), to align physical generation decisions with real resource costs. The Committee also notes that the BCOP has been framed so as to attribute an opportunity cost, for the purpose of Condition 15, to cost-items which represent real resource costs and so as to attribute no opportunity cost to cost-items which do not have those characteristics. Thus, paragraphs 7 and 8 of the BCOP do not permit the cost-item in question (i.e. the levy) logically to be valued in terms of benefit foregone by reference to alternative use. The levy costs do not exist where electricity is not generated and so they can have no use other than for the purposes of electricity generation. On this basis levy payments therefore have no opportunity cost which could properly be reflected in Commercial Offer Data.

5. Steps already taken by the SEM Committee

To date the SEM Committee, through the CER has issued directions to three licensees pursuant to paragraph 7 of condition 15 contained in part II, section C of their generation licences. The directions were issued to ensure that the price components of all Commercial Offer Data submitted by the generators to the market operator do not include any amount in respect of the carbon revenue levy.

Further to this the SEM Committee has issued a general communication to the market which was published on Friday 8th October on the All-Island Project website (SEM-10-069). This communication advised that the SEM Committee will take all appropriate steps to ensure that the price components of all Commercial Offer Data submitted by generators subject to the carbon levy do not include any amount in respect of the carbon levy paid or to be paid by them. The communication also indicated that the SEM Committee proposed to consult on making an amendment to the BCOP to reflect this position.

6. Merits of Further Action

As stated above the SEM Committee indicated in its communication of 8th October that it proposed to consult on making an amendment to the BCOP to reflect this position. The SEM Committee believes that this is required in particular for the following reasons:

Transparency – The SEM Committee has already found it necessary to direct three generator licensees in relation to the non-inclusion of carbon revenue levy costs in commercial offer data. In addition, another generator has approached the CER seeking guidance on the appropriate treatment of the levy. The SEM Committee therefore believes that in the interest of transparency to the entire market further clarity on the principles of behaviour which generators should observe in this context is required and an amendment to the BCOP achieves this objective.

Interests of Consumers – As SEM Committee has previously indicated, final consumers of electricity in Ireland and Northern Ireland are already paying for the cost of carbon within end-customer tariffs and should not, in its opinion, in addition have to pay for the cost of the levy. In view of its primary duty to protect the interests of consumers of electricity, the SEM Committee considers it to be particularly important to take steps to protect consumers from such an impact, particularly where it would result from conduct on the part of a generator which contravenes a Condition 15 and/or the BCOP.

7. Proposed BCOP Amendment

To give effect to the rationale in the previous sections the SEM Committee proposes that the following provision be inserted into the Bidding Code Of Practice immediately after paragraph 4.

- 4A. Nothing in this Code requires or permits generators to include in their Commercial Offer Data any amount in respect of the levy paid or to be paid by them to the Commission pursuant to section 40D of the Electricity Regulation Act 1999 (as amended by the Electricity Regulation (Amendment) (Carbon Levy) Act 2010). Generators shall ensure that the price components of all Commercial Offer Data submitted by them in relation to any generation units for which they are licensed generators do not include any amount in respect of such levy.

8. Consultation

The powers of the Regulatory Authorities to make amendments to the BCOP are contained in Paragraph 5 of Condition 15 of Licences to Generate Electricity in Ireland and Condition 17 in Northern Ireland licences. Also, a change management section is contained within the Paragraph 13 of BCOP itself (See Annex A).

Specifically Paragraph 13 of BCOP states;

“In accordance with paragraph 5 of the relevant conditions, this Code may, following consultation with the holders of generation licences and such other persons as the Authority or the Commission (as the case may be) consider appropriate, from time to time be amended by direction”.

Accordingly, the Regulatory Authorities are seeking the views of interested parties on the proposed BCOP amendment set out above.

Annex A: The Bidding Code of Practice

INTRODUCTION

1. This Bidding Code of Practice (**this Code**) is published jointly by:
 - a. the Northern Ireland Authority for Utility Regulation (**the Authority**), in accordance with paragraph 5 of the following conditions of licences in Northern Ireland:
 - i. Condition 17 of each electricity generation licence; and
 - ii. Condition 57 of the public electricity supply licence granted to Northern Ireland Electricity plc under Article 10(1) of the Electricity (Northern Ireland) Order 1992 under a licence document dated 31 March 1992 and transferred to NIE Energy Limited; and
 - b. the Commission for Energy Regulation (**the Commission**), in accordance with paragraph 5 of the following conditions of licences to generate electricity in the Republic of Ireland:
 - i. Condition 17 of the interim electricity generation licence granted to the Electricity Supply Board on 21 April 2006;
 - ii. Condition 16 of the electricity generation licence granted to Synergen on 31 July 2002; and
 - iii. Condition 15 of electricity generation licences granted to all other licensed generators of electricity.
2. For the purposes of the licence conditions under which it is made (**the relevant conditions**), this Code defines the concept of Opportunity Cost, makes provision for the calculation of cost-items and sets out other principles of good behaviour in the Single Electricity Market.
3. In accordance with paragraph 6 of each relevant condition:
 - a. electricity generators are required to comply with the provisions of this Code in submitting Commercial Offer Data under the Single Electricity Market Trading and Settlement Code, whether by themselves or through Intermediaries; and
 - b. the Power Procurement Business of NIE Energy Limited is required to comply with the provisions of this Code in submitting Commercial Offer Data under the Single Electricity Market Trading and Settlement Code.
4. This Code aims to facilitate the efficient operation of the Single Electricity Market by ensuring that:
 - in combination with the Capacity Payment Mechanism established under the Single Electricity Market Trading and Settlement Code, generators are appropriately compensated for making available their generation sets or units (as appropriate) and for generating electricity in the Single Electricity Market;
 - generators cannot exercise market power in the generation of electricity on the island of Ireland or any part thereof; and
 - the Power Procurement Business cannot exercise market power by virtue of generation sets or units contracted to it under long term power purchases agreements in Northern Ireland, in respect of which it has been appointed an Intermediary.

5. **Words and expressions used in this Code and not defined shall, unless the context otherwise requires, have the same meaning as when used in the licences containing the relevant conditions or (where appropriate) in the Single Electricity Market Trading and Settlement Code.**

DEFINITION OF OPPORTUNITY COST

General Principles

6. When calculating the Short Run Marginal Cost of a generation set or unit in respect of a Trading Day, constituent cost-items are to be valued at their Opportunity Cost, and so that a reasoned explanation of the calculation of that Opportunity Cost is capable of being given to the Authority or the Commission (as appropriate) on request.
7. The Opportunity Cost of any cost-item shall comprise the value of the benefit foregone by a generator in employing that cost-item for the purposes of electricity generation, by reference to the most valuable realisable alternative use of that cost-item for purposes other than electricity generation.
8. In calculating the value of the benefit foregone in employing a cost-item for the purposes of electricity generation, the following principles shall, unless it can be demonstrated to the satisfaction of the Authority or the Commission (as appropriate) that there is good cause not to, be applied:
- (i) where there exists a recognised and generally accessible trading market in the relevant cost-item, the Opportunity Cost of that item should reflect the prevailing price of the cost-item, which may be for immediate or future delivery or use as appropriate to the circumstances of the relevant generator, having regard to:
 - a) costs the relevant generator would incur in offering that cost-item for sale, or acquiring that cost-item, on a recognised and generally accessible trading market;
 - b) reasonable provision for the variability of the prevailing price of a cost-item on a recognised and generally accessible trading market;
 - (ii) where no recognised and generally accessible trading market exists in the relevant cost-item the Opportunity Cost of that item should reflect the costs which would be incurred by the relevant generator in replacing that cost-item; and
 - (iii) reasonable provision for increased risks to plant and equipment as a result of the operation of a generation set or unit may be included.
9. Subject to paragraph 12, all Commercial Offer Data submitted in respect of a generation set or unit are to reflect the costs relating to that generation set or unit when considered on a stand-alone basis.

Start-Up and No Load Costs

10. Start-up and no load costs should reflect the actual start-up and no load costs of the generation set or unit unless it can be demonstrated to the satisfaction of the Authority or the Commission (as appropriate) that the scheduling algorithm and

associated software operates in such a way that the bidding of actual start-up and no load costs would distort the true economics of the generation set or unit.

Energy, Emissions or Time Limited Units

11. Where there is a constraint on:

- a. the total time a generation set or unit may run, or
- b. the total emissions a generation set or unit may emit over a period of time, or
- c. the total amount of energy available to a generation set or unit for a period of time,

bids should reflect the Opportunity Cost of the generation set or unit over that period of time.

Co-Generation

12. Where the generation of electricity is associated with additional processes other than generation, the Opportunity Cost of generating electricity for delivery to the Single Electricity Market should reflect the value of the use of electricity, or heat used to generate electricity, or both, in those associated processes.

CHANGE MANAGEMENT

13. In accordance with paragraph 5 of the relevant conditions, this Code may, following consultation with the holders of generation licences and such other persons as the Authority or the Commission (as the case may be) consider appropriate, from time to time be amended by direction.

Annex B: Condition 15 of the ROI Generation Licence

Condition 15: Cost-Reflective Bidding in the Single Electricity Market

1. The Licensee shall ensure that the price components of all Commercial Offer Data submitted to the Single Market Operation Business under the Single Electricity Market Trading and Settlement Code, whether by the Licensee itself or by any person acting on its behalf in relation to a generation unit for which the Licensee is the licensed generator, are cost-reflective.
2. For the purposes of this Condition, the price component of any Commercial Offer Data shall be treated as cost-reflective only if, in relation to each relevant generation unit, the Schedule Production Cost related to that generation unit in respect of the Trading Day to which the Commercial Offer Data submitted by or on behalf of the Licensee apply is equal to the Short Run Marginal Cost related to that generation unit in respect of that Trading Day.
3. For the purposes of paragraph 2, the Short Run Marginal Cost related to a generation unit in respect of a Trading Day is to be calculated as:
 - (a) the total costs that would be attributable to the ownership, operation and maintenance of that generation unit during that Trading Day if the generation unit were operating to generate electricity during that day;minus
 - (b) the total costs that would be attributable to the ownership, operation and maintenance of that generation unit during that Trading Day if the generation unit was not operating to generate electricity during that day,the result of which calculation may be either a negative or a positive number.
4. For the purposes of paragraph 3, the costs attributable to the ownership, operation and maintenance of a generation unit shall be deemed, in respect of each relevant cost-item, to be the Opportunity Cost of that cost-item in relation to the relevant Trading Day.
5. The Commission may publish and, following consultation with the holders of Generation Licences and such other persons as the Commission considers appropriate, from time to time by direction amend, a document to be known as the Bidding Code of Practice, which shall have the purposes of:
 - (a) defining the term Opportunity Cost;
 - (b) making provision, in respect of the calculation by the Licensee and other generators of the Opportunity Cost of specified cost-items, for the treatment of:
 - (i) the costs of fuel used by generators in the generation of electricity;
 - (ii) the value to be attributed to credits issued under the Emissions Trading Scheme established by the European Commission;

- (iii) variable operational and maintenance costs;
 - (iv) start-up and no load costs; and
 - (v) any other costs attributable to the generation of electricity; and
- (c) setting out such other principles of good market behaviour as, in the opinion of the Commission, should be observed by the Licensee and other generators in carrying out the activity to which paragraph 1 refers.
6. The Licensee shall, in carrying out the activity to which paragraph 1 refers, act so as to ensure its compliance with the requirements of the Bidding Code of Practice.
 7. The Commission may issue directions to the Licensee for the purposes of securing that the Licensee, in carrying out the activity to which paragraph 1 refers, complies with this licence and with the Bidding Code of Practice, and the Licensee shall comply with such directions.
 8. The Licensee shall retain each set of Commercial Offer Data, and all of its supporting data relevant to the calculation of the price component of that Commercial Offer Data, for a period of at least four years commencing on the date on which the Commercial Offer Data is submitted to the Single Market Operation Business.
 9. The Licensee shall, if requested to do so by the Commission, provide the Commission with:
 - (a) a reasoned explanation of its calculations in relation to any Commercial Offer Data; and
 - (b) supporting evidence sufficient to establish the consistency of that data with the obligations of the Licensee under this Condition.
 10. In any case in which Commercial Offer Data are submitted to the Single Market Operation Business which are not consistent with the Licensee's obligation under paragraph 1 of this Condition, the Licensee shall immediately inform the Commission and provide to the Commission a statement of its reasons for the Commercial Offer Data submitted.
 11. In this Condition:

"Bidding Code of Practice" means the document of that title published by the Commission in accordance with paragraph 5, as it may be amended from time to time;

"Commercial Offer Data" has the meaning given to it in the Single Electricity Market Trading and Settlement Code;

"Opportunity Cost" shall have the meaning set out in, and the value calculated in accordance with, the terms of the Bidding Code of Practice;

"Schedule Production Cost" has the meaning given to it in the Single Electricity Market Trading and Settlement

Code;

"Short Run Marginal Cost"

means certain costs attributable to the ownership, operation and maintenance of a generation unit, as calculated in accordance with paragraph 3 of this Condition;

"Single Market Operation Business"

has the meaning given to it in the licence granted pursuant to section 14(1)(j) of the Act; and

"Trading Day"

has the meaning given to it in the Single Electricity Market Trading and Settlement Code.