Single Electricity Market Committee

Directed Contracts Implementation for 2012/'13 and Beyond

<u>A Decision Paper</u>

SEM-12-019

16th April 2012

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1. Introduction

1.1 Background

Since 1st November 2007 the Northern Ireland Authority for Utility Regulation (NIAUR or Utility Regulator) and the Commission for Energy Regulation (CER), together referred to as the Regulatory Authorities or RAs, have jointly regulated the all-Island wholesale electricity market known as the Single Electricity Market (SEM) covering both Northern Ireland and the Republic of Ireland. Further details on the project can be found on the AIP website at www.allislandproject.org.

The SEM includes a centralised gross pool (or spot) market which, given its mandatory nature for generators (above 10 MW) and suppliers, is fully liquid. In this pool electricity is bought and sold through a market clearing mechanism, whereby generators bid in their Short Run Marginal Cost (SRMC) and receive the System Marginal Price (SMP) for each trading period for their scheduled market quantities, as well as other revenue streams. Suppliers purchasing energy from the pool pay the SMP for each trading period along with other costs.

Risk Management is an integral element of the efficient and effective operation of the SEM. To date there have been offerings of a substantial volume of 2-way Contracts for Differences (CfDs) which have enabled generators and suppliers to manage and hedge the wholesale price - i.e. SMP - risk inherent in the SEM. CfDs assist both wholesale and retail competition to the ultimate benefit of final customers. This is because the ability of generators and suppliers to enter into and access contracts enhances the financial certainty, flexibility and innovation of participants in both the wholesale and retail markets.

Directed Contracts (DCs) are CfDs which are imposed by the RAs on the incumbent generators - ESB PG and NIE Energy PPB - with market power in the SEM. This is part of the RAs' Market Power Mitigation Strategy (see section 2).

On 8th February 2012 the RAs published a consultation paper (SEM-12-009)[1] on the approach for DCs for the contract year from 1st October 2012 and possibly beyond. Two scenarios are presented in the paper - DCs could be offered either annually (only), as has been the case to date, or they could also be offered quarterly on a rolling basis.

1.2 Purpose of this Paper

Taking on board comments received to the consultation, the SEM Committee[2] is issuing this decision paper which includes:

- A background to the different types of contracts available - see section 2;

[1] http://www.allislandproject.org/GetAttachment.aspx?id=8eeb1d66-9ee2-48f9-97d1-99d3a46088ff

[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 CER and NIAUR (together the RAs) that, on behalf of the RAs, takes any decision as to the exercise of a relevant function of CER or NIAUR in relation to an SEM matter.

- A summary of comments received and the RAs' response - see section 3;

- Information on the fuel/carbon indices that will be used in forecasting SEM prices, DCs and other market outcomes - see section 4.

- Information on the implementation of DCs, including DC timelines, products, volumes and eligibilities - see sections 5.

2. Background to Contracting

As a brief background, there are three types of CfD currently being offered in the SEM:

- DCs: Incumbent generators with large shares of control over generation in the SEM are required by the RAs to offer DCs, in order to mitigate their market power. As they are "directed", it is the RAs, after consultation with industry, who decide on the methodology, pricing and quantity of these DCs. For further information on DCs for the current contract year please see SEM-11-045 at the following link:

  http://www.allislandproject.org/en/market_decision_documents.aspx?article=ab4bc686-7ece-41e3-a84a-02802f666ac3

  This paper decides on the approach to be taken for DCs for the next contract year and beyond, i.e. from Q4 2012 and beyond.

- In recent years CfDs associated with the Public Service Obligation (PSO) levy in Ireland have been offered. For the current contract year approximately 0.9 TWh is being offered for each quarter, as monthly products, with the auctions taking place about a month in advance of the quarter in question - please see SEM-11-061 for further details at:

  http://www.allislandproject.org/en/market_decision_documents.aspx?article=743d1a96-dc25-4981-8df5-63affcb7cb70

  Details of the offerings of CfDs associated with the PSO for the next contract year - i.e. Q4 2012 to Q3 2013 - are published today with this paper.

- Non-Directed Contracts (NDCs): In addition to the DCs, generators can offer forward NDCs in the SEM which suppliers are free to bid for. To date there have generally been two parties, ESB PG and NIEE PPB, who offer NDCs to participants in the market every year. The RAs have no role in setting the price or volume of these forward contracts, although we do promote their provision. The extent and frequency of NDC trading has increased considerably in recent times with:

  - Contracts and hedging now extending out beyond the traditional trading year.

  - Tullett Prebon now hosting regular "Over the Counter" (OTC) windows on its Brokered Market. This allows for greater interaction between generators and suppliers with respect to NDC prices and quantities, assisting in price discovery.

3. DC Approach - Consultation Response

3.1 DC Options

To date in the SEM, the RAs' have offered DCs on an annual basis for the forthcoming contract year - for example last year the subscription window was from late June to mid July, covering each quarterly product for the entire 2011/'12 contract year (see SEM-11-045 for details).

On 8th February 2012 the RAs published a consultation paper (SEM-12-009) on the approach that would be applied to DCs for the forthcoming contract year and possibly beyond, i.e. from 1st October 2012. Two scenarios were presented in the paper - DCs could be offered either annually (only) in Q2 of this year, as has been the case to date, or they could be offered quarterly on a rolling basis.

The potential for a rolling offering was raised particularly in light of the likely increase in DC volumes arising from the SEM Committee's decision to allow ESB to horizontally integrate its generation businesses - see SEM-12-002[3] for more details. With this approach, the broad methodology and products used in previous years for determining DCs would still remain the same.

3.1 Summary of Comments Received

The RAs received comments to SEM-12-009 from 7 parties as follows:

- Power NI
- Airtricity
- ESB Power Generation
- Bord Gáis Energy
- Electric Ireland
- Endesa Ireland
- Energia

The comments received are published with this paper where they were not indicated as being confidential. Below is a summary of the key comments made to the consultation paper, followed by a response from the RAs.

Annual versus Rolling Offering of DCs

There was a general welcome to the RAs' consultation on DCs. All respondents were in favour of offering the DCs quarterly on a rolling basis as exemplified in the paper – none favoured continuing with the current annual-only approach. This was considered especially relevant in light of the higher proportion of DCs in the overall CfD mix

[3] http://www.allislandproject.org/en/market_current_consultations.aspx?article=682a98fe-9c18-4c73-8fa3-57e75d24d85e

anticipated from October, associated with the integration of ESB generation. The rolling approach was advocated on the basis that it provides additional hedging flexibility for suppliers, offering an appropriate mix of short-term and long-term products (i.e. further out the curve) and frequent auctions. It was stated that this will help suppliers to adjust their market positions, maintaining the competiveness of SEM and driving retail competition.

It was also pointed out that the rolling approach would ensure that DC pricing is based on fuel prices spread out across the year and it would allow for fuel hedging of smaller DC tranches on a quarterly basis rather than the annual allocation in a short number of weeks. In addition it will allow for the continuous update of DC quantities on offer and of supplier eligibilities.

Power NI suggested the methodology go further and offer on a rolling 2-year subscription window.

RA Response

Given the likely increase in DCs from October and the benefits associated with a more regular and rolling offering (as referred to by respondents to the consultation), the RAs have decided to proceed with the rolling option for DCs. This will proceed broadly in line with the rolling quarterly example provided in the consultation paper, whereby DCs are offered every quarter up to 5 quarters ahead, providing a reasonable balance between accuracy and availability of product. Details of this approach are provided in section 5 of in this paper.

DC Pricing

In terms of DC pricing, all bar two respondents expressed a preference for the continuation of the DC regression formulae over the other option of determining prices by the use of direct PLEXOS modelling (with no regression formulae). Reasons cited for continuing with the regression formulae included transparency (participants can use it to replicate the price), consistency with previous DC auctions, and that it is based on multiple PLEXOS runs rather than a single run where outliers can give less dependable results.

However two parties made specific suggestions surrounding the application of the formulae. Electric Ireland stated that currently the formulae need to be valid for 5 quarters beyond derivation, but the rolling approach would involve validity up to 8 quarters out, which would not be acceptable. Hence it suggested that the formulae be re-calculated at least every second quarter, so that the validity period would be 6 quarters out. Both Electric Ireland and Airtricity requested that the RAs explain why the formulae can't be determined quarterly.

Energia suggested that the DC pricing formulae be adjusted quarterly by adjusting the constants so that the formulae outturns match the results of a new PLEXOS run, while keeping the coefficients the same. It believes this approach would give more certainty on price but reduce the effect of potential errors in the formulae, and if there is a substantial change then the formulae could be revised.

In contrast, Bord Gáis Energy stated that, while there are benefits associated with the regression formulae, it believes that the direct PLEXOS modelling would be more appropriate for quarterly auctions for practical reasons. ESB PG referred to how, because an annual pricing approach would apply so many quarters later (see earlier paragraph), the pricing formulae could be inconsistent with market conditions. It considers that this places an unacceptable pricing risk on ESB PG as the sellers of DCs and hence would consider pricing based on the direct use of PLEXOS, though the RAs would need to ensure accuracy and reliability.

RA Response

The RAs have decided to continue with the regression formulae given the transparency benefits it provides market participants.

The RAs have considered the issue of frequency of the formulae derivation. It is acknowledged that annual derivation (with regular quarterly offerings) of the DC formulae would involve them being used for a length of time which could call their accuracy into question. On the other hand, at the other extreme, a quarterly derivation of the formulae would involve the RAs spending considerable extra internal resources on the issue at a time of resource constraints.

Hence the RAs have decided that a reasonable and a balanced approach would be to derive the formulae every second quarter. In addition, for the quarters in which new formulae are not derived, the formulae constants will be adjusted so that the formulae outturns match the results of a new PLEXOS run. This means that the formulae would apply over an acceptable timeframe, providing confidence in their accuracy.

Finally, as has always been the case, if the formulae appear to be no longer accurate, the RAs reserve the right to redo them at any time.

DC Volumes and Eligibility

ESB PG commented that it is critical that the RAs' concentration model is run on a quarterly (rather than annual) basis as if the model were run only annually and there was a change in the merit order, this could result in the allocation of DC volumes it does not have in generation output. ESB PG also believes that supplier eligibility should be determined quarterly as it best reflects suppliers' up-to-date MICs and customer churn.

Energia stated that it is important for market participants to have certainty about DC volumes and eligibilities for the year ahead. It stated that there should be a floor for DC volumes and eligibilities based upon an annual calculation.

Energia also suggested a "hybrid option" in which suppliers would have a choice of taking volume through an annual DC process held in July or through a quarterly process commencing in September. In this option any volume not taken by a supplier through the annual process would become available to them through the quarterly process. Unsubscribed volumes for each quarter would only be offered in a supplementary window when there remained no future opportunities for the supplier to subscribe to its eligible volumes (i.e. unsubscribed volumes would be rolled for each supplier until the last possible quarter).

RA Response

In line with the rolling quarterly offering of DCs, the volumes and eligibilities will be determined by the RAs on a quarterly basis, using PLEXOS and the general methodologies previously applied by the RAs. This approach allows the DC quantities on offer and supplier eligibilities to be more up to date to market share forecasts and supplier Maximum Import Consumption (MIC) data than would be the case if DCs were determined only once a year (as is currently the case). This may also suit suppliers to a greater extent than the current approach, given the customer churn rates.

Any unsubscribed volumes in a quarterly Primary Window will be offered to all suppliers in that quarterly Supplemental Window.

These issues will be put out to consultation by the RAs again next year, after sellers and suppliers have had a period of time to become accustomed to the rolling offering of DCs. Further changes may be made to DCs next year following this consultation.

4. Forward Carbon/Fuel Sources

For information, the RAs will be using the following forward fuel indices as part of forecasting SEM prices, DCs and other market outcomes in PLEXOS. If there are any proposed changes in the future, the RAs will inform the market.

Description	Source
Gas oil 0.1% CIF NWE Energy Swap Contract	Thomson Reuters Eikon
Low Sulphur Fuel Oil 1% FOB NWE Energy Swap Contract	Thomson Reuters Eikon
Coal ARA CIF Swaps Quarter/Year	Argus Media
ICE UK Natural Gas Futures (Quarters)	ICE
Carbon (December month)	ICE
EURO Exchange Rates	European Central Bank

5. DC Process and Timelines

5.1 Background

The DC models and methodologies used and consulted on in recent years will continue to be largely applied by the RAs in determining DC volumes, eligibilities and prices from October 2012, with the key changes being:

- ESB's market share is calculated on the basis of a horizontally integrated generation business - please see SEM-12-002[4] for details; and,

- DCs will be offered on a rolling quarterly basis rather than on an annual basis - please see sections 5.1 and 5.2 below.

Further details on these methodologies (excluding the above changes) and terminologies can be found in SEM-10-016, which in turn references the previous consultation SEM-10-005, available at the following links:

http://www.allislandproject.org/en/market_decision_documents.aspx?page=2&article=7f688b48-718a-4e2b-a18e-00a7450c0242

http://www.allislandproject.org/GetAttachment.aspx?id=259188b1-f91d-400b-bf35-d309d5a17d19

5.1 Overall Approach

The DC subscription windows will be held every quarter with DCs being allocated on a rolling basis up to 5 quarters ahead. The high-level approach is as per the following table, explained underneath.

[4] http://www.allislandproject.org/en/market_current_consultations.aspx?article=682a98fe-9c18-4c73-8fa3-57e75d24d85e

	2012 Q'2	2012 Q'3	2012 Q'4	2013 Q'1	2013 Q'2	2013 Q'3	2013 Q'4	2014 Q'1	2014 Q'2	2014 Q'3	2014 Q'4	..... Etc ..... Etc
			1	2	3	4	5	6	7	8	9	..... Etc
			1	1	2	3	4	5	6	7	8	..... Etc
			1	1	1	2	3	4	5	6	7	..... Etc
			1	1	1	1	2	3	4	5	6	..... Etc
DC Auction	1	2	3	4	5	6	7	8	9			

The RAs Concentration model will be run every quarter. Each box in the table above represents 25% of the outturn volume of DCs for the relevant quarter from the relevant DC auction. In the initial “front loading” auction, auction number 1 in the table, the RAs DC Concentration model will be run for the four quarters from Q4 2012 to Q3 2013. For Q4 2012 the full outturn volume of DCs will be allocated. For Q1 2013, 75% of the outturn volume of DCs will be allocated, for Q2 2013 50% of the outturn volume of DCs will be allocated, and for Q3 2013 25% of the outturn volume of DCs will be allocated.

For every subsequent quarterly DC auction the Concentration model will be run again for four quarters, starting two quarters ahead, and 25% of the outturn DC volume will be allocated to each quarter. The same applies for the supplier eligibility model which will also be run quarterly by the RAs.

The DC pricing formulae will be derived every second quarter. For the quarters in which new formulae are not newly derived, the formulae constants will be adjusted so that the formulae outturns match the results of a new PLEXOS run. This will help ensure that formulae apply over a reasonable timeframe and are therefore reasonably accurate.

The DC allocation windows will be shorter than the traditional process given the quarterly offerings. The Primary Window will generally be over one week, followed by a two-day Supplemental Window the following week. The exception is the initial “front-loaded” auction, where the Primary Window will be over two weeks and the Supplemental Window over three days the following week, due to the higher DC volumes involved in this offering.

This approach will be put out to consultation again by the RAs in the first half of next year, after sellers and suppliers have had a period of time to become accustomed to this rolling offering of DCs. Further changes may be made to the DCs next year following this consultation.

5.2 Timelines for Implementation

A more detailed timeline for the implementation of the DCs is shown in the table below. This provides timelines for the auctions to be offered this year - timelines for PSO-related CfDs are published by the RAs separately in a paper published today. Similar DC timelines are envisaged for next year and beyond, unless otherwise communicated by the RAs, and 2013's exact DC dates will be published by the RAs in early December.

The first DC auction in particular is based on the latest estimates for when PLEXOS, the model used to derive DC prices and volumes, will likely be validated (late May).

Key DC Milestones 2012	**Date**
RAs publish DC Implementation Report	Today, 16th April
RAs publish paper on PSO-related CfDs	Today, 16th April
RAs publish DC Master Agreement (with and without track changes)	Late April
Completion of PLEXOS Validation and RA Workshop	Late May
DC Seller(s) send Subscription Guidelines to eligible suppliers	Early June
RAs publish detailed DC rules by DC Seller(s), incl. track changes from last year	Early June
RAs publish paper on DC quantities and pricing, and inform suppliers of DC eligibility for Q4 2012 to Q3 2012 product	Mid June
Participants Sign DC Master Agreement with seller	Late June
First "Front-Loaded" DC Auction	
Primary Subscription Window for Q4 2012 to Q3 2012 product	Monday 25th June to Friday 6th July
Supplemental Subscription Window for Q4 2012 to Q3 2012 product	Tuesday 10th July to Thursday 12th July
Second DC Auction	
RAs publish paper on DC quantities and pricing, and inform suppliers of DC eligibility for Q1 2012 to Q4 2013 product	Early September
DC Primary Subscription Window for Q1 2013 to Q4	Monday 17th to Friday 22nd

2013 product	September
DC Supplemental Subscription Window for Q1 2013 to Q4 2013 product	Tuesday 25th & Wednesday 26th September
Third DC Auction	
RAs publish paper on DC quantities and pricing, and inform suppliers of DC eligibility for Q2 2013 to Q1 2014 product	Early December
DC Primary Subscription Window for Q2 2013 to Q4 2013	Monday 10th to Friday 14th to December
Third DC Supplemental Subscription Window for Q2 2013 to Q1 2014 product	Tuesday 18th & Wednesday 19th December
Publication by RAs of 2013 DC auction dates	Early December

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