



# **SINGLE ELECTRICITY MARKET COMMITTEE**

**Round 22 of Quarterly Directed Contracts  
- Q1 2018 to 'Q2' 2018**

**Information Paper**

**5<sup>th</sup> September 2017**

**SEM-17-066**

## **CLARIFICATION STATEMENT**

The Directed Contracts on offer for Round 22 will only apply until the expiration of the existing mandatory pool arrangements for SEM, such that Quarter 2 (Q2) 2018 will have the meaning 1<sup>st</sup> April 2018 to 22<sup>nd</sup> May 2018 and May 2018 will have the meaning 1<sup>st</sup> May 2018 to 22<sup>nd</sup> May 2018. This will be labelled as 'Q2' 18.

The cutover time for the new SEM trading arrangements is 23:00 GMT on 22<sup>nd</sup> May 2018.

The first trading day runs from 23:00 GMT on 22<sup>nd</sup> May to 22:59 GMT on 23<sup>rd</sup> May 2018.

The first day ahead auction results for the new SEM trading arrangements will be published at 12:00 GMT on 22<sup>nd</sup> May 2018.

## Table of Contents

	Page
1. Background.....	2
2. Directed Contract Quantities.....	2
3. Directed Contract Pricing.....	3
4. Subscription Rules.....	5
5. PLEXOS Model Updates.....	8

## **1. Background**

In June 2012 the Northern Ireland Authority for Utility Regulation (Utility Regulator) and the Commission for Energy Regulation (CER), together referred to as the Regulatory Authorities or RAs, published a decision paper (SEM/12/048)<sup>1</sup> on the quantification and pricing for the initial “front loaded” Directed Contract (DC) subscription. It covered DCs for the period from Q4 2012 to Q3 2013.

This followed the publication on 19<sup>th</sup> April 2012 of a SEM Committee<sup>2</sup> decision paper (SEM/12/026)<sup>3</sup> committing to a new rolling quarterly approach to the offering of DCs.

This paper from the RAs follows the quarterly DC approach set out in the June 2012 decision paper (SEM-12-048). It provides information on the quantities and pricing for the upcoming quarterly DC subscription round, Round 22, covering the period Q1 2018 to ‘Q2’ 2018 inclusive. Suppliers will also receive notification from the RAs of their updated DC eligibilities for Round 22 by Tuesday 5<sup>th</sup> September.

## **2. Directed Contract Quantities**

Further to SEM/12/026, DC subscription windows are held every quarter, with DCs being allocated on a rolling basis up to 5 quarters ahead. For the next round of the quarterly DC offerings, Round 22, the Primary Subscription Window will be held from Tuesday 12<sup>th</sup> September to Thursday 14<sup>th</sup> September 2017 inclusive, with the associated DC Supplemental Subscription Window on Thursday 21<sup>st</sup> September. DCs in Round 22 will be offered in quarterly segments for the periods Q1 2018 and ‘Q2’ 2018.

There are three DC products in the market: Baseload, Mid-Merit and Peak. Suppliers can elect to subscribe for any given product for which they are eligible in any particular quarter from ESB. The definitions of the products are set out in the Master Agreement. These are as follows:

- Baseload Product: For Trading Periods at the Contract Quantity arising in all hours.
- Mid-merit Product: For Trading Periods at the Contract Quantity during the hours beginning at 07:00 and ending at 23:00 on Business Days and for Trading Periods on days that are not Business Days at 80% of the Contract Quantity.
- Peak: For Trading Periods arising during the hours beginning at 17:00 and ending at 21:00 on all days during October, November, December, January, February and March at the Contract Quantity.

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<sup>1</sup> Decision Paper on Directed Contracts Version 2 – [SEM-12-048](#).

<sup>2</sup> 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.

<sup>3</sup> Directed Contracts Implementation for 2012/13 and Beyond - [SEM-12-026](#)

As previously, the RAs used the Herfindahl Hirschman Index (HHI) to set DC quantities and continue to use a target HHI level of 1,150 for the period Q1 2018 to 'Q2' 2018. NI Power PPB's market share does not warrant the offering of DCs.

The DC quantities to be offered by ESB for Q1 2018 to 'Q2' 2018 in Round 22 are set out in Table 1 below.

Quarter	Baseload	Mid-Merit	Peak
Q1 2018	358	0	0
'Q2' 2018	200	0	N/A

**Table 1: ESB DCs for Q1 '18 to Q2 '18 in Forthcoming Round 22 Subscription (Only), MW**

The total DC quantities offered by ESB to date for Q1 2018 to 'Q2' 2018 (including these Round 22 quantities) are also shown in Table 2 below.

Quarter	Baseload	Mid-Merit	Peak
Q1 2018	695	0	0
'Q2' 2018	572	0	N/A

**Table 2: ESB DCs for Q1 '18 to Q2 '18 in Forthcoming Round 22 Subscription (Only), MW**

The cumulative (all rounds) percentage of DC quantities offered by ESB to date for Q1 2018 to 'Q2' 2018 (including these Round 22 quantities) are also shown in Table 3 below.

Quarter	Baseload	Mid-Merit	Peak
Q1 2018	100%	100%	N/A
'Q2' 2018	100%	100%	N/A

**Table 3: Percentage of DCs offered to date (incl. Round 22 subscription)<sup>4</sup>**

### **3. Directed Contract Pricing**

The prices of DCs are determined by regression formulae that express the DC strike price in a given quarter and for a given product (Baseload, Mid-Merit or Peak) as a function of forward fuel and carbon prices. The dependent variable in the regression formulae is the DC strike price; the independent variables are forward fuel and carbon prices.

The pricing formulae are updated every quarter in line with the new rolling approach to DCs as per [SEM-12-026](#). Every 2<sup>nd</sup> quarter whole new pricing formulae will be derived, including the formulae constant and the coefficients (as is the case in this Round 22), and every other quarter just the formulae constants are changed.

The DC seller, ESB, will apply the approved published fuel and carbon indices to the regression formulae each day throughout the subscription window and notify suppliers who have elected to subscribe for DC products on that day of the calculated strike

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<sup>4</sup> Note the exact percentages shown in this table will vary depending on outturn DC volumes in future subscription rounds.

price. ESB contracts will be priced in euro.

It should be noted that if, between the publication date of the pricing formulae and a time at which it is applied during the subscription period, forward fuel or carbon markets move to a point outside the range of values for which there is sufficient confidence in the pricing formulae, the Regulatory Authorities reserve the right to suspend subscription and rerun the econometric pricing model or otherwise to amend the determination of the DC strike prices to correct any mispricing. The rerun would be done using the prevailing forward fuel and carbon prices as inputs. In this case, the resulting formulae would replace the original formulae and would be used to establish DC strike prices thereafter. The formulae may also be rerun if there is significant change to plant availability. The subscription window would reopen once the formulae have been revised.

The Directed Contract regression formulae for Round 22 take the following form:

$$\mathbf{DCStrike}_{q,p} = \alpha_{q,p} + \beta_{q,p} * \mathbf{Gas}_q + \delta_{q,p} * \mathbf{Coal}_q + \epsilon_{q,p} * \mathbf{CO2}_q$$

where:

**DCStrike<sub>q,p</sub>** = Directed Contract Strike Price (in €/MWh) for the relevant quarter (q) and product (p), i.e., baseload, mid-merit and peak.

**α<sub>q,p</sub>** = formula constant, which may vary by quarter (q) and product (p).

**β<sub>q,p</sub>, δ<sub>q,p</sub>, and ε<sub>q,p</sub>** = formula coefficients, which may vary by quarter (q) and product (p).

**Gas<sub>q</sub>** = the price (in pence sterling per therm) for quarterly Intercontinental Exchange Natural Gas Futures for the relevant quarter, as published on <http://data.theice.com> as the “ICE UK Natural Gas Futures – NBP - (Quarters)” ÷ (GBP/EURO Exchange Rate) / 100.

**Coal<sub>q</sub>** = the price (in US dollars per tonne) for quarterly ARA Coal Futures as reported on [www.theice.com](http://www.theice.com) as “Rotterdam Coal Futures – ARA” ÷ USD/EURO Exchange Rate.

**CO2<sub>q</sub>** = the settle price (in Euro per tonne of Carbon Dioxide) for the December month Intercontinental Exchange ECX EUA Carbon futures as reported on <http://data.theice.com> as “ICE ECX EUA Futures – EUX - (monthly)” for the given calendar year. The December price for a given year will apply to all quarters falling within that year.

The values of the constants and the independent variable coefficients are set out in the following table.

Coefficients					
Multiply Gas coefficient by euro/therm Gas price, Coal coefficient by euro/tonne, Coal price and CO <sub>2</sub> coefficient by euro/tonne CO <sub>2</sub> price.					
Contract (p)	Quarter (q)	Constant ( $\alpha_{q,p}$ )	Gas ( $\beta_{q,p}$ )	Coal ( $\delta_{q,p}$ )	CO <sub>2</sub> ( $\epsilon_{q,p}$ )
Baseload	Q1 18	21.50	45.080	0.0810	0.5331
Mid-Merit	Q1 18	26.88	46.969	0.0842	0.5341
Peak	Q1 18	42.78	28.622	0.2687	0.8600
Baseload	'Q2' 18	14.85	51.448	0.0497	0.4923
Mid-Merit	'Q2' 18	15.16	57.214	0.0412	0.4822

In order to facilitate trading till the end of SEM the RAs have decided – for Round 22 - to replace the quarterly quoted Gas Price for 'Q2' 18 with the average of the April '18 and May '18 monthly index prices quoted on ICE (see Clarification Statement above).

#### **4. Subscription Rules**

The Subscription Rules for the Directed Contracts have been made evergreen. To allow this to happen two items which require updating will be included in the Information Paper published by the Regulatory Authorities prior to each quarterly DC round. These are the details of the matrix of ESTSEM p,q prices for the purpose of credit cover calculations and Bank Holidays.

### ***Prices for Credit Cover calculations***

The matrix of ESTSEM p,q prices for the purpose of credit cover calculations based on closing fuel and carbon prices from 17<sup>th</sup> August 2017 are as follows:

	ESTSEM p,q		
	Baseload	Mid-Merit	Peak
<b>Q1 2018</b>	€54.85/MWh	€61.49/MWh	€82.20/MWh
<b>'Q2' 2018</b>	€44.79/MWh	€47.13/MWh	



## ***Public/Bank Holidays 2017 and 2018***

The following dates are those known at the time of execution to be bank and public holidays (in the Republic of Ireland and Northern Ireland) between October 2017 and 31<sup>st</sup> December 2018:

30 October 2017
25 December 2017
26 December 2017
01 January 2018
19 March 2018
30 March 2018
02 April 2018
07 May 2018
28 May 2018
04 June 2018
12 July 2018
06 August 2018
27 August 2018
29 October 2018
25 December 2018
26 December 2018

## **5. PLEXOS Model Updates**

The recently Baringa-validated PLEXOS model<sup>5</sup> for 2017-18 has been used for this round (Round 22) of the DCs.

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<sup>5</sup> <https://www.semcommittee.com/news-centre/baringa-sem-plexos-forecast-model-2016-17>