



# **SINGLE ELECTRICITY MARKET COMMITTEE**

**Round 19 of Quarterly Directed Contracts  
Q4 2022 to Q3 2023:  
Updated Pricing Formulae**

**Information Paper**

**6 July 2022**

**SEM-22-010**

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## **1. Introduction**

This paper provides information updating the pricing formulae for Directed Contract (DC) Round 19 Supplemental Subscription Window (covering the period Q4 2022 to Q3 2023 inclusive).

As outlined in Section 3 of [SEM-22-029](#), the Regulatory Authorities (RAs i.e. CRU and UREGNI) reserve the right to suspend the subscription and rerun the econometric pricing model or otherwise to amend the determination of the DC CfD Fixed Prices to correct any mispricing.

The rerun uses the prevailing forward fuel and carbon prices as inputs. In this case, the resulting formulae would replace the original formulae and to establish CfD Fixed Prices thereafter. The subscription window would reopen once the formulae are revised.

The RAs are not suspending the subscription window, rather, the RAs are updating the Pricing Coefficient formulae for the DC Round 19 Supplemental Subscription Window, scheduled for Thursday, 7<sup>th</sup> July 2022.

As of today, 6<sup>th</sup> July 2022, due to an unforeseen increase in the volatility in commodity markets, the DC input commodity prices, in particular NBP gas prices, have moved outside the volatility range of the original DC Round 19 model (published in [SEM-22-029](#)). Hence, for the Supplemental Subscription Window the updated DC Round 19 pricing formulae to be implemented is published below.

Suppliers' eligible volumes are unaffected by this update.

## 2. Updated Directed Contract Pricing

The prices of DCs are determined by regression formulae that express the DC CfD Fixed Price in a given quarter and for a given product (Baseload, Mid-merit or Peak) as a function of forward fuel and carbon prices.

Section 3 of [SEM-22-017](#) outlined amendments made to the process of calculating DC pricing formulae in DC Round 18. Such amendments are also implemented in the modelling process for the updated DC Round 19 pricing coefficients below.

The pricing formulae are updated every quarter in line with the established rolling approach to DCs as per [SEM-12-026](#) and [SEM-17-081](#).

The CfD Strike Price for each transaction are set using the published formulae and associated forward fuel prices, as detailed in the Subscription Rules [SEM-18-036d](#).

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 CfD Fixed Price. ESB contracts will be priced in Euro.

The DC regression formulae for the forthcoming round will take the following form:

$$\text{CfD Fixed Price}_{q,p} = \alpha_{q,p} + \beta_{q,p} * \text{Gas}_q + \delta_{q,p} * \text{Coal}_q + \epsilon_{q,p} * \text{CO2}_q$$

where:

**CfD Fixed Price**<sub>q,p</sub> = DC Fixed Price (in €/MWh) for the relevant quarter (q) and product (p), i.e., Baseload, Mid-merit and Peak.

**$\alpha_{q,p}$**  = formula constant, which may vary by quarter (q) and product (p).

**$\beta_{q,p}$ ,  $\delta_{q,p}$ , and  $\epsilon_{q,p}$**  = 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 stated in [SEM-21-005](#), the RAs notified industry of updates to the calculation of quarterly “ICE UK Natural Gas Futures – NBP” ÷ (GBP/EUR Exchange Rate).

**Coal<sub>q</sub>** = the price (in US dollars per tonne) for quarterly ARA Coal Futures. As noted in [SEM-21-005](#), the RAs noted updates to the calculation of quarterly “Rotterdam Coal Futures – ARA” ÷ (USD/EUR Exchange Rate).

**CO<sub>2q</sub>** = the settle price (in Euro per tonne of Carbon Dioxide) for the December month Intercontinental Exchange ECX EUA Carbon futures as reported 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. As noted in [SEM-21-005](#), the commodity data provider, ICE, transitioned from a public to a fee-based subscription for access to Carbon data.

**The updated values of the constants and the independent variable coefficients to be used during the DC Round 19 Supplemental Subscription Window are set out in the following table.**

<b><u>Updated Coefficients</u></b>					
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.					
<b>Contract (p)</b>	<b>Quarter (q)</b>	<b>Constant (α<sub>q,p</sub>)</b>	<b>Gas (β<sub>q,p</sub>)</b>	<b>Coal (δ<sub>q,p</sub>)</b>	<b>CO<sub>2</sub> (ε<sub>q,p</sub>)</b>
Baseload	Q4 22	26.02	57.227	0.0257	0.4244
Midmerit 1	Q4 22	33.99	63.309	0.0183	0.4252
Peak	Q4 22	80.92	66.837	0.0000	0.4139
Baseload	Q1 23	28.75	59.892	0.0240	0.4147
Midmerit 1	Q1 23	38.29	65.136	0.0170	0.4107
Peak	Q1 23	87.65	66.958	0.0000	0.4127
Baseload	Q2 23	28.19	64.275	0.0110	0.4008
Midmerit 1	Q2 23	38.88	67.650	0.0000	0.4076
Baseload	Q3 23	17.06	64.606	0.0145	0.4207
Midmerit 1	Q3 23	22.65	68.205	0.0160	0.4561

### **3. Subscription Rules**

The Subscription Rules ([SEM-18-036d](#)) for the DCs have been made evergreen. To allow this, two updated items are included in the Information Paper published by the RAs 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.

### **4 Updated Prices for Credit Cover calculations**

The updated matrix of ESTSEM p,q prices for the purpose of credit cover calculations based on closing fuel and carbon prices **from 16<sup>th</sup> June 2022** are as follows:

	ESTSEM p,q		
	Baseload per MWh	Mid-Merit per MWh	Peak per MWh
<b>Q4 2022</b>	278.61	307.08	361.24
<b>Q1 2023</b>	290.02	316.75	368.84
<b>Q2 2023</b>	227.76	245.15	
<b>Q3 2023</b>	202.21	219.29	

### **5. Public/Bank Holidays 2022 and 2023**

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 1<sup>st</sup> January 2022 and 31<sup>st</sup> December 2023:

03 January 2022
17 March 2022
18 March 2022
15 April 2022
18 April 2022

02 May 2022
02 June 2022
03 June 2022
06 June 2022
12 July 2022
01 August 2022
29 August 2022
31 October 2022
25 December 2022
26 December 2022
27 December 2022
2 January 2023
6 February 2023
17 March 2023
7 April 2023
10 April 2023
1 May 2023
29 May 2023
5 June 2023
12 July 2023
7 August 2023
28 August 2023
30 October 2023
25 December 2023
26 December 2023