



# **SINGLE ELECTRICITY MARKET COMMITTEE**

**Round 20 of Quarterly Directed Contracts  
Q1 2023 to Q4 2023**

**Information Paper**

**17<sup>th</sup> November 2022**

**SEM-22-085**

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## **1. Introduction**

This paper provides information on the quantities and pricing for the upcoming quarterly Directed Contract (DC) subscription round, Round 20, covering the period Q1 2023 to Q4 2023 inclusive. Suppliers will also receive notification from the Regulatory Authorities (RAs) of their updated DC eligibilities for Round 20 by Friday 18<sup>th</sup> November 2022.

In DC Round 18, market participants were notified of amendments made to the process of calculating DC pricing formulae ([SEM-22-017](#)). Participants were also informed of the RAs decision to hold the Primary Subscription Window over 6 days. On August 24<sup>th</sup> 2022, the RAs notified market participants that they are implementing such amendments in DC Round 20 ([SEM-22-059](#)). Furthermore, within the notification, the RAs noted their intentions to hold a consultation, following the completion of DC Round 20, to determine if the amendments should be implemented in any subsequent DC Rounds.

On September 14<sup>th</sup>, market participants were notified of the RA's decision to postpone DC Round 20 ([SEM-22-067](#)). The DC Round 20 Primary Subscription Window was originally scheduled to take place from; Tuesday 20<sup>th</sup> September 2022 to Thursday 22<sup>nd</sup> September 2022 inclusive and Tuesday 27<sup>th</sup> September 2022 until Thursday 29<sup>th</sup> September 2022, inclusive. The associated Round 20 Supplemental Subscription Window was scheduled to be held on Thursday 6<sup>th</sup> October 2022.

On October 17<sup>th</sup>, the RAs notified market participants of their decision to proceed with DC Round 20 ([SEM-22-072](#)) and outlined the Subscription Window dates, detailed below.

## **2. Directed Contract Quantities**

DC subscription windows are typically held every quarter, with DCs allocated on a rolling basis up to five quarters ahead. DCs in the Round 20 will be offered in quarterly segments for the periods Q1 2023, Q2 2023, Q3 2023 and Q4 2023.

The Round 20 DC offerings will be held as follows:

**DC Round 20 Primary Subscription Window will be held over six days, across two consecutive weeks:**

- Tuesday 22<sup>nd</sup> November until Thursday 24<sup>th</sup> November 2022 inclusive; and
- Tuesday 29<sup>th</sup> November until Thursday 1<sup>st</sup> December 2022 inclusive.

The associated Round 20 Supplemental Subscription Window will be held on Thursday 8<sup>th</sup> December 2022.

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 ESB PG DC Subscription Rules.

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 Product:* 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.

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 2023 to Q4 2023.

The DC quantities to be offered by ESB for Q1 2023 to Q4 2023 in Round 20 are set out in Table 1 below.

<b>Quarter</b>	<b>Baseload</b>	<b>Mid-Merit</b>	<b>Peak</b>
Q1 2023	132	0	41
Q2 2023	38	69	n/a
Q3 2023	5	49	n/a
Q4 2023	37	0	98

**Table 1: ESB DCs for Q1 2023 to Q4 2023 in forthcoming Round 20 Subscription (MW)**

The cumulative (all rounds) percentage of DC quantities offered by ESB to date for Q1 2023 to Q4 2023 (including these Round 20 quantities) are also shown in Table 2 below.

<b>Quarter</b>	<b>Baseload</b>	<b>Mid-Merit</b>	<b>Peak</b>
Q1 2023	100%	100%	-
Q2 2023	75%	75%	N/A
Q3 2023	50%	50%	N/A
Q4 2023	25%	25%	-

**Table 2: Percentage of DCs offered to date (incl. this Round 20 subscription)<sup>1</sup>**

As outlined in [SEM-21-085](#), the SEM Committee has decided that the amendment to the methodology of calculating DC allocations that took place during DC Round 16 will be implemented in subsequent rounds thereafter (pending a review of the market power and liquidity workstream). As per [SEM-21-065](#), the RAs will re-allocate DCs from market participants who cannot participate in the DC round (as a result of not executing a Financial Energy Master Agreement (FEMA) with ESBPG) to suppliers with a Maximum Import Capacity (MIC) value less than 5% of the total market MIC.

Per section 3.2.13 of the November 2017 decision paper ([SEM-17-081](#)), the SEM Committee has changed part of the Market Concentration methodology, such that a fixed fraction will be solely used in the first round that a product is offered. In subsequent rounds, up to the penultimate round, previous volumes sold are deducted from the annual total determined by the Market Concentration Model in that round; then the balance is multiplied by the remaining fixed fraction. In the final round, all the previous volumes sold are deducted from the annual total determined. There is no fixed fraction in the final round for which a product is on offer. A further clarification to this procedure was outlined in [SEM-19-030a](#) whereby in the event that a product was oversold in the first three rounds, the oversold volume will be deducted from downstream products.

If the volumes in the previous rounds for a particular product add up to more than the annual total volume determined by the Market Concentration Model in the last round, then the volumes for that product are set to zero.

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<sup>1</sup> Note that the exact percentages shown in this table will vary depending on outturn DC volumes in future subscription rounds.

### **3. 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 DC Round 20. Following the completion of DC Round 20, the RAs intend to hold a consultation in Quarter 1 2023 to determine if the amendments should become enduring in subsequent DC rounds.

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 will be set using the published formulae and associated forward fuel prices, as set out 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.

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 RAs reserve the right to suspend 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 would use 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 formulae may also be rerun if there is significant change to plant availability. The subscription window would reopen once the formulae are revised.

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/EURO 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/EURO Exchange Rate).

**CO<sub>2</sub><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 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 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 23	65.13	52.154	0.0000	0.4336
Midmerit 1	Q1 23	73.01	57.684	0.0000	0.4228

<b>Peak</b>	<b>Q1 23</b>	<b>130.17</b>	<b>56.828</b>	<b>0.0000</b>	<b>0.3966</b>
<b>Baseload</b>	<b>Q2 23</b>	<b>53.89</b>	<b>58.544</b>	<b>0.0000</b>	<b>0.3964</b>
<b>Midmerit 1</b>	<b>Q2 23</b>	<b>65.17</b>	<b>61.284</b>	<b>0.0000</b>	<b>0.4003</b>
<b>Baseload</b>	<b>Q3 23</b>	<b>54.56</b>	<b>56.042</b>	<b>0.0000</b>	<b>0.3957</b>
<b>Midmerit 1</b>	<b>Q3 23</b>	<b>65.00</b>	<b>59.238</b>	<b>0.0000</b>	<b>0.3994</b>
<b>Baseload</b>	<b>Q4 23</b>	<b>49.10</b>	<b>56.397</b>	<b>0.0000</b>	<b>0.3900</b>
<b>Midmerit 1</b>	<b>Q4 23</b>	<b>56.04</b>	<b>61.361</b>	<b>0.0000</b>	<b>0.3999</b>
<b>Peak</b>	<b>Q4 23</b>	<b>97.81</b>	<b>64.701</b>	<b>0.0000</b>	<b>0.3873</b>

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

The Subscription Rules ([SEM-18-036d](#)) for the DCs have been made evergreen. To allow this, two items which require updating will be 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.

## **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 20<sup>th</sup> October 2022 are as follows<sup>2</sup>:

	ESTSEM p,q		
	Baseload per MWh	Mid-Merit per MWh	Peak per MWh
<b>Q1 2023</b>	343.60	377.05	428.31
<b>Q2 2023</b>	332.92	356.24	n/a
<b>Q3 2023</b>	313.73	337.64	n/a
<b>Q4 2023</b>	321.13	350.31	405.71

## **5. Directed Contract Round 21**

The Primary Subscription Window and Supplemental Subscription Window of Directed Contract Round 21 is envisaged to take place in Quarter 1 2023. The RAs intend to publish the dates of Directed Contract Round 21 – 24 before the end of Quarter 4 2022.

## **6. Public/Bank Holidays 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 2023 and 31<sup>st</sup> December 2023:

2 January 2023
6 February 2023
17 March 2023
7 April 2023

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<sup>2</sup> The RAs note that the prices calculated are based on the most recently validated SEM PLEXOS Model which incorporate the 2021 Generation Capacity Statement (GCS) Inputs. Due to the unprecedented increase in volatilities of commodity prices in recent months, and in order to reflect the current market developments, the RAs are using a more recent date in Round 20 compared to previous DC rounds (excluding DC Round 19 and 18), in these extenuating circumstances.

10 April 2023
1 May 2023
8 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