



SINGLE ELECTRICITY MARKET COMMITTEE

**Round 17 of Quarterly Directed Contracts
Q2 2022 to Q1 2023**

Information Paper

3rd December 2021

SEM-21-097

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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 17, covering the period Q2 2022 to Q1 2023 inclusive. Suppliers will also receive notification from the Regulatory Authorities (RAs) of their updated DC eligibilities for Round 17 by Friday, 3rd December 2021.

2. Directed Contract Quantities

DC subscription windows are typically held every quarter, with DCs allocated on a rolling basis up to five quarters ahead. For the seventeenth round of the quarterly DC offerings under the revised SEM arrangements: the Primary Subscription Window will be held from Tuesday 7th December to Thursday 9th December 2021 inclusive, with the associated DC Supplemental Subscription Window on Thursday 16th December 2021. DCs in Round 17 will be offered in quarterly segments for the periods Q2 2022, Q3 2022, Q4 2022 and Q1 2023.

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 Q2 2022 to Q1 2023.

The DC quantities to be offered by ESB for Q2 2022 to Q1 2023 in Round 17 are set out in Table 1 below.

Quarter	Baseload	Mid-merit	Peak
Q2 2022	195	146	N/A
Q3 2022	19	127	N/A
Q4 2022	2	60	76
Q1 2023	16	60	29

Table 1: ESB DCs for Q2 2022 to Q1 2023 in forthcoming Round 17 Subscription, MW

The RAs note that the SEM PLEXOS model used in DC Round 17 was recently validated (2021-2029) by NERA Economic Consulting (the validated model will be made available on the SEM Committee website).

The cumulative (all rounds) percentage of DC quantities offered by ESB to date for Q2 2022 to Q1 2023 (including these Round 17 quantities) are also shown in Table 2 below.

Quarter	Baseload	Mid-Merit	Peak
Q2 2022	100%	100%	-
Q3 2022	75%	75%	N/A
Q4 2022	50%	50%	N/A
Q1 2023	25%	25%	-

Table 2: Percentage of DCs offered to date (incl. this Round 17 subscription)¹

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 DC Round 17 and 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.

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

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.

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.

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_{q,p} = 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_q = 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_q = 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).

CO2_q = 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 ₂ coefficient by euro/tonne CO ₂ price.					
Contract (p)	Quarter (q)	Constant ($\alpha_{q,p}$)	Gas ($\beta_{q,p}$)	Coal ($\delta_{q,p}$)	CO ₂ ($\epsilon_{q,p}$)
Baseload	Q2 22	13.25	66.667	0.0210	0.4200
Midmerit 1	Q2 22	17.54	70.660	0.0230	0.4513
Baseload	Q3 22	12.57	66.679	0.0138	0.4119
Midmerit 1	Q3 22	15.06	71.784	0.0158	0.4509
Baseload	Q4 22	15.07	63.360	0.0215	0.4123
Midmerit 1	Q4 22	19.27	68.783	0.0197	0.4400
Peak	Q4 22	33.57	76.917	0.0278	0.5407
Baseload	Q1 23	16.73	63.442	0.0282	0.4359
Midmerit 1	Q1 23	21.66	68.380	0.0269	0.4646
Peak	Q1 23	36.80	75.726	0.0383	0.5650

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 4th November 2021 are as follows²:

	ESTSEM p,q		
	Baseload per MWh	Mid-Merit per MWh	Peak per MWh
Q2 2022	€126.79	€138.32	N/A
Q3 2022	€118.21	€129.32	N/A
Q4 2022	€121.33	€133.86	€165.13
Q1 2023	€127.30	€140.24	€171.88

5. Directed Contract Round 18

As per [SEM-21-076](#), the Primary Subscription Window of Directed Contract Round 18 will be held from Tuesday 22nd March 2022 – Thursday 24th March 2022 inclusive, and the associated Supplemental Subscription Window will be held on Thursday 31st March 2022.

² The RAs note that the prices calculated are based on the most recently validated SEM PLEXOS Model.

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 1st January 2022 and 31st December 2023:

03 January 2022
17 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
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