



## **Capacity Remuneration Mechanism (CRM)**

### **Indexation of Capacity Payments**

#### **Decision Paper**

**SEM-23-038**

**11 May 2023**

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## 1. Background

A proposed modification to the Trading and Settlement Code, Mod\_07\_22 “Indexation to Calculation of Capacity Payments for New Capacity”<sup>1</sup>, was raised by Tynagh Energy in June 2022. The stated intent of the modification proposal was to include a term in the calculation of capacity payments to account for construction-related inflation for new capacity, where that inflation exceeds a certain threshold. The stated purpose of the proposal was to mitigate the risk that new capacity would be unable to build as a result of high and unexpected rates of inflation following, in particular, the invasion of Ukraine.

The proposal provided for annual indexation of capacity payments where inflation varies from an expected 2% level, from the date the contract was awarded, to the start of the relevant capacity year. Where, for instance, a ten-year contract has been awarded, indexation would continue to be recalculated annually throughout each of the ten years of the contract, based upon outturn inflation over the course of the ten years.

This modification proposal was recommended for approval by majority vote of the Modifications Committee, although it became apparent during the systems impact assessment carried out by SEMO subsequent to the Committee’s vote, that the proposal could not be implemented in systems as drafted. As such, the proposal could not be approved by the RAs as written. In any case however, the SEM Committee was not convinced that the proposal, which would continue to apply indexation based on outturn inflation over the course of a ten-year contract, would be the appropriate way to mitigate the effect of high and unexpected rates of inflation following, in particular, the invasion of Ukraine.

Nevertheless, the SEM Committee recognised that there may be legitimate concerns as developers who entered certain auctions have faced high and unexpected rates of inflation, and considered that further investigation was merited as to whether inflation poses a real threat to the delivery of these projects.

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<sup>1</sup> [https://www.sem-o.com/documents/market-modifications/Mod\\_07\\_22/FRRMOD\\_07\\_22version2.0.pdf](https://www.sem-o.com/documents/market-modifications/Mod_07_22/FRRMOD_07_22version2.0.pdf)

The SEM Committee therefore launched a workstream to examine the issue of inflation risk driven by unforeseen global events, in respect of new capacity awarded in the 2024/25 T-3 and 2025/26 T-4 capacity auctions in particular. As part of this, the SEM Committee issued a Call for Evidence (SEM-22-071)<sup>2</sup> asking market participants to provide evidence of the levels of inflation that their projects had been subject to, as well as evidence of the jeopardy to their projects as a result i.e., of how unexpected rates of inflation had impacted on the financial viability of projects to the extent that they posed a risk to delivery. A total of 11 responses were received, and whilst numerous respondents provided examples of the levels of inflation they have faced (all of which are being treated as confidential and commercially sensitive), none provided comprehensive evidence of the impact of inflation on actual expected project returns or demonstrated that those returns have been reduced to the extent that project viability has been threatened.

The SEM Committee therefore issued a Second Call for Evidence (SEM-23-014<sup>3</sup>), related specifically to the impact of inflation on the financial viability of projects. Cognisant of the potential need to act quickly, given the upcoming Substantial Financial Commitment (SFC) milestones for the two auctions, SEM-23-014 in parallel set out a consultation on a “strawman” proposal for how the indexation provisions would work, if they were to be introduced.

The SEM Committee received a total of 9 responses, most of which were confidential. The confidential responses provided more detailed financial information on project viability across a broad range of projects covering nearly three-quarters of the multi-year New Capacity awarded in the 2024/25 T-3 and 2025/26 T-4 auctions. The RAs also had a number of follow-up bi-lateral meetings with respondents clarifying aspects of their submissions.

Having given due consideration to the responses to this Call for Evidence, in addition to previous consideration of responses to the first Call for Evidence, the SEM Committee has decided to implement a form of indexation for multi-year New Capacity

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<sup>2</sup> [WP-05: Institutional Arrangements \(semcommittee.com\)](#)

<sup>3</sup> <https://www.semcommittee.com/sites/semc/files/media-files/SEM-23-014%20Indexation%20Consultation%20and%20CfE.pdf>

awarded in the 2024/25 T-3 and 2025/26 T-4 auctions based on wholesale construction price indices for Ireland and Northern Ireland.

In light of the upcoming SFC milestones mentioned above, the SEM Committee has decided to publish this short Decision Paper setting out its decision as soon as possible, to aid investor decision making. The SEM Committee intends to issue a more detailed response document in the coming weeks, summarising the non-confidential responses received and setting out a more detailed explanation for its decision.

## **2. SEM Committee Decision**

The SEM Committee has decided to apply indexation to multi-year New Capacity contracts awarded in the 2024/25 T-3 and 2025/26 T-4 auctions.

The form of the indexation is substantially in line with the “strawman” proposals consulted on in SEM-23-014. The material change to the “strawman” proposals is the choice of inflation indices, which has been amended in response to consultation feedback that the HICP/CPI indices set out in the “strawman” proposals do not accurately track the capex inflation faced by project developers. Instead of HICP/CPI, the SEM Committee has decided to use the wholesale construction inflation indices for Ireland and Northern Ireland specified below. These indices are expected to be a better proxy for the capex inflation faced by project developers, recognising that it is not possible to apply a single index which accurately tracks the capex inflation faced by the broad range of projects under development.

The SEM Committee has also decided that it is appropriate to include an explicit risk-sharing mechanism, given that a prudent investor will have expected a degree of risk around a central case expectation of inflation, and factored a risk premium into its bids as a result. Two risk-sharing options were consulted on. Of these, the SEM Committee has decided that a risk-sharing percentage should be applied, as this option has the advantage of simplicity over the option of applying a “deadband”. The percentage shall be 70%, with this figure being chosen given that it:

1. Aligns with what the SEM Committee understands to be the approach set out in the Irish Inflation/Supply Chain Delay Cooperation Framework Agreement<sup>4</sup>; and
2. Aligns with the SEM Committee's expectation of a standard split of project cost between capex and opex of approximately 70:30.

The form of indexation to be applied therefore is as follows:

- Indexation will only be applied based on the calculated change in the indices during the Build Period;
- The Build Period is defined as the period starting on the relevant auction date (i.e., 20 Jan 2022 for the 2024/25 T-3 and 24 Mar 2022 for the 2025/26 T-4), and finishing on the last day of the Capacity Year prior to the year in which projects are due to deliver (i.e., 30 Sept 2024 or 30 Sept 2025 respectively);
- Indexation will be applied on a currency zone basis. The relevant indices are:
  - Ireland: the Central Statistics Office's (CSO) Wholesale Price Index for Building and Construction (materials)<sup>5</sup>;
  - Northern Ireland: the UK Office for National Statistics' Construction Output Price Index (OPI) for New Work (Infrastructure)<sup>6</sup>;
- Explicit risk-sharing mechanism: There will be an explicit risk-sharing percentage, which will result in 70% of Unexpected Inflation being passed through to the capacity price;
- "Unexpected Inflation" means variances in the relevant indices from an assumed expected level of 2%<sup>7</sup> annual growth during the Build Period;
- A one-off Indexation Factor will be calculated based on cumulative Unexpected Inflation during the Build Period, with the 70% risk-sharing proportion applied to

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<sup>4</sup> In which "both parties will share the burden in recognition that neither party is responsible for the events that have already transpired and will continue to evolve. Where costs are identified it is proposed that parties will share these costs with the State bearing up to 70% of the additional costs."

<sup>5</sup> See link [here](#), and data in Appendix 2

<sup>6</sup> See link [here](#), and data in Appendix 2

<sup>7</sup> In [SEM-21-110](#), the SEM Committee decided to inflate the Auction Price Cap for the 2024/25 T-3 and 2025/26 T-4 auctions by 2% per annum, reflective of the "standard target level of inflation".

it. The Indexation Factor will be applied to the capacity price awarded to each unit at auction for all ten years of the contract;

- Different Indexation Factors will apply to:
  - Contracts denominated in Euros and contracts denominated in Sterling; and
  - Contracts awarded in the 2024/25 T-3 and 2025/26 T-4 auctions, which have different Build Periods.

An indicative worked example is shown in Appendix 1.

The Indexation Factor to be applied will be calculated only up until the last day of the Capacity Year prior to the year in which projects are due to deliver, and as such, developers will be exposed to inflation risk during the period of any delay in delivery beyond the start of the Capacity Year.

### **3. Next Steps**

The SEM Committee intends to issue a more detailed response document in the coming weeks summarising the non-confidential responses received and setting out a more detailed explanation for its decision.

The SEM Committee will bring forward such TSC and any other modifications as may be required to implement this indexation policy in the near future and will work with the TSOs to ensure any necessary systems changes are implemented in time to reflect in settlement, starting from October 2024.

## Appendix 1: Worked Example

An indicative worked example for a contract awarded in the 2025/26 T-4 auction is shown below. Assume, as in Table 1, the value of the chosen index in Ireland was 100.4 on the Auction Date in March 2022. Suppose that the index value increases to 105.4 in September 2022, 114.6 in September 2023, 120.4 in September 2024 and 121.4 in September 2025. Equivalent example values for the UK index are also shown in Table 1.

Table 1: Example index values

	Ireland	UK
Mar-22	100.4	101.3
Sep-22	105.4	106.1
Sep-23	114.6	115.3
Sep-24	120.4	122.3
Sep-25	121.4	123.0

Compound total inflation in Ireland is therefore  $121.4/100.4 - 1 = 20.92\%$ , and the corresponding figure for the UK is  $123.0/101.3 - 1 = 21.42\%$ .

Expected annual inflation in both jurisdictions is considered to be 2%, so in the three and a half years between March 2022 and September 2025, compound expected inflation is  $(1 + 2\%)^{3.5} - 1 = 7.18\%$ .

The appropriate percentage to index to represent Unexpected Inflation =

$$(1 + \text{compound total inflation}) / (1 + \text{compound expected inflation}) - 1$$

So the indexation percentage applicable, before the application of risk-sharing, in Ireland is  $(1 + 20.92\%) / (1 + 7.18\%) - 1 = 12.82\%$ , and the corresponding value in Northern Ireland is  $(1 + 21.42\%) / (1 + 7.18\%) - 1 = 13.29\%$ .

With the application of 70% risk-sharing, the final Indexation Factor in Ireland is 8.97%, and the final Indexation Factor in Northern Ireland is 9.30%.

Therefore, if a Capacity Market Unit had been awarded a 10-year contract in Ireland at a price of €146.92/kW<sub>d</sub>/yr for 10 years in the 2025/26 T-4 auction, with indexation, it would then, in this hypothetical example, be paid at €146.92 x 1.0897 = €160.10/kW<sub>d</sub>/yr in each of the ten years of the contract.



If a Capacity Market Unit had been awarded a 10-year contract in Northern Ireland at a price of £130.78/kWd/yr for 10 years in the 2025/26 T-4 auction, then with indexation, it would be paid at  $£130.78 \times 1.0930 = £142.94/\text{kW}_d/\text{yr}$  in each of the ten years of the contract.

## Appendix 2: Index Values

To assist stakeholders in identifying the specific indices, the values for the relevant indices extracted from the relevant weblinks are shown below.

An extract from the Central Statistics Office (CSO) of Ireland's Wholesale Price Index for Building and Construction (materials) for the period Jan 2022 to Dec 2022 is shown below. The index values are highlighted in yellow.

Note that these values are provided only for reference to help stakeholders identify the index that will be applied.

Statistic Label	Month	Type of Material	UNIT	VALUE
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 January	Materials	Base 2015=100	124.4
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 February	Materials	Base 2015=100	125.5
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 March	Materials	Base 2015=100	126.7
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 April	Materials	Base 2015=100	130.6
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 May	Materials	Base 2015=100	132.7
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 June	Materials	Base 2015=100	135.9
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 July	Materials	Base 2015=100	141.1
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 August	Materials	Base 2015=100	141
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 September	Materials	Base 2015=100	140.1
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 October	Materials	Base 2015=100	141.9
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 November	Materials	Base 2015=100	142.8
Wholesale Price Index (Excl VAT) for Building and Construction Materials	2022 December	Materials	Base 2015=100	142.9

An extract from the UK Office for National Statistics' Construction Output Price Index (OPI) for New Work (Infrastructure) for the period Jan 2022 to Dec 2022 is shown below. There are a number of indices in the spreadsheet, and the relevant index is highlighted in yellow.

Note that these values are provided only for reference to help stakeholders identify the index that will be applied.

**Table 2: New work output prices, not seasonally adjusted, index numbers and percentage change**

This worksheet contains one table.  
Source: Office for National Statistics - Construction Output Price Indices  
2015=100

Time period	Housing (public and private) index 2015=100	Housing (public and private) percentage change over 1 month	Housing (public and private) percentage change over 12 months	Infrastructure index 2015=100	Infrastructure percentage change over 1 month	Infrastructure percentage change over 12 months	Public (other than housing) index 2015=100	Public (other than housing) percentage change over 1 month
Jan 2022	129.7	2.4	11.0	119.7	1.5	3.6	121.8	2.7
Feb 2022	129.9	0.1	10.9	119.5	-0.1	3.2	121.7	-0.1
Mar 2022	130.6	0.6	10.7	120.6	0.9	5.7	122.5	0.7
Apr 2022	133.2	2.0	12.3	123.4	2.4	7.7	125.0	2.1
May 2022	134.6	1.0	12.3	133.3	8.0	15.6	126.7	1.4
Jun 2022	135.7	0.8	12.2	133.7	0.3	15.5	127.2	0.4
Jul 2022	136.6	0.7	11.6	133.5	-0.1	14.9	127.9	0.5
Aug 2022	135.9	-0.5	9.6	132.5	-0.8	13.6	126.9	-0.8
Sep 2022	137.3	1.0	10.7	133.7	0.9	14.3	128.5	1.3
Oct 2022	139.3	1.5	10.8	134.6	0.7	13.6	130.4	1.5
Nov 2022	140.0	0.5	10.2	135.2	0.4	14.2	130.3	0.0
Dec 2022	140.7	0.4	11.0	135.4	0.2	14.9	130.9	0.4