Single Electricity Market

(SEM)

SEM Tariffs and Charges to apply from 1 October 2022 – 30 September 2023

Decision Paper

SEM-22-052

02 September 2022

EXECUTIVE SUMMARY

As required under Trading and Settlement Code Part B, a number of market parameters require approval by the SEM Committee each year. This document includes the SEM Committee decisions for the following four Tariffs/Charges and one Conversion Rate:

- Supplier Capacity Charge Price
- Difference Payment Socialisation Multiplier
- Residual Error Volume Price
- Currency Cost Price and Currency Adjustment Charge Factor
- Annual Capacity Charge Exchange Rate

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1. Introduction

This paper provides a short description and review of the Single Electricity Market Operator (SEMO) submissions in relation to the following:

- Supplier Capacity Charge Price
- Difference Payment Socialisation Multiplier
- Residual Error Volume Price
- Currency Cost Price and Currency Adjustment Charge Factor
- Annual Capacity Charge Exchange Rate

The above market parameters are required to enable the Market Operator (MO) to calculate and issue Credit Cover Requirements to participants. Participants are then required to ensure that adequate Credit Cover is in place before 1 October 2022.

This paper also sets out the final values approved by the SEM Committee (SEMC) for each of the above items for the Tariff Year 1 October 2022 until 30 September 2023.

2. Supplier Capacity Charge Price

The Capacity Remuneration Mechanism (CRM) awards capacity determined via an auction process. Payment under the CRM is funded through a Capacity Charge that is socialised across all suppliers on a monthly basis, based on their daytime demand profile.

The Market Operator (MO) submitted a proposal for this tariff on 15 June 2022. The RAs reviewed this submission for consistency, analysing the results of two Capacity Auctions alongside Multi-year Reliability Options for the Capacity Year in question to arrive at a total capacity amount. An over recovery Y-2 K-factor was then deducted. This is outlined in Table 1:

Metric	**Value (€)**
Total (Annual) Capacity Amount for 2022/23	379,183,965
Y-2 K-Factor over recovery	-34,264,994
Total	**344,918,971**

Table 1: Amounts included in Supplier Capacity Charge for Capacity Year 2022/23

The SEMC approve the MO proposed tariff of €11.97/MWh for Supplier Capacity Charge Price.

3. Difference Payment Socialisation Multiplier

The Difference Payment Socialisation Multiplier relates to the Capacity Market. The purpose of building up the fund through a tariff is to ensure suppliers are fully hedged against high price events in cases in which there is not enough contracted capacity to make difference payments to cover the pricing event. This is separate to the Supplier Capacity Charge itself.

If inadequate funds have been built up at a point where difference payments need to be made from the fund, the Market Operator may use the over recovery of other charges to make difference payments. Otherwise the Market Operator has the right to "suspend and accrue" until funds are built up again.

SEMO submitted a proposal for this multiplier on 15 June 2022 of 0.0%.

In the tariff years 2018/2019 and 2019/2020, a multiplier was set to calculate the Difference Payment Socialisation Charge to build up a fund of €15.0m, for two years, in the period from I-SEM Go-Live (30 September 2018) to the end of the tariff year September 2020. This target amount was not reached by the end of FY 2020 however it was deemed reasonable to continue to seek to build / maintain a fund of €15.0m and charges for 2020/21 were set accordingly.

In considering the 2021/22 tariffs it was estimated that the fund would exceed the €15.0m target and as such the Multiplier was set to €nil. The current best estimate of this fund at September 2022 is €20.2m2. Therefore, as the fund is estimated to exceed the required €15.0m, SEMO, consistent with the approach taken in setting the 2021/22 multiplier, propose to set the multiplier to €nil for the tariff year 2022/23.

The estimated Capacity Difference Socialisation Fund at the end of tariff year 2021/22 and the balance to be collected in 2022/23 is therefore outlined in Table 2 below:

Estimate of Capacity Difference Socialisation Fund	€
Value of non-bidding capacity (360 MW x Auction Clearing Price of €41,800/MW/Year) to be in place 2 years from Cutover (c. 5% of total value of T-1 2018/2019 annual Capacity pot of €332.5m)	15,048,000
Estimated value of fund in Tariff Year 2021/22	20,200,000
Estimated balance to collect in Tariff Year 2022/23 (€15,048,000 - €20,200,000)	**Nil**

Table 2

SEMO noted that the estimated value of €20.2m excludes the following which are included in the Supplier Capacity Charge Price Calculation through the Y-2 K-factor completed in the next Capacity Year:

- €9.9m under recovery, in the Capacity Charge revenue, in 2018/19
- €13.9m under recovery in Capacity Charge revenue in 2019/20
- €34.3m over recovery in the Capacity Charge revenue in 2020/21

The SEMC are content with the approach and methodology used in the submission and approve the multiplier of 0.0%.

4. Residual Error Volume Price

Residual Error Volume Price (REVP) relates to differences between actual and metered volumes, that can swing in both positive and negative directions.

The concept and principles applied to REVP in I-SEM are similar to those previously applied in the SEM. As part of the I-SEM design, participants wanted to reduce weekly billing volatility associated with REVP and requested the introduction of a tariff arrangement. Thus, the key difference in REVP between SEM and I-SEM is the manner in which costs are recovered, where it has moved from a recovery in close to real time in SEM, to a tariff arrangement in I-SEM.

The MO submitted a proposal for this Tariff on 23 August 2022.

SEMO advised the RAs that, as at the end of April 2022, 7 months into the 2021/22 financial year, there is an actual c. €30.0m over recovery of Imbalance Component Charges over Imbalance Component Payments. This over recovery is likely due to the increase in the Imbalance Price seen in 2021/22.

SEMO also reviewed the trends in the first three years of the new SEM market for the remaining 5 months of the year. The average May – Sep figures for the first three years show an over recovery of c. €2.0m in Residual Error Volume Costs. This gives rise to a forecast Residual Error Volume surplus of c.€32m for 2021/22.

However, in considering the forward forecast, the current 21/22 forecast over recovery is considered an outlier, based on the first three years of the new SEM market data and taking into consideration the significant and unprecedented increase in the Imbalance Prices seen in the market.

As such SEMO have excluded this figure in their consideration of the average historical Residual Error Volume Costs. The Residual Error Volume Cost has been estimated based on the actual costs in the first three years of the new SEM market, 1 October 2018 to 30 September 2021, as shown in Table 3 below:

Historical Residual Error Volume Costs (€)	
Tariff Year	**Total €**
2018 / 2019	27,533,118
2019 / 2020	11,597,396
2020 / 2021	2,729,083
2021 / 2022 forecast	-
Average Residual Error Volume cost since I-SEM go-live	**13,953,199**

Table 3

SEMO noted that due to a large over recovery in 20/21 this exclusion would have no impact on the resultant charge proposed even if it were to be included. Therefore, an average of €13,953,199 is being used as a best estimate, of the Residual Error Volume

Cost, for Tariff Year 2022/2023. This calculation may be revised in future tariffs years when further ISEM data is available.

The forecast all Island SEM demand for tariff year 2022/2023 is 38,200 GWh and applied to throughput based on the Non-Interval Energy Proportion (the average NIEP for calendar year 2021 was 50%), which gave a forecast NIEP demand of 19,100,000 MWh.

In considering the appropriate Residual Error Volume Price for 2022/2023, SEMO noted that there are currently a number of items under investigation that may impact on the imbalance component payments/charges in I-SEM including:

- Modification changes to the TSC;
- Defect fixes; and
- Consideration of the treatment of interconnector errors and imbalances.

However, there is insufficient information on the potential impact that these changes may have at this time for them to be factored in the estimate.

SEMO note that the Residual error Volume Price (PREVy) in the prior tariff year (2021/2022) was 0.70 €/MWh. The resulting 1.37 €/MWh decrease is mainly due the higher imbalance component charge received in 2021/2022 and the impact it has on the 2022/2023 forecast residual error volume costs.

The Residual Error Volume Charge Price is calculated based on the estimate of the Residual Error Volume cost amount and taking into account the Y-2 K-factor arising from previous years, as applicable.

As the current K-factor, of a c. €26.7m over recovery, is greater than the forecast Residual Error volume cost for 2022/23 of c. €14.0m, applying the accumulated over-recovery in the calculation of the Residual Error Volume Charge Price results in a negative tariff.

SEMO proposed to set the Residual Error Volume Price (PREVy) €/MWh to negative €0.67 for tariff year 2022/2023.

Tariff Year 22/23 – 1 October 2022 to end Sept. '23	
Estimated Residual Error Volume cost 22/23 (€)	13,953,199
Y-2 K-Factor (€)	(26,703,672)
Total Estimated Residual Error Volume cost / (surplus) 22/23 (€)	(12,750,473)
Forecast NIEP demand (MWh)	19,100,000
Residual Error Volume Price (PREVy) €/MWh	**(€0.67)**

Table 4

The SEMC are content with the approach and methodology used and approve the proposed tariff of € -0.67/MWh for Tariff Year 2022/2023.

5. Currency Cost Price and Currency Adjustment Cost Factor

As the Single Electricity Market operates via two currencies, variation can occur in incoming and outgoing amounts in the market over the year. This variation is covered through the Currency Adjustment Charge.

The concept and principles applied to currency costs in the old SEM are similar in the new market. However, the mechanism for the recovery of these costs in the Balancing and Capacity Markets has changed. As part of I-SEM design, a tariff arrangement was introduced which reduces weekly and monthly billing volatility associated with currency as seen by suppliers. Therefore, recovery of costs have moved from close to real time in the old SEM to a tariff arrangement in I-SEM.

The MO submitted a proposal for this tariff on 15 June 2022 and the RAs have reviewed the submission.

The MO currently estimates the actual 2021/22 Capacity and Balancing Market FX exposure against the business out-turning at a c. €1.9m under recovery, noting that FX rate movements are unpredictable, and any variation will be accounted for through

a K-factor. There is an underlying assumption of a stable economic environment, whereby no economic shocks would give rise to significant FX rate fluctuations.

It was considered a reasonable assumption to estimate the Currency Cost Amount (excluding any applicable K-factor) at €1.0m for the 2022/23 tariff year. The MO considered the forecast outturn of €1.9m for 2021/22 to be a high estimate for 2022/23 and decided to use a lower scale estimate of €1.0m given the unpredictable nature of foreign exchange movements.

For the 2022/23 tariff setting period, there is a residual K-factor from 2018-2020 of €427,900 (€927,900 - €500,000 returned by setting a €Nil CCP last year). This has been offset against the actual under recovery in 2020/21 of €552,700 to give a total K-factor position to be used in the 2022/23 CCP setting process of €124,800 under recovery.

Based on the under recovery being larger than the forecasted Currency Cost amount, the MO submitted a proposed tariff of €0.029/MWh for the Currency Cost Adjustment factor for the Capacity Year 2022/23.

The SEMC approve the MO proposed tariff of €0.029/MWh for the Currency Cost Price and Currency Adjustment Charge Factor of 1.000 for the 2022/2023 tariff year.

6. Annual Capacity Charge Exchange Rate

The purpose of the Annual Capacity Exchange Rate is to translate the Annual Capacity Charge from Euro to Sterling, or vice versa for billing purposes.

An Annual Capacity Payment Exchange Rate for Capacity Year 2022/2023 (1 October 2022 to 30 September 2023) was published within the Final Auction Information Pack (FAIP) for the T-1 2022/2023 Capacity Auction[1] in October 2021. The rate was fixed at €1: stg: £0.8648 following approval from the RAs and SEM Committee.

[1] T-1 2022/2023 Final Auction Information Pack

The MO noted in their tariff submission that it had considered using another exchange rate or a blended exchange rate for 2022/23 as a separate Annual Capacity Payment Exchange Rate fixed at €1: stg: £0.9324 was confirmed within the FAIP for the T-4 2022/2023 Capacity Auction[2] which took place in March 2019.

Following that consideration, the MO has proposed the Annual Capacity Charge Exchange Rate is set equal to the Annual Capacity Payment Exchange Rate (€1: stg: £0.8648) approved in the recent T-1 2022/2023 Capacity Auction as this will mean that that both Capacity Payments and Capacity Charges related to the T-1 Capacity Auction will be billed using the same exchange rate during the 2022/2023 Capacity Year.

In addition, the MO believes that the application of the same rate will ensure that any currency gains/costs that may arise are not inadvertently recovered through Capacity Charges rather than through the Currency Adjustment Charge.

The SEMC approve the Annual Capacity Charge Exchange Rate of €1: £0.8648.

[2] T-4 2022/2023 Final Auction Information Pack