An Coimisiún um Rialáil Fóntas

Commission for Regulation of Utilities

Decision Paper

Public Service Obligation Levy 2024/25

Decision Paper

Reference:	CRU202477	**Date Published:**	31/07/2024	**Closing Date:**	N/A

Executive Summary

The positive impact of renewable energy in lowering the levels of carbon emissions is important in helping Ireland reach its carbon targets and reducing the impact of fossil fuels on the environment.

As part of the transition to a lower carbon future, it is necessary to support and encourage the development of renewable energy projects and that the cost of this support, as decided by Government policy, should be shared across electricity customers as fairly and equally as possible.

The Public Service Obligation (PSO) is a charge distributed across all final electricity customers in Ireland and is used to fund Irish Government schemes to support the construction and operation of sources of renewable electricity. The PSO currently supports the Government Renewable Energy Feed-In Tariff (REFIT) and the Renewable Electricity Support Scheme (RESS), both of which support renewable electricity generation projects.

The PSO Levy is now entirely related to renewable electricity supports and is key in enabling Ireland to meet its national targets in terms of the generation of electricity from renewables and aligns with the CRU's vision of achieving a secure, low carbon future. The PSO levy currently supports 4,459.3 Megawatts (MWs) of renewable generation in Ireland. In April 2024, on average, wind generation and large-scale solar generation contributed 33% and 2% to Ireland's total electricity generation mix respectively[1]. Furthermore, solar power contributed significantly to Ireland's generation mix during specific days in April 2024, most notably, over 430 MW of large-scale solar generation was recorded on April 21st.

Government policy determines the form of subsidy provided to generators supported under the PSO. The CRU's primary role is the calculation of the PSO Levy or PSO Payment annually and to help ensure appropriate and efficient administration of the scheme. The CRU has therefore prepared this Final Decision Paper (CRU202477), which sets out the final PSO Levy to apply to electricity customers from 1 October 2024 to 30 September 2025.

Following a review of the PSO cost submissions from eligible suppliers, the final PSO Levy of €251.79 million will be required for the 2024/25 PSO year, which represents an increase of €251.79 million on the 2023/24 PSO Levy which was set to zero. As represented in the graph below, this indicates a €26.79 million increase from the indicative PSO Levy which was

[1] Eirgrid Group - https://www.eirgrid.ie/

estimated to be €225 million as published in the Proposed Decision Paper of 11th June 2024 (CRU202455).

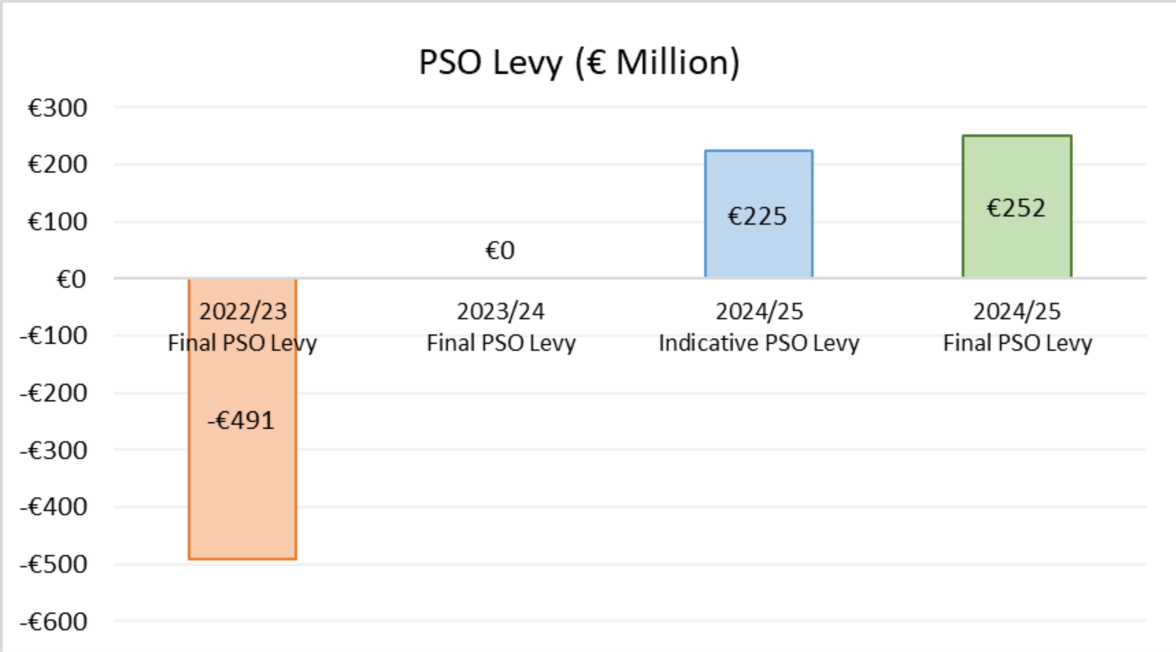


Figure 1: PSO Levy comparisons

The increase in the PSO Levy since the Proposed Decision has predominantly been driven by additional or amended submissions incorporated in the PSO calculation as a result of the CRU's post-proposed decision review of all data received by suppliers. This resulted in an increase in the 2022/23 R-factor of €32.91 million. Conversely a review of the ex-ante generation costs has resulted in a decrease of estimated costs for renewables generation for 2024/24 from -€10.55 million (Proposed) to -€16.89 million (Final). This is a result of RESS suppliers owing money back to the PSO in the form of difference payments. Lastly a slight increase in the revised benchmark price as a result of updating foreign exchange rates, forward fuel and carbon prices used in the model has also contributed to in a decrease in the estimate costs for 2024/25.

As per the proposed decision, for the PSO period 2024/2025 the key drivers for the PSO Levy funding requirement remain the same:

a) **Inclusion of the 2022/23 R-factor**: PSO support payments are calculated based on estimated generation and estimated wholesale electricity market prices for the year ahead. These ex-ante payments are then corrected for actual generation and prices based on submitted, audited statements through the R-factor. This R-factor amount is normally paid out or collected, as applicable, two PSO periods later. The 2022/23 R-factor which is included in the 2024/25 PSO final decision, is positive because actual market revenues in 2022/23 were significantly less than the estimates on which

2022/2023 ex-ante payments were based. This divergence between estimated and actual market revenues has predominantly been driven by a decrease in the price of the key commodities that determine the price of electricity (i.e., gas) after the proposed Benchmark Price has been modelled. The 2022/23 R-factor is an upward driver, as it increases the funding requirement of the 2024/25 PSO.

b) **Inclusion of the Interim R-factor:** For the 2023/24 PSO Period, a small negative funding requirement of -€67.47 million was calculated. At the time of calculation, it was known that the 2022/23 R-factor which was due to be included in the 2024/25 PSO calculation was going to be significant. This was because actual market prices in 2022/23 had been substantially lower than the Benchmark Prices used in the calculation of the ex-ante payment for the 2022/23 PSO. It was therefore decided that the PSO Levy for PSO Year 2023/24 would be set to zero. This allowed the inclusion of a partial R-factor correction one year earlier than would normally occur i.e. a partial correction for the 2022/23 R-factor was applied in 2023/24 instead of waiting until 2024/25. This Interim R-factor not only helps reduce the volatility on the customer's bills by smoothing the R-factor over two PSO Periods, but it also helps renewable generation, particularly RESS suppliers, who had paid significantly more money to the PSO, and ultimately the customer in the form of difference payments in 2022/23 than they earned in the wholesale electricity market. The interim R-factor is a downward driver, as it decreases the funding requirement of the 2024/25 PSO.

c) **The Benchmark Prices**: The forecasted prices used for the PSO year 2024/25 are less than those used for the 2023/24 calculation. The reduction in the forecast Benchmark Price between the 2023/24 PSO period and the 2024/25 PSO period was driven by a decrease in the forward prices of the key commodities that determine the price of electricity. Nevertheless, the Benchmark Price continues to slightly exceed the REFIT Reference price for the majority of technologies, resulting in a relatively low level (€35.56 Million) of support payments being due to suppliers contracting with generators under REFIT. Conversely, the Benchmark Prices estimated for the PSO Year 2024/25 exceeds the applicable strike prices for eligible suppliers contracting with generators under the RESS scheme. The RESS scheme is a two-way Contract for difference (CFD), meaning unlike the REFIT schemes, RESS projects can owe monies back to the PSO, in the event of a project's Benchmark Price being higher than the Strike Price. This has resulted in RESS projects owing (-€52.44 million) to the PSO for 2024/25. The net of these two renewable ex-ante costs results in a small downward drive, reducing the funding requirements of the 2024/25 PSO Levy.

Following two consecutive PSO periods with a negative or zero PSO, this year the PSO Levy is positive. A positive PSO Levy will result in a charge on, rather than a payment to the final customers.

Figure 2 below gives a history of the PSO Levy over recent years and outlines the total levy and its constituent parts. As illustrated below, the final 2024/25 PSO Levy has increased relative to the previous PSO year.

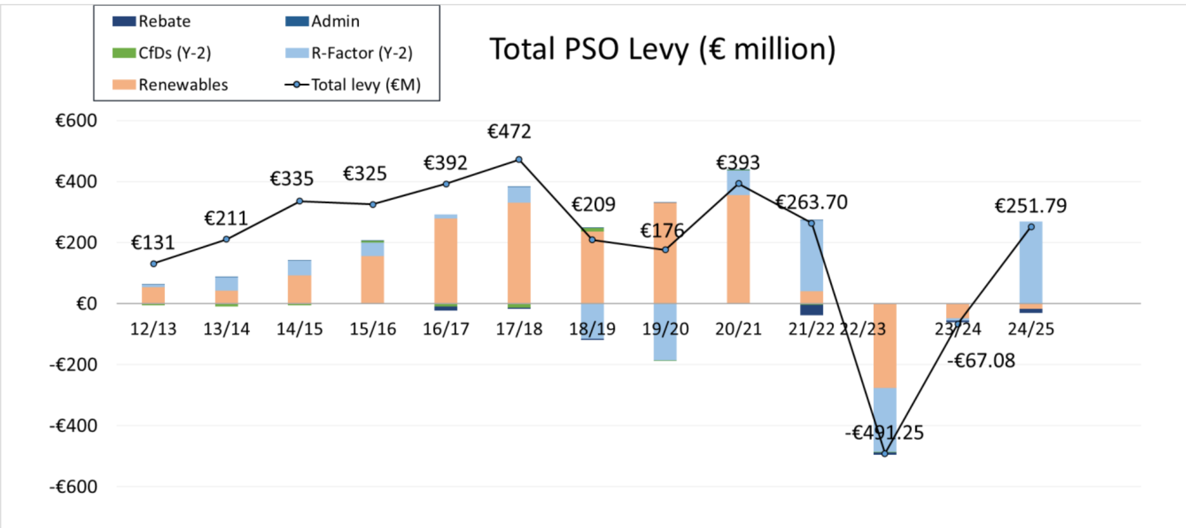


Figure 2: The PSO Levy Trend Graph

The CRU notes that PSO Levy payments are calculated based on estimated generation and estimated wholesale electricity market prices for the year ahead. These payments are then corrected for actual generation and prices through the R-factor. The CRU notes that due to the ex-ante nature of the PSO Levy and given that wholesale electricity market prices and generation from renewables fluctuate from year to year, the PSO funding requirements and the associated Levy or Payment can vary from year to year. In Quarter 3 2021, the CRU issued a decision addressing the volatility of the PSO, in particular regarding Suppliers obligations to submitted accurate estimate generation data, and the modelling of technology specific Benchmark Prices (CRU/21/076). These changes were in an effort to mitigate against year-on-year volatility; however, the CRU note due to the design of the scheme that it is not feasible to remove the risk of volatility occurring in the PSO completely.

Public/Customer Impact Statement

For the PSO year starting 1 October 2024, the CRU has calculated that the final PSO Levy will result in a monthly charge of €3.23 and €12.91 for domestic and small commercial customers, respectively. This compares to the current (2023/24) PSO levy which is set to zero. Customers in the medium/large commercial category will be subject to a monthly charge of €1.57/kVA, compared to the current PSO Levy which is set to zero. Table 1 below summarises the 2024/25 final change in the levy charged for each customer category[2].

PSO Customer Category	Monthly Levy Amount (2023/24) (€/customer)	Monthly Levy Amount (2024/25) (€/customer)
Domestic	€0.00	€3.23
Small commercial (MIC < 30 kVA)	€0.00	€12.91
Medium/Large commercial (MIC ≥ 30 kVA) (€/kVa)	€0.00/kVa	€1.57/kVa

Table 1: Monthly PSO Levy 2024/25

Figure 3 below provides a breakdown of monthly PSO Levy paid by each customer category since the 2011/12 PSO year.

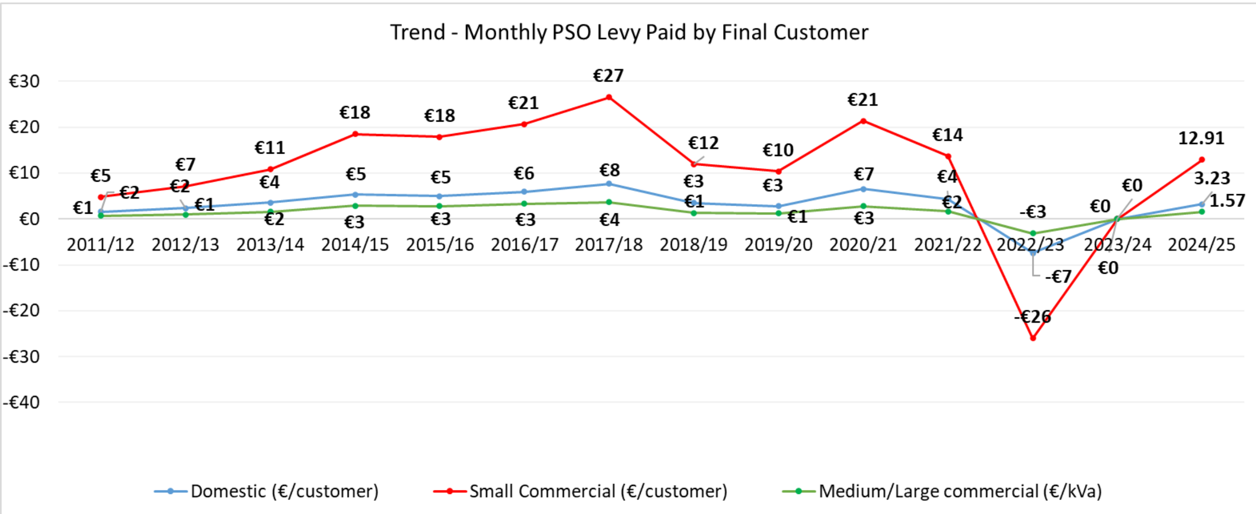
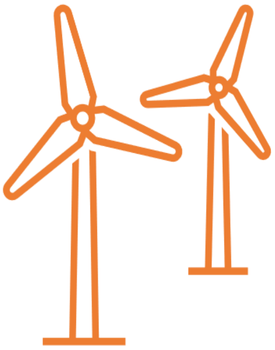


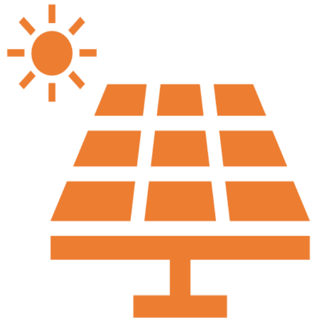
Figure 3: Monthly PSO Levy Trend Graph

[2] The table shows that domestic customers will be charged an additional €3.23 per month and small commercial customers will be charged an additional €12.91 per month. The monthly charge for medium / large commercial customers is charged on a capacity basis, for clarity and by way of example, a 100 MW demand site (approximated as 100MVA) will be charged €157,000 per month.

Renewable energy is power that can be generated using natural sources such as the sun and wind. Unlike fossil fuels these sources are not finite and have low carbon emissions. Renewable energy also contributes to Irelands security of supply and reduces our dependencies on countries which export fossil fuels. The cost of the PSO levy is shared across all electricity customers to support renewable electricity generation projects, such as wind and solar.



The PSO Levy is collected from electricity customers to fund schemes to support national policy objectives related to renewable energy for Ireland. The PSO is key to enabling Ireland to meet its national targets in terms of the generation of electricity from renewables.



In 2023, 42%[3] of all of Irelands electricity needs was provided by renewable generation. The PSO Levy is important in supporting clean energy and in helping Ireland meets its Climate Action Plan targets in 2030.

A number of factors determine how much the PSO Levy is each year. The wholesale price of electricity has the biggest influence on the PSO Levy size. This is because there is an inverse relationship between the PSO Levy and the wholesale electricity price.

If wholesale electricity prices are forecasted to be high, less money is required to be raised through the PSO Levy to subsidise PSO supported generators.

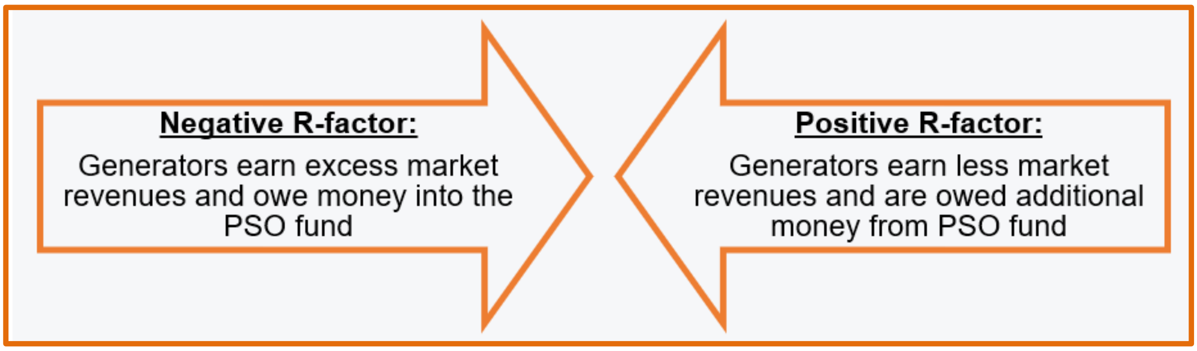
This is because:

- it is anticipated that these generators will receive more money from the wholesale market for the electricity they produce;
- generation in the newer RESS scheme are obligated to pay money into the PSO fund.

This is what happened in the 2022/23 and 2023/24 PSO period(s) and resulted in a PSO Payment to customers in 2022/23 and the PSO Levy being set to zero in 2023/24.

[3] EirGrid Group 2023 Annual Report

If it transpires that there has been a significant divergence between forecasted and actual market prices, a reconciliation will need to occur, this process is known as the “R-factor”. The R-factor can either be negative or positive.



For the 2024/25 PSO period the R-factor is positive as generators earned less market revenues in 2022/23 than expected. In 2023/24, an interim R-factor was introduced, and this has helped decrease the size of the R-factor in 2024/25. This measure has successfully reduced the size of the 2024/25 PSO Levy fund, and consequently, it has successfully decreased the levy which customers are due to pay.

The CRU notes that the increase in the PSO Levy will increase the fixed charge element of electricity bills, the variable rate i.e. the price per unit of electricity can vary depending on your electricity supplier. The CRU emphasises that customers can save money on their electricity bill by switching supplier and through energy efficiency. A guide to switching supplier can be found here.

Table of Contents

Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or meaning
ACPS	Annual Capacity Payment Sum
AD	Anaerobic Digestion
CfD	Contract for Difference
CHP	Combined Heat and Power
CPI	Consumer Price Index
DECC	Department of the Environment, Climate and Communications
DSO	Distribution System Operator
HICP	Harmonised Index of Consumer Prices
I-SEM	Integrated Single Electricity Market
MIC	Maximum Import Capacity
MWh	Megawatt Hours
PPA	Power Purchase Agreement
PSO	Public Service Obligation
REFIT	Renewable Energy Feed-In-Tariff
RESS	Renewable Energy Support Scheme
SEM	Single Electricity Market
S.I.	Statutory Instrument
TSO	Transmission System Operator

1. Introduction

1.1 The Commission for Regulation of Utilities Strategic Plan 2024/25

Our Mission	Our Strategic Priorities
• Protecting the public interest in water, energy and energy safety.	• Ensure Security of Supply • Drive a Low Carbon Future • Empower and Protect Customers • Enable our People and Organisational Capacity
Our Vision • Safe, secure and sustainable supplies of energy and water, for the benefit of customer now and in the future	

1.2 Purpose of this document

This document explains the Public Service Obligation (PSO) levy to apply to electricity customers in Ireland from 1 October 2024 to 30 September 2025. This follows a proposed decision paper (CRU202455 "Proposed Decision") which contained the preliminary determination of the PSO levy for the 2024/25 PSO year.

1.3 Structure of paper

The remainder of this document is structured as follows:

Section 2 – Background: Provides detail on the PSO levy, and an overview of the legislation governing the PSO levy and State Aid Decisions.

Section 3 – Key Assumptions: Provides detail on the Benchmark Price and the capacity payment applied in calculating the PSO levy for 2024/25.

Section 4 – 2024/25 PSO Levy: Gives a high-level overview of the PSO levy in terms of total cost and total generation capacity supported, as well as the allocation of the cost to different customer categories.

Section 5 – Key Comments Received: Summarises the main comments received to the Proposed Decision, along with CRU's responses to these comments.

Section 6 – Cost Breakdown of Levy: Provides a breakdown of the PSO levy in terms of the support schemes and generation technologies that it supports.

Section 7 – Next Steps.

Appendix 1 – Contains key data from ESB Networks' model used to allocate the PSO levy to the different categories of customer.

Appendix 2 – Compares the forecast commodity prices used in the calculation of the 2022/23 Benchmark Price with actual commodity prices.

1.4 Related documents

Relevant Legislation

- Electricity Regulation Act, 1999
- S.I. No. 217 of 2002, "Electricity Regulation Act 1999 (Public Service Obligations) Order 2002", as amended.
- S.I. No. 119/2023 - Electricity Regulation Act 1999 (Public Service Obligations) (Amendment) Order 2023

Relevant CRU Papers

- CRU/19/126, "Information Paper: Arrangements for PSO Invoicing and Collection", 11 October 2019;
- CRU/20/013, "Decision Paper: Arrangements for the Calculation of the Public Service Obligation Levy Post I-SEM Implementation", 27 January 2020;
- CRU202277, "Decision Paper: Public Service Obligation Levy 2022/23", 29th July 2022
- CRU/21/045, "Decision Paper: Arrangements for Calculation of the PSO Levy: Renewable Electricity Support Scheme & Clean Energy Package", 16 April 2021;
- CRU/21/17, "Managing Volatility of the Public Service Obligation Levy", 25 February;

- CRU202455 “Proposed Decision Paper: Public Service Obligation Levy 2024/25”, 11 June 2024.

- CRU202406, “Notification to Suppliers – Submissions to the CRU for the 2024/25 Public Service Obligation (PSO) Levy”, 12 February 2024

- CRU202406a, “Notification to Suppliers – Engagement of Auditor for 2024/25 Public Service Obligation (PSO) Levy”, 12 February 2024

Relevant EU State Aid Notifications and Clearance Decisions

- EC C(2012) 8, “State aid SA.31236 (2011/N) – Ireland, Renewable Feed In Tariff” (REFIT 2);
- EC C(2020) 4795, “State Aid SA.54683(2020/N)–Ireland Renewable Electricity Support Scheme (RESS)”, 20 Jul 2020;
- EC C(2007) 4317, State aid N 571/2006 – Ireland, “RES-E support programme” (REFIT 1);
- EC C(2020) 4795, “State Aid SA.54683(2020/N)–Ireland Renewable Electricity Support Scheme (RESS)”, 20 Jul 2020;

2. Background

2.1 The Difference between REFIT and RESS

The REFIT schemes are the main financial support provided to renewable electricity generators at this time, with approximately 3,240.3 MW of REFIT supported capacity. Specifically, there are three REFIT support schemes (REFIT 1, REFIT 2 and REFIT 3). These schemes are feed-in tariffs, with various REFIT reference prices to support a number of technologies being set by the Department[4]. In all three schemes, support has been allocated to eligible suppliers, on a first-come-first-served basis.

Generators that have been accepted into a REFIT scheme contract with licensed electricity suppliers via PPAs of 15-year duration (or for the remainder of the duration of the REFIT scheme, if shorter)[5]. The supplier thereby undertakes to purchase electricity generated by the REFIT-supported generator, with whom it has concluded a PPA. The price (the "PPA price") paid by the supplier to the generator is a matter for commercial negotiation between the two parties, except that the PPA price must be greater than or equal to a REFIT reference price[6], as specified in the terms and conditions of the scheme published by the Department.

In February 2020, the Department established RESS. Currently 1,219 MW of renewable capacity is supported by RESS. As with REFIT, RESS provides support primarily in the form of contracts for differences (CfDs), with payments being calculated as a metered quantity times the difference between a strike price and a deemed market price. RESS differs from REFIT primarily by the fact that:

(i) CfDs are two-way rather than one-way, meaning it is possible for the supplier to owe, rather than be owed, payments under RESS (see Figures 4 and 5); and support is allocated, not on a first-come-first-served basis, but through technology-specific auctions run by the TSO, in which eligible projects compete on strike price, with the successful projects being those offering the lowest strike prices.

[4] REFIT reference price (expressed in €/MWh) refers to the price for a particular category of electricity (e.g. large-scale wind, small scale wind, hydro, biomass, etc.) which has been set by the Department and adjusted annually by way of indexation, based on the Consumer Price Index (CPI).

[5] The backstop dates for REFIT support under the various schemes are as follows REFIT 1 – 31 December 2027, REFIT 2- 31 December 2032 and REFIT 3 – 31 December 2030.

[6] Refer to Section 3.6 of REFIT 2 and 3 terms and conditions for further detail.

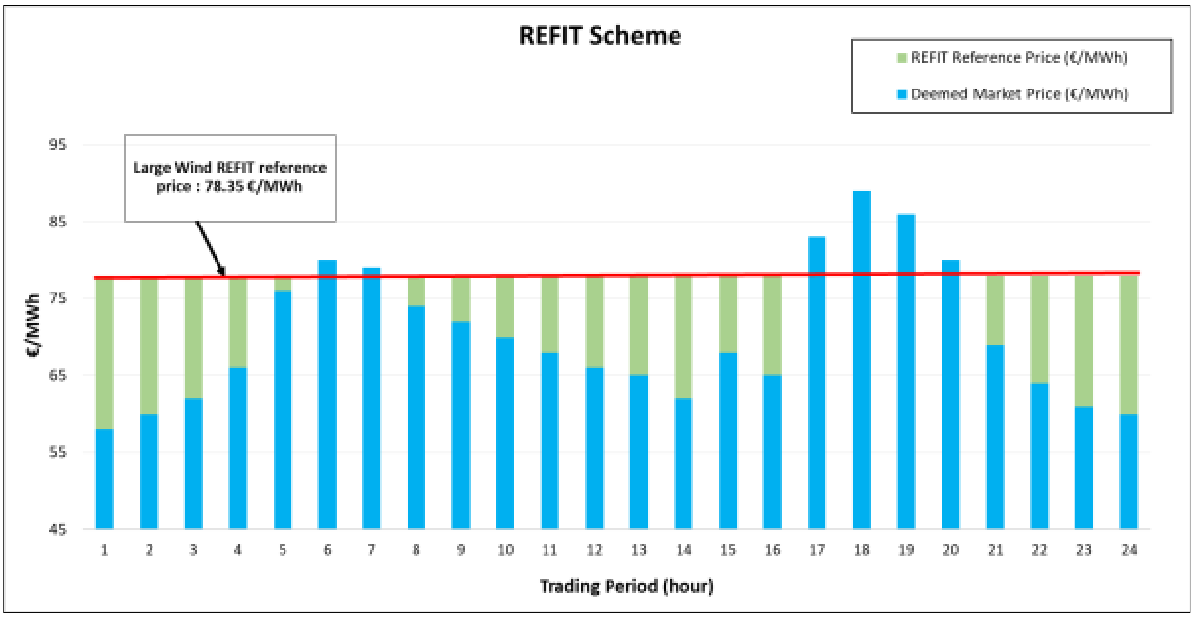


Figure 4: Illustration of REFIT Scheme (one-way CfD)

As illustrated in Figure 4 above, the REFIT reference price, as set by DECC, can be considered a price floor. This means a REFIT project earns a "top up" amount equal to the difference between the actual market revenues for the power generated and the REFIT reference price for a given technology. For example, the green portion of the bar in trading period 1 represents a top up to the applicable generator, up to the REFIT reference price. In trading periods (example trading period 18) when the price exceeds the REFIT reference price, no top-up is required.

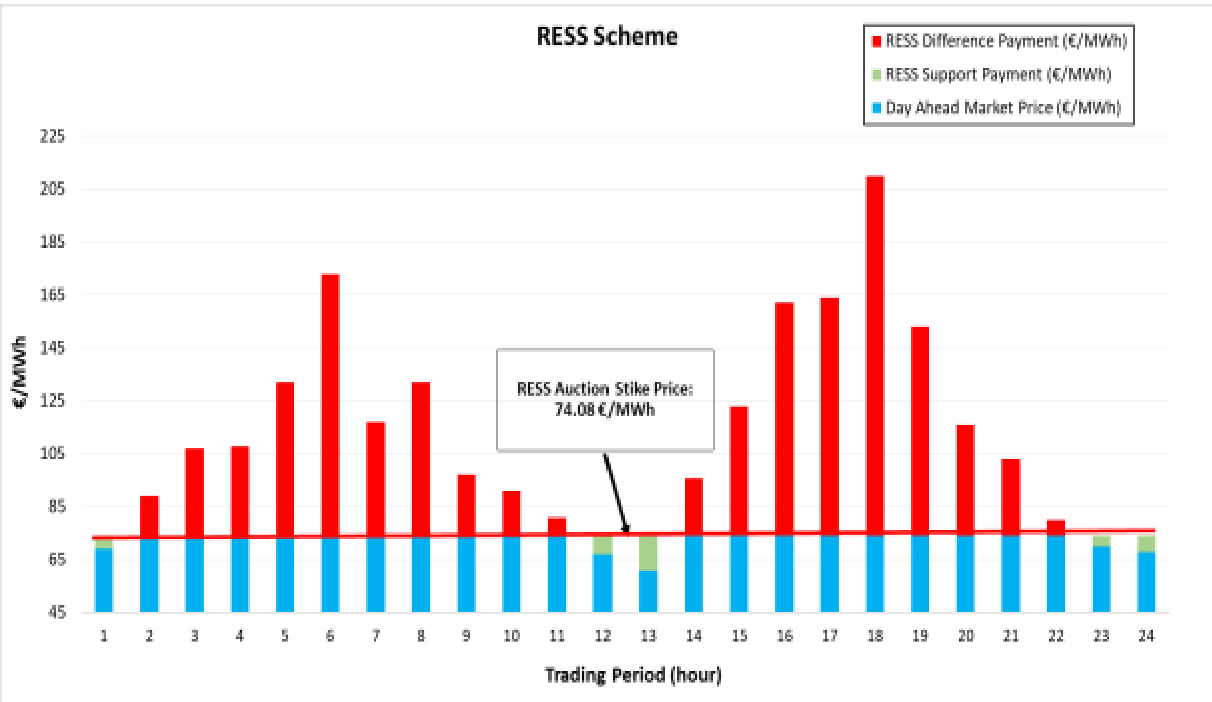


Figure 5: Illustration of RESS Scheme (two-way CfD)

RESS Strike Prices, as set by auction, can be considered a price cap. Similar to REFIT, RESS supported generation receive a “top up” amount up to the Strike Price, however revenues earned above the Strike Price represented as the red portion of the bar in figure 5 above, represent payments made back from RESS generators to the PSO and ultimately the customer under the terms of the scheme.

2.2 The PSO Levy or PSO Payment

The PSO funds various schemes designed by the Government to support national policy objectives related to renewable energy.

Before PSO Year 2022/23, the PSO Levy was charged to all electricity final customers in Ireland, and the proceeds used to compensate the:

i. Additional costs[7] incurred by market participants in generating or purchasing electricity from PSO-supported generators[8]. In the case of in-market generators, these are the additional costs over and above the revenues received from selling that electricity into the market, and in the case of out-of-market generators, they are the additional costs over and above the avoided cost of buying that electricity from the market; and

ii. Administrative expenses incurred by suppliers, the Distribution System Operator (“DSO”), i.e., ESB Networks, and the Transmission System Operator (“TSO”), i.e., EirGrid, in collecting payment of the PSO Levy.

However, in PSO Year 2022/23, high market prices, together with the design of the recently introduced RESS scheme, resulted in suppliers (on whom obligations to purchase renewable

[7] “Additional costs” as referenced in the 2002 Order does not define what is meant by such costs other than to state in Article 2(3) of the 2002 Order that they include costs incurred by the Board (i.e. ESB) in complying with its obligations under Article 5(1) and (b) (i.e. Public service obligations for Peat), Article 6A or 6B (i.e. Public service obligation for short-term peaking capacity), Article 6(C) (i.e. CADA), and the costs incurred by a supplier in complying with its obligations under Article 6D (i.e. Public service obligations for REFIT contracts). Under the CRU’s current arrangements for the PSO Levy, the relevant market participants are not entitled to recover such additional costs, unless those costs are in accordance with the relevant State Aid Notifications, legislation and the terms and conditions of the relevant schemes.

[8] Under PSO support schemes such as REFIT, this electricity is procured via Power Purchase Agreements (PPAs) that suppliers (also referred to as off-takers) enter into with electricity generators.

electricity have been placed) receiving benefits, rather than incurring additional costs, and a PSO Payment being owed to, rather than a PSO Levy being imposed on, final customers.

Consequently, payments that had previously been paid to REFIT and RESS suppliers from final customers were now due to be paid to the customers. The associated arrangements to allow for payments to be from REFIT and RESS Suppliers to final customers as applicable were implemented in 2023.

Before the start of each PSO Year, which runs from 1 October to 30 September, the CRU calculates the PSO Levy/ PSO Payment based on:

i. its forecast wholesale electricity price ("the Benchmark Price") and an estimate of generation output determined and submitted to the CRU by each relevant market participant; and

ii. a reconciliation of the additional costs actually or deemed to have been incurred in the preceding PSO year and the forecast estimates of that PSO year.

For example, the PSO Levy calculation for PSO Year 2024/25 includes a reconciliation of the costs incurred during PSO Year 2022/23 with the support payments made during PSO Year 2022/23. These resulting reconciliation payments are referred to as "R-factor payments", and may be positive or negative, depending on whether the costs are higher or lower than the estimates, in PSO 2024/25 it is positive. Such differences arise primarily due to differences between the estimated and the actual amount of electricity generated, and between forecast and actual market prices.

Different procedures will apply depending on whether any given PSO Year is a "Levy Period", during which a levy is charged on final customers and used to fund the additional costs of REFIT and RESS Suppliers, or a "Payment Period", during which Payments due from REFIT and RESS Suppliers are used to fund PSO Payments to final customers, whereby:

(i) The DSO and TSO collect the PSO Levy from suppliers of final customers connected to the distribution and transmission systems, respectively.

(ii) the payment to the TSO of amounts in respect of the PSO Levy collected by the DSO; and

(iii) payment of support payments by the TSO to REFIT and RESS Suppliers, or

(i) The TSO collects payment of benefits collected from REFIT and RESS Suppliers.

(ii) the payment by the TSO to the DSO of amounts in respect of PSO Payments to be paid by suppliers of final customers connected to the distribution system; and

(iii) the payment by the DSO and TSO to suppliers of final customers connected to the distribution and transmission systems, respectively.

Although the PSO Levy is paid to the supplier, generators receive support through the price specified in the Power Purchase Agreement (PPA)[9].

2.3 Legislation Governing the PSO Levy

Electricity Regulation Act 1999

Section 39 of the Electricity Regulation Act 1999, as amended ("the Act"), gives the Minister the power to direct, by order, the CRU to impose obligations on holders of licenses or authorisations in relation to security of supply, environmental protection and use of indigenous energy sources, including the collection of a levy from final customers. In accordance with Schedule 2 of the Act, the calculated PSO Levy or PSO Payment is allocated annually across three categories of electricity customer (i.e., Domestic Accounts, Small Accounts & Medium-Large Accounts based on the maximum demand in respect of each category, as a proportion of the sum of the three maximum demand figures. The attribution of the maximum demand in respect of each category of electricity account is carried out by the DSO for each PSO year, in accordance with Section 39(5A) (b) of the Act. CER/17/073 provides further details.

The 2002 Order

The Electricity Regulation Act 1999 (Public Service Obligations) Order 2002 (Statutory Instrument No. 217 of 2002) (as amended) ("the 2002 Order") sets out more detail in relation to issues such as:

- PSO Calculations
- Duties of suppliers

[9] Under PSO support schemes such as REFIT, this electricity is procured via Power Purchase Agreements (PPAs) that suppliers (also referred to as off-takers) enter into with electricity generators.

- Duties of the DSO
- Duties of the TSO
- Duties of final customers
- Recovery of contract debt
- Recovery of contract debt

Subsequent S.I.s have amended the 2002 Order to provide for the recovery of costs under new various schemes, as they have been introduced, and to add new projects to the PSO.

Role of the Commission

Policy and terms associated with the generators eligible for support from the PSO Levy under the various schemes are set out in legislation and documents published by DECC. The CRU has no discretion over the terms of the various schemes. The CRU's role in relation to the PSO is to calculate the levy and payments in respect of supported generators in accordance with Government policy, and to ensure the scheme is administered appropriately and efficiently.

3. Key Assumptions

3.1 Benchmark Price

The Benchmark Price is a forecast of the average wholesale market price of electricity over the relevant PSO Year. It is used by the CRU, together with estimates of generation output provided by suppliers, to forecast the market revenue of generation plants supported under the PSO for the relevant PSO Year. The Benchmark Price is compared to the Technology Reference Price (REFIT) or the Strike Price (RESS), in order to determine either the support to be paid to the REFIT or RESS Supplier from the PSO Levy or the Difference Payments to be paid by the RESS Supplier to fund the PSO Payment. The lower the Benchmark Price, the higher the top up required from the PSO Levy and vice versa.

In accordance with the CRU's Decision Paper on Managing Volatility within the PSO Levy (CRU/21/076), technology-specific Benchmark Prices are applied for wind and solar projects that are in receipt of PSO support, based on the different seasonal and diurnal patterns of generation. The current time-weighted Benchmark Price applies to all other technologies. The methodology for the calculation of these Benchmark Prices is set out in CRU/21/076.

The CRU used a PLEXOS model of the SEM to calculate the Benchmark Prices (SEM-21-086). The final Benchmark Prices for PSO Year 2024/25 are:

- Wind-weighted: €117.50/MWh.
- Solar-weighted: €124.99/MWh.
- Time-weighted is €120.38/MWh.

The foreign exchange rates and forward fuel and carbon prices used in the modelling of the benchmark prices are from 2nd July 2024. The main determinant of the Benchmark Price is the forward fuel prices. The commodity prices, exchange rates, and consequently the final Benchmark Prices, have slightly changed since the proposed Decision Paper. Table 2 below shows the difference between the final Benchmark Price and the indicative Benchmark Price.

PSO Benchmark Price	2024/25 Indicative Benchmark Price (€/MWh)	2024/25 Final Benchmark Price (€/MWh)	Increase Benchmark Price (€/MWh)	Increase Benchmark Price (%)
Time-weighted	118.08	120.38	2.30	2%
Onshore Wind	114.21	117.50	3.29	3%
Solar	123.63	124.99	1.36	1%

Table 2: Benchmark Price Comparison

Figure 6 below graphs the impact that changes in commodity prices had on the Final 2024/25 time-weighted Benchmark Price relative to the Indicative Benchmark Price.

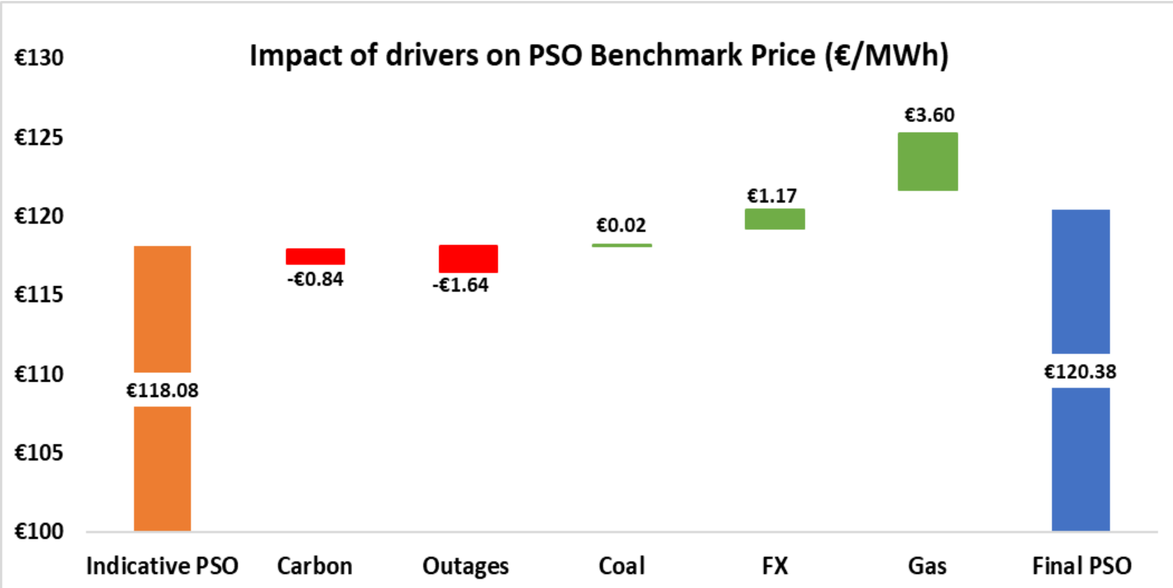


Figure 6: The relative impact that changes in each commodity price had on the Final 2024/25 time-weighted Benchmark Price by comparison to the 2024/25 indicative Benchmark Price.

3.2 Capacity payment

The CRU has used the results of the Final Capacity Auction Results 2024/2025 T-4[10] to estimate the capacity revenues generators are likely to receive during the PSO Year, which revenues are taken into account in the calculation of support or Difference Payments for the purpose of the 2024/25 PSO calculation.

[10] https://www.sem-o.com/documents/general-publications/T-4-2024-2025-Final-Capacity-Auction-Results-Report.pdf

4. 2024/25 PSO Levy

4.1 Total levy cost and generation capacity supported

The total PSO Levy for the 2024/25 year, calculated based on the Benchmark Price and capacity payment assumptions described in Section 3, is **€251.79 million**. A high-level breakdown of the 2024/25 PSO Levy into its components is shown in Table 3.

Component	Generation Capacity Supported (MW)	Forecast Cost 2023/24(€ million)	R-Factor 2022/23 (€ million)	Total PSO support 2024/25 (€ million)
Renewables	4,459	-€16.9	€326.9	€252.37
Admin	-	-	-	-€0.58
Rebate				€0.00
Interim R-factor	-	-	-€57.6[11]	-
Total	**4,459.3**	**-16.9**	**269.26**	**€251.79**

Table 3: Breakdown of the annual proposed PSO Levy Costs

Additionally, Figure 7 provides an annual breakdown of the total PSO Levy since 2012-13 and presents the overall trend in the cost of the PSO.

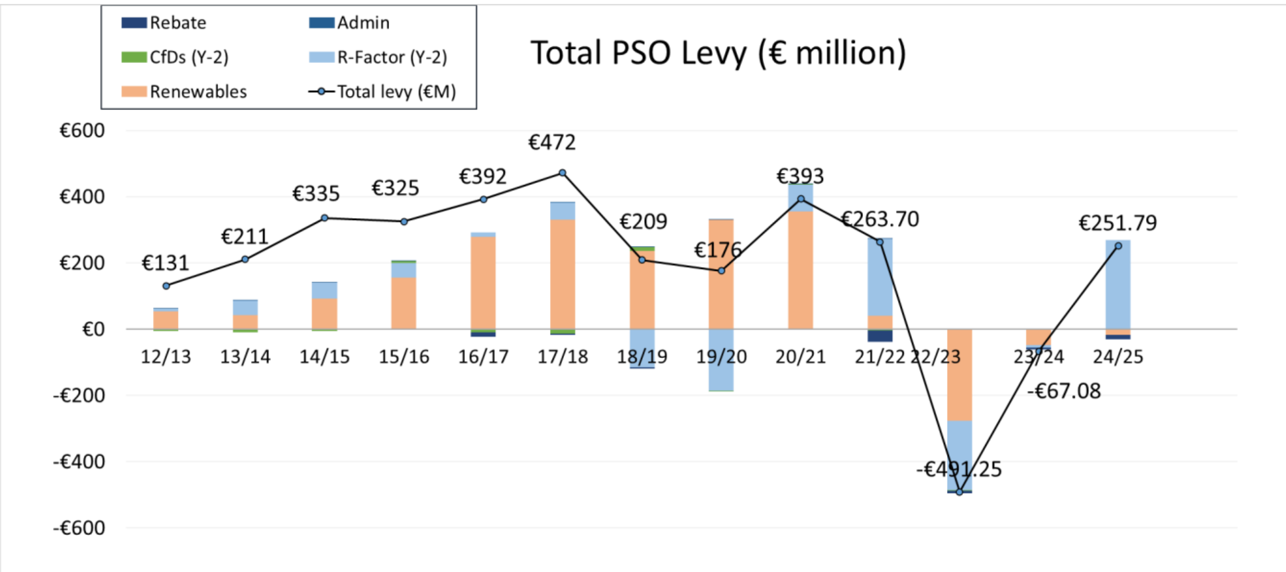


Figure 7: Historical breakdown of total PSO Levy

[11] A total funding requirement of -€67.08 million was calculated for 2023/24, this included administration costs (€0.90 million), and a rebate (-€12.62 million) which was deducted from the interim R-factor.

4.2 Drivers of year-on-year change

The final PSO Levy for 2024/25 of €251.79 million represents an increase of €318.87 million as compared to 2023/24 levy of - €67.08 million which was set to zero and an increase of €26.79 million as compared to 2024/25 Proposed PSO Levy of €225.00 million. A number of drivers are contributing to this increase, principally the significant R-factor from 2022/23 PSO, and the decrease in the 2024/25 PSO Benchmark Price relative to the 2023/24 Benchmark Price.

Upward Drivers of the 2024/25 PSO Levy compared to 2023/24 PSO Payment

i. Significant Negative R-factor:

A significant 2022/23 R-factor is included in the 2024/25 PSO Levy calculation. The 2022/23 R-factor accounts for the difference between the PSO monies paid by suppliers in the 2022/23 year, calculated ex-ante, and the actual PSO monies owed to suppliers for 2022/23 PSO year, certified ex-post. The R-factor for the 2022/23 PSO year is positive meaning suppliers over-paid in the 2022/23 PSO year. This substantial 2022/23 R-factor of €326.93 million (including Interim R-factor of €57.64 million) constitutes a net increase of €275.83 million by comparison to the 2023/24 R-factor of -€6.58 million. This is a significant upward driver in the final 2024/25 PSO Levy.

ii. Positive ex-ante REFIT Payments:

While the forecast Benchmark Prices are significantly lower than the Benchmark Prices used in calculating the 2022/23 and 2023/24 PSO Levy[12] they still remain high relative to historic Benchmark Prices. Nevertheless, a number of REFIT suppliers are due some support as the Benchmark is lower than the respective REFIT reference rate. The REFIT ex-ante payments for 2024/25 are currently €35.56 million compared to €10.78 million last year.

Downward Drivers of the 2024/25 PSO Levy compared to 2023/24 PSO Payment

i. Negative Ex-Ante RESS Payments:

Unlike the REFIT schemes, RESS projects pay back the PSO Levy if the project's Strike Price is less than the market price. The CRU's 2024/25 indicative Benchmark Prices are higher than the Strike Price of RESS units that have made ex-ante

[12] The Benchmark Prices for the 2022/23 PSO payment were: Wind-weighted €330.23/MWh, Solar-weighted €332.66/MWh and Time-weighted €341.25/MWh. The Benchmark Price for 2023/24 PSO payment were: Wind-weighted €139.32/MWh, Solar-weighted €155.23/MWh and Time-weighted €145.58/MWh.

submissions for the PSO Year 2024/25. Based on the CRU's current 2024/25 PSO projection, a number of these projects will owe -€52.44 million ex-ante difference payments to the PSO in the 2024/25 PSO year. These payments reduce the overall funding requirement for the 2024/25 PSO year.

ii. Interim R-factor:

In the 2023/24 PSO Period a negative funding requirement of -€67.47 million was calculated. At the time of calculation, it was known that the 2022/23 R-factor which was due to be included in the 2024/25 PSO calculation was going to be significant. This was because actual market prices in 2022/23 had been substantially lower than the Benchmark Prices used in the calculation of the ex-ante payment for the 2022/23 PSO. The CRU decided, given the relatively small funding requirement for 2023/24, to set the PSO to zero. The funding requirement of -€67.47 million was collected from renewable generation, in the normal manner. After administration costs (€0.90 million) and rebates costs (-€12.62 million) were deducted, €57.64 million remained and was redistributed to RESS suppliers a year earlier than normal i.e. on a T+1 instead of the normal T+2 basis. This Interim R-factor not only helps reduce the volatility on the customer's bills by smoothing the R-factor over two PSO Periods, but it also helps renewable generation, particularly RESS suppliers, who had paid significantly more money to the PSO, and ultimately the customer in the form of difference payments in 2022/23 than they earned in the wholesale electricity market. The interim R-factor is a downward driver, as it decreases the funding requirement of €57.64 million (including Euribor correction for 2024/25[13]) from 2024/25 PSO.

4.3 Allocation of costs

The cost of the PSO Levy or Payment is allocated across three categories of customer – Domestic, Small Commercial (MIC < 30kVA) and Medium/Large Commercial (MIC ≥ 30kVA). ESB Networks calculates the peak demand for each category based on standard load profiles, metered data and forecast demand data. The PSO Levy or Payment is then allocated in proportion to the ratio of these demand peaks.

[13] An Euribor correction of '1.06' for 2023/24 to 2024/25 was applied to Interim R-factor which is now updated to -€57.64 million.

ESB Networks' 2024/25 PSO Cost Allocation Model contains final projections of customer numbers and demands for the PSO Year 2024/25, which has slightly changed as compared to indicative projections of customer numbers and demands for 2024/25 PSO year.

Table 4 below shows the monthly proportion of the final 2024/25 PSO Levy of €251.79 million allocated to each of the three customer categories by ESB Networks' indicative model.

PSO Customer Category	Monthly Levy Amount (2023/24) (€/customer)	Monthly Levy Amount (2024/25) (€/customer)
Domestic	€0.00	€3.23
Small commercial (MIC < 30 kVA)	€0.00	€12.91
Medium/Large commercial (MIC ≥ 30 kVA) (€/kVa)	€0.00/kVa	€1.57/kVa

Table 4: Cost of Final 2024/25 levy by customer category.

One of the factors influencing the allocation across PSO customer categories is the share of peak demand applied to each category of customer for this period, as outlined below.

- **Domestic Customers:** For PSO Year 2024/25, updated forecast demand data results in a decrease of 1.8%. Domestic customers account for 34.7% of peak demand, compared to 36.84% in the PSO Year 2023/24 PSO year. This decreases domestic customers' allocation of the PSO Levy relative to other PSO customer categories.

- **Small Commercial Customers**: updated For PSO Year 2024/25, the updated forecast demand figures show a slight decrease of 0.2%. Small Commercial Customers account for 10.7% of peak demand, as opposed to 10.97% for the 2023/24 PSO year.

- **Medium & Large Commercial Customers**: For 2024/25, the updated forecast demand data resulted in an increase of 2.0% in allocation of the total PSO Levy to Medium & Large Customers. In PSO Year 2024/25, Medium & Large Customers account for 54.6% of peak demand as compared to 2023/24 PSO Year 52.19%.

Other factors which impact the year-on-year change to the charge or payment to each customer category is the variations in the total number of customers in the Domestic and Small

Commercial categories, and in total Maximum Import Capacity (MIC) for the Medium & Large Commercial category.

In ESB Networks' explanatory note it noted that its "demand forecasting is based on a robust regression analysis which considers forecast population growth, customer numbers, GDP/GNP and various other inputs from reliable sources such as the CSO or the Department of Finance. The forecasts also consider the demand impact of the government's Climate Action Plan targets". ESBN also noted that "In the years 2020 and 2021" it "witnessed a significant disruption to 'business as usual' electricity demand, primarily driven by the effects of COVID19. As such these years are omitted for the purposes of regression analysis" Furthermore ESBN noted that "despite considerable numbers of LCT (Low Carbon Technology) being installed in the year, 2023 saw a 3.2% drop in electricity demand on the distribution network due to the impact of high wholesale market prices and a movement of a small number of large customers from the distribution level to the transmission network".[14]

[14] ESBN Explanatory Note (CRU202477a) – PSO Cost Allocation Model 2024-25. (This will be published alongside this paper)

5. Key Comments Received

This section provides a summary of responses received to the CRU's proposed 2024/25 PSO Proposed Decision Paper (CRU202455), along with CRU responses to the key points made.

List of respondents

Three responses from organisation were received and are listed below. One confidential and seven responses from members of the public were also received, which are not included in this list.

1. Wind Energy Ireland (WEI)
2. Bord na Mona
3. Energia

5.1 Increase in the PSO Levy

Comments Received

Six respondents commented on the increase in the PSO Levy. All six respondents were critical of the increase, with a number urging CRU not to place an additional burden on domestic users. One respondent said that the levy was "counter-productive in terms of the market" and that "there are no regulations/rules of how this levy can be spent by the operators receiving it". This respondent also said that it was not normal that suppliers can be owed money because the forecasts are not calculated correctly, and that more than a 25% difference between forecast and actual prices in 2023 for coal and gas was indicative of poor analysis. Another respondent said that funding for the PSO should be taken from an existing tax, while a further respondent requested that domestic customers be removed from the PSO Levy. Another respondent suggested that increases in the PSO Levy should be balanced by forcing suppliers to pay microgeneration the same rate as charges for supply.

CRU Response

The CRU appreciates the burden of high energy prices that customers have endured recently. The CRU takes very seriously its statutory duty to protect the interests of customers and understands that anything adding to that burden is unwelcome. However, the PSO has been enshrined in legislation since 2002, and the various renewables support schemes have been designed by the Government in order to further Ireland climate action goals. The basis of charging, including the sharing between different categories of customer, is also specified by the legislation.

The CRU's role is limited to administering the schemes. Part of this requires the CRU to forecast prices for the coming PSO Year. The CRU acknowledges that outturn prices for 2022/23 were very different from the forecasts. However, in preparing forecasts, CRU's analysts use industry-standard tools and published forward prices that represent, at the time, the market's best estimate of the price of fossil fuels for the coming year. Considering this, in 2022/23 these forecasts diverged significantly from actual prices because of the exceptional volatility of fossil fuel prices during the PSO Year. Moreover, while customers understandably do not welcome increases in the PSO Levy, it should be recognised that, during 2022/23, the PSO Levy reduced domestic customers' bills by around €90 annually, which was implemented by PSO Payments.

The CRU acknowledges the comment regarding tariffs for microgeneration exports. The CRU published a decision (CRU202454) earlier this year on arrangements to remunerate microgeneration exports, with export tariffs, like import tariffs, continuing to be set by suppliers in a competitive retail environment. However, the CRU is continuing to monitor the situation and may review the decision if it becomes concerned that export tariffs cease to reflect market value.

5.2 Economic Competitiveness

One respondent expressed its concerns on the current uncompetitive cost of electricity noting that Irish electricity prices are amongst the highest in Europe and that the PSO Levy is an additional burden to doing business in Ireland. Furthermore, the respondent noted that the fixed charge component of their bill was continuing to increase and that the proposed PSO increase would worsen its competitive position. One respondent noted that in Germany, manufacturing industries in strategic sectors, are afforded competitive rates for fixed charges.

CRU Response

As already noted, the CRU appreciates the burden of high energy prices that customers have endured recent years in the context of geopolitical events. However, from a regulatory perspective, the CRU's role regarding the PSO is to comply with legislation, to calculate the PSO levy and to help ensure the PSO levy is administered appropriately and efficiently. The CRU is not able to reduce or suspend the PSO levy nor can it differentiate the charge applied to specific sectors. Furthermore, the CRU does not have discretion regarding the magnitude of the PSO levy, as the CRU calculates the PSO levy in accordance with the governing legislation.

The CRU acknowledges that PSO Levy is set to increase in 2024/25 but notes that there is an inverse relationship between the PSO Levy and wholesale electricity price. This means if the wholesale electricity price is reducing, additional money is required to be raised through the PSO levy to subsidise PSO supported generators. This is because these generators receive less money from the wholesale market for the electricity they produce. Given the correlation between the increase in the PSO Levy and the decrease in the wholesale market prices, the CRU notes that although an increase in the PSO Levy will increase one fixed charge element on electricity bills, variable charges (e.g. the unit rate) should in fact decrease.

5.3 Rural Customers

Comments Received

One respondent expressed concern about the designation of customers as "Rural" for the purpose of determining standing charges.

CRU Response

The CRU seeks to ensure that network charges are fair and reasonable. As regards the PSO Levy, the basis of charging is set out in legislation. The legislation requires costs to be shared between domestic and non-domestic customers in a defined way, and PSO Levy on domestic customers does not discriminate between rural and urban.

5.4 "Power to Revisit"

5.3 "Power to Revisit"

Comments Received

Two respondents commented on the provision in the legislation, introduced in 2023, for the CRU to revise its determination of the levy or payment amount for the remainder of a PSO Year. The respondents said that the power could serve to bound the working capital risks for RESS PPA off takers, and to protect customers from sudden increases in wholesale prices where a recalculation would result in increased payments (from RESS suppliers) into the PSO. However, the respondents said that it is uncertain when and how the power will be used and suggested that the CRU should consult on rules under which the power would be used.

CRU Response

The CRU recognises that a provision added by the 2023 Amendment Order gives it the power to revise, during the course of a PSO Year, its determination of the PSO amounts for the remainder of that PSO Year. However, the purpose of this provision is to cater for circumstances where there is a mismatch between amounts received in respect of the PSO Payment and amounts that were estimated ex ante, and on which basis the PSO Payment is being paid out to final customers. The provision does not provide for circumstances where the amounts being paid into and out from the PSO are more or less as expected at the time the PSO was set, but that with hindsight the PSO might have been set at a different level.

5.5 Publicity

Comments Received

One respondent commented that the PSO Decision Paper, and "messaging in relation to the PSO in general" should discuss the benefits that the PSO delivers.

CRU Response

The CRU's role in respect of the PSO Levy is limited largely to its administration, with the various schemes under the PSO being designed by Government, to further Government objectives. Notwithstanding this the CRU acknowledges the vital role that renewable energy plays in lowering the levels of carbon emissions and helping Ireland reach its carbon targets. Furthermore, the PSO and the renewable energy it supports aligns with the CRU's vision of achieving a secure, low carbon future.

5.6 Forecast Errors and R-Factor

Comments Received

One respondent said it would welcome further information on the approvals process for supplier submitted forecasts. The respondent also commented that consideration needs to be given for configurations where supported projects include storage allowing the capture of otherwise curtailed or constrained energy, as well as allowing a higher capture price. The respondent suggested that such projects may require a separate technology-specific Benchmark Price.

CRU Response

The CRU has previously consulted on managing PSO volatility and decided that suppliers' estimates of generation output should be the average of actual generation data when three full PSO years of data is available, or an unbiased P50 exceedance probability otherwise.

As regards hybrid projects, i.e. projects including storage, the outturn audited costs will reflect the higher capture price of these technologies. For PSO ex ante calculations, the CRU expects suppliers' forecasts to take account of improvements in expected output from hybrid projects, while the CRU will give consideration to whether a hybrid-specific benchmark price would have a significant impact on PSO calculations.

5.7 PSO Payment timeline and Cashflow issue

One of the respondents, highlighted that cashflow issues occurs due to the PSO payment timeline, the nature of the two-way CfD in RESS, necessitates that suppliers make payments in advance to the PSO in respect of any generation that is forecasted to receive a price above its strike price. The amount by which the forecasted price exceeds the strike price is uncapped which means there is no limit to this required payment on the part of RESS suppliers. The respondent suggested that this is especially problematic to RESS suppliers if the high prices forecast do not materialise, as they are obliged to pay their RESS generator upfront (via the PPA) in addition to funding the PSO, despite of the fact the real value of the generation could by then be significantly less than the forecasted benchmark price. In addition, the respondent noted that RESS suppliers are now obliged to manage sizable working capital which could lead to higher RESS prices in future auctions. Lastly the respondent noted that improvement in forecasting alone cannot sufficiently mitigate the volatility in the PSO Levy. Instead further consideration should be given to adopting either Option 2, using ex-post output and prices as the basis of calculating support payments or Option 4 a mid-year PSO review as discussed in CRU/21/076 Managing Volatility of the Public Service Obligation (PSO Levy).

CRU response

The CRU acknowledges concerns regarding cashflow implications of RESS in recent years. These are a consequence of the design of the PSO, which mandates the process of estimating and then reconciling the PSO amounts for each year. This issue is exacerbated when there is a significant divergence between actual market and Benchmark prices. In an effort to decrease the burden on suppliers and protect customers from a higher PSO Levy in 2024/25, the CRU made the decision in 2023/24 to bringing forward some of the R-factor correction in the current PSO Period (2023/24) that would otherwise be applied in PSO Year 2024/25.

The CRU has been cognisant of volatility and the consequence that this has for both the consumer and industry, and it is this that prompted the initial consultation in 2021. Notwithstanding this the CRU acknowledges that recent events, including the introduction of RESS and the invasion of Ukraine has reemphasised the importance of such matters and the, CRU intends to consider this further. It should be noted however that in accordance with the governing PSO legislation, the CRU's role is to calculate the PSO Levy annually and to help ensure that the scheme is administrated appropriately and efficiently. The CRU does not have any discretion to revise the legislation governing the PSO Levy or the Terms & Conditions of the PSO schemes (e.g. REFIT 1-3 & RESS 1-3), and any necessary amendments to the Order or T&Cs of the relevant PSO schemes would need to be overseen by DECC.

5.8 PSO Benchmark Price

One respondent stated that CRU's benchmark price for forecasting market revenues for 2024/25 exceeded those modelled by their analysts by 10%. The respondent stated that there appears to be a propensity for the CRU's forecast to over-estimate prices. They also stated that there may be merit in discussing CRU's assumptions and sharing information.

CRU response

The CRU uses an agreed upon methodology and industry best practice for modelling Benchmark Prices. Moreover, a comparison of outturn market and Benchmark Prices shows that differences have occurred in both directions, while an independent review undertaken in 2021[15] found that the CRU's SEM model "reasonably replicates" average SEM prices, with a slight tendency to underestimate, rather than overestimate, average SEM prices. Currently, the Regulatory Authorities (i.e. CRU & UREGNI) in conjunction with NERA Economic Consulting are undertaking a SEM PLEXOS Model Back cast and Validation project as part of this project a back cast using out-turn market data will be undertaken to test model settings and parameters, and findings, similar to, previous reviews will be made publicly available. Lastly the CRU welcome the sharing of analytical data from stakeholders. As decided in "Managing Volatility of the Public Service Obligation (PSO) Levy" (CRU/21/076) "Suppliers will have the option to submit their own estimates of Benchmark Prices to the CRU, as part of their annual PSO submission. Where provided these estimates will be used for comparison with the CRU's own estimates, with a view to helping refine future calculation of Benchmark Prices". The CRU notes that no supplier has provided such estimates since the implementation of this decision in 2021.

[15] "SEM PLEXOS Model Validation (2021-2029) and Back cast", SEM-21-086, NERA, 18 November 2021.

6. Cost breakdown of levy

6.1 Overview of support schemes

Table 5 provides a breakdown, by scheme and technology type, of the support rates during PSO Year 2024/25. Indicative REFIT Support Rates for the last nine months of the forthcoming PSO period are calculated by indexing the REFIT Reference Price (as published by DECC) for the first three months of the forthcoming period to an estimate of CPI for the current calendar year. For the 2024/25 PSO levy calculation, the CRU is applying the "Stability Programme Update Incorporating the Department of Finance's Spring Forecast" (April 2024), prepared by the Economics Division of the Department of Finance. The latest 2025 HICP inflation[16] estimate is 2.1%.

Support Scheme & Technology	2024 support rates (€/MWh)	2025 Indicative support rates (€/MWh)
RESS 1		
All Projects average Strike Price	74.08	74.08
RESS2		
All Projects average Strike Price	97.87	97.87
RESS 3		
All Projects average Strike Price	100.47	100.47
REFIT 1		
Biomass	105.21	107.42
Hydro	105.21	107.42
Landfill	102.29	104.44
Large Wind	83.29	85.04
Small Wind	86.22	88.03
REFIT 2		
Hydro	105.21	107.42
Landfill	102.29	104.44
Large Wind	83.29	85.04
Small Wind	86.22	88.03
REFIT 3		
AD CHP > 500 kWe	163.19	166.61
AD CHP ≤ 500 kWe	188.29	192.25
AD (non-CHP) ≤ 500kWe	138.08	140.98
AD (non-CHP) > 500kWe	125.53	128.17
Biomass CHP ≤ 1500 kWe	175.74	179.43
Biomass CHP > 1500kWe	150.64	153.80
Biomass Energy Crops	119.25	121.76
Other Biomass Combustion	106.70	108.94

Table 5: PSO Support rates for 2024 and 2025

[16] Economics Division of the Department of Finance

Table 6 provides a breakdown, by support scheme and technology type of the capacity supported, and the ex-ante cost estimates covered under the levy for 2024/25. The individual support schemes will be discussed in more detail in the sections that follow.

Support Scheme and Technology	Ex-ante PSO payment 2023/24 (€ million)	Ex-ante PSO payment 2024/2025 (€ million)	% Change in Payment	Capacity supported in 2023/24 (MW)	Capacity supported in 2024/25 (MW)	% Change in Capacity
AER						
Wind	-	-	N/A	0.0	0.0	N/A
Sub-total	**€0.00**	**€0.00**		**0.0**	**0.0**	
RESS 1						
Solar	-€6.00	-€2.78	-54%	592.4	36.0	-94%
Onshore Wind	-€53.54	-€31.76	-41%	276.4	272.8	-1%
Sub-total	**-€59.54**	**-€34.54**		**868.7**	**308.8**	
RESS 2						
Solar	NA	-€10.39	N/A	NA	775.4	N/A
Onshore Wind	NA	-€1.37	N/A	NA	20.4	N/A
Sub-total	**NA**	**-€11.76**		**NA**	**795.8**	
RESS 3						
Solar	NA	-€0.10	N/A	NA	10.1	N/A
Onshore Wind	NA	-€6.04	N/A	NA	104.4	N/A
Sub-total	**NA**	**-€6.14**		**NA**	**114.5**	
REFIT 1						
Biomass	€0.51	€1.98	289%	18.2	18.2	0%
Hydro	€0.01	€0.05	357%	0.7	0.5	-27%
Landfill	€0.22	€0.71	218%	13.8	6.9	-50%
Large Wind	€8.40	€27.15	223%	969.3	849.1	-12%
Small Wind	€0.97	€2.59	168%	96.8	72.8	-25%
Sub-total	**€10.11**	**€32.47**		**1098.8**	**947.6**	
REFIT 2						
Hydro	€0.00	€0.00	N/A	0.5	0.5	0%
Landfill	€0.00	€0.00	N/A	14.0	14.0	0%
Large Wind	€0.00	€0.00	N/A	2173.7	2109.7	-3%
Small Wind	€0.00	€0.00	N/A	123.9	123.9	0%
Sub-total	**€0.00**	**€0.00**		**2312.0**	**2248.0**	
REFIT 3						
AD CHP > 500 kWe	€0.03	€0.21	656%	1.1	1.1	0%
AD CHP ≤ 500 kWe	€0.54	€2.42	347%	4.5	4.0	-10%
AD (non-CHP) ≤ 500kWe	€0.00	€0.00	N/A	0.0	0.0	N/A
AD (non-CHP) > 500kWe	€0.00	€0.00	N/A	0.0	0.0	N/A
Biomass CHP ≤ 1500 kWe	€0.11	€0.46	328%	1.2	1.2	0%
Biomass CHP > 1500kWe	€0.00	€0.00	N/A	0.0	0.0	N/A
Biomass Energy Crops	€0.00	€0.00	N/A	0.0	0.0	N/A
Other Biomass Combust	€0.00	€0.00	N/A	110.4	38.4	-65%
Sub-total	**€0.68**	**€3.09**	357%	**117.1**	**44.7**	-62%
Total REFIT	**€10.78**	**€35.56**	**230%**	**3527.95**	**3240.3**	**-8%**
Total RESS	**-€59.54**	**-€52.44**	**-12%**	**868.71**	**1219.0**	**40%**
Total	**-€48.75**	**-€16.88**	**-65%**	**4396.7**	**4459.3**	**1%**

Table 6: Breakdown of ex-ante PSO Payment and capacity supported by support scheme and technology type

REFIT

The first Renewable Energy Feed-in-Tariff (REFIT 1) scheme was introduced in 2006, followed by REFIT 2 and 3 both in 2012. The technologies covered under each scheme are summarised in Table 7.

Scheme	REFIT 1	REFIT 2	REFIT 3
Technologies supported	• Biomass • Hydro • Landfill • Large Wind • Small Wind	• Hydro • Landfill • Large Wind • Small Wind	• AD (non CHP) > 500 kWe • AD (non CHP) ≤ 500 kWe • AD CHP > 500 kWe • AD CHP ≤ 500 kWe • Biomass CHP ≤ 1500 kWe • Biomass CHP > 1500 kWe • Biomass Combustion (non-CHP) ➢ Energy Crops ➢ Other Biomass

Table 7: Technologies supported under the three REFIT schemes

The ex-ante PSO amount finalized for the 2024/25 PSO year for the REFIT schemes is €35.56 million. This represents an increase of €8.73 million from the €26.84 million of support for these contracts included in the 2023/24 PSO Levy year. The REFIT generation capacity supported under the PSO in the 2024/25 PSO year is 3,240.3 MW.

RESS

The Renewable Electricity Support Scheme (RESS) is a government support scheme for renewable generators in Ireland. Under this scheme, renewable generators receive PSO support up to a guaranteed Strike Price. The Strike Price of each generator in this scheme is determined through an auction.

The first Renewable Electricity Support Scheme (RESS 1) auction took place in July 2020. In accordance with Government policy, the CRU has accepted ex-ante PSO submissions for RESS support in the PSO Year 2023/24 from projects that were successful in the RESS 1 auction. The CRU has received submissions from 47 RESS 1,2 and 3 projects for 397.6 MW wind and 821.48 MW solar.

A key difference between RESS and REFIT is that suppliers may owe money back to the PSO Levy where market prices exceed a project’s Strike Price. The 2024/25 indicative Benchmark Price is higher than the RESS Strike Price for many of the RESS submissions received. As a result, the net monies owed to suppliers under RESS in 2024/25 is negative €52.44 million.

Scheme	RESS 1	RESS 2	RESS 3
Technologies supported	• Onshore Wind • Solar	• Onshore Wind • Solar	• Onshore Wind • Solar

Table 8: Technologies supported under the three RESS schemes.

Summary of support schemes

The breakdown by technology of total ex-ante PSO cost and generation supported under the 2024/25 levy for REFIT and RESS is shown in Figure 8, with similar categories grouped together. As there are different support rates for the different technologies, the breakdown by cost differs from the breakdown by generation supported.

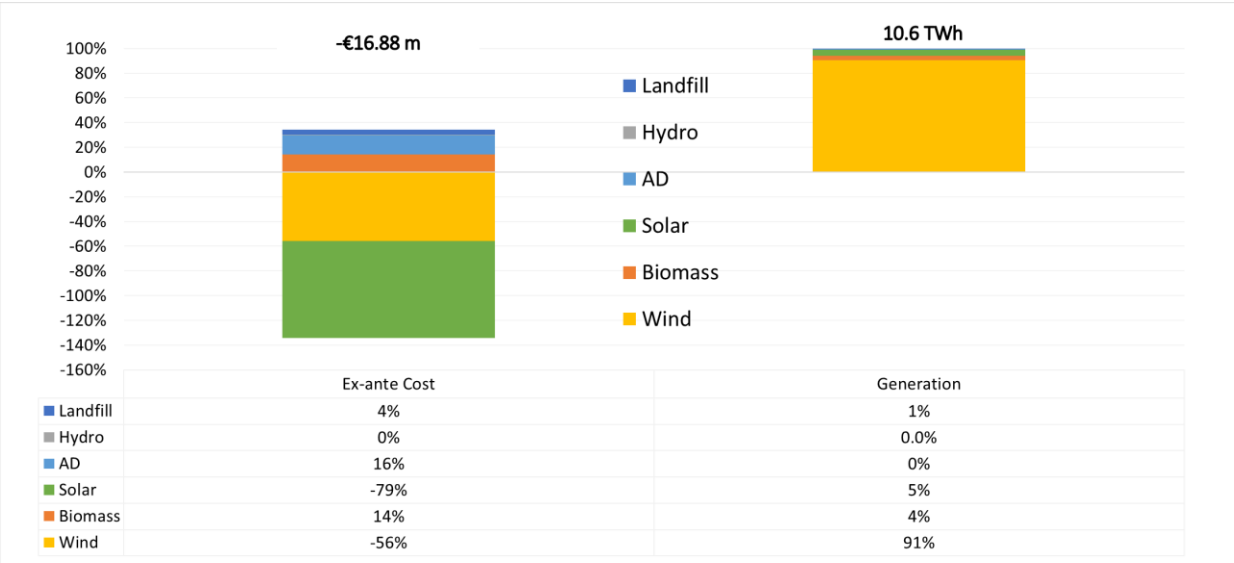


Figure 8: Breakdown of ex-ante costs and generation supported by technology type under the 2024/25 PSO Levy

6.2 R-factor

While the ex-ante estimates constitute part of the final 2024/25 PSO Levy. The R-factor i.e., the settlement of the ex-ante estimate component of the 2022/23 PSO Levy, based on actual outturn costs and market revenues, is the most significant component. The 2022/23 R-factor, included in the 2024/25 PSO Levy, accounts for the difference between the costs and revenues estimated for 2022/23 ex-ante and the actual costs and revenues for 2022/23 certified ex-post. Further detail on the methodology used in calculating the R-factor can be found in CRU/20/013.

A significant positive R-factor of €269.25 million has been included in the calculation of the final 2024/25 PSO Levy.

Component	R-Factor 2022/23 (€ million)
REFIT & RESS	326.93
Interim R-factor	-57.64
Total R-factor impact	**269.25**

Table 9: Breakdown of 2022/23 R-factor

The main reason for the significant 2022/23 R-factor is the difference between the 2022/23 Benchmark Price, as calculated by the CRU, and the out-turn market prices that occurred during the 2022/23 PSO year. The 2022/23 Benchmark Price was calculated using the CRU's SEM PLEXOS model (SEM-21-086).

The CRU observed a notable decrease in the commodity prices used to calculate the 2022/23 Benchmark Price(s) and the actual outturn market prices that occurred during the PSO Year 2022/23. Commodity prices reached record high levels during the unprecedented, highly volatile period in 2022. The 2022/23 Benchmark price was calculated during such period. Commodity prices have since retreated; however, prices remain high by historical standards. On average, the CRU observed a significant 70% decrease in outturn gas prices and a 50% decrease in coal prices. Outturn carbon prices decreased by 1%.

Lower SEM prices resulted in PSO generators receiving lower market revenue than anticipated, and hence REFIT and RESS Suppliers over-paying their additional costs during PSO Year 2022/23 through the ex-ante payments. This over-paid has been partially removed through the Interim R-factor in 2023/24 and will be fully reconciled through the 2024/25 PSO payments to suppliers.[17] In addition, outturn generation by REFIT supported generators for PSO Year 2022/23 was higher than the estimates of generation submitted beforehand. In recent years, the CRU has observed significant variance between estimated generation submitted by suppliers to the CRU and actual generation submitted by suppliers' ex-post. This has led to volatility in the PSO Levy. In Q3 2021, the CRU issued a decision addressing the volatility of the PSO, in particular regarding Suppliers obligations to submitted accurate estimate generation data CRU/21/076.

6.3 Publication of PSO Levy Data

As part of its 2024/25 PSO Decision Paper, the CRU will publish an Annex of additional data in relation to the PSO. This Annex details inter-alia, the estimated generation quantities and actual outturn generation for each individual REFIT project in the 2016/17 - 2019/20 PSO years, the Actual REFIT Payment associated with each REFIT project in the 2016/17 - 2022/23 PSO years, and the R-factor associated with each supply company in recent PSO years.

As noted in the "Notification to Suppliers - Submissions to the CRU for the 2024/25 Public Service Obligation (PSO) Levy" (CRU202406), the CRU will continue to publish data in relation to Actual REFIT Payments, estimated and actual REFIT generation and REFIT R-Factor payments for each supplier in receipt of PSO support. Furthermore, as stated in CRU202406, the CRU intends publishing the following information, in conjunction with its 2024/25 PSO decision paper:

i. the REFIT starts dates and REFIT end dates for each PSO supported project, as detailed by each supplier in their 2024/25 PSO submission.

This information is being published (as an Annex to this Decision Paper) to facilitate further transparency on the calculation of the PSO levy.

The CRU notes that as part of its recent Decision Paper on Managing Volatility of the PSO Levy, the CRU will now require suppliers' estimates of generation to be the average of actual generation data, when three full PSO years of data is available, or an unbiased P50 exceedance probability, otherwise. This should facilitate a reduction in the continuous overestimation of forecasted generation that currently occurs in the PSO levy.

[17] Refer to Appendix 2 for summary of the forecast commodity prices used in the calculation of the 2020/21 Benchmark Prices, relative to actual commodity prices in 2020/21.

6.4 Bad Debt

In accordance with the PSO Invoicing and Collection Procedures, in the case where a supplier has a net negative PSO payment, this amount is to be paid to the TSO (EirGrid) on a monthly basis. The recovery of the PSO monies owed will be pursued by EirGrid in accordance with its statutory responsibilities. CRU and the TSO will continue to pursue all relevant parties regarding the recovery of PSO monies owed.

6.5 HECHP Certification

The CRU requires (CRU/20/013) that suppliers contracted with a HE CHP generator that is supported under the PSO include a valid HE CHP certificate issued by the CRU covering the period to which the outturn calculations relate in their annual PSO submission[18]. If a valid certificate is not provided only the appropriate non-CHP rate for the relevant technology is applicable and suppliers will be requested to resubmit their outturn calculation based on the non-CHP rate.

The onus is on suppliers and their contracted generators to inform themselves of the requirements and to apply for HE CHP certification sufficiently in advance of the applicable PSO period.

[18] Planned plant certificates remain valid until 14 months after commissioning for the purposes of CHP plants to be able to collect operational/performance data (12 months) and to submit the relevant data to the CRU's HECHP Team for the performance certification. Once a CHP plant receives a performance certificate, the ex-post REFIT payment is updated to reflect the performance certificate (i.e., a Planned Plant Certificate cannot be used to calculate outturn REFIT costs & the supplier should not assume a generator unit is 100% certified on the basis of a Planned Plant Certificate). All queries relating to HECHP Certification should be emailed to hechp@cru.ie

7. Next Steps

As mentioned in the CRU's "Notification to Suppliers: Submissions to the CRU for the 2023/24 Public Service Obligation (PSO) Levy" (CRU202406), the CRU has in recent years published an increasing amount of data in relation to its calculation of the PSO levy. The purpose of this has been to increase transparency in the CRU's calculation of the PSO levy.

The CRU will continue to publish this data alongside future PSO Decision Papers. To facilitate further transparency in the calculation of the PSO levy, the CRU also intends publishing the REFIT start dates and end dates for each PSO supported project that are provided by the supplier (such dates will be subject to further review). As applicable, the CRU may also publish similar data in relation to its calculation of RESS payments under the PSO.

The PSO levy for the year 1 October 2024 to September 2025 is to be set out, as in Section 4.4 and Appendix 1 of this decision paper and will be applied to the electricity bills of all customers by their electricity suppliers over the applicable period.

PSO payments or settlements will only be made in respect of generation projects that have been included in the calculation of the PSO levy as published in this decision paper and that are listed in the forthcoming S.I. amending the 2002 PSO Order.

Between the publication of this decision paper and the making of the S.I., the CRU will continue to liaise with the DECC regarding eligibility of REFIT & RESS projects for inclusion in the 2024/25 PSO.

Appendix 1: Allocation of 2024/25 PSO Levy

Allocating 2024-25 PSO

	Individual Peak	MD at System Peak	% of Individual Peak	PSO Allocation €m	Total Mkt Cust Nos Mid Year (excl PL a/cs i.e. DG3)	Total Non-domestic mkt MICs kVA	Annual Charge € per Cust	Annual Charge €/kVA	Monthly Charge Monthly €	Monthly Charge
Domestic Profile	**1,962,335**	0.00	34.70%	87.37	**2,255,496**		38.74		**3.23**	**€ per Customer**
Small Profile	**602,839**	0.00	10.66%	26.84	**173,315**		154.87		**12.91**	**€ per Customer**
ie. non-domestic (excl PL) <30kVA										
Medium & Large Profile	**3,089,827**	0.00	54.64%	137.58		**7,294,262**		18.86	**1.57**	**€/kVA**
TOTAL	**5,655,001**		100.00%	**251.79**						
Number of months to recover charge			**12**							

Figure 9: Cost Allocation Model 2024/24 provided by ESBN

The "Annual cost" detailed for each customer category above is provided for information purposes. The monthly PSO Levy amount to be charged to Domestic Customers in 2024/25 PSO year is €3.23 per month. The monthly PSO levy to be charged to small commercial customers in the 2024/25 PSO year is €12.91 per month. The monthly PSO levy to be charged to medium/large commercial customers in the 2024/25 PSO year is €1.57/kVa per month.

Appendix 2: 2022/23 Benchmark Price

The time-weighted benchmark price for the 2022/23 PSO Levy was €341.25/MWh. The actual outturn average market price during the 2022/23 PSO Levy period was €140.40/MWh, which is approximately 59% lower than originally forecasted. The reason for the decrease is due to the volatility of commodity prices. A core driver of the substantial decrease in the average market price was the significant decrease in gas prices which peaked during the unprecedented, highly volatile period during 2022. Table 10 below shows how commodity prices decreased considerably throughout the PSO Levy period, particularly in Quarter 2 2023. On average, gas prices decreased by 70%, coal prices decreased by 50% and the price of carbon credits decreased by 1%.

	Gas Price (p/Therm)			Coal Price ($/Tonne)			Carbon Credits (€/Tonne)		
	Forecast	Actual	% Change	Forecast	Actual	% Change	Forecast	Actual	% Change
Q4 22	447.0	169.4	-62%	347.1	242.8	-30%	83.9	77.4	-8%
Q1 23	453.1	131.6	-71%	323.4	146.8	-55%	84.5	87.0	3%
Q2 23	332.7	83.5	-75%	286.4	122.4	-57%	85.2	86.4	1%
Q3 23	279.4	82.3	-71%	266.6	115.8	-57%	85.9	84.5	-2%
Average			-70%			-50%			-1%

Table 10: Forecast versus actual commodity prices for PSO Benchmark Price.

Figure 10 below graphs the impact that each commodity had on how the actual wholesale electricity market price deviated from the original forecasted benchmark price.

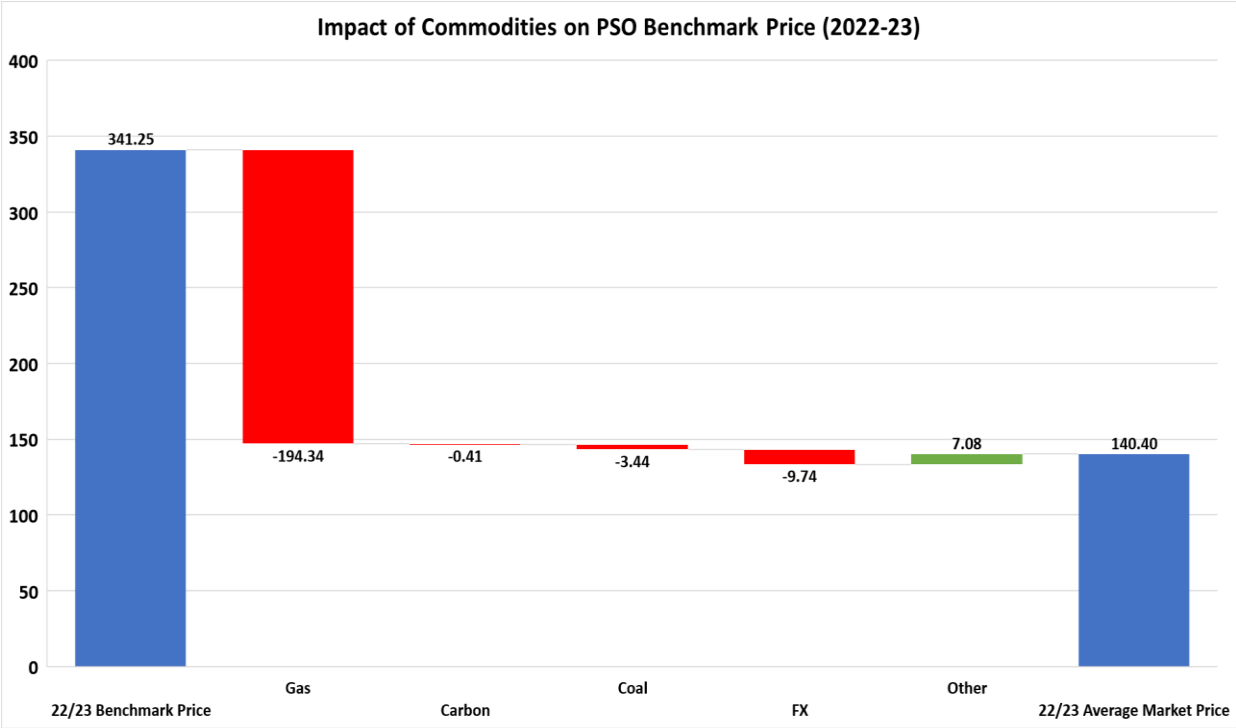


Figure 10: Impact of commodity volatilities on 2022/23 Benchmark Price