



An Coimisiún
um Rialáil Fóntas
**Commission for
Regulation of Utilities**

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Decision Paper

Public Service Obligation Levy 2023/24

Decision Paper

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Executive Summary

The Public Service Obligation (PSO) is, as applicable, charged or paid to, all electricity final customers. It is used to fund schemes designed by the Irish Government to support national policy objectives. The PSO currently supports the Renewable Energy Feed-In Tariff (REFIT) and the Renewable Electricity Support Scheme (RESS), both of which support renewable electricity generation projects.

Government policy determines the form of subsidy provided to generators supported under the PSO. The CRU's role is to calculate 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 (CRU202405) for the PSO period from 1 October 2023 to 30 September 2024.

The CRU has decided to set the PSO Payment to zero for 2023/24 PSO Year.

The final PSO funding requirement for 2023/24 is -€67.47 million. As represented in the graph below, this is a €1.14 million increase in the indicative PSO funding requirement which was estimated to be -€66.33 million, as published in the Proposed Decision of 28th June 2023 ([CRU202365](#)).

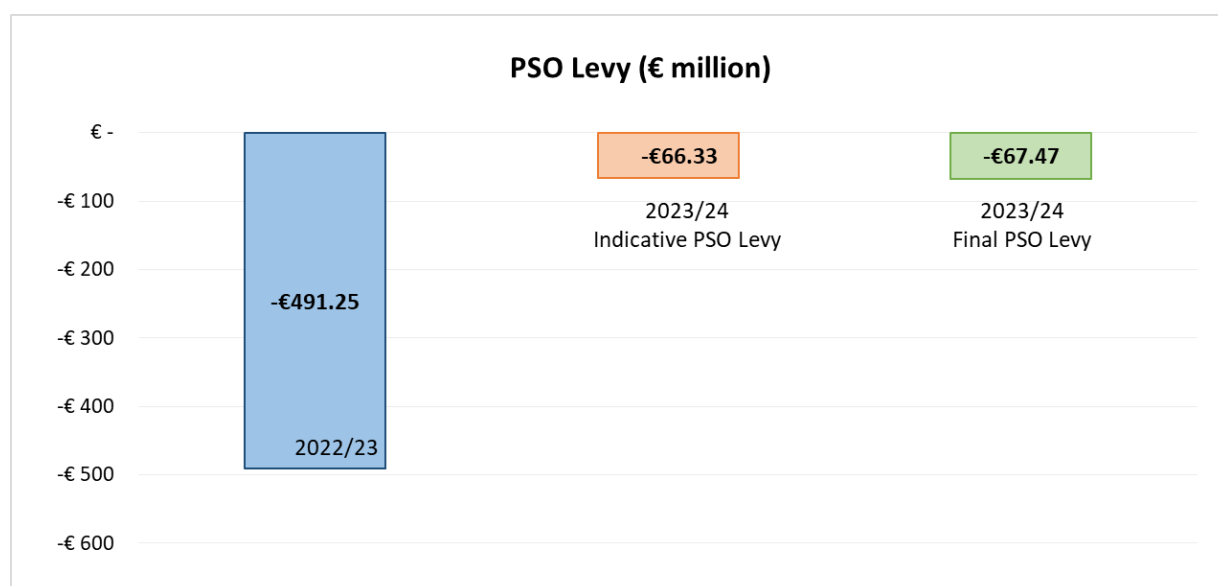


Figure 1 PSO Levy 2023-24 compared to proposed PSO levy of 2023-24

It is the CRU's role to estimate costs or benefits, and set the PSO Levy or PSO Payment, based on a Benchmark Price, using the best available data and using a methodology on which the CRU has consulted on¹.

The change in the PSO funding requirement since the Proposed Decision is predominately due to two factors. The inclusion of additional projects not in the Proposed Decision calculation increased the PSO Payment. Conversely, a slight decrease in the forecast electricity Benchmark Price for the 2023/24 PSO Year had an upward impact. This reduction in the forecast Benchmark Price between the indicative PSO Payment and the final PSO Payment was driven by a decrease in the forward prices of the key commodities that determine the price of electricity i.e., carbon, coal and in particular, gas.

The final 2023/24 Benchmark Prices are:

- Wind-weighted: €139.32/MWh
- Solar-weighted: €155.23/MWh
- Time-weighted: €145.58/MWh

This is in comparison with the Benchmark Prices used for the Proposed PSO Decision of:

- Wind-weighted: €145.62/MWh
- Solar-weighted: €159.45/MWh
- Time-weighted: €151.12/MWh

The negative PSO funding requirement for the upcoming PSO Year 2023/24 is -€67.47 million. While the PSO funding requirement is still negative, it represents a substantial increase (€423.78 million) from the 2022/23 PSO funding requirement of -€491.25 million.

The negative PSO funding requirement is a result of the inverse relationship between the PSO and the wholesale electricity price. When wholesale electricity prices are high, mostly because of high gas prices, renewable generators, which do not require

¹ [CRU2117-Consultation-Paper-Managing-Volatility-of-the-Public-Service-Obligation-Levy.pdf \(divio-media.com\)](#)

gas receive greater revenues for the electricity they sell in the wholesale market. As a result, for the PSO Year 2023/24, it is estimated that minimal support will be required from the PSO for REFIT supported generation. Moreover, under the terms of the RESS scheme, some renewable generation will owe money to the PSO for 2023/24.

Specifically, for the PSO period 2023/24 the key drivers for the negative PSO funding requirement are:

- (a) The Benchmark Prices estimated for the PSO Year 2023/24 slightly exceed the REFIT Reference price for the majority of technologies, resulting in a low level of support payments due to suppliers contracting with generators under REFIT. In addition, the Benchmark Prices estimated for the PSO Year 2023/24 are marginally greater than the applicable strike prices for the eligible suppliers contracting with generators under the RESS scheme. The RESS scheme is a two-way 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.

- (b) PSO 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 2021/22 R-factor which is included in the 2023/24 PSO calculation, is negative because of actual market revenues in 2021/22 exceeding the estimates on which 2021/22 ex-ante payments were based.

Figure 2 illustrates the history of the PSO Levy over recent years, showing the total Levy and its constituent parts.

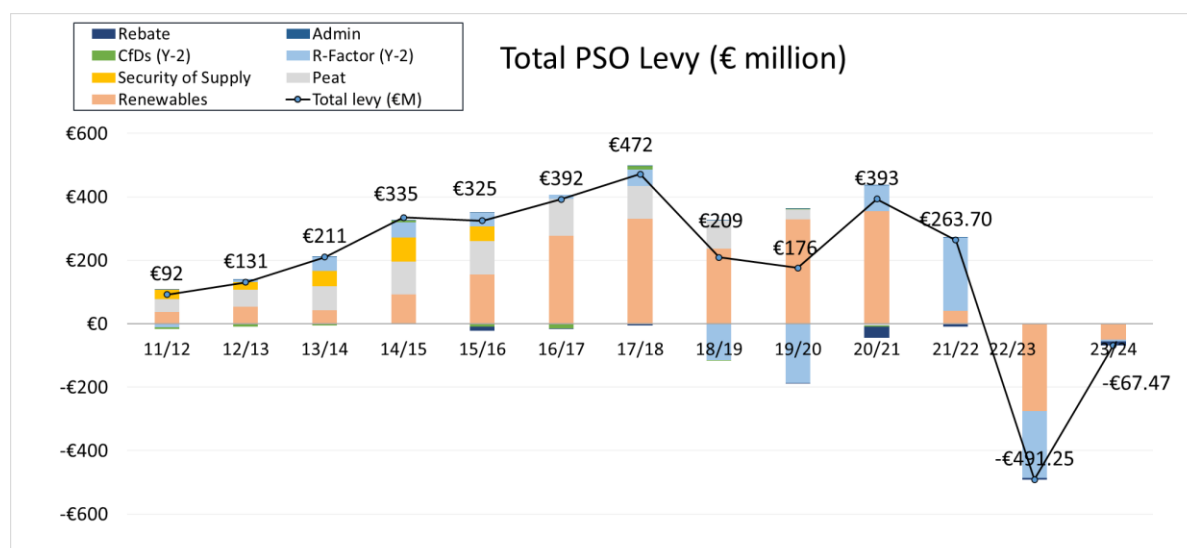


Figure 2 History of the PSO Levy outlining the total Levy and its constituent parts.

From a customer impact perspective, the forthcoming 2023/24 PSO is being set to zero. The funding requirement of -€67.47 million will be collected from renewable generation, in the normal manner and this will be used to decrease potential future costs to customers by reducing the large, anticipated R-factor due in the next PSO Year (2024/25).

The large, anticipated R-factor for PSO Year (2024/25), is due to the fact that actual market prices have been substantially lower than the Benchmark Prices used in the calculation of the 2022/23 PSO. This divergence between estimated and actual prices was predominantly driven by a decrease in the price of the key commodities that determine the price of electricity i.e., carbon, coal and, in particular, gas.

In 2021 the CRU, in its PSO Volatility Paper and subsequent decision paper, noted that there has been significant year-on-year volatility in the PSO levy. Such volatility has seen the PSO funding requirement and the associated PSO levy or payment rates (charged to or paid to customers) vary significantly from year to year, figure 2 above shows year on year variation in the PSO funding requirements since PSO Year 2011/12, including a breakdown showing the effect of R-factor payments. While some of the proposals in the consultation paper were not widely supported at the time, the CRU based on consultation responses did make amendments to the PSO forecast methodologies and committed to keeping all options under review.

Furthermore, the CRU notes that volatility not only impacts customers' bills, but also has an adverse impact on renewable generation, in particular on RESS suppliers, who are currently paying significantly more money to the PSO, and ultimately the customer, in the form of difference payments for 2022/23 than they are earning in the wholesale electricity market.

In summary and as detailed in table 1 given the potential significant magnitude of the 2022/23 R-factor, and the relatively small PSO funding requirement for PSO Year 2023/24, the CRU has decided to set the PSO to zero for 2023/24 PSO Year. The money collected from RESS and REFIT supported generation will be used to smooth potential future costs to customers.

PSO Customer Category	Monthly Levy Amount (2022/23) (€/customer)	Monthly Levy Amount (2023/24) (€/customer)
Domestic	-7.43	0.0
Small commercial (MIC < 30 kVA)	-25.96	0.0
Medium/Large commercial (MIC ≥ 30 kVA) (€/kVa)	-3.53	0.0

Table 1 2023/24 PSO Levy

Public/Customer Impact Statement

Under the legislation, the PSO funds Government-designed schemes to support national policy objectives. Currently, PSO schemes provide support for 4,396.7 MW of electricity generation from renewable sources. The PSO Levy or PSO Payment is charged or paid to customers and has varied over the last number of years as the amount of supported generation has increased, and as wholesale electricity prices, which affect the levels of support, have varied. For the PSO Year starting 1 October 2023, the CRU has calculated that the final PSO funding requirement will decrease by 86% from -€491.25 to -€67.47 million.

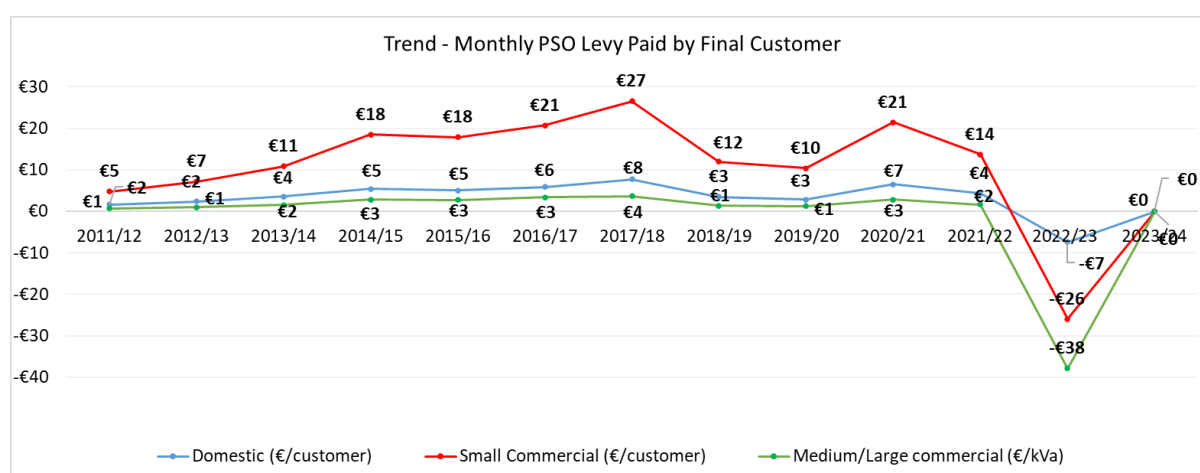


Figure 3 Trend of monthly PSO Levy paid/credited from/to final customer.

In the current PSO year (2022/23) there has been a PSO payment from the supported renewable generation to customers, amounting to a payment of €89.10 over the year to domestic customers. So far in the current PSO Year (2022/23), actual market prices have been substantially lower than the Benchmark Prices used when this payment from renewable generators to customers was calculated.

This divergence is likely to result in a significant positive R-factor in PSO Year 2024/25, which means customers would be required to pay this back to renewable generators.

This is because currently renewable generation is paying more money to the PSO, and ultimately the customer, than it is earning in the wholesale electricity market

The CRU is conscious a higher charge in the 2024/25 period will be challenging for many customer groups. Given the relatively small payment that would be due to customers for the coming PSO Year 2023/24, the CRU has decided that the PSO Levy for that period is set to zero. The negative PSO funding requirement of -€67.47 million which will be collected from renewables during this period will be used to in next year's PSO calculation to reduce the overall funding requirement for 2024/25. This will help reduce the impact of higher charges that would occur on next year's customer's bills.

The CRU further notes that although setting the PSO Levy to zero will reduce the fixed charge element on electricity bills, savings on the variable aspect (i.e., the price per unit of electricity) of the electricity bill can be gained through switching electricity supplier and through energy efficiency.

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Glossary of Terms and Abbreviations

Abbreviation	Definition
AD	Anaerobic Digestion
AER	Alternative Energy Requirement
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 CRU Strategic Plan 2023-24

Our Mission 1. Protecting the public interest in water, energy and energy safety.	Our Strategic Priorities <ul style="list-style-type: none">• Ensure Security of Supply• Drive a Low Carbon Future• Empower and Protect Customers• Enable our People and Organisational Capacity
Our Vision <ul style="list-style-type: none">• Safe, secure and sustainable supplies of energy and water, for the benefit of customer now and in the future	

1.2 Structure of Paper

The remainder of this document is structured as follows:

Section 2 – Background: Provides details on the PSO Levy and Payment, 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 capacity payment applied in calculating the PSO for 2023/24.

Section 4 –2023/24 PSO: Gives a high-level overview of the PSO in terms of total cost and total generation capacity supported, as well as the allocation of the cost to the different PSO customer categories.

Section 5 – Cost Breakdown of Payment: Provides a breakdown of the proposed PSO in terms of the support schemes and generation technologies that it supports.

Section 6 – Next Steps.

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

Appendix 2: Provides an analysis of the CRU's 2023/24 Benchmark Price.

1.3 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/20/005](#), "Notification to Suppliers – Submissions to the CRU for the 2021/22 Public Service Obligation (PSO) Levy", 24 January 2020
- [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", 29 July 2022
- [CRU/21/045](#), "Decision Paper Arrangements for Calculation of the PSO Levy: Renewable Electricity Support Scheme & Clean Energy Package"
- [CRU/21/17](#), "Managing Volatility of the Public Service Obligation Levy", 25 February

- [CRU202365](#), “PSO Proposed Decision Paper 2023-24” 28 June 2023

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)
- (i) [EC C\(2020\) 4795](#), “State Aid SA.54683(2020/N) – Ireland Renewable Electricity Support Scheme (RESS)”, 20 July 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 July 2020

2. Background

2.1 The Difference between REFIT and RESS

The REFIT schemes are the main financial support provided to renewable electricity generators, with approximately 3,528 MW of REFIT supported capacity. 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 technologies set by DECC.² In all three schemes, support has been allocated to eligible suppliers, on a first-come-first-served basis.

Generators 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)³. 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 commercial negotiation between the two parties, except that the PPA price must be greater than or equal to a REFIT reference price⁴, as specified in the terms and conditions of the scheme published by DECC.

In February 2020, DECC established RESS. As with REFIT, RESS provides support primarily in the form of contracts for difference (CfDs), with payments calculated as a metered quantity generated multiplied by the difference between a strike price and a deemed market price. RESS differs from REFIT primarily by:

- (i) RESS 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 3 and 4); and

² 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 DECC and adjusted annually by way of indexation, based on the Consumer Price Index (CPI).

³ 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.

⁴ Refer to Section 3.6 of REFIT 2 and 3 terms and conditions for further detail.

- (ii) support is allocated, not on a first-come-first-served basis, but through auctions managed by the TSO, in which eligible projects compete to offer the lowest strike price.

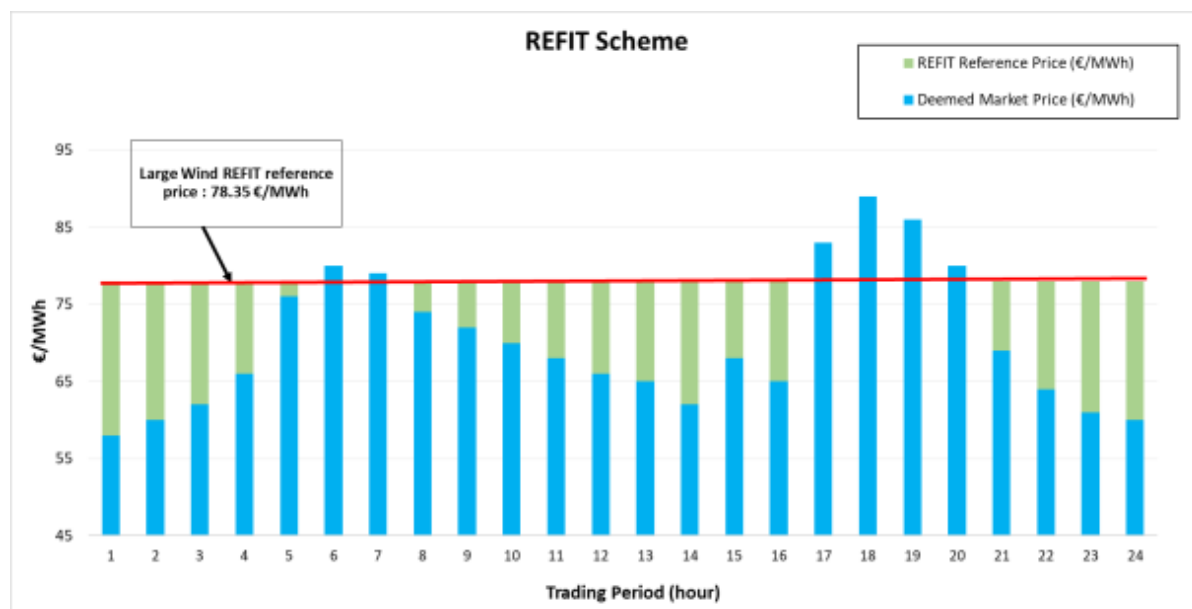


Figure 4 Illustration of REFIT Scheme (one-way CfD)

As illustrated in Figure 4, above, the REFIT reference price, as set by DECC, is 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. As shown, the green portion of the bar in trading periods represents a top up to the applicable generator, up to the REFIT reference price.

RESS Strike Prices are 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 bars in Figure 5 show payments made back from RESS generators to the PSO under the terms of the scheme.

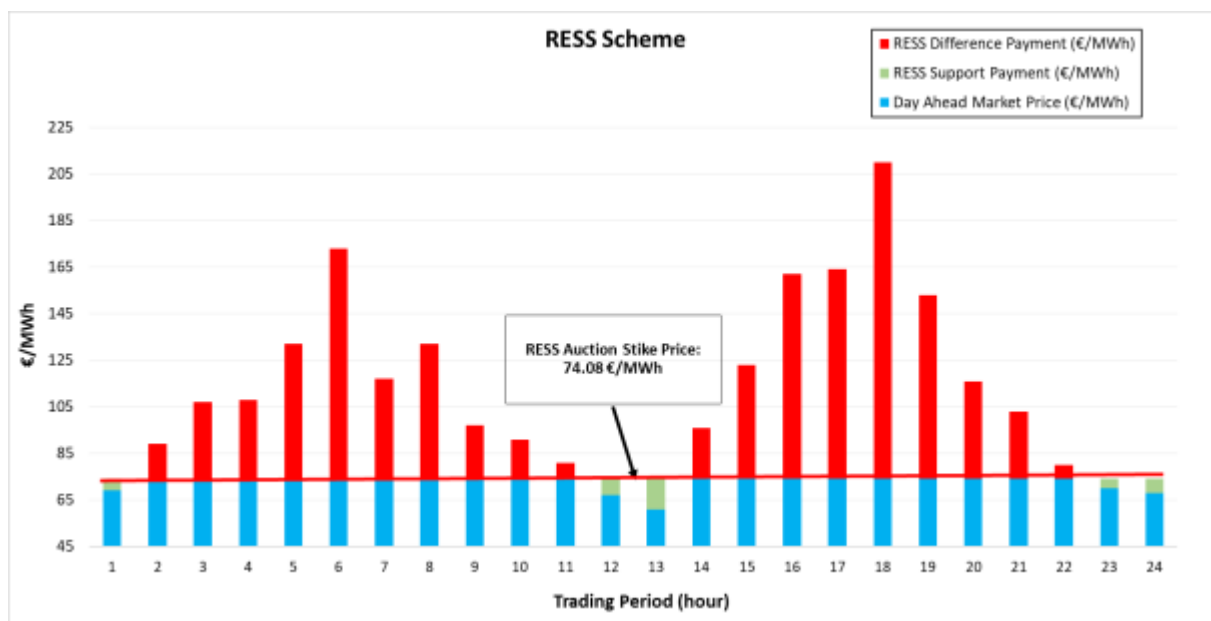


Figure 5 Illustration of RESS Scheme (two-way CfD)

2.2 The PSO Levy or PSO Payment

The PSO funds various schemes designed by Government to support national policy objectives related to renewable energy.⁵

Before PSO Year 2022/23, the PSO Levy was charged to all electricity final customers⁶ in Ireland, with the proceeds used to compensate the:

⁵ Until 2016, the PSO Levy supported security of supply policy objectives. The PSO Levy also supported national policy objectives in relation to indigenous fuels through the Peat PSO Scheme. This scheme expired at the end of 2019.

⁶ The Electricity Regulation Act, 1999, defines final customer as “a person being supplied with electricity at a single premises for consumption on those premises”.

- i. Additional costs⁷ incurred by market participants in generating or purchasing electricity from PSO-supported generators⁸. 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 resulted in suppliers who are contractually obliged to purchase renewable electricity receiving benefits, rather than incurring additional costs. It followed that PSO Payments were owed to, rather than a PSO Levy being levied on, final customers.

Consequently, whereas payments have previously flowed to REFIT and RESS suppliers from final customers, the arrangements now also accommodate payments from REFIT and RESS Suppliers to final customers.

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

⁷ The 2002 Order (see Section 2.3) does not define what is meant by “additional costs” other than to state in Article 2(3) 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.

- 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 Payment calculation for PSO Year 2023/24 includes a reconciliation of the costs incurred during PSO Year 2021/22 with the support payments made during PSO Year 2021/22. The 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. 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 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.

In a Levy Period:

- (i) The DSO and TSO collect the PSO Levy from retail suppliers of final customers connected to the distribution and transmission systems, respectively;
- (ii) The PSO Levy payments made to the TSO are collected by the DSO; and
- (iii) The TSO pays support payments to REFIT and RESS Suppliers

In a Payment Period:

- (i) The TSO collects payment from REFIT and RESS Suppliers;
 - (ii) The TSO gives the DSO the proportion of PSO Payments from distribution system connected customers; and
- The payment by the DSO and TSO to suppliers of final customers respectively connected to the distribution and transmission systems.

Although the PSO Levy or PSO Payment is paid to or from the supplier as applicable, generators receive support through the price specified in the PPA⁹.

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 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, Small Commercial Accounts and Medium/Large Commercial)¹⁰ based on each category’s peak demand as a proportion of total demand. For each PSO year the DSO calculates each of the category’s demands in accordance with Section 39(5A)(b) of the Act. CER/17/073¹¹ 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
- Duties of the DSO
- Duties of the TSO

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.

¹¹ Decision on ESB Networks’ Updated PSO Levy Cost Allocation Methodology.

- Duties of final customers
- Recovery of contract debt.

Subsequent S.I.s have amended the 2002 Order to provide for the recovery of costs under 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, which have also been subject to state aid approval from the European Commission. 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. Together with estimates of generation output provided by suppliers, it is used by the CRU 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 (for REFIT) or the strike price (for RESS), to determine either the support to be paid to the REFIT or RESS Supplier from the PSO Levy or the Difference Payments to be made 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, based on the different seasonal and diurnal patterns of generation. The current time-weighted Benchmark Price applies to all other technologies.

The CRU used a PLEXOS model of the SEM to calculate the final Benchmark Prices (see [SEM-21-086](#)). The final Benchmark Prices for PSO Year 2023/24 are:

- Wind-weighted: €139.32/MWh
- Solar-weighted: €155.23/MWh
- Time-weighted: €145.58/MWh.

The closing fuel and carbon prices and foreign exchange rates used in the calculation of the Benchmark Price(s) are from 12th July 2023.

3.2 Capacity payment

The CRU has used the results of the Final Capacity Auction Results 2023/2024 T-4¹² 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 2023/24 PSO calculation.

4. PSO for 2023/24

4.1 PSO Calculation for PSO Year 2023/24

Following the same calculation procedure used in previous PSO Years, the final PSO for PSO Year 2023/24, based on the final Benchmark Prices and capacity payment assumptions, as described in Section 3, is **-€67.47 million**.

Table 2 shows the high-level breakdown, comprising the ex-ante calculated benefits for 2023/24, the R-factor from 2021/22, estimated administrative expenses for 2023/24 and the rebate.

¹² [SEMO \(2022\) 'Final Capacity Auction Results: 2023/2024 T-4 Capacity Auction'](#)

Component	Generation Capacity Supported (MW)	Forecast Cost 2023/24(€ million)	R-factor 2021/22 (€ million)	Total PSO support 2022/23 (€ million)
Renewables	4,117	-49.1	-6.6	- 55.7
Admin	-	-	-	0.9
Rebate				-12.6
Total	4,117.3	-49.1	-6.6	-67.47

Table 2 Breakdown of annual final PSO Levy costs 2023/24

Additionally, Figure 6 shows the annual breakdowns and trend in the annual total PSO Levy and PSO Payments since 2011/12.

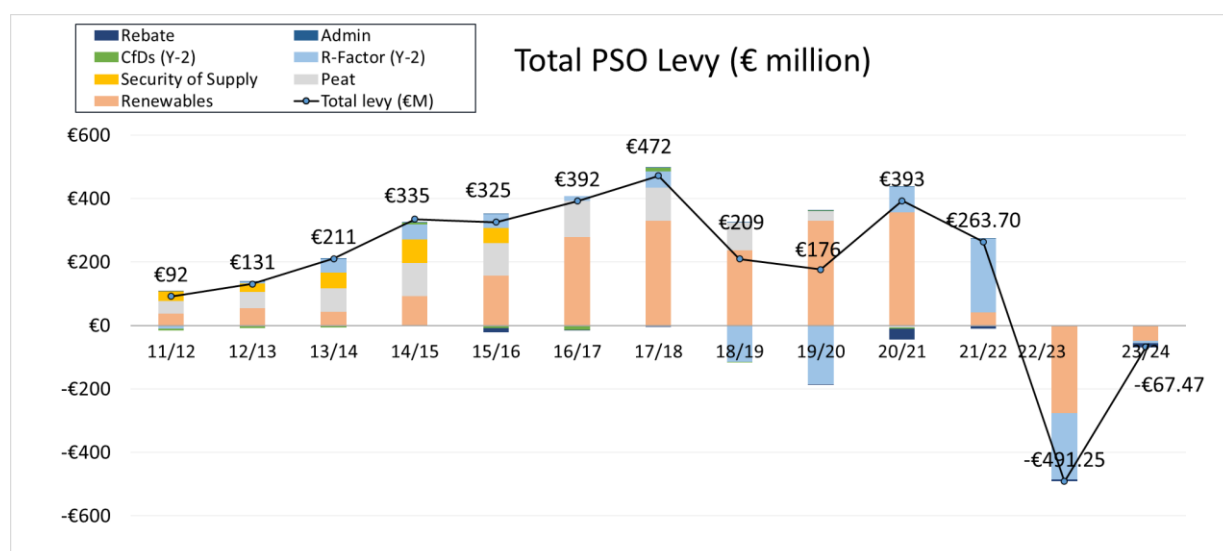


Figure 6 Annual breakdown and trend of total PSO levies

4.2. Drivers of year-on-year change

A PSO Payment for PSO Year 2023/24 of €67.47 million represents an increase of €423.78 million (86.3%) on the PSO Payment of -€491.25 million in PSO Year 2022/23. A number of drivers contribute to this, including the decrease in 2022/23 Benchmark Prices - resulting in less negative ex-ante RESS payments - and a smaller 2021/22 R-factor compared to the large negative 2020/21 R-factor included in the current PSO Year. Further detail on each is given below:

Upward Drivers of the 2023/24 PSO compared to the 2022/23 PSO Payment

i. Lower Benchmark Prices:

The forecast Benchmark Prices are significantly lower than those used in calculating the 2022/23 PSO levy¹³. This increases the ex-ante payments made to PSO supported generators in the 2023/24 PSO Year by approximately -€237.29 million. This is because a lower forecast market revenue increases the amount of funding required from the PSO levy to compensate suppliers up to the guaranteed rates.

ii. 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 2023/24 indicative Benchmark Prices are higher than the strike price of RESS units that have made ex-ante submissions for the PSO Year 2023/24. Based on the CRU's current 2023/24 PSO projection, a number of these projects will owe amounts to the PSO ex-ante in the 2023/24 PSO year. As a result, the 2023/24 net ex-ante payments under the RESS scheme are -€59.53 million.

iii. Negative R-factor:

A 2021/22 R-factor of -€6.58 million is included in the 2023/24 PSO Levy calculation. The 2021/22 R-factor accounts for the difference between the PSO monies paid suppliers in the 2021/22 PSO Year, calculated ex-ante, and the actual PSO monies owed to suppliers from the 2021/22 PSO Year, certified ex-post. The R-factor for the 2021/22 PSO year is negative, meaning suppliers over-recovered in the 2021/22 PSO Year. This negative 2021/22 R-factor of -€6.58 million constitutes a net increase of €203.69 million in comparison to the 2020/21 R-factor of -€210.27 million. This is a significant upward driver in the 2023/24 PSO Levy.

¹³ The Benchmark Prices for the 2022/23 PSO Levy were: Wind-weighted €330.23/MWh, Solar-weighted €332.66/MWh and Time-weighted €341.25/MWh.

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.

ESB Networks' 2023/24 PSO Cost Allocation Model provides final projections of customer numbers and demands for the PSO Year 2023/24.

Table 3 shows the monthly proportion of the final 2023/24 PSO Payment of €67.47 million allocated to each of the three customer categories by ESB Networks' model.

PSO Customer Category	Monthly Levy Amount (2022/23) (€/customer)	Monthly Levy Amount (2023/24) (€/customer)	Year on Year 'Monthly' Change (€/customer)	Change (%)
Domestic	-7.43	-0.93	-6.50	-88%
Small Commercial (MIC < 30 kVA)	-25.96	-3.54	-22.42	-86%
Medium / Large Commercial (MIC ≥ 30 kVA) (€/kVa)	-3.15	-€0.44	-2.53	-87.53%

Table 3 Cost allocation by customer category (monthly)

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 2023/24, updated forecast demand data results in a decrease of 3.1%. Domestic customers account for 36.5% of peak demand, compared to 39.7% in the PSO Year 2022/23. This decreases Domestic customers' share in the negative PSO Levy relative to other PSO customer categories.

- **Small Commercial customers:** Updated for PSO Year 2023/24, the forecast demand figures show a slight decrease of 0.1%. Small Commercial customers account for 10.9% of peak demand, as opposed to 11% for 2022/23 PSO year.
- **Medium / Large Commercial customers:** For 2023/24, the updated forecast demand data resulted in an increase of 3.2% in allocation of the total PSO Levy to Medium / Large Commercial customers. In PSO Year 2023/24 Medium / Large customers account for 52.6% of peak demand as compared to 2022/23 PSO Year of 49.4%.

Other factors which impact the year-on-year change to the charge or payment to each customer category are 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.

ESB Networks' final 2023/24 PSO Cost Allocation Model estimates that the number of Domestic customers in the 2023/24 PSO year will increase by 1.4%, as compared to their 2022/23 model, while the number of Small Commercial customers is expected to decrease by 0.1%. However, the Medium / Large Commercial category is forecast to see an increase, with a change in aggregate MIC of -4.4%. Appendix 1 provides further detail.

4.4. PSO for PSO Year 2023/24

The calculated R-factor for PSO Year 2021/22 of -€6.58m follows the R-factor Euribor correction for the previous year (2020/21), which was applied in setting the PSO Payment of -€210.27 million in the current PSO Year (2022/23)..

Moreover, while the R-factor for the current PSO Year (2022/23) will not be known until the ex-post submissions are received in 2024, it has become evident that outturn market prices have in recent months been far lower than anticipated. This is because the Benchmark Prices for 2022/23 were forecast in July 2022 when commodity prices were extremely high. If market prices for the remainder of the PSO Year remain in line

with current expectations, the R-factor for the whole PSO Year could be in the region of €220 million.

The CRU consulted on managing the volatility of the PSO in 2021¹⁴. This was prompted in part by the effect the R-factor can have in exacerbating the year-on-year variability of the PSO. One option considered involved smoothing the R-factor. The proposal was not widely supported, and the CRU did not pursue development of the option, although it stated it would keep the option under review. One of the concerns of the proposal was that it involved withholding funds from final customers, when Levy rates are or otherwise would be low, so they could be released when Levy rates are high.

The likely level of costs or payments during PSO Year 2024/25 is unknown. However, following the procedure used in previous PSO Years, the consequence of the R-factor for the current PSO Year is that the PSO Levy in 2024/25 is likely to be higher, or the PSO Payment lower, by approximately €220 million.

Therefore, the CRU has decided that, while the final R-factor for 2022/23 is not yet known, a proportion of the likely R-factor will be applied during PSO Year 2023/24, rather than waiting until PSO Year 2024/25. Specifically, the CRU has decided that the PSO Payment of €67.47 million is set to zero.

This will have the effect of recovering around a third of the R-factor expected for the current PSO Year (2022/23), in the upcoming PSO Year (2023/24), and hence reducing the R-factor to be applied in PSO Year 2024/25.

Through allowing a proportion of the negative cashflow in PSO Year 2023/24, rather than a year later, the decision will also help RESS suppliers who were affected by making significant Difference Payments to the PSO while receiving less revenues they expected from the wholesale electricity market in 2022/23. Thus, by reducing year on

¹⁵ "Consultation Paper: Managing Volatility of the Public Service Obligation Levy", CRU/21/017, 25 February 2021.

year volatility through R-factor smoothing, it also helps redress some of the cash flow issues experienced by RESS suppliers a year earlier.

4.5. 2022/23 Interim R-factor

The PSO Levy for PSO Year 2023/24 is being set to zero. This is due to bringing forward some of the R-factor correction for the current PSO Year (2022/23) that would otherwise be applied in PSO Year 2024/25 to PSO Year 2023/24. Whereas the R-factor correction in PSO Year 2024/25 will be calculated for each REFIT and RESS Supplier based on the audited out-turn costs and benefits as per the Suppliers' ex post submissions, this interim R-factor correction for PSO Year 2023/24 must be estimated.

In the absence of outturn generation for the current PSO Year, the CRU will apply an interim R-factor correction in respect of the current PSO Year of €67.47m, pro-rated on the basis of the ex-ante estimates of generation, as submitted last year. The CRU acknowledges that, ultimately, the ex-post correction will depend on the difference between outturn market prices and the reference or strike price for each individual, and actual meter project.

However, for the purposes of calculating the interim R- factor correction, the CRU has decided to allocate the PSO funding requirement for 2023/24 based on ex-ante estimate generation, which is relatively simple to implement efficiently and timely. Furthermore, the CRU notes that any correction due can be made when audited outturns are submitted as part of the normal PSO calculation process.

5. Key Comments Received

The CRU received four non-confidential responses, and two confidential responses, to the Proposed Decision Paper. The non-confidential responses were from Bord na Mona, Energia, Erova, and Wind Energy Ireland.

5.1 Comments Received

One respondent said that the large difference in Benchmark and actual market prices in PSO Year 2022/23 has created solvency issues, caused reputation issues with lenders, and could result in an increased financing cost. It welcomed the CRU's acknowledgement of the problem but sought clarification as to how the negative cash balances will be repaid from October 2023, and urged the CRU to investigate any other processes by which RESS projects could receive owed monies ahead of PSO Year 2024/25. The respondent noted that early repayment would be of benefit to both RESS projects and PSO customers, who would otherwise have to bear significant interest payments at the currently high Euribor rates.

The respondent said it believed that Benchmark Prices are over-estimated, and the methodology should be reviewed. It said RESS projects are currently exposed to negative prices, without any way of avoiding being dispatched, and suggested this needs to be resolved by DECC, EirGrid and CRU. Lastly, the respondent requested the CRU elaborate on when its powers to revisit the determination of the PSO Levy or Payment during a PSO Year will be used.

A second respondent noted that the Proposed Decision Paper acknowledged the divergence between outturn market prices and Benchmark Prices used in setting the PSO Payment had had an adverse effect on RESS generator cashflows during PSO Year 2022/23. They pointed out it is RESS Suppliers, rather than RESS generators, that have had to bear the adverse impact on cashflows. They also said the failure of some RESS generators to reach Commercial Operation had been a further aggravating factor.

The respondent acknowledged the CRU's proposal to set the PSO Payment for PSO Year 2023/24 to zero would recover approximately one third of the likely R-factor arising from the current PSO Year but was concerned under or over-recovery by RESS Suppliers in the coming PSO Year will again be governed by the relationship between actual market prices and Benchmark Prices. The respondent requested the CRU set a PSO Levy, amounting to approximately €66m, in order to recover a further third of the anticipated R-factor from the current PSO Year. It was argued that, as well as further smoothing costs for end consumers, there would be a saving in interest costs.

Two further respondents also expressed concerns about the recent volatility in the energy market, and its effect on PSO amounts and future R-factors. They said that there was a risk of RESS being unworkable, with the need to manage sizeable cashflow constraints limiting supplier participation in the PPA market and higher RESS prices to cover working capital costs. They also commented that, under current arrangements, suppliers are invoiced for the PSO each month, but customers are billed bi-monthly, leaving suppliers covering the cost of the PSO for a period of two months.

All respondents agreed with the proposal to set the PSO to zero and said they would welcome it if the CRU could find a means to direct the money withheld to RESS Suppliers as quickly as possible. They also said the current negative balance presents an opportunity to "pre-fund" the PSO. However, they said the current energy market volatility and its effects illustrated the need to amend the current mechanism and supported the implementation of more of the measures discussed in the consultation in 2021 on managing PSO volatility.¹⁵¹⁶

One of the two respondents said that, while it acknowledged that the CRU's primary role is the calculation of the PSO in accordance with Government policy, the CRU's policy will have a direct role in relation to how renewables are dispatched down, which will be reflected in RESS auction bids.

¹⁵ "Consultation Paper: Managing Volatility of the Public Service Obligation Levy", CRU/21/017, 25 February 2021.

¹⁶ "Decision Paper: Managing Volatility of the Public Service Obligation Levy", CRU/21/076, 30 July 2021.

5.2 CRU Response

The CRU acknowledges concerns with the 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. The problem is clearly exacerbated when there is a divergence between actual market and Benchmark prices. As recognised in responses, if this divergence is due to volatility in the energy markets, then no improvement in forecasting would avoid it. The CRU uses 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 2021¹⁷ found that the CRU's SEM model "reasonably replicates" average SEM prices, with a slight tendency to underestimate, rather than overestimate, average SEM prices.

The CRU recognises that the failure of generators to commission when expected will delay the earning of market revenues, potentially exacerbating the cashflow issue. However, if Commercial Operation is delayed any overpayment by the supplier is reconciled through the current reconciliation process.

The CRU welcomes that respondents regard setting the PSO to zero as a helpful proposal and notes the requests that the resulting funds be directed to RESS Suppliers as quickly as possible. The "interim R-factor" described in Section 4.5 is intended to achieve this distribution of funds in a timely and appropriate manner.

The CRU understands the suggestions to expand on the interim R-factor by setting a PSO Levy, with a view to doubling the interim R-factor, or even setting a PSO Levy to "pre-fund" the PSO. However, as discussed in the Decision Paper on managing PSO volatility¹⁸, the CRU considers that pre-funding, in effect charging a levy on final customers for the purpose of returning it later, is not appropriate, as discussed in the Decision Paper on managing PSO volatility¹⁹. While doubling the interim R-factor

¹⁷ "SEM PLEXOS Model Validation (2021-2029) and Back cast", SEM-21-086, NERA, 18 November 2021.

¹⁸ [CRU/21/076](#)

²⁰ [Central Bank of Ireland – Q1 2023 Economic Bulletin](#).

would not be the full equivalent of pre-funding, the CRU believes it would not be appropriate to impose this additional cost on final customers at this time.

The CRU acknowledges comments that early payment to RESS Suppliers would help customers by avoiding interest payments. However, the CRU are of the view, that given current electricity costs faced by customers it would not be appropriate to increase the burden on customers at this time.

The CRU acknowledges the comments that the PSO mechanism may need to be amended to address the cashflow challenges that have occurred in recent years. While these are issues outside the scope of decision, the CRU recognises this as risk for suppliers and will keep it under review, in parallel with discussing the risk with DECC.

The CRU notes also the request that it elaborate on when it will use its power to revisit the determination of the PSO Levy or Payment during a PSO Year. Article 9(4) of the PSO Order, is 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 was set. It is CRU's interpretation that the provision is to allow a revision of payments both in and out of the PSO Payment fund, on the basis that, although there isn't any significant mismatch in payments received or paid, the PSO Payment itself may, with hindsight, have been set at a different level.

The CRU acknowledges that the cashflow implications of RESS are borne primarily by RESS Suppliers, not generators. In Section 2.1 of the proposed and final decision papers the CRU outline clearly the relationship between suppliers who have PPAs with eligible generators.

The CRU notes the comments that Suppliers are invoiced monthly for the PSO but typically bill customers bi-monthly in arrears, and hence have to fund the PSO for a period of two months. However, the CRU does not agree with the accuracy of the statement: although Suppliers are invoiced monthly, payments are not due to be made to the DSO (or TSO) until after a substantial time frame allowing adequate time for a significant proportion of customer bills to be paid in advance of any PSO payment due to the DSO (or TSO)..

Lastly, the CRU notes comments that RESS generators are exposed to negative prices without any way to avoid being dispatched, and that the way generators are dispatched down will affect RESS auction prices. These issues are outside the scope of this paper.

6. Cost breakdown of levy

6.1. Overview of support schemes

Table 4 provides a breakdown by scheme and technology type, of the support rates during PSO Year 2023/24. 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 2023/24 indicative PSO Levy calculation, the CRU has applied the Irish Central Bank's 2024 HICP inflation²⁰ estimate of 3.29%.

²⁰ [Central Bank of Ireland – Q1 2023 Economic Bulletin.](#)

Support Scheme & Technology	2023 support rates (€/MWh)	2024 Indicative support rates (€/MWh)
AER		
Wind	N/A	Not applicable
RESS 1		
Solar Strike Price	72.92	72.92
All Projects Strike Price	74.08	74.08
REFIT 1		
Biomass	98.97	102.14
Hydro	98.98	102.14
Landfill	96.23	99.31
Large Wind	78.35	80.86
Small Wind	81.11	83.70
REFIT 2		
Hydro	98.97	102.14
Landfill	96.23	99.31
Large Wind	78.35	80.86
Small Wind	81.11	83.70
REFIT 3		
AD CHP > 500 kWe	153.52	158.43
AD CHP ≤ 500 kWe	177.13	182.80
AD (non-CHP) ≤ 500kWe	129.90	134.06
AD (non-CHP) > 500kWe	118.09	121.87
Biomass CHP ≤ 1500 kWe	165.32	170.61
Biomass CHP > 1500kWe	141.71	146.24
Biomass Energy Crops	112.19	115.77
Other Biomass Combustion	100.38	103.59

Table 4 Breakdown of PSO support rates²¹

²¹ Under the REFIT Schemes a Balancing Payment is paid to suppliers in addition to their REFIT “top up” payment.

Table 5 provides a breakdown by support scheme of the capacity supported and the ex-ante cost estimates covered under the PSO Levy for 2023/24. The following sections discuss in more detail the individual support schemes.

Support Scheme & Technology	Ex-ante PSO payment 2022/23 (€ million)	Ex-ante PSO payment 2023/2024 (€ million)	% Change in Payment	Capacity supported in 2022/23 (MW)	Capacity supported in 2023/24 (MW)	% Change in Capacity
AER						
Wind	€0.06	-	N/A	0.0	0.0	N/A
Sub-total	€0.06	€0.00		0.0	0.0	
RESS 1						
Solar	-€113.88	-€6.00	-95%	373.5	592.4	59%
Onshore Wind	-€200.08	-€53.54	-73%	255.7	276.4	8%
Sub-total	-€313.96	-€59.54		629.2	868.7	
REFIT 1						
Biomass	€1.90	€0.51	-73%	10.1	18.2	80%
Hydro	€0.12	€0.01	-91%	1.5	0.7	-51%
Landfill	€0.62	€0.22	-64%	5.2	13.8	166%
Large Wind	€31.41	€8.40	-73%	1090.6	969.3	-11%
Small Wind	€4.28	€0.97	-77%	114.5	96.8	-15%
Sub-total	€38.33	€10.11		1221.9	1098.8	
REFIT 2						
Hydro	€0.00	€0.00	N/A	0.5	0.5	0%
Landfill	€0.00	€0.00	N/A	14.5	14.0	-3%
Large Wind	€0.00	€0.00	N/A	2160.0	2173.7	1%
Small Wind	€0.00	€0.00	N/A	121.7	123.9	2%
Sub-total	€0.00	€0.00		2296.7	2312.0	
REFIT 3						
AD CHP > 500 kWe	€0.00	€0.01	N/A	2.1	1.1	-50%
AD CHP ≤ 500 kWe	€0.00	€0.24	N/A	5.1	4.5	-12%
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	€0.00	€0.04	N/A	1.6	1.2	-25%
Biomass CHP > 1500kWe	€0.00	€0.00	N/A	7.6	0.0	-100%
Biomass Energy Crops	€0.00	€0.00	N/A	0.0	0.0	N/A
Other Biomass Combust	€0.00	€0.00	N/A	76.0	110.4	45%
Sub-total	€0.00	€0.29		92.4	117.1	27%
Total REFIT	€38.33	€10.39	-73%	3611.00	3528.0	-2%
Total	-€275.57	-€49.14	-82%	4240.2	4396.7	4%

Table 5 Breakdown of ex-ante PSO Levy and capacity supported in 2023/24 by support scheme.

REFIT

The 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 6.

Scheme	REFIT 1	REFIT 2	REFIT 3
Technologies supported	<ul style="list-style-type: none"> • Biomass • Hydro • Landfill • Large Wind • Small Wind 	<ul style="list-style-type: none"> • Hydro • Landfill • Large Wind • Small Wind 	<ul style="list-style-type: none"> • 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) <ul style="list-style-type: none"> ➢ Energy Crops ➢ Other Biomass

Table 6 Technologies supported under the three REFIT schemes.

The ex-ante PSO amount for the 2023/24 PSO Year for the REFIT schemes is €10.39 million. This represents a decrease of €27.94 million (73%) from the €38.33 million of support for these contracts included in the 2022/23 PSO Year. The REFIT generation capacity supported under the PSO in the 2023/24 PSO year is 3,528 MW.

RESS

The first RESS 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 RESS 1 projects. The CRU has received submissions from 43 RESS projects for 592.4 MW solar and 276.4 MW wind.

A key difference between RESS and REFIT is that suppliers may owe money back to the PSO where market prices exceed a project's strike price. The 2023/24 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 2023/24 is negative -€59.54 million.

6.2. R-factor

While the ex-ante estimates constitute the majority of the 2023/24 PSO. The R-factor i.e., the settlement of the ex-ante estimate component of the 2021/22 PSO Levy, based on actual outturn costs and market revenues, is an additional component. The 2021/22 R-factor, included in the 2023/24 PSO, accounts for the difference between the costs and revenues estimated for 2021/22 ex-ante and the actual costs and revenues for 2021/22 certified ex-post. Further detail on the methodology used in calculating the R-factor can be found in CRU/20/013.

A negative R-factor of -€6.58 million has been included in the calculation of the final 2023/24 PSO.

Component	R-factor 2021/22 (€ million)
REFIT & RESS	-€4.83
ESB	-€1.8
Total	-€6.58

Table 7 Breakdown of R-factor by support scheme

The main reason for the negative 2021/22 R-factor is the difference between the 2021/22 Benchmark Price, as calculated by the CRU, and the outturn market prices in the 2021/22 PSO Year. Average wholesale electricity prices in PSO Year 2021/22 were approximately €97.32/MWh. The 2021/22 Benchmark Price was calculated using the CRU's SEM PLEXOS model.

The CRU observed significant increases in gas and coal commodity prices between those used to model the 2021/22 Benchmark Price and actual market prices that occurred in PSO Year 2021/22. Comparing the 2021/22 forecast commodity prices used to model the Benchmark Price and actual 2021/22 commodity prices, on average, gas prices increased by approximately 206% and coal prices increased by approximately 192%. The CRU also observed a 35% increase in carbon prices compared to those used to calculate the 2021/22 Benchmark Price.

Higher SEM prices resulted in PSO generators receiving higher market revenue than anticipated, and hence REFIT and RESS Suppliers over-recovering their additional costs during PSO Year 2021/22 through the ex-ante payments. This over-recovery of PSO Payments will be remedied through the R-factor.²²

In addition, outturn generation by REFIT supported generators for PSO Year 2021/22 was 12% lower than the submitted estimates of generation. 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 PSO Levy Data

As part of its 2023/24 PSO Decision Paper, the CRU published an Annex of additional data in relation to the PSO (CRU202405a). This Annex detailed inter-alia the estimated generation quantities and actual outturn generation for each individual REFIT project in the 2016/17 - 2021/22 PSO years, the Actual REFIT Payment associated with each REFIT project in the 2016/17 - 2021/22 PSO years, and the R-factor associated with each supply company in recent PSO years.

As outlined in the "Notification to Suppliers - Submissions to the CRU for the 2023/24 Public Service Obligation (PSO) Levy" ([CRU202327](#)), 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 CRU202327, the CRU intends publishing the following information, in conjunction with its 2023/24 PSO decision paper:

²² 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.

- i. the REFIT starts dates and REFIT end dates for each PSO supported project, as detailed by each supplier in their 2023/24 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 for the 2021/22 PSO years, suppliers again significantly overestimated their forecast generation. Only two suppliers achieved their estimated generation. On average, suppliers achieved only 79%. 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.

6.4 HECHP Certification

In accordance with the CRU's Arrangements for Calculating the PSO levy ([CRU/20/013](#)), the CRU requires that a supplier's annual PSO submission (when contracted with a HECHP generator supported under the PSO) include a valid HECHP certificate issued by the CRU covering the period to which the outturn calculations relate. 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 HECHP certification sufficiently in advance of the applicable PSO period.

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" (CRU202327), 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 2023 to September 2024 is to be set to zero. PSO Levies or Payments 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 are listed in the forthcoming S.I. amending the 2002 PSO Order.

Between the publication of this Decision Paper and the finalising of the S.I., the CRU will continue to liaise with the DECC regarding eligibility of REFIT and RESS projects for inclusion in the 2023/24 PSO.

Appendix 1: Allocation of 2023/24 PSO Levy

Allocating 2023-24 PSO									
	Individual 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		Monthly Charge Monthly €	Monthly Charge
						€ per Cust	€/kVA		
Domestic Profile	2,085,946	36.52%	-24.64	2,218,498		-11.11		-0.93	€ per Customer
Small Profile <small>ie. non-domestic (excl PL) <30kVA</small>	621,087	10.88%	-7.34	172,990		-42.42		-3.53	€ per Customer
Medium & Large Profile	3,004,025	52.60%	-35.49		6,704,969		-5.29	-0.44	€/kVA
TOTAL	5,711,059	100.00%	-67.47						

Table 8 Customer Category Allocation for PSO 2023/24

If the current PSO 2023/24 is allocated across all customer categories it would result in a monthly PSO payment to Domestic Customers in 2023/24 PSO year of -€0.93 per month, to Small Commercial customers -€3.53 per month and to Medium / Large Commercial customers -€0.44/kVa per month. For the 2023/4 PSO Period, these amounts are being offset against future PSO costs.

Allocating 2023-24 PSO									
	Individual Peak	% of Individual Peak	PSO Allocation	Total Mkt Cust Nos Mid Year (excl PL a/cs i.e. DG3)	Total Non-domestic mkt MICs kVA	Annual Charge		Monthly Charge Monthly €	Monthly Charge
			€m			€ per Cust	€/kVA		
Domestic Profile	2,085,946	36.52%	0.00	2,218,498		0.00		0.00	€ per Customer
Small Profile <small>ie. non-domestic (excl PL) <30kVA</small>	621,087	10.88%	0.00	172,990		0.00		0.00	€ per Customer
Medium & Large Profile	3,004,025	52.60%	0.00		6,704,969		0.00	0.00	€/kVA
TOTAL	5,711,059	100.00%	0.00						

Table 9 Final Customer Category Allocation for PSO 2023/24

The monthly PSO Levy payment amount is to Domestic Customers in 2023/24 PSO year is €0.00 per month, to Small Commercial customers €0.00 per month and to Medium / Large Commercial customers €0.00 per kVA.

Appendix 2 – 2021/22 Benchmark Price

The time-weighted Benchmark Price for the 2021/22 PSO Levy was €98.73/MWh. The actual average market price was €235.71/MWh, which is approximately 139% higher than forecast. The reason for this increase is due to the unprecedented and sustained volatility of commodity prices in 2022. A core driver of the substantial increase in the average market price was the significant increase in gas prices during the period.

As can be seen from Table 10, commodity prices moved considerably during the 2021/22 period, particularly in Quarter 2 and Quarter 3 of 2022. There was an average of a 206% increase in the price of gas, a 192% increase in the price of coal and a 35% increase in the price of carbon credits.

	Gas Price (p/Therm)			Coal Price (\$/Tonne)			Carbon Credits (€/Tonne)		
	Forecast	Actual	% Change	Forecast	Actual	% Change	Forecast	Actual	% Change
Q4 21	98.8	227.9	131%	115.8	171.3	48%	57.9	68.7	19%
Q1 22	98.3	233.7	138%	102.8	232.4	126%	58.2	82.8	42%
Q2 22	59.6	134.9	126%	89.6	323.1	261%	58.1	83.5	44%
Q3 22	55.5	293.7	429%	82.9	359.8	334%	58.2	79.7	37%
Average			206%			192%			35%

Table 10 Forecast versus actual commodity prices for PSO Benchmark Price

Figure 7, below, graphs the impact that each commodity had on the actual wholesale electricity market price and illustrates how each commodity deviated from the forecast Benchmark Price during the 2021/22 period. Additional effects include unscheduled plant outages.

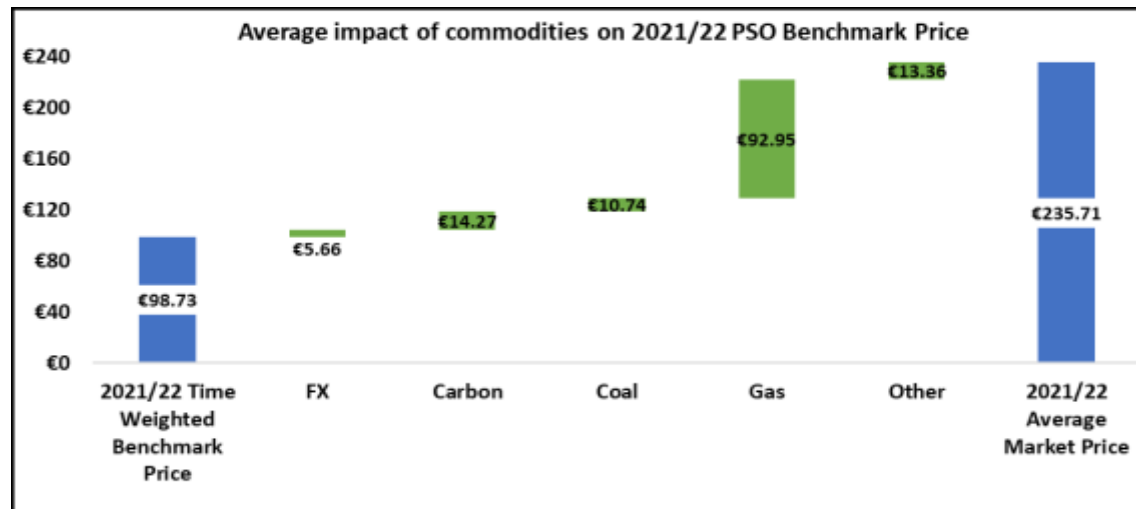


Figure 7 Impact of commodity volatilities on 2021/22 Benchmark Price