



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

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Information Paper

Application of the PSO Levy to Commercial Storage

Information Paper

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Executive Summary

The purpose of this Information Paper is to clarify the CRU's arrangements regarding the apportioning of the Public Service Obligation (PSO) levy to commercial storage units, which will be operating in the Single Electricity Market (SEM) and/or providing DS3 services.

In keeping with the CRU's Turlough Hill decision (CER/04/193) and having considered guidance from the Department of Communications Climate Action and Environment (DCCAE), the CRU considers it appropriate that commercial storage units should be considered a final customer, for the purpose of calculating their PSO levy charge, only when consuming electricity for its normal house load. Consequently, the PSO levy shall only apply to a commercial storage unit's house load when it is offline (i.e. neither importing or exporting).

This information paper also notes that the CRU directs that the relevant system operators (i.e. ESB Networks and EirGrid) to develop, document and publish procedures as to how the agreed MIC for commercial storage units (for the purposes of calculating the PSO levy) will be calculated and administered. Such procedures shall be submitted to the CRU for approval, prior to publication by the relevant system operators.

Public/Customer Impact Statement

The CRU has published this information paper to provide greater clarity to industry regarding the apportioning of the PSO levy to commercial storage units.

Storage sites, take electricity off the grid, store it (such as in batteries) and later reinject the electricity into the grid. The electricity that is stored and later reinjected is finally consumed by a customer (such as a residential customer or small business). This final customer will be charged the PSO levy like any other final customer.

This paper clarifies that in line with the 2004 decision (CER/04/193) storage facilities will not be charged the PSO levy on electricity that they store but will be charged the PSO levy based on the electricity they consume on the site, known as the “house load”. If the PSO was charged on the electricity that was stored, then the energy would incur a PSO charge twice

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Glossary of Terms and Abbreviations

Abbreviation	Meaning
AER	Alternative Energy Requirement
CRU	Commission for Regulation of Utilities
DCCA	Department of Communications, Climate Action and Environment
DSO	Distribution System Operator
DS3	Delivering a Secure, Sustainable Electricity System
MIC	Maximum Import Capacity
OJEU	Official Journal of the European Union
PSO	Public Service Obligation
REFIT	Renewable Energy Feed-in Tariff
S.I.	Statutory Instrument
SEM	Single Electricity Market
TSO	Transmission System Operator

1. Introduction

1.1 The Commission for Regulation of Utilities

The Commission for Regulation of Utilities (CRU)¹ is Ireland's independent energy and water regulator. Our mission is to regulate water, energy and energy safety in the public interest. Further information on the CRU's role and relevant legislation can be found on the CRU's website at www.cru.ie.

1.2 Purpose of this Document

In 2004, the CRU issued a decision (CER/04/193), which determined that ESB's hydro pumped storage generation station, Turlough Hill, is not liable to the Public Service Obligation (PSO) levy by reference to its consumption in import mode (i.e. its Maximum Import Capacity for PSO levy calculation purposes cannot be determined by reference to that consumption level). The rationale for the 2004 decision is that the storage unit it is not a final customer supplied by a supplier, therefore its PSO levy charge shall be based on its normal house load.

The purpose of this information paper is to clarify the CRU's arrangements regarding the apportioning of the PSO levy to other commercial storage units , that will be operating commercially in the Single Electricity Market (SEM) and/or providing DS3 system services.

1.3 Structure of Paper

The remainder of this document is structured as follows:

- **Section 2:** provides background information regarding the legislation governing the application of the PSO levy on the final customer, and the CRU's 2004 decision regarding Turlough Hill's Maximum Import Capacity (MIC) for PSO levy purposes;
- **Section 3:** outlines recent market developments pertaining to commercial storage units (in the context of the application of the PSO levy); and
- **Section 4:** clarifies the CRU's arrangements for the application of the PSO levy to commercial storage units. .

¹ Previously known as the Commission for Energy Regulation (CER)

1.4 Related Documents

- CER/04/128: Draft Decision on Turlough Hill MIC for PSO Purposes;
- CER/04/193: Decision on Turlough Hill MIC for PSO Purposes;
- [Electricity Regulation Act, 1999](#) (as amended); and
- [S.I. No. 217/2002 - Electricity Regulation Act 1999 \(PSO\) Order 2002](#) (as amended).

2. Background

2.1 Overview of the PSO Levy

The PSO levy is charged to all electricity customers in Ireland. It covers various subsidy schemes (i.e. AER, Peat PSO Scheme and REFIT 1-3) designed by the Irish Government to support its national policy objectives related to renewable energy, indigenous fuels (peat) and security of energy supply. The proceeds of the PSO levy are used to compensate the:

- “additional costs” incurred by market participants in purchasing/generating PSO-supported electricity generation (which are not recovered in the electricity market); and
- the “administrative expenses” incurred by suppliers, the Distribution System Operator (DSO) and the Transmission System Operator (TSO) in the period concerned in collecting payment of the PSO levy.

The policy and terms associated with the plants supported by the PSO levy are mandated by Government in relevant legislation and approved by the European Commission. The CRU has no discretion over the terms of the Government’s schemes supported under the PSO levy. The CRU’s role is to calculate the PSO levy in accordance with the governing legislation and to ensure that the scheme is administered appropriately and efficiently.

2.2 Legislation Governing the PSO Levy & Application to Final Customers

The legislation governing the PSO is contained within the Electricity Regulation Act 1999 (“the 1999 Act) and S.I. 217 of 2002 Electricity Regulation Act 1999 (Public Service Obligations) Order 2002 (“the PSO Order”).

Within Section 39 of the 1999 Act, it is stated that the PSO levy is imposed by CRU (subject to direction by the relevant Minister) on and recovered from “final customers”, which is defined in Section 2 of the 1999 Act as “a person being supplied with electricity at a single premise for consumption on those premises”.²

In accordance with the governing legislation, the CRU is required to ensure that the PSO levy is applied in a manner that is non-discriminatory and transparent. Additionally, the CRU is

² The 1999 Act defines electricity “supply” as to mean “supply through electric lines to final customers for consumption”.

required to make a final determination on the basis of the calculation of the PSO amount to be paid by final customers, which are based on three categories of electricity accounts (i.e. Domestic Accounts, Small Accounts and Medium-Large Accounts).

With reference to Medium-Large Accounts, the governing legislation has defined this category of customer as “*meaning electricity accounts held by final customers which, in respect of each such account, the distribution system operator certifies as having a maximum import capacity of not less than 30kVA*”.

Additionally, Schedule 2 of the 1999 Act defines Maximum Import Capacity (MIC) in relation to an individual electricity account as either:

- the agreed MIC, being the MIC expressed in kVA agreed by the holder of the electricity account with the DSO (i.e. ESB Networks); or
- the deemed MIC, being the level of MIC calculated by the DSO (in accordance with a formula determined by the CRU), when the MIC is not agreed between the DSO and electricity account holder.

With reference to the application of a deemed MIC to a Medium-Large electricity account, the formula determined by the CRU requires consultation within industry and approval by the Minister, prior to being published by the CRU (as per Article 4(b) in Schedule 2 to the 1999 Act).

2.3 Decision on Turlough Hill MIC for PSO Purposes

In 2004, the CRU published a draft decision on Turlough Hill’s MIC for PSO purposes (CER/04/128). Within CER/04/128, the CRU noted that as final customers of electricity, all generation plant must be charged the PSO levy on the basis of an agreed MIC. CER/04/128 also noted that each generating station has a MIC, which is related to its house load requirements, and where the house load is supplied from the grid, then this power may be treated as having been supplied by a supplier and consumed in the station.

With reference to Turlough Hill, CER/04/128 noted that Turlough Hill imported large amounts of power when in pumping mode and exported similar amounts while the station is generating. Additionally, the CRU noted that Turlough Hill when in pumping mode is not a final customer supplied by a supplier, and it is not appropriate to base the station’s MIC (for the purposes of the PSO levy) on this pumping mode import demand. Instead, the CRU proposed that it is

appropriate to base the station's MIC on its normal house load when it is off line i.e. neither generating or pumping.

Following consultation, the CRU determined (CER/04/193) that *"Turlough Hill is not liable to the PSO levy by reference to its consumption in import mode, its MIC for PSO-levy calculation purposes cannot be determined by reference to that consumption level, because Turlough Hill is not a final customer supplied by a supplier"*. Additionally, CER/04/193 determined that *"it is appropriate to base the station MIC on its normal house load (typically c.0.7 MVA) when it is off line (neither generating or pumping)" – for the purpose of calculating the PSO levy.* Consequently, the CRU instructed the system operator to set Turlough Hill's MIC to 0.7MVA for the purposes of calculating the PSO levy.

The CRU notes that its 2004 decision regarding Turlough Hill is consistent with developments in other electricity markets. In Great Britain (GB), the CRU notes that the Office of Gas and Electricity Markets (Ofgem), recently published a report³ detailing changes to the generation licence design, which *"enable storage facilities to identify themselves as exempt from so-called final consumption levies, as storage facilities are not end consumers of energy."*

Additionally, in Germany, the CRU notes that the German equivalent of the PSO levy – the Erneuerbare-Energien-Gesetz (EEG) surcharge - is also not applied to storage units. A specific provision within EEG 2017 specifies that battery storage is not subject to the levy for the purposes of energy imported for temporary storage *"For electricity which is supplied or conducted for the purpose of temporary storage [...] payment of the EEG surcharge [...] shall not apply if energy is removed from the electricity storage installation solely for the purpose of re-feeding in electricity into the grid system."*⁴

³ [Ofgem : Clarifying the regulatory framework for electricity storage : Licensing.](#)

⁴ [Section 60 of the Renewable Energy Sources Act – 2014 \(unofficial translation\)](#)

3. Developments Regarding Storage

3.1 Electricity Storage Providers

The number of commercial storage units currently operating in the Single Electricity Market (SEM) is low, with ESB's hydro storage generation units (i.e. Turlough Hill TH1-4), being the main commercial storage unit with a max capacity of 292 MW.

As costs for other electricity storage provider technologies (e.g. battery) are likely to decrease over time, the CRU envisages that there will be increased commercial interest in such electricity storage providers, particularly with the opportunity to be remunerated for the provision of DS3 system services. Projects could include stand-alone battery storage, co-location with / renewable/conventional generation or integrated as part of a hybrid project.

Regarding the potential growth in battery storage, the CRU notes that EirGrid's "*Tomorrow's Energy Scenarios 2017 Planning our Energy Future*"⁵ estimate a need for between 50 MW and 1200 MW of battery storage by 2030, under different scenarios (i.e. Steady Evolution, Low Carbon Living, Slow Change and Consumer Action).

With reference to the provision of DS3 System Services, the CRU notes that the Transmission System Operators (i.e. EirGrid/SONI) are currently engaging in a competitive procurement process for services from battery storage units with specific availability requirements on fixed term and fixed tariff contracts.

As part of this procurement process, the TSOs have recently published (06.03.019) an Official Journal of the European Union (OJEU) notice for the fixed contracts "*DS3 System Service – Volume Capped*". This procurement process will involve a two-stage selection process whereby applicants must meet the appropriate contractual and technical pre-requisites in order to enter the competition and then winning bids will be ranked based on price.

The CRU notes that the technical pre-qualification is scheduled to commence in April 2019 with the bidding process scheduled for May/June 2019. Contract execution (in order to procure 90-140 MWs of electricity storage) is due on the 1st September 2019 with a service delivery date of no later than 1st September 2021.

⁵Eirgrid's "Tomorrow's Energy Scenarios 2017 Planning our Energy Future" is available [here](#).

3.2 Request for Clarification on Application of the PSO Levy to Storage Units

Given market participants interests in securing DS3 fixed contracts, the CRU has received queries from potential commercial storage projects, who have sought clarification as to the current and likely future policy in relation to the PSO levy charges applied to commercial storage units.

Such market participants note the role that can be played by commercial storage projects in facilitating Ireland in meeting its renewable energy targets, while contributing to grid security of supply. Market participants also drew similarities between such storage unit's consumption profiles and that of Turlough Hill and therefore expressed a view they should also receive a partial exemption from the PSO levy (i.e. the PSO levy should be based on their house load).

3.3 Guidance from DCCAE

Given that the design and implementation of the PSO is a matter for Government policy, the CRU sought guidance from DCCAE as to whether other storage units can be granted similar treatment to Turlough Hill. From a policy perspective, DCCAE noted that it is keen to see the entry of batteries and other storage providers into the market as key enablers of delivery of renewable electricity both for Ireland's 2020 RES targets and 2030 RES-E goals in line with Ireland's first National Energy and Climate Plan⁶.

Additionally, DCCAE suggested that the CRU clarify the apportioning of the PSO levy for such account holders with ESB Networks/EirGrid as appropriate, and noted it is important to provide clarity to industry on this matter as soon as possible given EirGrid's upcoming procurement process under the DS3 programme.

⁶ [Ireland's National Energy & Climate Plan 2021-2030](#)

4. Application of the PSO Levy to Commercial Storage Generation

4.1 CRU's Clarification

The CRU notes that significant development of commercial storage units may be expected in Ireland over the next decade, as part of the solution to meeting Ireland's contribution to EU 2030 renewable energy targets.

Considering the Turlough Hill decision and DCCAE guidance, the CRU considers it appropriate that commercial storage units be considered only a final customer (for the purpose of calculating their PSO levy charge) when consuming electricity for its normal house load when it is offline (i.e. neither importing or exporting).

In the event that a commercial storage unit intends to avail of an MIC based on their house load (for the purpose of calculating their PSO levy charge), an agreed MIC will need to be determined by the relevant system operator.

In order to facilitate the determination of an agreed MIC for commercial storage units (for the purpose of calculating their PSO levy charge), the CRU directs that the relevant system operators (i.e. EirGrid and ESBN) develop, document and publish procedures as to how the agreed MIC will be derived for commercial storage units.⁷ Such procedures shall be submitted to the CRU for approval, prior to publication by the relevant system operators. Such procedures shall:

- i. detail the process to be applied by commercial storage units when applying for an agreed MIC to the relevant system operator (for the purpose of calculating a PSO levy charge);
- ii. detail the relevant system operator's process for reviewing such applications from commercial storage units;

⁷ In accordance with Condition 23 of the DSO licence, and Condition 25 of the TSO licence, the Licensee shall comply with any public service obligation imposed on it by the Commission pursuant to Section 39 of the Act. Section 19(1) of the PSO Order (as amended) states that "Each person, other than a final customer, who has duties imposed on him or her pursuant to this Order shall submit a document to the Commission for approval in such form as may be required by the Commission from time to time specifying the procedures which he or she will adopt in order to comply with those duties and, when approved by the Commission, shall comply with those procedures".

- iii. detail the relevant system operator's process for informing the CRU of decisions pertaining to an agreed MIC (for the purpose of calculating a PSO levy charge);
- iv. detail the relevant system operator's process for reviewing existing MICs (for the purpose of calculating a PSO levy charge) that have been allocated to commercial storage units based on their house load (for the purposes of the PSO levy), and for determining whether such MICs should be amended; and
- v. detail the relevant system operator's procedures for invoicing and collecting PSO monies from such commercial storage providers.

In the event that the relevant system operator and the storage provider do not concur with the agreed MIC derived in accordance with the relevant system operator's procedures and decision, the relevant system operator shall inform the CRU accordingly. This non-concurrence will be considered by the CRU in line with its dispute procedures. As such both parties (i.e. the relevant system operator and storage provider) shall be required to provide supporting evidence to enable the CRU to assess and determine if necessary a deemed MIC. Notwithstanding, the CRU expects that the relevant parties involved in a dispute will first engage directly in an effort to resolve the dispute (i.e. reasonable efforts must have been made to resolve the matter prior to bringing it to the CRU).

In the absence of sufficient evidence that the relevant parties have engaged directly to resolve the dispute, the CRU may request the relevant parties to engage further on this matter. For clarity, the CRU will only be in a position to accept a dispute where there is relevant information for the CRU to review, and clear evidence of engagement by both parties, as per the CRU's established processes for resolving disputes.

Separate to the above, the CRU also requires suppliers who may supply commercial storage to document the procedures they have to account for and pay to the DSO/TSO all amounts invoiced to such commercial storage in respect of the PSO levy and submit such a document to the CRU.