



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

## PUBLIC SERVICE OBLIGATION LEVY 2015/2016

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Commission for Energy Regulation

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## CER – Information Page

### Abstract:

This decision paper explains the Public Service Obligation (PSO) levy to apply to electricity customers from 1<sup>st</sup> October 2015 to 30<sup>th</sup> September 2016.

### Target Audience:

Electricity generators and suppliers participating in PSO-related schemes, and electricity customers.

### Related Documents:

- Public Service Obligation Levy 2015/16 Proposed Decision (CER/15/110)  
<http://www.cer.ie/docs/001034/CER15110%20PSO%20Levy%202015-16%20Proposed%20Decision%20Paper.pdf>
- 2014/15 PSO Decision Paper (CER/14/361)  
[https://www.cer.ie/docs/000967/CER14361%20PSO%20Levy%20Decision%20Paper%20%202014-15%20\(New\).pdf](https://www.cer.ie/docs/000967/CER14361%20PSO%20Levy%20Decision%20Paper%20%202014-15%20(New).pdf)
- Electricity Regulation Act, 1999  
<http://www.irishstatutebook.ie/1999/en/act/pub/0023/index.html>
- S.I. No. 217 of 2002 - Electricity Regulation Act, 1999 (Public Service Obligations) Order 2002 as amended  
<http://www.irishstatutebook.ie/2002/en/si/0217.html>
- S.I. No. 583 of 2007 – Amending S.I. No. 217 of 2002  
<http://www.irishstatutebook.ie/pdf/2007/en.si.2007.0583.pdf>
- S.I. No. 284 of 2008 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.attorneygeneral.ie/esi/2008/B26313.pdf>
- S.I. No. 444 of 2009 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.attorneygeneral.ie/esi/2009/B27208.pdf>
- S.I. No. 532 of 2010 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.irishstatutebook.ie/pdf/2010/en.si.2010.0532.pdf>
- S.I. No. 513 of 2011 – Amending S.I. No. 217 of 2002 for REFIT

<http://www.irishstatutebook.ie/pdf/2011/en.si.2011.0513.pdf>

- S.I. No. 438 of 2012 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.irishstatutebook.ie/pdf/2012/en.si.2012.0438.pdf>
- S.I. No. 421 of 2013 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.irishstatutebook.ie/pdf/2013/en.si.2013.0421.pdf>
- S.I. No. 603 of 2014 – Amending S.I. No. 217 of 2002 for REFIT  
<http://www.irishstatutebook.ie/pdf/2014/en.si.2014.0603.pdf>
- PSO Benchmark Price Setting Methodology AIP-SEM-07-431 PSO Decision  
<http://www.allislandproject.org/en/generation.aspx?page=2&article=ab6bf37c-9803-4167-8528-05d20e034477>
- Calculation of the R-factor in determining the PSO levy (CER/08/236)  
<http://www.cer.ie/docs/000229/cer08236.pdf>
- Arrangements for the Public Service Obligation Levy – A Decision by the Commission for Energy Regulation (CER/08/153)  
<http://www.cer.ie/docs/000229/cer08153.pdf>
- Relevant EU State Aid Notifications and Clearance Decisions
  - State Aid N 475/2003: Capacity and Differences Agreements (CADA) [Link](#)
  - State Aid N 553/2001: AER [Link](#)
  - State Aid N 571/2006: REFIT 1 [Link](#)
  - State Aid N 826/2001: AER I-V [Link](#)
  - State Aid SA.31236 (2011/N): REFIT 2 [Link](#)
  - State Aid SA.31861 (2011/N): REFIT 3 [Link](#)
- Relevant part of website of Department of Communications, Energy and Natural Resources:  
<http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/>

## Executive Summary

### Background

This decision paper explains the Public Service Obligation (PSO) levy to apply to electricity customers from 1<sup>st</sup> October 2015 to 30<sup>th</sup> September 2016. It follows on from a “proposed decision” paper, CER/15/110, issued by the CER for public consultation on 12<sup>th</sup> June 2015.

The PSO levy is a subsidy charged to all electricity customers in Ireland. It is designed by the Irish Government and consists of various subsidy schemes to support its national policy objectives related to renewable energy, indigenous fuels (peat) and security of energy supply. The proceeds of the levy are used to contribute to the additional relevant costs incurred by PSO-supported electricity generators which are not recovered in the electricity market.

The policy associated with the PSO is mandated by Government in legislation and approved by the European Commission. The CER has no discretion over the terms of the PSO schemes. The CER’s role here is only to calculate the PSO levy in accordance with Government policy and to help ensure that the scheme is administered appropriately and efficiently.

### Levy

The PSO levy for the 2015/16 period is **€325.3 million**. The table below summaries the key PSO cost categories for 2015/16, which are shown in more detail in the paper.

Category	Total PSO 2015/16 € Million
Renewables	180.9
Peat	121.9
Security of Supply	47.3
PSO CfDs	-9.3
Other	-15.5
<b>Total</b>	<b>325.3</b>

The PSO levy of €325.3 million for 2015/16 compares with €335.4 million allowed for the current 2014/15 PSO period, a reduction of circa 3%. The biggest drivers for the year-on-year change are as follows (further information is available in the paper):

### *Upward Pressure*

- Lower wholesale prices. The benchmark price, which is the estimated wholesale System Marginal Price (SMP) in SEM for the 2015/16 levy period, is €52.25/MWh, down approximately 9% on the €57.17/MWh used to determine the levy for the current PSO period. A lower wholesale price for next year results in the PSO plant needing more PSO money to cover their allowed costs, to offset the lower money they are predicted to receive from the market. This applies across-the-board for renewables, peat and security of supply plants supported by the PSO. The lower estimated wholesale price for next year is reflective of a trend in the SEM since the first half of 2014 of lower spot prices, related to lower gas prices;
- Lower capacity payments. The capacity payment in SEM of €5.77/MWh for 2015/16 is significantly lower than the capacity payment of €7.29/MWh in the current 2014/15 period. As with the SMP, this reduces the forecast revenues from the market and hence increases the PSO; and,
- More renewables. An estimated 2,080 MW of REFIT supported renewable generation, mostly wind, will be supported by the PSO next year. This is 206 MW, or 11%, more than the 1,874 MW of REFIT plants supported in the current PSO period, hence driving-up the levy<sup>1</sup>.

### *Downward Pressure*

- Termination of contracts. The termination of PSO contracts for Tynagh, Aughinish and Edenderry will result in these plants receiving support from the PSO for circa 6 months, 6 months and 3 months respectively, compared with a full 12 months of support for these plants for the current 2014/15 PSO period. The support for these plants is €41.3 million less than for the 2014/15 levy;
- Contracts for Difference (CfDs). For 2015/16, PSO-related CfDs are reducing the levy by €9.3 million. This reflects an SMP out-turn for 2013/14 which on average was lower than the CfD strike price for the period overall;
- R-Factor Reduction (excluding CfDs). The 2013/14 R-Factor included in the 2015/16 PSO levy is €4.9 million less than the R-Factor included in the 2014/15 PSO levy; and,

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<sup>1</sup> While more wind generation tends to increase the PSO levy, it also tends to reduce the wholesale price of electricity in the SEM.

- Electric Ireland repayment. Electric Ireland recently identified an amount of €12.94 million arising from a differing interpretation of the R-factor rules applying to REFIT 1, which has since been clarified. This is now being rectified by a rebate of these monies with interest in 2015/16.

The PSO levy of €325.3 million for 2015/16, as set in this decision paper, has increased from the €304.8 million consulted on in the June proposed decision (CER/15/110). This is due to:

- A (further) reduction in the estimated average wholesale SEM price for 2015/16, falling from €53.52/MWh in the June paper to €52.25/MWh used for this decision. This is based on more up-to-date estimates of the wholesale SEM price for the next PSO period and is related to reduced international gas prices. It has the effect of increasing the PSO as a greater subsidy is needed in compensation for lower market revenues for the relevant plants. It was noted in the proposed decision that the final levy figure for 2015/16 could change for this reason; and,
- The Tynagh PSO/contract termination date being validated as 31<sup>st</sup> March 2016, two months later than the date advised to the CER for the June consultation. This is because, subsequent to the public consultation, information was recently provided to the CER to that effect from both Tynagh and ESB, such that the 31<sup>st</sup> March date is in accordance with Part 3 of Schedule 1C of S.I. No. 217 of 2002 as amended by S.I. No. 583 of 2007.

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## **1.0 Introduction**

### **1.1 The Commission for Energy Regulation**

The Commission for Energy Regulation (CER) is Ireland's independent energy and water regulator. The CER was established in 1999 and now has a wide range of economic, customer protection and safety responsibilities in energy. The CER is also the regulator of Ireland's public water and wastewater system.

The CER's primary economic responsibilities in energy cover electricity generation, electricity and gas networks, and electricity and gas supply activities. As part of its role, the CER jointly regulates the all-island wholesale Single Electricity Market (SEM) with the Utility Regulator in Belfast. The SEM is governed by a decision-making body known as the SEM Committee, consisting of the CER, the Utility Regulator and an independent member. The overall aim of the CER's economic role is to protect the interests of energy customers. The CER has an important related function in customer protection by resolving complaints that customers have with energy companies.

The CER's core focus in safety is to protect lives and property across a range of areas in the energy sector. This includes safety regulation of electrical contractors, gas installers and gas pipelines. In addition the CER is the safety regulator of upstream petroleum safety extraction and exploration activities, including on-shore and off-shore gas and oil.

In 2014 the CER was appointed as Ireland's economic regulator of the Irish public water and wastewater sector.

Further information on the CER's role and relevant legislation can be found on the CER's website at [www.cer.ie](http://www.cer.ie).

### **1.2 Purpose and Content of this Paper**

This decision paper explains the Public Service Obligation (PSO) levy to apply to electricity customers in Ireland from 1<sup>st</sup> October 2015 to 30<sup>th</sup> September 2016. It is laid out as follows:

- Section 1 gives a general background to the PSO;
- Section 2 discusses the PSO's key cost components and considerations for the 2015/16 period;



- Section 3 provides a summary of public responses received to the proposed decision CER/15/110, along with CER responses;
- Section 4 summarises the PSO levy, explains the key drivers for the year-on-year levy change and the change between the proposed decision paper (CER/15/110) paper published on 12<sup>th</sup> June 2015 and this decision paper, and shows the allocation of the levy to customers;
- Appendix A shows the allocation of 2015/16 PSO costs to customers; and,
- Appendix B provides detail from ESB Networks on the current methodology for the allocation of PSO costs to customers.

### **1.3 Background to the PSO**

The PSO levy is charged to all electricity customers in Ireland. It covers various subsidy schemes 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 levy are used to contribute to the additional relevant costs incurred by PSO-supported electricity generation which are not recovered in the electricity market, typically via contracts that suppliers have in place with electricity generators.

The policy and terms associated with PSO levy supported plant are mandated by Government in the relevant legislation and approved by the European Commission. The CER has no discretion over the terms of PSO schemes. The CER's only role here is to calculate the PSO levy in accordance with Government policy and to help ensure that the scheme is administered appropriately and efficiently. As part of this role, the CER calculates the costs properly incurred under the relevant PSO contracts/schemes to be recovered.

In terms of the payment process, ESB Networks collects the allowed PSO levy from electricity suppliers (which is paid for by electricity customers to suppliers) and passes it to EirGrid. These PSO monies are then distributed by EirGrid to relevant generators/suppliers supported by the PSO.

### **1.4 Legislation**

Under Section 39 of the Electricity Regulation Act, 1999, the CER is responsible for the imposition of the PSO levy on ESB, licence holders and holders of permits under the Electricity (Supply) Act, 1927.

Statutory Instrument (S.I.) No. 217 of 2002 was made by the relevant Minister under Section 39 of the 1999 Act and sets out more detail in relation to the above matters. S.I. No. 217 of 2002 provides, *inter alia*, for the calculation of the PSO levy by the CER to provide for the recovery of costs by all relevant parties in accordance

with Notifications to the European Commission regarding the various mechanisms supported by the PSO.

The original Notification<sup>2</sup> of November 2000 sets out the broad areas that may be covered by the PSO as listed in Section 39 of the 1999 Act: namely security of supply, use of indigenous fuel sources and environmental protection. It refers specifically to the schemes envisaged to be covered by the PSO at that juncture, i.e. the imposition on ESB of a requirement to have available to it the output of electricity generating stations using peat and stations using renewable, sustainable or alternative forms of energy.

Subsequent to the Notification, new schemes have been notified to the European Commission in accordance with Article 88(3) of the Treaty and Directive 2003/54/EC and have received state aid clearance. S.I. No. 217 of 2002 has been amended by subsequent S.I.s to provide for the recovery of costs under the PSO for such schemes. These included the recovery of costs associated with peat plants and plants that entered the market under a competition, referred to as “Capacity 2005”, held by the CER due to security of supply concerns. In 2012 REFIT 2 and REFIT 3<sup>3</sup> were notified to the EU and received state aid clearance to provide support for the generation of electricity from renewable technologies.

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<sup>2</sup> The purpose of the Notification was to inform the European Commission of the Irish Government’s intention to impose public service obligations and of the proposed mechanism to recover the additional costs of fulfilling the obligations.

<sup>3</sup> <http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/REFIT.htm>

## 2.0 PSO Levy 2015/16 – Key Cost Considerations

This section of the paper shows the key considerations and cost categories feeding into the PSO levy for the period 1<sup>st</sup> October 2015 to 30<sup>th</sup> September 2016.

Building on this, section 3 then summarises the public comments received to the proposed decision, CER/15/110, and provides CER responses. Section 4 summarises the levy for 2015/16, focuses on the key drivers for the year-on-year change and any change between the proposed decision (CER/15/110) and this decision paper, and shows the allocation of the levy to electricity customers.

### 2.1 Benchmark Price

The benchmark price is a forecast of the wholesale market price in the SEM, i.e. the System Marginal Price (SMP), for the PSO levy period and is determined before the PSO levy period commences. It is determined, *inter alia*, using forecasts of fuel and carbon prices. A lower forecast benchmark price predicts that less revenue will be earned from the wholesale market by the PSO generating plant to cover their allowed costs, thus generally resulting in a higher PSO levy. A higher benchmark price predicts that greater revenue will be earned from the market by PSO plant to cover their allowed costs, thus generally resulting in a lower PSO levy.

Paragraphs 5.10 to 5.12 of the Notification refer to the method for setting the “market value”. Paragraph 5.11 states:

*From 2005 the market will be fully open and a time-weighted market price will be determined by the CER in an open consultative process, and posted by the CER in its annual review.*

For the purposes of this decision paper, the CER has forecasted a benchmark price for the upcoming 2015/16 PSO period of €52.25/MWh. This figure is an annual, average time weighted price calculated using a PLEXOS model. In calculating this price, the model was run with ten different outage patterns, using fuel, carbon and exchange rates from 8<sup>th</sup> July 2015. For more information on PLEXOS please see the relevant documents on the All Island Project website, [www.allislandproject.org](http://www.allislandproject.org).

The benchmark price for 2015/16 is materially lower than the €57.17/MWh for that used in the current 2014/15 period and is being driven by lower forward gas prices. This puts significant upward year-on-year pressure on the PSO levy (as discussed in section 4).

## **2.2 Capacity Payment**

Regarding the €/MWh capacity payment rate used in the PSO calculations, revenues associated with the capacity payment in the SEM have been estimated for the 2015/16 PSO period. The rate for 2015<sup>4</sup> has been calculated on the basis of the current Annual Capacity Payment Sum. The rate for 2016<sup>5</sup> has been calculated on the basis of the proposed Annual Capacity Payment Sum as this is the most up-to-date information available.

The capacity payment of €5.77/MWh for 2015/16 is significantly lower than the €7.29/MWh used in the current 2014/15 period, putting upward pressure on the PSO levy. The reduction is driven by the proposed reduction of circa 19% in the Annual Capacity Payment Sum for 2016. The final Annual Capacity Payment Sum for 2016 has not been decided by the SEM Committee at the time of publication of this decision by the CER. Hence the capacity payment of €5.77/MWh, as used in the proposed decision, will be used for the 2015/16 PSO.

## **2.3 PSO Plants/Schemes & Forecast Costs**

The PSO covers various subsidy schemes designed by the Irish Government to support its national policy objectives related to renewable energy, indigenous fuels (peat) and security of energy supply.

The PSO levy is determined ex-ante each year based on estimates of relevant costs to be recovered by all relevant PSO parties that are not recovered from the market, relative to the forecasted benchmark price (see section 2.1) and their forecast output. In addition, as discussed in section 2.4, an “R-factor” is added to this ex-ante estimate for the previous PSO out-turn period, reflecting actual, audited relevant PSO plant costs, out-turn SMP, out-turn capacity payments received and out-turn generation levels for the PSO plant.

Table 1 below provides a summary of the schemes and generating plants covered by the PSO for the forthcoming 2015/16 period.

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<sup>4</sup> Annual Capacity Payment Sum for the Trading Year 2015, Decision Paper, August 2014, SEM-14-070: <http://www.allislandproject.org/GetAttachment.aspx?id=229e36bd-411a-4a88-8140-f0a43068ad70>

<sup>5</sup> Annual Capacity Payment Sum for the Trading Year 2016, Consultation Paper, May 2015, SEM-15-032: <http://www.allislandproject.org/GetAttachment.aspx?id=cf13a0b3-7341-4bbf-9b70-6eee412a6ad8>

PSO Scheme	Technology Supported	MW of Plant Eligible <sup>6</sup>	MW of Plant supported in 2015/16 PSO Period
AER	<ul style="list-style-type: none"> <li>Onshore and offshore wind (onshore wind constitutes most of AER)</li> <li>Small-scale hydropower</li> <li>Combined heat and power (CHP)</li> <li>Biomass (landfill gas)</li> <li>Biomass-CHP</li> <li>Biomass-anaerobic digestion</li> </ul>	718	40
REFIT 1	<ul style="list-style-type: none"> <li>Onshore wind (constitutes most of REFIT 1)</li> <li>Hydro</li> <li>Biomass landfill gas</li> <li>Other biomass</li> </ul>	1,450	1,379
REFIT 2	<ul style="list-style-type: none"> <li>Onshore wind (constitutes most of REFIT 2)</li> <li>Hydro</li> <li>Biomass Landfill Gas</li> </ul>	4,000	657
REFIT 3	<ul style="list-style-type: none"> <li>Biomass Combustion (including co-firing)</li> <li>Biomass CHP</li> <li>Anaerobic Digestion</li> </ul>	310	44 <sup>7</sup>
Edenderry <sup>8</sup>	<ul style="list-style-type: none"> <li>Peat</li> </ul>	128	128
Lough Ree	<ul style="list-style-type: none"> <li>Peat</li> </ul>	100	100
West Offaly	<ul style="list-style-type: none"> <li>Peat</li> </ul>	150	150
Aughinish Alumina <sup>9</sup>	<ul style="list-style-type: none"> <li>Gas - CHP</li> </ul>	160	160
Tynagh <sup>10</sup>	<ul style="list-style-type: none"> <li>Gas - CCGT</li> </ul>	400	400

Table 1 - Generation Capacity Supported for 2015/16 PSO Period

The schemes in Table 1 above are discussed in more detail next, showing their ex-ante forecast cost - excluding the R-factor (discussed in the next section) - for the 2015/16 PSO period.

<sup>6</sup> The column headed “MW of Plant Eligible” is the capacity of renewable generation which the scheme targets to support by the time the scheme closes for acceptance and approval of applications. This may not always be achieved. There may also be a significant difference compared with the capacity of plant supported as, for instance, some previously supported contracts may have terminated.

<sup>7</sup> Includes REFIT 3 support for co-firing at Edenderry commencing 22<sup>nd</sup> December 2015, calculated at 30% of installed capacity of 128 MW.

<sup>8</sup> PSO support terminates 21<sup>st</sup> December 2015.

<sup>9</sup> PSO support terminates 31<sup>st</sup> March 2016.

<sup>10</sup> PSO support terminates 31<sup>st</sup> March 2016.

## **Renewables**

The two main PSO schemes related to renewable generation are known as Alternative Energy Requirement (AER) and Renewable Energy Feed-in Tariff (REFIT), of which there are various types explained below. Overall, the total ex-ante PSO amount for the 2015/16 PSO period for these schemes is €156.3 million.

- **AER:** The technologies supported under the 15-year AER schemes, which started from 1995, include wind energy, small-scale hydropower, combined heat and power (CHP) biomass (landfill gas), biomass-CHP, biomass-anaerobic digestion and offshore wind. The plants involved, most of which are on-shore wind, contract with Electric Ireland (ESB's supply entity), which is then entitled to compensation from the PSO levy if the revenue it receives for selling the electricity is less than what it paid the renewable generators. Similarly Electric Ireland returns money to the PSO in the event of over-compensation. It is noted that for some AER contracts a reduction of 35% to payments applies for the second half of the term of the contracts. Since the AER was launched in 1995, six AER competitions have been held. The AER scheme is closed to new entrants.

There is 40 MW of AER generation capacity supported in this PSO decision, down from 128 MW in the current 2014/15 PSO period.

Compared with the 2014/15 PSO period, there are four less AER contracts in 2015/16 with the 35% reduction in payments, which contributes to increasing the PSO payment required. The ex-ante PSO amount for the 2015/16 PSO period for the AER schemes is €6.3 million.

- **REFIT:** Since the introduction of REFIT in 2006 (REFIT 1) relevant costs associated with the scheme have been included in the PSO levy. The REFIT 1 Terms and Conditions<sup>11</sup> as published in 2006 cover five categories of plant. These are Large Wind, Small Wind, Hydro, Biomass Landfill Gas and Biomass. The REFIT 2 scheme for onshore wind, small hydro and landfill gas was opened in March 2012. Most of REFIT 1 and 2 plants are on-shore wind.

In February 2012 the REFIT 3 scheme for biomass technologies opened. From 22<sup>nd</sup> December 2016 the Edenderry plant will be included under REFIT 3 for co-firing of biomass with peat up to a maximum of 30% of the installed capacity of 128 MW.

Under REFIT, generators contract with suppliers in a similar fashion to the AER scheme. Unlike AER however, the scheme is open to all suppliers (not just

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<sup>11</sup> REFIT Terms and Conditions:  
<http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division>

Electric Ireland) to contract with renewable generation. The compensation streams under the REFIT scheme are paid to electricity suppliers in exchange for entering 15-year Power Purchase Agreements (PPAs) with renewable electricity generators.

There is 2,080 MW of REFIT renewable generation capacity included in this PSO decision, which is an increase of 206 MW compared with the current 2014/15 PSO period.

The ex-ante PSO amount for the 2015/16 PSO period for the REFIT schemes is €150.0 million.

### **Peat Plants**

There are three peat plants associated with the PSO as shown below. Overall, the total ex-ante PSO amount for the 2015/16 PSO period for the peat plants is €103.7 million.

- ESB's Lough Ree (100 MW, commissioned December 2004) and West Offaly (150 MW, commissioned January 2005) plants sell their electrical output into the SEM pool and receive revenues from the SEM for that output. If the revenues they receive are less than entitled, notified costs incurred, Lough Ree and West Offaly recover monies from the PSO under 15-year PPAs. Similarly, if either plant over-recovers from the SEM, monies are returned to the PSO fund.
- Edenderry Power (128 MW, commissioned in December 2000) sells its electricity to Electric Ireland under a 15-year PPA whereby EI then sells that electricity on to the SEM pool. Electric Ireland is compensated for the shortfall between what it pays for the electricity it purchases from Edenderry Power and what it receives for selling the electricity to the SEM pool. If Electric Ireland over-recovers from the SEM, monies are returned to the PSO fund.

The ex-ante PSO amounts for the 2015/16 PSO period for Lough Ree, West Offaly are €45.2 million and €50.7 million respectively.

The ex-ante PSO amount for Edenderry is €7.9 million. This is down significantly on the ex-ante PSO cost for the current 2014/15 PSO period as PSO support for the combustion of peat with biomass co-firing at the Edenderry plant will terminate on 21<sup>st</sup> December 2015. Separately, PSO support for the biomass used in co-firing with peat, up to a maximum of 30% of the installed capacity of 128 MW, will commence from 22<sup>nd</sup> December 2015, as mentioned under the REFIT category above.

### **Security of Supply**

There are two plants supported by the PSO under this category - Aughinish Alumina (160 MW) and Tynagh (400 MW). The PSO for these plants was notified to the EU Commission in October 2003 in order to secure additional capacity to meet an anticipated generation capacity shortfall in 2005 and were cleared by the EU Commission at the end of 2003<sup>12</sup>. Hence these are sometimes referred to as “Capacity 2005” plants.

Aughinish and Tynagh entered a contract for differences (CfD) agreement with Electric Ireland, whereby Electric Ireland recovers or returns additional monies paid under the agreement from/to the PSO levy. These arrangements were put in place for a 10 year period. The contracts for Aughinish and Tynagh terminate on 31<sup>st</sup> March 2016, at which point they will no longer receive ex-ante PSO payments.

The ex-ante PSO amounts for support in the 2015/16 PSO period for Aughinish Alumina and Tynagh are €5.7 million and €41.4 million respectively, a total of €47.1 million. This is far less than for the current 2014/15 period, reflecting the reduced periods of support in 2015/16. These plants will continue to be subject to ex-post R-factor reconciliation payments for a further two years, up to the 2017/18 PSO.

## **2.4 Forecast Costs & R-Factor**

Added to the ex-ante estimate (in section 2.3 above) of the PSO is what is known as an “R-factor”. This can be positive or negative and relates mainly to the actual out-turn for two PSO periods before the ex-ante estimate period. It accounts for the difference between the PSO levy that was set ex-ante for a period to recover allowed costs and the actual PSO due (in retrospect) given audited relevant PSO plant costs, out-turn SMP, out-turn capacity payments received and out-turn generation levels for the PSO plant (i.e. market-related revenues)<sup>13</sup>.

Hence this decision paper includes monies pertaining to the R-factor for the 1<sup>st</sup> October 2013 to 30<sup>th</sup> September 2014 PSO period.

An R-factor of €42.9 million (excluding PSO-related CfDs discussed in section 2.5) is included in the PSO levy for 2015/16, relating to the 2013/14 PSO period.

Table 2 below sets out how the ex-ante forecasted 2015/16 PSO payments and the 2013/14 R-factor monies are allocated between the primary categories of plant supported under the PSO mechanism as referred to above (renewables, peat and security of supply).

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<sup>12</sup> See N/475/03: [http://ec.europa.eu/competition/state\\_aid/cases/133645/133645\\_496906\\_27\\_2.pdf](http://ec.europa.eu/competition/state_aid/cases/133645/133645_496906_27_2.pdf)

<sup>13</sup> See CER/08/236 “Calculation of the R-Factor in Determining the PSO Levy”  
<https://www.cer.ie/docs/000229/cer08236.pdf>



Cost Category	Scheme	2015/16 ex-ante Forecast € Million	2013/14 R-factor € Million	Total PSO for Plants € Million
Renewables	REFIT & AER	156.4	24.5	180.9
Peat	Edenderry, West Offaly and Lough Ree	103.7	18.2	121.9
Security of Supply	Aughinish & Tynagh	47.1	0.2	47.3

Table 2 - Allocation of 2013/14 R-factors

The R-factor for 2013/14 is primarily driven by lower out-turn market revenue than expected resulting from a lower average SMP out-turn for 2013/14 of €57.68/MWh compared with the forecast market price (or benchmark price) of €64.28/MWh.

## 2.5 PSO-related CfDs

PSO-related Contracts for Difference (CfDs) have been offered out by ESB for some years now - see SEM-11-020<sup>14</sup> for more details. For 2015/16 they are reducing the levy by €9.3 million. This reflects a lower average out-turn SMP than the average CfD strike price for the PSO-related CfDs for 2013/14, as shown in Table 3, as follows.

PSO - 2013/14 Average Prices	Baseload	Mid Merit	Mid Merit 2
Strike Price	€ 59.32	€ 70.93	€ 71.38
Out-turn SMP	€ 57.68	€ 66.62	€ 70.05

Table 3 - CfD and SMP Out-turn Prices for 2013/14

## 2.6 Electric Ireland Rebate

Electric Ireland recently identified an amount of €12.94 million arising from a differing interpretation of the R-factor rules applying to REFIT 1, which has since been clarified. This is now being rectified by a rebate in 2015/16 of these monies from Electric Ireland with interest.

## 2.7 Other

The category entitled “Other” covers administrative costs associated with schemes in the PSO of circa €1.2 million. This category also includes €3.7 million returned to the PSO due to over-collection of the PSO in 2014/15 due to a differing inflation assumption.

<sup>14</sup> [http://www.allislandproject.org/en/market\\_decision\\_documents.aspx?article=151a9561-cef9-47f2-9f48-21f6c62cef34](http://www.allislandproject.org/en/market_decision_documents.aspx?article=151a9561-cef9-47f2-9f48-21f6c62cef34)

## **3.0 PSO Levy 2015/16 – Key Comments to Proposed Decision**

This section provides a summary of public responses received to the proposed decision on the PSO levy for 2015/16, CER/15/110, along with CER responses to the key points made.

### ***3.1 List of Respondents***

The CER received 36 responses to the proposed decision paper CER/15/110. Submissions were received from the parties listed below and have been published with this decision paper where they were not indicated as confidential.

- Anne Flynn
- Anthony Cohu
- Ardfert Quarry Products
- Aughinish Alumina Limited
- Bennettsbridge Limestone Quarries
- Carmel McCormack
- Con Lehane
- Condron Concrete
- CSNA
- Dave Fingleton
- David Hughes
- Electric Ireland
- Fand Cooney
- Francis Clauson
- Gleeson Quarries
- Harrington Concrete & Quarries
- Ibec
- Irish Concrete Federation
- Irish Grain Feed Association (IGFA)
- IWEA
- Jeff Agar & Carlien Croonenberg
- Killeshal Precast Concrete
- Kilroran Castle Estate & Spa
- Kore Energy
- Lennon Quarries Ltd.
- Loughnane Concrete (Birr) Ltd.
- McGrath's Limestone (Cong) Ltd.
- Molloy Concrete Ltd.
- New Ross Hinterland

- Nigel de Haas
- Second Sight Technical
- Saint Vincent de Paul (SVP)
- Tony Miller
- Val Martin
- Wright Quarry Products
- Kieran O’Driscoll

### **3.2 Key Comments and CER Responses**

The primary issues raised by respondents to the proposed decision CER/15/110 (where not stated as confidential) are summarised by topic below, followed by the CER’s response.

#### **General Comments on Levy**

Many respondents to the proposed decision criticised the size of the PSO levy, noting the significant overall rise in recent years which applies despite the proposed decrease from October 2015.

It was queried whether building more PSO-subsidised wind farms represents value for money, especially given the high electricity capacity margin at present. Some respondents pointed to other costs associated with wind such as the “GRID25” upgrade of the national grid and the need for back-up plants. There were criticisms related to the lack of a cost-benefit analysis and a Strategic Environmental Assessment for wind and associated upgrades to the grid.

The CER was called on by some parties to either completely scrap or phase out the PSO levy and associated grid upgrades, especially related to wind, in order to assist competitiveness. Some respondents advocated alternative approaches to reducing carbon output such as demand reduction. The authority of the CER to impose the PSO levy was also questioned.

There were some general comments in relation to the PSO consultation period not being long or visible enough.

On the other hand, some parties welcomed the reduction in the PSO levy, while one respondent defended the customer benefits arising from increased wind, given that it drives lower wholesale costs.

There were also particular comments from large users which are referred to in the next topic section.

## **CER Response**

*The various PSO schemes have been designed and implemented by Government to achieve overall national policy objectives related to increased renewable energy (mostly from wind farms), indigenous fuels (peat) and security of energy supply. The CER's role in this matter is to follow legislation, to calculate the PSO levy and to help ensure that the levy is administered appropriately and efficiently. The CER is not in a position in any way to abolish or phase-out the levy. A review of PSO policy would be a matter for Government. That said, we do not believe the PSO levy to be unlawful, and we point out that all the various levy schemes are time-limited.*

*The overall rise in the PSO levy in recent years has been explained by the CER; in addition to section 4 of this paper, please see last year's PSO paper:*

[http://www.cer.ie/docs/000967/CER14361%20PSO%20Levy%20Decision%20Paper%20%202014-15%20\(New\).pdf](http://www.cer.ie/docs/000967/CER14361%20PSO%20Levy%20Decision%20Paper%20%202014-15%20(New).pdf)

*The PSO rise also needs to be considered in the context of reduced electricity prices for business and domestic customers over the last year. This has been driven by reduced wholesale electricity prices in SEM since early 2014, which in turn is related to lower international gas prices. It has been assisted by the wholesale SEM working efficiently and by a competitive electricity supply market, overseen by the CER, in which customers can switch between suppliers simply and for free in order to avail of price discounts on offer. The CER encourages all customers to “shop around” and seek better offers and discounts from energy suppliers in order to identify possible savings, including from their current supplier.*

*It is true that wind power tends to increase the PSO levy and has other infrastructure costs, referred to by some respondents, such as the need for grid reinforcements. However some of these reinforcements would be required in any event, for example to provide for a secure network to meet demand from customers, including for the facilitation of more high-tech factory investment (and jobs) in the country. Furthermore, the level of expenditure on networks upgrades is subject to direct regulatory oversight by the CER to help ensure that it is efficient.*

*Moreover, wind power tends to reduce the wholesale price of electricity given that its marginal cost is almost zero when the wind blows. This benefit in lowering wholesale SEM prices needs to be taken into account when considering the total impact of wind on the price of electricity. Overall, when fuel/carbon and wholesale prices are high, wind will tend to reduce the overall price of electricity to customers (and vice versa); thus wind can be seen as providing an electricity price “hedge” against possible high future fuel/carbon prices, which are outside of Ireland's control. Already over 20% of Ireland's electricity consumption comes from renewable generation on average, most of it wind, putting Ireland ahead of many EU countries. Issues related to environmental assessment associated with wind farms or the grid are not a matter for the CER, but rather the planning authorities.*

*In relation to the public consultation, the CER published the PSO paper in the standard fashion and normal time of the year on its website, for all to see and comment on, and we sent a “news-shot” to all website subscribers informing of the paper publication; please view here to subscribe: <http://www.cer.ie/email-subscription>*

*We allowed 3 weeks for responses to this consultation given that the policy issues for consultation here are very limited (as referred to above). Taking on board comments received, we will increase the consultation period to 4 weeks in future to assist respondents.*

### **Comments from Larger Customers**

Many larger electricity users referred to the large rise in the PSO levy in recent years, even with the reduction proposed from October 2015, pointing to the competitiveness implications for companies, stating that Irish electricity prices are already among the highest in Europe. They requested that the PSO levy be reduced to €18.47/kVA which was the rate that applied in 2013/14. One respondent referred to the PSO sustaining ESB’s monopoly.

The difficulty in budgeting electricity costs was pointed out. Some respondents called for the levy to run on a calendar year basis to assist with budgeting.

### ***CER Response***

*While the PSO levy has risen in recent years, it needs to be considered in context as it is only one component in the overall electricity cost and competitiveness chain. The latest statistics from Eurostat for the 2<sup>nd</sup> half of last year show Ireland’s electricity prices in total, including the PSO, for the typical business/industrial consumption band, as per the following graph. It can be seen that our prices, including tax, are only slightly ahead of the Eurozone average - this is a better comparison than with Europe as a whole as it strips out exchange rate impacts.*

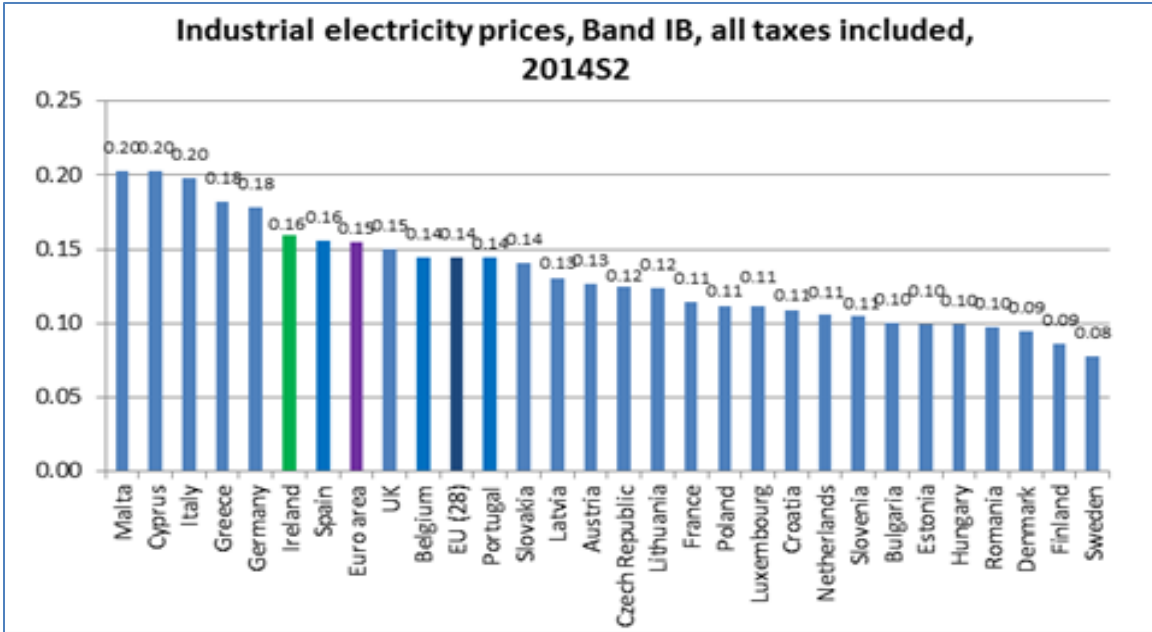


Figure 1 – Industrial Electricity Prices, Half 2 2014, Euro/kWh (Source: Eurostat)

*It would be expected that Ireland’s electricity prices would generally be slightly higher than the Eurozone for structural reasons which increase our relative costs, including our generation mix and the low and dispersed nature of our population. In any event, overall electricity prices offered by suppliers in Ireland have reduced over the last year or so, in line with lower wholesale prices in the SEM, which in turn has been largely driven by lower international gas prices. This applies to large electricity users as well as to domestic customers.*

*The CER has no discretion to artificially reduce the PSO levy to 2013/14 levels and we point out that the levy is not sustaining ESB Networks but rather is paid for the support of various generators in the market for public policy reasons, as referred to earlier.*

*In relation to budgeting, we appreciate that electricity cost inputs can be volatile; there is inherent uncertainty in many electricity costs, no matter what levy period is chosen. This especially applies to the international gas price which impacts directly on wholesale prices in the SEM and therefore the PSO levy amount. The CER has no plans to change the PSO levy period to a calendar year for the next two years, especially as I-SEM is planned to go-live in Quarter 4 2017. However we will consider this matter as part of the review of how the PSO will apply more generally in I-SEM.*

**Charging Mechanism**

A number of respondents commented on the allocation of the PSO cost between categories of customers and the charging mechanism itself. One queried the peak

consumption levels allocated to large customers, given that this has driven an increased contribution to the levy have risen since 2012/13.

Two parties believe that that MIC is not a reliable/fair way to charge larger customers as it does not account for consumption. One respondent believes that all customers should have the same charging methodology or, if that is not feasible, allow medium/large customers be levied at the same fixed level up to 29kVA and only on a per kVA basis thereafter on the balance; another respondent requested that large customers be charged on a peak monthly demand in MW or on a unit cost basis.

The flat nature of the charge to domestic customers was criticised by another respondent on a social justice basis, as it is unrelated to energy consumption and takes no account of ability to pay. The fact that VAT is payable was also raised.

### **CER Response**

*The CER cannot amend the PSO schemes or the allocation of allowed PSO costs to the three customer categories which is by their estimated contribution to overall peak consumption. Given consultation feedback received, the CER has discussed how peak demand is allocated to large customers with ESB Networks, and we include an explanation from ESB Networks of this allocation in Appendix B.*

*The legislation which governs the PSO mandates that the CER decides the PSO levy amount to be paid by final customers, in each customer category, on the basis of kVA of the Maximum Import Capacity (MIC) for large customers and a fixed amount for the other customer categories. Specifically, Article 9 (3) (e) (v) of the Electricity Regulation Act 1999 (Public Service Obligations) Order 2002, states that:*

*“... (e) The Commission shall make a final determination of-*

*(v) the PSO Levy amount per electricity account for Domestic Accounts and Small Accounts and the PSO Levy charge per kVA of maximum import capacity for Medium-Large Accounts...”*

*The CER therefore does not have discretion on these matters, nor on the applicability of VAT for domestic customers which is a matter for the Revenue Commissioners/Government.*

### **Other Comments**

The proposed reduction in capacity payments for 2016 was raised, including in terms of how much this is adding to the PSO levy and whether suppliers have already fixed contracts to customers for 2016 based on a higher capacity payment level.

### **CER Response**

*The proposed reduction in the capacity payment level for 2016 in the recent SEM Committee consultation results in an estimated extra €14.6 million to the 2015/16 PSO levy. It should be noted that this is only an estimate as there are lots of overlapping factors affecting the size of the PSO levy which are not easy to disentangle. For information, the final capacity payment level for 2016 will be decided on by the SEM Committee and published in the coming months.*

*We have no reason to believe that electricity suppliers will not pass through the capacity payment sum that will be decided on by the SEM Committee for 2016, and of course all customers are free to shop around among suppliers to get the best tariff deal. In any event the CER monitors such issues as part of its general monitoring of retail energy markets, to help ensure that customers benefit from competition.*



## 4.0 PSO Levy 2015/16

This section summarises the PSO levy for the 2015/16 period, explains the key drivers for the year-on-year change as well as the change between the proposed decision CER/15/110 and this paper, and shows the allocation of the levy to electricity customers.

### 4.1 Levy Amount

Tables 4 below summarises the key PSO schemes and cost categories and resulting PSO levy figures by the broad support categories (renewables, peat and security of supply) for the 2013/14 and 2014/15 PSO periods as well as for 2015/16. Table 5 details the PSO figures for 2015/16 in more detail by scheme/cost category.

As can be seen, the total PSO levy amounts to **€325.3 million** for the 2015/16 period.

Category	Total PSO 2013/14 € Million	Total PSO 2014/15 € Million	Forecast 2015/16 excluding R-factor € Million	R-Factor 2013/14 € Million	Total PSO 2015/16 € Million
Renewables	54.5	94.3	156.4	24.5	180.9
Peat	94.8	119.0	103.7	18.2	121.9
Security of Supply	61.0	104.7	47.1	0.2	47.3
PSO CfDs	-6.2	5.6	0.0	-9.3	-9.3
Other	6.8	11.6	-2.4	-13.1	-15.5
<b>Total</b>	<b>210.9</b>	<b>335.4</b>	<b>304.7</b>	<b>20.5</b>	<b>325.3</b>

Table 4 – Comparison of Recent PSO Levy Amounts with 2015/16 PSO

PSO Item	Totals
AERs	€6,313,000
REFIT	€150,047,159
Lough Ree	€45,169,000
West Offaly	€50,657,000
Edenderry	€7,873,000
Tynagh	€41,434,000
Aughinish	€5,653,000
Sub-Total	€307,146,159
2013-14 R-Factors	€42,907,277
2013/14 PSO CfDs	-€9,305,207
Electric Ireland Rebate	-€13,076,312
Other	-€2,420,504
<b>Total PSO</b>	<b>€325,251,413</b>

Table 5 – Total 2015/16 PSO Levy

## 4.2 Drivers for Changes to the PSO Levy

The total PSO levy for 2015/16 of €325.3 million compares with €335.4 million for the current 2014/5 period, a reduction of circa 3%. While the PSO levy is reduced overall compared with current period, there are factors which are putting both upward and downward pressure on it, as explained below. This is followed by a summary of changes between in the levy for 2015/16 between the proposed decision (CER/15/110) and this decision.

### Upward Levy Pressure

- Lower wholesale prices. As referred to in section 2, the benchmark price - the estimated wholesale SMP - for 2015/16, is €52.25/MWh. This is down circa 9% on the €57.17/MWh used to determine the levy for the current PSO period. A lower wholesale price for next year results in the PSO plant needing more PSO money to cover their allowed costs, to offset the lower money they are predicted to receive from the market. This applies across-the-board for renewables, peat and security of supply plants supported by the PSO. The lower estimated wholesale price for next year is reflective of a trend in the SEM since the first half of 2014 of lower spot prices, related to lower gas prices;

- Lower capacity payments. The capacity payment of €5.77/MWh for 2015/16 is significantly lower than the capacity payment of €7.29/MWh in the current 2014/15 period. As with the SMP, this reduces the forecast revenues from the market to generators/suppliers and hence increases the PSO. The reduction in the capacity payment is driven by the proposed reduction of circa 19% in the Annual Capacity Payment Sum for 2016.
- More renewables. An estimated 2,080 MW of REFIT supported renewable generation, mostly wind, will be supported by the PSO next year. This is 206 MW, or 11%, more than the 1,874 MW of REFIT supported plants in the current PSO period, hence driving-up the levy<sup>15</sup>.

### ***Downward Levy Pressure***

- Termination of contracts. The termination of contracts for Tynagh, Aughinish and Edenderry will result in these plants receiving support from the PSO for circa 6 months, 6 months and 3 months respectively, compared with a full 12 months of support for these plants for the current 2014/15 PSO period. The support for these plants is f €41.3 million less than for the 2014/15 levy;
- CfDs. For 2015/16, PSO-related CfDs are reducing the levy by €9.3 million. This reflects an SMP out-turn for 2013/14 which on average was lower than the CfD strike price for the period overall;
- R-Factor Reduction (excluding CfDs). The 2013/14 R-Factor included in the 2015/16 PSO levy is €4.9 million less than the 2012/13 R-Factor included in the 2014/15 PSO levy; and,
- Electric Ireland repayment. Electric Ireland recently identified an amount of €12.94 million arising from a differing interpretation of the R-factor rules applying to REFIT 1, which has since been clarified. This is now being rectified by a rebate of these monies with interest in 2015/16.

### ***Changes from Proposed Decision***

The PSO levy of €325.3 million for 2015/16, as set in this decision paper, has increased from the €304.8 million consulted on in the June proposed decision paper (CER/15/110). This is due to:

- A (further) reduction in the estimated average wholesale SEM price for 2015/16, falling from €53.52/MWh in the June paper to €52.25/MWh used for this decision. This is based on more up-to-date forecasts of the wholesale SEM price for the next PSO period and is related to reduced international gas prices. It has the effect of increasing the PSO as a greater subsidy is needed in

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<sup>15</sup> While more wind generation tends to increase the PSO levy, it also tends to reduce the wholesale price of electricity in the SEM.

compensation for lower market revenues for the relevant plants. It was noted in the proposed decision that the final levy figure for 2015/16 could change for this reason; and,

- The Tynagh PSO/contract termination date being validated as 31<sup>st</sup> March 2016, two months later than the date advised to the CER for the June consultation. This is because, subsequent to the public consultation, information was recently provided to the CER to that effect from both Tynagh and ESB, such that the 31<sup>st</sup> March date is in accordance with Part 3 of Schedule 1C of S.I. No. 217 of 2002 as amended by S.I. No. 583 of 2007.

### 4.3 PSO Cost per Customer

The PSO apportionment model 2015/16 is calculated using data from the ESRI's Summer 2015 Economic Commentary<sup>16</sup>. For the final PSO levy decision the model has incorporated the relevant indices for economic growth from the most up to date ESRI Quarterly Economic Commentary available.

Using this model, and based on a PSO levy of €325.3 million, the payment by customer category for the levy period 1<sup>st</sup> of October 2015 to the 30<sup>th</sup> September 2016 is as per Table 6 below.

PSO Customer Category	Current Annual Levy Amount 2014/15	Annual Levy Amount 2015/ 16	Levy Amount 2015/16 Per Month
Domestic customers	€64.37/customer	€60.09/customer	€5.01/customer
Small commercial customers (maximum import capacity of less than 30kVA)	€221.66/customer	€214.50/customer	€17.88/customer
Medium and large customers (maximum import capacity of equal to or greater than 30kVA)	€34.20/kVA	€33.14/kVA	€2.76/kVA

Table 6 – PSO Levy 2015/16 by Customer Category

Detail behind the 2015/16 figures above is contained in Appendix A.

<sup>16</sup> [http://www.esri.ie/UserFiles/publications/QEC2015SUM\\_ES.pdf](http://www.esri.ie/UserFiles/publications/QEC2015SUM_ES.pdf)

## Appendix A – Allocation of PSO Levy

Allocation of 2015/16 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		
<b>Domestic Profile</b>	<b>2,154,635</b>	37.61%	122.32	<b>2,035,732</b>		60.09		<b>5.01</b>	<b>€ per Customer</b>
<b>Small Profile</b> <small>ie. non-domestic (excl PL) &lt;30kVA</small>	<b>636,317</b>	11.11%	36.12	<b>168,410</b>		214.50		<b>17.88</b>	<b>€ per Customer</b>
<b>Medium &amp; Large Profile</b>	<b>2,938,273</b>	51.29%	166.81		<b>5,033,379</b>		33.14	<b>2.76</b>	<b>€/kVA</b>
<b>TOTAL</b>	<b>5,729,225</b>	100.00%	<b>325.25</b>						

## Appendix B – Allocation of PSO Charges

*This information has been provided to the CER by ESB Networks.*



### **Related Documents: Electricity Regulation Act 1999**

<http://www.irishstatutebook.ie/1999/en/act/pub/0023/index.html>

### **S.I. No. 217 of 2002 - Electricity Regulation Act 1999 (Public Service Obligations) Order 2002 as amended**

<http://www.irishstatutebook.ie/2002/en/si/0217.html>

### **CER Direction 2003**

<http://www.cer.ie/document-detail/PSO-Invoicing-and-Collection-Procedures/753/4609>

### **SUSTAINABLE ENERGY ACT, 2002**

<http://www.irishstatutebook.ie/2002/en/act/pub/0002/>

### **Determination of PSO amounts**

The total amount of the PSO Levy to be collected in any year is estimated by the CER in accordance with Section 9 of S.I. 217 of 2002. This amount is allocated to three customer categories by the Distribution System Operator (DSO), in accordance with Section 39 of the Electricity Regulation Act, 1999, and is submitted for approval to the CER.

### **Attribution of Maximum Demands**

ESB Networks, as DSO, is responsible for attributing maximum demands in respect of three customer categories of electricity account, on an annual basis, with the approval of the CER in respect of each levy period. This entails ESB Networks using forecast figures for each category and applying these to standard load profiles and metered profiles (as appropriate) for each category. The peak demand for each category is then determined from the profiles.

The categories mentioned are defined as:

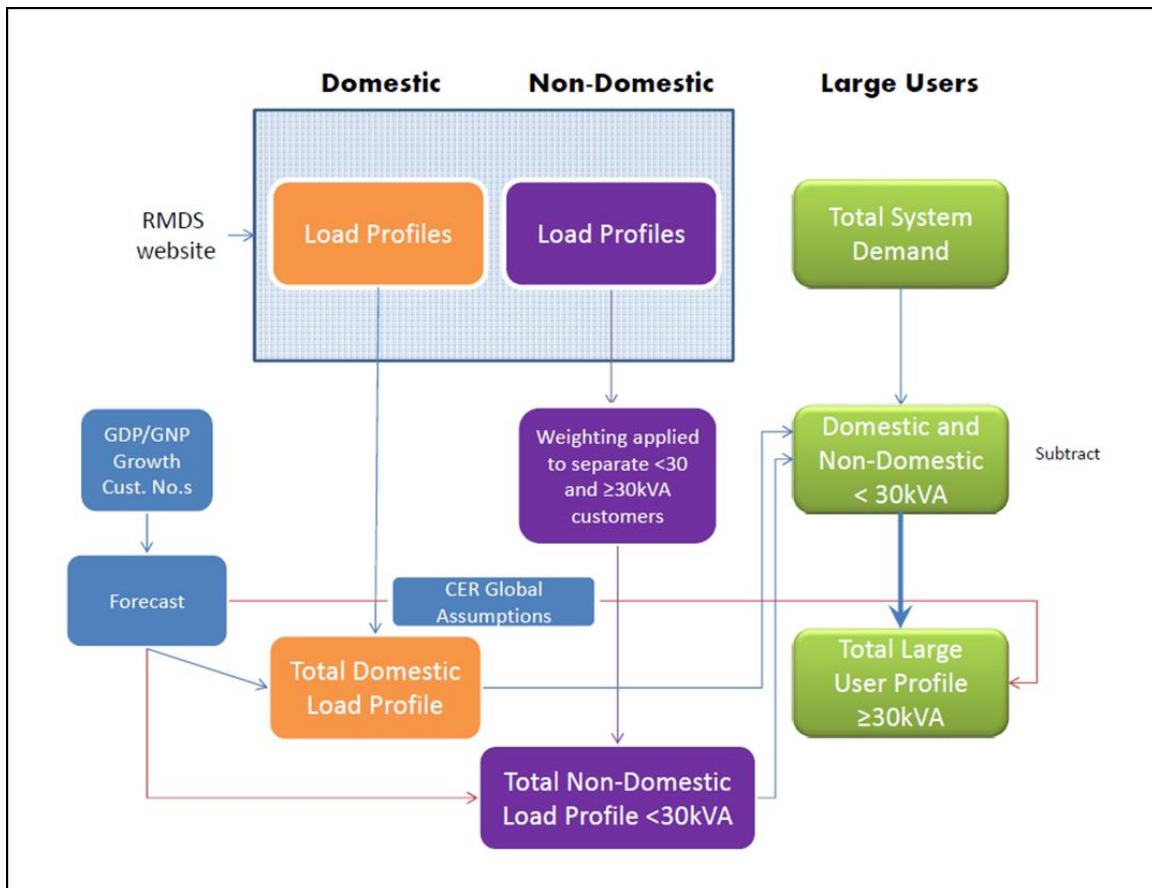
- Domestic Accounts;
- Small Accounts (<30kVA); and,
- Medium-Large Accounts (≥30kVA incl. public lighting)

Each of the calculations used by ESB Networks are based on consistent assumptions and the same methodology applied to the PSO model annually, as described above. Profile data is collected and processed annually, using the most recent profile data from sample meters, to create the base Standard Load Profiles for the following year. The PSO model has not changed in recent years and the manner in which the PSO levy is allocated each year is consistent with the relevant PSO legislation.

### Calculation of Profiles for the Three Customer Categories

As illustrated in the PSO Model flow chart below (Fig.1), the PSO model takes publicly available electricity consumption profiles that are available on the RMDS website, Total System Demand, Forecast Figures and Actual measured electricity consumption, and then combines these to determine the Individual Peak for each of the three customer categories:

- Domestic Accounts
- Small Accounts
- Medium-Large Accounts



Appendix B, Fig. 1

Standard Load Profiles (SLP) and Total System Demand Profiles are used to determine the Individual Peak for each customer category. The Standard Load Profiles were developed for the Irish Market, in consultation with Electricity Association Consultants, UK. The project was approved by the CER in December 2001, following discussions with all parties. It was agreed to develop 9 SLPs for the retail market, together with derived profiles for the unmetered Public Lighting supplies. Sample meters were installed during 2003 and early 2004 and the profile data collected, validated and processed to create the base profiles for the 2005 calendar year. The profile data is collected and processed annually, using the most recent profile data from sample meters, to create the base SLPs for the following year.

### Domestic Accounts

Domestic Profile consists of a combination of the Load Profiles associated with DUoS Tariff groups DG1 and DG2.

The profiles are added together and combined with forecast data and the maximum GWh value is selected as the peak.

### Small Accounts

Small Profile consists of a combination of the Load Profiles associated with DUoS Tariff groups DG5 and DG6.

For each of the DG groups, a weighting is applied to apportion and exclude the number of accounts in each group that are not less than 30kVA. The profiles are added together and combined with forecast data and the maximum GWh value is selected as the peak.

### Medium-Large Accounts

Medium-Large Accounts Individual Peak is derived as follows:

(Total System Demand Profile) – (Domestic Profiles + Non-Domestic Profiles).  
As with the Domestic and Non-Domestic categories above, the maximum GWh value is selected as the peak.

The proportion of the Individual Peak GWh for each of the customer categories in relation to the combination of the three Individual Peaks determines the percentage of the total PSO allocated to each of the three customer categories.



## **Charging**

The total PSO levy associated with domestic accounts is divided by total customer numbers to determine a charge per customer. The same process is applied for the small accounts to determine a charge per customer. The PSO levy for the medium-large account category is divided by the sum of the network connection capacities for such account holders, to determine a standard charge per kVA of Maximum Import Capacity (MIC)

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