An Coimisiún um Rialáil Fóntas
Commission for Regulation of Utilities

Pass Through Costs for Business Electricity Customers from 1st October 2017

Information Paper

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Public/ Customer Impact Statement

This note provides business electricity customers with a brief overview of regulated cost components (unregulated costs such as the cost of energy and supply costs are not detailed here). Final prices are primarily influenced by international energy costs (accounting for approximately 60% of costs), and a proportion of the final price relates to regulated charges and taxes.

While suppliers may generally choose whether or not to absorb these costs (PSO and taxes are the exception), they typically pass them on to the customer. Such costs are referred to as Pass Through Costs. To assist business customers in evaluating quotations provided by suppliers, this document contains details of the Pass Through Costs for each electricity business type, which are applicable from 1st October 2017 to 30th September 2018.

For any queries on this note please contact retaildata@cru.ie.

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Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or Meaning
BNE	Best New Entrant
CfD	Contract for Difference
CRM	Capacity Remuneration Mechanism
CRU	Commission for Regulation of Utilities
DBC	Dispatch Balancing Costs
DG	Distribution Group
DLAF	Distribution Loss Adjustment Factor
DUoS	Distribution Use of System
I-SEM	Integrated Single Electricity Market
kVArh	Kilo Volt Amperes Reactive Hours
kWh	Kilowatt Hour

LEU	Large Energy User
LLF	Low Load Factor
LV	Low Voltage
LVMD	Low Voltage Maximum Demand
MEC	Maximum Export Capacity
MIC	Maximum Import Capacity
MO	Market Operator
MV	Medium Voltage
MWh	Megawatt Hour
NIAUR	Northern Irish Authority for Utility Regulation
PSO	Public Service Obligation
REVLF	Residual Error Volume Loss Factor
SEM	Single Electricity Market

SEMO	Single Electricity Market Operator
SMP	System Marginal Price
TUoS	Transmission Use of System

1. Introduction

1.1 Background

1.1.1 Overview of Charges

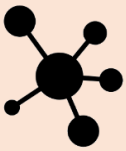
Final electricity prices are generally comprised of a number of different costs to a supplier, some of which are regulated. However, the final prices of electricity are primarily influenced by energy costs which account for approximately 60% of the final electricity price.

The full breakdown of electricity costs fall into the following categories:

Generation

The cost of purchasing electricity from generators accounts for about 60% of an electricity bill. The majority of the electricity generated in Ireland uses imported fossil fuels. International fuel prices – which are outside of Ireland's control – are the key driver of the cost of generation and therefore electricity prices.

Details on the wholesale electricity market in Ireland (the Single Electricity Market) can be found through the following link: Factsheet on the SEM. Historic costs in the wholesale market are available on the SEMO website (see their Market Data section[1]) and reports relating to some of the hedging options available to suppliers against movements in energy costs are available on the All-Island Project website (see reports on - contracts for difference (CfDs), directed contracts and PSO CfDs). In addition to the SEM wholesale cost, suppliers pay SEMO (the SEM market operator) a Market Operator charge to recover the costs of administering the SEM to all electricity users.



Networks

The cost associated with the services of Networks, which involves sending the electricity from the generation plants through the Transmission and Distribution wires to customers' premises, also accounts for a very significant portion of the final price of electricity for customers.

[1] You will need to sign up to access the historic pricing information (note the price is referred to as the system marginal price or SMP for short). Signing up is a simple process but should you have any questions you should contact SEMO's helpline – for details see http://www.sem-o.com/pages/contactus.aspx.

 **Supply**	A suppliers operating expenditure in in supporting their business e.g. administrative costs
 **Public Service Obligation Levy**	The PSO levy is a Government initiative designed to support certain electricity generation plant in order to meet national policy objectives of security of energy supply, the use of indigenous fuels (i.e. peat) and the use of renewable energy sources in electricity generation.
 **Taxes**	Suppliers are responsible for payment of an electricity tax and for returns/accounts related to it.

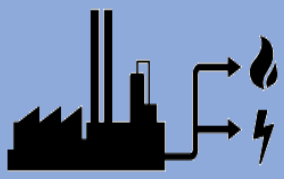
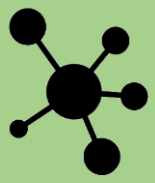
1.1.2 Pass Through Costs

Whilst international fuel prices are the key driver of electricity prices (and outside of Ireland's control), some of the final cost components are regulated and approved annually. These costs are necessary in order for networks and other market operators to recoup the cost of generating, transmitting and distributing electricity, and suppliers are required to pay these annually. Changes to these charges generally come into effect on the 1st October annually (capacity charges are updated on 1st January). While it is the decision of each supplier whether or not to pass through such costs to final customers, it is likely that most suppliers pass through all such costs. These costs, with the addition of the applicable taxes, are referred to as Pass Through Costs and are discussed in the next section.

2. Pass Through Costs

2.1 Introduction

This section describes Pass Through Costs for customers. As detailed in the previous section, these charges include regulated charges and taxes. They include the following charges:

Cost	Charge	Description
 **Generation**	**Capacity Payments**	Payment made to generators for availability separate from energy production.
	Market Operator Charges	Charges levied on generators and suppliers for the operation of the wholesale markets.
	Imperfection Charges	Constraint costs on the network are recovered by imperfection charges.
 **Networks**	**Network Transmission use of system charges (TUoS)**	Charges levied for the building, maintenance and operation of the transmission network.
	Network Distribution use of system charges (DUoS)	Charges levied for the building, maintenance and operation of the distribution network.
 **PSO**	**Public Service Obligation Levy**	Levied for support for renewables, security of supply and indigenous fuels (peat).

2.2 Electricity Market Segments

The value of each charge is based upon the business electricity market segment that is being operated in.

The electricity market is comprised of four different market segments covering different DUoS groups (distribution use of system groups or DGs)[2]: domestic, small-sized business, medium-sized business and large energy users (LEUs). Some charges vary depending upon DuoS group. The table below provides a breakdown of the 3 different business markets and their respective DUoS groups.

Business Market	DUoS Group
Small Business	**DUoS Group 5** – General Purpose
Medium Business	**Duos Group 4** – Local Authority Public Lighting
	DUoS Group 6 – LVMD & LLF
Large Energy User	**DUoS Group 7-** Medium Voltage Max Demand
	DUoS Group 8- 38KV Max Demand
	DUoS Group 9 – 38KV Max Demand
	T-CONN

2.3 Consumption

Components of price are charged on either consumption at trading point or consumption at selling point. All generation charges and TUoS charges are based on consumption at trading point. DUoS charges are based on consumption at selling point[3].

To apply charges (for both consumption at trading point and selling point), a customer's metered consumption is used. However, the transportation of electricity from the trading point to a customer's metering point results in losses. To account for these losses a 'Distribution Loss Adjustment Factor' (DLAF) is applied to customers' metered energy consumption. The energy

[2] A DUoS charge is a fee that ESB Networks charges to electricity suppliers for use of the electricity distribution system. The amount of DUoS that ESBN charges a supplier for each customer depends on which DUoS Group a customer is classified as, which is based on several factors including the voltage a premises is connected at, the type of meter installed, or if electricity is exported. Source: ESB Networks.

[3] Retail consumption data published on a quarterly basis by the CRU refers to consumption at selling point (i.e. at the customer's site)

consumption measured at a customer's meter is multiplied by the DLAF to get the consumption at which generation and transmission charges are applied. The CRU publishes DLAFs each year, broken down by size of a customer's connection and time of consumption.

On the 31st of August 2017, an Information Paper was published by the CRU which identified the DLAFs to be applicable for the 2017/18 tariff year, see CER/17/273 '*Electricity Distribution Network Allowed Revenue 2018, Distribution Tariffs 2017/2018 & Distribution Loss Adjustment Factors'*. The following are the applicable DLAFs for the 2017/18 tariff year.

	Time Period		
	Composite	**Day**	**Night**
38kV Sales	1.02	1.021	1.017
MV Sales	1.036	1.038	1.031
LV Sales	1.087	1.092	1.074

DLAFs for 1 October 2017 to 30 September 2018

2.4 Generation Charges

2.4.1 Capacity Charges

The system marginal price (SMP) is set in relation to short-run generation costs (see 'energy costs' section below for more information). Therefore, to enable generators to fully recover their long-run fixed costs a capacity payment mechanism is in place. This is a Fixed Revenue system payment for participants offering generation capacity to the SEM. The fixed "pot" of money for this is calculated on an annual basis by the Regulatory Authorities, with technical assistance from the System Operators. This capacity pot is "filled" throughout the Trading Year through Capacity Charges levied on participants who purchase energy from the pool.

On the 10th of October 2017, a Decision Paper was published by the SEM Committee which identified the capacity charges to be applicable for the 2018 trading year, see SEM-17-069 '*Fixed Cost of a Best New Entrant Peaking Plant, Capacity Requirement and Annual Capacity Payment Sum For Trading Year 2018*'. The following are the indicative applicable charges.

BNE (€/kW/yr)	Capacity Requirement (MW)	Annual Capacity Pot (€)	Total Demand GWh	Indicative Cost Per MWh
74.12	7,368	€546,116,160	38,745	€14.09

Annual Capacity Charges 2018

2.4.2 Market Operator (MO) Charges

The Single Electricity Market (SEM) is administered by the Single Electricity Market Operator (SEMO). SEMO imposes a Market Operator (MO) charge, to recover the costs of administering the SEM, on all electricity users on a cent per kilowatt hour (c/kWh) basis. SEMO applies annually to the SEM Committee (which is comprised of the Irish and Northern Irish Regulators; CRU and NIAUR respectively) with their suggested revenues and tariffs for the upcoming tariff year. The SEM Committee reviews and approves a set of charges annually and publishes them on the SEM website.

On July 27th 2017 the SEM Committee approved the revenue to be recovered by SEMO for its operation of the SEM Market in the tariff year 2017/18 (MO Charges) up to I-SEM Go-Live (see the appendix of this paper for further discussion of I-SEM). The approved MO Charges for the 2017/18 tariff year were published on the SEMO website, see 'Single Electricity Market SEMO Tariffs and Imperfection Costs Period: 1st October 2017 to 23rd May 2018', which is available here. The following are the applicable charges.

MO Charges	2017/18
Fixed Supplier Charge (per unit[4])	**€ 128**
Variable Supplier Charge (per MWh)	**€0.286**

MO Charges 2017/18

The MO Charges were calculated up until the 23rd May 2018 when I-SEM was due to Go-Live. However, with the delay in I-SEM Go-Live until 1st October, the MO charges for the period 23rd May – 1st October are currently being considered and will be published on the SEMO website in due course.

2.4.3 Imperfection Charges

SEMO recovers costs on an annual basis in relation to the operation of the grid in the form of imperfection charges.

The purpose of Imperfection charge is to recover the following costs

[4] Refers to supplier unit. A full list of supply units is on the SEMO website

- Dispatch Balancing Costs (DBC): Constraint Payments due to the TSOs having to dispatch some generators differently from the ex-post market unconstrained schedule, in real time, to ensure security of supply on the system
- Make Whole Payments: any difference between the total Energy Payments to a generator and the production cost of that generator on a weekly basis
- Energy Imbalance Charges: if the sum of Energy Payments to generators does not equal the sum of Energy Charges to supplier

On 4th October 2017, a decision paper was published by the SEM Committee, which identified the imperfection charges to be applicable for the 2017/18 tariff year, see '*Imperfection Charge October 2017 - September 2018*', which is available here. The following are the applicable charges.

Imperfection charge	2017/18
Tariff	**€ 5.00/MWh**

Imperfection Charges 2017/18

2.5 Network Charges

2.5.1 Distribution Use of System (DUoS) Charges

DUoS charges are applied for the use of the distribution system infrastructure in Ireland. DUoS tariffs are charged to suppliers based on the amount of energy used by their customers, and include standing charges. These changes are paid to the Distribution System Operator (DSO) based on their 'allowed revenue', which is annually calculated by the CRU. The DSO determines the annual DUoS charges from this, with the approval of the CRU.

On the 31st of August 2017, a decision paper was published by the CRU which identified the DUoS charges to be applicable for the 2017/18 tariff year, see CER/17/273 '*Electricity Distribution Network Allowed Revenue 2018, Distribution Tariffs 2017/2018 & Distribution Loss Adjustment Factors'* and accompanying tariff statement. The following are the applicable charges.

Segment	DUoS Standing charge 2017/18	DUoS Unit rates 2017/18	Low Power Factor Surcharge
DG3		€0.03340/kWh	

DG4		€0.03340/kWh (ex DG4 premium[5])	
DG 5 and DG5b (low voltage non-domestic customers, non-max demand)	Standard meter: €95.369/ customer/ annum Day/night meter: €95.369/ customer/ annum	Standard meter: €0.04401/kWh Day/night meter: Day: €0.05147/kWh Night: €0.00629/kWh	Standard meter: €0.01021/kVArh Day/night meter: €0.01021/kVArh
DG5a (low voltage autoproducers MEC>MIC, non-max demand)	N/A	Standard meter: €0.04401/kWh Day/night meter: Day: €0.05147/kWh Night: €0.00629/kWh	Standard meter: €0.01021/kVArh Day/night meter: €0.01021/kVArh
DG 6 and DG 6b (low voltage business customers, max demand)	Standing charge: €889.591/customer /annum Capacity charge: €33.199/kVA of MIC /annum	Day: €0.02619/kWh Night: €0.00309/kWh	€0.00933/kVArh
DG 6a (low voltage autoproducers MEC>MIC, max demand)	N/A	Day: €0.02619/kWh Night: €0.00309/kWh	€0.00933/kVArh
DG 7 & 7b (medium Voltage customers, max demand)	Standing charge: €1,567.998/customer /annum Capacity charge: €11.466/kVA of MIC /annum	Day: €0.00453/kWh Night: €0.00071/kWh	€0.00819/kVArh
DG 7a (medium voltage autoproducers MEC >MIC, max demand)	N/A	Day: €0.00453/kWh Night: €0.00071/kWh	€0.00819/kVArh
DG 8 & DG 8b (38kV looped customers, max demand)	Standing charge: €26,285.477/custom er /annum Capacity charge: €5.644/kVA of MIC /annum	Day: €0.00100/kWh Night: €0.00007/kWh	€0.00768/kVArh
DG 8a (38kV looped autoproducers MEC >MIC, max demand)	N/A	Day: €0.00100/kWh Night: €0.00007/kWh	€0.00768/kVArh
DG 9 & DG 9b (38kV tailed customers, max demand)	Standing charge: €7,487.325/customer /annum Capacity charge: €5.644/kVA of MIC /annum	Day: €0.00100/kWh Night: €0.00007/kWh	€0.00768/kVArh

[5] DG4 tariff also incurs an additional premium in respect of additional costs incurred on public lighting installations. This premium is 0.01 c/kWh but it is currently being reviewed.

DG 9a (38kV tailed autoproducers MEC >MIC, max demand)	N/A	Day: €0.00100/kWh Night: €0.00007/kWh	€0.00768/kVArh

DUoS Charges 2017/18

2.5.2 Transmission Use of System (TUoS) Charges

TUoS charges are applied for the use of the transmission system infrastructure in Ireland. They are designed to recover the total costs involved in operating, maintaining and developing the transmission system. TUoS charges are calculated on an annual basis by the Transmission System Operator (TSO), with the approval from CRU.

On the 31st of August 2017, an Information Paper was published by the CRU which identified the TUoS charges to be applicable for the 2017/18 tariff year, see CER/17/276 '*Electricity Transmission Network Allowed Revenue 2018 and Transmission Tariffs 2017/2018*' and accompanying tariff statement[6]. The following are the applicable charges.

TUoS for 2017/18	DTS-D2[7] (non-LEUs)	DTS-D1[8] (non-LEUs)	DTS-D1[9] (LEUs)	DTS-T[10] (LEUs)
Network Capacity Charge	€6.2143/MWh (day hrs)	€1,591.4405/MW	€1,234.9471/MW	€1,463.7413/MW
Network Transfer Charge	€2.9541/MWh	€2.9541/MWh	€2.2925/MWh	€2.2924/MWh
System Services Charge	€4.6270MWh	€4.6270/MWh	€3.5905/MWh	€3.5905/MWh
DSM Charge	€0.0001/MWh (day hrs)	€0.0001/MWh (day hrs)	€0.0001/MWh (day hrs)	€0.0001/MWh (day hrs)

Note: DTS-D2 (non-LEU) is applicable to DG 3, DG 4, DG 5, the majority of DG 6 customers.
DTS-D1 (non-LEUs) is applicable to some DG 6 customers.
DTS-D1 (LEUs) is applicable to DG 7, DG 8 and DG 9 customers.
DTS-T (LEUs) is applicable to T-CONN customers

TUoS Charges 2017/18

[6] '*Eirgrid Statement of Charges Applicable from 1st October 2016*'
[7] DTS-D2 non-LEU customers are those connected to the distribution system and have a maximum import capacity of less than 0.5MWs.
[8] DTS-D1 non-LEU customers are those connected to the distribution system and have a maximum import capacity (MIC) greater than 0.5MWs.
[9] DTS-D1 customers are those connected to the distribution system and have a maximum import capacity (MIC) greater than 0.5MWs.
[10] Applies to customers connected directly to the transmission system.

2.6 Public Service Obligation Levy (PSO)

The Public Service Obligation (PSO) levy is a government subsidy charged to all electricity customers in Ireland. It is designed by the Irish Government and consists of various schemes to support national policy objectives related to: renewable energy, security of supply and the use of indigenous fuels (peat). The proceeds of the levy are used to contribute to the additional 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.

On the 28th July 2017, a decision paper was published by the CRU which identified the PSO levy to be applicable for the 2017/18 tariff year, CER/17/241.

The following are the applicable monthly charges.

PSO Levy	Monthly Levy Amount 2017/18
Small commercial customers (MIC of less than 30kVA)	**€26.55 per customer**
Medium & large customers (MIC of equal to or greater than 30kVA)	**€3.64 per customer**

PSO Charges 2017/18

This is an increase from the 2016/17 tariff year due to a number of drivers, including in particular, increased renewable generation and an increased R-factor arising from the 2015/16 PSO period.

2.7 Electricity Tax

To comply with the EU Energy Tax Directive, an electricity tax on suppliers of electricity was introduced in 2008. Suppliers are responsible for payment of the tax and for returns/accounts in relation to it. This cost is passed on to final customers[11].

Electricity Tax	
Business	**€0.50 per MWh**

Electricity Tax 2017/18

[11] Households are exempt

Appendix

I-SEM and the introduction of new charges

The Integrated Single Electricity Market (I-SEM) is a new wholesale electricity market arrangement for Ireland and Northern Ireland which is due to go-live in the next tariff year (2018/19).

The new market arrangements are designed to integrate the all-island wholesale electricity market with European wholesale electricity markets, enabling the free flow of electricity across borders. This is expected to deliver increased levels of competition which should help put a downward pressure on prices as well as encouraging greater levels of security and transparency.

I-SEM will introduce many changes to the wholesale market, including the introduction of a new capacity remuneration mechanism, through which generators get paid for their availability, to replace the old capacity payment mechanism.

The new pass through costs that will be effective form I-SEM Go-Live are:

- Supplier Capacity Charge;
- Capacity Difference Payment Socialisation Charge;
- Residual Error Volume Loss Factor Charge; and
- Currency Adjustment Charge.

It will be at suppliers' discretion whether they itemise each of these charges separately on the bills of Business Electricity Customers.

Supplier Capacity Charge

The administratively determined CPM in SEM is being replaced with a competitively determined Capacity Remuneration Mechanism (CRM) with the price for awarded capacity determined through an auction process. Capacity Payments will be funded through a Capacity Charge tariff which is socialised across all suppliers on a monthly basis based upon their daytime demand profile.

Capacity Difference Payment Socialisation Charge

The capacity difference payment socialisation fund is a new mechanism in I-SEM. The revenue to fund awarded capacity is recovered from suppliers through a capacity charge. In return the suppliers are hedged against high energy prices. The purpose of this tariff is to ensure suppliers are fully hedged against high price events. This is separate to the Supplier Capacity Charge itself.

If inadequate funds have been built up to fully cover difference payments that need to be made, the Market Operator may use the over recovery of other charges to fund these. Otherwise the Market Operator has the right to “suspend and accrue” until funds build up again.

Residual Error Volume Loss Factor Charge

The Residual Error Volume Loss Factor (REVLF) relates to differences between actual and metered volumes that can swing in both positive and negative directions. The key difference in the REVLF between SEM and I-SEM is that costs are recovered in a tariff arrangement, rather than from close to real-time recovery as is carried out in SEM.

Currency Adjustment Charge

Due to the existence of two currencies within the SEM/I-SEM, variation between these can occur in incoming and outgoing amounts in the market. The variation is covered through the Currency Adjustment Charge.