



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

2014 TSO and TAO Revenue

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Abstract:

This Information Note outlines the revenues that EirGrid and ESB Networks will be allowed to recover from the Transmission Use of System (TUoS) customer over calendar year 2014, to cover their costs as electricity Transmission System Operator (TSO) and Transmission Asset Owner (TAO), respectively.

In 2010 the Commission for Energy Regulation (CER) outlined its decision (CER/10/206) on the current electricity transmission price control, known as Price Review 3 (PR3), covering the period 2011 to 2015. During the PR3 period yearly updates will be completed as per the structures outlined in section 13 of CER/10/206. The following Information Note outlines the effect of implementing the yearly update to the 2014 transmission revenue.

Target Audience:

This Information Note is for the attention of members of the public, the energy industry, customers and all interested parties.

Related Documents:

[CER/12/150](#) Information Note on 2013 TSO and TAO Revenue

[CER/11/167](#) Information Note on 2012 TSO and TAO Revenue

[CER/11/128](#) Decision on 2011/2012 Transmission Incentives

[CER/10/206](#) Decision on TSO and TAO transmission revenue for 2011 to 2015

[CER/10/207](#) Response to comments received to CER/10/102 (consultation on TSO and TAO transmission revenue for 2011 to 2015)

[CER/10/102](#) Consultation on TSO and TAO transmission revenue for 2011 to 2015

[CER/09/140](#) Determination of 2010 Transmission Allowed Revenue and Use of System Tariffs

[CER/09/004](#) TSO System Performance Incentives (SPIs) for 2009 & 2010

Executive Summary

The following Information Note paper outlines the application of the third PR3 annual update (2014) to the PR3 transmission revenue. This revenue is to be collected during calendar year 2014 and will cover the costs of the Transmission System Operator (EirGrid) and the Transmission Asset Owner (ESB Networks).

The Transmission Use of System (TUoS) tariffs applicable to Demand Customers have been published in Appendix A of this Information Note. These tariffs are those contained in CER/13/188, which was published by the CER on 15 August 2013. The TUoS tariffs, applicable to Generators on an all-island basis for the upcoming tariff period¹, were published by EirGrid on 14 August 2013².

Financial data in this Information Note is expressed in 2012 price levels, unless otherwise stated.

2014 TSO allowed revenue

The CER has approved TSO revenue of €121.51 million for the 2014 calendar year. This figure has been derived from the following:

- Allowed 2014 TSO revenue of €161.52 million as per CER/10/206³;
- Outturn results for 2012 TSO External costs (e.g. Ancillary Services);
- Outturn results for 2012 TSO System Performance Incentives;
- Adjustment for actual 2012 inflation⁴; and
- Adjustment for differential in TUoS energy volume recovery against the assumed energy throughput forecast in 2012, known as the 2012 K-Factor.

Inflating this figure to a nominal 2014 price level⁵ results in a TSO allowed amount of €125.59 million. This is a decrease of 6.8% relative to the revenue approved for the 2013 calendar year (€134.66 million in nominal 2013 prices) in the PR3 price review.

2014 TAO allowed revenue

The CER has approved TAO revenue of €195.42 million for the 2014 calendar year. This figure has been derived from the following:

- Allowed 2014 TAO revenue of €201.20 million as per CER/10/206⁶;
- Outturn results for 2012 TAO External costs (e.g. Local Authority Rates); and
- Adjustment for actual 2012 inflation.⁷

¹ Please refer to following link [here](#)

² Please refer to the following link [here](#).

³ Allowed figure of €159.17 million in 2009 prices inflated to 2012 prices using Irish HICP factor of -1.6% in 2010 and 1.1% in 2011 and 2% in 2012.

⁴ For the current price control PR3 (2011-2015) Irish HICP will be used as the inflation factor. Please refer section 13.2.2 of CER/10/206.

⁵ 2014 prices based on inflation of the 2012 prices by actual/forecast Irish HICP rates of 2% in 2012, 1.7% in 2013 and 1.9% in 2014. Please refer to the ESRI Quarterly Economic Commentary Spring [2013](#).

⁶ Allowed figure of €198.28 million in 2009 prices inflated to 2012 prices using Irish HICP factor of -1.6% in 2010, 1.1% in 2011 and 2% in 2012.

Inflating this figure to a nominal 2014 price level⁸ results in a TAO allowed amount of €202.73 million. This is an increase of 19.8% relative to the revenue approved for the 2013 calendar year (€169.10 million in nominal 2013 prices).

2014 Total Transmission Revenue

Combining allowed TSO and TAO revenue results in a total 2014 transmission allowance of €320.05 million in 2012 prices. This equates to €328.32 million in nominal 2014 prices. This is an increase of 8% relative to the transmission revenue approved for the 2013 calendar year (€303.76 million).

€ millions	2012 prices	2014 nominal prices⁹
2014 TSO Revenue	€121.51	€125.59
2014 TAO Revenue	€195.42	€202.73
2014 Total Transmission Revenue	€316.92	€328.32

Note: figures are rounded

2014 Average Unit Price (AUP) and 2013/2014 transmission AUP

Since TUoS tariffs are not set on a calendar year basis, it is useful to compare transmission revenue relating to TUoS tariff periods. The appropriate portion of the €328.32 million (2014 nominal prices), plus the relevant portion of the €306.46 million (2014 nominal prices) that was approved for the 2013 calendar year would result in transmission revenue of €322.42million (2014 nominal prices) for the TUoS tariff period from 1 October 2013 to 30 September 2014. This is a nominal revenue increase of 10.2% relative to the equivalent revenue (€292.50 million) for the period 1 October 2012 to 30 September 2013.

If this allowed revenue of €322.42 million (2014 nominal prices) was recovered during the 1 October 2013 to 30 September 2014 period it would result in a TUoS AUP of 1.26 c/ kWh, a 9.2% increase from the equivalent twelve month period from 1 October 2012 to 30 September 2013.

This significant rise in the transmission AUP can be attributed mostly to the following factors:

- the continued ramp-up in transmission capital expenditure so to allow Ireland to meet its 2020 renewables targets (€330 million in 2014 compared with €313 in 2013, an increase of 5.4%);
- the continued weak energy throughput growth in the PR3 period, which reflects the current economic climate. It is important to note that the PR3 model of November 2010 (CER/10/102f) assumes energy throughput for the period 2013/2014 of 28,862 GWh. The current forecast for the same period is for 25,650GWh – a 12.5% difference.

⁷ For the current price control PR3 (2011-2015) Irish HICP will be used as the inflation factor. Please refer section 13.2.2 of CER/10/206.

⁸ Please refer to footnote 6.

⁹ Ibid.

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Introduction

The Commission for Energy Regulation

The CER is the independent body responsible for overseeing the regulation of Ireland's electricity and gas sectors. The CER was initially established and granted regulatory powers over the electricity market under the Electricity Regulation Act, 1999. The enactment of the Gas (Interim) (Regulation) Act, 2002 expanded the CER's jurisdiction to include regulation of the natural gas market, while the Energy (Miscellaneous Provisions) Act 2006 granted the CER additional powers in relation to gas and electricity safety.

The Electricity Regulation Amendment (SEM) Act 2007 outlined the CER's functions in relation to the Single Electricity Market (SEM) for the island of Ireland. This market is regulated by the CER and the Northern Ireland Authority for Utility Regulation (NIAUR). The CER is working to ensure that consumers benefit from regulation and the introduction of competition in the energy sector.

Purpose of this paper

This Information note outlines the level of transmission revenue that EirGrid (the Transmission System Operator, TSO) and ESB Networks (the Transmission Asset Owner, TAO) will be allowed to recover from the TUoS customer in the 2014 calendar year. This revenue will allow the TSO and TAO to finance their activities as the monopoly electricity system operator and system owner in Ireland.

Structure of this paper

This paper is structured in the following manner:

- **Section 1** provides an introduction to the purpose of this Information Note;
- **Section 2** provides background information on this note. It outlines, at a high level, the decisions made as part of the PR3 Transmission Price Control published in November 2010¹⁰;
- **Section 3** provides detail on the transmission revenue that has been approved for the 2014 calendar year;
- **Section 4** provides a summary;
- **Section 5** discusses the Demand Side Management Charge applicable to the upcoming tariff period; and
- **Appendix A** outlines the approved 2013/2014 TUoS Demand Schedule of tariffs for the period 1 October 2013 to 30 September 2014. Please note that the full 2013/2014 Statement of Charges will be published by EirGrid, as TSO, in

¹⁰ Please refer to the CER decision paper CER/10/206.

accordance with Section 36 of the Electricity Regulation Act 1999 before commencement of the new tariff period.

Background Information

PR3 Transmission Revenue Control

In November 2010, the CER published a decision paper (CER/10/206) on the revenue that EirGrid (as TSO) and ESB Networks (as TAO) would be allowed to recover from the Transmission Use of System customer over the period 2011 to 2015. This period is known as PR3.

The five years from 2011 to 2015 require significant new investment in the transmission system. The target of ensuring 40% of Ireland's electricity is generated by renewable sources by 2020 means a major expansion of the transmission network. This expenditure will allow these new renewable Generators to connect to the system. The transmission network also needs ongoing investment to ensure it operates securely and effectively.

This necessary investment will mean that the overall revenues to be recovered by the TSO and TAO over the period of the review will rise from their levels in the last price control (PR2 2006-2010). As a result TUoS charges, levied to consumers, will rise somewhat. However, it should be noted that TUoS is a small overall element of a customer's bill (approximately 7%) and that the revenues outlined in this paper will result in a minor increase in a customer's overall bill.

The CER adopts an incentive based model to separately determine the TSO's and TAO's allowed revenues. Both utilities internal operating costs are fixed for a five year period. If either utility spends more than it is allowed, it bears the cost. On the other hand if the utility spends below what it is allowed it can keep the surplus made any one year for a period of five years as a means of incentivising efficiency, as long as those savings have been made in an efficient manner. The utilities cannot simply make apparent savings through the avoidance of expenditure, which could be to the detriment of the transmission system.

Customers benefit in the medium term by the progressive decrease in operating costs allowed at subsequent price reviews.

The allowed revenue set for each calendar year of the PR3 period for both TSO and TAO is shown in the below table.¹¹ Please refer to CER/10/206 for the breakdown of these revenues.

(2009 monies, €m's)	2011	2012	2013	2014	2015	Total
TSO Allowed Revenue	95.68	120.36	159.47	159.17	161.02	695.72
TAO Allowed Revenue	164.29	160.40	165.65	198.28	232.48	921.10

Table 1: TSO & TAO Allowed Revenues 2011-2015

¹¹ Please note that these figures have been rounded to the nearest ten thousand euro.

Determination of TSO and TAO revenue for each calendar year

CER/10/206 also detailed how the allowed revenues would be updated each year for both the TSO and TAO in PR3. Accordingly, this is the third year that such an update will take place – for calendar year 2014. Please refer to section 13 of the decision paper (CER/10/206) as to how TSO and TAO revenue will be updated for each calendar year.

Determination of TUoS tariffs for each tariff period

For 2006 (and previous years), TUoS tariffs were set on a calendar year basis using estimated Gigawatt hour (GWh) figures and the allowed transmission revenue for that calendar year.

In 2007, TUoS tariffs were set for an 11 month tariff period from 1 November 2007 to 30 September 2008. The reasons behind the decision to change the tariff period to a non-calendar-year term are documented in the CER decision document AIP/SEM/07/93.¹²

TUoS tariffs are now set on a tariff year basis, i.e. 1 October to 30 September.

¹² The decision paper on PES retails tariff period alignment in both regulatory jurisdictions (AIP/SEM/07/93) is available [here](#).

TSO & TAO revenue for the 2014 calendar year

Introduction

As detailed in Section 2.1, in November 2010 the CER published a decision paper (CER/10/206) detailing the level of TSO and TAO allowed revenue for the period 2011 to 2015 (PR3). That decision paper also detailed how the allowed revenue would be updated each year.

The TSO and TAO revenue for the 2014 calendar year have been separately updated according to the above decision paper. The CER approves TSO revenue of €124.63 million for the 2014 calendar year. The CER also approves TAO revenue of €195.42 million for the 2014 calendar year. This is based on a revenue submission provided by the TSO and TAO and the calculations behind this figure are explained below.

TSO revenue for the 2014 calendar year

Revenue control formula

The revenue control formula, which is used to keep the TSO's revenue in line with allowed costs, is set out in detail in Section 13 of CER/10/206. This has been slightly modified to take account of the TSO Incentive outturn in year t-2 (in this case calendar year 2012). Very simply, the revenue control formula takes the 'base' allowed revenue (in 2009 monies, as detailed in Table 1 above), inflates that revenue into nominal figures, and adjusts it for specific revenue parameters. The following formula is used:

$$R_t = \prod_{2010}^t \left[\frac{1 + Inf_t - X}{100} \right] * B_t + INCENT_t + KINCENT_{t-1} \Delta P_t + \Delta U_t + K_{t-1} + K_{t-2}$$

Equation 1: Price control formula from CER/10/206

$$R_t = \prod_{2010}^t \left[\frac{1 + Inf_t - X}{100} \right] * B_t + Incent_{t-2} + \Delta P_t + \Delta U_t + K_{t-1} + K_{t-2}$$

Equation 1: Price control formula from CER/10/206 formula for application in revenue year 2014

The terms within Equation 2 are fully explained within CER/10/206, apart from $Incent_{t-2}$ which is defined below. For the 2014 calendar year:

- R_t , the maximum level of TSO revenue allowed in 2014, is €121.51 million;
- Inf_t , when inflating from 2009 to 2012 values, the relevant figures are increased by -1.6%, 1.1% and 2%¹³;

¹³ Irish HICP for 2010, 2011 and 2012 inflation values – please refer to footnote 4.

- X_t , the efficiency factor, is set at zero;
- B_t , the level of allowed revenue for the 2014 calendar year in real 2009 prices as detailed in the CER/10/206, is €357.46 million, which takes account of the 2013/2014 Imperfections Charge consultation forecast (€165.60million).¹⁴
- $INCENT_{t-2}$, is the value of incentive penalties in year t-2 in € millions in respect of the penalties or payments.¹⁵ PR3 transmission incentives for the current incentive period (2012/2013) are outlined in a separate CER paper CER/11/128 The value of TSO incentive payments for 2012 is €882k;
- ΔP_t , the change in 2014 in TSO external costs (e.g. Inter TSO Compensation and Ancillary Services) from those assumed in the determination paper CER/10/206, is €0.53 million;
- ΔU_t , the change in 2014 unforeseen costs from those assumed in the determination paper CER/10/206, is €1.89 million;
- K_{t-1} , this is the correction factor, which ensures that prices in year t are adjusted by an amount equal to the over or under recovery in the previous calendar year. For the purposes of calculating the 2014 TSO revenue this is €0; and
- K_{t-2} , the equivalent correction factor for 2012, is minus €14.55 million.

2012 TSO outturn and k-factor to apply to 2014 TSO revenue

This section outlines the TSO's revenue for 2012 allowed under the 2010 transmission revenue determination (CER/10/206) and the changes now made, on an *ex-post* basis. This is then compared with the actual revenue received from market participants to calculate the total allowed transmission over-recovery of revenue in 2012, known as the 'k-factor'. This k-factor will feed into the 2014 TSO revenue.

2012 prices	CER <i>ex-ante</i> allowed 2012¹⁶	CER Outturn allowed 2012	Difference (Outturn minus <i>ex-ante</i>)
<i>Total Internal Costs</i>	61.19	58.87 ¹⁷	-2.32
<i>External Costs</i>			
EWIC TUoS Entitlement	12.68	15.56	2.88
CER Levy	.92	.90	-0.02
DUoS costs	.41	.70	.29
Interconnector Services	0.61	0	-0.61
Inter TSO Compensation	1.14	1.10	-0.04
Ancillary Services	46.98	37.40	-9.58
<i>Total External Costs</i>	62.75	55.66	-7.09

¹⁴ Please refer to following link [here](#)

¹⁵ Please refer to footnote 11.

¹⁶ Figures adjusted for actual 2010 and 2011 inflation of -1.6% in 2010, 1.1% in 2011 and 2% in 2012. Please refer to footnote 4. CER/10/206 assumed -1.5% in 2010 and 0.5% in 2011.

¹⁷ TSO submission included a reduction in working capital requirement and actual outturn for 2012 imperfection costs.

2012 TAO Charge cost	162.64	142.70	19.94
2012 Incentive allowance		.882	
<i>Total TSO Costs + Incentives</i>		(a) 251.05	
<i>Total TSO Income</i> ¹⁸			(b) 265.62
Total K-Factor adjustment (pre-interest)			(a)-(b) -14.57

Table 2: Ex-post 2012 TSO Revenue

2012 TSO Incentives outturn

An incentive value of €882k (rounded) is included in the above table. This includes incentives values for System Minutes Lost (SML) and System Frequency¹⁹ and new transmission system development incentives introduced for the 2011/2012 incentive period. It also includes a specific incentive outlined in CER/09/004 for the delivery of Gate 3 connection offers to stakeholders.

The TSO target levels for 2012 are set out in CER/11/128²⁰ and the outturn results and applicable TSO payment/penalties are detailed in table 3 below. It should also be noted, as per CER/11/128 that the CER has undertaken an *ex-post* review of the TSO project milestones targets from 2012 and re-adjusted *ex-ante* targets based on that review. The incentives are now discussed in turn.

Incentive	Target	Outturn	Payment/Penalty in 2012 prices €k's
System Minutes Lost	1.0 - 1.5 SML	.371 SML	+0.33
System Frequency in range 50Hz +/- 0.1Hz	96% - 98% of year	99.4% of year	+0.33
Project Milestones	Total 59-99	72	+0.22
Delivery of Enhanced Network Capacity	Demonstrable through Cost-Benefit Analysis	N/A for 2012	0
Total			€882k

Table 3: TSO 2012 System Performance Incentives outturn.

(a) System Minutes Lost

The SML is an index that measures the severity of each system disturbance relative to the size of the transmission system. It is determined by calculating the ratio of unsupplied energy during an outage to the energy that would be supplied during one minute, if the supplied energy was at its peak value.

The outturn of 0.371 SML equates to full achievement of the target (i.e. 1.5 to 1.0) and therefore results in a full reward to the TSO of plus €330k.

¹⁸ EirGrid submission made to CER in May 2013.

¹⁹ Please refer to the Annual Transmission System Performance reports published by EirGrid.

²⁰ Please refer to the following link [here](#).

(b) System Frequency

The National Control Centre (NCC) in TSO offices aims to maintain the frequency of the transmission system within a target operating range of 50 ±0.1 Hz. The frequency, however, may deviate outside the normal operating range under fault or abnormal operating conditions.

The outturn of system frequency being kept in the range 50Hz +/- 0.1Hz 99.4% of the year equates to full achievement of the target (i.e. 96% to 98%). This results in a full reward to the TSO of plus €330k.

(c) Project Milestones

This is a joint incentive with the TAO. In CER/11/128 the CER introduced an incentive on stages of project initiation to project completion, i.e. lodgement of planning permission right through to energisation. It was called the Project Milestones incentive. An *ex-post* adjustment is a correct step to take within this incentive considering the level of degree of influence each party has under its control, something which the CER acknowledged in CER/11/128.

However, just as important is the nature of that adjustment. The CER has reviewed the TSO/TAO submission and each of the individual proposed adjustments. The CER believes that the TUoS customer should be rewarding the transmission utilities (collectively) for delivery of the transmission network and not just on making sure one party fulfils their own project milestones. Therefore, the CER considers that lack of achievement in this incentive should be shared equally between the TSO and TAO. The central target of the TSO project milestones in CER/11/128 was 77, with the outturn being 72. The TSO and TAO have jointly submitted a total of 22 adjustments to the incentive central target; the CER consider 16 of those to be valid (or 73%).

As a result, the CER has decided that 73% of the Project Milestones incentive payment should be paid to both the TSO and TAO. This equates to plus €222k to the TSO and plus €172k to the TAO, or plus €394k in total.

However, after reviewing the outturn data for 2012 the CER has a number of concerns with this incentive as currently structured. The concern mainly centres on their effectiveness, e.g. for the Project Milestones incentive – to promote a fluid process of project development from lodgement of planning permission to ultimate project agreement between the TSO and TAO. The electricity networks team are currently working on a consultation paper which will propose a new incentive mechanism. A joint submission on incentives from the TSO and TSO was received by CER in May 2013, the content of which is being considered in drafting the consultation paper. The paper is expected to be published for consultation in Q3 2013, it is envisaged that a new incentive mechanism will be in place for the 2014/15 tariff period.

(d) Delivery of Enhanced Network Capacity

In CER/11/128 the CER placed an incentive on the TSO to investigate measures which make more efficient use of the network, such that additional network capacity is released to allow non-firm generation to connect.

Measures include adoption/more progressive interpretation of network planning standards, operating security standards and the use of active network management techniques and tools such as dynamic line ratings and advanced protection/control schemes. These issues may particularly come into focus as levels of intermittent generation on the system increase in the coming years. There is no lower bound or reduction in TSO revenues linked to this incentive. Full achievement of the target, which is determined by the CER through of a review of a TSO economic cost benefit analysis, results in a reward of €420k.

No submission was made to the CER for the year 2012, therefore no reward is granted to the TSO.

2014 TSO revenue and explanation of 2014 adjustments

Table 4 below provides a summary of the allowed TSO revenue for 2014 as determined in CER/10/206 compared with the revenue submission for 2014 made by the TSO and, following a review of this submission, the CER's determination of the amount allowed for 2014.

2012 prices	CER ex-ante allowed 2014	Final CER allowed 2014	Difference
<i>Total Internal Costs</i>	43.47	43.47	0
<i>External Costs</i>			
CER Levy	1.02	1.13	.11
DUoS costs	.41	.74	.33
Interconnector services	.61	.60	-.01
Inter TSO Compensation	1.14	.70	-.44
Ancillary Services	51.65	51	-.65
Stage 1 Working Capital	1.68	1.68	0
<i>Total External Costs</i>	56.51	55.85	-.66
EWIC Charge	50.74	24.18	-26.56
Depreciation/Return/Incentives	7.74	7.74	0
Working Capital	3.06	2.94	-0.12
2014 Adjustments ²¹		1.89	1.89
2011 K-Factor from Table 2		-14.57	-14.57
Total Allowed Revenue	161.52	121.51	-40.01

Table 4: k-factor and adjustments to TSO revenue for 2014

Equation 2 shows that B_t for 2014 was adjusted for inflation to give a figure of €161.52million. This figure is then adjusted downwards by the 2012 TSO k-factor of

²¹ Relates directly to 2014 and is included within Equation 2 under the terms ΔP_t and ΔU_t .

minus €14.57 million, a lower than forecast EWIC charge and the pass-through/unforeseen items, €1.72 million, to yield the total value of €121.51 million for TSO revenue for the 2014 calendar year.

Change to External Costs - ΔP_t

DSO wires costs

These costs are consistent with the forecast received from ESB Networks Ltd., as DSO, on six DG10 110kV accounts. There is a slight increase in this anticipated cost.

Unforeseen Adjustments - ΔU_t

Intra-day Trading

The SEM Committee meeting on 2 March 2011 approved the modifications to facilitate Intra-Day trading. In late March 2011 the EirGrid Group made a submission outlining the revenue requirements associated with the delivery of the Intra-Day project and its ongoing operation, some of which is associated with the ROI TSO licence. These costs have been reviewed and approved by the SEM Committee.

The CER allows a sum of €1.10 million for this adjustment as per SEM Committee decision on Approval of SEMO Intra-Day Trading Costs²². These costs have been included in the annual revenue since 2012.

Guarantees of Origin

CER decision paper CER/11/824 'Supervisory Framework for Administration of Guarantees of Origin', it was set out that the operational costs and costs involved in setting up a charging infrastructure for Guarantees of Origin (GoOs), would be recovered through EirGrid's network charges.

The TSO have submitted a request for €170k for the work associated with Guarantees of Origin. The figure comprises the cost of the on-going resource allowance, development an automated system for the management of GoOs and associated licensing costs.

The CER allows an adjustment this adjustment of €170k to the 2014 revenue.

Constraints Arrangement Fees

The arrangement in place since 2001 relates to the ongoing provision of working capital for the TSO business to manage cash flow differentials which result from the operation of its business.

²² Approval of SEMO Intra-Day Trading Costs (SEM-11-083) http://www.allislandproject.org/en/smo_decision_documents.aspx?article=f58e5c07-d1c5-4903-b157-7cd7eceb82f4&mode=author

This constraints arrangement fees line item is separate to the general working capital arrangements contained in the allowed TSO revenue and it covers funding arrangements associated with the all-island Imperfections charge. The TSO has submitted for costs of €0.58 million. The CER allows this cost of €0.58 million for 2014, which will be subject to *ex-post* review.

Strategic Projects

The TSO have also submitted a request for €240k for the costs associated with investigating the Ireland – France Interconnector. The €240k includes expenditure of €80k in 2013 and anticipated spend of €160k for 2014 as no provision was for this project in 2013.

The CER recognise that the TSO is acting under licence “*to explore and develop opportunities for interconnection of its system with other systems*”²³, however, given the current economic environment and focus on managing increases in tariffs, the CER has not allowed this adjustment to the 2014 revenue.

The CER will engage with the TSO over the coming year to in relation to this and other potential interconnection projects to develop a view on the merits of these projects, the costs associated and the benefits they may have for the Irish customer. Following these discussions a decision on whether or not to allow costs associated with this work may be considered in the 2015 revenue.

Change to East-West Interconnector Allowance

As noted in CER/10/206 this is a new cost item applicable in the PR3 period. The EWIC charge is not a TSO related cost, but recoverable under TUoS in accordance with the interconnector licence. The EWIC charge is treated in the exact same fashion as all the external TSO cost items listed above, i.e. this charge will be allowed as pass through in PR3. However the CER will undertake an annual *ex-post* adjustment to take account of actual outturn costs and revenues earned by the EWIC.

With the 500MW EWIC expected to become operational in Q4 2012, for the purposes of PR3 modelling the CER included the EWIC charge that is likely to be recovered through TUoS from the 2012/2013 tariff period onwards. The CER based the forecast annual cost of €50 million on the estimated cost for the infrastructure and the financing arrangements. However, the TSO advised in its submission of July 2013 that the forecast cost for the 2014 revenue year is €24.18.²⁴

The CER will undertake an *ex-post* review of these costs, which will feed into allowed TSO revenue for 2015.

²³ Please refer to the Transmission System Operator Licence ([CER/07/229](#)), granted to EirGrid in 2007.

²⁴ Please refer the CER Information Note on the EWIC revenue requirement (CER/12/149) which can be found [here](#). Please note that the allowance of €42.18 million indicated in section 11 of CER/12/149 is a tariff year allowance (1 October 2013 to 30 September 2014).

TAO revenue for the 2014 calendar year

Revenue control formula

The revenue control formula, which is used to keep the TAO's revenue in line with allowed costs, is also set out in detail in Section 13 of CER/10/206. As with the TSO this has been slightly modified to take account of the TAO Incentive outturn in year t-2. The revenue control formula for the TAO takes the 'base' allowed revenue (in 2009 monies, as detailed in Table 1), inflates that revenue into nominal figures, and adjusts it for specific revenue parameters. The following formula is used:

$$R_t = \prod_{2010}^t \left[\frac{1 + Inf_t - X}{100} \right] * B_t + INCENT_t + KINCENT_{t-1} \Delta P_t + \Delta U_t + K_{t-1} + K_{t-2}$$

Equation 3: Price control formula from CER/10/206

$$R_t = \prod_{2010}^t \left[\frac{1 + Inf_t - X}{100} \right] * B_t + Incent_{t-2} + \Delta P_t + \Delta U_t + K_{t-1} + K_{t-2}$$

Equation 4: Updated formula for application in revenue year 2013

The terms within Equation 4 are fully explained within CER/10/206, apart from $Incent_{t-2}$ which is defined below. For the 2014 calendar year:

- R_t , the maximum level of TAO revenue allowed in 2014, is €195.42 million;
- Inf_t , when inflating from 2009 to 2012 values, the relevant figures are increased by -1.6% 1.1%; and 2%.²⁵
- X , the efficiency factor, is set at zero;
- B_t , the level of allowed revenue for the 2014 calendar year in real 2009 prices as detailed in the CER/10/206, is €198.28million;
- $INCENT_{t-2}$, is the value of incentive penalties in year t-2 in € millions in respect of the penalties or payments. PR3 transmission incentives for the current incentive period (2012/2013) are outlined in a separate CER paper CER/XX/XXX. The value of TAO incentive payments for 2012 is €2.34 million;
- ΔP_t , the change in 2014 in TAO external costs (e.g. Local Authority Rates) from those assumed in the determination paper CER/10/206, is zero;
- ΔU_t , the change in 2014 unforeseen costs from those assumed in the determination paper CER/10/206, is also zero;
- K_{t-1} , this is the correction factor, which ensures that prices in year t are adjusted by an amount equal to the over or under recovery in the previous calendar year. For the purposes of calculating the 2014 TAO revenue this figure is €0; and
- K_{t-2} , the equivalent correction factor for 2012 is minus €5.78 million.

²⁵ Irish HICP 2010, 2011 and 2012 inflation values – please refer to footnote 4.

2012 TAO outturn and k-factors to apply to 2014 TAO revenue

This section outlines the TAO's revenue for 2012 allowed under CER/10/206 and the changes now made, on an *ex-post* basis. This is then compared with the actual revenue received to calculate the total allowed transmission over-recovery of revenue in 2012, known as the k-factor. This k-factor will feed into the 2014 TAO revenue.

2012 prices	CER <i>ex-ante</i> allowed 2012 ²⁶	CER Outturn allowed 2012	Difference (Outturn minus <i>ex-ante</i>)
Internal Costs	27.91	27.91	0
<i>External Costs</i>			
Local Authority Rates	18.48	17.69	-0.79
CER Regulatory Levy	0.81	0.86	0.05
Total External Costs	19.29	18.55	-0.74
2012 Incentive allowance	0	2.34	2.34
Further Opex and Capex efficiencies	-3.39	-3.39	0
Clawbacks/Deferrals	0	-7.39	-7.39
Depreciation	39.68	39.68	0
Return on Capital	79.26	79.26	0
TAO Total Revenue	162.76	156.97	-5.78
Total k-factor adjustment (pre-interest)			-5.78

Table 5: Ex-post 2012 TAO Revenue

Changes to 2012 TAO allowance

Local Authority Network rates are levied annually by county, city, borough and certain town councils around the country on the TAO. Due to an annual *ex-post* review an adjustment of minus €0.79 million is made to 2012 allowed Network Rates costs.

The adjustment to clawbacks and deferrals reflects an underspend on the 2011 and 2012 Capex which directly leads to a reduction for the TAO in the depreciation of network assets and the return on the capital employed in the network. This underspend leads to a reduction in TAO 2014 revenues of €6.89 million.

²⁶ Figures adjusted for actual 2010 and 2011 inflation of -1.6% in 2010, 1.1% in 2011 and 2% in 2012. Please refer to footnote 4. CER/10/206 assumed -1.5% in 2010 and 0.5% in 2011.

A further adjustment to clawback and deferrals is attributable to charges payable by ESB Telecoms to ESB Networks for the lease of fibre optic cable on high voltage power lines. This adjustment to TAO 2014 revenues is €0.5 million.

2012 TAO Incentives outturn

An incentive value of plus €2.34 million is detailed in the above table. This includes incentives values for the new transmission system development incentives introduced by the CER for the 2012/2013 incentive period. The TAO target levels for 2012 are set out in CER/12/128²⁷ and the outturn results and applicable TAO payment/penalties are detailed in table 6 below.

Incentive	Target	Outturn	Payment/Penalty in 2012 prices €m's
Issue PIP	35-44	40	€1.172
Scheduled Outages	Total outage days of all 3 weekly reports – 5% more days	2.2% more days than total outage days of all 3 weekly reports	€4.400
Construction and Energisation	80% - 100%	102%	€1.77
Total			€2.34

Table 6: TAO 2012 System Performance Incentives

(a) Issuance of Project Implementation Plans (PIPs) to TSO

As highlighted above the Project Milestones incentive is a joint one with the TSO. The CER considers that lack of achievement in this incentive should be shared equally between the TSO and TAO. The central target of the TAO project milestones in CER/11/128 was 39, with the outturn being 42. The TSO and TAO have jointly submitted a total of 22 adjustments to the incentive targets; the CER consider 16 of those to be valid (or 73%).

As a result, the CER has decided that 73% of the Project Milestones incentive payment should be paid to both the TSO and TAO. This equates to plus €222k to the TSO and plus €172k to the TAO, or plus €394k in total.

However, after reviewing the outturn data for 2012 the CER has a number of concerns with this incentive as currently structured. The concern mainly centres on their effectiveness, e.g. for the Project Milestones incentive – to promote a fluid process of project development from lodgement of planning permission to ultimate project agreement between the TSO and TAO. The CER is currently working on a consultation paper which will propose a new incentive mechanism. A joint submission on incentives from the TSO and TSO was received by CER in May 2013, the content of which is being considered in drafting the consultation paper. The

²⁷ Please refer to the following link [here](#).

paper is expected to be published for consultation in Q3 2013, it is envisaged that a new incentive mechanism will be in place for the 2014/15 tariff period.

(b) Scheduled outages

In CER/11/128 the CER introduced a trial incentivisation period around scheduled outages for 2012. The incentive focused on the TAO not beating the scheduled outages programme that had been agreed between it and the TSO, but rather on the TAO meeting this agreed programme.

CER/11/128 also stated that there should be some allowance in an *ex-post* adjustment for changes to outage durations driven by a TSO request to divert resources from less important outages to more important outages (e.g. forced outages or customer driven/affecting outages). The CER has reviewed the submission made by the TAO and the *ex-post* adjustments made. In light of the current incentive structure the TAO is entitled to the full incentive amount of €400k.

After reviewing the outturn data for 2012 the CER has a number of concerns with this incentive as currently structured, akin to the Project Milestones incentive. The concern mainly centres on its effectiveness to promote transmission system availability.

(c) Construction and Energisation

The CER through CER/11/128 introduced an incentive mechanism around the construction and energisation of transmission assets. The objective of this incentive was to ensure that the TAO, deliver the required electricity transmission infrastructure within time and within budget to meet Ireland's 2020 renewable targets. The CER decided to base the award/penalty on the net outturn of Capex using a delivery metric. This metric is calculated against the 2012 TAO budget submission made to the CER, which details project Capex spend on a project-by-project basis.

The CER has reviewed the TAO 2012 *ex-post* submission and allows the full incentive of €1.77 million. It does acknowledge that Capex spend against particular projects can vary against Capex spend estimated at budget approval. In its submission the TAO has highlighted number of reasons for these variations.

The Capex estimated for a given project by the TAO often requires assumptions to be made as to likely progress over the course of the year. The accuracy of these estimates will obviously vary, but especially where ESB Capital Approval has not yet been received; where planning permission has not yet been obtained; where wayleaving has not yet commenced and/or difficulties are being encountered. The CER does acknowledge that transmission spend by its nature is, as a result, far from linear.

CER concerns with the current incentive structures will be addressed in incentives consultation paper which is expected to be published for consultation in Q3 2013, it

is envisaged that a new incentive mechanism will be in place for the 2014/15 tariff period.

2014 TAO revenue and explanation of 2014 adjustments

Table 7 below provides a (rounded) summary of the allowed TAO revenue for 2014 as determined in CER/10/206 compared with the revenue submission for 2014 made by the TAO and, following a review of this submission, the CER's determination of the amount allowed for 2014.

2012 prices	CER ex-ante allowed 2014	Final CER allowed 2014	Difference
Total Internal Costs	26.89	26.89	0
Total External Costs	19.29	19.29	0
Further Efficiencies	-3.31	-3.31	0
Depreciation/Return/Incentives	158.34	158.34	0
2012 Adjustments ²⁸		0	0
2012 K-Factor from Table 5		-5.78	-5.78
Total Allowed Revenue	201.20	195.42	-5.78

Table 7: k-factor and adjustments to TAO revenue for 2014

Equation 4 shows that B_t for 2014 was adjusted for inflation to give a figure of €201.20million. This figure is then adjusted by the 2012 TAO k-factor, minus €5.78million, to yield the total value of €195.42 million for TAO revenue for the 2014 calendar year.

Interest Provision for 2012 TSO and TAO Over/Under-Recovery

As stated in CER/10/206, the mechanism for inter-year adjustments for under or over-recovery is to apply interest at the three month average Euribor rate. The interest rate (I) that is applied to under and over-recoveries of transmission revenue for year t-2 is as follows:

I_{t-2} is the mean of the twelve monthly average three month Euribor rate between April and March of the year t-2 (i.e. April of year t-3 to March year t-2) multiplied by the mean of the twelve monthly average three month Euribor rate between April and March of the year t-1 (i.e. April of year t-2 to March year t-1).

Applying an interest rate of 0.02% in 2012 and -0.14% in 2013 to the 2012 TSO k-factor of minus €14.57million, results in a net TSO k-factor of minus €14.55million (rounded) in 2014 nominal prices

²⁸ Relates directly to 2014 and is included within Equation 4 under the terms ΔP_t and ΔU_t

Again, applying an interest rate of 0.02% in 2012 and -0.14% in 2013 to the 2012 TAO k-factor of minus €5.78 million, results in a net TAO k-factor of also minus €5.78million (rounded) in 2014 nominal prices.

The net k-factor, interest adjusted, is minus €20.33million.

The inflation rate

The CER's PR2 decision paper CER/05/143 defines the CPI value within the PR2 formula as:

'CPI the annual average percentage change in the Irish (all-items) Harmonised Index of Consumer Prices (HICP) for the 12-month period October to September in the year j.....published by Eurostat in Eurostatistics for short-term economic analysis'

When setting the TSO and TAO revenue for the 2009 calendar year, the CER considered whether it would be appropriate to switch at that stage to the Irish Harmonised Index of Consumer Prices (HICP) or to continue with CPI and decided to continue to use CPI as the indexation value for the remainder of this revenue control.

However, as per section 13 of CER/10/206 the CER has decided to use the Irish HICP as the inflation index for PR3 period, 2011-2015.

Therefore, Irish HICP being used to inflate from 2009 actual prices to 2014 nominal prices.

Comparison with revenue for 2013 calendar year

- The allowed TSO revenue for the 2014 calendar year is €128.71 million (2014 nominal prices), a 4.4% decrease over the €134.66 million (2013 nominal prices) that was allowed for the 2013 calendar year.
- The allowed TAO revenue for the 2014 calendar year is €195.42million (2014 nominal prices), a 15.56% increase on the €169.10 million (2013 nominal prices) that was allowed for the 2013 calendar year.
- The combined allowed 2014 transmission revenue is €328.32 million (2014 nominal prices), a 8% increase over the €303.76 million (2013 nominal prices) that was allowed for the 2013 calendar year.

However, it is important to note that tariffs are not set on a calendar year basis. Consequently, interested parties may find it more useful to compare the transmission AUP between tariff periods as discussed within Section 4 of this paper.

Review of Weighted Average Cost of Capital (WACC)

The CER allows the TAO and TSO a return on capital to remunerate the debt and equity required to finance capital investment. This return is referred to as the Weighted Average Cost of Capital (WACC). In CER's 'Decision on TSO and TAO transmission revenue for 2011 to 2015 (the PR3 decision, CER/10/206) the CER approved a real pre-tax WACC of 5.95%. In that decision, the CER also proposed to review this level of WACC, at the midterm of the review period, given the uncertain and difficult economic climate at the time of the PR3 decision (November 2010). The CER has now commenced this review and it is intended to consult on the matter later in 2013. Should a decision to adjust the WACC (which would be from 1 January 2014) be made, it is intended that tariff changes will be implemented as soon as practicable, likely from as early as April 2014. The CER will provide further clarity on this matter in its consultation and decision on this review of the PR3 WACC.

TUoS tariffs for 1 Oct 2013 to 30 Sept 2014

Background

Allowed revenues are set on a calendar year basis; however TUoS tariffs are set for periods that span two calendar years. The current TUoS tariff period covers the period 1 October 2012 to 30 September 2013. This means that the relevant portion of 2012 calendar year revenue and the relevant portion of 2013 calendar year revenue were allocated for recovery through TUoS tariffs during that period.²⁹

Similarly, within this paper the relevant portion of 2014 calendar year revenue and the relevant portion of 2013 revenue, have been allocated for recovery through TUoS within the 1 October 2013 to 30 September 2014 tariff period.³⁰

Transmission AUP for 2013/2014 Tariff Period

Based on the above annual revenues (allowed 2013 transmission revenue and allowed 2014 transmission revenue) and the estimated tariff period consumption of 25,650GWh, the transmission average unit price (AUP) for the period from 1 October 2013 to 30 September 2014, is estimated to be approximately 1.26 c/kWh in 2014 nominal prices. This is an increase of 9.2% on the 2012/2013 tariff period transmission AUP.

This significant rise can be attributed mostly to the following factors:

- the continued ramp-up in transmission capital expenditure so to allow Ireland to meet its 2020 renewables targets (€330 million in 2014 compared with €313 in 2013, an increase of 5.4%);
- the continued weak energy throughput growth in the PR3 period, which reflects the current economic climate. It is important to note that the PR3 model of November 2010 (CER/10/102f) assumes energy throughput for the period 2013/2014 of 28,862 GWh. The current forecast for the same period is for 25,650GWh – a 12.5% difference; and

²⁹ 27% of 2012 calendar year revenue and 73% of 2013 calendar year revenue, based on the demand weighted average.

³⁰ 27% of 2013 calendar year revenue and 73% of 2014 calendar year revenue, based on the demand weighted average.

Summary

This Information Note paper outlines the application of the third PR3 yearly update (2014) to the PR3 transmission revenue. This revenue is to be collected during calendar year 2014 and will cover the costs of the TSO and TAO. The paper outlines:

- The TSO allowed revenue approved for the 2014 calendar year;
- The TAO allowed revenue approved for the 2014 calendar year; and
- The Demand TUoS tariffs approved for implementation during the tariff period from 1 October 2013 to 30 September 2014.³¹

The total transmission allowed revenue for the 2014 calendar year is €328.32 million. This is 8 % increase over the €303.76 million that was allowed for the 2013 calendar year. The total transmission allowed revenue for the TUoS tariff period from 1 October 2013 to 30 September 2014 is €322.42 million (2014 nominal prices). This is a nominal revenue increase of 10.2% relative to the equivalent revenue (€292.50 million) for the period 1 October 2012 to 30 September 2013.

The transmission AUP for the same period is estimated to be €1.26 c/kWh in 2014 nominal prices. This is an increase of 9.2% on the 2012/2013 tariff period transmission AUP.

The Demand TUoS tariffs that have been approved for implementation during the period from 1 October 2013 to 30 September 2014 are contained in Appendix A of this paper.

³¹ The full Statement of Charges will be published by EirGrid under Section 36 of the Electricity Regulation Act 1999 before the commencement of the upcoming tariff period.

Appendix A - Transmission Tariffs 2012/2013

1.A Demand TUoS Tariffs for the Republic of Ireland

In deriving the TUoS Demand Tariffs which cover the 12 month period from 1 October 2013 to 30 September 2014 EirGrid has applied an energy based weighting to the tariffs derived from the transmission revenue for the full calendar year of 2013 and the full calendar year 2014. The Demand TUoS tariffs are shown in the accompanying schedules below.

The following should be noted when reviewing the table:

- Large Energy Users (LEUs) are defined as those on the DUoS tariff group DG7 and above and those connected directly to the transmission system.
- DTS-D2 customers are those connected to the distribution system and have a maximum import capacity (MIC) of less than 0.5MWs. Thus DTS-D2 customers have the potential to be classed as either LEUs or non-LEUs.

Schedule of 2013/2014 TUoS Demand Tariffs

Schedule		Charges	Charges
		2013/2014 to be charged to non-LEUs	2013/2014 to be charged to LEUs
DTS - T	Network Capacity Charge	€1,625.1592/MW ³²	€1,096.5885/MW
	Network Transfer Charge	€2.7151/MWh ³³	€1.8321/MWh
	System Services Charge	€3.4188/MWh ³⁴	€2.3069/MWh
	DSM Charge	€0.0167/MWh ³⁵	€0.0167/MWh
DTS - D1	Network Capacity Charge	€1,350.8417/MW	€911.4906/MW
	Network Transfer Charge	€2.7151/MWh	€1.8321/MWh
	System Services Charge	€3.4188/MWh	€2.3069/MWh
	DSM Charge	€0.0167/MWh	€0.0167/MWh
DTS - D2	Network Capacity Charge	€5.7302/MWh	€3.8665/MWh
	Network Transfer Charge	€2.7151/MWh	€1.8321/MWh
	System Services Charge	€3.4188/MWh	€2.3069/MWh
	DSM Charge	€0.0167/MWh	€0.0167/MWh

The full set of Demand tariffs and application of these tariffs will be set out in EirGrid's published Statement of Charges to be approved by the CER.

1.B All-island Generator TUoS Tariffs

The all-island Generator tariffs for the period 1 October 2013 to 30 September 2014 were published by EirGrid on 14 August 2013 and are available on the EirGrid website.³⁶

³² Not applicable as all DTS-T connected customers are LEUs.

³³ Ibid.

³⁴ Ibid.

³⁵ Please refer to section 6 above.

³⁶ Please refer to the following link [here](#).