

Imperfections Charges
For
October 2014 – September 2015

Consultation Paper

SEM-14-051

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1 EXECUTIVE SUMMARY

The purpose of this consultation paper on the proposed Imperfection Charges for October 2014 to September 2015 is to inform and obtain the views of market participants and other stakeholders.

Imperfection Charges are made up of a number of components, the largest of which relates to Dispatch Balancing Costs (DBC). Other costs include Make Whole Payments and any net imbalance between Energy Payments and Energy Charges. Furthermore, adjustments are made to reflect the offset from Other System Charges together with an adjustment for previous years to reflect the difference from forecast to actual outturn.

The Transmission System Operators (TSOs) submitted their forecast for the 2014/15 Imperfections revenue requirement (Appendix 1). This submission forms the basis of the total Imperfections revenue requirement proposed for 2014/15 of €181.6 million compared with €146.7 million for 2013/14. Once combined with forecasted demand figures this translates to a 2014/15 Imperfection charge of €5.45 per MWh compared with €4.42 per MWh for 2013/14.

A number of key factors influencing the 2014/15 forecast include:

- Expected treatment of within-day gas transportation charges in participants' bids.
- High levels of interconnector imports and wind generation relative to overall demand drive a lower production cost but contribute to an increase in forecast constraint costs.
- The relative prices of coal and gas units, particularly those which are constrained on in the dispatch model for reserve, transmission and security constraints drive a higher constrained production cost.
- Anticipated savings as a result of increased SO Interconnector Countertrading arrangements reduces the overall imperfections cost forecast.

Comments are invited from the industry and the public by 25 July 2014 as detailed in section 5.

The Imperfections charge is the largest and most variable tariff within the SEM. Therefore the Single Electricity Market Committee (SEMC) introduced an incentive mechanism¹ with the objective of reducing the all-island dispatch balancing costs. This has been effective from tariff year 2012/13.

¹SM-12-033 Incentivisation of All-island Dispatch Balancing Costs dated 5 June 2012

The TSO's have submitted their report on the Imperfections Costs incentive for the 2012/13 tariff year for which a 2% reduction was realised. While the reduction is beneficial to consumers it did not meet the requirements for receiving an incentive payment. Therefore, no incentive payment is due to, nor penalty owed to, the TSO's for the tariff year 2012/13.

2 INTRODUCTION

2.1 THE SINGLE ELECTRICITY MARKET

The All-Island wholesale electricity market was established as a Single Electricity Market (SEM) effective from November 2007. The SEM is a centralised or gross mandatory pool market, with electricity being bought and sold through the pool under a market clearing mechanism.

Generators receive the System Marginal Price (SMP) for their scheduled dispatch quantities, capacity payments for their actual availability, and constraint payments for changes in the market schedule due to system constraints and other, specific factors.

Suppliers purchasing energy from the pool will pay the SMP for each trading period, capacity costs, and system support charges. The SEM market rules are set out in the Trading and Settlement Code (TSC). The SEM is governed by the SEM Committee which was set up by the Governments in Ireland and Northern Ireland. This Committee has representatives from both Regulators together with an Independent Member. The SEM is operated by the Single Electricity Market Operator (SEMO) which is a contractual joint venture between the System Operators EirGrid and SONI.

2.2 IMPERFECTIONS CHARGE & DISPATCH BALANCING COSTS

The Imperfections Charge is levied on suppliers by SEMO who recovers the anticipated Dispatch Balancing Costs (less Other System Charges), net cost of Make Whole Payments and Energy Imbalances together with any necessary adjustments for previous years.

The TSOs submitted a paper to the RAs on 1 May 2014 detailing the costs relating to Dispatch Balancing Costs (Appendix 1). Dispatch Balancing Cost refers to the sum of Constraint Payments, Uninstructed Imbalance Payments and Generator Testing Charges. The details relating to these are covered in Section 3 of this Consultation Paper.

2.3 OBJECTIVE OF PAPER

The objective of this consultation paper is to solicit comments from interested parties on a range of proposals associated with Imperfections Charges and in particular Dispatch Balancing Costs.

This paper also summarises the Dispatch Balancing Cost incentivisation mechanism which came into effect for tariff year 2012/13 onwards.

3 IMPERFECTIONS CHARGE

3.1 OVERVIEW

Imperfection Charges are made up of a number of components, the largest of which relates to Dispatch Balancing Costs (constraint costs). Other costs include Make Whole Payments and any net imbalance between Energy Payments and Energy Charges. Furthermore, adjustments are made to reflect the offset from Other System Charges.

The interaction between the components making up the Imperfections Charge is depicted in Figure 1 below.

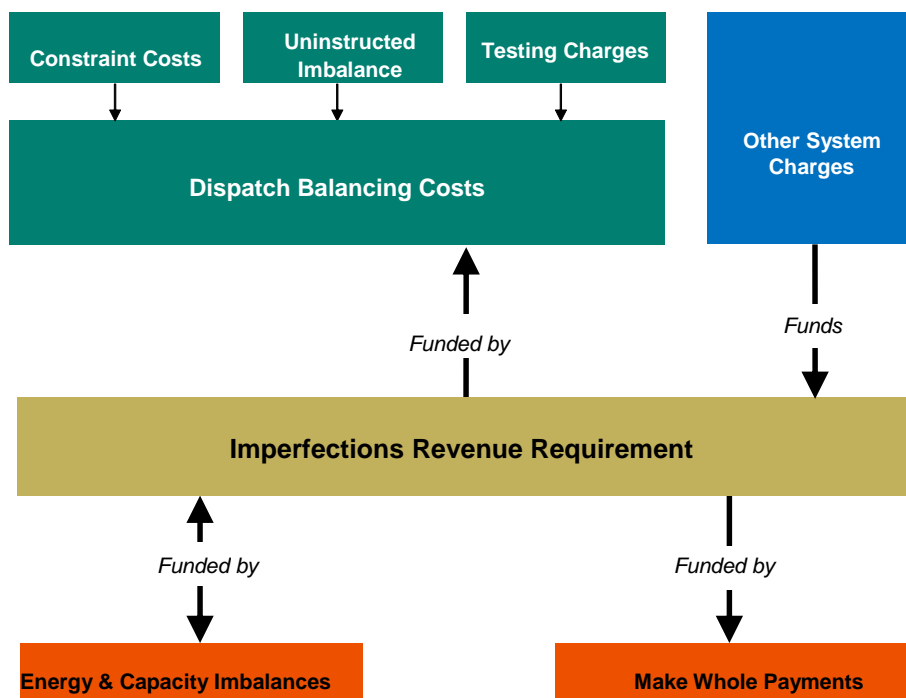


Figure 1: Imperfection Charge Components

Dispatch Balancing Costs is the collective term for Constraint Costs, Uninstructed Imbalance Costs and Testing Charges, which are provided by the System Operators, EirGrid and SONI. In addition to these, there may also be Energy Imbalances and Make Whole payments for which SEMO would provide the budget requirement to the TSOs.

The Transmission System Operators (TSOs) submission was prepared jointly by EirGrid and SONI, and captured an all-island estimate of Dispatch Balancing Costs. The forecast of Dispatch Balancing Costs is for the period from 1 October 2014 to 30 September 2015.

All these costs are estimated *ex-ante* and recovered from suppliers on a MWh basis through the Imperfections Charge.

3.2 DISPATCH BALANCING COSTS

The TSOs estimate of Dispatch Balancing Costs for the tariff year 2014/15 is €177.6m compared to €165.5m for the tariff year 2013/14. This represents a forecast increase of 7% from the previous year.

Further detail regarding this forecast is provided by the TSOs in Appendix 1.

3.3 ENERGY IMBALANCES

It is assumed that minimal energy imbalances will arise. A zero net cost has been provided for this.

3.4 MAKE WHOLE PAYMENTS

The forecast for Make Whole payments is based on the experience of the last 12 months and as a result the TSOs have proposed a provision of €3.6 million.

3.5 OTHER SYSTEM CHARGES

Other system charges aim to improve the performance of generators to ensure efficient use of the transmission system. Such charges relate to generator trips, short notice declarations and generator performance incentives.

The TSOs have assumed in their submission that generators are compliant with Grid Code and no charges are recovered through Other System Charges. In other words the TSOs have forecast zero revenue income in respect of Other System Charges.

However, in reality and for a range of reasons, generators performance fails to provide necessary services to the system and as a result Other System Charges are levied on the generators. For example, following the tripping of a generator, the TSO must activate reserves and will typically have to replace the lost generation. Additional constraint costs are forecast for such changes in generator availability.

Revenue generated, and therefore set off against constraint costs, during 2012/13 tariff year was €6.6 million and the most recent Quarterly Imperfections report for the current

tariff year 2013/14 shows revenue of €3.4 million for the six month period October 2013 to March 2014².

In light of the above the Regulatory Authorities propose applying to the 2014/15 tariff an estimate for the expected revenue generated from Other System Charges. The RAs would expect generator behaviour to improve over time and therefore are proposing to base an estimate on 75% of the average revenue recorded for the last three full years as shown below in Table 1.

Actual Other System Charges Revenue			Proposed for 2014/15 Tariff		
	2012/13	2011/12	2010/11	Average 2010-13	75%
	€ millions	€ millions	€ millions	€ millions	€ millions
OSC	6.6	6.5	6.4	6.5	4.9

Table 1: Basis of RAs estimate of Other System Charges Revenue proposed to apply to 2014/15 tariff.

The effect of applying this estimated Other System Charges revenue of €4.9million is a reduction in the overall Imperfections tariff of €0.15 per MWh.

The Regulatory Authorities would welcome respondents views in relation to a forecast for the revenue generated from Other System Charges which differs from the TSOs forecast which is currently zero.

3.6 RECOVERY OF IMPERFECTION COSTS

As stated previously, the dispatch balancing costs are estimated *ex-ante* and this estimate is recovered during the relevant tariff period through the imperfections charge.

Differences between the estimated costs being recovered and the amounts paid out will lead to instances where SEMO will:

- require working capital to fund constraints payments that exceed revenue collected through the imperfections charge, or,
- have collected revenue through the imperfections charge that exceeds the amount being paid out on constraints.

To allow for the first scenario, SEMO may require funding from EirGrid Group to cover fluctuations during the tariff period. Any allowed under-recovery of revenue during the

² EirGrid SONI Quarterly Imperfections Costs Report to 31 March 2014 published <http://www.eirgrid.com/media/Quarterly%20Imperfections%20Costs%20Report%20Jan%20to%20Mar%202014.pdf>

tariff period will be paid to SEMO in the subsequent tariff period(s) with the appropriate amount of interest. This reflects the cost of short-term financing required to provide SEMO's working capital needs.

Similarly, for situations where the revenue recovered by SEMO through the Imperfections Charge is greater than that paid out in constraints (second scenario above), the Imperfections Charge in the following tariff period will be reduced by an appropriate amount to reflect the allowed over-recovery and the associated interest.

A 'K factor' mechanism is used to adjust the Imperfection Charge to reflect the difference between the forecast and actual outturn. The 'K factor' expected to be applied to the Imperfections Charge for 2014 /15 is €5.245m. This comprises of:

Summary of K factor adjustment

Under-recovery in year 2012/13	(€5.2m)
Advance given for year 2012/13	<u>€10.0m</u>
Total Imperfections Over-recovery in year 2012/13	€4.8m
Less: Estimated advance required for tariff year 2013/14	<u>(€10.0m)</u>
Total Imperfections K factor to be applied in 2014/15	<u>(€5.2m)</u>

This €5.2m under-recovery will increase the 2014/15 Imperfections Charge. Further detail of the 'K factor' is provided in Appendix 2.

3.7 DEMAND FORECAST

The forecasted demand provided by the TSOs is 33,320 GWh for 2014/15 compared to 33,200 GWh applied to the 2013/14 Imperfection Charge.

3.8 IMPERFECTIONS CHARGE

The TSOs have submitted an estimate for the net value of Dispatch Balancing Costs of €177.6 million, to be recovered through the imperfections charge during tariff year 2014/15. The amount allowed will be subject to review and determination ex-post, with allowed under or over-recoveries feeding into the subsequent tariff period(s). Adjusting for €3.6m for Make Whole Payments, K Factor of €5.2 m and Other System Charges estimated revenue of €4.9m gives a total Imperfections Charge for 2014/15 of €181.6 million.

Using an estimated forecasted demand for 2014/15 of 33,320 GWh and the total Imperfections Charge above (€181.6 million), the resulting Imperfections Charge is €5.45 per MWh. (The figure for 2013/14 was €4.42 per MWh).

This is summarised in Table 1 below:

Summary of Imperfections Charges						
	2014-2015	2013-2014	2012-2013	2011-2012	2010-2011	2009-2010
Total Constraints costs	177,600,000	165,500,000	142,008,742	142,600,000	110,500,000	106,000,000
Uninstructed Imbalances	-	-	-	-	-	-
Testing Charges	-	-	-	-	-	-
Dispatch Balancing Costs	177,600,000	165,500,000	142,008,742	142,600,000	110,500,000	106,000,000
Energy Imbalance	-	-	-	-	-	-
Make whole payments	3,600,000	100,000	100,000	100,000	330,000	311,652
K factor Adjustment	5,245,000	- 18,932,000	12,788,000	42,500,000	- 3,510,000	-12,580,000
Other System Charges	- 4,859,000	-	-	-	-	-
Total Imperfections Charge	181,586,000	146,668,000	154,896,742	185,200,000	107,320,000	93,731,652
Forecast Demand (MWh)	33,320,000	33,220,000	32,900,000	34,030,000	34,430,000	34,060,000
Imperfections Charge	€ 5.45	€ 4.42	€ 4.71	€ 5.44	€ 3.12	€ 2.75

Table 1: Summary of Imperfections Charges over the years

4 INCENTIVISATION & TSOS REPORTING

4.1 SUMMARY OF INCENTIVE OUTTURN REVIEW FOR 2012/13

During 2012 the SEM Committee introduced both an incentive mechanism as a measure to encourage the management of constraint costs and additional reporting requirements on the TSOs³.

2012/13 is the first year under review since the incentive was introduced. EirGrid and SONI provided a review of the outturn and their assessment of the subsequent incentive outcome for 2012/13 tariff year to the Regulatory Authorities in May 2014.

Their assessment resulted in an outturn Imperfections Costs for 2012/13 of €140 million; €3 million lower than the ex post adjusted revenue requirement. The savings reported by the TSOs do not meet the requirements for receiving an incentive payment.

Therefore for 2012/13 it is expected that no reward is due to, nor penalty payable by, the TSOs through the DBC Incentivisation process.

The RAs are currently analysing the outturn results for 2012/13 in particular the ex post adjustments to the revenue requirement.

4.2 SUMMARY OF INCENTIVISATION FOR 2014/15

Dispatch Balancing Costs (DBC) are a significant cost passed on to the all-island consumer and represent the vast majority of the Imperfections Charge. In the tariff year 2012-13 DBC represented 5.7% of the €2.5 billion⁴ market.

In light of the above, an all-island DBC incentive mechanism was introduced by the SEM Committee with effect from 1 October 2012⁵. The current parameters as detailed in the DBC Incentivisation Decision Paper (SEM-12-033) are presented in Table 2 below:

³ SEM-12-033 Incentivisation of All-island Dispatch Balancing Costs Decision Paper published 5 June 2012

⁴ EirGrid Group Annual Report 2013 <http://www.eirgrid.com/media/2013%20EirGrid%20Annual%20Report%20English.pdf>

⁵ SEM-12-033 Incentivisation of All-Island Dispatch Balancing Costs Decision Paper

€m's	Lower Bound	Dead Band	Upper Bound	Below Target	Above Target
Dispatch Balancing Costs	7.5% - 20% below baseline	7.5% below and above the baseline	7.5% - 20% above baseline	TSOs retain 10% of every 2.5% below	TSOs penalised 5% of every 2.5% above

Table 2: DBC incentive parameters

The RAs are currently reviewing the outcome for tariff year 2012/13 which includes an assessment of the adjusting factors. As mentioned in the DBC Incentivisation Decision Paper (SEM-12-033) the SEM Committee reserves the right to carry out an audit of the TSOs baseline setting in order to ensure that overly-conservative assumptions are not being used. It is expected that the DBC incentive parameters will continue to be those reflected in Table 2 above.

In relation to the cost categories included in incentive baseline these are listed below in Table 3 and correspond to the Incentivisation Decision Paper (SEM-12-033). It should be noted the SO-SO Trades is expected to include the additional revenue forecast for countertrading based on the Largest Single Infeed (LSI) which was introduced in March 2014. Therefore we do not expect further adjustments to be made to the baseline in this regard. Such adjustments had been suggested by the TSOs to allow for them to benefit through the incentive mechanism for a period of time.

We view this approach as being consistent with the purpose of the incentive, which is to encourage efficiencies against a baseline, as detailed in the SEM Committee's Incentivisation Decision Paper (SEM-12-033).

Category		Category	
Constraint Costs	Yes	Make Whole Payments	No
Uninstructed Imbalances	Yes	Capacity Imbalances	No
Testing Charges	Yes	Other Imperfection Charge components	No
Energy Imbalances	Yes		
Other System Charges	Yes		
SO-SO Trades	Yes		

Table 3: Cost Categories included in DBC ex-ante baseline

For tariff year 2014-15 the baseline applicable for the above incentivisation is expected to be €172.7m. The maximum reward available is €2.2m and alternatively, the maximum penalty is €1.1m.

The reward/penalty will be determined following completion of the 2014-15 ex-post review due in Quarter 1 2016. The resultant incentive payment/penalty will be applied on a 75:25 split between ROI TUoS and NI SSS revenues respectively. This incentive mechanism will continue to be monitored over the coming years to determine its effectiveness.

4.3 TSOS REPORTING AND TRANSPARENCY MEASURES

In order to increase transparency around DBC, the SEM Committee has introduced reporting requirements on the TSOs. The TSOs now provide quarterly updates on the levels of constraints, drivers behind constraints, mitigating measures being taken and other information or commentary, which the TSOs believe will aid transparency in this area.

These Quarterly Imperfections Costs Reports are available on EirGrid and SONI's website. The most recent report relates to the period January – March 2014⁶ and included a Year-to-Date section.

5 PROVISION OF COMMENTS

The RAs request comments on the proposals set out in this consultation paper. All comments received will be published, unless the author specifically requests otherwise. Accordingly, respondents should submit any sections that they do not wish to be published in an appendix that is clearly marked “confidential”.

Comments on this paper should be forwarded, in electronic form, to Karen Shiels at Karen.Shiels@uregni.gov.uk and Billy Walker at Billy.Walker@uregni.gov.uk by 17:00 on Friday 25 July 2014.

⁶<http://www.eirgrid.com/media/Quarterly%20Imperfections%20Costs%20Report%20Jan%20to%20Mar%202014.pdf>