Imperfections Charges

For

October 2013 – September 2014

Decision Paper

SEM-13-052

02 August 2013

1 EXECUTIVE SUMMARY

On 19 June 2013 the SEM Committee published a consultation on the proposed imperfections charge for the period from 1 October 2013 to 30 September 2014. Four responses were received to this paper. The main themes within these responses related to the incentivisation mechanism, interconnector modelling bases, data freeze timeframe and grid development.

The SEM Committee have therefore decided that the imperfections charge to be applied from 1 October 2013 should be €4.42 per MWh. The composition of this is summarised in Table 1 below.

	2013-14	**2012-13**	**Change**
Imperfections Allowance (€ million)	165.60	142.10	16.54%
K factor (€ million)	-18.93	16.79	
Offset for Other System Charges	0.00	-4.00	
Total Allowance (€ million)	**146.67**	**154.89**	**-5.31%**
Forecast Demand (GWh)	33,220	32,900	1.00%
Tariff (€/MWh)	**4.42**	**4.71**	**-6.16%**

Table 1: The composition of the Imperfections Charge 2013-14 and 2012-13

Incentivisation was introduced for the 2012-13 tariff year with the first ex-post review due late 2013/early 2014. The incentive parameters will be monitored for effectiveness and any necessary changes will be made.

Transparency of the within year actual imperfection costs are now being reported by the TSO's in the form of a 'Quarterly Imperfections Costs Report'.

2 INTRODUCTION

2.1 IMPERFECTIONS CHARGE & DISPATCH BALANCING COSTS

In addition to SEMO's operational costs, the Market Operator (MO) tariffs have to recover Imperfections Charges which are made up of Dispatch Balancing Costs, Make Whole Payments and Energy Imbalance Charges. The Transmission System Operators (TSOs) submitted a paper to the Regulatory Authorities (RAs) on 30 April 2013 detailing the costs relating to Dispatch Balancing Costs. Dispatch Balancing Cost is a TSO-defined term and refers to the sum of Constraint Payments, Uninstructed Imbalance Payments and Generator Testing Charges. See section 3.1 below for an overview. The Imperfections Charges are made only on Suppliers while the MO Charges are made on Suppliers and Generators.

2.2 OBJECTIVE OF PAPER

The objective of this decision paper is to determine the Imperfections Charge for tariff year 2013-14. This decision paper summarises the comments received from interested parties following the publication of the Imperfections Charge Consultation Paper on 19 June 2013. The responses received have been duly considered in preparation of this decision paper.

3 IMPERFECTIONS CHARGE

3.1 OVERVIEW

The costs associated with Imperfection Charges are depicted in the diagram below. Three of the costs covering constraint costs, uninstructed imbalance costs and testing charges (collectively known as Dispatch Balancing Costs) are provided by the TSOs, EirGrid and SONI. In addition to these, there are also Energy Imbalances and Make Whole payments. The estimate for these two costs is provided by SEMO.

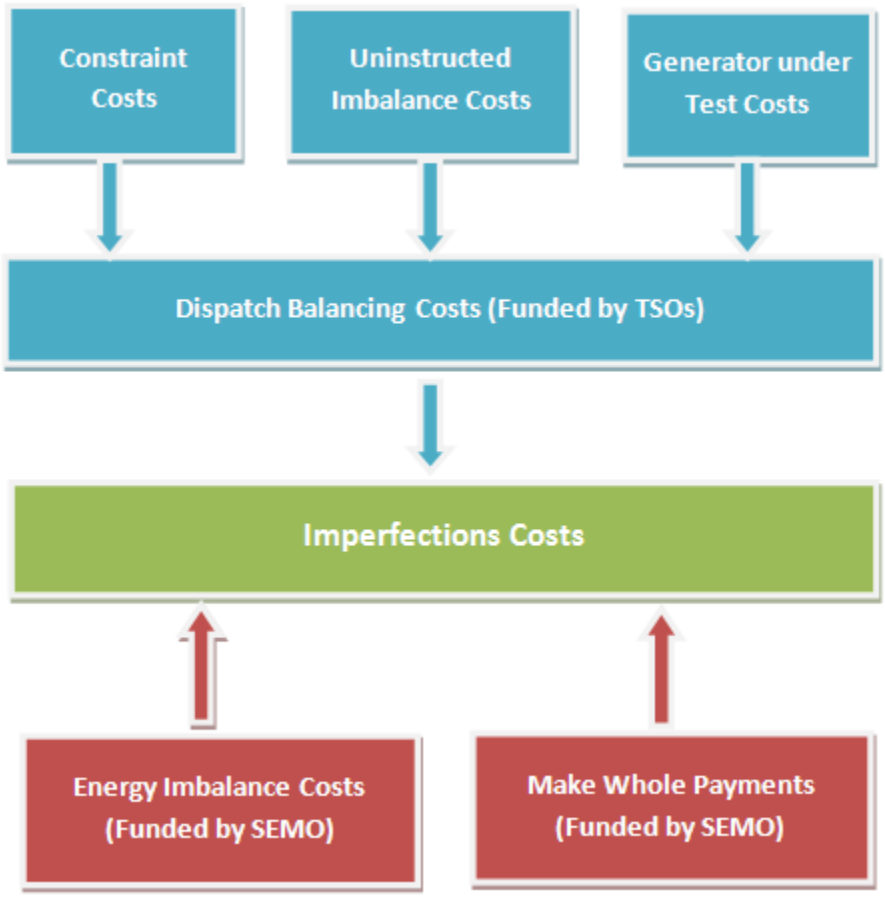

Figure 3: Make up of Imperfection Charges

The TSOs submission was prepared jointly by the 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 2013 to 30 September 2014.

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 budget proposed by the TSOs for the tariff year 2013-14 is €165.5 million compared to €142 million for the tariff year 2012-13. The forecast has been impacted by a number of key factors such as:

- full operation of East West Interconnector impacting the reserve requirement;
- Moyle Interconnector is assumed to operate on half capacity for the full tariff year;
- decrease in all fuel prices when compared to 2012-13, particularly coal prices;
- Carbon Price Floor exemption is assumed to apply to Northern Ireland Generators during 2013-14.

3.2.1 RESPONSES

The consultation paper generated four formal responses, of which one will be treated confidential, with varying and wide ranging views. General comments welcomed the overall reduction in the Imperfections Charge of 6% when compared with the 2012-13 charge.

Response: Interconnection Modelling

A respondent noted 'that the modelling bases Interconnector flows on historical flows rather than rather than seeking to explicitly model flows based on relative prices in the GB and SEM markets. Given current price differentials, this simplified approach may be sufficient for the 2013-14 tariff year but this approach may not be appropriate in future years when GB prices are forecast to increase (due to tighter capacity margins and the cost impact of the Carbon Price Floor)'.

RAs view: The TSO's have provided further clarification as follows:

'Price-based flows with GB were modelled, and analysis was carried out on recent historical trading on both Moyle (operating at 250MW) and the commercial operation of EWIC at a reduced capacity of 250MW, which had taken place up to the data freeze date. This analysis, along with a recent academic study[1] showed that flows were not purely price-based and are predominantly imports from GB to SEM, often against the efficient price spread direction. Given the potential impact of this on the forecast constraints costs for the system it was deemed prudent to model flows based on this observed behaviour. Each year the TSOs review the modelling methodology to ensure

[1] McInerney, C. and Bunn, D. 2013. "Valuation anomalies for interconnector transmission rights", *Energy Policy*, vol. 55, no. 0, pp. 565-578.

that it is fit for purpose and this will be carried out as part of the process in developing future forecasts.'

Response: Grid Development

One respondent noted that the constraints cost element of the imperfections charge have increased from those predicted for 2012-13 and suggest that this cost can be reduced by ensuring grid development is carried out in a timely manner.

RAs view: The RAs are also concerned with the rising costs of the constraints cost component over recent years and therefore recently implemented the SEM Committee's DBC incentivisation mechanism[2] which will be reviewed regularly. Transmission constraints are a key driver of Dispatch Balancing Costs and grid development is a factor which contributes to the management of these costs. The TSO's confirm they are 'committed to the cost effective and timely delivery of a strong reliable transmission grid in Ireland and Northern Ireland, in the context of their statutory obligations relating to environmental assessment and public participation'.

Response: Dispatch Balancing Cost Incentivisation

A respondent welcomed the introduction of the DBC incentivisation mechanism for tariff year 2012-13 onwards but raised 'concern that it may be incentivising a subtle change in business practice, as opposed to any change in performance of the TSOs'. The respondent cautioned the 'potential for unintended consequences arising from the incentivisation of DBC with the potential for penalties/rewards for the TSOs'.

RAs view: DBC represents a significant cost passed on to the all-island consumer and represents the vast majority of the overall Imperfections Charge. The SEM Committee introduced an all-island DBC incentive mechanism which took effect from 1 October 2012. The first ex-post review of this incentivisation scheme will relate to tariff year 2012-13 and will be assessed in 2014. At present the incentive mechanism maintains the original parameters. These parameters will be monitored over the coming years to determine their effectiveness and any necessary adjustments identified will be made.

Response: Data Freeze Timeframe

One respondent commented on the data freeze timeframe and suggest 29 March to be too soon to implement the data freeze.

RAs view: The data freeze timeframe is necessary to facilitate the overall tariff process and to provide sufficient notification of the tariff before the new tariff year commences.

[2] SEM-12-033 Incentivisation of All-Island Dispatch Balancing Costs Decision Paper

The TSOs make a submission to the RAs in late April which is a key factor in setting the data freeze date. It should be noted the data freeze date was extended by one month this year to 29 March to reflect, in part, responses received to the previous year's Imperfections consultation paper and allow for the decision on the Carbon Price Floor in Northern Ireland to be included[3]. The modeling process is comprised of two models: an unconstrained model using PLEXOS and a constrained model which includes the transmission system, reserve and security requirements. The constrained model is the more complex transmission model and involves a considerable amount of time to both build and validate. A further component to the consultation paper is the requirement for demand forecast and K factor figures, received in May/June each year, to be reviewed.

3.2.2 DISPATCH BALANCING COSTS SUMMARY

Taking into consideration the responses from consultation the amount of €165.5M is approved by the SEM Committee to be collected by SEMO via the imperfections tariff to cover the Dispatch Balancing Costs. This is subject to an ex-post adjustment and any under- or over-recovery will be reflected in the following year's tariff.

3.3 ENERGY IMBALANCES

It is assumed that no Energy Imbalances will arise. If energy imbalances do occur, they are assumed to have an equal and opposite effect on constraints and will offset any increase or decrease accordingly. No comments were received in relation to this and the provision of a zero net cost has been included within the tariff for 2013-14.

3.4 MAKE WHOLE PAYMENTS

Make Whole Payments purpose is to provide the balance between total energy payments to a generator and the production cost of that generator on a weekly basis. Due to the SEM design these payments are rarely necessary. Therefore the proposed provision for Make Whole payments is €100,000. This figure remains constant with previous year and reflects the reduced levels experienced in recent years.

No comments were received in relation to this and the SEM Committee has decided to allow a provision of €100,000 in the imperfections tariffs for the 2013-14 tariff period.

[3] This decision was published on 20th March 2013 http://www.hmrc.gov.uk/budget2013/tiin-1006.pdf

3.5 RECOVERY OF IMPERFECTION COSTS

The amounts detailed above are estimated *ex-ante* and this estimate is recovered during the relevant tariff period through the imperfections charge.

However, differences between the costs being recovered and paid out will lead to instances where SEMO will:

- require working capital to fund constraint 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 the mechanism adopted for previous SEMO Revenues and Tariffs was that any under-recovery of revenue during the tariff period plus financing costs will be financed by SEMO. This reflects the cost of short-term financing required to provide SEMO's working capital needs.

See section 3.5.1 below for further detail.

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(s) will be reduced by an appropriate amount to reflect the allowed over-recovery and the associated interest.

3.5.1 PROVISION OF WORKING CAPITAL FOR IMPERFECTION CHARGES

The RAs proposed that, as is currently the case, the funding of working capital requirements be provided by EirGrid and SONI.

In addition, the RAs proposed that funding required to cover fluctuations during the tariff period, and any allowed under-recovery of revenue during the tariff period be paid back 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, it is proposed that the Imperfections Charge in the following tariff period(s) will be reduced by an appropriate amount to reflect the allowed over-recovery and the associated interest.

No comments were received in respect of this proposal and the SEM Committee have decided that this mechanism will continue for the 2013-14 tariff period.

3.6 OTHER SYSTEM CHARGES

Other System Charges (OSC) are levied on generators whose failure to provide necessary services to the system lead to higher Dispatch Balancing Costs and Ancillary Services Costs.

Other System Charges are netted off Dispatch Balancing Costs. A zero estimate has been made by the TSOs on the assumption that generators are compliant with Grid Code and no charges are recovered through Other System Charges. The TSOs expand further on this and expect any deviation from this assumption to result in an increase in Dispatch Balancing Costs with any monies recovered through Other System Charges netting off the resultant costs to the system in DBC.

3.7 K FACTOR

3.7.1 RESPONSES

Response: K factor to be latest K estimate

A respondent agreed with the use of the current K factor mechanism and commented that the 'latest "K" estimate' should be used.

RAs view: The K factor comprises of two elements, firstly finalised actuals and therefore the necessary K factor adjustments for the previous tariff year (in this case an over-recovery of €28.93 million for 2011-12). The second element is to include a best estimate of the current tariff year (in this case an under-recovery of €10 million for 2012-13) based upon total actual imperfection charges to date and an estimate for the remainder of the current tariff year.

3.7.2 K FACTOR SUMMARY

The total K factor applicable to the 2013-14 imperfections charge is €18.93 million. This represents an over-recovery which reduces the 2013-14 imperfections charge.

3.8 DISPATCH BALANCING COST INCENTIVISATION

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 2011-12 DBC represented 6.2% of the €2.3 billion[4] market.

In light of the above, an all-island DBC incentive mechanism was introduced by the SEM Committee with effect from 1 October 2012[5]. The current parameters as detailed in the DBC Incentivsation Decision Paper (SEM-12-033) are detailed in Table 2 below:

€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

In relation to tariff year 2013-14 the baseline applicable for the above incentivisation,is €165.5m. The maximum reward available is €2.1m and alternatively, the maximum penalty is €1m.

The reward/penalty will be determined following completion of the 2013-14 ex-post review due in 2015. 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 be monitored over the coming years to determine its effectiveness.

3.9 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 regular 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.

[4] EirGrid Group Annual Report 2012 http://www.eirgrid.com/media/EirGridAnnualReport2012.pdf

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

These Quarterly Imperfections Costs Reports are available on the TSOs website. The most recent report relates to the period April - June 2013[6] and included a Year-to-Date section.

3.10 IMPERFECTIONS CHARGE

Based on the above decisions, the imperfections charge will be €4.42 per MWh for the period 1 October 2013 to 30 September 2014. This represents a 6.16% decrease from the 2012-13 imperfections charge.

	2013-14	**2012-13**	**Change**
Imperfections Allowance (€ million)	165.60	142.10	16.54%
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[6] http://www.eirgrid.com/media/QuarterlyImperfectionsCostReportAprToJun2013.pdf