Harmonised Other System Charges Consultation

Tariff Year
1st October 2015 to 30th September 2016

20th February, 2015

EXECUTIVE SUMMARY

Other System Charges (OSC) are levied on generators which fail to provide necessary services to the system leading to higher Dispatch Balancing Costs and Ancillary Service Costs. The OSC charges include charges for generators whose units Trip or make downward re-declarations of availability at short notice. Generator Performance Incentive (GPI) charges were harmonised between Ireland and Northern Ireland with the Harmonisation of Ancillary Service & Other System Charges "Go-live" on the 1st February 2010. These charges are specified in the Transmission Use of System Charging Statements approved by the Regulatory Authorities (RAs) in Ireland and Northern Ireland. The arrangements are defined in both jurisdictions through the Other System Charges policies, the Charging Statements and the Other System Charges Methodology Statement.

In this year's Annual Tariff Consultation the TSOs are proposing to retain the OSC rates approved for the 2014-2015 tariff year adjusting for inflation at forecast rate of 1% for the Tariff year 2015-2016. Current inflation forecasts in the UK, as published by bodies such as the Office of Budgetary Responsibility (OBR) indicate UK inflation of the order of 2-2.5%. Recent Central Bank Reports forecast HICP inflation in Ireland to be around 0.5%. On this basis, and recognising the relative balance between Ireland and Northern Ireland, and indeed the somewhat lower than originally forecast expected outturn inflation for 2014/15 the TSOs' view is that a blended rate of 1% for the forthcoming 2015/16 period is appropriate. No other changes to rates are proposed.

The Generator Performance Incentive (GPI) charge for Secondary Fuel declarations is proposed not to be initiated this year pending completion of the necessary changes in respect of fuel security, including fuel switching arrangements, in Northern Ireland. The Fuel Switching Agreements are expected to be in place by 2015. Upon completion, the TSOs are proposing the introduction of a GPI to quantify the availability of a generating unit to operate on secondary fuel as the TSOs have observed a gap in the level of compliance of some generating units. This is essential to ensure the continued security of supply on an all-island basis and that generating units are in compliance with the Grid Code in Ireland and Fuel Security Code in Northern Ireland.

ABBREVIATIONS

ASP	Ancillary Service Provider
AS	Ancillary Service
HAS	Harmonised Ancillary Services
TSO	Transmission System Operator
SONI	System Operator Northern Ireland
RA	Regulatory Authority
SEM	Single Electricity Market
OSC	Other System Charges
GPI	Generator Performance Incentive
SND	Short Notice Declaration
DSU	Demand Side Unit
AGU	Aggregated Generator Unit
WFPS	Wind Farm Power Station
DETI	Department of Enterprise, Trade and Investment
DMOL	Design Minimum Operating Level
RoCoF	Rate of Change of Frequency

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1. INTRODUCTION

Other System Charges (OSC) are defined in the Transmission Use of System / System Support Services Statement of Charges and include Trip Charges, Short Notice Declaration charges and Generator Performance Incentive charges. These Other System Charges are levied on underperforming generators who unexpectedly trip off the system or re-declare at short notice causing a re-dispatch of other plant at a cost. The Generator Performance Incentive (GPI) charges are levied on those generators which fail to comply with specific standards in the Grid Code or the contracted values in the relevant AS agreement where applicable.

The TSOs consult on an annual basis regarding changes to the OSC charges and the purpose of this consultation paper is to obtain views on the proposed OSC rates for the tariff year 1st October 2015 to 30th September 2016.

Short Notice Declarations (SNDs) incentivise generators to avoid changing declarations at short notice or at least provide maximum notice. The Notice Time Weight is an empirical weighting corresponding to the relative importance of notice time from 8 hours up to real time.

The Trip Charge incentivises generators to minimise the number of trips and to aim for slow tripping, when a trip is unavoidable. The Trip Charge is designed to incur higher charges the higher the MW loss seen by the power system. A charge applies for all full trips and/or partial trips where the reduction is greater than or equal to the trip threshold.

1.1 The Delivery of I-SEM

The delivery of I-SEM [1] is a fundamental change to the market design. While I-SEM is not due to go-live until 2017, the TSOs consider that the current list of Other System Charges may require a review based on the outcome of the detailed design phase of I-SEM. If for example, market participants in I-SEM become “balance responsible” and hence any participant who is “out of balance” would be subject to imbalance settlement. Being “out of balance” could be driven by events such as trips, late/early synchronisation, not ramping as anticipated. Therefore, in some cases, the imbalance settlement process may be adequate to incentivise market participant behaviour. There is no implementation changes proposed to the existing Other System Charges products for TY 2015-2016 . However the future Other System Charges will be considered in line with the decision on the market design.

1.2 OSC Review

The OSC were introduced on a harmonised basis on 1st February 2010 and are divided into the following:

- Trip Charge;
- Short Notice Declaration Charge; and
- Generator Performance Incentive Charge.

In the event of a generator unit dropping output a Trip Charge is levied on the service provider depending on how the unit tripped (i.e. slow wind down, fast wind down, direct trip). The charge is intended to incentivise behaviour that enhances system security and reduces

[1] http://www.allislandproject.org/en/wholesale_overview.aspx?article=d3cf03a9-b4ab-44af-8cc0-ee1b4e251d0f

operating costs. The proposed rates for the various categories of unit trip are set at a level which seeks to recover an amount of costs which is representative of the power system impact. The purpose of the Trip Charge is to minimise the number of trips and, when a trip is unavoidable, to incentivise a Generator to reduce output as slowly as possible.

In the event of a generator unit making a downward declaration of its availability at short notice a Short Notice Declaration (SND) Charge is levied on the service provider depending on the amount of notice given. The charge is intended to incentivise behaviour that enhances system security and reduces constraints costs. The RAs' January 2010 Decision Paper[2] stated that the charge rate for SNDs is to be phased in with the rate increasing from €20 / MW to €40 / MW for the 2010-2011 tariff period and to €70 / MW from the 1st October 2011.

It is important for the efficient and economic operation of the system to ensure that generators maintain the performance required in the respective Grid Codes and act in a manner that facilitates the operation of the system. The harmonised arrangements establish Generator Performance Incentive (GPI) Charges monitoring and performance incentives on an all-island basis. The arrangements are intended to quantify and track generation performance, identify non-compliance with standards and help evaluate the performance gap between what is needed and what is being provided by service providers as the power system develops.

The TSOs have found the introduction of GPIs has led to improved performance of certain generation units in relation to the required Grid Code compliance. In some cases GPIs have placed focus on the performance and highlighted the level of compliance of certain generator units. The TSOs are therefore proposing to retain the OSC rates approved for the 2014-2015 tariff year with the inclusion of the agreed inflation rate.

1.2 OSC Reporting

A monthly report is published on the TSOs' websites which shows the following:

1. The total Trip Charges levied and the type of trip. This is reported on an all-island basis and the total OSCs for the tariff year;
2. The total SND charges levied. This is reported on an all-island basis and the total OSCs for the tariff year; and
3. The revenue levied for each category of GPI. This is reported on an all-island basis and the total GPIs for the tariff year.

These monthly reports are available on the TSOs' websites which can be accessed at www.EirGrid.com or www.soni.ltd.uk.

1.3 Instructions for Response

Responses should be sent to: Amanda.Kelly@Eirgrid.com , AS@Eirgrid.com and Commerical@soni.ltd.uk.

The closing date for receipt of responses is 5pm on Monday 23rd March, 2015.

[2] [SEM-10-001]; Harmonised All-Island Ancillary Services Rates and Other System Charges; Decision Paper; 4 Jan 2010

It would be helpful if comments were aligned with the sections and sub-sections of this consultation document. It would also be helpful if responses were not confidential. If confidentiality is required, this should be made clear in the response. Please note that, in any event, all responses will be shared with the RAs.

2. EXISTING OSC DEVELOPMENTS

The TSOs have reviewed the charges levied on generating units for the tariff year 2013-2014 and it has maintained a similar level of compliances compared to the same period in tariff year 2012-2013. This trend can be viewed on the monthly reports published on the EirGrid and SONI websites.

2.1 Short Notice Re-declarations

Short Notice Declarations (SND) are made by generators to reflect changes in availability of committed plant or unscheduled outage of dispatched plant. The SND charges are intended to incentivise behaviour that enhances system security and reduces dispatch balancing costs by providing the TSOs with notice to re-dispatch plant at the least cost. The TSOs believe that the charge is appropriate and would not propose to change the charge for this upcoming tariff year other than increasing in line with the assumed inflation rate.

In 2014-2015 consultation paper, the TSOs made a clarification with regards to the SND Minimum Threshold. There was ambiguity over how a SND equal to the SND Minimum Threshold would be dealt with in the settlement system were either a charge would result, or instead the MW reduction would be used in the sum of the SND reductions, within the specific time window for chargeable SNDs.

The Methodology Statement was revised and published effective from 01st October 2014 with the following:

'To discourage multiple SNDs below the minimum threshold in quick succession, re-declarations below the SND Minimum Threshold within the Time Window for Chargeable SNDs are subject to an SND charge, provided the sum of the SND reductions are equal to or above the SND Minimum Threshold. In such circumstances, the SND reduction is the summation of the smaller SND reductions and set to no notice.'

2.2 Trip Charge

In response to the participants views from the 2013-2014 OSC consultation paper the TSOs stated in their recommendations paper[3] to maintain the current Trip Charge threshold at 100 MW in the 2013-2014 tariff year. Furthermore, the TSOs recommended a separate consultation to review the Trip Charge methodology.

Following a review of the analysis of the available data over the period of 2011-2013 the TSOs, in conjunction with the RAs, recommended that the Trip Charge methodology remains as is and not proceed with the consultation to review for 2014-2015. The review of the methodology should be visited again once the DS3: Enhanced Performance Monitoring System is put in place as part of the DS3 project which will log any trips or load drops over a certain threshold (including WFPS).

[3] SEM-13-043b Other System Charges recommendations paper 2013-14

2.3 Late Synchronisation Charge

Modifications to the joint sections of the Northern Ireland and Ireland Grid Codes in respect of late synchronisation windows (required because of the pending Failure to Follow Notice to Synchronise Instruction modifications) were discussed at the February 2012 meeting of the Joint Grid Code Panel. At this meeting it was agreed that a consultation paper be developed which would set out the modification proposal to change the late synchronisation window from 55 minutes to 15 minutes. The change was consulted upon from 23rd May 2012 until 28th June 2012 and on the 28th September 2012 the TSOs issued a joint response to the consultation, which was published on the EirGrid and SONI websites[4]. In this response the TSOs addressed the points raised by the respondents to the consultation and sought approval from the RAs for the specified changes to the Grid Codes in Northern Ireland and Ireland.

In May 2013 the RAs wrote to the TSOs requesting they consider a number of specific points and discuss them with the Grid Code Review Panels prior to resubmitting the modification proposals.

The TSOs have since then carried out an analysis of the impact on costs of the modifications and presented results at the Joint Grid Code Review Panel meeting on 12 February 2014. The results presented where inconclusive. The TSOs produced a further report and sent it the RAs in 2014.

Subsequently, the RAs wrote to the TSOs requesting a summary to outline the sequence of events of this modification. This was completed in Q4 2014 and submitted to the RAs.

If the modification approval is granted the change will be implemented accordingly.

3. NEW OTHER SYSTEM CHARGES (OSC)

In assessing new developments for OSC, there are two key areas for consideration:

1. Where a non-compliance trend is found and a GPI is considered worthwhile or an existing GPI should be modified; and
2. Implementation of OSC for non-conventional generation.

3.1 Secondary Fuel GPI

In the 2011-2012 tariff year, the TSOs proposed a new GPI relating to a generating unit's declared secondary fuel capability. Since then, the TSOs understand that the fuel security arrangements in Northern Ireland have advanced but are not at the stage yet where a GPI can be applied to all units on the island.

The Utility Regulator in Northern Ireland and the Department of Enterprise, Trade and Investment (DETI) in Northern Ireland have asked SONI to implement Fuel Switching Agreements with certain generators and DETI are redrafting the NI Fuel Security Code. The final Fuel Switching Agreements are expected to be in place by 2015.

The TSOs believe there is merit in proposing that a declaration based GPI should be introduced when the Fuel Switching Agreements are in place to quantify the availability of a generating unit to operate on its secondary fuel as the TSOs have observed a gap in the

[4] www.eirgrid.com and www.soni.ltd.uk

level of compliance of some generating units. This is essential to ensure the continued security of supply on an all-island basis and that generating units are in compliance with the Grid Code in Ireland and Fuel Security Code in Northern Ireland.

A review has taken place on the methodology of the GPI proposed in the 2011-2012 tariff year consultation. The gap in the level of compliance remains valid. The following is a general summary of the design:

Generating units declare their MW availability on their secondary fuel; and If a generating unit is available on its primary fuel and not on its secondary fuel, cannot start up on its secondary fuel or cannot change fuel on load then a trading based charge is levied depending on its requirements.

SF_ChargeX = TP * DSFC * A * SecFuel_RATE

where:

SF_ChargeX	is the charge for Secondary Fuel underperformance in the Trading Period X (expressed in € or £);
TP	is a 0.5 hour Trading Period (expressed in h);
DSFC	is the Declared Secondary Fuel Capability of the generating unit to be available to generate on its secondary fuel, start on their secondary fuel or change fuel on load. If the generating unit cannot perform either of these capabilities then a charge is levied on the unit. This is a Yes or No condition in the calculation;
A	is the Availability of the Generating Unit (expressed in MW) on their primary fuel prevailing at the De-Synchronisation Load Time; and,
SecFuel_RATE	is the Secondary Fuel charge rate (expressed in €/MWh or £/MWh) specified in the TUoS Statement of Charges.

The TSOs would welcome participants views on the merits of the proposed methodology.

3.2 Introduction of new GPIs

There have been significant strides by windfarms over the last couple of years, in terms of achieving / maximising Grid Code compliance.

The first phase involved increased compliance with regard to controllability and availability declarations.

The TSOs are now seeing a significant proportion of the connected windfarms achieving Grid Code compliance certification. This compliance certification is often qualified by temporary and/or permanent derogation applications. Although compliance certification without qualification would be the best outcome, compliance certification with qualification is a distinct improvement on no certification, in that at least the TSOs are aware of the capability of the connected windfarms. Also in the case of temporary derogations there is usually an associated plan in place, with targets and milestones, to implement remedial works and achieve compliance. It is the TSO's opinion that it could be useful to introduce GPIs, similar to those currently in place for conventional Generation Units, at the appropriate

time in the future. It is likely that these GPIs would include incentives to maximise compliance with Design Minimum Operating Level (DMOL), Reactive Power and Reserve as follows:

- The DMOL GPI would be a trading period based charge on the deviation from the Grid Code/Derogated requirement;
- The Reactive Power GPI would be a trading period charge and will be based on the deviation from the Grid Code/Derogated requirement; and
- The Reserve GPI charge would be a trading period charge and will be based on the deviation from the Grid Code/Derogated requirement.

The TSOs would welcome participants views on the introduction of such GPIs in the future.

3.3 RoCoF GPI

It is anticipated that a decision on the implementation date will be clarified by the Regulatory Authorities. It is the TSOs' expectation to introduce a RoCoF GPI in line with the publication of the RA's RoCoF decision paper.

The RA's RoCoF modification to the Grid code decision papers[5] state that the RAs intend to phase the introduction of GPI according to the unit categorisation and will confirm the decision on this matter on 10 November 2015.

[5] Rate of change of Frequency (RoCoF) Modification to the Grid Code Decision paper CER/14/081 published 4th April 2014 Decision Paper on the Rate of Change of Frequency Grid Code Modfication publisehd 7th May 2014

4. PROPOSED RATES

The following sections define the rates used for the Other System Charges (OSC).

In the Harmonised Ancillary Services Rates and Other System Charges Decision paper for 2011-2012, the SEM Committee was satisfied that the exchange rate methodology is aligned to that utilised in the SEM. The TSOs will use the same methodology for 2014-2015 but propose that the 5-day average rate is based on the last five working days of July in order that the HAS & OSC GBP rates are available sooner.

The OSC rates assume a forecast blended inflation rate[6] of 1% for the 2015-2016 period.

4.1 Trip Charges

The following tables propose the Trip Charges and Constants for the 2015-2016 tariff year. As seen in Table 4.1 and Table 4.2 there are no changes to the proposed charges compared with the previous tariff year other than increasing in line with the agreed inflation rate.

	2014-2015	2015-2016
Direct Trip Rate of MW Loss	15 MW/s	15 MW/s
Fast Wind Down Rate of MW Loss	3 MW/s	3 MW/s
Slow Wind Down Rate of MW Loss	1 MW/s	1 MW/s
Direct Trip Constant	0.01	0.01
Fast Wind Down Constant	0.009	0.009
Slow Wind Down Constant	0.008	0.008
Trip MW Loss Threshold	100 MW	100 MW

Table 4.1: Proposed Trip Constants

Charge	2014-2015	2015-2016
Direct Trip Charge Rate	€4,141	€4,183
Fast Wind Down Charge Rate	€3,106	€3,137
Slow Wind Down Charge Rate	€2,071	€2,091

Table 4.2: Proposed Trip Rates

[6] Current inflation forecasts in the UK, as published by bodies such as the Office of Budgetary Responsibility (OBR) indicate UK inflation of the order of 2-2.5%. Forecasts of HICP inflation in Ireland are general around 0.5%. On this basis, and recognising the relative balance between Ireland and Northern Ireland, and indeed the somewhat lower than originally forecast expected outturn inflation for 2014/15 the TSOs' view is that a blended rate of 1% for the forthcoming 2015/16 period is appropriate.

4.2 Short Notice Declaration (SND) Charges

The following tables propose the SND Charges and Constants for the 2015-2016 tariff year. As seen in Table 4.3 and 4.4 there is no change to the proposed constants and charges compared with the 2014-2015 tariff year other than increasing in line with the proposed inflation rate.

SND Constants	2014-2015	2015-2016
SND Time Minimum	5 min	5 min
SND Time Medium	20 min	20 min
SND Time Zero	480 min	480 min
SND Powering Factor (Notice time weighting curve)	-0.3	-0.3
SND Threshold	15 MW	15 MW
Time Window for Chargeable SNDs	60 min	60 min

Table 4.3: Proposed SND Constants

SND Charge Rate	2014-2015	2015-2016
SND Charge Rate	€72 / MW	€73 / MW

Table 4.4: Proposed SND Charge Rate

4.3 GPI Charges

The proposed GPI Constants, GPI Declaration Based Charges and GPI Event Based Charges for the 2014-2015 tariff year are outlined in Table 4.5, Table 4.6 and Table 4.7 respectively. The TSOs are proposing to make no change to the rates for 2015-2016 other than increasing in line with the proposed inflation rate.

The rates proposed are displayed with 2 decimal places in Euro. The TSOs would like to clarify that 4 decminals places are used in the calculation of the inflationary Increase.

GPI Constants	2014-2015	2015-2016
Late Declaration Notice Time	480 min	480 min
Loading Rate Factor 1	60 min	60 min
Loading Rate Factor 2	24	24
Loading Rate Tolerance	110%	110%
De-Loading Rate Factor 1	60 min	60 min
De-Loading Rate Factor 2	24	24
De-Loading Rate Tolerance	110%	110%
Early Synchronous Tolerance	15 min	15 min
Early Synchronous Factor	60 min	60 min
Late Synchronous Tolerance	5 min	5 min
Late Synchronous Factor	55 min	55 min

Table 4.5: Proposed GPI Constants

	2014-2015	2015-2016
GPI Declaration Based Rates	**€ / MWh**	**€ / MWh**
Minimum Generation	1.22	1.23
Max Starts in 24 hour period	1.04	1.05
Minimum On time	1.04	1.05
Reactive Power Leading	0.30	0.30
Reactive Power Lagging	0.30	0.30
Governor Droop	0.30	0.30
Primary Operating Reserve	0.12	0.13
Secondary Operating Reserve	0.12	0.13
Tertiary Operating Reserve 1	0.12	0.13
Tertiary Operating Reserve 2	0.12	0.13

Table 4.6: Proposed GPI Declaration Based Charge Rates

	2014-2015	2015-2016
GPI Event Based Rates	**€ / MWh**	**€ / MWh**
Loading Rate	0.61	0.62
De-Loading Rate	0.61	0.62
Early Synchronisation	2.74	2.77
Late Synchronisation	27.41	27.68

Table 4.7: Proposed GPI Event Based Charge Rates

5. SUMMARY AND NEXT STEPS

Comments are invited from interested parties on this consultation paper and should be aligned with the sections and sub-sections of this document. If confidentiality is required, this should be made explicit in the response as the comments will be published on the TSOs' websites[7]. Please note that, in any event, all responses will be provided to the RAs. The closing date for responses is 5pm on Monday, 23rd March, 2015.

[7] www.eirgrid.com and www.soni.ltd.uk