Harmonised
Other System Charges
Consultation

Tariff Year
1st October 2012 to 30th September 2013

3rd April 2012

EIRGRID

SONI
System Operator for Northern Ireland

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.

For the upcoming tariff period running from 1st October 2012 to 30th September 2013 proposals to discourage units dropping output in sympathy to a trip event have been described. The TSOs would like to remove the incidence of units which trip in direct response to another unit tripping. The SND charges are proposed to remain the same.

A number of comments have been received from Service Providers over the last year whereby it has been argued that the use of the *Minimum Generation or Minimum Load* clause from the Grid Code is too onerous for generating units which have a lower generation/minimum load than the Grid Code requirement. The TSOs therefore propose to include a new the parameter called 'Contracted Minimum Load/Generation' in the Ancillary Services Agreement. This is the value that will be used in the calculation of the Required Loading Rate.

The GPI charge for Secondary Fuel declarations is proposed to be delayed for a further year pending completion of the necessary legislative changes in Northern Ireland in respect of the Fuel Security Code. As part of DS3, OSC for wind farms and other Users as defined in the Grid Code are being investigated and future OSC consultation may propose implementation of OSC charges to these Users.

OSC monies, as of July 2011, have been transferred to the Imperfections account being administered by SEMO. OSC monies are published on the TSOs websites for October 2011 and total tariff year monies are published in addition. The SEM Imperfections Consultation paper for 2012-2013 will contain a forecast of OSC monies received from SNDs, Trips and GPIs for the year 2011-2012 which will be used to offset Dispatch Balancing Costs during this tariff year.

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 Charge
GPI	Generator Performance Incentive
SND	Short Notice Declaration

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1. INTRODUCTION

Other System Charges (OSC) are defined in the TUoS / SSS 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 and have to 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 2012 to 30th September 2013.

SNDs avoid units 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 12 hours up to real time.

Trip Charge incentivise to mminimize number of trips and to aim for slow tripping, when 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 a trip threshold.

1.1 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
- Generator Performance Incentive Charge

In the event of a generator unit tripping 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 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 while recognising that a level of tripping is inevitable. The purpose of the trip charge is to minimise the number of trips and, when a trip is unavoidable, to incentivise a Generator to wind down a unit as slowly as possible.

In the event of a generator unit making a downward declaration of their 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[1] 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

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

2011. The phased approach to the rates setting allowed all parties time to gain experience of the new harmonised arrangements.

It is important for the efficient and economic operation of the system to ensure that generators maintain the performance required in the 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 generator performance, identify non-compliance with standards and help evaluate the performance gap between what is needed and what is being provided by services providers as the power system develops.

The TSOs have found the introduction of GPIs has led to improved performance of certain generating 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 2011/2012 tariff year.

1.2 INSTRUCTIONS FOR RESPONSE

Responses should be sent to: david.carroll@eirgrid.com or mark.gormley@soni.ltd.uk

The closing date for receipt of responses is Friday, 4th May 2012.

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. PROPOSED OSC DEVELOPMENTS

The TSOs have reviewed the charges levied on generating units for the tariff year 2010-2011 and have noted an improvement in the level of non-compliances over the period. 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 the change 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 least cost. There were significant SND charges levied on generating units during the 2010-2011 tariff year which were more pronounced during the very cold snap in the winter of 2010. In October 2011, the SND charge was increased from €40/MWhr to €70/MWhr during 2011-2012 tariff year as approved in the 2010 RA decision. The TSOs believe that the charge is appropriate and would not propose to change the tariff for this upcoming tariff year.

2.2 Trip Charge

Trip charges are where plant unexpectedly drops load off the system and the TSOs have to dispatch on plant to deal with the loss of generation. There were six events during the tariff year 2010-2011 where, following a large drop in load, another unit dropped significant load, causing a further reduction in frequency. These events are of serious concern and thus the TSOs would like to incentivise generators to prevent such an event or trend to continue by increasing the trip penalty for the unit which causes a secondary trip. Table 2.1 below shows the units and the amount tripped.

Event	Date	Initial Trip - MWs Lost	Secondary Trip - MWs Lost
1	27/11/2010	404	307
2	26/12/2010	107	137
3	02/01/2011	134	303
4	13/01/2011	241	243
5	05/09/2011	363	100
6	09/10/2011[2]	341	136

Table 2.1: Secondary Trip Events during Tariff Year 2010-2011

The TSOs would like to discourage generators which cause a secondary trip by applying a double trip charge for a unit which drops output during a trip event window i.e. from the initial trip to 20mins to when the power system would return to a full reserve position. For example the trip charge rate would increase from €4000/MWhr to €8000/MWhr for a direct trip event

[2] This event is marginally outside of the 2010-2011 tariff year.

of a unit which fails to maintain its output. This secondary trip charge would be considered applicable in the case of events where failure to provide contracted reserve failure is liable. Participants are thus requested to provide their views on the proposal as set out in the Table 2.2 below.

Charge Rate	Initial Trip Charge €/MWhr	Secondary Trip Charge €/MWhr
Direct Trip Charge Rate	4,000	8,000
Fast Wind Down Charge Rate	3,000	6,000
Slow Wind Down Charge Rate	2,000	4,000

Table 2.2: Proposed Trip Charges for Initial Trip and Secondary Trip

2.3 Late Synchronisation Charge

Modifications to the joint sections of the Northern Ireland and Ireland Grid Codes in respect of late synchronisation windows 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 55mins to 15mins. Following the completion of this consultation process, it is proposed that the tariff year consultation for 2013-2014 would reflect the RAs decision in respect of this consultation.

2.4 GPI Loading Rate

A number of comments have been received from service providers in Ireland over the last year whereby it has been argued that the use of the *Minimum Load* clause from the Grid Code is too onerous for generating units which have a lower minimum load than the Irish Grid Code requirement. The TSOs therefore propose to use the parameter called 'Contracted *Minimum Generation or Minimum Load'* in the Schedule to the Ancillary Services Agreement in the GPI Loading Rate Calculation. This is the value that will be used in the calculation of the Required Loading Rate for those units in Ireland which have a Minimum Load which is less than the Irish Grid Code Requirement. In Northern Ireland, the Grid Code Minimum Load values are unit specific and thus is unaffected by this change.

For example a CCGT has a registered capacity of 250MW, has a minimum load of 125MW however it declares a lower minimum generation of 100MW. Currently the required loading rate, when hot, is calculated as 125MW/40mins = 3MW/min. The proposed refined loading rate would now be 100MW/40mins = 2.5MW/min.

It is proposed that the de-loading rate will also be calculated using this methodology.

3. NEW OTHER SYSTEM CHARGES (OSC)

3.1 Secondary Fuel GPI

In the 2010/2011 OSC consultation paper[3] the TSOs proposed that future potential GPIs may be introduced to address gaps in the performance of generating units. In the 2011/2012 tariff year, the TSOs proposed a new GPI relating to a generating unit's declared secondary fuel capability. The TSOs understand that the Fuel Security Code in Northern Ireland has advanced but is not at the stage yet where a GPI can be applied to all units on the island. Should this GPI be introduced, the TSOs are proposing a rate for the Secondary Fuel GPI of €0.12 / MWh which is consistent with the declared reserve GPIs.

The TSOs still believe there is merit in proposing that a declaration based GPI should be introduced to quantify the availability of a generating unit to operate on its 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.

It is therefore proposed that the GPI for Secondary Fuel will not be introduced in this Tariff Year 2012-2013.

3.2 Future Developments for OSC

Under the Performance Monitoring work stream for DS3, future developments for OSC are being considered. There are two key areas for consideration:

1. Where non-compliance trend is found and a GPI is considered worthwhile
2. Implementation of OSC for Wind Farms and other Users as defined under the Grid Codes

The TSOs will consider the merits of these areas and expect to propose changes as part of the future annual consultations on OSC.

3 Harmonised Other System Charges 2010/2011; Consultation Paper; 9th July 2010

4. PROPOSED RATES

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

4.1 TRIP CHARGES

The following tables propose the Trip Charges and Constants for the 2012/2013 tariff year. As seen in Table 4.1 and Table 4.2 there is no change to the proposed charges compared with the previous tariff year.

	2009/2010	2010/2011	2011/2012	2012/2013
Direct Trip Rate of MW Loss	15 MW/s	15 MW/s	15 MW/s	15 MW/s
Fast Wind Down Rate of MW Loss	3 MW/s	3 MW/s	3 MW/s	3 MW/s
Slow Wind Down Rate of MW Loss	1 MW/s	1 MW/s	1 MW/s	1 MW/s
Direct Trip Constant	0.01	0.01	0.01	0.01
Fast Wind Down Constant	0.009	0.009	0.009	0.009
Slow Wind Down Constant	0.008	0.008	0.008	0.008
Trip MW Loss Threshold	100 MW	100 MW	100 MW	100 MW

Table 4.1: Proposed Trip Constants 2011/2012

Charge	2009/2010	2010/2011	2011/2012	2012-2013 Initial Trip	2012-2013 Secondary Trip
Direct Trip Charge Rate	€4,000	€4,000	€4,000	€4,000	€8,000
Fast Wind Down Charge Rate	€3,000	€3,000	€3,000	€3,000	€6,000
Slow Wind Down Charge Rate	€2,000	€2,000	€2,000	€2,000	€4,000

Table 4.2: Proposed Trip Rates 2011/2012

4.2 PROPOSED SHORT NOTICE DECLARATION (SND) CHARGES

The following tables propose the SND Charges and Constants for the 2012/2013 tariff year. As seen in Table 4.3 and 4.4 there is no change to the proposed constants and charges compared with the 2010/2011 and 2011-2012 tariff years. .

SND Constants	2009/2010	2010/2011	2011/2012	2012/2013
SND Time Minimum	5 min	5 min	5 min	5 min
SND Time Medium	20 min	20 min	20 min	20 min
SND Time Zero	480 min	480 min	480 min	480 min
SND Powering Factor (Notice time weighting curve)	-0.3	-0.3	-0.3	-0.3
SND Threshold	15 MW	15 MW	15 MW	15 MW
Time Window for Chargeable SNDs	60 min	60 min	60 min	60 min

Table 4.3: Proposed SND Constants

SND Charge Rate	2009/2010	2010/2011	2011/2012	2012/2013
SND Charge Rate	€ 20 / MW	€ 40 / MW	€70/MW	€70/MW

Table 4.4 Proposed SND Charge Rate

4.3 PROPOSED GPI CHARGES

The proposed GPI Constants, GPI Declaration Based Charges and GPI Event Based Charges for the 2012/2013 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 2012-2013.

GPI Constants	2009/2010	2010/2011	2011/2012	2012/2013
Late Declaration Notice Time	480 min	480 min	480 min	480 min
Loading Rate Factor 1	60 min	60 min	60 min	60 min
Loading Rate Factor 2	24	24	24	24
Loading Rate Tolerance	110%	110%	110%	110%
De-Loading Rate Factor 1	60 min	60 min	60 min	60 min
De-Loading Rate Factor 2	24	24	24	24
De-Loading Rate Tolerance	110%	110%	110%	110%
Early Synchronous Tolerance	15 min	15 min	15 min	15 min
Early Synchronous Factor	60 min	60 min	60 min	60 min
Late Synchronous Tolerance	5 min	5 min	5 min	5 min
Late Synchronous Factor	55 min	55 min	55 min	55 min

Table 4.5: Proposed GPI Constants

	2009/2010	2010/2011	2011/2012	2012/2013
GPI Declaration Based Rates	**€/MWh**	**€/MWh**	**€/MWh**	**€/MWh**
Minimum Generation	1.18	1.18	1.18	1.18
Max Starts in 24 hour period	0.29	0.6	1.00	1.00
Minimum On time	0.29	0.6	1.00	1.00
Reactive Power Leading	0.29	0.29	0.29	0.29
Reactive Power Lagging	0.29	0.29	0.29	0.29
Governor Droop	0.29	0.29	0.29	0.29
Primary Operating Reserve	0.12	0.12	0.12	0.12
Secondary Operating Reserve	0.12	0.12	0.12	0.12
Tertiary Operating Reserve 1	0.12	0.12	0.12	0.12
Tertiary Operating Reserve 2	0.12	0.12	0.12	0.12
Secondary Fuel	NA	NA	0.12	0.12

Table 4.6: Proposed GPI Declaration Based Charge Rates

	2009/2010	2010/2011	2011/2012	2012-2013
GPI Event Based Rates	**€/MWh**	**€/MWh**	**€/MWh**	**€/MWh**
Loading Rate	0.59	0.59	0.59	0.59
De-Loading Rate	0.59	0.59	0.59	0.59
Early Synchronisation	2.65	2.65	2.65	2.65
Late Synchronisation	26.47	26.47	26.47	26.47

Table 4.7: Proposed GPI Event Based Charge Rates

5. OSC REPORTING

A monthly report is now published on the TSOs websites which show 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; and
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 Generator Performance Incentives (GPIs). This is reported on an all-island basis and the total GPIs for the tariff year.

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

A number of service providers queried historical SND charges with EirGrid during the 2009/2010 tariff year. EirGrid subsequently issued an Advisory Note to service providers clarifying that the responsibility of ensuring correct declarations and reason codes are used is the responsibility of the generator station. The TSOs have also published and keep up to date Frequently Asked Questions (FAQs)[4] on OSCs. These FAQs include the reason codes which should be used by generating units to prevent incorrect SNDs being incurred.

The TSOs and SEMO agreed an offsetting mechanism whereby the OSC revenue will be transferred to the Imperfections account on a monthly basis. SEMO submitted a Modification to the Trading and Settlement Code (TSC) during March 2011 and this modification was approved by the RAs on 11th July 2011. This transfer of OSC monies is now implemented. The SEM Imperfections Consultation paper for 2012-2013 which will be published in May 2012 will contain a forecast of the monies expected to be recovered from OSC during the Tariff Year 2011-2012.

4 Available from www.eirgrid.com

6. SUMMARY AND NEXT STEPS

The TSOs have provided the proposals for the OSC rates and design changes for Tariff Year 2012-2013. 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[5]. Please note that, in any event, all responses will be provided to the RAs. The closing date for responses is Friday, 4th May 2012.

5 www.eirgrid.com and www.soni.ltd.uk