Harmonised
Other System Charges

Consultation

9th July 2010

1. SUMMARY

Other System Charges (OSC) are levied outside the Single Electricity Market (SEM) by the Transmission System Operators (TSOs). OSC include trip charges, Short Notice Declaration (SND) charges and Generator Performance Incentive (GPI) charges. These charges have been harmonised between Ireland and Northern Ireland since 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 the 1st October 2010 to the 30th September 2011, the TSOs are proposing not to adjust any of the OSC rates for the initial phase of operation of the harmonised arrangements that were decided on by the Regulatory Authority (RAs) decision paper in January 2010[1], other than those which result from changes to the exchange rate. This proposal is being made on the basis that the current arrangements have only recently been implemented, that the current rates and charges are still considered to be valid and that a period of stability in payment and charging rates is required. A more comprehensive review of rates and arrangements will be undertaken next year for the 2011/12 tariff period. This is discussed further in the RAs recent Information Note to Service Providers[2].

The TSOs do propose however to make three design refinements to the current charges. Two of these refinements relate to the Minimum on Time and Maximum Starts in a 24 hour charges and how these interact with the Minimum Generation design change. The TSOs propose that this design refinement is implemented for the start of the 2010/2011 tariff period. The TSOs also propose making a possible refinement to the Minimum Generation design to allow generators to take ambient conditions into consideration when making declarations. This refinement of the existing design may not be implemented for the start of the 2010/2011 tariff period and this is further discussed in this paper.

Responses to the proposals outlined in this paper should be submitted to the TSOs by the 6th August 2010.

Following consultation and consideration of comments received the TSOs will submit their recommendations to the RAs for approval.

1 [SEM-10-001] "Harmonised All-Island Ancillary Services Rates & Other System Charges" Decision Paper 4th January 2010

2 [SEM-10-042] "Ancillary Service Rates and Other System Charges; Information Note to Service Providers" 29th June 2010

2. INTRODUCTION

The purpose of this consultation paper is to obtain views on the Transmission System Operators (TSOs) proposed harmonised all-island Other System Charge (OSC) rates for the tariff year 1st October 2010 to 30th September 2011.

In addition to proposing rates for the existing arrangements, this consultation paper also discusses potential OSC developments on which the TSOs wish to obtain views.

The rates set out in this paper are intended to supersede the rates set by the Regulatory Authority (RA) decision paper in January 2010[3] for the initial "Go-live" phase of new Harmonised Ancillary Services & Other System Charges arrangement (HAS&OSC) which were introduced on the 1st February 2010. These Other System Charges are formally defined as part of the TUoS framework and the TUoS Statement of Charges. These Other System Charges are levied on underperforming generators, in accordance with the Other System Charges Methodology Statement[4].

Section 8 of this document sets out arrangements for submitting responses to this consultation paper.

3. PROPOSED EXCHANGE RATE

The currency exchange rate used in this consultation uses the same methodology as that used in the TSOs' June 2009 rates consultation paper[5] and that which is used in the annual SEM Capacity Pot calculation[6].

The rate used in this paper for the 2010/2011 tariff period is €1/£0.86, which may be amended for the final published rates to reflect the exchange rate calculated at that time. The exchange rate used for the 2009/2010 tariff period was €1/£0.85.

3 [SEM-10-001] "Harmonised All-Island Ancillary Services Rates & Other System Charges" Decision Paper 4th January 2010

4 [EirGrid/SONI] "Other System Charges Methodology Statement" Applicable from 1st February 2010

5 [AIP-SEM-09-062] "Harmonised Ancillary Services & Other System Charges; Rates Consultation" 8th June 2009

6 [SEM-09-103] "Trading & Settlement Code Annual Parameters; Decision Paper" 4th November 2009

4. PROPOSED TRIP CHARGES

4.1. Trip Charge Introduction

In the event of a generator unit tripping a 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 Harmonised AS&OSC arrangements went live on the 1st February 2010. During the first four months of the harmonised arrangements, the charges levied for trips have been in line with the TSOs expectations.

4.2. Proposed Harmonised Trip Charge Rate

The TSOs propose not to change the trip charge formulae and trip constants as at the time of writing this consultation paper the harmonised arrangements have only been in place for less than five months. Therefore the sample of data available is not sufficient to warrant change. The TSOs believe that the present design effectively ramps up the charge with increasing MW loss and that the trip design incentivises 'wind-downs' rather than trips if technically achievable. These proposed trip constants can be seen in Table 1.

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 proposed rates are listed in Table 2. These rates are unchanged from those used for the 2009/2010 tariff year. However the proposed exchange rate has changed and this is described in Section 3. The rate in Euro is used as the base rate, as is consistent with the approach used in the Single Electricity Market (SEM), therefore the rates in GBP have changed to reflect this change in the exchange rate. As part of this consultation process, views are sought on these charge rates.

Table 1: Proposed Trip Constants

	2009/2010	**2010/2011**
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 2: Proposed Trip Rates

	Proposed Trip Charge Rates			
Charge	**2009/2010**		**2010/2011**	
Direct Trip Charge Rate	€4,000	£3,400	€4,000	£3,440
Fast Wind Down Charge Rate	€3,000	£2,550	€3,000	£2,580
Slow Wind Down Charge Rate	€2,000	£1,700	€2,000	£1,720

5. PROPOSED SHORT NOTICE DECLARATION CHARGES

5.1. Short Notice Declaration Introduction

In the event of a generator unit making a downward declaration of their availability at short notice a 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 operating costs.

During the first four months of the harmonised arrangements, the charges levied for trips have been in line with the TSOs expectation.

5.2. Proposed Harmonised Short Notice Declaration Rate

For the 2010/2011 tariff period the TSOs propose not to change the SND constants and these are shown in Table 3, since at the time of writing this consultation paper the rates are still considered to be appropriate, harmonised arrangements have only been in place for less than five months, therefore the sample of data available is not sufficient enough to warrant change.

The RAs January 2010 Decision Paper 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. The phased approach to the rates setting allowed all parties time to gain experience of the new harmonised arrangements. With limited experience of the harmonised SND charges to date the TSOs are of the view that the current rate is adequate so now propose an extension of this phased approach and to retain the lower initial rate of €20/MW for the 2010/2011 tariff year. This would therefore remain at €20/MW for the 2010/2011 tariff period, with the rate increasing to €40/MW for the 2011/2012 tariff period and then to €70/MW for the 2012/2013 tariff period.

The proposed rates for the 2010/2011 tariff year have not changed from the 2009/2010 tariff year, however the proposed exchange rate has changed and this is described in Section 3. The rate in Euro is used as the base rate, as is consistent with the approach used in the Single Electricity Market (SEM), therefore the rates in GBP have changed to reflect this change in the exchange rate. As part of this consultation process, views are sought on these charge rates. The proposed charge rates for the 2010/2011 tariff period can be seen in Table 4.

Table 3: Proposed SND Constants

SND Constants	2009/2010	2010/2011
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: Proposed SND Charge Rate

SND Charge Rate	2009/2010		2010/2011	
SND Charge Rate	€ 20 / MW	£ 17 / MW	€ 20 / MW	£ 17.20 / MW

6. GENERATOR PERFORMANCE INCENTIVE CHARGES

6.1. GPI INTRODUCTION

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 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.

To better analyse the gap, a systematic and objective performance reporting structure is being developed. The reporting will be technical in nature and will consider a greater number of characteristics than the current GPIs and will report against all users of the power system.

In addition to expanding the monitoring, reporting and the GPI charges, the Grid Codes will be developed to ensure that the standards reflect the technology of the time as well as the long term needs of the power system.

6.2. PROPOSED GPI CHARGE RATES

The RAs January 2010 Decision Paper stated that the charge rate for Minimum on Time and Max Starts in 24 hours is to be phased in with the rate increasing from €0.29/MWh to €0.60/MWh for the 2010/2011 tariff period and to €1.00/MWh from the 1st October 2011. The phased approach to the rates setting allowed all parties time to gain experience of the new harmonised arrangements. With limited experience with the harmonised GPI charges to date the TSOs are of the view that the current rate is adequate so now propose an extension of this phased approach and to retain the initial rate of €0.29/MWh for both the Minimum on Time and Max Starts in 24 hours GPI for the 2010/2011 tariff year. This would therefore remain at €0.29/MWh for the 2010/2011 tariff period, with the rate increasing to €0.60/MWh for the 2011/2012 tariff period and then to €1.00/MWh for the 2012/2013 tariff period

The TSOs also propose not changing any of the GPI constants for the new tariff period. These are shown in Table 5. The TSOs want to clarify that the parameter value for “Late Declaration Notice Time” is the same as the parameter value for “SND Time Zero” – i.e. 480 minutes.

The proposed rates for the 2010/2011 tariff period are listed in Table 6. These rates are unchanged from those used for the 2009/2010 tariff year, however the proposed exchange rate has changed and this is described in Section 3. The rate in Euro is used as the base rate, as is consistent with the approach used in the Single Electricity Market (SEM), therefore the rates in GBP have changed to reflect this change in the exchange rate. As part of this consultation process, views are sought on these charge rates.

Table 5: Proposed GPI Constants

GPI Constants	2009/2010	2010/2011
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 6: Proposed GPI Rates

GPI Rates	2009/2010		2010/2011	
	Half Hour Trading Period Charges			
Minimum Generation	€ 1.18 / MWh	£ 1.00 / MWh	€ 1.18 / MWh	£ 1.01 / MWh
Max Starts in 24 hour period	€0.29 / MWh	£ 0.25 / MWh	€0.29 / MWh	£ 0.25 / MWh
Minimum On time	€0.29 / MWh	£ 0.25 / MWh	€0.29 / MWh	£ 0.25 / MWh
Reactive Power Leading	€0.29 / MVAr	£ 0.25 / MVAr	€0.29 / MVAr	£ 0.25 / MVAr
Reactive Power Lagging	€0.29 / MVAr	£ 0.25 / MVAr	€0.29 / MVAr	£ 0.25 / MVAr
Governor Droop	€0.29 / MWh	£ 0.25 / MWh	€0.29 / MWh	£ 0.25 / MWh
Primary Operating Reserve	€0.12 / MWh	£ 0.10 / MWh	€0.12 / MWh	£ 0.10 / MWh
Secondary Operating Reserve	€0.12 / MWh	£ 0.10 / MWh	€0.12 / MWh	£ 0.10 / MWh
Tertiary Operating Reserve 1	€0.12 / MWh	£ 0.10 / MWh	€0.12 / MWh	£ 0.10 / MWh
Tertiary Operating Reserve 2	€0.12 / MWh	£ 0.10 / MWh	€0.12 / MWh	£ 0.10 / MWh
	Event Based Charges			
Loading Rate	€0.59 / MWh	£ 0.50 / MWh	€0.59 / MWh	£ 0.51 / MWh
De-Loading Rate	€0.59 / MWh	£ 0.50 / MWh	€0.59 / MWh	£ 0.51 / MWh
Early Synchronisation	€2.65 / MWh	£ 2.25 / MWh	€2.65 / MWh	£ 2.28 / MWh
Late Synchronisation	€26.47 / MWh	£ 22.50 / MWh	€26.47 / MWh	£ 22.77 / MWh

6.3. PROPOSED GPI CHARGES DEVELOPMENTS

6.3.1. Interaction between Min Gen, Min On Time and Max Starts Design Refinement

In the current GPI design, a generator is only exposed to both the Minimum on Time and Maximum Starts in 24 hour period charges in each half hour trading period when the generators Minimum Generation is non-compliant. This is consistent with the System Support Services Agreement arrangements which operated in Northern Ireland pre-harmonisation on which the GPI arrangements were based. Both the Minimum on Time and Maximum Starts in 24 hour period charges are calculated based on the declared Minimum Generation and are independent of the level of non-compliance with respect to either Minimum on Time or Maximum Starts in 24 hour period.

It is logical for the charge calculation for Minimum on Time or Maximum Starts in 24 hour period to include the declared Minimum Generation. However, by not including the level of non-compliance a step change in the charge can occur. The present design is illustrated in Table 7.

Table 7: Present Design for Minimum on Time and Maximum Starts in 24 hour period

Generation	Minimum Generation			Minimum On Time		Maximum Starts in 24h	
Size	Required	Declared	Month Charge	Compliant	Month Charge	Compliant	Month Charge
[MW]	[MW]	[MW]	[€]		[€]		[€]
400	200	200	0	No	0	No	0
400	200	201	850	No	41,969	No	41,969
400	200	202	1,700	No	42,178	No	42,178
400	200	203	2,550	No	42,386	No	42,386

As can be seen in the example in Table 7, the charge for Minimum on Time and Maximum Starts in a 24h period are much greater than the Minimum Generation charge. The TSOs therefore propose to refine both the Minimum on Time or Maximum Starts in 24 hour period charge calculations, to take into account the degree of non-compliance and make them more reflective of the Minimum Generation charge. The calculation would include the ratio of non-compliance.

The Minimum on Time charge calculation would change from:

$$MoT\_ChargeX = TP * DMG * MoT\_RATE$$

to

$$MoT\_ChargeX = TP * DMG * MoT\_RATE * [(DMoT – RMoT) / RMoT]$$

where: RMoT is the Required Minimum on Time

DMoT is the Declared Minimum on Time

The Maximum Starts in 24 hour period charge calculation would change from:

MxS_ChargeX = TP * DMG * MxS_RATE

to

MxS_ChargeX = TP * DMG * MxS_RATE * [(RMxS - DMxS)/DMxS]

where: RMxS is the Required Max Starts in a 24 hour period

DMxS is the Declared Max Starts in a 24 hour period

An example of this design change to the Minimum on Time and Max Starts in a 24 hour period can be seen in Table 8.

Table 8: Proposed Design for Minimum on Time and Maximum Starts in 24 hour period

Generation	Minimum Generation			Minimum On Time			
Size	Required	Declared	Month Charge	Required	Declared	Compliant	Month Charge
[MW]	[MW]	[MW]	[€]	[min]	[min]		[€]
400	200	200	0	240	300	No	0
400	200	201	850	240	300	No	5,246
400	200	202	1,700	240	480	No	21,089
400	200	203	2,550	240	960	No	63,580

Generation	Minimum Generation			Maximum Starts in 24h			
Size	Required	Declared	Month Charge	Required	Declared	Compliant	Month Charge
[MW]	[MW]	[MW]	[€]	[No.]	[No.]		[€]
400	200	200	0	2	1.9	No	0
400	200	201	850	2	1.9	No	1,104
400	200	202	1,700	2	1.5	No	7,030
400	200	203	2,550	2	1.0	No	21,193

The TSOs propose that these design refinements are implemented for the 1st October 2010.

7. POTENTIAL GPI CHARGES

7.1. Minimum Generation Design Refinement

The TSOs propose to make a refinement to the existing minimum generation design to allow for the minimum generation requirement to vary based on the impact of ambient temperature conditions on the technical capabilities of certain units. If, after a technical appraisal, it is found that changing ambient conditions effect minimum output, the TSOs will consider an amended design. A number of possible amendments are as follows:

- Set the requirement as the greater of either a percentage of the declared maximum declared MW availability or the Grid Code requirement (whichever is greater); or
- Add a percentage tolerance to the Minimum Generation requirement to allow for ambient conditions. (e.g. a general 5% tolerance or a generator specific tolerance based on their output correction curves).

The TSOs would support the first option which would make a reasonable reflection of the intent of the Grid Code requirement while acknowledging the particular characteristics of CCGT units. The TSOs do not favour the second option as it would merely have the effect of increasing the Minimum Generation requirement by chosen percentage tolerance. This would significantly undermine the drive towards having lower Minimum Generations and as a consequence reduce the capability of the power system to facilitate more wind at night.

To carry out a full technical appraisal for the refinement of the minimum generation design could take some time and this proposal is included to obtain views on the proposed arrangements.

The TSOs propose that this design refinement is implemented for the start of the 2011/2012 tariff period, to prevent the introduction of the design refinement intra tariff year.

7.2. Potential Future GPI Charges

In defining the current parameters the TSOs included particular parameters in the initial GPI arrangements from the System Support Services Agreement in Northern Ireland and exclude others for the first tariff period in 2009/2010. Parameters which were excluded include low availability during the year, deviations from planned outage timelines and inflexibility on the scheduling of outages. The TSOs will review the GPI arrangements including the possibility of reintroducing some of the parameters originally excluded or possible other parameters such as ramp rates. Subsequent additions to the initial GPI parameters or changes to them will form part of future consultations and be subject to RA approval.

8. INSTRUCTION FOR RESPONSES

In order to focus the responses, views and comments are invited regarding the following sections of the paper:

Section #	Proposal
3	Proposed Exchange Rate
4	Trip Charge Constants & Rates
5	Short Notice Declaration Charge Constants & Rate
6.2	Generator Performance Incentive Charge Constants & Rates
6.3.1	Min On Time and Max Starts Design Refinement
7.1	Minimum Generation Design Refinement

Responses should be sent to:

David.Carroll@EirGrid.com and Michael.Preston@SONI.ltd.uk by Friday, 6th August 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.

9. NEXT STEPS

The rates setting process will follow a slightly different process to that followed for the first year of the Harmonised AS arrangements. The process for setting the OSC rates will be as follows:

- The consultation process on the OSC rates and proposed design refinements will end on the 6th August 2010;
- The TSOs will consider the comments received on the consultation paper and make recommendations to the RAs based on these;
- The RAs will approve/reject the recommendations proposed by the TSOs in light of the responses received;
- The TSOs will publish a summary of the approved recommendations, a revised Other System Charges Methodology Statement (if necessary) and the Statement of Charges on the TSOs websites in advance of the 1st October 2010.