

Harmonised Other System Charges Consultation

Tariff Year
01 October 2019 to 30 September 2020

5th April 2019



EXECUTIVE SUMMARY

Other System Charges (OSC) are levied on generators, which fail to provide necessary services to the system, leading to higher Imperfections Costs. The OSC include charges for generators, if their units Trip, or make downward re-declarations of availability, at short notice. Generator Performance Incentive (GPI) charges were harmonised between Ireland and Northern Ireland on the 01 February 2010. These charges are specified in the Transmission Use of System Charging Statements, which are 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 (2019/2020) we are proposing to:

- increase the rate of Trip Charges and Short Notice Declaration charges back to the 2017/2018 tariff rate, adjusting for inflation, at the forecast rate of 1.5875%, for units with no day ahead market position (QEX);
- retain the rate of Trip Charges and Short Notice Declaration charges as per 2018/2019 tariff year, adjusting for inflation, for units with a day ahead market position (QEX);
- retain the charging rate of zero for the early and late synchronization GPIs;
- retain the charging rate of zero for the loading and de-loading GPIs;
- retain the OSC rates approved for the 2018/2019 tariff year, only adjusting for inflation at forecast rate of 1.5875% for the following GPIs:
 - Minimum Generation
 - Governor Droop
 - Secondary Operating Reserve
 - Tertiary Operating Reserve 1
 - Tertiary Operating Reserve 2
 - Reactive Power
- retain the charging rate of zero for the Minimum On Time GPI and the Maximum Number of Starts in 24 hours GPI;
- retain the Primary Operating Reserve GPI rate from 2018/2019, adjusted for inflation, with a view to carrying out a review for the tariff year 2020/2021;
- retain the Secondary Fuel Availability declarations GPI rate from 2018/2019, with a view to carrying out a review for the tariff year 2020/2021

The TSOs welcome comments from industry on these proposals.

ABBREVIATIONS

DETI	Department of Enterprise, Trade and Investment
DSU	Demand Side Unit
GPI	Generator Performance Incentive
HICP	Harmonised Index of Consumer Prices
UK	United Kingdom
OSC	Other System Charges
QEX	Ex-Ante Quantity
RA	Regulatory Authority
RoCoF	Rate of Change of Frequency
RPI	Retail Prices Index
SEM	Single Electricity Market
SND	Short Notice Declaration
SONI	System Operator Northern Ireland
TSO	Transmission System Operator
WFPS	Wind Farm Power Station

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1. INTRODUCTION

Other System Charges (OSC) are defined in the Transmission Use of System 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.

GPIs are designed to incentivise compliance with respect to the Grid Code and are not linked with DS3 System Services Agreements.

The TSOs completed a comprehensive review in advance of the 2018/19 OSC consultation, focusing on the relevance and impact of I-SEM and DS3 System Services on OSC and implemented a number of changes for the TY 2018/19 as a result of this. At this time there is limited data available (since 1st October 2018) to review the impact of these changes. As a result we propose to complete a more comprehensive review in advance of the 2020/21 OSC consultation, when more data is available.

However based on this limited data we have the TSOs are proposing to make some changes to the Trip and SND Charges for TY 2019/2020.

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.

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.

In relation to Trip Charges and SNDs, the TSOs have noticed a trend, from the limited data we have since the introduction of I-SEM. A number of units are awarded an ex-ante quantity (QEX) based on their bids in the day ahead market. The ex-ante quantity is an energy representation of the net trades a unit carried out for an imbalance settlement period in the ex-ante markets (the Day-ahead and Intraday

Markets). This is the amount of energy in that period a unit must provide in order to be balance responsible.

However, for various reasons (for example but not limited to system constraints, as a result of trips, sudden drops in wind generation etc.) units that do not clear in the day ahead market (and therefore do not have a QEX) may still be required to provide generation.

If a unit has a QEX of zero, but is providing energy, they are paid through the balancing market. We have observed that units in this position that trip only have a reduction in their balancing market revenue while also paying the reduced trip charge rate. However they are not liable for imbalance charges. As a result of this, for the 2019/2020 tariff year we are proposing to increase the trip charge for these units back to the rates that were charged in tariff year 2017/2018, having adjusted them for inflation.

1.1. OSC Reporting

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

1. the total Trip Charges levied and the type of trip; this is reported on an all-island basis along with the total Trip Charge levied for the tariff year;
2. the total SND charges levied; this is reported on an all-island basis along with the total SND charges levied for the tariff year; and
3. the charges levied for each category of GPI; this is reported on an all-island basis along with the total GPIs for the tariff year.

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

1.2. Instructions for Response

Responses should be sent to:

Tariffs@soni.ltd.uk or Tariffs@Eirgrid.com

The closing date for receipt of responses is 5pm on Friday 3rd May 2019.

It would be helpful if comments were aligned with the sections and sub-sections of this consultation document. 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 Regulatory Authorities.

2. REVIEW OF EXISTING OSC

2.1. Trip Charge and Short Notice Declaration 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 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 constraint costs.

2.2. Generator Performance Incentive Charge

It is important for the efficient and economic operation of the system that generators maintain the performance required of them in the respective Grid Codes. Harmonised arrangements were established in 2010 for Generator Performance Incentive Charges to monitor performance on an all-island basis. These arrangements 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 generators in an evolving power system.

The introduction of GPIs has placed focus on generator performance and highlighted the level of compliance of certain generating units, leading to improved performance of certain generating units in relation to the required Grid Code compliance.

2.2.1. Impact of I-SEM

The GPIs for early and late synchronization and loading and de-loading rates were set to zero for the tariff year 2018/2019. As stated in last year's consultation paper, we consider that GPIs remain separate to I-SEM and do not require modification as a direct consequence of the new market. We are proposing to maintain the GPI rates of zero for early and late synchronization and loading and de-loading for the tariff year 2019/2020.

It should be noted that if the TSO records a trend of material imperfections costs in the future as a result of non-compliance in these areas, it may be necessary to recommend the re-introduction of the full charge rate for the early and late synchronization and loading and de-loading GPIs in future years.

2.2.2. Review of GPIs not linked to I-SEM changes

The Minimum On Time and the Maximum Number of Starts in 24 hours GPIs were both set to zero for the tariff year 2018/2019. This was as a result of analysis which indicated that no charges had been applied with respect to these GPIs in the previous two tariff years. Strong industry compliance in these areas was the basis for this change. We are proposing to maintain these rates at zero for the tariff year 2019/2020.

However as noted for the loading and de-loading and early and late synchronization GPIs it should also be noted that if, in future years, the TSO records a negative impact on imperfections costs as a result of non-compliance, it may be necessary to recommend the re-introduction of these GPIs.

We believe the GPIs for Minimum Generation, Governor Droop, Operating Reserve and Reactive Power still have merit in incentivising compliance with Grid Code standards. Therefore we propose to retain the charge rates approved for the 2018/2019 tariff year with the inclusion of the assumed inflation rate.

2.3 RoCoF GPI

A RoCoF GPI was introduced in June 2016 in line with the publication of the RAs' RoCoF decision papers¹. Although there has been significant progress, the RoCoF implementation project is not yet complete. A review of the appropriateness of the tariff may be merited following closure of the RoCoF project. However, until such time we will continue to apply the current rate.

¹[https://www.uregni.gov.uk/sites/uregni.gov.uk/files/media-files/Decision Paper on the Rate of Change of Frequency Grid Code Modification.pdf](https://www.uregni.gov.uk/sites/uregni.gov.uk/files/media-files/Decision%20Paper%20on%20the%20Rate%20of%20Change%20of%20Frequency%20Grid%20Code%20Modification.pdf) and <https://www.cru.ie/wp-content/uploads/2014/07/CER14081-ROCOF-Decision-Paper-FINAL-FOR-PUBLICATION.pdf>

2.4 Operating Reserve GPI

In previous tariff consultation papers we proposed making a refinement to the GPI calculation for reserve, whereby the required decrement rate is included as part of the calculation. We continue to monitor the need for this refinement and will develop, if required, this proposal in next year's consultation.

We have observed that, for those generating units, that have a DS3 System Services contract for the Primary Operating Reserve (POR) service, there are conflicting incentives between the POR GPI and the DS3 performance scalars², for the POR service. It would appear that to reduce the risk of failing to provide the declared POR capability, following a frequency event, and therefore the impact on their performance scalars, certain generators have been declaring down their required Grid Code POR capability. If units declare below their required Grid Code POR capability, this could potentially lead to imperfections costs, which would be passed on to the end consumer.

If a generating unit can no longer meet the required level of operating reserve as specified in the Grid Code a derogation may be sought.

For the tariff year 2018/2019, the POR GPI rate was increased from €0.13 to €0.52. Under new market operation (since 1st October 2018) there is a limited set of data to analyse. As a result it is not possible to determine the full extent of the impact of this increase. We are minded to conduct a more comprehensive review of this change for the tariff year 2020/2021 and are proposing to keep the charge at the 2018/19 rate for 2019/2020, apart from inflation rate increases.

Under the DS3 System Services arrangement, non-conventional generation is now being scheduled for various reserve products but not liable for Reserve GPI charges. As non-conventional technologies are making up a larger proportion of the generation portfolio on the island, further consideration needs to be given as to how they are treated with regard to GPIs. Therefore, the TSOs are minded to review whether non-conventional technologies should be liable for Reserve GPI charges in future years and would welcome the views of participants on this matter.

² A performance scalar is a multiplicative factor which adjusts the payment for a given DS3 System Service to reflect a generating unit's delivery of a given DS3 System Service. More information can be found in the DS3 System Services Protocol published on the TSOs' websites (www.eirgridgroup.com/ www.soni.ltd.uk).

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 new GPI is considered worthwhile or modification to an existing GPI; and
2. implementation of an OSC for non-conventional generation where there is a cost to the end user due to their non-compliance.

3.1 Secondary Fuel Availability GPI

For the tariff year 2018/2019 a Secondary Fuel Capability GPI was introduced.

Based on the limited amount of data available (since 1st October 2018), we are proposing no change to the secondary fuel GPI rate for 2019/2020, apart from inflation. The TSOs are minded to conduct a more detailed review of these charges for the TY 2020/2021.

3.2 Wind Farms and Demand Side Units

There have been significant strides by wind farms over the last number of years in terms of achieving Grid Code compliance through the issuing of Operational Certificates. We continue to observe that the majority of new wind farms connected to the system are compliant with their Grid Code requirements. For those wind farms that are not compliant a number of temporary derogations have been granted, to allow time to investigate and implement remedial works.

We continue to monitor and develop robust performance monitoring of Demand Side Units (DSUs).

Wind farms and Demand Side Units are now being awarded DS3 System Services contracts. Currently, these technologies are not liable for GPIs. As these technologies are making up a larger proportion of the generation portfolio on the island, further consideration needs to be given as to how they are treated with regard to GPIs. Therefore, the TSOs are minded to review whether these technologies should be liable for GPI charges in future years and would welcome the views of participants on this matter.

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 only difference being the 5 day timeframe is taken in July rather than August in order to align to other Regulatory Authorities timeframes with regard to publication of charges.

With respect to the blended inflation rate, we are again aligning to the methodology approved by the RAs in applying a blended rate.

In the OSC 2015-2016 recommendations paper, we proposed the following methodology to be applied going forward:

- 75% * Central Bank HICP forecast from the latest available quarterly report adjusted for the relevant tariff timeframe; plus
- 25% * Office of Budgetary Responsibility RPI forecast from the latest available quarterly report adjusted for the relevant tariff timeframe

According to the latest Office of Budgetary Responsibility report³ (Mar 2019) the current RPI year on year inflation forecasts in the UK for the 2019/20 tariff year equates to c.+2.825% while the latest Central Bank report⁴ (Q1 2019) forecasts HICP in Ireland for the same period at c.+1.175%.

Source		2019	2020	Tariff Year Methodology	2019/2020 Tariff Year	Blended Rate Methodology	Blended rate
OBR Oct 2018	RPI	2.9%	2.8%	(.029*25% + .028*75%)	2.825%	2.825*25%	0.70625
Central Bank Q1 2019	HICP	0.8%	1.3%	(.008*25% + .013*75%)	1.175%	1.175*75%	0.88125
Blended Rate							1.5875%

Table 4.0: Proposed Inflation Rate Increase

³ <https://obr.uk/efo/economic-fiscal-outlook-march-2019/>

⁴ <https://www.centralbank.ie/publication/quarterly-bulletins/quarterly-bulletin-q1-2019>

On this basis, and recognising the relative balance between Ireland and Northern Ireland, the forecast blended rate for the forthcoming 2019/20 period is 1.5875% as shown in Table 4.0.

Therefore in this year’s Annual Tariff Consultation we are proposing to retain the OSC rates approved for the 2018/2019 tariff year adjusting for inflation at forecast blended rate of 1.5875% for the tariff year 2019/2020. We believe our proposal is an appropriate inflation rate based on our assessment of forecast inflation at the time of initial submission.

4.1 Trip Charges

The proposed Trip Charges and Constants for the 2019/2020 tariff year are shown in Table 4.1 and Table 4.2. In the tariff year 2018/2019, trip charges were reduced by 50% from the previous tariff year for all three trip types; direct, fast wind down and slow wind down. In 2019/2020 we propose to retain this trip charge rate, having adjusted for inflation, for all units that have a QEX in the day ahead market.

We have observed that, in the new market, units that have tripped from above 100 MW without a QEX are not required to pay for lost generation through imbalance charges. These units have also received the benefit of paying a trip charge that is 50% of what it would have been had the previous rate been retained. As a result of this, for the 2019/2020 tariff year we are proposing to increase the trip charge for these units back to the rates that were charged in tariff year 2017/2018, having adjusted them for inflation.

	2017-2018	2018-2019	2019-2020
Direct Trip Rate of MW Loss	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
Slow Wind Down Rate of MW Loss	1 MW/s	1 MW/s	1 MW/s
Direct Trip Constant	0.01	0.01	0.01
Fast Wind Down Constant	0.009	0.009	0.009
Slow Wind Down Constant	0.008	0.008	0.008
Trip MW Loss Threshold	100 MW	100 MW	100 MW

Table 4.1: Proposed Trip Constants

Charge	2017-2018	2018-2019	2019-2020
Direct Trip Charge Rate	€4,322	€2,161	€2,195
Fast Wind Down Charge Rate	€3,242	€1,621	€1,647
Slow Wind Down Charge Rate	€2,161	€1,081	€1,098

Table 4.2: Proposed Trip Rates For Units With a QEX

Charge	2017-2018	2018-2019	2019-2020
Direct Trip Charge Rate	€4,322	€2,161	€4,390
Fast Wind Down Charge Rate	€3,242	€1,621	€3,294
Slow Wind Down Charge Rate	€2,161	€1,081	€2,196

Table 4.3: Proposed Trip Rates For Units Without a QEX

4.2 Short Notice Declaration (SND) Charges

The proposed SND Charges and Constants for the 2018/2019 tariff year are shown in Table 4.3 and 4.4. We propose to retain the rate of 50% of the 2017/2018 tariff year for all units that have received a QEX in the day ahead market. For units without a QEX, we propose to return to the rate for the 2017/2018 tariff year having adjusted them for inflation.

SND Constants	2017-2018	2018-2019	2019-2020
SND Time Minimum	5 min	5 min	5 min
SND Time Medium	20 min	20 min	20 min
SND Time Zero	480 min	480 min	480 min
SND Powering Factor (Notice time weighting curve)	-0.3	-0.3	-0.3
SND Threshold	15 MW	15 MW	15 MW
Time Window for Chargeable SNDs	60 min	60 min	60 min

Table 4.3: Proposed SND Constants

SND Charge Rate	2017-2018	2018-2019	2019-2020
SND Charge Rate	€76 / MW	€38 / MW	€38 / MW

Table 4.4: Proposed SND Charge Rate for units with a QEX

SND Charge Rate	2017-2018	2018-2019	2019-2020
SND Charge Rate	N/A	N/A	€76 / MW

Table 4.5: Proposed SND Charge Rates for units without a QEX

4.3 GPI Charges

The proposed GPI Constants, GPI Declaration Based Charges and GPI Event Based Charges for the 2019/2020 tariff year are outlined in Table 4.6, Table 4.7 and Table 4.8 respectively. We are proposing to make no changes, apart from adjusting for inflation, to the rates for 2019/2020 as detailed in sections 2.2.1, 2.2.2 and 3.1.

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

GPI Constants	2017-2018	2018-2019	2019-2020
Late Declaration Notice Time	480 min	480 min	480 min
Loading Rate Factor 1	60 min	60 min	60 min
Loading Rate Factor 2	24	24	24
Loading Rate Tolerance	110%	110%	110%
De-Loading Rate Factor 1	60 min	60 min	60 min
De-Loading Rate Factor 2	24	24	24
De-Loading Rate Tolerance	110%	110%	110%
Early Synchronous Tolerance	15 min	15 min	15 min
Early Synchronous Factor	60 min	60 min	60 min
Late Synchronous Tolerance	5 min	5 min	5 min
Late Synchronous Factor	55 min	55 min	55 min
Secondary Fuel Availability Factor	N/A	0.9	0.9

Table 4.6: Proposed GPI Constants

	2017-2018	2018-2019	2019-2020
GPI Declaration Based Rates	€ / MWh	€ / MWh	€ / MWh
Minimum Generation	1.28	1.29	1.31
Max Starts in 24 hour period	1.08	0.00	0.00
Minimum On time	1.08	0.00	0.00
Reactive Power Leading	0.31	0.32	0.32
Reactive Power Lagging	0.31	0.32	0.32
Governor Droop	0.31	0.32	0.32
Primary Operating Reserve	0.13	0.52	0.53
Secondary Operating Reserve	0.13	0.13	0.13
Tertiary Operating Reserve 1	0.13	0.13	0.13
Tertiary Operating Reserve 2	0.13	0.13	0.13
Secondary Fuel Availability	N/A	0.03	0.03

Table 4.7: Proposed GPI Declaration Based Charge Rates

	2017-2018	2018-2019	2019-2020
GPI Event Based Rates	€ / MWh	€ / MWh	€ / MWh
Loading Rate	0.64	0.00	0.00
De-Loading Rate	0.64	0.00	0.00
Early Synchronisation	2.86	0.00	0.00
Late Synchronisation	28.60	0.00	0.00

Table 4.8: 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 our websites⁵. Please note that, in any event, all responses will be provided to the RAs. **The closing date for responses is 5pm on Friday 3rd May 2019.**

- We 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 us in light of the responses received; and
- We will implement in accordance with the RAs decision paper.

⁵ www.eirgrid.com and www.soni.ltd.uk