Harmonised Other System Charges Consultation Paper

Tariff Year
01 October 2022 to 30 September 2023

30th May 2022

EIRGRID SONI

ABBREVIATIONS

AGU	Aggregated Generator Unit
BOA	Bid Offer Acceptance
CRM	Capacity Remuneration Mechanism
DAM	Day-Ahead Market
DBC	Dispatch Balancing Costs
DMOL	Design Minimum Operating Level
DSU	Demand Side Unit
DS3	Delivering a Secure Sustainable System
EDIL	Electronic Dispatch Instruction Logger
GPI	Generator Performance Incentive
QFPN	Final Physical Notification Quantity
HAS	Harmonised Ancillary Services
HICP	Harmonised Index of Consumer Prices
IDM	Intra-Day Market
SEM	Single Electricity Market
LTS	Long-Term Schedule
MMS	Market Management System
MPI	Market Participant Interface
NI	Northern Ireland
NIEN	Northern Ireland Electricity Networks
OSC	Other System Charges
PPM	Power Park Modules
RA	Regulatory Authority
RO	Reliability Options
RoCoF	Rate of Change of Frequency
RPI	Retail Prices Index
SEM	Single Electricity Market
SEMC	Single Electricity Market Committee
SND	Short Notice Declaration
TCG	Transmission Constraint Group
TSO	Transmission System Operator

1 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 unit(s) 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 (2022/2023) the TSOs are proposing to:

- Retain the rate of Trip Charges from 2021/22, adjusted for inflation
- Increase Short Notice Declarations (SND) notice time from 8hrs to 12hrs and retain the SND charge rate from 2021/22, adjusted for inflation.
- Retain the Primary Operating Reserve GPI rate from 2021/22, adjusted for inflation.
- Increase Secondary Fuel GPI rate from 2021/22 by 50% and adjust for inflation.
- Retain the OSC rates from 2021/22 tariff year, adjusted for inflation, for the following GPIs:
    - Minimum Generation
    - Governor Droop
    - Secondary Operating Reserve
    - Tertiary Operating Reserve 1
    - Tertiary Operating Reserve 2
    - Reactive Power

The TSOs welcome comments from industry on these proposals.

Contents

2 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 to the end consumer. 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 the respective Grid Codes and are not linked with DS3 System Services Agreements.

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 12 hours up to real time.

3 REVIEW OF EXISTING OSC

3.1 Short Notice Declarations and Trip Charges

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 and the quantity of downward declaration (i.e. MW/€ charge). The charge is intended to incentivise behaviour that enhances system security and reduce the costs of actions taken by the TSOs to mitigate SNDs.

The TSOs have reviewed Trip Charge and SND Charge settlement data, from October 2021 to March 2022, as part of an ongoing assessment into changes introduced for tariff year 2020/21.

Security of Supply is being adversely impacted by units redeclaring availability, even at greater than eight (8) hours' notice, given the potentially long start time for replacement unit(s). For this reason and given the tight generation margins forecast in the SEM for the 2022/23[1] tariff year, the TSOs are proposing to increase the SND Time Zone from 480 mins to 720 mins.

The TSOs are proposing to retain the Trip and SND charges, at the rate approved for tariff year 2021/22, apart from adjusting for inflation.

However, the TSOs will continue to monitor the incidence of SNDs and its impact on system security. In future Tariff years the TSOs may propose further increases in the notice time and/or reducing the de-minimus threshold of 15 MW and/or applying the charge to non-conventional units/new technologies.

3.2 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.

The TSOs have reviewed settlement data for Tariff year 2020/21 and current tariff year to date. Following this review the TSOs are proposing to increase GPI Secondary Fuel Rate (see section 3.2.3 for details) and propose to retain all other GPI charges at the rate approved for tariff year 2021/22, apart from adjusting for inflation.

[1] 208281-All-Island-Generation-Capacity-Statement-LR13A.pdf (eirgridgroup.com) or 208281-All-Island-Generation-Capacity-Statement-LR13A.pdf (soni.ltd.uk)

3.2.1 GPI Operating Reserve

Approximately half of all the Operating Reserve charges in 2021/22 were applied to a small number of non-compliant generator units. The lack of compliant operating reserve does increase imperfections costs, as reserve must be dispatched elsewhere, possibly resulting in the commitment of additional generator units. The TSOs are proposing to retain GPI Operating Reserve charges at the rate approved for tariff year 2021/22, apart from adjusting for inflation.

3.2.2 GPI Minimum Generation

Grid Code compliance with minimum generation standards continues to be central to the facilitation of renewables on the island. A reliable Minimum Generation will allow the TSOs to schedule effectively during periods of low demand and high wind generation. The TSOs are proposing to retain GPI Minimum Generation charges at the rate approved for tariff year 2021/22, apart from adjusting for inflation.

3.2.3 GPI Secondary Fuel

Secondary Fuel availability is critical for fuel security (and therefore power system operational security) in both Ireland and Northern Ireland, because of the high dependency on gas, as a fuel source for generation. Previous papers have highlighted ongoing issues, regarding availability of units on secondary fuel.

More recently, there is a renewed focus on secondary fuel, given the increased uncertainty about gas supplies. It is therefore even more critical, that applicable units can switch over and operate on Secondary Fuel. Therefore, the TSOs are proposing to increase the GPI Secondary Fuel charge rate by 50% from tariff year 2021/22 and apply inflation to produce the GPI Secondary charge rate for tariff year 2022/23.

3.2.4 GPI Reactive Power

A review shows that a limited number of units are being regularly charged the Reactive Power GPI due to non-compliance. Non-compliance contributes to higher imperfections costs as the TSOs may have to schedule more expensive generator units to cover any deficiency in reactive power capability.
The TSO is proposing to retain GPI Reactive Power charges at the rate approved for tariff year 2021/22, apart from adjusting for inflation.

4 NEW OTHER SYSTEM CHARGES (OSC)

4.1 Power Park Modules

The TSOs are involved in initiatives in relation to improved voltage control in areas when windfarm Power Park Modules (PPMs) are not generating and are monitoring performance of PPMs when they are generating.

The TSOs are not proposing any GPI for PPMs for the tariff year 2022/23.

4.2 Demand Side Units (DSU)

Since the OSC consultation for tariff year 2021/22, the TSOs have liaised with the DSU Industry in relation to specific concerns regarding DSU availability declarations. The concerns are focused on the accuracy of availability data in scheduling systems (i.e. MPI Forecast Availability) versus dispatch systems (i.e. EDIL availability). There has been a noteworthy improvement in the consistency of availability declarations, between the two systems, for a number of DSUs. The TSOs issue quarterly performance reports to the DSUs and are continuing to engage with the DSUs, to further reduce variations in declarations between the two systems.

The TSOs are not proposing to introduce OSCs for DSUs for the tariff year 2022/23.

4.3 Emerging Non-Conventional Technologies

As per the consultation for 2021/22, it is still deemed too early to propose GPIs for emerging non-conventional technologies, which have yet to be embedded into normal operations. The TSOs will continue to monitor these technologies and propose GPIs, should they be required, in future years.

4.4 Security of Supply

As a result of the ongoing issue of security of supply, the TSOs are considering the relative merits of introducing a charge for declared availability, in future tariff years. The concept is that a charge would be applied, where the unit's declared Availability is less than a given percentage of the unit's Registered Capacity (or DSU MW Capacity), unless the unit is on scheduled outage.

5 PROPOSED RATES

The following sections define the rates used for the Other System Charges (OSC) and the proposed rates for the 2022/2023 period.

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

The TSOs, therefore, propose the following methodology to be applied:

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

According to the latest Office of Budgetary Responsibility report[2] (Mar 2022) the current CPI year on year inflation forecasts in the UK for the 2022/23 tariff year equates to c.+4.85% while the latest Central Bank report[3] (QB2 2022) forecasts HICP in Ireland for the same period at c.+3.73%.

Source		2022	2023	Tariff Year Methodology	2022/2023 Tariff Year	Blended Rate Methodology	Blended rate
OBR March 2022	CPI	7.4%	4.00%	(0.074*25% + 0.04*75%)	4.85%	4.85*25%	1.2125
Central Bank April 2022	HICP	6.5%	2.80%	(0.065*25% + 0.028*75%)	3.73%	3.73*75%	2.7975
						TOTAL	**4.01%**

Table 5.0 Proposed Inflation Rate Increase

On this basis and recognising the relative balance between Ireland and Northern Ireland, the forecast blended rate for the forthcoming 2022/23 period is 4.01% as shown in Table 5.0.

[2] https://obr.uk//docs/dlm_uploads/CCS0222366764-001_OBR-EFO-March-2022_Web-Accessible-2.pdf
[3] https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2022/quarterly-bulletin-q2-2022.pdf?sfvrsn=7

5.1 Trip Charges

The proposed Trip Constants for the 2022/23 tariff year are shown in Table 5.1. There are no changes proposed.

	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Direct Trip Rate of MW Loss	15 MW/s	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	3 MW/s
Slow Wind Down Rate of MW Loss	1 MW/s	1 MW/s	1 MW/s	1 MW/s	1 MW/s
Direct Trip Constant	0.01	0.01	0.01	0.01	0.01
Fast Wind Down Constant	0.009	0.009	0.009	0.009	0.009
Slow Wind Down Constant	0.008	0.008	0.008	0.008	0.008
Trip MW Loss Threshold	100 MW	100 MW	100 MW	100 MW	100 MW

Table 5.1 Proposed Trip Constants

Based on the reasoning in Section 3.2, Table 5.2 contains the Trip Charge proposals for units with a QFPN while Table 5.3 contains the Trip Charge proposals for units without a QFPN.

Charge	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Direct Trip Charge Rate	€2,161	€2,190	€2,227	€2,249	€2,339
Fast Wind Down Charge Rate	€1,621	€1,642	€1,670	€1,687	€1,756
Slow Wind Down Charge Rate	€1,081	€1,095	€1,114	€1,125	€1,170

Table 5.2 Proposed Trip Rates For Units With a QFPN

Charge	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Direct Trip Charge Rate	€2,161	€2,190	€4,454	€4,498	€4,678
Fast Wind Down Charge Rate	€1,621	€1,647	€3,340	€3,373	€3,508
Slow Wind Down Charge Rate	€1,081	€1,095	€2,228	€2,250	€2,340

Table 5.3 Proposed Trip Rates For Units Without a QFPN

5.2 Short Notice Declarations

A SND can have the same impact on scheduling and dispatch as that of trips. These short notice outages can have a significant effect on the ability of the TSO to schedule and dispatch in an economic manner and also to manage Transmission Constraint Groups which are essential to the secure operation of the transmission system.

Table 5.4 shows the proposed SND Constants for 2022-23.

SND Constants	**2018-2019**	**2019-2020**	**2020-2021**	**2021-22**	**2022-23**
SND Time Minimum	5 min	5 min	5 min	5 min	**5 min**
SND Time Medium	20 min	20 min	20 min	20 min	**20 min**
SND Time Zero	480 min	480 min	480 min	480 min	**720min**
SND Powering Factor (Notice time weighting curve)	-0.3	-0.3	-0.3	-0.3	**-0.3**
SND Threshold	15 MW	15 MW	15 MW	15 MW	**15 MW**
DSU SND Threshold	N/A	N/A	5 MW	5 MW	**5 MW**
Time Window for Chargeable SNDs	60 min	60 min	60 min	60 min	**60 min**

Table 5.4 Proposed SND Constants

Table 5.5 shows the proposed SND Charge Rate for Generating Units with a QFPN.

SND Charge Rate	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**	**2022-2023**
SND Charge Rate	€76 / MW	€38 / MW	€38 / MW	€39 / MW	€39 / MW	€41 / MW

Table 5.5 Proposed SND Charge Rate for units with a QFPN

Table 5.6 shows the proposed SND Charge Rate for Generating Units without a QFPN.

SND Charge Rate	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**	**2022-2023**
SND Charge Rate	N/A	N/A	N/A	€77 / MW	€78 / MW	€81 / MW

Table 5.6 Proposed SND Charge Rates for units without a QFPN

5.3 GPI Charges

The proposed GPI Constants, GPI Declaration Based Charges and GPI Event Based Charges for the 2022/2023 tariff year are outlined in Table 5.7and Table 5.8 respectively. The TSOs are proposing to make no changes, apart from adjusting for inflation.

GPI Constants	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Late Declaration Notice Time	480 min	480 min	480 min	480 min	480 min
Loading Rate Factor 1	60 min	60 min	60 min	60 min	60 min
Loading Rate Factor 2	24	24	24	24	24
Loading Rate Tolerance	110%	110%	110%	110%	110%
De-Loading Rate Factor 1	60 min	60 min	60 min	60 min	60 min
De-Loading Rate Factor 2	24	24	24	24	24
De-Loading Rate Tolerance	110%	110%	110%	110%	110%
Early Synchronous Tolerance	15 min	15 min	15 min	15 min	15 min
Early Synchronous Factor	60 min	60 min	60 min	60 min	60 min
Late Synchronous Tolerance	5 min	5 min	5 min	5 min	5 min
Late Synchronous Factor	55 min	55 min	55 min	55 min	55 min
Secondary Fuel Availability Factor	0.9	0.9	0.9	0.9	0.9

Table 5.7 Proposed GPI Constants

	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
GPI Declaration Based Rates	**€ / MWh**	**€ / MWh**	**€ / MWh**	**€ / MWh**	**€ / MWh**
Minimum Generation	1.29	1.31	1.33	1.34	1.39
Max Starts in 24- hour period	0	0	0	0	0
Minimum On time	0	0	0	0	0
Reactive Power Leading	0.32	0.32	0.32	0.32	0.33
Reactive Power Lagging	0.32	0.32	0.32	0.32	0.33
Governor Droop	0.32	0.32	0.32	0.32	0.33
Primary Operating Reserve	0.52	0.53	0.54	0.55	0.57
Secondary Operating Reserve	0.13	0.13	0.13	0.13	0.14
Tertiary Operating Reserve 1	0.13	0.13	0.13	0.13	0.14
Tertiary Operating Reserve 2	0.13	0.13	0.13	0.13	0.14
Secondary Fuel Availability	0.03	0.03	0.03	0.03	0.05

Table 5.8 Proposed GPI Declaration Based Charge Rates

The Event Based GPIs will remain at zero (i.e. Loading Rate, De-Loading Rate, Early Synchronisation and Late Synchronisation).

6 SUMMARY AND NEXT STEPS

Comments on this consultation paper are invited from interested parties. Preferably these should be aligned and referenced with the relevant sections and sub-sections of this document. If confidentiality is required, this should be made explicit in the response, otherwise the submissions will be published on the TSOs' websites[4]. Please note that, in any event, all responses will be provided to the RAs. **The closing date for responses is 5pm on 11th July 2022.**

- Comments should be submitted to tariffs@eirgrid.com or tariffs@soni.ltd.uk;
- The TSOs will consider all comments received on the consultation paper and make recommendations to the RAs based on these;
- The RAs may approve/reject the recommendations proposed by the TSOs in light of the responses received; and
- The TSOs will implement in accordance with the regulatory decision.

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