

Harmonised Other System Charges Consultation Paper

Tariff Year

01 October 2023 to 30 September 2024

12th May 2023



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Revision History						
Revision	Date	Description	Originator	Reviewer	Checker	Approver
R0						
R1						
R2						

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ABBREVIATIONS

AGU	Aggregated Generator Unit
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
SEM	Single Electricity Market
MMS	Market Management System
NI	Northern Ireland
NIEN	Northern Ireland Electricity Networks
OSC	Other System Charges
PPM	Power Park Modules
QD	Dispatch Quantity
QM	Meter Quantity
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 for non-compliance to provide necessary services to the system, leading to higher imperfections costs. The OSC include charges for units which 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 EirGrid Statement of Charges and the SONI Transmission Use of System Charging Statements, which are approved by the applicable Regulatory Authorities (RAs) in Ireland and Northern Ireland respectively. 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 (2023/2024) the TSOs are proposing to:

- Retain the rate of Trip Charges from 2022/23, adjusted for inflation.
- Retain the existing rate of Short Notice Declarations (SND) from 2022/23, adjusted for inflation.
- Retain the existing rate of Generator Performance Incentive (GPI) Charges from 2022/23, adjusted for inflation.
- New DSU Short Notice Declarations (SND) from 2023/24.
- New DSU Performance Monitoring for declared availability of DSU MW Capacity
- New DSU Generator Performance Incentive (GPI) from start date dictated by RAs.

The TSOs welcome comments from industry on these proposals.

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.

3. REVIEW OF EXISTING OSC

3.1. Trip Charges

The TSOs have reviewed Trip Charge settlement data, from October 2021 to March 2023, as part of an ongoing assessment into changes introduced for tariff year 2020/21. For the first six months of Tariff Year 2022/23, there is a downward trend of trip occurrence, with November having the highest number of occurrences and more units have physical market positions.

However, the TSOs will continue to monitor the incidence of trips and its impact on system security. The TSOs are proposing to retain the trip charges, at the rate approved for tariff year 2022/23, apart from adjusting for inflation.

3.2. SND 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.

Due to Security of Supply being adversely impacted by units redeclaring availability, tariff year 2022/23 saw the introduction of increasing the eight (8) hours' notice time to twelve (12) hours for Generators. Given greater ability to utilise long start time for replacement unit(s) and reduce tight generation margins, the TSOs has seen a significant improvement in notice time provided by units. However, the TSOs will continue to monitor the incidence of SNDs and proposing to retain this SND charges, at the rate approved for tariff year 2022/23, apart from adjusting for inflation.

Additional measures are required to improve system security. The TSOs are proposing to introduce a SND Charge to Demand Side Unit (DSU) units. In the event of a DSU unit making a downward declaration of its availability at short notice less than 60mins, a Short Notice Declaration (SND) Charge is levied on the service provider depending on the amount of notice given, while applying a threshold of 4MW 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.

3.3. Generator Performance Incentive Charge

For the efficient and economic operation of the system generators must maintain the performance required of them, in the respective Grid Codes. 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 improved performance of certain Generating Units, in relation to the required Grid Code compliance.

The TSOs have reviewed settlement data for Tariff year 2021/22 and current tariff year to date. Following this review the TSOs are proposing to retain all current GPI charges at the rate approved for tariff year 2022/23, apart from adjusting for inflation and potential of introduction of DSU GPI charge (DSU Meter Shortfall) at the direction of RAs when required¹, see section 3.3.3 for details.

¹ [MOD_02_23 DSU Energy Payments - Decision Paper SEM-22-090](#)

3.3.1. 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 and tariff year 2022/23 the charge rate increased by 50%.

Upon review of first six months of tariff year 2022/23 compared to same period of previous year there is a significant reduction in number of units this charge applies to, and the charge total is on trend to be at least 153% lower.

The TSO is proposing to retain GPI Secondary Fuel charges at the rate approved for tariff year 2023/24, apart from adjusting for inflation.

3.3.2. GPI Minimum Generation and GPI Operating Reserve

Grid Code compliance with minimum generation standards continue 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. TSOs need for Generating Units not only to meet their Minimum Generation obligation but also to provide essential system services reliably at minimum MW output.

Operating Reserve units are predominately priority dispatch units or units scheduled to maintain operational security requirements. These units are frequently scheduled and any declaration of reserve below their Grid Code Primary Operating Reserve (POR) capability will result in the need to schedule additional reserve elsewhere, thereby increasing imperfections costs.

In both instance the TSO has observed while reviewing of tariff year 2020/21 to 2021/22 and first six months of tariff year 2022/23 compared to same period of previous year there is increase in charges applied to small number of non-compliant generator units. Investigation into the units was conducted and measures have already been planned by units to resolve issues.

The TSOs will continue to monitor the incidence and its impact on system security. The TSO is proposing to retain GPI Minimum Generation and GPI Operating Reserve charges at the rate approved for tariff year 2023/24, apart from adjusting for inflation.

3.3.3. New DSU GPI

As per decision paper SEM-22-0902, once DSU energy payments has been implemented in Balancing Market, DSU dispatched quantity (QD) will be used as a proxy for metered quantity (QM), the effectiveness of this will be assessed and reported on quarterly. Through the continuous monitoring process if it is deemed additional measures are required the below charge will be applied.

The TSOs issue Dispatch Instructions to the DSU, and this is currently compared to SCADA Metering data. If the shortfall between these is greater than 70%, an underperformance change rate will apply for each trading period at a rate of €100.

The TSOs and RAs will continue to monitor the incidence and its impact. The RAs may advise implementation date during tariff year 2023/24 or if to apply at all.

² [MOD_02_23 DSU Energy Payments - Decision Paper SEM-22-090](#)

4. NEW OTHER SYSTEM CHARGES (OSC)

4.1. Power Park Modules

The TSOs are involved in initiatives in relation to improved voltage control 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 2023/24.

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 several DSUs over the last two years. 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 proposing to only produce reports for units that have a variation and a review of process. The TSOs are not proposing to introduce a charge for this in tariff year 2023/24.

4.3. Emerging Non-Thermal Technologies

As per last year's consultation, it is still deemed too early to propose charges for emerging non-thermal technologies, which have yet to be embedded into normal operations. There is a substantial increase in Battery Energy Storage Power Stations and Solar Generation available since beginning of this tariff year, the TSO will continue to monitor these technologies.

4.4. Security of Supply

As per last year's consultation, 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.

Review of data for calendar year 2022 found for Generator its declared Availability is in the high percentile of its Registered Capacity and for DSU declared Availability is in the low percentile of its DSU MW Capacity.

The TSOs are proposing to introduce quarterly performance monitoring reports for DSUs and to engage with the DSUs, to reduce variations in declared Availability and DSU MW Capacity for the tariff year 2023/24 and potentially to include reports as part of section 4.2. In early 2024 a workshop will be held to provide update on performance monitoring progress. The TSOs are not proposing to introduce OSCs for the tariff year 2023/24.

5. PROPOSED RATES

The following sections define the rates used for the Other System Charges (OSC) and the proposed rates for the 2023/2024 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% from Central Bank HICP forecast using the latest available quarterly report adjusted for the relevant tariff timeframe; plus.
- 25% from Office of Budgetary Responsibility CPI forecast using the latest available quarterly report adjusted for the relevant tariff timeframe.

According to the latest Office of Budgetary Responsibility report³ (Mar 2023) the current CPI year on year inflation forecasts in the UK for the 2023/24 tariff year equates to c.+2.2% while the latest Central Bank report⁴ (QB2 2023) forecasts HICP in Ireland for the same period at c.+3.65%.

Source		2023	2024	Tariff Year Methodology	2023/2024 Tariff Year	Blended Rate Methodology	Blended rate
OBR March 2023	CPI	6.1%	0.90%	$(0.061*25\% + 0.009*75\%)$	2.20%	$2.2*25\%$	0.55
Central Bank March 2023	HICP	5.0%	3.20%	$(0.05*25\% + 0.032*75\%)$	3.65%	$3.65*75\%$	2.7375
Blended Rate							3.2875

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 2023/24 period is 3.2875% as shown in Table 5.0.

³ https://obr.uk/docs/dlm_uploads/OBR-EFO-March-2023_Web_Accessible.pdf

⁴ https://www.centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2023/quarterly-bulletin-q1-2023.pdf?sfvrsn=541f991d_5

5.1 Trip Charges

The proposed Trip Constants for the 2023/24 tariff year are shown in Table 5.1. There are no proposed changes to this section, while Table 5.2 & 5.3 rates has increased by inflation from previous year.

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Direct Trip Rate of MW Loss	15 MW/s				
Fast Wind Down Rate of MW Loss	3 MW/s				
Slow Wind Down Rate of MW Loss	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				

Table 5.1 Proposed Trip Constants

Based on the reasoning in Section 3.1, 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	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Direct Trip Charge Rate	€2,190	€2,227	€2,249	€2,339	€2,416
Fast Wind Down Charge Rate	€1,642	€1,670	€1,687	€1,756	€1,813
Slow Wind Down Charge Rate	€1,095	€1,114	€1,125	€1,170	€1,209

Table 5.2 Proposed Trip Rates for Units With a QFPN

Charge	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Direct Trip Charge Rate	€2,190	€4,454	€4,498	€4,678	€4,832
Fast Wind Down Charge Rate	€1,647	€3,340	€3,373	€3,508	€3,624
Slow Wind Down Charge Rate	€1,095	€2,228	€2,250	€2,340	€2,417

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 to manage Transmission Constraint Groups which are essential to the secure operation of the transmission system. There are no proposed changes for Generator units Constants, while DSU constants have been added (see table 5.4). The DSU SND Threshold is set to 4MW, in line with minimal DSU MW Capacity and DSU SND Time Zero to 60mins. In Table 5.4 & 5.5 rates has increased by inflation from previous year.

Table 5.4 shows the proposed SND Constants for 2023-24.

SND Constants	2019-2020	2020-2021	2021-22	2022-23	2023-2024
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	720 min	720 min
DSU SND Time Zero	N/A	N/A	N/A	N/A	60 min
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	N/A	N/A	4 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	2019-2020	2020-2021	2021-22	2022-2023	2023-2024
SND Charge Rate	€38 / MW	€39 / MW	€39 / MW	€41 / MW	€42 / 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	2019-2020	2020-2021	2021-22	2022-2023	2022-2023
SND Charge Rate	N/A	€77 / MW	€78 / MW	€81 / MW	€84 / MW

Table 5.6 Proposed SND Charge Rates for units without a QFPN

5.3 GPI Charges

There are no proposed changes for Generator GPI Constant, while DSU constant have been added (see table 5.7). The DSU MW Shortfall tolerance limit is at 70% so anything under will receive a charge, In Table 5.8 Generator rates has increased by inflation from previous year and new DSU GPI rate added for the 2023/2024 tariff year.

The Event Based GPIs will remain at zero (i.e., Loading Rate, De-Loading Rate, Early Synchronisation, Late Synchronisation, Max Starts in 24-hour period and Minimum On time).

The proposed GPI Constants and GPI Declaration Based Charges for the 2023/2024 tariff year are outlined in Table 5.7 and Table 5.8 respectively.

GPI Constants	2019-2020	2020-2021	2021-22	2022-2023	2023-2024
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
DSU MW Shortfall Tolerance	N/A	N/A	N/A	N/A	70%

Table 5.7 Proposed GPI Constants

	2019-2020	2020-2021	2021-22	2022-2023	2023-2024
GPI Declaration Based Rates	€ / MWh	€ / MWh	€ / MWh	€ / MWh	€ / MWh
Minimum Generation	1.31	1.33	1.34	1.39	1.44
Reactive Power Leading	0.32	0.32	0.32	0.33	0.34
Reactive Power Lagging	0.32	0.32	0.32	0.33	0.34
Governor Droop	0.32	0.32	0.32	0.33	0.34
Primary Operating Reserve	0.53	0.54	0.55	0.57	0.59
Secondary Operating Reserve	0.13	0.13	0.13	0.14	0.15
Tertiary Operating Reserve 1	0.13	0.13	0.13	0.14	0.15
Tertiary Operating Reserve 2	0.13	0.13	0.13	0.14	0.15
Secondary Fuel Availability	0.03	0.03	0.03	0.05	0.05
DSU Metering Shortfall	N/A	N/A	N/A	N/A	100

Table 5.8 Proposed GPI Declaration Based Charge Rates

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' websites⁵. Please note that, in any event, all responses will be provided to the RAs. **The closing date for responses is 5pm on 28th June 2023.**

- 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 considering the responses received; and
- The TSOs will implement in accordance with the regulatory decision.

⁵ www.eirgrid.com and www.soni.ltd.uk