



**Imperfections Charge
October 2021 – September 2022**

And

**Reforecast Report
October 2019 – September 2020**

Decision Paper

SEM-21-061

13 August 2021

EXECUTIVE SUMMARY

This SEM Committee paper sets out the Regulatory Authorities (i.e. CRU & UREGNI) decision regarding the 2021/22 Imperfections Charge.

On 25 June 2021, the Regulatory Authorities (RAs) published a SEM Committee consultation paper ‘Imperfections Charge October 2021 to September 2022 and Reforecast Report October 2019 to September 2020 Consultation Paper’ (the Consultation Paper – [SEM-21-053](#)). The Consultation Paper considered the TSOs submission in relation to their:

- ‘Forecast Imperfections Revenue Requirement for Tariff Year 1st October 2021 to 30th September 2022’; and
- ‘Reforecast Report for Tariff Year 1st October 2019 to 30th September 2020.

As part of their 2021/22 submission, the TSOs submitted a forecast Imperfections Revenue Requirement of €473.09 million, which was greater than the €304.47 amount allowed for the 2020/21 tariff year. A significant driver of the increase in the TSOs forecasted Imperfections Revenue Requirement was higher forward fuel prices, which increased approximately by €99 million relative to the 2020/21 tariff year.

Following a review of the TSOs’ submission, the RAs proposed a reduction in the Imperfections Revenue allowance to €341.01 million for the 2021/22 tariff year. This proposed amount excluded a TSOs’ request for a provision in relation to potential costs arising from the implementation of Article 13 of the Regulation (EU) 2019/943. Based on the demand forecast submitted by the TSOs’, this resulted in a 2021/22 proposed Imperfections Tariff of €9.19/MWh (including K factor adjustment of -€10.18).

Having considered responses to the Consultation Paper, the RAs have decided to proceed with an imperfections tariff of €9.19/MWh, which is to be applied for the period from 1st October 2021 to 30th September 2022. Table 1 details a comparison between the 2020/21 imperfections tariff and the 2021/22 imperfections tariff.

2021/22 IMPERFECTIONS CHARGE DECISION PAPER

	2021-22 Decision	2020-21 Decision	Change relative to 20/21
Imperfections Allowance (€m)	€ 341.01	€ 301.47	13.12%
K factor (€m)	-10.18	-0.37	
Total Allowance (€m)	€ 330.83	€ 301.10	9.87%
Forecast Demand GWh (GWh)	36,000	33,600	
Tariff (€/MWh)	€ 9.19	€ 8.96	2.56%

Table 1: Comparison of 2021/22 & 2020/21 Imperfections Tariff

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1 INTRODUCTION

This SEM Committee paper sets out the Regulatory Authorities (i.e. CRU & UREGNI) decision regarding the 2021/22 Imperfections Charge.

The purpose of the Imperfections Charge is for the Transmission System Operators (i.e. EirGrid & SONI) to recover the total expected costs associated with managing the transmission system, and is levied on suppliers by SEMO. Such costs typically include anticipated Dispatch Balancing Costs (DBC), less Other System Charges, Fixed Cost Payments, any net imbalance between Energy Payments and Energy Charges and Capacity Payments and Capacity Charges over the tariff year, with adjustments for previous years as appropriate, via the K factor. The K factor adjustment mechanism enables any under or over recovery of Imperfections Costs, in the previous year and an estimate for the current year, to be accounted for in the upcoming tariff year.

On 25th June 2021, the Regulatory Authorities (RAs) published a SEM Committee consultation paper ‘Imperfections Charge October 2021 - September 2022 and Reforecast Report October 2019 - September 2020 Consultation Paper’ (the Consultation Paper – SEM-21-053). The Consultation Paper considered the Transmission System Operators (TSOs) submission in relation to their:

- Forecast Imperfections Revenue Requirement for Tariff Year 1st October 2021 to 30th September 2022; and
- Reforecast Report for Tariff Year 1st October 2019 to 30th September 2020.

The RAs received 5 responses to the Consultation Paper, with one response marked confidential (Table 1.1 lists non-confidential respondents).

Bord Gáis Energy	Energy Storage Ireland
EirGrid & SONI – the TSOs	SSE

Table 1.1: List of Respondents

Having considered responses received, the RAs through the publication of this SEM Committee Decision Paper, is setting out the Imperfections Charge to be applied for the 2021/22 tariff year.

The remainder of this document is structured as follows:

- Section 2: provides an overview of the TSOs’ 2021/22 imperfections submission;
- Section 3: summaries the RAs initial review of the TSOs 2021/22 Imperfections Revenue Requirement, and its proposed allowed revenue;
- Section 4: summarises key comments received regarding the Consultation Paper and details the RAs’ responses; and
- Section 5: sets out the RAs decision regarding the 2021/22 Imperfections Charge.

2 OVERVIEW OF TSOs' 2021/22 FORECAST IMPERFECTIONS REVENUE SUBMISSION

The TSOs' 2021/22 forecast Imperfections Revenue Submission captures an all-island estimate of the Imperfections Charge for the 2021/22 tariff year. All costs are estimated ex-ante by the TSOs and will be recovered from suppliers on a MWh basis, through the Imperfections Charge. The TSOs forecasted an imperfections revenue requirement of €473.09 million for the 2021/22 tariff year.

This TSOs' imperfections forecast represented a 56.93% increase from the €301.47 million final decision for the 2020/21 tariff year. There were a number of key factors influencing the TSOs' 2021/22 forecast imperfections cost forecast. Figure 2.1 details the key drivers of change in the 2021/22 PLEXOS Imperfections Costs calculation, relative to 2020/21.

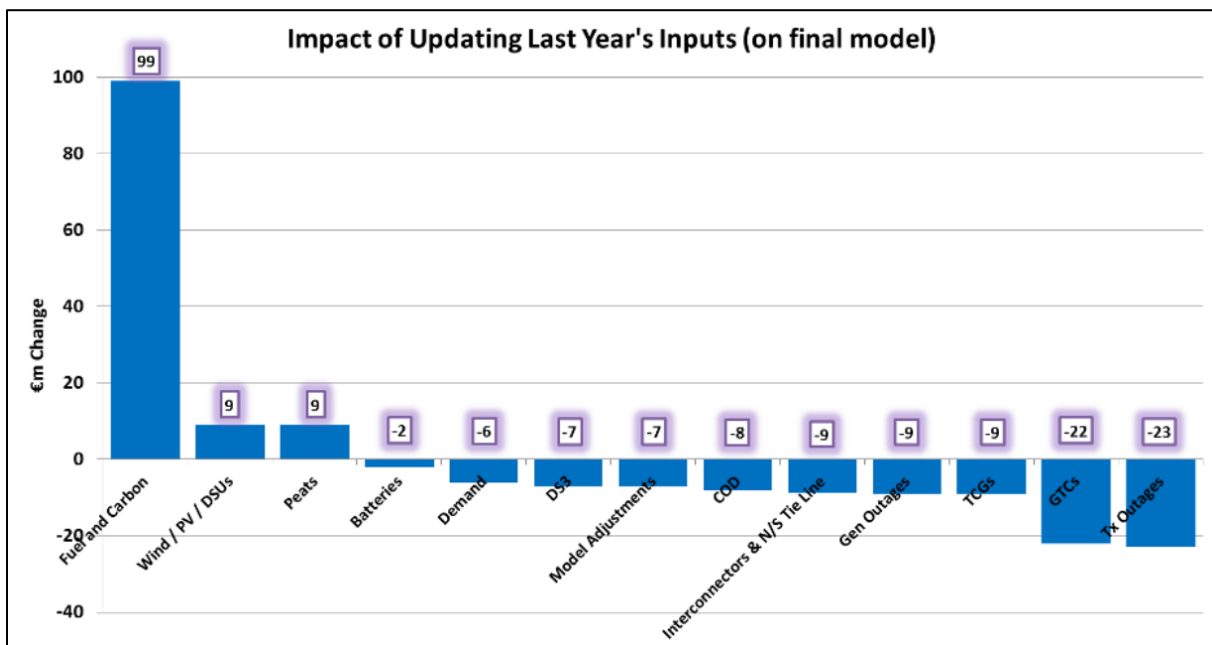


Figure 2.1 The key drivers of change in the TSOs' 2021/22 Plexos Imperfections Costs relative to 2020/21.

As stated above, a key driver in the TSOs' 2021/22 forecasted Imperfections revenue requirement, was an increase in fuel price forecasts relative to 2020/21. Figure 2.2 details the change for some key fuel price inputs applied in the TSOs' Imperfections model.

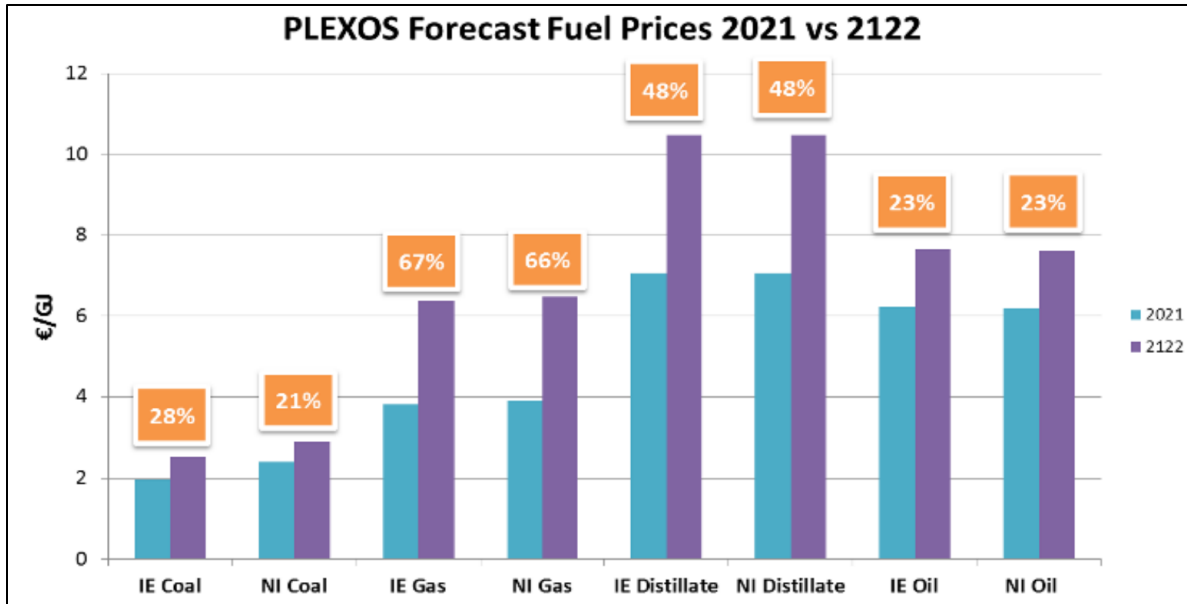


Figure 2.2. The increase in key fuel prices seen between 2021/22 and 2020/21.

Additional detail on the forecasts for each of the Imperfections Charge components is provided in Section 2.1 – 2.7 below and further information regarding the 2021/22 Forecast is provided by the TSOs in their submission (refer to Annex 1 published in conjunction with the Consultation Paper).

2.1 DISPATCH BALANCING COSTS (DBCS)

DBCs refers to the sum of Constraint Payments, Uninstructed Imbalance Payments and Generator Testing Charges. DBCs of €348.59 million made up the majority of the TSOs' proposed Imperfections Charge for 2021/22.¹

2.2 DBC - CONSTRAINT PAYMENTS

Constraint Payments contribute to the majority of the TSOs' 2021/22 DBC forecast, as Uninstructed Imbalances and Testing Charges are forecast at zero. Constraint Costs arise due to the TSOs having to dispatch some generators differently from the ex-post market unconstrained schedule, in real time, to ensure security of supply on the system. Generators receive Constraint Payments to compensate them for any difference between the market schedule and actual

¹ In order to increase transparency around DBC, the SEMC has introduced reporting requirements on the TSOs. The TSOs provide quarterly updates on the levels of Constraint Costs, drivers behind Constraint Costs, mitigating measures being taken and other information or commentary that the TSOs believe will aid transparency in this area. These Quarterly Imperfections Costs Reports are available on EirGrid's and SONI's websites (web-link if we have it).

dispatch. A generator that is scheduled to run by the market, but which is not run in the actual dispatch (or run at a decreased level) is 'constrained off/down'; a generator that is not scheduled to run or runs at a low level in the market, but which is instructed to run at a higher level in reality is 'constrained on/up'.

PLEXOS Modelled Constraints

The forecast Constraint Costs are partly derived using the TSOs' PLEXOS modelling tool. The PLEXOS element of the TSOs' Constraint Costs forecast was €291.40 million.

Supplementary Modelling Constraints

As it is not possible to model all Constraint Cost drivers in its PLEXOS model, part of the TSOs' Constraint forecast is made up of supplementary modelling results. The 2021/22 forecast for Constraint Costs, derived from supplementary modelling, was €56.60 million. A provision of €0.59 million for Secondary Fuel start-up tests was also made within the supplementary model.

Combining both the PLEXOS and supplementary modelling constraints, a forecast of €348.59 million was received from the TSOs in relation to 2021/22 Constraint Costs. This represented an increase of 21.85% from the 2020/21 decision of €286.09 million.

2.3 DBC - UNINSTRUCTED IMBALANCES

Uninstructed Imbalances occur when there is a difference between a generator unit's dispatch quantity and its actual output. Uninstructed Imbalances and Constraint Costs are related, with Uninstructed Imbalances having a direct effect on Constraints Costs, as TSOs re-dispatch generators to counteract the impact of Uninstructed Imbalances on the system.

A forecast of zero was included for Uninstructed Imbalances as it is assumed that the additional Constraint Costs as a result of Uninstructed Imbalances will, on average, be recovered by the Uninstructed Imbalance payments for the forecast period.

2.4 DBC - TESTING CHARGES

The testing of generator units results in additional operating costs to the system, in order to maintain system security. As a testing generator unit typically poses a higher risk of tripping, additional operating reserve will be required to ensure that system security is not compromised, which will give rise to increased Constraint Costs.

A forecast of zero was included for Testing Charges, as it is assumed that any testing generator unit will pay Testing Charges to offset the additional Constraint Costs that will arise from out-of-merit running of other generators on the system as a result of the testing.

2.5 FIXED COST PAYMENTS

Fixed Cost Payments comprise Make Whole Payment, Recoverable Start Up Costs and Recoverable No-Load Costs. In their 2021/22 submission, the TSOs did not seek a provision for Fixed Cost Payments for the 2021/22 tariff year. In their submission, the TSOs assumed that the majority of these costs have been captured in their PLEXOS model.

2.6 OTHER SYSTEM CHARGES

Other System Charges (OSC) are levied on generators whose failure to provide necessary services to the system lead to higher DBC and Ancillary Service Costs. OSC include charges for generator units which trip or make downward re-declarations of availability at short notice.

In their submission the TSOs assumed that generators are compliant with the Grid Code and that no charges will be recovered through Other System Charges i.e., a forecast of zero is included for OSC for the 2021/22 tariff year.

2.7 CLEAN ENERGY PACKAGE COSTS

The TSOs made an initial submission in relation to potential costs arising from the implementation of Article 13 of the Regulation (EU) 2019/943. The TSOs made a submission for these costs from the period 1st January 2020 to 30th September 2022. In relation to this submission, the Consultation Paper noted that the methodology applied by the TSOs to calculate these costs did not align with the proposals set out by SEM Committee in its recent consultation paper on Dispatch, Redispatch and Compensation ([SEM-21-026](#)).

Consequently, the RAs requested that the TSOs resubmit these costs on the basis of the latest methodology set out in [SEM-21-026](#). The TSOs subsequently acknowledged that using this methodology, these costs would be small for the tariff periods in question.

2.8 K-FACTOR

Imperfections Costs are estimated ex-ante and recovered during the following tariff period, through the Imperfections Charge via a K factor mechanism.

Differences between the amount of Imperfections Charges paid out by SEMO to generators and the amounts paid to SEMO by suppliers will lead to instances where SEMO will:

- i. Require working capital to fund Imperfections Costs that exceed revenue collected through the Imperfections Charge, or,

- ii. Have collected revenue through the Imperfections Charge that exceeds the amount being paid out on Imperfections Costs.

To allow for the first scenario, SEMO may require funding from EirGrid Group to cover fluctuations during the tariff period. Any allowed under-recovery of revenue during the tariff period will be paid to SEMO, in the subsequent tariff period(s), with the appropriate amount of interest. This reflects the cost of short-term financing required to meet SEMO's working capital needs.

Similarly, for situations where the revenue recovered by SEMO through the Imperfections Charge is greater than that paid out in Imperfections Costs (second scenario above), the Imperfections Charge in the following tariff period will be reduced by an appropriate amount to reflect the allowed over-recovery and the associated interest.

The K factor mechanism accounts for any under or over recovery of Imperfections Costs, in previous periods and the current period and adjusts the following period's tariff accordingly. The K factor submitted by the TSOs to be applied to the Imperfections Charge for 2021/22 is €-10.18m, owed by the TSOs. A summary of the K factor adjustment is as follows:

Under-recovery in tariff year 2019/20	€10.92m
Estimated over-recovery for tariff year 2020/21	<u>€-21.1m</u>
Total Imperfections K factor to be applied in 2021/22 (monies owed)	<u>€-10.18m</u>

This €-10.18 million over-recovery would usually be applied to the 2021/22 forecast Imperfections Charge leading to a decrease in the Imperfections Charge for the 2021/22 tariff year.

3 INITIAL REGULATORY REVIEW OF THE TSOS 2021/22 IMPERFECTIONS REVENUE REQUIREMENT

In the Consultation Paper, the RAs proposed an allowed Imperfections Revenue Requirement for the 2021/22 Tariff year of €341.01. Allowing for the proposed K factor adjustment, a total forecast Imperfections Charge of €330.83 million was proposed. When divided by the forecast demand, of 36,000 GWh², this equated to a proposed Imperfections Charge of €9.19/MWh for the 2021/22 tariff year.

Within the Consultation Paper, the RAs invited stakeholders' views on the following provisions prior to publishing its final decision on the 2021/22 imperfection tariff:

- Provision of €15.6 million for the settlement of Pumped Storage units in the new market. In previous years, the RAs acknowledged that the treatment of these units in PLEXOS differs from the new market, while noting that the PLEXOS models already include a gap between the unconstrained and constrained efficiencies. In their 2021/22 submission a gap in efficiencies between the unconstrained and constrained efficiencies is set to 70% and 54% respectively. The RAs proposed a reduced allowance for this element in keeping with previous decisions. The RAs proposed an allowance of €8 million in relation to this cost item, as it would expect the TSOs to strive to match the market position of the units in dispatch as closely as possible.
- A provision of €10 million in relation to interconnector counter trading costs. The TSOs made a submission of €10 million in relation to interconnector counter trading costs in the 2021/22 tariff year. This was an estimated figure submitted by the TSOs. In their submission, the TSOs demonstrated that €5.6 million in interconnector counter trading costs were incurred by the TSO in the past 12 months.
- The RAs proposed not including a provision in relation to potential costs arising from the implementation of Article 13 of the Regulation (EU) 2019/943. The RAs noted that based on the proposals set out by SEMC in its recent consultation paper ([SEM-21-026](#)), these costs would be minimal for the tariff period in question. The RAs noted that any costs that may arise due to the implementation of Article 13 of the Regulation (EU) 2019/943 will be recoverable by the TSOs in subsequent tariff years.

² The TSOs forecast demand for the 2021/22 tariff year is 36,000 GWh, which represents a 7.1% increase from the 2020/21 forecast demand of 33,600 GWh.

4 KEY COMMENTS RECEIVED AND RAS RESPONSE

This section provides a summary of the main responses received to the Consultation Paper, in conjunction with the RAs' responses to the key points made. Respondents to the Consultation Paper primarily commented on the following:

- i. Exclusion of TSOs' proposed Clean Energy Package costs;
- ii. Provision for Interconnector Counter Trading Costs;
- iii. Provision for pumped storage costs;
- iv. Upward trend in imperfection costs;
- v. TSOs imperfections modelling; and
- vi. Transparency of imperfections tariff.

4.1 EXCLUSION OF CLEAN ENERGY PACKAGE COSTS

Comments Received

In the 2021/22 Imperfections Tariff Consultation Paper, the RAs proposed not to include a provision in relation to potential costs arising from the implementation of Article 13 of the Regulation (EU) 2019/943. Two responses supported the RAs proposed approach in relation to these costs. However, in their consultation response, the TSOs noted their concerns in relation to the removal of this cost item.

RAs Response

The RAs' note that in their consultation response, the TSOs state that their imperfections forecast submission is their best view of the anticipated Imperfections Costs for the 2021/22 Tariff year. Notwithstanding this, the RAs note the methodology applied by the TSOs in calculating the potential costs arising from the implementation of Article 13 of the Regulation (EU) 2019/943, differs significantly from the SEM Committees proposed methodology, which was set out in [SEM-21-026](#), prior to publication of the Consultation Paper.

The RAs are therefore maintaining its position in relation to this cost item and are not including a provision for such costs in the 2021/22 Imperfections Tariff. The RAs note that any imperfections costs that may arise due to the implementation of Article 13 of the Regulation (EU) 2019/943 will be recoverable by the TSOs in subsequent tariff years. Any potential matters arising from k-factor adjustments will be considered accordingly by the RAs.

4.2 INTERCONNECTOR COUNTER TRADING COSTS

Comments Received

In relation to interconnector counter trading costs, the RAs provisionally included an amount of €10 million in the Consultation Paper while seeking stakeholders' feedback on this cost item. Only

one respondent commented on this cost item, who noted that this cost item would be expected to be closer to the demonstrated interconnector counter trading costs of €5.6 million, which occurred in the 12-month period prior to the TSOs' submission.

RAs Response

As stated by the TSOs, System Operator to System Operator trades on the interconnector are initiated for system security (or priority dispatch) reasons. The RAs note that within the TSOs' 2021/22 Imperfections Submission, the TSOs state that this forecasted increase in countertrading costs in the 2021/22 tariff year is due to projected tighter capacity margins, high forced outage rates and increasing demand over this period.

The RAs have decided to maintain its position in relation to these costs as it is of the view that potential tighter margins expected in the forthcoming tariff year, justify the TSOs' forecasts in relation to these costs.

4.3 PUMPED STORAGE COSTS

Comments Received

One respondent commented on the TSOs imperfection cost submission of €15.6 million in relation to Pumped Storage unit settlement costs. The respondent did not comment on the RAs proposed allowance of €8 million, but queried the steps being taken by the TSOs to reduce these costs.

RAs Response

The TSOs have noted to the RAs that while they strive to meet the market position of the pumped storage unit, it sometimes deviated from its ex-ante position to increase system security and to maximise renewable generation. The TSOs noted that these cost projections are based on actual historical costs.

The RAs have decided to maintain its position in relation to these costs, as per its 2021 decision, and would expect the TSOs to strive to match the market position of the units in dispatch as closely as possible.

4.4 IMPERFECTIONS TARIFF TREND

Comments Received

A number of respondents expressed concerns over the trend of increasing imperfections costs in recent years. Such responses queried the actions that the RAs are taking to reduce to cost of the imperfections tariff. Two responses also noted the role that the delivery of further systems

services can play in reducing constraints on the network. These responses stated that the further provision of zero-carbon inertia and voltage systems services should be prioritised.

RAs Response

Regarding concerns raised over the increase in imperfections costs seen in recent years, both RAs have included mechanisms in recent price controls/reviews in this regard. As part of the PR5 Regulatory Framework, Incentives and Reporting Decision published in December 2020 ([CRU/20/154](#)), the CRU introduced a strategic objective incentive aimed at delivering enduring reductions in imperfections costs. The purpose of this incentive is to promote actions to mitigate and reduce imperfection costs, which will ultimately be passed onto electricity customers. UREGNI's [SONI price control 2020-2025](#) Final Determination, detailed a new Evaluative Performance Framework which has been developed to encourage the improvement of SONI's performance, including the reduction of system-wide costs, such as imperfections costs.

In relation to the provision of systems services, the RAs note that in July 2020, the SEM Committee published a Scoping Paper ([SEM-20-044](#)) in relation to System Services Future Arrangements (SSFA). In March 2021, following this period of stakeholder engagement, the SEMC published a Consultation Report and Decision Paper on the SSFA ([SEM-21-012](#)). The paper also set out a framework for further Fixed Contract Procurement. This framework will be used when required to encourage the development of new technology projects and may also be for suitable for inertia and voltage products given the more localised nature of these issues. A consultation on the High Level Design Phase of the SSFA is expected to be published in Q3 2021.

4.5 TSOs' IMPERFECTIONS MODELLING

Comments Received

A number of queries were raised in relation to modelling assumptions applied by the TSOs in their 2021/22 imperfections modelling. The RAs have engaged with the TSOs in relation to the comments raised and have sought responses from the TSOs to these comments. Below details the comments received from stakeholders in relation to the TSOs' imperfections PLEXOS model.

- i. A respondent raised concerns concerning potential differences in bidding patterns between ex-ante and balancing markets not being incorporated within the TSOs' PLEXOS model.
- ii. A respondent queried whether better representation of neighbouring markets should be considered within the TSOs model.
- iii. A respondent sought clarity in relation to increases in flows between North-South tie-lines in the TSOs' PLEXOS model.

- iv. A respondent queried whether there may be merit in performing an additional PLEXOS run in the period after publication of the Imperfections Consultation Paper and before the Decision Paper.
- v. A respondent sought clarity in relation to the DS3 assumptions applied in the model.
- vi. A respondent sought clarity in relation to a projected increase of €9 million in imperfections costs due to the closure of two peat plants.
- vii. A respondent sought clarity in relation to a reduction of €22 million in Gas Transportation Charges (GTC) relative to the 2020/21 projects costs.
- viii. A respondent expressed concern that the demand forecast applied for the 2021/22 Imperfections Tariff year is not consistent with the 2020-2029 GCS.

RAs Response

The responses provided by the TSOs in relation to the matters raised by stakeholders in response to the Consultation Paper are detailed below.

- i. In relation to the point raised on potential differences in bidding patterns between ex-ante and balancing markets, the TSOs have stated that the purpose of their imperfections model is to forecast the relative difference in production costs between an Unconstrained and Constrained model. They state that for this purpose, using Balancing Market Commercial Offer Data (COD) as proxy for the Day Ahead COD to date has been a reasonable proxy. The TSOs also stated that it remains their opinion that a production cost model based on balancing market bids is the most appropriate for the 2021/22 imperfections forecast.
- ii. In relation to the response received in relation to the TSOs' modelling of neighbouring markets, the TSOs have stated the view that its current method of modelling interconnectors and neighbouring markets is fit for purpose. They also stated that the interconnector flows used are based on actual historic data and matched with actual wind profiles, and therefore consider the influence of similar climatic conditions in the two markets.
- iii. In response to the queries received on North-South tie-line flows, the TSOs stated that changes to these flows in the model have been applied to reflect observed trends.

- iv. In relation to the question as to whether there may be merit in performing an additional PLEXOS run prior to the publication of the Imperfections Decision Paper, the TSOs have stated that given the tight timelines involved in the annual imperfections process, this would not be feasible.
- v. Regarding the matter of DS3 assumptions applied in the model, the TSOs have stated that the projections applied were best estimates taken at the point of the data freeze in March 2021 and that the TSOs hope to achieve these projections during the 2021/22 Tariff year, depending on the outcome of an ongoing 75% SNSP trial.
- vi. Regarding the increase in costs of €9 million resulting from the closure of the peat plants, the TSOs confirmed this relates to the results of running the TSOs' PLEXOS model in the forthcoming tariff period without the peat units operational.
- vii. Regarding the decrease of Gas Transportation Charges, the TSOs have confirmed that this decrease is based on analysis of actual generator bids.
- viii. Regarding the TSOs' demand forecasts, the TSOs have stated that the demand forecast used in the 2021/22 Imperfection model is the median demand forecast from the forthcoming GCS 2021-2030. The TSOs have stated that this is their best estimate of demand for the 2021/22 Tariff year and includes the impact of COVID-19 on demand.

Having considered the queries raised by stakeholders in relation to the TSOs' modelling and the responses provided by the TSOs to the matters raised, the RAs have decided that no further action is required in relation to the TSOs imperfections modelling at this time.

4.6 IMPERFECTIONS TARIFF TRANSPARENCY

Comments Received

The RAs received a number of responses from stakeholders in relation to improving transparency in relation to the imperfections tariff and seeking additional information in relation to the TSOs' submission. One of the responses received also suggested that a mid-year reforecast be performed annually by the TSOs for information purposes. Another response expressed the view that parallel consideration should be applied between the cost impact and the potential increase in carbon emissions, resulting from the dispatch down of renewable generation by the TSOs.

RAs Response

The RAs note that detail in relation to the TSOs' 2021/22 imperfections tariff submission is available in [Appendix 1 of SEM-21-053](#). Notwithstanding this, the RAs will continue to engage

with the TSOs in relation to improving transparency on their TSOs' annual imperfections submission.

In relation to the publication of a mid-year review, the RAs note that the TSOs are of the view the publication of an imperfections tariff mid-year review may require significant additional resources. The RAs note that further steps have been taken in recent years to increase transparency in relation to imperfections costs, including the publication of the TSOs Quarterly Imperfections Cost Report. Given the publication of the TSOs' Quarterly Imperfections Cost Report's, the RAs do not see an immediate need for the publication of an imperfections mid-year review but will keep this matter under review.

In relation to comments raised on the potential increases in carbon emissions resulting from the dispatching down of renewables, the RAs note that the TSOs are obliged to operate the transmission system in the most economic manner while maximising priority dispatch/renewable generation on the system, in accordance with their Balancing Market Principles Statement.

5 SEMC DECISION

The SEMC have considered all the responses received from stakeholders as summarized in Section 4 above. Having considered the responses received and following further engagement with the TSOs, the RAs have decided to implement a 2021/22 Imperfections Tariff of €9.19/MWh.

SEMC Decision: The 2021/22 Imperfections Charge is to be set at €9.19/MWh.

The trend in the Imperfections Charge in recent years is summarised in Table 5.1 below.

€ million	2021-22 Decision	2020-21	2019-20	2018-19	2017-18	2016-17	2015-16
Total Constraints costs	341.01	271.09	256.97	190.44	177.6	144.3	163.5
Uninstructed Imbalances		-			-	-	-
Testing charges		-			-	-	-
Dispatch Balancing Costs	341.01	271.09	256.97	190.44	177.6	144.3	163.5
Energy Imbalance		-			-	-	-
Fixed Cost Payments	-	15.38	14.35	7.19	2.7	2.5	7.2
K factor Adjustment	(10.18)	(0.37)	84.44	(13.86)	(7.34)	(77.6)	(22.1)
Other System Charges		-	-	-	-	-	-
Total Imperfections Charge	€ 330.83	286.10	355.76	183.77	173.02	69.2	148.6
Forecast Demand ('000 MWh)	36,000	33,600	34,200	35,200	34,550	33,700	33,230
Imperfections Charge/ MWh	9.19	8.51	10.40	5.22	5.00	2.05	4.47

Table 5.1: Imperfections Charge in recent years.

Under the current SEM arrangements as per the Trading and Settlement Code part B the RAs are required to approve the Imperfections Charge Factor (FCIMPy).

The intent of this is to enable EirGrid and SONI, should it become evident within a given year that the Imperfections Charge is not providing the adequate recovery of anticipated costs, to seek

approval from the RAs to increase the factor thus increasing the Imperfections Charge to a level which adequately recovers the costs without requiring amendment to the underlying approved forecast requirement.

SEMC Decision: The Imperfections Charge Factor is approved to be set to 1 for the period of 1 October 2021 to 30 September 2022.