



# 2022/23 Imperfections Forecast Response to RAs' Consultation

**05 August 2022**

## Response

SONI and EirGrid (the **TSOs**) acknowledge the publication of the Regulatory Authorities' (**RAs**) consultation on the Imperfections Charge 2022/23 (SEM-22-038)<sup>1</sup> (the **Consultation Paper**) and welcome the opportunity to respond to same.

In the 2022/23 Imperfections Forecast Submission (the **Forecast Submission**) the TSOs set out a requirement of €730.45m for the 2022/23 tariff year to cover the anticipated Imperfections Costs in that period along with a k-factor of €140.36m to recover the known and forecast deficit in revenues pertaining to the 20/21 and 21/22 tariff periods, in accordance with Paragraphs 4.153 and 4.155 of the Trading and Settlement Code ("the Code"). Taken together with the forecast SEM Demand for the 2022/23 tariff period this would result in an Imperfections charge of €22.80/MWh (as noted in Table 2 of the Consultation Paper). While this represents a notable increase from the current 2021/22 charge of €9.91/MWh, it must be recognised that the current charge does not reflect actual costs being incurred which has and continues to result in a significant under recovery of revenues. It is thus not a reflective reference point against which to consider the future imperfections forecast requirement.

While the TSOs recognise that the Imperfections Charge for 2022/23 remains a notable increase, the TSOs are of the view that the forecast as submitted is a reasonable and prudent estimation of the likely forecast costs.

In the Consultation Paper the RAs have proposed various alternative options, all of which are significantly lower than the TSOs' forecast. The alternative scenarios proposed by the RAs are based on historical data from the current 2021/22 tariff year, and a 'run rate' option. These approaches result in proposed imperfections tariffs substantially below the TSOs' forecasted requirement.

The RAs are also consulting on a possible deferral of full recovery of the k-factor which are monies due to the TSOs. The TSOs are opposed to this significant change, as it is a key underpinning principle of the funding of the SEM that the (best estimate of the) k-factor would be recovered in the following year. That set out essentially proposes that the TSOs carry a significant deficit (under-recovery) over an unnecessarily prolonged horizon. It would present material cash flow issues for the TSOs without cause or added utility to the customer.

The current revolving credit facility in place for the TSOs provides for a combined €200m of contingent debt supported by contingent equity. These facilities cover Imperfection Costs, DS3 System Services, capacity socialisation fund, residual error and foreign exchange variations. The backstop amount included in the Trading & Settlement Code clause F22.3.1 is an amount of €150m. This backstop underpins the credit facility.

This facility is in place to deal with risks over and above those currently known i.e. unpredictable events. It should not be relied upon to deal with risks that are appropriately factored into our original Imperfections Forecast of costs for 2022/23 in line with the provisions and requirements of the TSC, that would be to use the facility as a mechanism to manage in-built shortfalls.

Furthermore, it must be recognised that the facility is finite. Any significant draw on the facility in any one of the areas covered, would directly limit the available funds to manage shortfalls in other areas. That is any deferral of recovery of the k-factor only leads to a potential accumulation of under-recoveries and erodes the TSOs' available funding to provide liquidity to the market. Should the funds be fully drawn, the MOs (as

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<sup>1</sup> [SEM-22-038 Imperfections Charge Consultation Paper.pdf \(semcommittee.com\)](#)



the settlement body) may have to invoke the provisions of section F22.1 of the TSC that provides payments to the participants to be reduced, where the charges recovered do not meet the level of payments required.

In the Consultation Paper, the RAs have sought views on a number of specific aspects which the TSOs address in turn below:

**1. Whether the TSOs' forecasts of costs and assumptions for Tariff Year 2022/23 are reasonable**

The TSOs stand by the forecast Imperfections as originally submitted, even in consideration of the points raised in the RAs' consultation. The TSOs maintain that the approach used for the determination of such is appropriate for the 2022/23 tariff year. It should be noted that the TSOs sought an independent model review through Stantec; their report can be found in Appendix 8 of the Forecast Submission<sup>2</sup>. The main focus of the review was on the performance and calibration of the unconstrained model (day-ahead representative). Subsequently, the review was extended to also look at the constrained model (balancing market representative), although typically the balancing market is more predictable. The TSOs' fuel pricing was also reviewed. Significant volumes of PLEOX data was shared at an hourly level per unit matched with real-world time-equivalent data as part of the review.

The outcome of the review showed alignment between the unconstrained model and the day-ahead market both with respect to price and volumes, and that the constrained model offered a good representation of actual dispatch. Stantec also noted that forward prices remain elevated and that the 2022/23 PLEXOS model reflects this market expectation. To note, looking at current fuel future contracts as of 29 August 2022, gas and coal are higher (gas +55% and coal +17%) than those the TSOs included in the 2022/23 forecast.

The TSOs have only included costs / assumptions that can be quantified at the time of preparing the forecast. Choosing a price input which is not contemporaneous with the other selected costs and assumptions would undermine the validity of the temporal relationships which are inferred by the model. No additional factor for uncertain or additional risk has been included in the forecast. For example, as outlined in Section 3.1 of our submission report, we have not included any factor to account for factors such as recent volatility in fuel prices or High Impact Low Probability events etc.

**2. If there are actions the TSOs could take to minimise Imperfections Charges**

The TSOs continuously seek to reduce imperfections charges. As part of PR5, the CRU has developed a new incentive mechanism with the aim of encouraging EirGrid to monitor, mitigate and reduce imperfection costs. The incentive scheme involves EirGrid identifying areas that are related to imperfections costs and putting in place actions to reduce these costs. SONI was previously incentivised to minimise the quantum of DBC through its licence obligations regarding Dispatch Balancing Costs, this specific incentive has since been removed as part of the latest licence review. SONI now includes the activities that it undertakes to manage the DBC within the suite of activities included within the Evaluative Performance Framework. These actions will then be included in the UR's qualitative assessment of SONI's performance; however, this assessment takes place ahead of the DBC outturn reporting so will not reflect the quantitative benefits delivered.

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<sup>2</sup> [SEM-22-038 - Annex 1 - 2022\\_23 Imperfections Submission v2.0.pdf \(semcommittee.com\)](#)

**3. If the Imperfections Price for Tariff Year 2022/23 should be determined based on forecasts using either daily projected quarterly fuel and carbon costs averaged over a 12-month period, or utilising the k-factor run rate approach**

As outlined in Appendix 7 of the Forecast Submission, the TSOs are strongly of the opinion that employing the averaged historical fuel and carbon is inappropriate for determining the forecast. The TSOs are of the opinion that the future fuel forecast values will be more accurate than the method of averaging values of the preceding year; as noted in response to Q1 above as part of the external review of the model Stantec noted that forward prices remain elevated and that the 2022/23 PLEXOS model reflects this market expectation. In general, as forecasts get closer to real time, they are more accurate. The TSOs' proposed values, as of 09 May 2022, would have the most up to date market dynamics factored into the future price. The averaged historic prices would not have the current foresight factored into them.

In addition, choosing an averaged historical figure, which is not contemporaneous with the other inputs and costs used in the model would only bias the initial condition of the model without reasonable cause; selected inputs must have some relationship to one another, in this example the point in time which they were observed, otherwise they will yield forecasts which are not rooted in empirical observation.

It seems misguided to suggest that taking an historical average is a meaningful way to mitigate volatility, in what is an evident shift towards a higher-price market with increased capacity for volatility. There is little to suggest that hydrocarbon-rich countries would seek lower prices even if something fundamentally changed in geopolitics.

There are various political and economic factors currently ongoing, which will feed into 2022/23 but which did not feed into the full 2021/22 year. These conditions are not likely to improve, and economically wise, could have a dramatic impact on 2022/23 costs. To make the point again, current fuel future contracts as of 29 August 2022 for gas and coal are higher (gas +55% and coal +17%) compared to those the TSOs included in the 2022/23 forecast, and certainly an even greater and significant deviation away from 2021/22 values. The TSOs are very concerned, that if the 2022/23 imperfections charge is set based on the average historical fuel and carbon price data, there is a notable risk that the charge will not recover the required monies to fund imperfections payments.

The TSOs are of the opinion that using the PLEXOS model as a forecasting method in the year ahead is superior to a "run rate" approach. The PLEXOS model is a more sophisticated forecasting tool, which models every single hour of the upcoming tariff year, than a simple "run rate" approach. Also, the "run rate" approach assumes that the past is representative of the future; it cannot factor in new effects into the forecast, which the PLEXOS model can. While such an approach can be useful for considering a short term look ahead position i.e. weeks or small number of months, it is an inappropriate basis for a partial, to full year ahead, forecast. The "run rate" approach is effectively deterministic, which arbitrarily assumes, and applies, the rate of change of an observed residual, while ignoring the more nuanced underlying relationships of the multivariable inputs. In addition, the within-year k-factor is the product of a very different geopolitical and energy market context.

**4. Whether the k-factor for under or over-recovery from previous Tariff Years should be spread over more than one subsequent Tariff Year and, if so, over how many Tariff Years**

As note above the TSOs are opposed to this proposed significant change, as it is a key principle of funding the SEM that the best estimate of the k-factor would be recovered in the following year. Certainty and timely recovery of k-factors is an important principle for the TSOs in providing such funding. It is essential that market participants are fully aware of the implications of the TSOs credit facilities being exhausted. Should the funds be fully drawn the MOs may have to invoke the provisions of section F22.1 of the TSC.

The Imperfections k-factor comprises the known outturn k-factor for Y-2 and a forecast of the within year k-factor. The within year k-factor forecast is subsequently updated to reflect the actual outturn in the following Tariff Year. Ultimately resulting in this within year k-factor being fully recovered over 2 tariff year periods under the extant approach.

Following on from that, the imperfections forecast is made up of a number of components. The 2022/23 Imperfections forecast thus comprises:

1. The Imperfections k-factor for tariff year 2020/21 of an **over-recovery of €9.64m.**
2. An estimate (as at May 2022) of the Imperfections k-factor for tariff year 2021/22 of an **under-recovery of €150m.**
3. Giving a total forecast Imperfections k-factor to be applied in setting the 2022/23 Imperfections tariff of an **under-recovery of €140.36m.**

The forecast within year k-factor, as submitted, is a conservative value for the anticipated end of year (2021/22) position. The TSOs had considered two scenarios in assessing the potential 'within year k'. Under the High scenario the expenditure rate at [April 2022] was extrapolated to continue unchanged to the end of the period. This would result in a forecast under recovery of **c.€200m.** Under the Low scenario the TSOs considered reduced expenditure as seen in the some more recent weeks (as of May 2022). If the run rate continued at a reduced level for the remainder of the period, the resultant k would be a forecast under recovery of **c.€150m.** The TSOs noted that it is likely that the ultimate outturn k-factor will fall somewhere within the high and low scenarios, however for the purpose of setting the k-factor the TSOs employed the low forecast and based on the latest figures this is proving to be at the conservative end of the likely year end year position.

**5. The merits of implementing a biannual review of the costs covered by Imperfection Charges and a proposed modification to the Trading and Settlement Code to allow bi-directional alterations to the Imperfection Charge Factor**

The TSOs are supportive of a biannual review and a proposed modification to the Trading and Settlement Code to allow bi-directional alterations to the Imperfection Charge Factor where required, and it is clear that the intent, consistent with that in place, is to help minimise the k-factor. Such an approach would provide assurance to suppliers that where external assumptions (such as fuel costs) do not hold, and result in a notable impact on the costs, that there is an opportunity to make bi-directional review of the charge, if needed. However, it is essential that any such process is clearly defined, does not involve a full rerun of the entire PLEXOS modelling and each input, and considers both the costs and the k-factors. Further engagement with the TSOs must take place to determine what is achievable if any additional PLEXOS modelling is requested. In particular, should the RAs proceed with their proposal regarding spreading the recovery of large-scale k-factors over multiple periods, that the scale of the k-factor being carried is taken into consideration with a view to ensuring recovery over the shortest timeframe.

## Conclusion

The TSOs have provided a PLEXOS model and Supplementary modelling, on a similar basis to previous years, using the best assumptions available to the TSOs, internally and externally. The TSOs also sought an independent party, Stantec, to review the PLEXOS model (unconstrained and constrained), and to provide feedback regarding assumed fuel prices. It is on this basis that the TSOs believe that the model offers the best insight to the 2022/23 tariff year. The TSOs are of the opinion that the forecast should not be disregarded on the basis that it is higher than last year. The current 2021/22 year has already identified that costs are rising, as seen by the within-year increases in energy caps, and the general rise in domestic electricity and gas prices (and in the energy industry, fuel and carbon). The TSOs are of the view that the proposed bi-directional charge factor is the prudent mechanism to manage significant deviation from the TSO forecast and should allow the TSOs' submission to stand while providing the assurance that where external assumptions (such as fuel costs) do not hold and result in a notable impact on the costs that there is an opportunity to make a bi-directional review of the charge, if needed to minimise the k-factor. Clearly in a year where costs are high, the TSOs do not want to place an unfair burden on suppliers and the end consumer, and this mechanism allows this.

The TSOs do not believe it is reasonable or prudent to use fuel prices other than the latest fuel prices available, and determined based on future trends, the trajectory, and numerous other factors. Using historic fuel prices as a representation of future volatility is not a viable option, as historic data can only indicate the volatility from the year the data comes from. Future fuel contracts, reviewed at various points over the last few months, show much higher prices than 2021/22 prices, highlighting that although 2021/22 prices may show volatility, they are centred around much lower average prices.

The k-factor is a mechanism to make the imperfections balance whole and it is a key underpinning principle of the funding of the SEM that the (best estimate of the) k-factor would be recovered in the following year. The TSOs provided a conservative forecast k-factor in this submission. It is essential that the full value of the k-factor is provided for in the final approved costs. To not do so would present material cash flow issues for the TSOs without cause or added utility to the customer.

It is essential that the core principles underpinning the operation of the single electricity market are preserved and that the Imperfections Capacity Charge Mechanism and the revolving credit facility in place are viewed in that context. These features of the market arrangements are in place to deal with risks over and above those currently known i.e. unpredictable events. They are not intended to be relied upon to deal with risks that are currently known, particularly where such risks are appropriately factored into the forecast of costs as submitted by the TSOs. To do so would be to use the facility as a mechanism to manage in-built shortfalls.

On the basis of that set out above the TSOs can affirm that the Forecast Submission reflects our best view of the anticipated Imperfections Costs for 2022/23 and the k-factor to address a significant under recovery. We urge that the RAs approve the submitted amount and in parallel move to advance the necessary changes to the TSC to enable bi-directional changes of the imperfections charge factor.