

Calculation of Imperfections K-Factor for inclusion in 2022/23 Tariff

The calculation of the Imperfections k-factor for inclusion in the 2022/23 tariff is made up of two elements:

- (1) Actual outturn for 2020/21
- (2) An estimated outturn for 2021/22

(1) Actual Outturn for 2020/21

Market Imbalances	Notes	2020/21 Over/(Under) Recovery
Energy Imbalance	a	0
Imperfections excl OSC	b	25,389,990
Other System Charges	c	4,976,849
Capacity	d	0
Market Interest	e	13
Foreign Exchange	f	0
Cash excess arising during year (market imbalance)		30,366,852
The tariff for 2020/21 was reduced by a €0.37m k-factor, therefore this must be added here in order to arrive at the actual over/under recovery for 2020/21		
	g	371,546
Actual outturn over (under) recovery for 2020/21 (true k-factor arising in year)		30,738,398
An estimated over recovery of €21.1m was included in calculating the tariff for 2020/21, this must be taken into account to arrive at what is left to be taken into account in setting the k factor for 21/22		
	h	(21,100,000)
Adjustment needed to correct estimate to actual		9,638,398
2020/21 k-Factor to be included in 2022/23 tariff	€m	9.64

(2) Estimate of over/(under) recovery for 2021/22

Estimate for Imperfections k-factor for 2021/22	€m	-150.00
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Total Forecast K Factor to be applied in 2022/23

Total Forecast K Factor to be applied in 2022/23	€m	-140.36
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(1) Imperfections Outturn for 2020/21

There was a cash over recovery of €30.37m in 2020/21 which included a previous over recovery forecast position of €0.37m (Ref. SEM-20-058) k factor as built into the tariffs. Adding this k-factor from previous years gives an actual k-factor over recovery of €30.74m arising for the 2020/21 year. However, in calculating the 2021/22 tariff, there was an estimated €21.1m over-recovery for 2020/21 included (ref. SEM-21-061). Taking this figure into account results in an outturn over recovery of €9.64m for tariff year 2020/21. This over recovery will be subtracted from the imperfections forecast revenue.

(2) Estimate Outturn 2021/22

The Estimated within year (Y) K-factor (2021/2022) is a forecast of the financial position, as reflected in the accounts, as at the end of September 2022. The estimated K therefore takes into consideration

- The actual DBC costs against the forecast and forecast trend to year end.
- Any resettlement costs from previous periods (M+13 etc.) that fall within the period

DBC Costs

Imperfections Costs

As at the 30 April 2022 the Imperfections costs were 33% over the RA Approved Forecast giving rise to an under recovery of c. €77.81m. It is estimated that Imperfections expenditure will continue to move adversely to that originally forecast leading to an increase in the forecast outturn under recovery position. This estimated under recovery reflects a number of opposing factors:

Factors driving up forecast spend

- Wholesale fuel and carbon prices have increased significantly since the forecast was modelled. This trend is forecast to persist throughout 2021/22. This is the dominant reason for actual outturn being greater than forecast outturn.
- The 'must run constraint' for SoS reasons which increases imperfections costs was implemented on 19th April 2022. It is expected that the requirement for such a constraint at some level will remain for the remainder of the tariff year.
- Continued Generation Plant scarcity, mainly due to forced outages, will give rise for the need for additional SO-SO trades, which will increase imperfections costs.
- Emissions regulations and availability of fuel mix are impacting the output of Kilroot units now that their derogation has recently ended. This has started and will continue to reduce their flexibility, leading to increased imperfections costs.

Factors driving down forecast spend

- A number of significant transmission outages that were included in the 2021/22 Imperfections Forecast costs have been re-prioritised/deferred. However, any reduction driven by these changes to outages is significantly offset by the upward movement in other areas as outlined above in particular Wholesale fuel costs.

Taking into account the above, the TSOs have considered two scenarios in assessing the potential 'within year K'. Under the High scenario the current expenditure rate is 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 have taken into account the reduced expenditure as seen in the most recent weeks. If the run rate continued at this reduced level for the remainder of the period, the resultant K would be a forecast under recovery of c. €150m. 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 have employed the low forecast.

Resettlement

The settlement team has advised finance that no notable resettlement of DBC costs are anticipated over the remainder of this tariff year.

Estimated outturn 2020/21 = (150-0) = €150m

Total Forecast K Factor to be applied in 2022/23

The total forecast K is an under recovery of €140.36m which will be added to the Imperfections forecast revenues.

Summary of K-factor adjustment

under-recovery in tariff year 2018/19	€-29.63m
Estimated over-recovery for tariff year 2019/20	€+30m
Total Imperfections K-factor to be applied in 2020/21	€+0.37m (g)

This €0.37million over-recovery would usually be applied to the 2020/21 forecast Imperfections Charge leading to a decrease in the Imperfections Charge for the 2020/21 tariff year.

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

Note the signage used in the SEM-21-061 paper is backward in the section on the K - however is applied correctly in the calculation of the revenue