2018/19 Imperfection Costs Reforecast

Tariff Year: 1st October 2018 to 30th September 2019

14 July 2020

1 Executive Summary

This report to the Commission for Regulation of Utilities (CRU) and the Northern Ireland Authority for Utility Regulator (UR), collectively known as the Regulatory Authorities (RAs), has been prepared by EirGrid and SONI, in their roles as the TSOs for Ireland and Northern Ireland respectively, concerning the 2018/19 Imperfection Costs Reforecast. This report covers the period from 01/10/2018 to 30/09/2019 inclusive, referred to as the Tariff Year 2018/19.

Imperfection costs are an inherent feature of the SEM design and arise due to the difference between the ex-ante market schedule and the real-time dispatch. These costs are levied on suppliers through the Imperfections Charge. EirGrid and SONI, as Transmission System Operators (TSOs), are responsible for managing imperfection costs, through efficient dispatch of generation, while still maintaining a secure electricity system.

As set out in correspondence to the RAs, dated 26 March 2020[1], the first number of months of the revised SEM arrangements cannot be held as a true representation of the market operation for a variety of reasons, including, but not limited to: code and system defects, changes in participant bidding strategy and general settling in of the revised market arrangements and as a result comparison of actual costs, to a reforecast model (as we would normally have done), would not provide meaningful data. We can, however, make some qualitative rather than quantitative comments, from comparing the original forecast to a reforecast model (by updating fuel, demand, etc.), and explaining the impacts of using this actual data on our original forecast.

A process to incentivise the TSOs to reduce imperfections was announced by the Regulatory Authorities (RAs) in June 2012. In regard to the 2018/2019 period, however, as set out by the RAs in correspondence dated 27 February 2020[2], and reflected in the formal letter from the TSOs to the RAs dated the 26 March 2020, it was determined that no incentive should apply for the first year of the revised SEM arrangements(tariff year 2018/19).

This report has been prepared on this basis, setting out a summary of the general trends seen in the 2018/19 year, and how they impacted the TSOs' original forecast, through assessing how the 2018/2019 PLEXOS model changes, when updated with actual data.

The TSOs submitted a 2018/19 Forecast to the RAs on 30/05/2018. Using the submitted forecast as a base, the TSOs then updated a number of inputs based on actual data for this period, to create an ex-post adjusted forecast; the "reforecast". As the Incentive did not apply in 2018/2019, a detailed assessment, as would normally be required, applying the Eligibility criteria as described in SEM-12-33, has not been undertaken.

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[1] Ref: Letter from SONI and EirGrid to Paul Bell (UR) entitled 'Imperfections Incentive and reporting under the revised Single Electricity Market (SEM) Arrangements'
[2] Ref: Email from Billy Walker (UR) entitled 'Imperfections Incentive'

The comparison of the 2018/19 Forecast with the 2018/19 Reforecast and the 2018/19 Actuals is shown in Figure 1 below. The 2018/19 reforecast is in the general range of the 2019/20 actual cost.

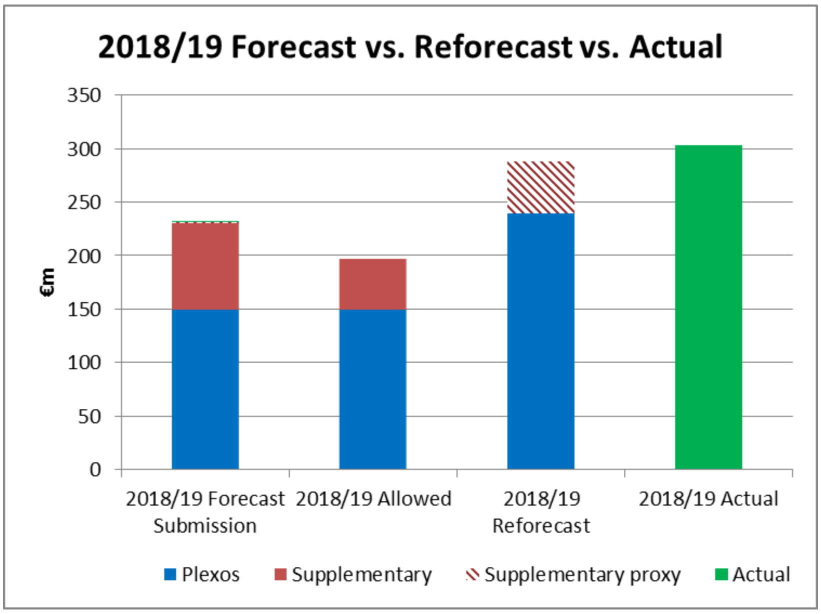

Figure 1: 2018/19 Forecast vs. Reforecast vs. Actual comparison

2 PLEXOS Comparison

The PLEXOS modelled component of the reforecast for 2018/19 was found to be €240m. This is an increase from the submitted forecast cost of €149m. The impacts of the ex-post adjusted changes on the original submitted forecast are outlined in Figure 2 below.

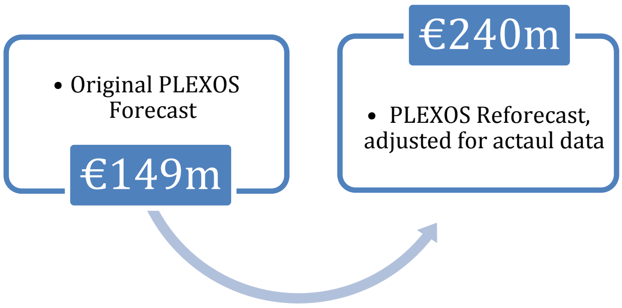

Figure 2: PLEXOS adjustment for actuals

As shown in Table 1, updating the 2018/19 Forecast PLEXOS model with actual data led to an increase of €91m. Figure 2 shows the drivers which make up this increase of €91m.

Component	Imperfections (€m)
PLEXOS component of submitted forecast	149
Net of base case refinements and actual data changes adjustments	91
PLEXOS component of ex-post adjusted baseline	**240**

Table 1: The impact of actual data on the original forecast

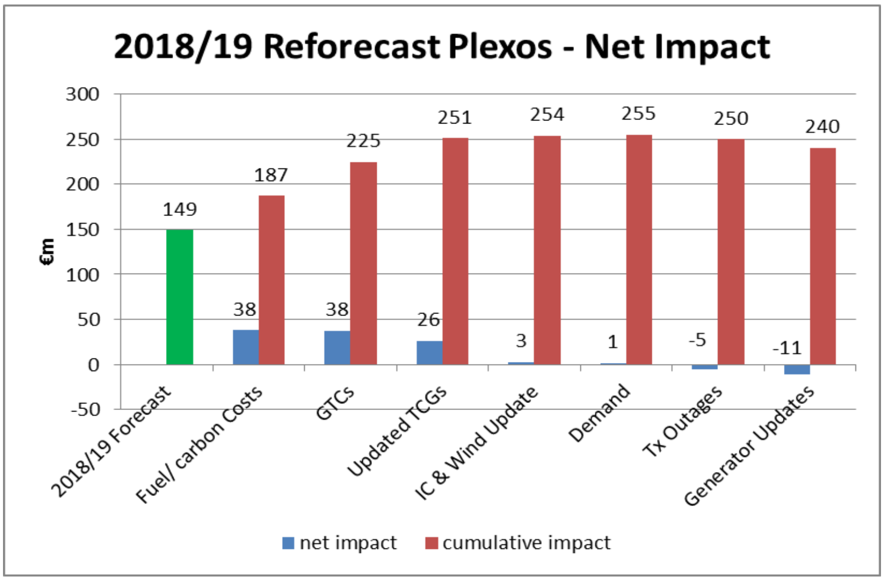

Figure 3: 2018/19 Reforecast PLEXOS – Net Impact

2.1 Fuel/Carbon Prices

Updating the model for actual fuel costs increased costs by €38m. The carbon cost had more than doubled between that used in the 2018/19 Forecast and the Reforecast. In addition there was an increase in the cost of distillate and oil between the 2018/19 Forecast and the Reforecast.

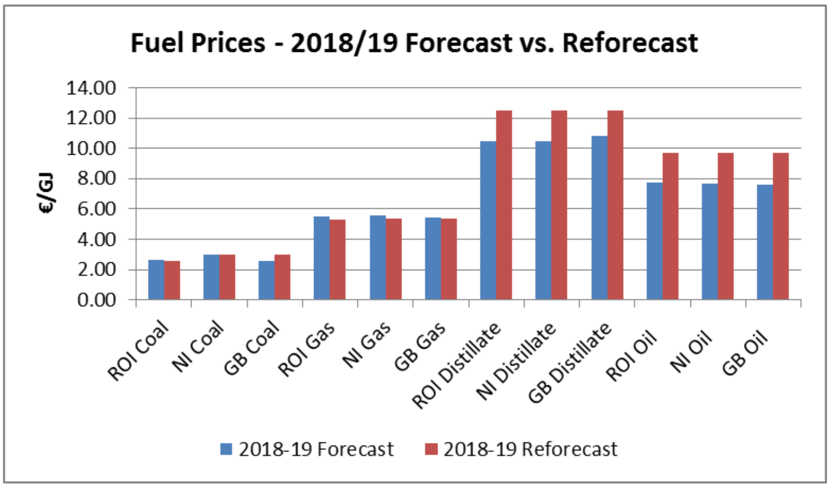

Figure 4: Fuel Prices – 2018/19 Forecast vs. Reforecast

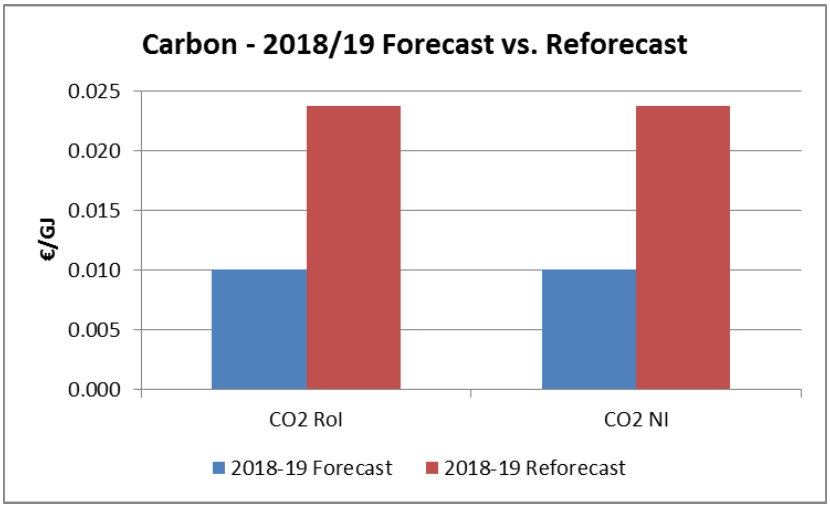

Figure 5: 2018/19 Carbon Prices – Forecast vs. Reforecast

2.2 Gas Transportation Costs

The cost of gas transportation adders for each unit (based on analysis of historic bids) was updated. This update resulted in increased constraints costs, where the units had been constrained on in the dispatch, to meet reserve, transmission or security constraints on the power system. This amounted to an increase in costs of €38m.

2.3 Updated Operational Constraints

The operational policies/ Transmission Constraint Groups (TCGs) were updated to reflect the updated policies/TCGs on the system in 2018/19. The Tarbert and Moneypoint-Tynagh TCGs included in the reforecast, had not been included in the original forecast, as they were not active, at the time of the data freeze. This amounted to an increase of €26m.

2.4 IC flows and Wind Adjustments

Updating the 2018/19 Forecast with actual 2018/19 interconnector flows and wind generation resulted in a €3m increase in Imperfections.

2.5 Demand

The actual all-island monthly demand (total energy requirement) was 3% lower than forecast. This resulted in a €1m increase in Imperfections.

2.6 Transmission Outages

The model was updated to reflect the actual transmission outages that took place in 2018/19. Less transmission outages took place over the year than originally forecast; this reduced the model costs by €5m.

2.7 Generator Updates

The no load and start-up costs of generators were updated to reflect costs as seen in actual, historic bids. Also, the forecast outages were updated to reflect the actual outages that happened in 2018/19. This lead to a decrease in the model costs of €10.5m.

3 Reforecast Results Compared to Actuals

This section contains a comparison of the following for the Tariff Year 2018/19:

- The original forecast (submitted and allowed values),
- The reforecast (PLEXOS only) and
- The actual[3] outturn.

For the 2018/19 Tariff year, the TSOs submitted an Imperfections forecast of €231.17m Following consultation, the RAs provided in their decision, which was an allowance of €197.63m for the year.

The current resettled actual costs for the 2018/19 year are €303m (shown in green in Figure 6). This is higher than the TSOs submitted forecast, and significantly higher than the allowed forecast.

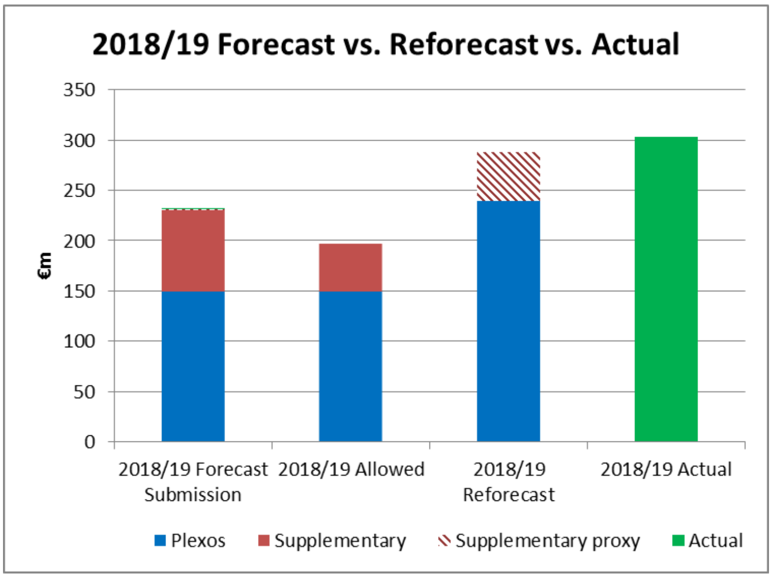

Figure 6: 2018/19 Forecast vs. Reforecast vs. Actual comparison

Plexos: From Figure 6 it can be seen that when updating the original/allowed forecast with actual data, the PLEXOS element significantly increases from €149m to €240m.

Supplementary: As mentioned previously, there was a 'bedding in' period for this first year of the revised market arrangements that saw code defects and modifications required through the year. In this regard, the TSOs have not included any revision to the submitted supplementary modelling. However, for purposes of comparison, the 2018/19 approved supplementary (€48m) has been used as proxy for the 2018/19 Reforecast Supplementary (shown in red dash in Figure 6).

As shown in Figure 6 the total for the 2018/19 reforecast (€288m) is in the general range of the 2019/20 actual cost (€303m).

[3] The actual outturn used in this document is the current total including resettlement.