


	<b>Quarterly Imperfections Cost Report</b> 2018-2019: Q3: 01 April 2019 - 30 June 2019			
	2018/2019 YTD Outturn (€m)	2017/2018 YTD Outturn (€m)	2018/2019 Q3 Outturn (€m)	2017/2018 Q3 Outturn (€m)
CPREMIUM	89.4	Note <sup>[1]</sup>	20.8	Note <sup>[1]</sup>
CDISCOUNT	78.5		19.8	
CABBPO	2.9		0.2	
CAOPO	3.0		0.1	
CTEST	-0.2		-0.1	
CUNIMB	-3.0		-0.8	
CCURL	-3.8		-0.8	
<b>Dispatch Balancing Costs (DBC)</b>	166.8	155.2	39.2	42.6
<b>Fixed Cost Charges/Payments (CFC) <sup>[2]</sup></b>	55.6	6	25.5	2.4
<b>Energy Imbalance</b>	Note <sup>[5]</sup>	-2	Note <sup>[5]</sup>	-0.2
<b>Other System Charges (OSC) <sup>[3]</sup></b>	-5.5	-8.8	-1.8	-2.7
<b>Imperfections Costs Outturn</b>	216.9	150.4	62.9	42.1
<b>Imperfections Costs Forecast</b>	156.9	143.5	44.4	35.5
<b>Variance: Forecast Vs. Outturn <sup>[4]</sup></b>	60.0	6.9	18.5	6.6
<b>Variance %</b>	38.2%	4.8%	41.8%	18.6%

### Key Points

- Costs are based on **actual initial settlement figures**. There will be variations in the final year-end figures as a result of resettlement, system defect fixes and Trading and Settlement Code modifications.
- The Imperfections Cost Forecast is profiled based on the RA approved model, which assumed zero payments for OSC. The Imperfections Cost Outturn is subject to fluctuation relative to the forecast.

<i>Key Factors Affecting Imperfections Costs</i>	<i>Forecast Assumptions for TY1819 <sup>[11]</sup></i>	<i>Actual TY1819</i>	<i>Impact <sup>[12]</sup></i>
<b>T&amp;S Code and System Changes</b>	Data as per forecast submission	<p>Similar to Q2, the Fixed Cost Charges/Payments (CFC) were significant this quarter due to system defect fixes in January and June allowing more amounts payable to be calculated. Further fixes for amounts recoverable should be implemented in the next release. As outlined in Note [2], there are 2 approved modifications related to CFC, which were implemented in systems in June.</p> <p>As with previous quarters, the new settlement rules have impacted imperfections costs. In particular, the rule that generators are paid the better of the imbalance price and their offer price has resulted in increases in imperfections this quarter against the allowed budget. The deviation of both imbalance prices and generator offer prices have been greater than forecast.</p>	
<b>Reserve Policy and TCGs <sup>[6]</sup></b>	Primary & Secondary Operating Reserve 75% LSI <sup>[7]</sup> , TCG data as forecast per submission	No significant change from forecast in this quarter.	

<i>Key Factors Affecting Imperfections Costs</i>	<i>Forecast Assumptions for TY1819<sup>[11]</sup></i>	<i>Actual TY1819</i>	<i>Impact<sup>[12]</sup></i>
<b>Reserve Provision</b>	Data as per forecast submission	The minimum daytime operating reserve requirement in Ireland was 135 MW compared to the forecasted figure of 110 MW, thus increasing DBC.	↑
<b>System Demand</b>	Data as per forecast submission	Actual system demand was broadly in line with that forecast.	→
<b>Forced Generation Outages</b>	Data as per forecast submission	Average actual rate for this quarter was 15.21% <sup>[8]</sup> . This is significantly higher than forecast and was a significant driver to increased DBC over the quarter.	↑
<b>Scheduled Generation Outages</b>	Data as per forecast submission	Scheduled generator outages were broadly in line with those forecast.	→
<b>Forced Transmission Outages</b>	No outages forecast	There were some forced outages, including 400 kV and 220 kV, which resulted in constrained generation.	↑
<b>Scheduled Transmission Outages</b>	Data as per forecast submission	Scheduled transmission outages were broadly in line with those forecast.	→
<b>Commercial Offer data - Fuel Costs &amp; Carbon<sup>[9]</sup></b>	Data as per forecast submission	Wholesale fuel prices for the quarter were as follows; Gas: 20% lower than forecast, Coal: 25% lower, Distillate: 12% higher, Oil: 14% higher and Carbon: 154% higher.	↓
<b>Wind Variability</b>	Data as per forecast submission	Installed all-island capacity at period end: 5,009MW <sup>[10]</sup> Average Wind Capacity Factor for Q3 was 22%, which was broadly in line that forecast.	→

#### *Mitigation Measures*

The following are a list of mitigation measures undergoing review to seek to increase downward pressure on imperfection costs:

1. Daily review of Non-Compliances / Performance Monitoring events e.g. trips;
2. Weekly review of imperfections costs and drivers;
3. Ongoing review of Reserve Policy and TCGs [6];
4. Flexibility services as required;
5. Grid Code/ Trading and Settlement Code review and modifications

#### *Notes*

[1] Not all settlement cost components had an equivalent pre 01/10/2018.

[2] Fixed Cost Payments/Charges (which include a calculation for Make Whole Payments) were introduced as part of Trading and Settlement Code Part B. Unintended consequences of this calculation have led to significant Make Whole Payments to units with negative imbalance revenue. A modification (Mod\_34\_18) to change the rules around Make Whole Payments for negative imbalance revenue was approved by the SEM Committee, effective 27 January 2019. In addition, Modification Proposal Mod\_07\_19 "Correction to No Load Cost" has been approved by the Modifications Committee effective 03 May 2019. These were both implemented in the June release and have the effect of reducing CFC. For settlement runs between the effective dates of the modifications and the June release, the changes in CFC are not reflected in the values presented. This will be corrected as part of resettlement. However, a fix is still required for the Recoverable Cost Start Up defect (CSUR – due to heat state) and should be implemented in the next release.

In addition, Modification\_09\_19 "Removal of Locational Constraints from Imbalance Pricing Calculation" has been approved by the Modifications Committee effective 02 May 2019, which has an effect on imperfections costs by changing the units settled on Complex COD due to being Flagged or Tagged. M+4 resettlement have begun and CFC has increased due to defect fixes.

The imperfections cost forecast includes an estimate for Make Whole Payments. Make Whole Payments are not subject to the incentive process.

[3] Includes Other System Charges up to June 2019, as published at [www.eirgridgroup.com](http://www.eirgridgroup.com) and [www.soni.ltd.uk](http://www.soni.ltd.uk).

[4] Positive value indicates outturn is higher than forecast. Negative value indicates outturn is lower than forecast.

[5] A number of defects have been identified in the settlement of interconnectors. A recent estimate of the net position at the end of Q3 is a charge to the TSOs of €8.5m. This has not been included in the figures in table above as it was based on shadow settlement

[6] TCGs mean Transmission Constraint Groups or Operational Constraints as published at [www.eirgridgroup.com](http://www.eirgridgroup.com) and [www.soni.ltd.uk](http://www.soni.ltd.uk).

[7] LSI means the Largest Single Infeed which is used in the calculation of the system reserve requirement.

[8] Calculated from the average monthly all-island forced outage rates from April 2019 to June 2019.

[9] The forecast and actual fuel and carbon costs were based on data taken from Thomson Reuters.

[10] The installed wind capacity is the May 2019 figure as published at [www.eirgridgroup.com/how-the-grid-works/renewables](http://www.eirgridgroup.com/how-the-grid-works/renewables), as full data for June was not available at the time of publication.

[11] Forecast is over an annual time horizon. Information and figures are for this period unless otherwise stated. Forecast assumptions are published at: <http://www.semcommittee.eu>

#### *Component Description*

Fixed Cost Charges/Payments: Payments for additional fixed costs incurred, or charges for fixed costs saved from dispatching a unit differently to its market position, if not sufficiently covered through the unit's other payments or charges.

Dispatch Balancing Costs are made up of the following components:

- CPremiums: Paid when an offer is scheduled in balancing (and delivered) at an offer price above the imbalance settlement price.
- CDiscounts: Paid when a bid is scheduled in balancing (and delivered) at a bid price below the imbalance settlement price.
- CABBPO/ CAOPO: Bid Price Only and Offer Price Only Payments and Charges, adjustment payment or charge to result in net settlement at the offer price for increments, or bid price for decrements, for undo actions on generators.
- CCURL: Adjustment payment or charge to result in net settlement at a specific curtailment price for curtailment actions on generators.
- CTEST: Charges applied to units under test.
- CUNIMB: Charges for imbalances, and bids and offers accepted in balancing but not delivered, which were outside of a tolerance. Undelivered quantities are settled at the imbalance settlement price.