

	2018/2019 YTD Outturn (€m)	2017/2018 YTD Outturn (€m)	2018/2019 Q2 Outturn (€m)	2017/2018 Q2 Outturn (€m)
CPREMIUM	68.7		30.3	
CDISCOUNT	58.7		30.2	
CABBPO	2.8		0.6	
CAOPO	2.9		1.6	
CTEST	-0.1	Note [1]	-0.1	Note [1]
CUNIMB	-2.3		-1.3	
CCURL	-3.0		-0.8	
<b>Dispatch Balancing Costs (DBC)</b>	<b>127.7</b>	<b>112.6</b>	<b>60.5</b>	<b>60.3</b>
<b>Fixed Cost Charges/Payments (CFC) [2]</b>	<b>30.1</b>	<b>3.6</b>	<b>24.4</b>	<b>2.1</b>
<b>Energy Imbalance</b>	Note [5]	-1.7	Note [5]	-1.0
<b>Other System Charges (OSC) [3]</b>	<b>-3.7</b>	<b>-6.1</b>	<b>-1.9</b>	<b>-3.6</b>
<b>Imperfections Costs Outturn</b>	<b>154.1</b>	<b>108.4</b>	<b>83.0</b>	<b>57.8</b>
<b>Imperfections Costs Forecast</b>	<b>112.5</b>	<b>108.0</b>	<b>55.7</b>	<b>54.4</b>
<b>Variance: Forecast Vs. Outturn [4]</b>	<b>41.6</b>	<b>0.4</b>	<b>27.3</b>	<b>3.4</b>
<b>Variance %</b>	<b>37.0%</b>	<b>0.4%</b>	<b>49.0%</b>	<b>6.3%</b>

### Key Points

- Costs are 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.

Key Factors Affecting Imperfections Costs	Forecast Assumptions for TY1819 [11]	Actual TY1819	Impact [12]
<b>Regulatory Policy Changes</b>	Data as per forecast submission	<p>As with Q1, 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 large 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> <p>An example of the impact of high imbalance prices on imperfections cost occurred on 24/01/2019. On this day there was a record high imbalance price which resulted in an imperfections cost of ~€4.2m for this single day. Further information on this day can be found in SEMO Report on the Imbalance Prices calculated on 24/01/2019 at <a href="http://www.sem-o.com/documents/general-publications">www.sem-o.com/documents/general-publications</a>.</p> <p>The Fixed Cost Charges/Payments (CFC) increased significantly this quarter due to a system defect fix in January. However, there are currently 2 modifications related to CFC that have yet to be implemented in the systems which are likely to reduce the CFC component. For further details of these CFC modifications, see Note [2] below.</p>	↑
<b>Reserve Policy and TCGs [6]</b>	Primary & Secondary Operating Reserve 75% LSI [7] TCG data as forecast per submission	No significant change from forecast in this quarter.	→
<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 17.90% [8]. 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 [9]</b>	Data as per forecast submission	Wholesale fuel prices for the quarter were as follows; Gas: 8% lower than forecast, Coal: 4% lower, Distillate: 7% higher, Oil: 5% higher and Carbon: 120% higher. Therefore the cost of constrained generation was reasonably consistent with the forecast.	→
<b>Wind Variability</b>	Data as per forecast submission	Installed all-island capacity at period end: 4,958MW [10] Average Wind Capacity Factor for Q2 was 34%, which was broadly in line with 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 <sup>[6]</sup>;
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.

Both these calculations will be implemented in the Market Systems at a later date.

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 March 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] Please note that detailed energy imbalance costs (including those for interconnectors) were not available at the time of publication.

[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 January 2019 to March 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 February 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 March 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>

[12] Increase from Forecast



Decrease from Forecast



No Change from Forecast



### 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.