

	2017/2018	2016/2017	2017/2018	2016/2017
	YTD Outturn (€m)	YTD Outturn (€m)	Q3 Outturn (€m)	Q3 Outturn (€m)
Dispatch Balancing Costs (DBC)	155.2	107.3	42.6	26.5
Make Whole Payments	6.0	2.3	2.4	1.1
Energy Imbalance	-2.0	-2.0	-0.2	-1.2
Other System Charges (OSC) <sup>[2]</sup>	-8.8	-6.5	-2.7	-2.2
<b>Imperfections Costs Outturn</b>	<b>150.4</b>	<b>101.1</b>	<b>42.1</b>	<b>24.2</b>
<b>Imperfections Costs Forecast</b>	<b>143.5</b>	<b>113.1</b>	<b>35.5</b>	<b>31.0</b>
Variance: Forecast Vs. Outturn	6.9	-12.0	6.6	-6.8
Variance % <sup>[3]</sup>	4.8%	-10.6%	18.6%	-21.9%

## Key Points

- The Imperfections Costs Forecast are profiled based on the submitted model which assumed zero payments for both OSC and Energy Imbalances.
- The Imperfections Costs Outturn are subject to fluctuation dependent upon power system conditions and will vary significantly within the year relative to the forecast. The differing power system conditions and external conditions (for example system demand) need to be taken into account when comparing quarterly periods and year to date figures.

Key Factors Affecting Imperfections	Forecast Assumptions for TY1718 <sup>[5]</sup>	Actual TY1718	Impact <sup>[11]</sup>
Reserve Policy and TCGs <sup>[6]</sup>	Primary & Secondary Operating Reserve 75% LSI <sup>[7]</sup> TCG data as forecast per submission	65% SNSP limit this has been made permanent as of 9th April.  Removal of constraint on certain Northern Ireland windfarms with relays set to trip at 0.4 Hz/s RoCoF.  There have been a number of changes to Dublin TCGs, including the operation of PBA and PBB in open cycle mode contributing towards the requirement for 2 large generators to be on load at all times in the Dublin area.	→
Reserve Provision	Data as per forecast submission	Following the discontinuation of the STAR scheme at the end of April there has been a 54 MW reduction of static reserve. The minimum daytime operating reserve requirement in Ireland has increased from 110 MW to 155 MW as a result.	↑
Regulatory Policy Changes	Data as per forecast submission	No change from forecast in this quarter.	→
System Demand	Data as per forecast submission	System demand was marginally lower than forecast	→
Forced Generation Outages	Data as per forecast submission	Average actual rate for this quarter: 7.92% <sup>[8]</sup> .	↑
Scheduled Generation Outages	Data as per forecast submission	There were no significant scheduled generator outages during this period.	→
Forced Transmission Outages	No outages forecast	A few forced outages in the Dublin Area resulted in re-dispatch of generation	↑

<b>Scheduled Transmission Outages</b>	Data as per forecast submission. N-S Tie Line maintenance outage was not included in the forecast submission.	There was a 10 day N-S Tie Line outage between Friday 30th March and 8th April for essential planned maintenance. Ireland and Northern Ireland were run as separate synchronous systems for the duration of the outage. In order for the TSO to maintain system stability there were irregular dispatch patterns, curtailment and constraining of renewable generation and irregular interconnector flows.	↑
<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: 35% higher than forecast, Coal c. 40% higher, Distillate c. 40% higher, Oil c. 29% higher and carbon was c. 202% higher. Therefore the cost of constraining on generation (Gas and Coal units) was higher than forecast and has increased DBC over the quarter.	↑
<b>Wind Variability</b>	Data as per forecast submission	Installed Capacity at period end: 4616.9 MW <sup>[10]</sup> Estimated Capacity Factor Q3: 20% The wind capacity factor was lower than forecast (27%) during the quarter, which decreased DBC as more price making generators were in merit.	↓

**Mitigation Measures**

The following are a list of mitigation measures undergoing review to seek to increase downward pressure on Imperfection Co

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. Grid Code review and modifications;
5. Review of requirement of Dublin units for voltage control.

**Notes**

- [1] Costs are actual initial settlement figures. There may be variations in the final figures as a result of resettlement or regulator approved derogations.
- [2] Other System Charges amounts as published at [www.eirgridgroup.com](http://www.eirgridgroup.com).
- [3] Positive value indicates under forecast, Negative value indicates over forecast.
- [4] Imperfections Cost Forecast includes forecast for Make Whole Payments. Make Whole Payments are not subject to the incentive process.
- [5] 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>
- [6] TCGs mean Transmission Constraint Group or Operational Constraints as published at [www.eirgridgroup.com](http://www.eirgridgroup.com).
- [7] LSI means the Largest Single Infeed which is used in the calculation of the system reserve requirement.
- [8] Forced outage percentage availability is an average of Ireland's April to June figures.
- [9] Fuel and Carbon Costs forecast and actual performance based on data taken from Thomson Reuters.
- [10] Installed capacity is as of end May 2018, end of quarter data not currently available.
- [11] Increase from Forecast   
Decrease from Forecast   
No Change from Forecast 