

Costs <sup>[1]</sup>	2016/2017	2015/2016	2016/2017	2015/2016
	YTD Outturn (€m)	YTD Outturn (€m)	Q1 Outturn (€m)	Q1 Outturn (€m)
Dispatch Balancing Costs (DBC)	40.1	37.5	40.1	37.5
Make Whole Payments	0.5	0.7	0.5	0.7
Energy Imbalance	0.2	-1.2	0.2	-1.2
Other System Charges (OSC) <sup>[2]</sup>	-0.7	-2.1	-0.7	-2.1
<b>Imperfections Costs Outturn</b>	<b>40.1</b>	<b>34.9</b>	<b>40.1</b>	<b>34.9</b>
<b>Imperfections Costs Forecast</b>	<b>37.8</b>	<b>40.3</b>	<b>37.8</b>	<b>40.3</b>
<b>Variance: Forecast Vs. Outturn</b>	<b>-2.3</b>	<b>5.4</b>	<b>-2.3</b>	<b>5.4</b>
<b>Variance %<sup>[3]</sup></b>	<b>-6.1%</b>	<b>13.4%</b>	<b>-6.1%</b>	<b>13.4%</b>

## 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.

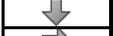
Key Factors Affecting Imperfections Costs	Forecast Assumptions for TY1516 <sup>[5]</sup>	Actual TY1516	Impact <sup>[11]</sup>
<b>Reserve Policy and TCGs<sup>[6]</sup></b>	Primary & Secondary Operating Reserve 75% LSI <sup>[7]</sup> TCG data as forecast per submission	The removal of the temporary must-run of a unit in the North West Generation constraint helped mitigate DBC.	↓
<b>Reserve Provision</b>	Data as per forecast submission	Moyle now provides up to 50MW of dynamic reserve. EWIC was out of commission for the majority of this quarter and did not provide reserve.	→
<b>Regulatory Policy Changes</b>	Data as per forecast submission	No change from forecast in this quarter.	→
<b>System Demand</b>	Data as per forecast submission	Actual system demand figures were slightly higher than forecast which decreased DBC.	↓
<b>Forced Generation Outages</b>	Data as per forecast submission	Average actual rate for this quarter: 5.67% <sup>[8]</sup>	→
<b>Scheduled Generation Outages</b>	Data as per forecast submission	There were no significant scheduled generator outages during this period.	→
<b>Forced Transmission Outages</b>	No outages forecast	The outage of EWIC required 3 units to be on in the Dublin area at all times. This required expensive units to be constrained on at times. This resulted in an increase in DBC.	↑
<b>Scheduled Transmission Outages</b>	Data as per forecast submission	There were a number of changes in the actual scheduled outages against those used in the forecast. The full impact will be identified as part of the incentive process.	→
<b>Commercial Offer data - Fuel Costs &amp; Carbon<sup>[9]</sup></b>	Data as per forecast submission	A number of units bid in unanticipated Gas Transportation Capacity charges in Northern Ireland. This increased DBC. Wholesale fuel prices were generally higher than forecast for this quarter; Gas c. 15% higher, Coal c. 85% higher, Distillate c. 0.1% lower and Oil c. 5% higher and carbon was c. 36% lower. Therefore the cost of constraining on generation (i.e. Gas units) was higher than forecast, thus increasing DBC.	↑
<b>Wind Variability</b>	Data as per forecast submission	Installed Capacity at period end: 3623 MW <sup>[10]</sup> Estimated Capacity Factor: 28% <sup>[10]</sup> The wind capacity factor was lower than forecast during the quarter, which decreased DBC.	↓

### 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 review and modifications; and
6. System Operator counter trading on the Interconnectors.

### 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). OSC for December are not yet available.
- [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] Percentage availability is an average of the Ireland October to December figures.
- [9] Fuel and Carbon Costs forecast and actual performance based on data taken from Thomson Reuters.
- [10] Percentage capacity factor is estimated as the October - December figures are currently not available.
- [11] Increase from Forecast        
Decrease from Forecast        
No Change from Forecast      