

ESO Forward Plan 2019-20

Monthly Reporting - October

21 November 2019



Foreword

Welcome to our monthly performance report for October 2019. Each month we report on a subset of metrics, which have data available at monthly granularity. Our mid-year report was [published](#)¹ in October, and gave a fuller picture of our performance in the first half of the 2019-20 reporting year together including an update on our progress against the deliverables set out in our current [Forward Plan](#)².

A summary of our monthly metrics covering October is shown in Table 1 below.

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Metric	Performance	Status
Balancing cost management	£130.8m outturn against £103.3m benchmark	●
Energy forecasting accuracy	Demand forecast error met target; wind forecast error below target.	●
Month-ahead BSUoS forecast	6% forecasting error	●
System access management	3.02/1000 cancellations	●
Connections agreement management	100%	●
Right first time connection offers	88%	●

●	Exceeding expectations
●	Meeting expectations
●	Below expectations

Table 1: Summary of monthly metrics

You can find out about our vision, plans, deliverables and full metric suite in the [Forward Plan pages](#) of our website³. We welcome feedback on our performance reporting to box.soincentives.electricity@nationalgrideso.com.



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¹ <https://www.nationalgrideso.com/document/154826/download>

² <https://www.nationalgrideso.com/document/140736/download>

³ <https://www.nationalgrideso.com/about-us/business-plans/forward-plans-2021>

Role 1 Managing system balance and operability

Operate the system safely and securely, whilst driving overall efficiency and transparency in balancing strategies across time horizons

Support market participants to make informed decisions by providing user friendly, comprehensive and accurate information

Metric 1 – Balancing cost management

October 2019 Performance

For monthly breakdown of costs, please refer to our [balancing costs webpages](#)⁴.

	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
Benchmark cost (£m)	83.2	97.5	75.3	85.6	87.4	96.6	103.3	98.4	91.0	82.6	81.9	81.1	1064
Additional cost forecast due to WHVDC fault (£m)	11.3	11.3	1	0	0.5	1	0	0	0	0	0	0	25.1 ⁵
Benchmark adjusted for WHVDC (£m)	94.5	108.7	76.3	85.6	87.9	97.6	103.3	98.4	91.0	82.6	81.9	81.1	1089
Outturn cost (£m)	78.7	60.5	85.3	65.5	105.3	107.9	130.8						634 [YTD]

Table 2: Monthly balancing cost benchmark and outturn.

Note that we are including an adjusted benchmark figure due to restrictions on Western HVDC link availability during April, May, June, August and September as these events were outside of our control.

To apply seasonality to the monthly benchmark figures, we have apportioned the calculated benchmark for the year (£1064m) across the 12 months in the same ratio as our [year-ahead monthly BSUoS forecast](#)⁶.

⁴ <https://www.nationalgrideso.com/balancing-data>

⁵ The number has been corrected on 11 Dec 2019.

⁶ <https://www.nationalgrideso.com/document/141946/download>

Supporting information

October balancing costs were higher than the benchmark as a result of higher constraint costs due to thermal constraints in the North and South East, which were driven by adverse weather and system outages. Increased volatility on the interconnectors due to higher continental prices also led to an increase in costs for energy balancing.

Metric 3 – Energy forecasting accuracy

October 2019 Demand Forecasting Performance

Figure 1: Demand Forecasting Performance, shows our performance for October as the green histogram against the blue target line.

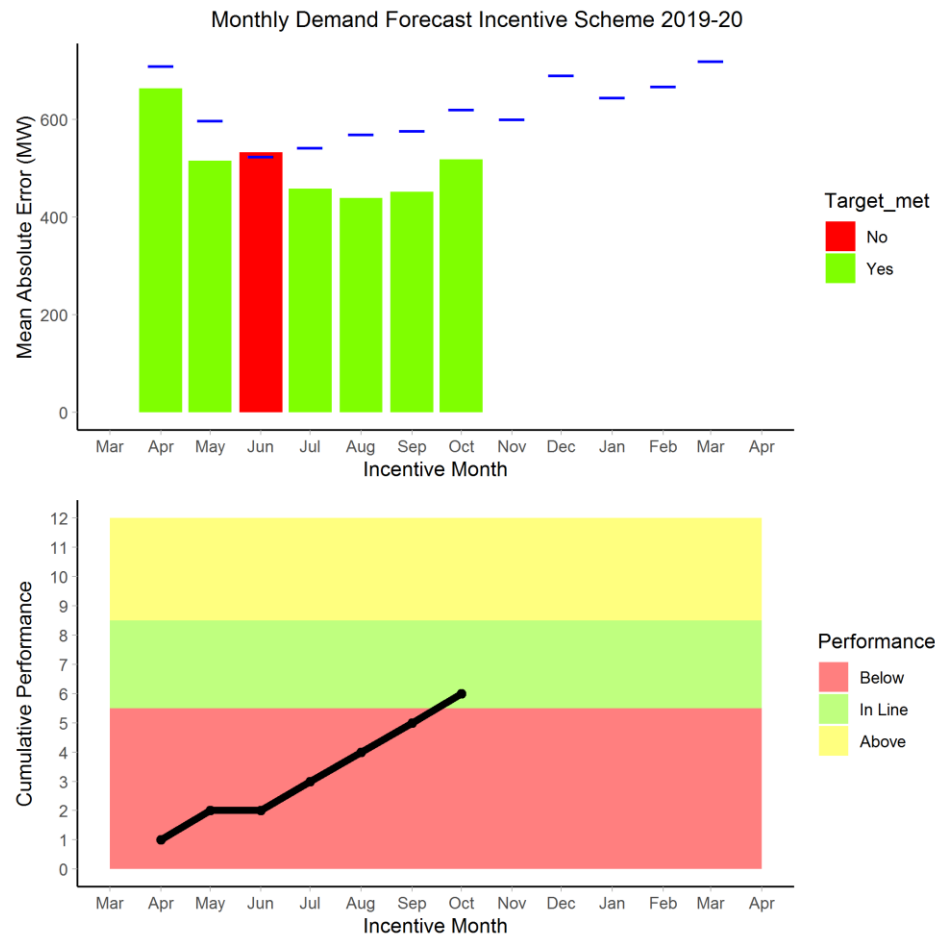


Figure 1: Demand Forecasting Performance

Supporting information

In October 2019, our day ahead demand forecast performance beat our target of 621 MW. October's MMAE (monthly mean absolute error) was 519 MW. This was the sixth month for this financial year (2019-20) for which this target has been met.

The forecasting team is continuing to trial the new forecasting tool to help improve accuracy.

Performance benchmarks

At the end of the year, we will count how many months we have met our targets and apply the benchmarks:

Below benchmark: 0-5 months;

In line with benchmark: 6-8 months;

Exceeds benchmark: 9-12 months.

October 2019 Wind Generation Performance

Figure 2: Wind Forecasting Performance, shows our performance this month as the green histogram, against the blue monthly target.

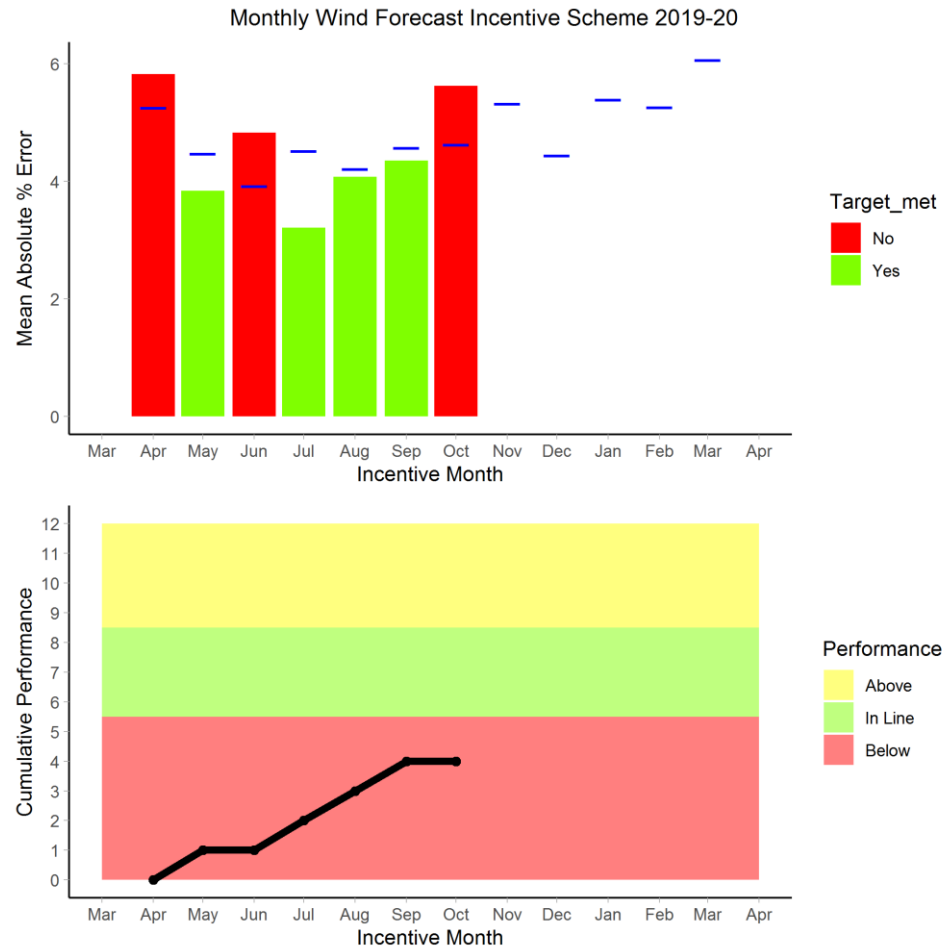


Figure 2: Wind Forecasting Performance

Supporting information

In October 2019, our day ahead wind forecasts were above the target of 4.62%. October's MMAPE (monthly mean absolute percentage error) was 5.62%.

October is one of the windier months of the year in the UK. The first part of the month was particularly unsettled with multiple storms crossing the country and the Jet Stream in a non-standard location. During this time, ex-Hurricane Lorenzo passed by the British Isles, leading to very high wind speeds in the North. These passing systems are generally difficult to predict; both in timing and magnitude.

We also experienced an increase in wind power forecast error from some wind farms, who submitted incorrect availability declarations via our Transmission Outage and Generator Availability (TOGA) system. If a wind farm declares that it is unavailable and then however chooses to generate, this results in large forecasting errors.

Performance benchmarks

At the end of the year, we will count how many months we have met our targets and apply the benchmarks:

Below benchmark: 0-5 months;

In line with benchmark: 6-8 months;

Exceeds benchmark: 9-12 months.

Notable events this month

Electricity Operational Forum

The Commercial team held a successful Electricity Operational (Ops) Forum at Faraday House in Warwick on 23 October. The Ops Forum focuses on operational and commercial issues associated with the operation of the electricity transmission system.

Over 150 delegates from across the industry attended and particularly welcomed the sessions giving an overview of the 9 August incident and an update on our Pathfinder projects. An IT Change Forum also ran throughout the day where attendees could learn about the ESO's work to enable future changes to markets.

Feedback and engagement from delegates has been very positive, with a current score of 8.4 out of 10 on the feedback survey and over one hundred questions on a wide range of topics.

For more information on the Electricity Operational Forum, please click here: <https://www.nationalgrideso.com/balancing-services/transmission-operational-forum>

Role 2

Facilitating Competitive Markets

Ensure the rules and processes for procuring balancing services maximise competition where possible and are simple, fair and transparent

Promote competition in wholesale and capacity markets

Metric 9 – Month ahead forecast vs outturn monthly BSUoS

October 2019 Performance

Month	Actual	Month-ahead Forecast	APE	APE>20%	APE<10%
April-19	2.86	3.02	0.05	0	1
May-19	2.47	3.12	0.26	1	0
June-19	3.35	3.07	0.08	0	1
July-19	2.73	3.23	0.18	0	0
Aug-19	3.97	3.34	0.16	0	0
Sept-19	3.89	3.71	0.05	0	1
Oct-19	3.79	4.02	0.06	0	1

Table 3: Month ahead forecast vs. outturn BSUoS (£/MWh) October 2019 Performance

Performance benchmarks

Exceeds benchmark: Exceeding is meeting baseline performance and five or more forecasts less than 10% APE.

In line with benchmark: Of the 12 forecasts over a financial year, baseline performance is less than five forecasts above 20% APE.

Below benchmark: five or more forecasts above 20% APE.

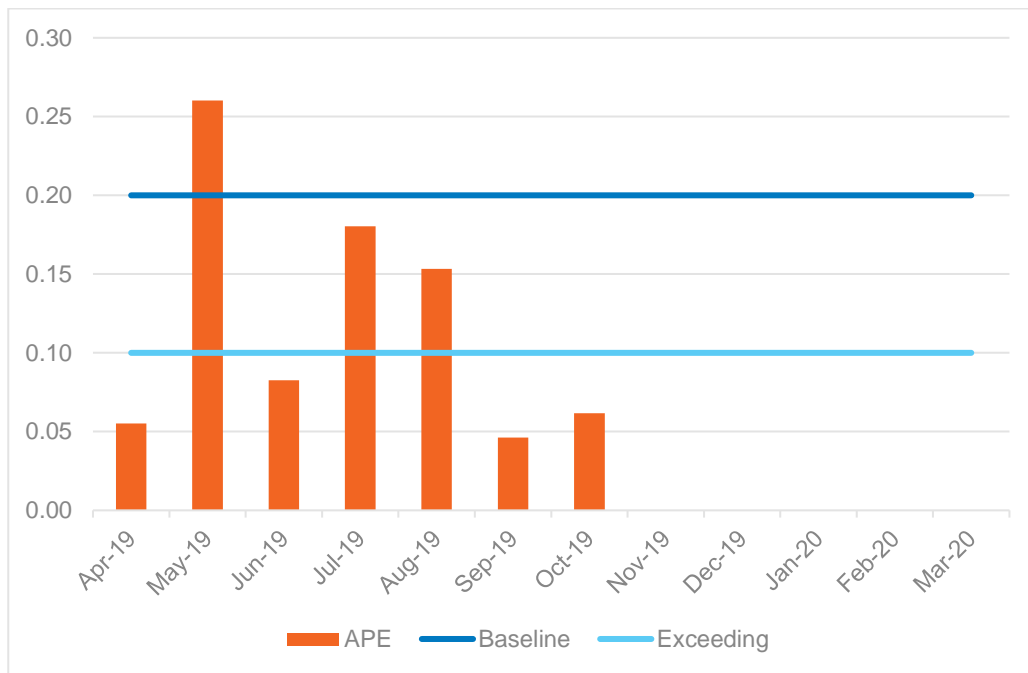


Figure 3: Monthly BSUoS forecasting performance

Supporting information

The cost of balancing the system in October was higher than September based on an increase in Constraint Costs and Energy Imbalance. However, the BSUoS charge was lower due to the volume being significantly higher. The forecast accuracy was good with an APE of 6%. This is our fourth month with APE < 10% and our average monthly APE is 12%.

Notable events this month

Balancing and Charging Forum

The Revenue team held a successful Balancing and Charging Forum at Faraday House in Warwick on 16 October (aimed at suppliers) and another forum on the 17 October (aimed at generators). The forum focused on charging and settlement of BSUoS, TNUoS and Ancillary Services. Based on customers' feedback and suggestions, the team introduced interactive workshops and held in-depth discussions on the topics that the customers requested.

On day one, 30 delegates from across the industry attended, and on day two there were 27 attendees. The sessions were welcomed and there were many positive comments about the quality of the presentations.

Feedback and engagement from delegates has been excellent, with a score of 8.4 out of 10 on the feedback survey for the supplier dedicated day and score of 8.9 out of 10 on the feedback survey for the generator dedicated day.

Roles 3 & 4

Facilitating whole system outcomes and supporting competition in networks

Coordinate across system boundaries to deliver efficient network planning and development

Coordinate effectively to ensure efficient whole system operation and optimal use of resources

Facilitate timely, efficient and competitive network investments

Metric 11 – System access management

October 2019 Performance

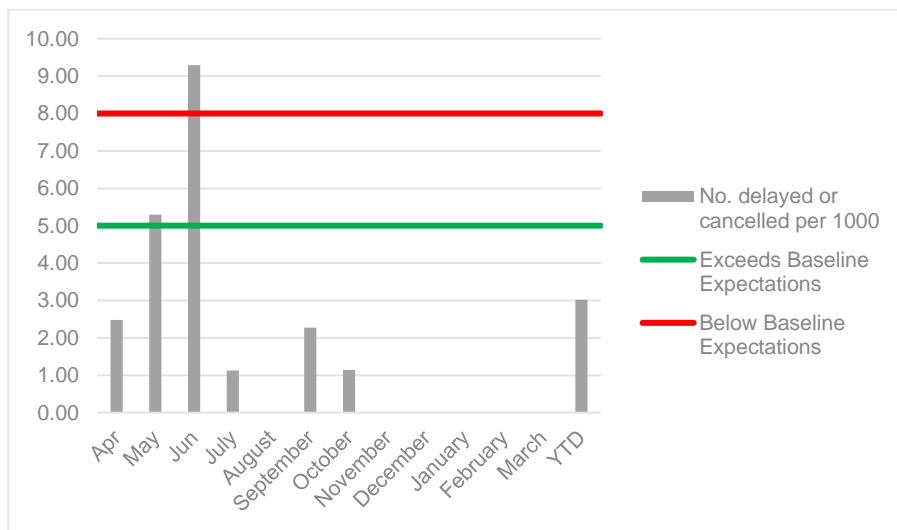


Figure 4: Number of outages delayed by > 1 hour, or cancelled, per 1000 outages

Supporting information

For October, we had an average of 3.02 outage cancellations per 1000 outages, this is above the 'Exceeds Expectations' criteria of 5 per 1000 outages, which was an improved performance against previous months.

We are consistently exceeding the benchmark, as our communication with our customers has improved and the outage plan is being optimised. In October, we did not have any major issues with our IT systems, which has meant outages are effectively planned and therefore we are continuing to deliver greater access to the transmission system for our customers.

Performance benchmarks

Exceeds benchmark: Less than or equal to 5 per 1,000 outages

In line with benchmark: Between 5 and 8 per 1,000 outages

Below benchmark: More than 8 per 1,000 outages

Metric 13 – Connections agreement management

October 2019 Performance

Number of agreements that need updating	Number of agreements that need updating identified 9 months ago	Number of agreements updated within 9 months	Percentage of agreements updated within 9 months	Status
3	0	2	100%	●

Table 4: Connections agreement management performance

Performance benchmarks

2018-19 performance: = 86%.

Exceeds benchmark: >90% of agreements to be updated within nine months of notification.

In line with benchmark: 80-90% of agreements to be updated within nine months of notification.

Below benchmark: < 80% of agreements to be updated within nine months of notification.

Supporting information

The requirement to update connection agreements arises from a situation where new generation connects, and the ESO needs to amend its arrangements with existing generators connected in that region to ensure that it does not incur unnecessary balancing costs as a result of restricting generation.

We consider that 9 months is a reasonable timeframe for updates of this type to be agreed with customers. We have identified three agreements of this type, two of which have been signed by the customer in April and July respectively. The remaining agreement is currently with our customer for update. All agreements are within the 9-month timeframe.

We are working to identify where any further changes to connection agreements of this type are required.

Metric 14 – Right first time connection offers

October 2019 Performance

Connections Offers	Results
Year to date number of connections offers	102
Year to date ESO related reoffers	12
Year to date percentage of Right First Time connections offers determined from ESO related reoffers	88%

Table 5: Connections re-offers data

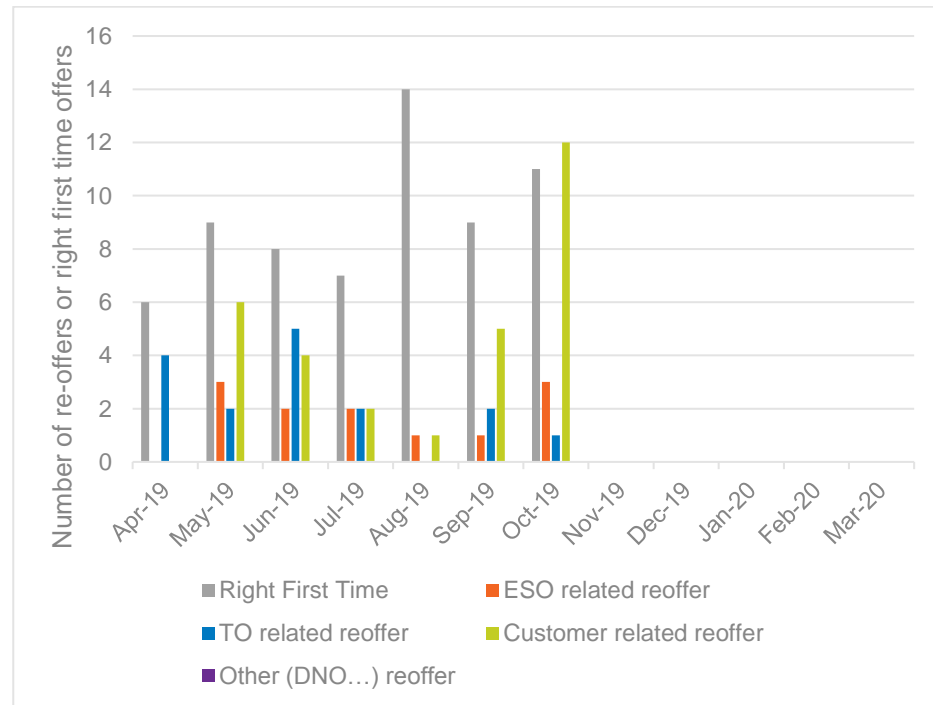


Figure 5: Connections offers monthly performance

Supporting information

In October, we processed 20 offers. The three ESO related re-offers this month were due to updates required to technical appendices, corrections to figures in Appendix G, and omission of a technical appendix. There was a slight percentage decrease in our performance compared to last month. Our year to date performance is now 88%.

Performance benchmarks

2018-19 performance: = 94%.

Exceeds benchmark: >95% of offers right first time.

In line with benchmark: 95% of offers right first time.

Below benchmark: < 95% of offers right first time.

Notable events this month

Stability Pathfinder

Stability is the ability of the system to withstand a network disturbance and continue operating normally. Conventional power generation technology as used in gas, coal, nuclear and hydropower plants has provided the benefit of key characteristics such as inertia which have generally helped keep the system stable. In July 2019, we published a Request for Information (RFI) to collect industry feedback on technical limitations and associated timescales of potential stability solutions needed to keep the system stable as the contribution of conventional power generation technology declines. On 21st October, we published the follow up to our RFI feedback.

Our latest stability pathfinder document, outlines the timelines for delivering the new stability solutions, including a tender that has been launched for a stability service to meet a requirement across GB. This multi-year contract, starting between 1 April 2020 and 1 April 2021, is our first tender for this type of service. This approach has been developed following the stability request for information as part of our network development roadmap.

For more information on pathfinder documents please click here: <https://www.nationalgrideso.com/publications/network-options-assessment-noa/network-development-roadmap>

For more information on the tender for stability services please click here: <https://www.nationalgrideso.com/balancing-services/system-security-services/transmission-constraint-management?market-information>

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