

## Monthly Monitoring Meeting

Monday 30 November 2020, 10:00 – 12:00

### Teleconference

### AGENDA

Ref	Time	Title	Owner
1	10:05 – 10:25	SME slot – Winter Outlook Report	ESO
2	10:25 – 10:45	SME slot – Balancing Costs	ESO
3	10:45 – 11:05	SME slot – Power Potential	ESO
4	11:05 – 11:15	ESO to highlight any notable points from the published report	ESO
5	11:15 – 11:25	ESO to take questions on the published report	ESO
6	11:25 – 11:35	Ofgem to give feedback on ESO performance	Ofgem
7	11:35 – 11:45	Review actions & AOB: <ul style="list-style-type: none"><li>• Next steps for mid year process</li><li>• Date of December meeting</li><li>• Pennine pathfinder delay</li></ul>	All

## Meeting record

### Monthly Monitoring Meeting

**Date:** 30 November 2020  
**Time:** 10:00 – 12:00  
**Venue/format:** Teleconference

#### ACTIONS

Meeting No.	Action No.	Date Raised	Target Date	Resp.	Description	Status
28	66	3 Nov	8 Jan	ESO	ESO to share views on the interactions between the Constraint Management Pathfinder and the possible RIIO-T2 incentive that could allow TOs to earn a payment based on a share of the cost saving actions that may reduce constraint costs	Open

#### MAIN ITEMS OF INTEREST

##### 1. SME slot – Winter Outlook Report

###### Key points:

- Due to uncertainty caused by COVID-19, ESO are examining a range of scenarios for margins rather than a single forecast and expect to see downward pressure on demand compared to last winter.
- This year's Outlook shows an electricity margin that is well within the Reliability Standard set by the government. Operability remains complex.
- If there is not a negotiated trade deal with the European Union, there will be changes to the trading arrangements for the interconnectors, but this is not envisaged to have any material implications.
- The de-rated margin is expected to be lower than last year due to generation outages and plant closures.
- Transmission demands are expected to be lower than previous years Weather corrected peak transmission system demand (TSD) to be 44.7 GW. This includes a 4% suppression of electricity demand at peak due to COVID-19
- There could be typically export from GB to Northern Ireland and Ireland during peak times, but there may be some import through Moyle and EWIC at times of high wind output in Ireland, or during periods of system stress in GB

###### Q&A section:

Ofgem asked what the main driver was for system margin being lower than last winter. ESO responded that the generation outages, particularly of nuclear and gas generators,

meant that there was less capacity in the winter. But the margin for this winter meets the reliability standard regardless, and margins are further improved by a forecast offset by the demand reduction effect.

Ofgem asked if the winter analysis could be open to scrutiny by stakeholders. ESO said it was taken to the weekly transparency forum for stakeholder engagement and Q&A, ESO also published the data workbook including all the break down detail of the analysis. There are a lot of opportunities for stakeholders to access the work and ask questions and the ESO will publish its annual Winter Review and Consultation to engage further with stakeholders next year.

Ofgem asked if ESO analysed the demand isolating the impact of COVID-19 this year. ESO said the expected demand sat in between the previous two years. It is seen the demand trend is broadly flat instead of continuously dropping. ESO will consider the long term impact of COVID-19 on demand linking to economic activities in the next Future Energy Scenarios publication and the shorter term impact ahead of next winter in the Winter Outlook 2021/22.

## **2. SME slot – Balancing costs**

The Electricity System Operator (ESO) presenter gave commentary on the £142.4m outturn against the £126.9m benchmark.

Key points:

- October this year was slightly higher than last year but with a similar breakdown of costs with Energy, Constraints, RoCoF and Black Start all up slightly on last year with only Reactive falling slightly.
- October costs were slightly higher than September:
- October demand was about 3-5% lower than expected.
- There has been a re-distribution of costs from Constraints – Ancillary as the Sizewell contract and ODFM services ended and an increase in energy categories such as Energy Imbalance and Response.
- The reduction in Constraints – Ancillary has been offset against an increase in thermal constraints and constrained sterilised headroom as outages have continued later in the year than normal.
- Wind is slightly higher than October last year and the year before, but this is part of an ongoing trend as more wind is being developed and brought online.
- On Sunday the 25th the Western Link HVDC tripped, returning 3 hours later but only in Monopole operation until Monday evening.
- ESO has been working to mitigate the impact of delayed outages and save balancing costs: re-calling circuits, optimising competing constraints, reassessing response holding for largest loss and reviewing voltage control arrangements.

Q&A Section:

Ofgem asked what the ESO's backup plan was to deal with a potential Western Link HVDC fault given the generator outages delayed from the summer due to COVID-19. ESO replied the system was still operable but with more costs incurred for constraining wind generation

during the fault. The Western Link has been in service a higher proportion of the time this year compared to last year. It tripped in October and was back within three hours in monopole operation until the following evening. As the cost saving examples indicated ESO have been continuously optimising the cost on constraints in the operation plans.

Ofgem asked if ESO planned to hold more response to mitigate the risk from delayed outages over the winter. ESO said response and reserve requirements were continuously assessed against how the system was operating at that time. ESO will hold additional response according to system conditions during the period of low demand and uncertainty of wind. ESO has commissioned Dynamic Containment and is currently working on other new products to support system operation.

Ofgem asked what the ESO's future plans were for managing Sizewell, for which the contract ceased in October. ESO said they did not foresee any issues from Sizewell. As COVID-19 pandemic going forward, there might be further restrictions from the UK government next year. The Sizewell contract and Optional Downward Flexibility Management (ODFM) were introduced this year, but the experience shows that the downward level is manageable. ESO has adequate data to illustrate that 13GW demand can be managed effectively. The cost is now redistributed from the constraint to the energy category. There have been a lot of discussions around the two mitigation actions from the working tripartite, i.e. The Accelerated Loss of Mains Change Programme and Dynamic Containment. Ofgem will follow up with the tripartite group.

### **3. SME slot – Power Potential**

Key points:

- Power Potential is the world first project in dynamic voltage control from Distributed Energy Resources (DERs) and establishing new reactive power market from DERs.
- Power potential aims to build a Distributed Energy Resources Management System and create a regional reactive power market for DERs to provide services while keeping the distribution network secure.
- The trial region is around Bolney, Ninfield, Sellindge and Canterbury grid supply points.
- DER will receive a fixed fee for a fixed volume in wave 1, in line with the number of hours they are available. DER will join competitive daily auctions in wave 2.
- ESO engage with project participants and other interested parties via Regional Market Advisory Panel and hold regulation meetings to provide technical and commercial support to the trial as well as receiving critique and challenge.
- The key benefits for end consumers include deferring costly transmission network reinforcements, introducing competitive markets and increasing security on both transmission and distribution systems.
- Cost benefit analysis showed the potential consumer savings of £400m by 2050. It will be reviewed after the trials.

Q&A Section:

Ofgem asked how Power Potential coordinate with the DNO flexibility market. ESO replied that power potential focused on the reactive power market for voltage control while the

DNO flexibility market was for real power. ESO is aware of the flexibility market DNOs are working on and will make sure there is no conflict with the reactive power market in the later stage.

Ofgem asked what the main learnings were from Power Potential so far. ESO said the main learning was that they had underestimated the complexity when defining the minimum variable product at the beginning of the project. The platform was well designed with full functions; however, it took longer time to integrate this new technology into the DNO network than had been expected. The DNO has different tools and processes. Technological integration and coordination will be the next step. ESO will also ensure there is sufficient expert support in the area to avoid delays in the future.

Ofgem asked how the daily auctions in wave 2 will work with the reactive power reform in the longer term. ESO said as stated in the Forward Plan Addendum 2020-21 ESO will publish the strategy in Q3 2020-21 outlining how they will look to integrate learnings from all reactive power projects (pathfinders, Power Potential, DNO boundary investigations) to create a coherent plan for the development for the future of reactive power. The product roadmap will outline the approach to reactive procurement and the timelines to achieve this. Based on the lessons learned across projects that involve voltage and reactive power, engagement with the industry, and the publication of a strategy, ESO will provide further updates on how reactive power procurement may develop during 2021-22.

Ofgem commented that it was good to see the tangible development of reactive power products from the Power Potential and pathfinder projects.

#### **4. ESO to highlight any notable points from the published report**

ESO summarised the key points from the report.

#### **5. ESO to answer any questions which Ofgem have sent prior to the meeting regarding the recently published report**

Q1: Wind forecasting error was significantly higher, has the ESO made any learnings from this particular instance? How do these high errors feed into the work the ESO is doing on the Platform for Energy Forecasting? As we are seeing significant errors, is any work being progressed this year to address wind forecasting error? This might be an area where an SME slot on the Platform for Forecasting Project might be helpful.

Answer:

The higher than normal wind forecast error in October was mainly tied to 3 storms (Storms Alex, Barbara & Aiden). During storms, wind power forecast errors are generally caused by errors in the underlying weather forecasts themselves. For example, it's common to see mis-forecasts of the exact timing of wind-speed ramps, which can propagate through to large errors in the wind power forecasts that we publish. As a normal part of our work, we do progress discussions with our weather forecast provider, to feedback observations of such events, so that they can develop improvements to their systems.

A further piece of work, which is also an ongoing process, is to ensure that the models of our wind farm power curves are as up to date as possible. Some new wind farms were added to the GB fleet over the recent past (as noted in September's monthly report), and we're collecting generation and weather data in order to replace the default models for these sites with dedicated models. This is unlikely to be the main cause of October's error, however this is a normal process that we are progressing, as part of ensuring new and existing wind farms have the best available wind power models. For next year, FY21/22, it's worth noting that we are putting our current weather forecasting service out to competitive tender. This will ensure that we'll continue to benefit from best in class weather forecast accuracies, as well as adding new wind farm specific weather forecasts. Both of these activities will underpin and should improve our wind power forecasting accuracy.

These high errors evidence the need for flexible and adaptive energy forecasting modelling and hence PEF is actively developing solutions to support such an approach;

- PEF is implementing a flexible, frequent, automatic forecast model re-training process – machine learning & now casting;
- PEF is facilitating the provision of additional 70-80 weather forecast sites (mainly for wind);
- We have also acquired historical wind actuals for these weather sites – that can improve our wind forecast models;
- We have also used ElectraLink MPAN level generation metering data to build GSP level machine learning and advance statistical learning (ASL) non-machine learning forecast wind models (non-BMU);
- Learnings from the GSP level wind modelling can be implemented towards improving BMU level wind forecasts as well;
- We are exploring options to improve the quality, frequency, and granularity of our input data in PEF

Q2 The ESO has told us that a number of outages have been delayed into the Winter period. Do these outages coincide with high constrained areas? What proportion of these outages are 'on commission' and cannot be recalled? How is the ESO ensuring that these outages don't lead to significant increased costs over winter?

Answer:

- Yes, these outages coincide with high constrained areas
- All of the outages delayed into the winter period are 'on commission' and cannot be recalled
- We have highlighted the impact of these outages to the relevant TO(s) and asked that they ensure there is no further overrun of these outages. We have asked the TO(s) for enhanced ratings on the limiting circuits to alleviate the constraints and, where possible, the TO(s) have provided these.

## **6. ESO to take other questions on the published report**

N/A

## **7. Ofgem to give feedback on ESO performance**

Feedback will be provided in the panel report in December.

## **8. Review Actions**

N/A

## **9. AOB**

Key points:

- December meeting will be moved to early January.
- The ESO noted a delay to the Pennine pathfinder project.

## Appendix 1 – Timetable

### 1. Annual Requirements

- Monthly
  - 15<sup>th</sup> working day of M+1 keeps cost basis historic
  - Meeting 20<sup>th</sup> working day of M+1
- Quarterly
  - 15<sup>th</sup> working day of M+1 following Q end (Jul, Oct, Jan)
- Half Year Report
  - 15<sup>th</sup> working day in October (M+1 after half year completed)
- Year End- Ofgem's Proposal
  - 7<sup>th</sup> May -consultation & draft licence (5 wks after year end)

2020	2020	2020	2020	2020	2020	2020	2020	2021	2021	2021	2021
May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
M	M		M	M		M	M		M	M	
		Q						Q			
					1/2YR						FYR

### 2. Monthly requirements

Date	Action	Owner	Note
15 <sup>th</sup> Working Day	Monthly report submission date	ESO	
No later than 5 Working Days before meeting	Provide the Chair with meeting papers	ESO	
20 <sup>th</sup> Working Day	Monthly Monitoring Meeting	Technical Secretary	
25 <sup>th</sup> Working Day	Minutes from meeting submitted	ESO	
End of Month	Chair to approve minutes from meeting	Chair	
2 <sup>nd</sup> Working Day after approval of the minutes	Publication of meeting minutes	Technical Secretary	

### 3. 2019-2020 Reporting & Meeting Dates

Month	Report Published (15 <sup>th</sup> WD)	Ofgem Meeting (20 <sup>th</sup> WD)	Report Type
May	22/05/2020	29/05/2020	
June	19/06/2020	26/06/2020	
July	21/07/2020	28/07/2020	Q1 Report
August	21/08/2020	01/09/2020	



September	21/09/2020	28/09/2020	
October	21/10/2020	28/10/2020	Half Year Report
November	20/11/2020	27/11/2020	
December	21/12/2020	03/01/2021	
January	22/01/2021	29/01/2021	Q3 Report
February	19/02/2021	26/02/2021	
March		26/03/2021	
April			
May			End of Year Report

## Appendix 2 – Previously Closed Actions

Meeting No.	Action No.	Date Raised	Target Date	Resp.	Description	Status
26	61	28 Jul	4 Aug	ESO	ESO to share presentation slides with Ofgem	Closed
26	62	28 Jul	31 Jul	ESO	ESO organise an IT deep dive session with Ofgem	Closed
26	63	28 Jul	28 Aug	Ofgem	Ofgem to organise a session for feedback from the performance panel	Closed
27	64	1 Sep	18 Sep	Ofgem	Ofgem to send through the forward plan addendum feedback	Closed
27	65	1 Sep	31 Sep	Ofgem	Ofgem to confirm the date for the mid-year panel event	Closed