Network Access Planning

Key performance indicators

July 2024

nationalgrid

Content

Introduction

The GB Network Access Policy is designed to facilitate collaboration between National Grid Electricity System Operator (NGESO) and the Transmission Owners in Great Britain to deliver value for consumers in relation to the planning, management and operation of the electricity transmission systems in England, Wales and Scotland.

As part of these policy commitments and to ensure NGET have a fully transparent outage planning processes, National Grid Electricity Transmission (NGET) produces a series of annual Key Performance Indicators (KPIs) to monitor outage planning performance and outage delivery.

The KPIs are set in appendix A of the GB Network Access Policy which can be found here on our website.

The data below reflects the plan performance for 2023/24, for any queries please contact us.

The data trends for the first 3 years of the RIIO-2 period need to be fully analysed to understand what actions NGET needs to take to ensure we can improve on downward trending KPIs. Further work is being done on this as part of our review of planning processes and this will ensure we can enable better plan stability in the future.

Tables

Key Performance Indicators

Description			Measure			Comments
			FY22	FY23	FY24	
1. Long term outage planning performance: Measure of the number of outages in the year ahead plan submitted at week 49 vs the number of actual outages delivered in the regulatory year. This is a high-level measure of long-term Outage planning performance.	1a	Number of outages in the year ahead plan	1914	2155	1810	Includes 1635 'out-of-service' and 175 'in-service' outage bookings
	1b	Number of YA outages delivered	1164	1085	838	Includes 787 'out-of-service' and 51 'in-service' outage bookings
	1c	Percentage of YA plan delivered	61%	50%	46%	
2. Accuracy of Year Ahead Outage Plan: This is a measure of the TOs capability to construct and deliver a robust outage plan. This is detailed measure of Long-Term Outage Planning Performance	2a	Percentage of outages in the year ahead plan started on the date agreed at the year ahead stage - week 49	32%	26%	25%	Includes 'out-of-service' and 'in-service' outage bookings.
	2b	Percentage of outages in YA plan started on agreed week at YA stage	39%	31%	30%	
	2c	Percentage of outages in YA plan changed for a positive reason	10%	7%	5%	Includes outage bundling, request to accelerate works, early completion of works, and User or ESO requests to change an outage
3. Within Year Outage Planning Performance: Measure of new outages requested within year by the TO during the relevant regulatory year. These are essential outages to carry out	3a	No. of new within year Outages submitted to NGESO prior to Optimisation Phase			470	
	3b	No. of new within year Outages submitted to NGESO during Optimisation Phase			928	
	3c	No. of new within year Outages submitted to NGESO during Delivery Phase			1438	
4.How many connection assets or transmission circuits are out of service more than once per annum?	4	Measure of the number of times the same item of equipment or circuit is removed from service	1157	1181	2846	2846 represents the number of assets being out of service more than once per annum, when grouped at circuit level the value is 770.

Description			Measure			Comments
			FY22	FY23	FY24	
5. Outage coordination: Measure of number of times the TO has carried out different work during a single outage. Measure is based on the number of outages that have been combined into a single outage vs the total number of outages delivered in a regulatory year	5					NGET outages have work bundled via the optimisation process during year-ahead plan build this includes construction and maintenance work. Due to the nature in which NGET records information in Outage management tool (ENAMS) it cannot be reported in a volumetric way
6. Percentage of TO Outages Started Within 60mins of Agreed Start Time	6	Measure of outage start time accuracy will be the agreed Planned Start Time compared to Actual Start Time	53%	44%	45%	Includes in service bookings
7. Transmission Connected Generation Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum - Firm Connections	7	Measure of lost network access due to transmission outages and connection agreements. Measure would be 100 x (total days of actual outages \ 365).		0%	-	
8. Transmission Connected Generation Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum – Non-Firm Connections	8	Measure of lost network access due to transmission outages and connection agreements. Measure would be 100 x (total days of actual outages \ 365)		0%	3.62%	
9. Average Outage Duration Accuracy Measure of TO ability to plan outage durations. A negative figure would indicate outages generally overrun, a positive figure would indicate outages generally finish early	9a	In plan before week 49: % finished early	22%	18%	17%	These are only 'out-of-service' outage bookings
		In plan before week 49: % finished on time	45%	44%	44%	
		In plan before week 49: % finished late	33%	39%	39%	
	9b	In plan after week 49: % finished early	11%	16%	13%	
		In plan after week 49: % finished on time	80%	80%	83%	
		In plan after week 49: % finished late	8%	4%	4%	

Description			Measure			Comments
			FY22	FY23	FY24	
10. Number of Unplanned Outages due to Faults or Defects This is a measure of the number of times an asset or circuit has been removed from service due to a system fault, has been removed from service by emergency	10a	Number of system faults removing an asset or circuit from service		260	64	
	10b	Number of emergency switching outages removing an asset or circuit from service		1	7	
	10c	All other unplanned outages when an asset or circuit has been made unavailable to NGESO due to a defect		173	350	
11. Enhanced Service Provision Measure of the number of STCP11.4 proposals identified within a regulatory year.	11a	Number of proposals identified by NGESO or TO		42	55	A total of 55 Enhanced Services were identified and submitted by either NGET or ESO
	11b	Number of proposals delivered by the TO		34	25	25 of the 55 proposals were confirmed as both deliverable and providing consumer benefits and were thus completed within the 2023/24 plan year.
	11c	Measure of System Operational costs savings vs cost to deliver by TO		£176.7m	£93.9m Forecast £51.17m Outturn	Across the year, the 25 Enhanced Services delivered had forecast savings of £93.9m and outturn savings of £51.9m with a cost to achieve of forecast/actual of £0.87m/£0.76m.
12. In Service Works	12	Measure of the number of “In Service” bookings to highlight works taking place without an asset being taken out of service e.g. Telecoms works, Risk of Trips etc	953	508	448	Includes OHL delayed auto-reclose (DAR) outages, circuit risk of trips, telecoms outages, and equipment/circuit testing outages.

Further narrative on T2Y3 Network Access Planning KPIs

Following the completion of Year 3 of the RIIO-T2 period (T2Y3), we have published our outage KPIs. This additional narrative explains some of the trends . There are areas where further investigation is needed, and we have called these out with specific actions that are being taken. In particular, we are undertaking a full planning transformation programme and we believe this work will provide solutions to the underlying issues that are impacting these KPIs. We expect the planning transformation to be completed ahead of the RIIO-T3 period and consequently to see improvements in the KPIs by FY27

1. **Long Term Outage Planning Performance**

   The total number of outages planned was lower than the prior two years which is in part due to better outage bundling and optimisation during the plan build phase. However, our rate of delivering these outages in accordance with the plan has dropped. In FY24 we delivered 46% of the Year Ahead (YA) plan which was the lowest of the first three years of T2. This is due to factors such as new work identified, defects found on inspection, and commissioning requirements. It should be noted that some of these factors are unforeseeable (e.g. a fault). Action is being taken to understand our foreseeable changes (e.g. the identification of maintenance work) and how we can implement solutions to better manage them.

2. **Accuracy of the Year Ahead Outage Plan**

   We have seen a marginal drop in outages delivered on their planned dates (FY24 25% from 26% in FY23) and during the same plan week (FY24 30% from 31% in FY23). This is due to the same factors highlighted in our commentary on Long Term Outage Planning Performance. We are taking action to understand the factors that drive these changes via our planning transformation programme.

   The drop in percentage of change for positive reasons (FY24 = 5%; FY23 = 7%) may be affected by how we reflect changes in the Electricity Networks Access Management System (ENAMS). There is an on-going action to refresh the change codes in STCP 11-2 which will make reporting more effective.

3. **Within Year Outage Planning Performance**

   We continue to have plan changes, some of which are due to unforeseeable factors which drive up the number of new outages that we request during the Delivery Phase compared to the Optimisation Phase. These new outages are deemed essential to keep our work delivery optimised and to maintain our outcomes. Some of these changes are also driven by external factors such as customer requests. Our planning transformation work is seeking to review the causes of foreseeable changes and address the root causes such that they can be better accommodated in the plan.

4. **How Many Connection Assets or Transmission Circuits Are Out of Service More Than Once Per Annum?**

   2,846 represents the number of assets being out of service more than once per annum; when grouped at circuit level, the value is 770. These circuits being taken out of service more than once per year is driven by a combination of planned and unplanned outages.

5. Outage Coordination

NGET outages have work bundled via the optimisation process during the Year-Ahead plan build and this includes construction and maintenance work. Due to the way in which information is recorded in ENAMS, it cannot be easily reported in a volumetric way. 93% of our outages have had more than one piece of work planned which demonstrates a high level of work bundling.

6. Percentage of TO Outages Started Within 60mins of Agreed Start Time

45% is a slight improvement compared to last year, but this figure is still affected by complexities we have coordinating outage releases across multiple stakeholders. This includes external parties who have issues which mean that some outage releases need to wait until later in the day for more suitable conditions. These complexities of stakeholder coordination have existed in each of the three years of T2.

7. Transmission Connected Generation - Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum - Firm Connections

None.

8. Transmission Connected Generation - Percentage of Annual Access Curtailed by Bilateral Connection Agreement Per Annum – Non-Firm Connections

We have needed to curtail generation to enable essential statutory work to proceed. In this instance, it was as a last resort following exploration of other coordination avenues.

9. Average Outage Duration Accuracy

Across these figures, we have seen a mix of slight decreases and improvements. Our duration accuracy for outages built in the Year Ahead plan is low; this is due to our current process where more detailed work preparation is done as we approach the time of the outage. It is also due to the identification of new issues on inspection when we get closer access to equipment. We are refining our approach via our planning transformation work to focus on better outage preparation and improve accuracy.

10. Number of Unplanned Outages Due to Faults or Defects

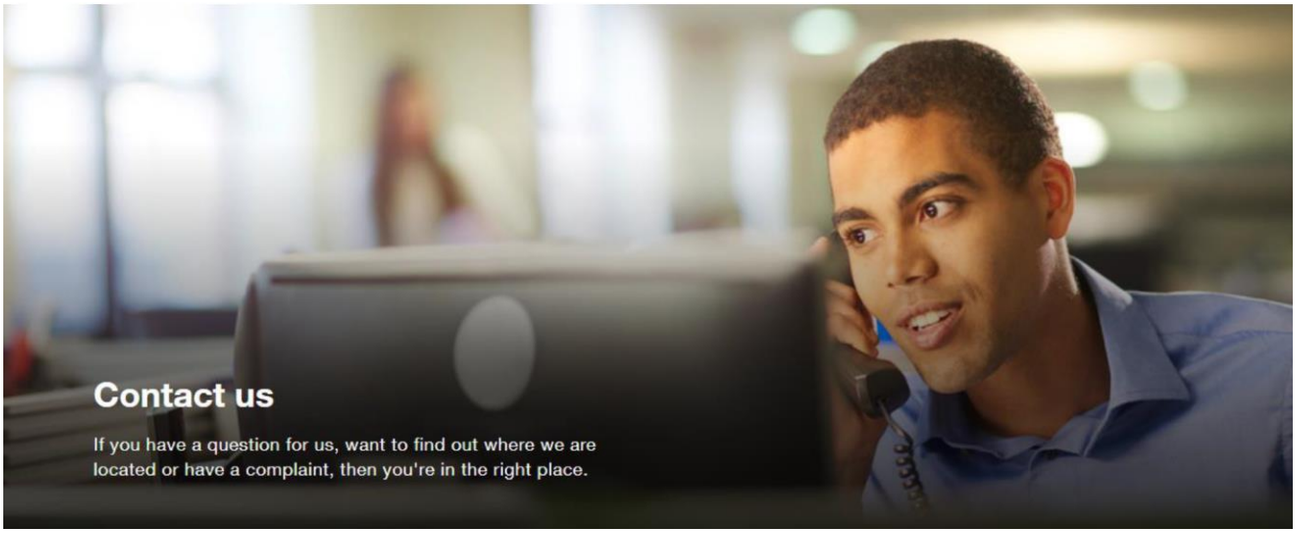
The total figure remains steady compared to FY23, however there have been movements within sub-categories because, between FY23 and FY24, we have changed how we record faults and unplanned outages in ENAMS. We now record fault outages for those assets that have been switched out by automatic operation. This change in approach has driven the reduction in number of system faults reported in FY24 and the increase in unplanned outages.

11. Enhanced Service Provision

We delivered fewer enhanced services to the ESO compared to FY23 even though more opportunities were identified. This was related to the feasibility of delivering some solutions, e.g. some were prevented by asset restrictions or availability of external support.

12. In Service Works

The number of In-Service bookings has decreased compared to previous years. This trend could be driven by how we plan specific work types such as protection, control and cyber.



If you have any questions, please do contact us.

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