



Worst Served Customers Annual Report

October 2024

**Electricity
Distribution**

nationalgrid

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Purpose of this report

This report provides an overview of the projects being carried out by National Grid Electricity Distribution's (NGED) to improve performance for Worst Served Customers.

'Worst Served Customers' has a specific definition¹ under the electricity distribution licence and is defined as:

Worst Served Customer 'means a Customer of the licensee who experiences 12 or more unplanned Incidents of a duration of three minutes or longer at Distribution Higher Voltage over a three Regulatory Year period with a minimum of two such Incidents per Regulatory Year.'

For the RII0-ED2 price control period (April 2023 to March 2028) The Office of Gas and Energy Markets (Ofgem) requires each Distribution Network Operator (DNO) to publish a report that shows summary details of the projects being carried out.

This report provides stakeholders with project by project details of the work being carried out and the timescales for delivery.

¹ As per OFGEM's definitions in RII0-ED2 Special Licence Conditions and referenced in Ofgem's Worst Served Customers Governance Document version 1 dated 17 February 2023.

Introduction

While NGED's network performance is among the best in the industry, there are a small number of customers who experience high numbers of supply interruptions. These customers are generally located on remote parts of the network, with limited interconnection available to restore supplies when network faults occur.

Stakeholders value network reliability as a top priority, especially as electricity supplies have become more important for people working from home and as more customers switch to electric vehicles and use electricity for heating.

Worst Served Customers (WSC) experience higher volumes of faults, which occur each year over a number of consecutive years.

The faults can occur for a variety of reasons including wildlife, vegetation, the weather, network location and deterioration of network components. Specific investment programmes are therefore targeted to address the causes of the faults.

Typical investment activities that may be carried out includes the reconfiguration of the network, replacement of poor condition overhead lines, undergrounding of overhead lines, refurbishment of circuit components or the installation of additional switching points and protection zones.

This report provides summary details of the investment activities for each of the Worst Served Customer projects started in the RIIO-ED2 period.

The approach taken by NGED to identify Worst Served Customers and prioritise investments is documented in a separate Methodology publication that can be found here:

<https://www.nationalgrid.co.uk/worst-served-customers>

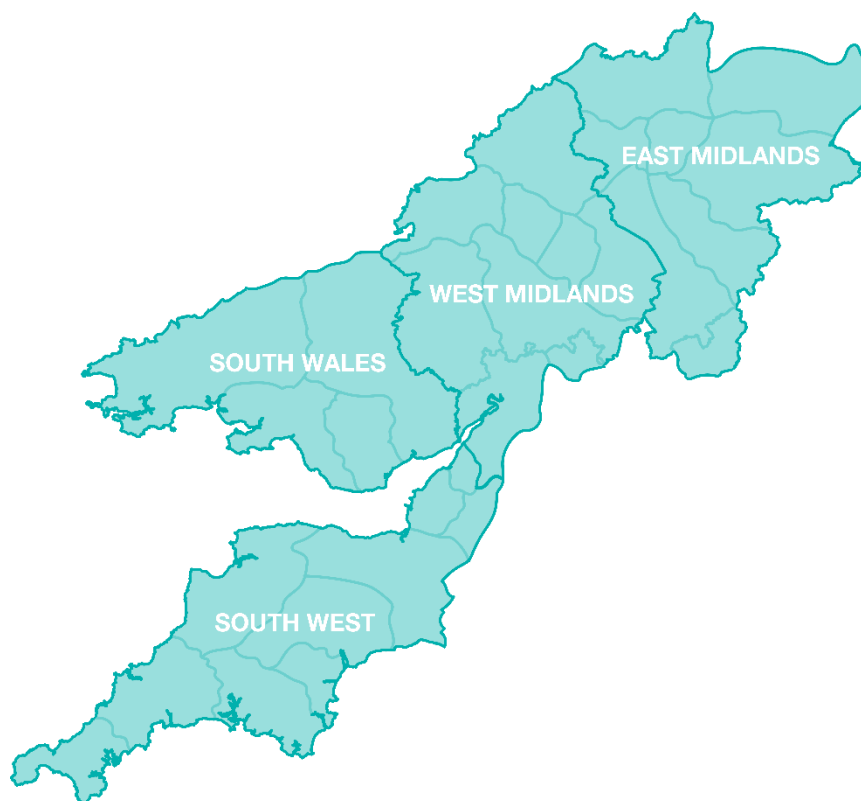
NGED's geographic area

NGED's network is the largest in the UK, covering every kind of geography and demography from densely populated residential areas to widely dispersed rural communities providing electricity to over 8 million households.

Across our region, we provide power to large cities such as Birmingham, Bristol, Cardiff and Nottingham, and farming communities in counties such as Cornwall, Pembrokeshire, Herefordshire and Lincolnshire.

We operate across four regions, each covering a separate licence area. These are:

- West Midlands (WMID)
- East Midlands (EMID)
- South Wales (SWALES)
- South West (SWEST)



2023/24 Performance Summary

During 2023/24, the first year of RIIO-ED2, NGED worked on a total of seven Worst Served Customer schemes across its licence areas, as detailed below.

- **West Midlands**
 - **WSC-ED1-2019-WM-MITC-0005:** MITCHELDEAN 33 11kV S STN - Automation and feeding arrangement changes, benefiting 302 WSC.
 - **WSC-ED1-2020-WM-STOW-0004:** STOWFIELD 33 11kV S STN - Automation and feeding arrangement changes, benefiting 151 WSC.
 - **WSC-ED1-2020-WM-ELTO-0005:** ELTON 33 11kV S STN - Install additional automated protection equipment and some asset replacement, benefiting 2 WSC.
- **East Midlands**
 - No projects identified in 2023/24 (low defined numbers of WSC in both ED1 and ED2).
- **South Wales**
 - **WSC-ED1-2020-WA-Buil-0163:** Builth Wells - Install additional automated protection equipment and some asset replacement, benefiting 131 WSC.
 - **WSC-ED1-2020-WA-Rhay-0202:** Rhayader - Install additional automated protection equipment and some asset replacement, benefiting 169 WSC.
 - **WSC-ED2-2023-WA-BUIL-0059:** North Powys/ Park Road 11kV OH Feeder – Install additional automated protection equipment and some asset replacement benefiting 505 WSC (see next section for further details).
- **South West**
 - **WSC-ED1-2021-SW-Luck-0173:** Luckwell Bridge - HV OHL replacement, additional automation, and network interlinks, benefiting 6 WSC.

All but one of the schemes detailed above relate to ongoing RIIO-ED1 projects, so do not fall under the scope of this report. Therefore, only **WSC-ED2-2023-WA-BUIL-0059** in South Wales is broken down in detail for the remainder of this report. We continue to mobilise to deliver our RIIO-ED2 objectives.

The number of customers that qualify as Worst Served Customers as at March 2024 are as follows:

Number of WSC

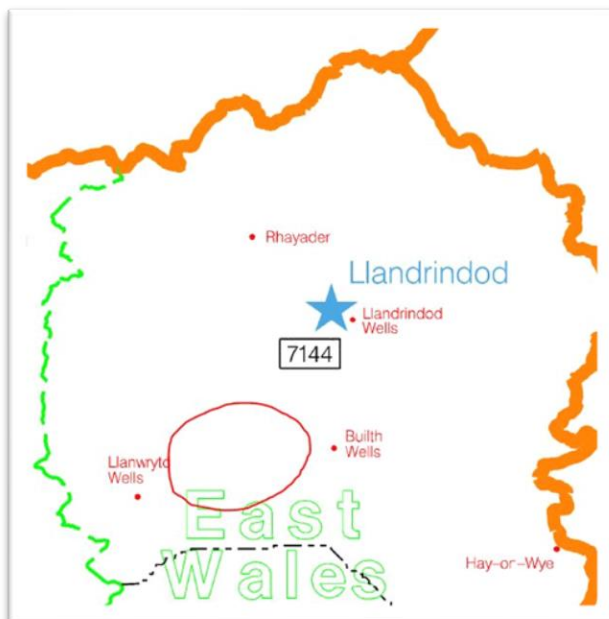
Licence area	2023/24	2024/25	2025/26	2026/27	2027/28
WMID	3,252	-	-	-	-
EMID	361	-	-	-	-
SWALES	1,966	-	-	-	-
SWEST	3,547	-	-	-	-
NGED	9,126	-	-	-	-

South Wales

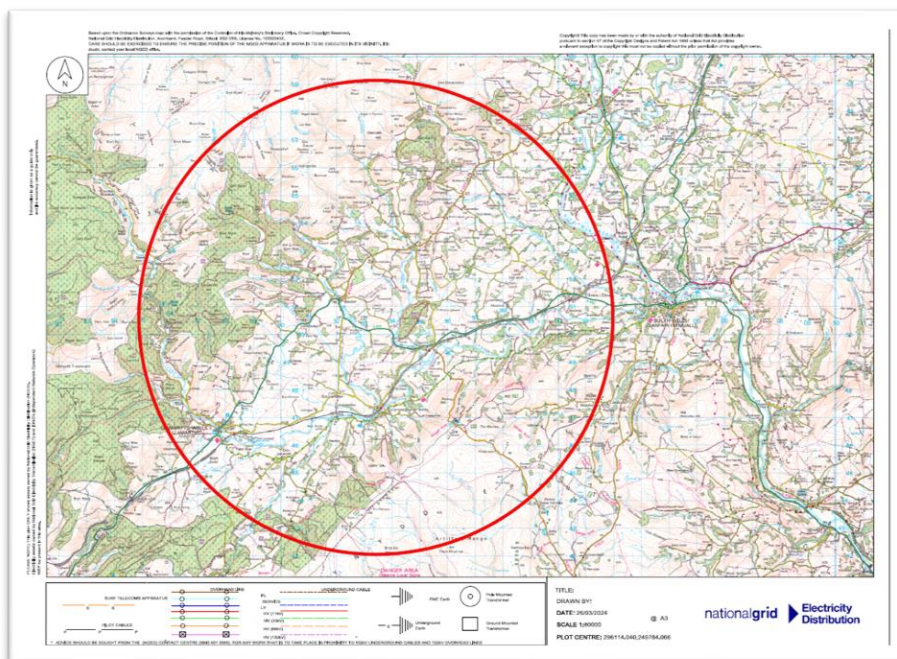
Project 596279 North Powys/ Park Road 11kV OH Feeder

Information	Description
DNO	South Wales
Scheme Reference Number	WSC-ED2-2023-WA-Buil-0059
Year qualified	2022/23
Name of scheme	Project 596279 North Powys/ Park Road 11kV OH Feeder
Description	<p>The circuit was arranged in such a way that a number of spurs emanated from the main lines.</p> <p>Before the work was started, there was limited protection installed on the spurs to segregate them from the main line.</p> <p>This meant that faults on the spurs would affect both the customers on the spurs and all other customers fed from the section of main line feeding the spur.</p> <p>The project focused on installing protection on a number of spurs, which means that faults on the spurs will now be cleared by the protection and the faults will no longer impact other parts of the network.</p> <p>In combination the installation of multiple spur protection will reduce the number of interruptions experienced by worst served customers on the circuit.</p>
Summary of WSC Project options	Options considered were undergrounding, tree clearance, additional automation, OHL reconductoring and additional feeding capabilities from other feeders.
Number of WSC planned scheme is expected to benefit	505
Expected completion year	2025
Expected cost (£k)	£42k
Description of geographic locations impacted	The feeder is fed from the Builth-Wells primary in Builth-Wells (Clanfair-TM-Muallt) and feeds houses to the west towards Beulah.

Region map showing area in DNO



Detailed map showing localities impacted



Scheme status

Delivery – Construction has commenced

Updated number of WSC that the delivered scheme is intended to benefit

505 (scheme currently in delivery)

Reason for variance between planned scheme

None (scheme currently in delivery)

benefit and delivered scheme benefit, if required	
Actual Completed year	N/A – scheme currently in delivery
Actual Cost (£k)	£49k in 2023/24

