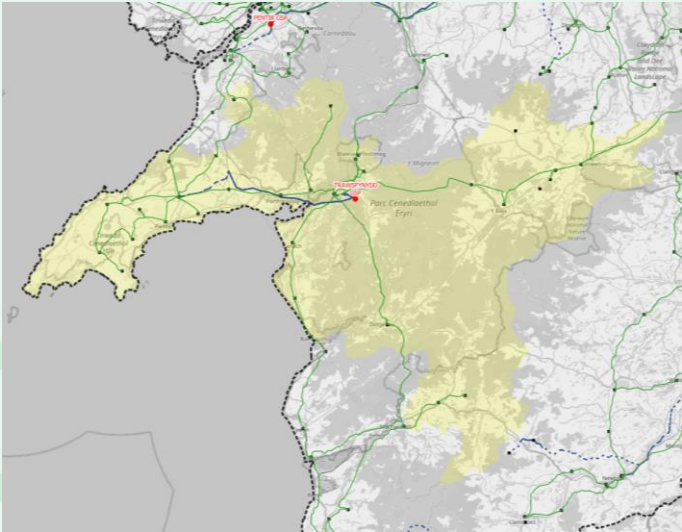


Maentwrog – Porthmadog 33kV reinforcement

Reinforce, supported by flexibility



The SP Manweb (SPM) network in North Wales around Maentwrog, Porthmadog, Pwllheli, Criccieth, Blaenau Ffestiniog, Harlech and Morfa Nefyn is supplied from Trawsfynydd Grid Supply Point (GSP). The 132kV network group secures Maentwrog/Four Crosses 33kV group supplying ca. 42,000 customers which includes several recreational/tourist destinations spread across the network.

Constraint

THERMAL and SECURITY OF SUPPLY

The demand growth in this group is expected to load the circuit between Maentwrog –Llanfrothen – Porthmadog beyond the cyclic ratings and would risk cascade tripping of the group and loss of supplies to over 18,000 customers during outage on the 132/33kV 45MVA grid transformer at Four Crosses grid substation.

Decision

Reinforce with new 33kV circuit

Reinforce with new 11km, 33kV circuit between Maentwrog and Porthmadog and extend the 33kV switchboards at Maentwrog grid and Porthmadog substations. Contract flexibility services to support the network during the project delivery.

Justification for decision

Considering the increased risk duration, capacity requirements and cost of flexibility services through RIIO-ED2, deferral beyond three years is not commercially viable. All viable reinforcement options were considered and the highest Net Present Value (NPV) option was selected.

Flexibility product

SUSTAIN

Constraint season(s)

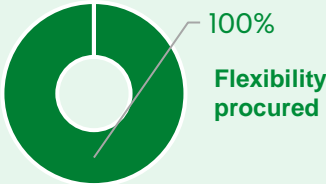
Winter

Guide price

Competition closed

Reinforcement timescale

2026/27



Flexibility position at March 2024	2023/24	2024/25	2025/26	2026/27	2027/28
Risk duration (hrs)	47	78	133		
Flexibility required (MW)	3.8	4.6	5.2		
Flexibility procured (MW)	4.0	4.8	5.2		
Flexible MW capacity met (%)	>100%	>100%	100%		

Flexibility Tendering

Closed

Requirements have been met.

All competitions are now closed for this site.

Technical Appraisal

More detailed technical information on the nature of the constraint, network impacts, solutions considered and selected intervention are available in this scheme's [Engineering Justification Paper](#)

To ensure that our plans and publications cover the needs of our stakeholders, customers, and the communities we serve, we welcome ongoing feedback.

Feedback can be emailed to: systemdesignsteam@spenergynetworks.co.uk