Portishead BSP

Scheme description

Issues with parallel operation of Sandford and Seabank. Reinforcement solution involves Circuit Breaker (CB) works to allow the network to be split.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2024
Current Status Preliminary

DNOA Decision
Reinforce

St Germans to Liskeard Ring

Scheme description

For an N-1 outage of one of the circuits that feeds the group or a fault on main 1 or 2 at St Germans the remaining circuit could overload. Reinforcement solution includes CB work to allow for reconfiguration and upgrading the 33 kV circuit.

Justification for decision

Flexibility is not suitable here due to the ring arrangement with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Exeter Main to Exeter City

Scheme description

Constraint present due to 132 kV tower line clearance infringement (along the Exeter Main 905 feeder) with an 11 kV overhead line. Reinforcement solution is to divert the 11 kV span.

Justification for decision

Flexibility is not suitable here due to the safety concerns of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Fraddon to Newquay Trevamper

Scheme description

An N-1 condition for the loss of one of the 33 kV circuits to Newquay Trevamper primary heavily loads the remaining circuit and leads to low volts. Reinforcement solution is to install a new 33 kV circuit from Fraddon to Newquay Trevamper.

Justification for decision

Flexibility is not suitable here as it introduces Power Quality constraints and protection restrictions.

Constraint Information

Outage Type N-1
Constraint Type Thermal and Voltage

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Witheridge

Scheme description

Demand growth takes the 11 kV backfeeds over their capacity. Reinforcement solution is to add a new transformer and circuit along with a replacement switchboard at Witheridge.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2026
Current Status Preliminary

DNOA Decision
Reinforce

Exminster Primary

Scheme description

Demand growth takes the 11 kV backfeeds over their capacity. Reinforcement solution is to add another transformer and replace the switchboard.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2026
Current Status Preliminary

DNOA Decision
Reinforce

Alverdiscott GSP and K route

Scheme description

Several constraints have been identified in this area including GT overloads at East Yelland, Barnstaple and St Tudy BSPs. Reinforcement solution is a new GSP south of Pyworthy and a new BSP on the K route.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

Iron Acton to Seabank

Scheme description

Seabank and Bradley Stoke BSPs are fed via two 132 kV circuits from Iron Acton GSP. For N-2 conditions, back energisation could lead to operational, earthing and safety risks. Reinforcement option is to carry 132 kV works and reconfigurations.

Justification for decision

Flexibility is not suitable here due to safety concerns, and it does not resolve the earthing and operational constraints.

Constraint Information

Outage Type N-2
Constraint Type Thermal

Reinforcement Information

Completion Year 2027
Current Status Preliminary

DNOA Decision
Reinforce

Isles of Scilly

Scheme description

For a loss of the mainland supply the Isles of Scilly generator needs to support the electricity needs of the Isles.
Either asset replacement of the current generating plant or the installation of a new submarine cable will be required.

Justification for decision

Flexibility is not suitable here due to the total loss of supply during constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2027
Current Status Preliminary

DNOA Decision
Reinforce

Alverdiscott to East Yelland and Barnstaple

Scheme description
Two circuits supplying the group are connected to the same busbar. For an N-2 outage the entire group demand is lost and interconnectivity is insufficient to restore it to meet P2 requirements. Reinforcement solution includes new BSP on the K route and new 132 kV circuit.

Justification for decision
Flexibility is not suitable here due to the N-2 loss of supply constraint.

Constraint Information

Outage Type N-2
Constraint Type Security of Supply

Reinforcement Information

Completion Year 2027
Current Status Preliminary

DNOA Decision
Reinforce

Penryn / Falmouth Bickland Hill / Falmouth Dock Ring

Scheme description
A busbar outage taking out a circuit supplying the group overloads one of the remaining circuits. The solution is to reconductor the circuits and reconfigure to allow for a split arrangement during outages. Alternatively a new circuit to Falmouth Bickland Hill could be constructed.

Justification for decision
Flexibility is not suitable here due to the ring arrangement with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2026
Current Status Preliminary

DNOA Decision
Reinforce

Feeder Road to Bedminster and Bower Ashton

Scheme description
One circuit supplies both Bedminster and Bower. For an N-2 condition this circuit overloads. Proposal is to separate these two primaries by laying 33 kV cable between BSP and the circuit intersection point.

Justification for decision
Flexibility is not suitable here due to the complexity of the constraint with varying sensitivity factors.

Constraint Information

Outage Type N-2
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Hayle to Penzance

Scheme description

An N-1 fault on the Main 1 busbar at Hayle overloads several of the 33 kV circuits, and lead to low voltage constraints. Reinforcement solution is to bring a 132 kV circuit to Penzance and establish a BSP there.

Justification for decision

Flexibility is not suitable here due to the meshed network, varying sensitivity factors and voltage constraints.

Constraint Information

Outage Type N-1
Constraint Type Thermal and Voltage

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

Exeter City to Folly Bridge Ring

Scheme description

An N-1 outage of one of the infeeds (or a busbar) overloads one of the other two infeeds. Reinforcement solution is to construct a new 33 kV circuit from Exeter City BSP to create an additional infeed into the ring.

Justification for decision

Flexibility is not suitable here due to the ring arrangement with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2026
Current Status Preliminary

DNOA Decision
Reinforce

East Yelland to Penn Hill Tee

Scheme description

For an N-1 outage on one of the four circuits that supply the group, the circuit between East Yelland and Penn Hill Tee potentially overloads. The reinforcement solution is to uprate this circuit.

Justification for decision

Flexibility is not suitable here due to the ring arrangement with varying sensitivity factors.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2026
Current Status Preliminary

DNOA Decision
Reinforce

Bridgwater to Bath Road Circuit

Scheme description
There is a 33 kV circuit overload under N-1, it is proposed to install an additional 33 kV circuit between Bridgwater and Bath Road to resolve this.

Justification for decision
Flexibility has been previously procured however it was determined to be insufficient and therefore reinforcement will be progressed.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Blagdon Primary

Scheme description
Blagdon is a single transformer primary. There is liability on Blagdon to feed some of Churchill Gate primary demand for a fault at Churchill gate. This causes an overload of the Blagdon transformer. Reinforcement of the 33 kV and 11 kV network is suggested to solve this and nearby constraints.

Justification for decision
Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

Moretonhampstead

Scheme description
Moretonhampstead is a single transformer primary with restricted N-1 restoration capacity. The N-1 restoration capacity is restricted by 11 kV backfeeds.
Proposal is to upgrade the 11 kV backfeeds.

Justification for decision
Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

Shapwick Primary

Scheme description

Shapwick is a single transformer primary with restricted N-1 restoration capacity. The N-1 restoration capacity is restricted by 11 kV backfeeds.
Proposal is to upgrade the 11 kV backfeeds.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

East Brent Primary

Scheme description

East Brent is a single transformer primary which is anticipated to overload under intact conditions. The reinforcement is to replace the transformer with a larger one and assess the 11 kV backfeed capacity.

Justification for decision

Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type Intact
Constraint Type Thermal

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

Newton Abbot to Teignmouth Gasworks and Higher Woodway

Scheme description

Overload on the circuit from Newton Abbot 8L5 to Teignmouth Gasworks 1L3 and Newton Abbot 3L5 to Higher Woodway. Proposed reinforcement is to uprate small sections along Newton Abbot-Higher Woodway and Higher Woodway-Dawlish circuits.

Justification for decision

Flexibility is not suitable here due to the severity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2028
Current Status Preliminary

DNOA Decision
Reinforce

St Mawgan

Scheme description
Demand growth takes the 11 kV backfeeds over their capacity. Reinforcement solution is to add another transformer and replace switchboard.

Justification for decision
Flexibility is not suitable here due to the complexity of the constraint.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2029
Current Status Preliminary

DNOA Decision
Reinforce

Weston to Lypstone Farm

Scheme description
There is a 33 kV circuit overload under N-1, it is proposed to carry out 33 kV reinforcement to resolve this.

Justification for decision
The zone is entirely nested within Weston BSP, and it is therefore not possible in this tranche to procure and dispatch flexibility.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2027
Current Status Preliminary

DNOA Decision
Reinforce

Barnstaple BSP

Scheme description
The winding temperature indicator at Barnstaple Bulk Supply Point (BSP) is in need of replacing to alleviate an N-1 constraint for the loss of a transformer.

Justification for decision
The proposed reinforcement works are below the threshold for economic viability.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce