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

Lapford and Tinkers Cross

Scheme description

Low voltage at Lapford and Tinkers Cross primaries for an N-1 condition. Installing new circuits from South Molton to Tinker's Cross and Lapford to Witheridge would resolve this constraint.

Justification for decision

Flexibility is not suitable here due to severe voltage constraints.

Constraint Information

Outage Type N-1
Constraint Type Voltage

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

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Tiverton to Dunkeswell

Scheme description

An N-1 condition for the loss of one of the 33 kV circuits to Dunkeswell primary heavily loads the remaining circuit. Reinforcement solution is to add a new transformer and circuit to Dunkeswell.

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

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Newton Abbot to Higher Woodway circuits

Scheme description

An N-1 condition for the loss of Main 1 33 kV busbar at Newton Abbot Bulk Supply Point (BSP) overloads the circuits to Higher Woodway. Reinforcement solution is to uprate sections of the Newton Abbot to Higher Woodway and Higher Woodway to Dawlish 33 kV circuits.

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

Reinforcement Information

Completion Year 2025
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. 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

Bristol Airport Circuits

Scheme description

For An N-1 fault on the main 1 busbar at Churchill Bulk Supply Point (BSP), Bristol Airport is left at single circuit risk. For a main 2 busbar fault the circuit overloads. Reinforcement solution is to reconfigure the network.

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

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

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

Flexibility is not suitable here as it cannot resolve protection related constraints.

Constraint Information

Outage Type N-1
Constraint Type Thermal

Reinforcement Information

Completion Year 2025
Current Status Preliminary

DNOA Decision
Reinforce

Camborne Holmans

Scheme description

An N-1 outage of one of the legs of the Camborne Hayle ring leads to low voltages at Camborne Holmans. Reinforcement solution is a short 33 kV circuit to Camborne Treswithian.

Justification for decision

Flexibility is not suitable here due to voltage constraints and network complexity.

Constraint Information

Outage Type N-1
Constraint Type Voltage

Reinforcement Information

Completion Year 2025
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 increasing interconnectivity and reconfiguring busbars.

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 Voltage Step Change

Scheme description
An N-2 outage on one leg of the XW route, and the loss of one leg of the VW route leads to a 33 kV voltage step change constraint at Feeder Road BSP. Reinforcement solution is to establish a 132 kV busbar at Feeder road. This is linked to other reinforcement schemes at Feeder Road.

Justification for decision
Flexibility is not suitable here due to the voltage step change constraint.

Constraint Information

Outage Type N-2
Constraint Type Voltage

Reinforcement Information

Completion Year 2026
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 Bulk Supply Point (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

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 busbar affecting an infeeds overloads one of the other two infeeds. In the near term protection modifications can mitigate some of the baseline constraints with overhead line uprating also being required.

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